

# **Gift of Water, Legacy of Service**

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**A History of the  
NORTH TEXAS MUNICIPAL WATER DISTRICT**



**BILL SLOAN**

### *A Word About the Author*

During a 25-year career as an author and journalist, Bill Sloan has written for virtually every type of publication and on every type of subject matter. In *Gift of Water, Legacy of Service*, Mr. Sloan shows his versatility by making clear the unique nature of the organization and policies of the North Texas Municipal Water District and by explaining the many different municipal interests served by NTMWD over 43 years.

At one time or another Bill Sloan has been a small town editor, a big-city reporter, a free-lance magazine writer, a novelist, a Pulitzer Prize nominee, and a college journalism instructor. A native Texan, a graduate of North Texas State University, and a former award-winning writer for the *Dallas Times Herald*, he is also a life-long history buff.



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*Anyone who can solve the problems of water will be worthy  
of two Nobel Prizes, one for peace and one for science.*

— John F. Kennedy

# Acknowledgments

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*I*n North Central Texas, water resources currently available are the tangible result of our climate, geography, and the determined efforts of many Texans who know the value of clean, plentiful water. North Texas Municipal Water District wishes to gratefully acknowledge the efforts and commitments of the many people who made this book possible, and in so doing they also make possible a greater understanding and appreciation among the general public for the efforts required to conserve, treat, deliver, and protect the quality of our precious water resources.

While everyone is the product of their own history, the people of North Central Texas owe a debt of gratitude to those citizens who, settling here decades ago, foresaw the need of the future to conserve and protect available but unstored storm water. NTMWD and our current raw water resources emerged from their efforts, and without their accomplishments conservation of our water and service to the cities would never be possible.

More current, however, is the debt of thanks owed to the NTMWD Board of Directors and its committees who saw the possibilities and understood the importance of a public informed about the water supplies on which everyone depends. Likewise, a special thanks is due to all of the cities which have relied on NTMWD, which understand the long-term benefits of regional services, and which continue to support NTMWD in meeting their future needs. To the cities and the citizens, NTMWD renews its commitment to serve their best interests in cooperation with local, state, and federal officials, while preserving water quality and availability.

Sincere appreciation is extended also to the loyal staff of the NTMWD who execute the plans and policies of the Board to meet the cities' needs. Their dedication and creativity made possible the unique responsiveness which extends throughout the history of the NTMWD. Our sincere thanks to all for a job well done.



## Appendix & Index





## **NTMWD – Serving Directly**

|                               |                               |
|-------------------------------|-------------------------------|
| <i>Allen</i>                  | <i>Mesquite</i>               |
| <i>Caddo Basin W.S.C.</i>     | <i>Milligan W.S.C.</i>        |
| <i>Cash W.S.C.</i>            | <i>Mount Zion W.S.C.</i>      |
| <i>College Mound W.S.C.</i>   | <i>Murphy</i>                 |
| <i>Dallas</i>                 | <i>Nevada W.S.C.</i>          |
| <i>East Fork W.S.C.</i>       | <i>Parker</i>                 |
| <i>Fairview</i>               | <i>Plano</i>                  |
| <i>Farmersville</i>           | <i>Princeton</i>              |
| <i>Fate</i>                   | <i>Richardson</i>             |
| <i>Forney</i>                 | <i>Rockwall</i>               |
| <i>Forney Lake W.S.C.</i>     | <i>Rose Hill W.S.C.</i>       |
| <i>Frisco</i>                 | <i>Rowlett</i>                |
| <i>Garland</i>                | <i>Royse City</i>             |
| <i>Gastonia-Scurry W.S.C.</i> | <i>Sachse</i>                 |
| <i>Kaufman</i>                | <i>Seis Lagos MUD</i>         |
| <i>Kaufman Four-One</i>       | <i>Sunnyvale</i>              |
| <i>Lavon W.S.C.</i>           | <i>Wylie</i>                  |
| <i>Lucas</i>                  | <i>Wylie Northeast W.S.C.</i> |
| <i>McKinney</i>               |                               |



## **1993–94 Board of Directors**

Darwin L. Whiteside, President  
 Jack I. McJunkin, Vice-President  
 Harry Tibbals, Secretary

|                        |                                          |
|------------------------|------------------------------------------|
| Farmersville . . . . . | Jimmy Whitaker                           |
| Forney . . . . .       | C.L. McCuistion                          |
| Garland . . . . .      | Johnie Marshall, Richard H. Roach        |
| McKinney . . . . .     | Robert C. Allen, Ben Whisenant           |
| Mesquite . . . . .     | Terry Sam Anderson, Loncy L. Leake       |
| Plano . . . . .        | David B. McCall, Jr., Alex R. Schell III |
| Princeton . . . . .    | Dyon Cantrell                            |
| Richardson . . . . .   | Billy Keller, Jack I. McJunkin           |
| Rockwall . . . . .     | Brett Hall, Larry Parks                  |
| Royse City . . . . .   | Darwin L. Whiteside                      |
| Wylie . . . . .        | Rita Smith, Harry Tibbals                |



## **NTMWD**

### **Presidents of the Board of Directors**

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|     |                                  |           |
|-----|----------------------------------|-----------|
| 1.  | J.C. Cantrell, Princeton         | 1951 – 54 |
| 2.  | H.R. Bisby, Garland              | 1954 – 56 |
| 3.  | Clifford Carpenter, Farmersville | 1956 – 57 |
| 4.  | J.O. Wallace, Rockwall           | 1957 – 58 |
| 5.  | C. Hansford Ray, McKinney        | 1958 – 59 |
| 6.  | Alex R. Schell, Jr., Plano       | 1959 – 60 |
| 7.  | C. Truett Smith, Wylie           | 1960 – 61 |
| 8.  | H.L. Roach, Garland              | 1961 – 62 |
| 9.  | C.E. Cantrell, Princeton         | 1962 – 63 |
| 10. | Conway Senter, Forney            | 1963 – 64 |
| 11. | Loncy L. Leake, Mesquite         | 1964 – 65 |
| 12. | C. Hansford Ray, McKinney        | 1965 – 66 |
| 13. | Clifford Carpenter, Farmersville | 1966 – 67 |
| 14. | Alex R. Schell III, Plano        | 1967 – 68 |
| 15. | Robert L. Jordan, Garland        | 1968 – 69 |
| 16. | A.H. Eubanks, Jr., McKinney      | 1969 – 70 |
| 17. | Dyon Cantrell, Princeton         | 1970 – 71 |
| 18. | Conway Senter, Forney            | 1971 – 72 |
| 19. | Loncy L. Leake, Mesquite         | 1972 – 73 |
| 20. | Clifford Carpenter, Farmersville | 1973 – 74 |
| 21. | Alex R. Schell III, Plano        | 1974 – 75 |
| 22. | G.W. Range, Garland              | 1975 – 76 |
| 23. | Jack I. McJunkin, Richardson     | 1976 – 77 |
| 24. | E.L. Kohn, Royse City            | 1977 – 78 |
| 25. | William B. Finney, McKinney      | 1978 – 79 |
| 26. | Carl B. Mann, Mesquite           | 1979 – 80 |
| 27. | Richard H. Roach, Garland        | 1980 – 81 |
| 28. | David B. McCall, Jr., Plano      | 1981 – 82 |
| 29. | Marvin Youngblood, Richardson    | 1982 – 83 |
| 30. | O.L. Steger, Jr., Rockwall       | 1983 – 84 |
| 31. | Dyon Cantrell, Princeton         | 1984 – 85 |
| 32. | C. Truett Smith, Wylie           | 1985 – 86 |
| 33. | Conway Senter, Forney            | 1986 – 87 |
| 34. | Loncy L. Leake, Mesquite         | 1987 – 88 |
| 35. | Jimmy Whitaker, Farmersville     | 1988 – 89 |
| 36. | Alex R. Schell III, Plano        | 1989 – 90 |
| 37. | G.W. Range, Garland              | 1990 – 91 |
| 38. | Brett Hall, Rockwall             | 1991 – 92 |
| 39. | Robert C. Allen, McKinney        | 1992 – 93 |
| 40. | Darwin L. Whiteside, Royse City  | 1993 – 94 |

## NTMWD Board of Directors 1951–1994

| City                | Years Served | Term Served        | President                     | Vice-President                | Secretary-Treasurer |
|---------------------|--------------|--------------------|-------------------------------|-------------------------------|---------------------|
| <b>Farmersville</b> |              |                    |                               |                               |                     |
| Clifford Carpenter  | 33           | 1951–84            | 1956–57<br>1966–67<br>1973–74 | 1954–56<br>1965–66<br>1972–73 |                     |
| Jimmy Whitaker      | 10 +         | 1984–              | 1988–89                       | 1987–88                       |                     |
| <b>Forney</b>       |              |                    |                               |                               |                     |
| R.M. Rhea           | 3            | 1951–54            |                               |                               |                     |
| C.L. McCuiston      | 4            | 1954–58            |                               |                               |                     |
| Conway Senter       | 35           | 1958–93            | 1963–64<br>1971–72<br>1986–87 | 1962–63<br><br>1985–86        | 1984–85             |
| C.L. McCuiston      | 1 +          | 1993–              |                               |                               |                     |
| <b>Garland</b>      |              |                    |                               |                               |                     |
| H.L. "Hack" Roach   | 6            | 1951–57            |                               |                               |                     |
| H.R. Bisby          | 10           | 1951–61            | 1954–56                       | 1951–54                       |                     |
| C.D. Cabiness       | 2            | 1957–59            |                               |                               |                     |
| H.L. "Hack" Roach   | 10           | 1959–69            | 1961–62                       |                               | 1960–61             |
| H.A. Walker         | 3            | 1961–64            |                               |                               |                     |
| Dewey R. Moore      | –            | Jan 1966–June 1966 |                               |                               |                     |
| Ray Olinger         | 2            | 1964–66            |                               |                               |                     |
| Robert L. Jordan    | 5            | 1966–71            | 1968–69                       | 1967–68                       |                     |
| M.S. Hollenshead    | 2            | 1969–71            |                               | 1970–71                       |                     |
| Richard H. Roach    | 23 +         | 1971–              | 1980–81                       | 1979–80                       |                     |
| G.W. Range          | 20           | 1971–91            | 1975–76<br>1990–91            | 1974–75<br>1989–90            | 1988–89             |
| Johnie Marshall     | 3 +          | 1991–              |                               |                               |                     |
| <b>McKinney</b>     |              |                    |                               |                               |                     |
| C. Hansford Ray     | 23           | 1951–74            | 1958–59<br>1965–66            | 1957–58<br>1964–65            | 1951–57             |
| H.L. Shoap          | 8            | 1951–59            |                               |                               |                     |
| Fitzhugh Newsome    | 2            | 1959–61            |                               |                               |                     |
| Choice McClure      | 2            | 1962–64            |                               |                               |                     |
| A.H. Eubanks, Jr.   | 19           | 1964–83            | 1969–70                       | 1968–69                       |                     |
| William B. Finney   | 13           | 1974–87            | 1978–79                       | 1977–78                       |                     |
| Ben Whisenant       | 4            | 1983–87            |                               | 1986–87                       | 1985–86             |
| Paul Hardin         | 4            | 1987–91            |                               |                               |                     |
| Robert C. Allen     | 6 +          | 1988–              | 1992–93                       | 1991–92                       | 1990–91             |
| Ben Whisenant       | 3 +          | 1991–              |                               |                               |                     |



**NTMWD Board of Directors *continued***  
**1951–1994**

| <b>City</b>          | <b>Years<br/>Served</b> | <b>Term<br/>Served</b> | <b>President</b>              | <b>Vice-<br/>President</b> | <b>Secretary-<br/>Treasurer</b> |
|----------------------|-------------------------|------------------------|-------------------------------|----------------------------|---------------------------------|
| <b>Mesquite</b>      |                         |                        |                               |                            |                                 |
| N.E. Shands          | 15                      | 1951–66                |                               | 1959–61                    |                                 |
| Loncy L. Leake       | 34 +                    | 1960–                  | 1964–65<br>1972–73<br>1987–88 | 1963–64<br>1971–72         | 1986–87                         |
| B.W. Cruce, Jr.      | 4                       | 1966–70                |                               |                            |                                 |
| Bill Glaspy          | 3                       | 1970–73                |                               |                            |                                 |
| Carl B. Mann         | 12                      | 1973–85                | 1979–80                       | 1978–79                    |                                 |
| Terry Sam Anderson   | 9 +                     | 1985–                  |                               |                            |                                 |
| <b>Plano</b>         |                         |                        |                               |                            |                                 |
| Alex R. Schell, Jr.  | 13                      | 1951–64                | 1959–60                       | 1958–59                    |                                 |
| Alex R. Schell III   | 30 +                    | 1964–                  | 1967–68<br>1974–75<br>1989–90 | 1973–74<br>1988–89         | 1987–88                         |
| D.B. Dickson         | 2                       | 1971–73                |                               |                            |                                 |
| David B. McCall, Jr. | 21 +                    | 1973–                  | 1981–82                       | 1980–81                    |                                 |
| <b>Princeton</b>     |                         |                        |                               |                            |                                 |
| J.C. Cantrell        | 3                       | 1951–54                | 1951–54                       |                            |                                 |
| Walter B. Gantt      | 2                       | 1954–56                |                               |                            |                                 |
| George Cantrell      | 2                       | 1956–58                |                               |                            |                                 |
| Herman E. Utley      | 2                       | 1958–60                |                               |                            |                                 |
| C.E. Cantrell        | 4                       | 1960–64                | 1962–63                       | 1961–62                    |                                 |
| R.E. Clements        | 2                       | 1964–66                |                               |                            |                                 |
| Dyon Cantrell        | 28                      | 1966–                  | 1970–71<br>1984–85            | 1969–70<br>1983–84         |                                 |
| <b>Rockwall</b>      |                         |                        |                               |                            |                                 |
| J.O. Wallace         | 29                      | 1951–80                | 1957–58                       | 1956–57<br>1966–67         |                                 |
| O.L. Steger, Jr.     | 4                       | 1980–84                | 1983–84                       | 1982–83                    |                                 |
| Brett Hall           | 13 +                    | 1981–                  | 1991–92                       | 1990–91                    | 1989–90                         |
| Bill Briggs Lofland  | 3                       | 1984–87                |                               |                            |                                 |
| Nick Woodall         | 6                       | 1987–93                |                               |                            |                                 |
| Larry Parks          | 1 +                     | 1993–                  |                               |                            |                                 |
| <b>Royse City</b>    |                         |                        |                               |                            |                                 |
| Homer Stimson        | 13                      | 1951–64                |                               |                            |                                 |
| Roy Cookston         | 8                       | 1964–72                |                               |                            |                                 |
| E.L. Kohn            | 15                      | 1972–87                | 1977–78                       | 1976–77                    |                                 |
| Darwin L. Whiteside  | 6 +                     | 1988–                  | 1993–94                       | 1992–93                    | 1991–92                         |

**NTMWD Board of Directors *continued***  
**1951–1994**

| <b>City</b>       | <b>Years<br/>Served</b> | <b>Term<br/>Served</b> | <b>President</b>   | <b>Vice-<br/>President</b> | <b>Secretary-<br/>Treasurer</b> |
|-------------------|-------------------------|------------------------|--------------------|----------------------------|---------------------------------|
| <b>Wylie</b>      |                         |                        |                    |                            |                                 |
| W.E. Williams     | —                       | June 1951–July 1951    |                    |                            |                                 |
| C. Truett Smith   | 35                      | 1951–86                | 1960–61<br>1985–86 | 1984–85                    | 1957–60<br>1961–84              |
| Raymond B. Cooper | 4                       | 1986–90                |                    |                            |                                 |
| Rita Smith        | 4 +                     | 1990–                  |                    |                            |                                 |
| Harry Tibbals     | 4 +                     | 1990–                  |                    |                            | 1993–94                         |
| <b>Richardson</b> |                         |                        |                    |                            |                                 |
| Jack I. McJunkin  | 21 +                    | 1973–                  | 1976–77            | 1975–76<br>1993–94         | 1992–93                         |
| Marvin Youngblood | 18                      | 1973–91                | 1982–83            | 1981–82                    |                                 |
| Billy Keller      | 3 +                     | 1991–                  |                    |                            |                                 |





## **North Texas Municipal Water District Staff**

Over the years since this organization began, North Texas Municipal Water District has been blessed with dedicated and loyal staff who everyday perform the vital tasks to meet the cities' needs. They take on as their own the objectives of the NTMWD, while filling NTMWD with their high values. Their long tenure is only one measure of their dedication, and their spirit seasons the whole organization. Without such people onboard, many of the accomplishments of the NTMWD in behalf of the cities neither could have materialized nor could they continue through the years ahead. To the continued preservation of water resources and water quality while fulfilling the cities' needs, the NTMWD staff renews its commitment and dedicates its efforts.

### **Carl W. Riehn**

### **Executive Director**

NTMWD Service: 24 years

Previous experience: City manager cities of Mesquite, Sulphur Springs

Education: Graduate fellowship in Public Administration, Southern Methodist University; Bachelors degree in Business Administration; major in Public Administration, Texas Tech University

*Mr. Riehn is responsible to the Board of Directors for all aspects of NTMWD operations, management and planning.*

. . .

### **William J. Avery**

### **Administrative Officer**

NTMWD Service: 12 years

Previous experience: Director of Finance: cities of Mesquite, Edinburg, Beaumont; Director of Finance/Assistant City Manager, City of McKinney

Education: Bachelors degree in Accounting, Southern Methodist University, 1961

*Mr. Avery directs the Finance and Accounting Function, including personnel services, budget, purchasing, payroll, payables, billings, insurance, bond sales and investments.*

. . .

### **James E. Parks, P.E.**

### **Engineering Officer**

NTMWD Service: 15 years

Previous experience: Texas Highway Department, Civil Engineer and City of Fort Worth Water Department Construction Engineer

Education: Bachelors degree in Civil Engineering, University of Texas at Arlington; registered Civil Engineer

*Mr. Parks directs the Engineering Function which sets design criteria for all NTMWD facilities, controls and inspects all construction, reviews all plans, provides value engineering, coordinates pipeline activities, and supervises maintenance services.*

. . .



**David E. Stephens****Operations Officer**

NTMWD Service: 23 years

Previous Experience: NTMWD Laboratory Supervisor; NTMWD Water System Manager

Education: Masters in Business Administration, University of Texas at Dallas; Masters degree in Aquatic Biology and Microbiology, East Texas State University; Bachelors degree in Chemistry, East Texas State University

*As Operations Officer, Mr. Stephens manages daily operations of the three systems: Water, Wastewater and Solid Waste. In this capacity, he supervises the activities of the three system managers and assures that all operations are meeting the daily needs of the cities and the requirements of state and federal regulations.*

. . .

**Robert B. Mansell****Public Service Officer**

NTMWD Service: 21 years

Previous Experience: NTMWD

Education: Masters degree in Public Administration, Southern Methodist University; Bachelors degree in Political Science, Southern Methodist University

*Mr. Mansell performs duties as legislative liaison at the state and federal levels and serves the Executive Director as an Executive Assistant.*

. . .

**M. Dolan McKnight****Research and Development Officer**

NTMWD Service: 16 years

Previous Experience: Engineer/ Wastewater Superintendent, City of Fort Worth

Education: Masters degree in Interdisciplinary Studies, University of Texas at Arlington; Masters degree in Chemical Engineering, Rice University; Bachelors in Chemical Engineering, Rice University; registered Professional Engineer

*Mr. McKnight directs research efforts in support of all three NTMWD Systems (Water, Wastewater, and Solid Waste), provides engineering and technical advice to all functions, and assists in all value engineering.*

. . .

**Reagan S. Cook****Information Officer**

NTMWD Service: 10 years

Previous Experience: Environmental permitting and reclamation research in the energy industry

Education: Masters degree in Forestry, Stephen F. Austin State University; Bachelors degree in Biology, University of Texas at Austin

*Mr. Cook directs public communications with the cities, media, public, citizens, and public groups through annual reports, newsletters, pamphlets, news releases, presentations, tours, and special projects.*



**David C. Morgan****Wastewater Systems Manager**

NTMWD Service: 18 years

Previous Experience: NTMWD Laboratory; Assistant Manager, NTMWD Wastewater Systems

Education: Bachelor of Science in Zoology and Accounting, Stephen F. Austin State University

*Mr. Morgan manages the daily operations and staff of all NTMWD wastewater operations, including four major regional plants and fourteen small plants operated under contracts with cities. It is his responsibility to assure treatment of all wastewater received to the highest capabilities of the plant facilities and in compliance with all permits and regulations.*

. . .

**Steven W. Long, P.E.****Water System Manager**

NTMWD Service: 4 years

Previous Experience: Ranger, U.S. Army; Consulting Engineer

Education: Bachelors degree in Civil Engineering, Texas Tech University; registered Professional Engineer

*As Water System Manager, Mr. Long manages the daily operations of the NTMWD water treatment and distribution facilities in order to produce high quality drinking water, in volumes to meet the highest daily need of the cities, and in compliance with all state and federal regulations. This system includes two water treatment plants with total capacity of 350 MGD, over 287 miles of pipelines, 61 city delivery points, and over 40 remote storage sites.*

. . .

**David H. Canup, P.E.****Solid Waste System Manager**

NTMWD Service: 10 years

Previous Experience: Allis-Chalmers; Ingersoll-Rand; Truck Fleet Manager, Owner, trucking company; Texas Extrusion Corp.; Project Engineer, NTMWD

Education: Bachelors degree in Mechanical Engineering, Texas A&M University

*As Manager of the Solid Waste System, Mr. Canup directs the daily operations at NTMWD landfills and transfer stations which dispose of over 360,000 tons per year of refuse from seven cities in Collin County. Currently this system can process 1950 tons per day through three transfer stations. Operations include eighteen tractor trailer rigs, three scrapers, three bulldozers, two compactors, and one grader.*





# Index

## A

Abernathy, Don 213  
 Alexander, R.E. 35  
 Alexander, R.E. & Son 58  
 Allen, City of 51, 143, 183, 239,  
 240, 241, 246, 248, 249, 256  
*Allen American* 249, 272  
 Allen, Robert C. 309, 324–326  
 Amerson, Peggy 205  
 Anderson, Terry Sam 252,  
 324, 327  
 Apollo Site/Apollo System  
 139, 167, 170  
 Arlington, City of 65  
*Austin American-Stateman*  
 248  
 Austin Power Company 251  
 Avery, William J. 329

## B

Bachman Lake 16  
 Barker, W.W. 74  
 Bass, Hugh 103  
 Baylor University Medical  
 Center 132  
 Beavers, R.B. 22, 25, 53  
 Benbrook 21, 34, 50  
 Benbrook Reservoir 25, 63  
 Benson, Ezra Taft 73  
 Bentson, Lloyd 213  
 Bernstein, Dr. Robert 279  
 Bisby, H.R. 25, 45, 98, 102–105,  
 111, 118, 137, 325, 326  
 Blackmon, Warren 272  
 Blythe & Company 101, 104  
 Bonham 132  
 Bonham Reservoir 219  
 Boyd, D.L. 86  
 Boyd, Roland 25, 29, 30, 44,  
 50, 53, 57, 63, 76, 85, 86,  
 122, 123, 125, 126, 130,  
 165, 168, 198  
 Boyd, Veigel & Gay 130, 134  
 Bradfield, W.H. 25, 43  
 Brazos River 200  
 Breckenridge, City of 11  
 Breckenridge Park 263  
 Brett, Thomas R. 231

Briggs, Bill 321  
 Briggs, J.L. 25  
 Briscoe, Dolph 264  
 Brooks & West 58  
 Brown, Roy 111, 213  
 Brumit Landfill 263, 267  
 Bryan, John Neely 10  
 Button, W.E. 89

## C

Cabiness, C.D. 326  
 Cantrell, C.E. 325, 327  
 Cantrell, Charlie 52  
 Cantrell, Dyon 167, 211, 252,  
 321, 324, 325, 327  
 Cantrell, George 327  
 Cantrell, J.C. "Jim" 28, 31, 36,  
 39, 42, 45, 50, 52, 56, 60,  
 74, 91, 94, 96, 98, 100, 101,  
 321, 322, 325, 327  
 Canup, David H. 331  
 Carmichael, Jack C. 264, 265  
 Carpenter, Clifford 67, 79, 98,  
 105, 111, 118, 123, 148,  
 202, 325, 326  
 Carpenter, John 40  
 Carter, President Jimmy 208  
 Casa View 140  
 Chandler, Pierce L. 279  
 Chandler's Landing 186  
 Chapman, Jim 210–213  
 Chorpeneing, Brig. Gen.  
 Claude H. 89, 90, 99  
 Clay, Henry 132  
 Cleave, Walter C. 103  
 Clements, R.E. 327  
 Click, Mayor D.W. 52  
 Collin County 11, 19, 21, 25,  
 28, 31–33, 38, 49, 59, 60,  
 66, 239, 246, 250, 275  
 Colorado River Municipal  
 Water District 41  
 Commerce, City of 196, 209,  
 212  
 Community Advisory  
 Committee 241  
 Concerned Citizens Over  
 Fairview's Future 280

Continuous Automated  
 Monitoring System 299  
 Cook, Reagan 256, 289, 295,  
 299, 330  
 Cookston, Roy 327  
 Cooper, City of 128, 137, 165,  
 196, 209  
 Cooper, Raymond 252, 328  
 Cooper Reservoir 9, 144, 165,  
 195–218, 231, 299, 311, 312  
 Copeville, City of 51  
 Cotterill, Lorrie 281  
 Cotton, James A. "Jim" 39, 44,  
 85, 86  
 Crockett, Robert B. 161  
 Crow, Dr. Donald 290  
 Cruce, B.W. Jr. 327  
 Crull, Elgin 72  
 Crume, Paul 70  
 Custer Road Transfer Station  
 274, 302  
 Cypress River Basin 219

## D

*Daily Times Herald* 14  
 Dallas, City of 16, 18, 66, 81,  
 92, 100, 119, 139, 140, 223,  
 240  
 Dallas City Council 66  
 Dallas County 11, 38  
*Dallas Magazine* 100  
*Dallas Morning News* 12, 45,  
 55, 58, 65, 67, 70, 72, 77,  
 79, 81, 101, 283  
*Dallas Times Herald* 11, 36,  
 80, 99, 124, 200  
 Dalton, George 25  
 Dawson, Bob 224, 225  
 Delta County 165  
 Denison, City of 229  
 Denison Dam 50, 60, 221  
 Denton County 25  
 Department of Agriculture 20  
 Dickson, D.B. 109, 111,  
 146–148, 170, 202, 327  
 Dorrough, C. Dwight 60  
 Dowell, Avery 52, 53  
 Drumb, E.C. 179  
 Duck Creek 11, 177, 178, 182  
 Dyer, Hal L. 25



- E**  
E.E. Ericson & Company 90  
East Fork Association 38, 42, 44, 71, 85, 86  
East Fork Water Quality Advisory Council 187, 189  
East Texas City Managers Association 149  
Edmondson, Debbie 280  
Eisenhower, President Dwight D. 68, 125  
Eldridge, Nathan 25  
Emig, Harvey 161  
Environmental Protection Agency 241, 304  
Espey, Huston & Associates 276  
Eubanks, A.H., Jr 30, 138, 145, 150, 160, 180, 202, 266, 325, 326  
Ewell, Cecil 272, 273
- F**  
Fairview, Town of 242, 280  
Fannin County 38, 49, 50, 219  
Farmers Branch 11  
Farmersville, City of 22, 73, 128  
Farmersville Reservoir, 128  
Fate, City of 142  
Federal Water Pollution Control Administration 175  
Fifth Circuit Court of Appeals 207  
Finney, William B. 252, 325, 326  
First Southwest Company 84, 96, 131, 267  
First State Bank of Rockwall 58  
First State Bank of Wylie 58  
Fischer, E.W. 134  
Flood Control Act (1936) 194  
Flood Control Act (1944) 21, 32  
Flood of 1908 14, 15  
Floyd Branch Wastewater Treatment Plant 190  
Floyd, Lester 25  
Foley, Ray 111  
Forney, City of 17, 73, 81, 140  
Forney Reservoir, 128  
Forrest & Cotton 39, 44, 71, 85, 93, 95, 104, 108, 110, 113, 128, 140, 147, 183  
Forrest, T. Carr 39, 42, 85, 86, 93, 104, 111, 119  
Fort Worth, City of 18, 19, 66  
Fort Worth District COE 63  
*Fort Worth Star-Telegram* 36  
Fouts, John M. 19, 26, 33, 36, 72  
Fowler, Wick 55  
Freeman, Col. Delbert B. 63  
Freese & Nichols, Inc. 219, 222, 315  
Freese, Nichols & Endress 138  
Freese, S.W. 222  
Frisco, City of 284  
Fritz, Ned 205  
Fuller Construction Company 35, 38  
Future Water Supply Committee 224
- G**  
Gainesville, City of 223  
Gantt, Walter B. 327  
Garland, City of 11, 16, 17, 25, 44, 66, 73, 81, 116, 126, 137, 139, 167, 169, 170, 177, 179, 183, 277  
Garland City Council 178  
*Garland Daily News* 43, 74, 77  
Garza-Little Elm Reservoir 21, 25, 50, 57, 79, 92, 93  
Gay, John E. 134, 162, 202, 203, 282, 283  
Genega, Stanley G. 213  
Glaspy, Bill 327  
Gosney, Mayor Milton 242, 245, 250  
Graeser, Henry 119, 121, 152  
Gramm, Senator Phil 210, 211, 213  
Grand Prairie, City of 65  
Grant, Walter B. 327  
Grapevine Reservoir 21, 25, 34, 50, 58, 79  
Grayson County 38, 49, 50, 223  
Greater Texoma Utility Authority 225  
Griffin, David 263, 265  
Griffiths, Col. D.W. 21, 22, 26, 27, 29, 58
- Groups Allied to Stop Pollution 281  
Groves, Norman 179  
Gulf Coast 200
- H**  
Hall, Brett 213, 252, 324, 325, 327  
Hall, John L. 281  
Hall, R.J. 115  
Hall, Ralph 210, 211, 213, 224, 228  
Hall, Sam B. Jr. 209, 211, 213  
Hallock, Col. H.R. 68, 76, 87, 90, 91, 94  
Hampton, O.W. 202  
Hardin, Paul 33, 40–43, 56, 57, 59, 74, 76, 85, 121, 252, 326  
Harding Lawson Associates 278  
Harrison, Adlene 242  
Hartman, R.F. 25  
Hartung, G. Chris 178  
Harvard, Jack 247, 272, 273  
Hatch, H.J. 301  
Hayslip, Michael R. 65  
Heath, City of 184, 185, 240  
Helm, Walter 211  
Henry, Stuart 245  
Hilmes, Jerome B. 210, 211  
Hoeftle, K.F. 105  
Holbert, Leon 112, 115, 290  
Hollenshead, M.S. 326  
Holliday, Ron 213  
Holton, John 121  
Honeycutt, Frank Jr. 106, 107  
Hopkins County 165  
Hopkins, Paul 252, 254  
Hord's Ridge 11  
Horton, Homer 25  
Houchins, John 252  
Huey, Bob 263, 265  
Hunt County 38, 49, 50, 128  
Hunt, H.L. 33
- I**  
Ingram, E.H. "Whitey," P.E. 85, 106, 107, 110, 115, 147, 149, 161  
Irving, City of 65, 144, 165, 198, 199, 201, 214  
Itschner, E.C. 121



**J**

Jackson, Ben 74  
 Jackson, W.C. "Decker" 84,  
 85, 102, 103  
 Jefferson, City of 219  
 Jenkins, Walter 123  
 Jester, Gov. Beauford H. 39  
 Johnson, President Lyndon B.  
 63, 132  
 Jones, Garner 145, 202  
 Jones, Kent L. 232  
 Jordan, Robert L. 180, 325, 326  
 Josephine, City of 142

**K**

Kaufman County 38, 49, 60,  
 66  
*Kaufman Sun* 18  
 Keller, Billy 321, 324, 328  
 Kennedy, President John F.  
 132  
 Kiamichi Project 312  
 Kiamichi River Basin 312  
 Kohn, E.L. 252, 325, 327  
 Koisch, Col. F.P. 133  
 Kretzschmar, G.E. 313, 314  
 Kristoferson, Col. Ralph S.  
 149, 160  
 Kucera, Henry 92

**L**

Lake Dallas 58, 79  
 Lake Lavon 9, 34, 195, 196,  
 238, 311  
 Lake Lewisville 92  
 Lake O' The Pines 219  
 Lake Ray Hubbard 128, 184  
 Lake Sulphur Springs 212  
 Lake Tawakoni 212  
 Lake Texarkana 199  
 Lake Texoma 9, 219, 223, 312  
 Lake Texoma Association  
 228-230  
 Lake Texoma Diversion  
 Project 225  
 Lamb, Kelly 115  
 Lancaster, City of 66  
 Lavon 25, 50, 51, 63  
 Lavon Dam 20, 21, 22, 46-62,  
 71, 73, 120, 144, 159, 171  
 Lavon Reservoir, 126

Lawrence, Major John 65  
 League of Women Voters 205  
 Leake, Loncy L. 137, 146, 149,  
 167, 169, 178, 252, 254,  
 300, 301, 309, 313, 317,  
 318, 321, 324, 325, 327  
 Leisure Systems, Incorporated  
 184  
 Lewisville, City of 64  
 Lofland, Bill Briggs 36, 327  
 Lofland, Evelyn 24, 51  
 London, William B. 141, 152,  
 156  
 Long, Steven W. 331  
 Lookout Drive Transfer  
 Station 263, 267  
 Lucas, City of 151, 238-259  
 Lucas United Citizens Against  
 Sewage 239  
 Lyle, Clayton B., Jr. 86  
 Lyon, Senator Ted 281

**M**

Macha, Victor P. 161  
 Mahon, George 49  
 Mann, Carl 169, 260, 266, 325,  
 327  
 Mansell, Robert B. 330  
 Marshall, Johnie 321, 324, 326  
 Martin, Crawford 199  
 Matthews, Charles 250  
 Matthews, David 276  
 Maxwell Creek 263, 266, 267  
 Maxwell Creek Landfill 272  
 McCall, David B. Jr. 239, 252,  
 292, 318, 324, 325, 327  
 McCall, John D. 39, 40, 42, 84,  
 85, 99, 102, 103  
 McCall, Parkhurst, Crowe,  
 McCall & Horton 84, 130  
 McCall, Parkhurst & Horton  
 267  
 McClure, Choice 326  
 McCoy, John H. 206  
 McCraw, John 250, 251  
 McCuiston, C.L. 111, 321-326  
 McDonald, Gordon E. 103  
 McJunkin, Jack I. 169, 252, 293,  
 308, 309, 319, 324, 325, 328  
 McKinney, City of 11, 16, 21,  
 51, 73, 137, 239, 240, 241,

243, 245, 246, 248, 256,  
 274, 278, 282, 284  
 McKinney Airport 280  
 McKinney Chamber of  
 Commerce 246  
*McKinney Courier-Gazette*  
 249, 282  
*McKinney Examiner* 35  
 McKinney Landfill 274, 279,  
 284, 302  
 McKnight, M. Dolan 286, 290,  
 330  
 Medanich, Frank 103  
 Mercantile National Bank 101  
 Merrill, Lynch, Pierce, Fenner  
 & Beane 101  
 Merritt, J.H. 19, 25, 32, 36  
 Mesquite, City of 16, 24, 73,  
 81, 117, 126, 137, 139, 140,  
 169, 179, 187, 190, 240  
 Mesquite Regional Wastewater  
 Treatment Plant 257, 318  
 Miller, W.C. 79  
 Montgomery, Harold 115  
 Montgomery, James M.,  
 Consulting Engineers 222  
 Moore, Dewey R. 201, 202, 326  
 Moore, Joe G. Jr. 199  
 Moore, W. Hammond 25, 28,  
 32, 56  
 Morgan, David C. 331  
 Morris, William 86  
 Mouldon, L.V. 25  
 Murphee, Mayor R.D. 17  
 Murphy, City of 51, 126, 142,  
 240, 294  
 Murphy, Cullen 292

**N**

National Center for Policy  
 Analysis 303  
 National Environmental Policy  
 Act 208  
 Neal, J.W. 25  
 Neches River 200  
 Nevada, City of 51, 142  
 New Bonham Reservoir 219  
 Newsom, Joe 112  
 Newsome, Fitzhugh 326  
 Newsome, R.F. 21, 25  
 Nichols, James R. 315



Nichols, Marvin C. 138  
 Noah, Raymond D. 167, 264  
 Norman, Col. H.R. 30, 31  
 North Central Texas Council of  
 Governments 158, 176, 318

## O

Oak Cliff 11, 14  
 Oklahoma, State of 66, 231  
 Oklahoma Water Resources  
 Board 311  
 Oklahoma Wildlife Federation  
 230  
 Olinger, Ray 25, 326  
 Oliver, Paul 246  
 Omnibus Flood Control Act 20

## P

Paine, Phillip 245, 248  
 Park, Forrest L. 27, 28, 32, 72  
 Parkhouse, George 44  
 Parks, James E. 329  
 Parks, Larry 321, 324, 327  
 Parkway Transfer Station 271  
 Paschal, Don 276  
 Patete, Frank M. 228  
 Patman, Wright 49, 57, 201, 206  
 Peters Colony 10  
 Petty, Bill 249  
 Pitstick, William J. 176  
 Plano, City of 11, 16, 51, 73,  
 117, 167, 169, 170, 177, 179,  
 183, 187, 239–241, 246, 248,  
 256, 266, 269  
*Plano Daily Star-Courier* 246  
 Plano Planning and Zoning  
 Commission 271  
*Plano Star Courier* 283  
 Plano Transfer Station 266  
 Poague, Bob 49  
 Pottsboro, City of 229  
 Prairie and Timber Audubon  
 Society 231  
 Princeton, City of 73

## R

Range, G.W. 180, 252, 321,  
 325, 326  
 Rathje, William 292, 294, 298  
 Raw Water Intake Structure and  
 Pump Station No. 2 155

Ray, C. Hansford 25, 45, 53,  
 61, 98, 102, 103, 111, 118,  
 123, 147, 202, 325, 326  
 Rayburn, Sam 24, 27, 28, 35,  
 47–61, 63, 71, 73, 76, 86–89,  
 94, 95, 99, 112, 120–125,  
 131, 132, 181  
 Reason Foundation 293, 297  
 Red River 199, 219, 223  
 Red River Valley 228  
 Red River/Cypress Creek Basin  
 219  
 Reed, Keith B. & Company 96  
 Rhea, R.M. 98, 111, 326  
 Richardson, City of 11, 126,  
 139, 166, 167, 169, 170, 177,  
 179, 183, 239, 240, 241, 246,  
 248, 256, 263, 269  
 Richardson Transfer Station 266  
 Riehn, Carl W. 42, 97, 148, 153,  
 155–162, 166, 168, 171, 176,  
 178, 181, 182, 190, 203–212,  
 219, 222, 224, 225, 227, 230,  
 231, 234, 239, 241–246, 249,  
 254, 256, 257, 263, 265, 267,  
 268, 273, 276, 277, 279, 284,  
 286, 289, 290, 291, 298, 301,  
 303, 305, 308, 309, 311, 316,  
 312, 320, 329  
 Rio Grande River 20  
 Ritter, Mayor Martha 248  
 Rivers and Harbors Act 13  
 Rivers and Harbors Act of 1945  
 25, 50, 54  
 Roach, H.L. "Hack" 23, 25, 53,  
 98, 105, 111, 118, 202, 321,  
 322, 325, 326  
 Roach, Richard H. 252, 267,  
 309, 313, 321, 324–326  
 Roberts, Ray 133, 157, 158,  
 160, 181, 201, 203  
 Robinson, Col. Bernard L. 35  
 Rockwall, City of 11, 16, 24,  
 25, 55, 66, 73, 116, 240  
 Rockwall County 19, 38, 49, 60  
 Rockwall Success 44  
 Rocky Point Peninsula 225  
 Rogers, Will 12  
 Rollins & Forrest 108  
 Rollins, A.P. "Andy" 39, 79, 105,  
 107, 109, 111, 119, 121, 123,

124, 137, 138, 145, 146, 149,  
 154, 178, 197  
 Roosevelt, Franklin 49  
 Rowlett, City of 143, 183  
 Rowlett Creek Plant 183, 186,  
 190, 240–243  
 Rowlett Creek Regional Waste-  
 water Treatment Plant 240  
 Royse, City of 73, 100  
 Rural Electrification  
 Administration 50  
 Rush Creek Yacht Club 184

## S

Sabine River Authority 212  
 Sabine River Basin 200, 219  
 Sachse, City of 126, 142, 177,  
 263, 266, 277  
 Sample, Clarence 102, 103  
 Sardis Reservoir 312  
 Scarlett, Lynn 297  
 Schell, Alex R. Jr. 53, 59, 98, 111,  
 137, 168, 321, 325, 327  
 Schell, Alex R. III 146, 156, 168,  
 179, 203, 205, 218, 252, 296,  
 321, 324, 325, 327  
 Seeman, L.E. 123  
 Seis Lagos Municipal Utility  
 District 186  
 Sellers, D.W. 25  
 Senter, Conway 131, 157, 196,  
 252, 321, 325, 326  
 Shands, Dr. N.E. 17, 98, 111,  
 118, 137, 327  
 Shepherd's Glen 186  
 Sherman, City of 229  
 Shimek, Carl 93, 109, 110, 126,  
 129, 141, 174  
 Shimek, Jacobs & Finklea 219,  
 242, 266  
 Shivers, Gov. Allan 44, 68, 69  
 Shoap, H.L. 98, 326  
 Simmons, A.B. 233  
 Sister Grove Creek 223  
 Smith, Rita 321, 324, 328  
 Smith, C. Truett 29, 31, 35, 44,  
 50, 51, 60, 74, 75, 78, 79, 85,  
 86, 97, 98, 113, 118, 125,  
 132, 148, 150, 157, 160, 168,  
 197, 202, 208, 225, 226, 321,  
 322, 325, 328



Soil Conservation Service 32,  
33, 54, 61, 64  
Sorenson, Ray 111  
Sperry, Neil 243, 246  
Spore, James 227  
Sportsmen's Clubs of Texas  
231  
Springs, Sulphur 209  
Steger, O.L. 30  
Steger, O.L. Jr. 325, 327  
Stemmons, Leslie A. 14  
Stephens, David E. 330  
Stevens, Roger 249  
Stimson, Homer 98, 100, 327  
Stroup, Richard L. 303, 305  
Sturgis, S.D. 87  
Sturrock, J.C. 41  
Sulphur River Municipal Water  
District 144, 165, 196, 199,  
210  
Sulphur Springs, City of 196,  
212  
Sunnyvale 126, 140, 142

## T

Tarrant County 11, 25  
Tarter, Brent 197  
Terrell, City of 66, 73  
Texas A&M College 106  
Texas Committee on Natural  
Resources 205, 299  
Texas Fifth District Court of  
Appeals 251  
Texas Legislature 15, 19  
Texas Parks and Wildlife  
Department 228  
Texas Power and Light  
Company 17  
Texas Supreme Court 251  
Texas Water Commission 144,  
221, 245, 276, 279  
Texas Water Conservation  
Association 41  
Texas Water Development  
Board 313  
Texas Water Quality Board 174,  
180, 182, 184, 187, 189  
Texas Water Report 201, 314  
Texas Water Rights  
Commission 165, 179, 199

Thomas, Albert 49  
Thomas, J.B. 69  
Thornton, R.L. 101  
Thornton, R.L., Sr 78  
Tibbals, Harry 322, 324, 328  
Tower, Senator John 201  
Toxic Terror 304  
Trammel, W.E. 112  
Travis County 248  
Tresnick, John 245  
Tri-County Lavon Reservoir  
Association 25-38, 47, 52,  
56, 58, 165, 306, 322  
Trinity Improvement  
Association 19, 20, 26, 32  
Trinity River 10, 15  
Trinity River Canal Association  
18, 19  
Trinity Watershed Soil  
Conservation and Flood  
Control Association 19  
Truman, President Harry 49,  
54

## U

U.S. Bureau of Reclamation  
63, 69  
U.S. Fish and Wildlife Service  
228  
U.S. Public Health Service 200  
Upper East Fork Association 71  
Upper East Fork Interceptor  
System 317  
Upper Trinity Basin 63  
URS/Forrest & Cotton 219  
Ussery, Leon 202  
Utley, Herman E. 327

## V

Vandergriff, Tom 224  
Vogel, H.D. 76

## W

Waddell, John S. Jr. 309  
Wagstaff Act 19  
Walker, H.A. 326  
Wallace, J.O. 19, 24, 25, 36,  
50, 51, 52, 53, 55, 61, 76,  
86, 88, 98, 105, 111, 118,  
174, 321, 322, 325, 327

Water for Texas Today and  
Tomorrow, 314  
Water Pollution Control Act of  
1972 181  
Water Resources Development  
Act of 1990 301  
Water Treatment Plant II 234  
Water Treatment Plant III 313  
Webb, Walter Prescott 12, 69  
Wheeler, Gen. R.A. 53, 54  
Whelan, Elizabeth 304  
Whisenant, Ben 225, 226, 324,  
326  
Whitaker, Jimmy 252, 324,  
325, 326  
White, Joe T. 25  
White Rock Lake 16  
Whiteside, Darwin L. 320,  
324, 325, 327  
Whitsitt, Col. Menan 160  
Whitsitt, Norman 170  
Whitten, Jamie 57  
Wilkerson, J.A. 29  
Williams, W.E. 328  
Wilson Creek 190, 238-259,  
318  
Wilson Creek Regional  
Wastewater Treatment  
Plant 239, 275, 276, 288,  
291, 319  
Wilson, Woodrow 49  
Woodall, Nick 252, 321, 327  
Wright, Jim 123  
Wroten, Leahray 280  
Wylie, City of 16, 25, 51, 73,  
184, 186  
*Wylie News* 73, 135  
Wynn, Buck III 252, 254

## Y

Yarborough, Ralph 201  
Youngblood, Marvin 169, 225,  
226, 252, 321, 325, 328

## Z

Zachry, Bartel 160  
Zachry Co., H.B. 160



# 1

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## Downpours and Dust Devils — A Texas Tradition

*From an airplane 2,500 feet above the Dallas area, a visitor from Saudi Arabia stares down in fascination at the seemingly endless geometric grid of homes, businesses, streets and freeways stretching to the far horizon. Even from this height, the dynamic growth of the area is evidenced by numerous bright strips of new concrete and patches of dark, freshly turned earth where a variety of construction projects are going on*

*"Is this all one giant city?" the visitor asks in wonder.*

*"No," says the native North Texan seated beside him, "what you're seeing is many cities — dozens of them — each with its own special character, needs and priorities, but each with a lot of things in common, too. Some are as small as a few thousand people. Others have populations of 100,000 or more."*

*"But with so many cities, how do all the people down there obtain essential services?" the Saudi asks. "Where do they get water? How do they dispose of their sewage? Obviously, they can't discharge it into the sea or any other large natural body of water to be dissipated, because there is none. What happens to all the solid waste generated by such a populous area? Do all these small cities have to rely on Dallas for services like this?"*

*"I'm afraid even Dallas isn't big enough to serve this entire area alone," laughs the North Texan. "Dallas does provide services to some cities, but many of them receive these services from the North Texas Municipal Water District."*

*The Saudi seems puzzled. "What is that?" he inquires.*



*"It's a very unusual organization," says his seatmate. "There's nothing else exactly like it in Texas — and maybe not anywhere else. It's a regional authority in which numerous cities of all sizes join together on a voluntary basis to obtain the kind of municipal services they wouldn't be able to afford on their own. The district not only provides hundreds of millions of gallons of fresh water daily, but also operates some of the world's most modern and efficient wastewater treatment facilities. It even offers solid waste disposal services on a regional basis."*

*"Interesting," says the Saudi, "but doesn't the district have a hard time satisfying all these different communities? Isn't there a lot of bickering and friction?"*

*"Not at all," says the North Texan. "Because of its unique structure, its representation and its policies, the district never competes with the cities it serves. Since it was created, for example, it's never collected or relied on property taxes, and it provides only the services that its member cities specifically ask it to provide."*

*"Everything here seems amazingly efficient and well-organized," says the Saudi. "Has it always been that way? Have services always been supplied on such a dependable basis?"*

*"I'm afraid not," admits the North Texan. "If you could've looked down on this same area forty years ago, you wouldn't have recognized it as the same place. For one thing, there are millions more people down there. Forty years ago, this was mostly open countryside, dotted with small towns and farm communities surrounded by fields of cotton, grain and onions, and many of those communities were facing severe problems."*

*"Well, they certainly aren't small anymore," observes the Saudi.*

*"No, but forty years ago, a lot of them were literally about to dry up and blow away. We were in the midst of the worst drought in our history. Some towns were running completely out of water, and even the City of Dallas was in desperate straits. In fact, our North Texas prairies were starting to look a lot like your deserts in Saudi Arabia."*

*"Looking back on it today, it's hard to believe just how bad things were," the North Texan continues, "but at the time, most people didn't realize they could do anything about the situation. Residents of this part of Texas had been living for generations with cycles of flood and drought. These cycles wreaked terrible havoc, but most folks thought they were beyond anyone's control."*



*"So what did you do?" the stranger asks, puzzled. "How did you overcome such circumstances? How did you manage to survive, much less to achieve such tremendous growth?"*

*The North Texan smiles. "Well, for one thing," he replies, "we established the North Texas Municipal Water District."*



The entity known today as the North Texas Municipal Water District is a regional giant. Its service area sprawls over 1,600 square miles with a population of more than 800,000. It operates one of the state's largest multi-city water systems, supplying a score of large and small communities through 275 miles of transmission pipelines, 61 delivery points, two water treatment plants with a combined maximum capacity of 350 million gallons per day and 15 pump stations for raw and treated water.

The district either already draws, or soon will be capable of drawing, up to 213 million gallons of raw water per day from three major reservoirs — Lake Lavon, Lake Texoma and Cooper Reservoir — in which it holds storage rights to a combined total of more than 500,000 acre feet of water. Since the 1950s, it has pioneered the concept of regionalized services — a concept regarded by many as a "recent" innovation.

From its modern headquarters at Wylie, a staff of 223 employees oversees and carries out the district's far-flung operations, which include a regional state-of-the-art wastewater treatment system composed of 18 plants, four of which are huge regional facilities, and a 47.7-mile network of regional interceptor pipelines. The system, one of the most advanced in the United States, is capable of treating nearly 79 million gallons of wastewater daily.

In addition, the district is also a pioneer in the concept of regional solid waste management, permitted to operate two landfills totaling 350 acres and three transfer stations capable of handling 1,950 tons of solid waste per day.

Remarkably, it has been able to do all this through the issuance of pay-as-you-go revenue bonds and without ever collecting or spending a single cent of tax money.

In its relatively brief lifetime, the NTMWD has ventured into areas where no water district has gone before, setting precedent after precedent for others to follow. Its unique structure, as set forth under its state-issued charter, has never been duplicated in Texas, but has allowed the district to remain remarkably free,



both of internal strife and outside political influences. It has virtually unlimited authority to serve any community within its reach whose voters approve an affiliation with the district, and yet it cannot go anywhere uninvited, since services are based on voluntary contracts.

A mere half-century ago, however, no one had ever heard of the North Texas Municipal Water District or anything resembling it. Even the concept behind it was unknown and untested.

In the beginning, there was only a great unfilled need.

Throughout the ebb and flow of history, the portion of North Central Texas lying within the drainage basin of the Trinity River has been a land of great natural wealth and great natural extremes. For the first century and a half after its discovery, however, its existence remained virtually unknown, except to a few mapmakers, and its potential — both as an economic resource and as a periodic troublemaker — totally untapped.

The Trinity got its name more than three centuries ago, on May 16, 1690, to be precise, when General Alonzo de Leon, a Spanish conquistador, happened upon the twisting, pristine stream. Since it was only two days before the feast day of the Most Holy Trinity, he named the river in honor of that occasion, then moved on, blissfully unaware of the basin's "split personality."

For many years after the first explorers passed through it, there were no permanent residents at all in the area known as the Three Forks of the Trinity, and so the vagaries of nature were visited only upon wandering bands of Indians, a few soldiers and occasional hunters and trappers.

It was only in the early 1840s — 150 years after General de Leon's visit — that a trickle of settlers began finding their way into this remote wilderness, attracted by the promise of free land offered by agents of the newly designated Peters Colony. In the late fall of 1841, a backwoods entrepreneur named John Neely Bryan built a cabin near a natural ford on the river in hopes of establishing a profitable trade with the Indians.

Bryan laid out a townsite on a bluff above the river, sold off a few plots of land, and soon saw a crude village sprout there. Convinced that the Trinity was navigable all the way to the Gulf of Mexico, and that his town would one day be a thriving river port and head of navigation on the river, he named the cluster of log cabins in honor of "my friend Dallas," although there were few people around to take note.



Bryan was followed over the next two decades by other adventurous pioneers who founded other area settlements, including Duck Creek (now Garland), Breckenridge (now Richardson), Hord's Ridge (now Oak Cliff), McKinney, Plano and Farmers Branch. But it was the period immediately following the Civil War that brought the first real waves of westward-bound migrants flowing out of the war-ravaged former Confederate states east of the Mississippi and onto the lush prairies of North Central Texas.

For many of these homesteaders, the area now encompassed by Dallas, Rockwall and Collin Counties must have closely resembled the "Promised Land." When they discovered the fertile belt of blackland drained by the East Fork of the Trinity, it was often love at first sight. The terrain was pleasant and gently rolling; there was plenty of grass for grazing livestock, and the rich soil looked as though it was capable of growing virtually anything — especially cotton. (The *Dallas Herald* of the late 1860s proudly called it "the finest soil in the Union.") Although there were no forests to compare with those to the east, thick stands of pecan, oak, elm, hackberry, cottonwood and bois d'arc grew along the streambeds and provided ample wood. There were numerous springs and flowing creeks, and a shallow well could produce adequate water for household needs. Fruits, nuts and other edibles grew wild in the countryside, and there was an abundance of game.

Less than 200 miles further west, the climate began to turn noticeably drier, the vegetation much more sparse, the general conditions less hospitable and the land far less productive. Thus, a high percentage of those who had left small farms in Mississippi, Tennessee, Alabama and Georgia elected to put down roots in the land along the East Fork and try to carve out new lives for themselves. Consequently, the population of the 17 counties within the Trinity basin grew from just over 94,000 in 1860 to more than 231,000 by 1880, with the vast majority settling in Dallas and Tarrant Counties.

Few realized in the beginning how fickle, unpredictable — and sometimes downright ornery — the forces of nature could be in this verdant basin. Few had any inkling of what mayhem could be generated by the normally placid streams along which they built their homes and planted their crops. The lands of the Trinity Valley were a paradox. The river had created a virtual Garden of Eden, but it could also strike like a coiled snake.

The settlers learned this lesson the hard way. In dry years, they watched their crops wither in dusty fields and their shallow wells play out. Then, in wet years,



they saw those same fields flooded and their crops washed out by persistent downpours. Creeks that were only beds of dry sand when precipitation was below normal could become raging rivers after a sudden cloudburst. And there was rarely a period of more than two or three consecutive years without a rainfall-related calamity of one extreme or the other.

Still, the agricultural bounty that was possible in the good years made the bad times endurable. In the years immediately after the Civil War, when unimproved farmland in the area was selling for as little as \$1.50 per acre, a farmer could expect to produce up to 18 bushels of wheat, 25 to 30 bushels of corn and as much as 100 bushels of cotton on each cultivated acre.

The Trinity and Mother Nature, however, had a seemingly endless supply of tricks and treachery at their command. Although it drains an area roughly the size of Connecticut, the river could shrivel to almost nothing during drought times, then burst out of its banks and inundate the broad floodplain when rainfall was above normal.

Its capriciousness had earned the river a host of unflattering nicknames. Historian Walter Prescott Webb called it "the rat-tailed Trinity." Others labeled it a "useless stream" and "that unpredictable drainage ditch." Much later, when humorist Will Rogers was asked what he thought should be done with it, he suggested, "Pave it!"

At any rate, by the post-Civil War period, Bryan's dream of commercial transportation on the river was shared by many others, and was, in fact, viewed as essential to the continued growth of the area. There were numerous attempts to prove that a vessel of sufficient size could successfully navigate the stream from Dallas to the Gulf. Some actually managed to haul timber and cotton all the way to Galveston and return with manufactured goods, but many of the most-publicized excursions ended in disappointment. One such voyage began in the spring of 1867 and took a year and four days to complete, mainly because there was, to quote the *Dallas Herald*, "scarcely enough water in the river . . . to hide the cat(fish)."

Nonetheless, the dream would outlive Bryan by many decades, and by the 1890s the push to make Dallas a port city reached fever pitch. In 1893, the steamboat *H.A. Harvey, Jr.* managed to navigate the river from Galveston to Dallas in a mere two months and ten days, causing the *Dallas Morning News* to exult:

*"The river has been opened to its mouth without a nickel of Government money . . . (although) the facilities for doing the work have been*



*crude and weak. The stream contained the accumulations and obstacles of ages. The dead river has been vitalized by Dallas enterprise and capital."*

Local leaders felt confident that continuing improvements on the river would allow steamboats of up to 500 tons to reach Dallas from Galveston for at least eight or nine months each year. So certain did this now seem that the 1893 Dallas City Directory declared: "This is no longer a dream, no longer the pet theories of so-called missionaries, but is a reality."

Such rosy projections proved to be hopelessly optimistic, and by the turn of the century, the dream of making Dallas an inland port was, if anything, even further from reality than it had been a decade earlier, and navigation by steamboats was again limited to short hauls on the upper Trinity.

By 1902, however, the federal government had begun throwing its support to the Trinity navigation project by allotting enough money under the Rivers and Harbors Act of that year to clear the river channel to a point 75 miles south of Dallas. Between 1905 and 1917, seven locks and dams were built within 50 miles downstream with federal funds, and once more it seemed only a matter of time until commercial vessels would be travelling the entire 550-mile length of the river on a regular schedule.

But World War I intervened to bring work on Trinity improvements to a temporary halt. And in the meantime, two unrelated developments combined to run the navigation project aground. First, the new Union Terminal was opened in Dallas in 1916, consolidating the services of five old railway stations scattered around the city, but unfortunately also taking up the space along the river where the projected Port of Dallas was to be located. And then, in a 1921 report to the Secretary of War, a board of U.S. Army Engineers came to the stunning conclusion that navigation on the upper Trinity was not feasible and should not be attempted at federal expense.

Even after sustaining these damaging blows, the navigation dream would linger on for more than half a century. It would become the subject of numerous later studies by the Corps of Engineers, many of which refuted the earlier findings, and the object of many additional millions of dollars in federal allocations. But as time passed, the emphasis on Trinity improvements would gradually shift away from canalization to the more immediate and pressing needs of providing flood control and water storage for a rapidly growing population.

One of the major events that triggered this shift occurred during the first



decade of the Twentieth Century, just as federal efforts to open the river to navigation were reaching full stride. It was at this point that the unpredictable Trinity staged the greatest demonstration yet of its capacity for treachery and havoc.

It is still remembered today as the catastrophic "Flood of 1908."

By this time, of course, floods on the Trinity and its tributaries were nothing new.

Accounts passed along from Indians to the first white settlers told of the "big water" that had occurred on the Trinity around 1822, and from the earliest frontier times through the end of the Nineteenth Century, there had been a series of other devastating floods, the most severe of which took place in 1844, 1866, 1871 and 1890.

Bad as they were, however, all these would pale in comparison to the demoralizing, death-dealing events of 1908. Throughout the known history of the region, no natural disaster before or since has come close to matching the one that ravaged the communities along the Trinity that fateful spring.

To anyone who lived at the time in Dallas or any of the cities and towns to its immediate north and east, this was a singular and totally unforgettable experience. It was a watershed event in the truest sense of the term — one that not only altered certain physical characteristics of the area forever, but also left a lasting psychological impact on its inhabitants.

On May 26, 1908, swollen by two months of incessant rain (according to the National Weather Service, rainfall for April and May that year totalled 20.32 inches, a record that stood until 1957) the Trinity went on a ruinous rampage. The river reached a record-shattering depth of 52.6 feet and stretched out to a width of more than one and a half miles across the low-lying floodplain at the point where it rushed by downtown Dallas. As the late Dallas businessman Leslie A. Stemmons recalled: "A large part of the downtown (area) was inundated. Eleven people were killed by the torrents, and 4,000 Dallasites were forced to flee their homes. Damage ran into the millions of dollars."

A reporter for the *Daily Times Herald* wrote of "indescribable suffering" and "destruction, destitution . . . and loss of property almost beyond description."

The entire westernmost section of the city's central business district — a four-block-wide area from present-day Houston Street to a point west of the Triple Underpass — was wiped out and abandoned, never to be rebuilt. Every bridge and railroad trestle across the river was swept away, leaving the suburb of Oak



Cliff unreachable, except by boat. Thousands of head of livestock were drowned, and the stench from dead animals lodged in treetops lingered long after the floodwaters had receded.

The catastrophe also disrupted all types of municipal services. The central power plant was under several feet of water, leaving the city in total darkness for days. Telephone and telegraph lines to the outside world were down. But the hardest hit of all were the city's water utilities. Its new pumping station on Turtle Creek was submerged, and the city was completely without drinking water, except for a few unpolluted artesian wells, where long lines of desperate residents queued up with pans and pails.

More than any other single event, the monumental Flood of 1908 was destined to engender an urgent new attitude toward flood control. Over the next few decades, it would lead, in turn, to a whole new concept of water management in the Trinity basin.

Regional weather patterns and the historic cycle of flood and drought were beyond the ability of man to alter, but somebody had to do something to minimize the terrible impact of the cycle. Like the Trinity itself, the question confronting those in search of a solution was three-faceted. It boiled down to "Who?" "What?" and "How?"

. . .

The problems of flood control and water supply are not confined, of course, to the upper Trinity River and its tributaries. On the contrary, these problems are — and always have been — a crucial statewide concern. While few areas of Texas experience the wet-dry extremes common to the Trinity basin, many suffer from chronic water shortages, particularly in the western half of the state.

For nearly a century, there have been repeated efforts by the Texas Legislature and state agencies in Austin to deal with water problems on a statewide basis. As early as 1904, an amendment to the state constitution authorized the first public development of water resources. The following year, the Legislature created the state's first drainage districts, and in 1913, it established the State Board of Water Engineers and set forth procedures by which cities, towns and other political subdivisions could obtain water rights. Conservation and reclamation districts were made possible by another constitutional amendment in 1917, and two years later, the first fresh water supply districts were created.

These were steps toward a comprehensive statewide water policy, but it would take many more years for such a policy to evolve. Meanwhile, for well over a half-



century after the westward migration began to swell the population of the Three Forks area in the 1860s, whatever use was made of water resources was usually decided at the local level. This was precisely the case in the Trinity basin, where residents of each separate community had to obtain water as best they could. At first, every family had its own shallow well, but as communities grew, it became imperative to develop some sort of public water supply.

While Dallas remained by far the largest municipality in the region — and was, in fact, the largest city in Texas in 1890 — other cities of some consequence were now beginning to grow up around it. By that same year, McKinney reported a population of nearly 2,500, while Plano and Rockwall each claimed more than 800 residents. Garland, Wylie and Mesquite were also on the map, with populations of 478, 239 and 135 respectively.

At first, all these communities tried to deal with the steadily growing demand for water simply by digging deep artesian wells that tapped into hitherto untouched sources of pure water below the layer of Austin chalk underlying the region. But beginning with the arrival of the first railroads in the area in 1872 and the boom that accompanied this event, it became apparent that more plentiful and dependable stores of water would be vital.

By the mid-1870s, many Dallasites were forced to buy potable water from wagons that peddled the precious fluid door to door. The city answered this crisis by digging more wells, but in 1887, T.J. Whitman, a St. Louis engineer retained to inspect the wells, warned city officials that they were heavily contaminated and should be closed. A number of stopgap measures followed, but the only lasting solution was building dams and creating reservoirs.

Bachman Lake, the region's first municipal water supply reservoir of any consequence, was completed by the City of Dallas in 1903 at a cost of \$29,527 — a price tag exceeded by that of many luxury automobiles today. It covered about 500 acres and impounded 650 million gallons of water, and although it seems tiny by today's standards, there were many in Dallas who thought it would meet the city's water needs for many years to come. Fortunately, however, most Dallas leaders realized that this was not the case, and as soon as Bachman was completed, they began looking further ahead.

In 1907, when Dallas began acquiring land to build White Rock Lake, a new reservoir with projected storage capacity of some 5 billion gallons (roughly eight times that of Bachman), some people complained bitterly that the project was too costly and ambitious for Dallas to undertake. But the drought of 1909–11 —



which began just a year after the Flood of 1908 and long before White Rock Lake had had a chance to fill — quickly ended such talk forever.

Smaller towns, meanwhile, were utterly incapable of building reservoirs, pipelines and pumping stations during this period, and consequently their plight was far, far worse.

In World War I era Garland, for example — by now a town of some 1,200 people — there was still no water or sewer system whatever. Hence, notes one local historian, “water from various wells was discharged directly into the streets, ensuring the perpetual presence of mud. Outhouses and hogpens were cleaned irregularly; therefore noxious odors plagued the town.”

City officials sought to rectify the situation in the early 1920s, when Garland voters approved a \$100,000 bond issue to dig a 2,300-foot artesian well, construct two 75,000-gallon water storage tanks and lay the town’s first water and sewer lines, but a host of unforeseen problems developed.

First, when funds began to run low, it was necessary to recruit dozens of volunteers to help with the work, and many of the town’s leading business and professional men were seen digging ditches and laying pipe side by side with hired laborers. Then, when the project was completed, officials were distressed to learn that they couldn’t afford to operate the pumps to start the water flowing without a major concession on electric rates, which Texas Power and Light Company declined to make.

Fearful that they might literally be run out of town unless the water and sewer system started functioning soon, Mayor R.D. Murphee and members of the city council desperately sought a solution to the dilemma. That solution came only when the city decided to generate its own electrical power with a 75-horsepower generator it already owned and an additional 100-horsepower unit acquired on credit. As a result, Garland became the only city in the region to operate its own electrical power plant — a distinction it still claims today.

Neighboring Forney, meanwhile, encountered even more serious and long-lasting difficulties in trying to obtain water for its residents. After the railroad came through in 1873, the town quickly outgrew its shallow hand-dug wells. But when an attempt was made in 1877 to bore an artesian well, it not only failed, but became the first in a string of failures that would stretch out over more than three decades. It was a seemingly interminable period in which every dry spell brought the town to the very brink of ruin.

In the early 1880s, a group of Forney citizens headed by Dr. N.E. Shands



decided to try again, but the drill bit broke off in the hole, and the contractor departed, leaving it there. Dr. Shands made repeated efforts to continue the project, but eventually had to give up. In 1898, yet another attempt was made to retrieve the bit and resume drilling, but it, too, failed.

When the drought of 1909 descended on the area, Forney found itself in an especially grim situation. Residents were forced to haul water from the East Fork of the Trinity, and town leaders arranged for tank cars filled with water to be brought in by train, but the town clearly could not survive much longer without a dependable water supply of its own.

In desperation, a number of citizens subscribed some \$9,000 to make one more effort to drill a well. And this time, thanks to improved technology developed in the state's budding oil industry, the effort was a success.

As a writer for the *Kaufman Sun* noted many years later:

*"On Thanksgiving Day 1910, the drill entered a different strata below 2,000 feet . . . (and) all Forney gave thanks that day as a seemingly never-ending supply of artesian water gushed forth at the rate of 40,000 gallons per day. According to several sources, the townspeople celebrated their good fortune throughout the remainder of that day and also throughout the night."*

It had taken 32 years, but Forney had finally struck water. And no oil boom town anywhere could have been prouder of its "gusher."

. . .

As the decades passed and the towns of the Trinity basin grew, they gradually reached the conclusion that only by joining together into some type of areawide organization could they hope to deal effectively with the problems — and opportunities — presented by the river.

While the smaller communities felt they had less of an economic stake than the big cities of Dallas and Fort Worth in the proposed Trinity canal, they came to realize that the canalization movement served as a focal point for many types of potential improvements along the river. It could spin off important benefits in the form of better flood control and soil conservation programs — and perhaps even a more dependable water supply.

Thus, when a group known as the Trinity River Canal Association was formed in 1930, it was principally made up of prominent Dallas and Fort Worth businessmen and its primary purpose was to present an effective case for canalization to Washington. But six years later, when the Trinity Canal Association subsequently



sponsored the establishment of the Trinity Watershed Soil Conservation and Flood Control Association, many of the new group's members came from small towns.

When the new association's organizational meeting was held at the Texas Hotel in Fort Worth on November 19, 1936, representatives of 22 counties, most of them residents of small towns, were present. Among them were J.H. Merritt of McKinney, representing Collin County, and J.O. Wallace of Rockwall, representing Rockwall County, both of whom were designated as directors of the organization. (Both would also play major roles in the common efforts among communities along the East Fork that led, some 16 years later, to the establishment of the North Texas Municipal Water District.)

The minutes of that initial meeting included a number of random comments from those attending that indicated both the scope and the commonality of water-related problems in the Trinity basin:

"Two floods annually on our tributary . . ."

"Have gathered one crop out of the last five . . ."

"Erosion not only robs the farmer on the higher grounds, but also drowns out the landowners in the bottom lands . . ."

"Trinity takes a course of 80 miles in crossing our 40-mile-wide county . . ."

*"We must cooperate to solve our problem. . . ."*

The acting chairman for this historic meeting was John M. Fouts of Fort Worth, who later became general manager of the Trinity Improvement Association, an organization created by the merger in the early 1940s of the Trinity River Canal Association and the Trinity Watershed Soil Conservation and Flood Control Association. The merger and the change of name clearly reflected the broadened interests of the group, although its underlying purpose remained building support for the proposed canal.

"From the inception of the Trinity Association's efforts in 1930, local interests have recognized that flood control and water conservation for navigation and other uses are inseparable," Fouts would write several years later. ". . . In fact, its local interests have probably done more to solve their surface water problems — without either federal or state aid — than have those of any other comparable area."

During the 1930s, however, important steps were taken at both the federal and state levels that added major impetus to the development of water resources in the Trinity basin.

The Wagstaff Act, for example, was passed in 1931 by the Texas Legislature,



establishing the first statewide priorities on water use that applied to all streams within the state except the Rio Grande River. Under the act, first preference was given to domestic and municipal uses, followed by processing (industrial), irrigation, mining and recovery of minerals, hydroelectric, navigation and recreation.

At the federal level, meanwhile, even more far-reaching actions were taking place. Congress gave what Fouts termed “visible evidence” of its “clear thinking” by passing the 1935 Soil Conservation Act and the 1936 Omnibus Flood Control Act, both of which furthered the aims of the Trinity Improvement Association and brought federal funds for flood control and conservation flowing into the Trinity basin.

But by far the most significant development of the decade took place in 1939, when the Corps of Engineers conducted another study of the Trinity, the findings of which effectively reversed the COE’s ruinous report of 1921. The new study not only supported the concept of navigation on full length of the river, but even more importantly from the standpoint of the towns in the Trinity basin, it outlined for the first time concrete plans for building a series of dams to create reservoirs in the watershed.

Among the proposed dams that made their first appearance on COE planning maps at that time was one recommended for construction at some unspecified future date near the tiny Collin County community of Lavon.

At the time, the reservoir that might someday be created by the was envisioned only as a flood control facility — a part-time lake, in other words — where floodwaters would be held briefly until they could safely be released and allowed to flow downstream.

Many people in Dallas and Fort Worth no doubt hoped for the day when those floodwaters would be used to float boats and barges down the Trinity canal. But almost no one dreamed that they would one day provide a pure, dependable water supply for hundreds of thousands of North Texans.

Within a matter of months after the new COE report, improvements in the Trinity watershed, along with all other domestic matters, were pushed far into the background by the outbreak of World War II. Those improvements relating to soil conservation won approval by the Department of Agriculture in 1941, but by then the attention of the federal government in general and the Army engineers in particular was totally focused on national defense.

Thus, any hope of early congressional action on Lavon Dam and the rest of



the Trinity proposals, which included the building of Benbrook, Grapevine and Garza-Little Elm reservoirs, quickly faded. They became, in effect, some of the nation's earliest "war casualties," although they were not officially dead, merely dormant.

For the next several years, all domestic dam-building would remain on the "back burner" as more urgent wartime concerns took precedence. But in 1944, even before the war ended, Congress demonstrated its continuing interest by authorizing a special soil conservation program for the upper Trinity. The Flood Control Act of that year authorized the Department of Agriculture to initiate a Trinity "watershed-improvement plan of action for runoff and water-flow retardation and soil-erosion prevention in aid of flood control."

By the time the war ended in early September 1945, it was obvious that the much-discussed and long-delayed Trinity improvement program was going to be carried out. The system of dams, including the one at Lavon, was finally going to be built. But the manner in which the reservoirs they created would be used was still very much in doubt.

Slowly, a new concept in flood control was taking shape. Some government leaders were beginning to grasp a basic fact of nature that many observers who were personally touched by the situation had known for a long time: "Flood control must start at the top of the hill, where the first trickle of surface water forms."

This emerging concept held that, in order to be effective, all measures designed to conserve soil and water and control flooding within a given drainage system must be interrelated and not in conflict with each other.

Woven into the concept was the belief that a single reservoir could — and should — serve a dual purpose, as both flood control device and water supply lake.

Nowhere was this belief more strongly held than in the alternately water-short and water-ravaged towns along the Trinity's East Fork. In a letter to Col. D.W. Griffiths of the Galveston office of the Corps of Engineers, dated November 23, 1945, McKinney Mayor R.F. Newsome expressed the belief in these terms:

*"It has come to our attention that the present plans on the Lavon Dam in Collin County call for a conservation reservoir to be used strictly for flood control.*

*"The citizens of McKinney are very desirous of having the Lavon Dam constructed whereby water may be secured for the use of the city*



*and local industries and for other industries that may locate in this vicinity.*

*"The city of McKinney is now dependent on deep wells. We have been advised that the water level in these wells is declining at a rapid rate, and we must look to the future for surface water. Our present water supply is taxed to handle the needs of the city and local industries."*

Mayor R.B. Beaver of neighboring Farmersville, one of the few towns on the East Fork with its own small supply of surface water, wrote Colonel Griffiths to outline similar concerns.

*"The town of Farmersville will soon have urgent need for water," he wrote on November 21, 1945, "owing to lakes filling with silt and our deep well having been abandoned because of a quality of water not possible for human use. I am sure there are others in the area similarly affected. . . ."*

The question now was how the Corps of Engineers, the myriad agencies in Washington and the members of Congress who funded their operations would react to these appeals from the grassroots. Yielding to the appeals, regardless of how logical they seemed, would be contrary to long-standing government tradition, since more than 90 percent of all COE reservoirs developed in Texas up until this time had been designed exclusively for flood control with no consideration to water supply storage.

Faced with an increasingly desperate situation, community leaders along the East Fork could only hope that common sense would prevail. Riding on the federal decision was something much more crucial and immediate than the future shape and character of the lake to be created by Lavon Dam, or even the eventual fate of the proposed Trinity canal.

The very survival of numerous towns and cities was hanging in the balance.





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## From Decades of Crisis Springs a Fountainhead of Hope

*"I was born in Garland before the turn of the century, and I've seen the town grow from 600 or 700 people to about 180,000. It would never have happened without Lake Lavon. Before the lake, all we had was three deep wells, and they were getting lower and lower every year."*

— Hack Roach  
former NTMWD board member

As the post-war era arrived, the end of six years of worldwide bloodshed and strife sent a wave of euphoria sweeping over Texas and the rest of the nation. By the millions, husbands, fathers, sons and lovers were coming home from history's most terrible war, shedding their military uniforms and resuming their civilian lives. Foremost in the thoughts of most was the prospect of starting families, buying new homes and automobiles, and generally pursuing the good life to which they believed their wartime sacrifices entitled them. To most, the future had never looked brighter.

It was a time of big dreams, not only for individuals but also for many smaller communities in Northeast Texas whose more farsighted leaders could see a period of unprecedented growth and prosperity opening up before them as peace returned. Tempering the enthusiasm of the times, however, was a sense of urgency. America had become a much more mobile society than it had been before the war, and it would become even more so in the years ahead. Increasingly,



the lure of the cities was drawing young people away from the small towns, rural hamlets and farmland. If smaller communities were to share in the coming explosion of wealth and population, they were going to have to do a much better job of providing basic facilities and services than they had ever done in the past.

Among these basics were such down-to-earth concerns as water. No town was going to grow very much, even in a time of big dreams and high hopes, without an adequate water supply — and almost no towns in the region *had* an adequate water supply.

Rockwall was a prime example of a community that sensed the bright prospects for the future and was eager to reap its share of them. The slogan of the local Chamber of Commerce in the 1940s and '50s — “A Town Today — A City Tomorrow” — was filled with hopeful anticipation, yet Rockwall faced a serious water problem. It was a problem severe enough to keep the town’s optimistic slogan from ever being fulfilled unless the situation changed drastically.

As Evelyn Lofland, daughter of the late Rockwall banker and community leader J.O. Wallace, puts it: “My dad knew that Rockwall couldn’t grow with just the water supply from a few deep wells and a six-inch pipe to bring it up. But that was all the water Rockwall had.”

Consequently, in a letter to U.S. Representative Sam Rayburn a few months after the war ended, Wallace warned:

*“I am not certain that I can encourage the school-age children of this county to stay here any longer without the development (of an adequate water supply), because there will be no jobs here for them.”*

Even the agricultural production on which Rockwall’s existence had historically been based was endangered by a dwindling and uncertain water supply. Wallace pointed out that Rockwall County’s peak crop production had occurred nearly a half-century earlier, in 1900, and had been declining since. *“Footfalls gather where abundant water is found — and that means income and tax-paying ability,”* he noted bluntly.

Mesquite was another town standing in the path of phenomenal growth, but lacking the water to accommodate it. When the town had completed its second artesian well in 1941, to augment an original well drilled in November 1910, and the well flowed a bountiful 217 gallons per minute, it had been a cause for major celebration. But within a few years, the mood of community leaders had changed to one of growing concern about the future.

For a community of fewer than 1,100 people, as Mesquite had been at the



time of the 1940 federal census, the new well was big news. But in the Mesquite that would emerge in the 1950s and swell to a never-dreamed-of population of more than 25,000 by the end of that decade, it would literally be nothing more than a "drop in the bucket."

In Garland, too, the water supply situation was tenuous at best. As former NTMWD board member Hack Roach recalled in a 1989 interview:

*"I was born in Garland before the turn of the century, and I've seen the town grow from 600 or 700 people to about 180,000. It would never have happened without Lake Lavon. Before the lake, all we had was three deep wells, and they were getting lower and lower every year."*

The same story was repeated, in one form or another, all over the East Fork basin. Even without a steadily dwindling water table, no amount of wells would be sufficient to meet future demand. A large, reliable source of surface water was the only answer.

Rockwall's Wallace was among a number of community leaders who had perceived the scope of the problem as much as 15 or 20 years earlier, and who had been instrumental during the 1930s in getting a reservoir on the East Fork included in a master plan for the Trinity watershed. That reservoir, to be located near the Collin County community of Lavon, had now become one of four major lake construction projects authorized by Congress in the Rivers and Harbors Act of 1945 (the others being Garza-Little Elm Reservoir in Denton County, Benbrook Reservoir in Tarrant County and Grapevine Reservoir in Denton and Tarrant Counties).

On the last day of February 1946, leaders from nine small communities met at the Wylie City Hall and joined forces to organize the Tri-County Lavon Reservoir Association to work for specific improvements closer to home. Roland Boyd of McKinney became president of the association, with Wallace and C. Hansford Ray serving as vice presidents and W. Hammond Moore of McKinney as secretary-treasurer.

Directors elected at the meeting included, in addition to those listed above: R.F. Newsome, Hal L. Dyer and J.H. Merritt of McKinney; J.W. Neal and George Dalton of Princeton; R.B. Beavers and D.W. Sellers of Farmersville; L.V. Mouldon of Murphy, H.R. Bisby, Ray Olinger and W.H. Bradfield of Garland; R.F. Hartman and Nathan Eldridge of Wylie; J.L. Briggs and Joe T. White of Rockwall, and Lester Floyd and Homer Horton of Plano.

Among the group's primary goals was using the watershed's resources to solve



the chronic water shortage that plagued the towns of the region, and they lost no time informing the “proper authorities” of their existence. On March 5, 1946, Wallace wrote a letter to Col. D.W. Griffiths, chief of the Army Corps of Engineers office in Galveston, in which he told of the organizational meeting and noted:

*“The purpose of this meeting was to promote the best interests of the (East Fork) watershed area. . . . Particularly was the group interested in the only two resources we have — water and soil. The Lavon Reservoir, as permitted under the 1944 Flood Act, was considered not enough just as a flood control project. As the flood waters have been a destructive agent (emphasis Wallace’s), it was brought out that these same flood waters could be harnessed and become a useful agent.”*

But in trying to accommodate the special needs of their communities, the founders of the Tri-County Lavon Reservoir Association faced some major obstacles, as well as big-time competition for the ear — as well as the expertise and resources — of the federal agencies involved.

The Trinity master plan was the outgrowth of ongoing efforts by the Trinity Improvement Association, which had grown into a powerful lobbying group since its founding in 1930. The TIA was solidly backed by some of the most influential figures in the Dallas and Fort Worth business communities, but representatives of many East Fork communities were also active participants. The TIA had been instrumental in getting Washington’s commitment to spend tens of millions of dollars on the Trinity, and its plan for the Trinity watershed was hailed in late 1946 by TIA General Manager John M. Fouts as the “major project of its kind” in the entire nation.

“Its uniqueness lies in the fact that it is the first truly coordinated program for an entire river watershed,” Fouts said. “Under congressional directives . . . the War and Agriculture Departments are authorized to conserve properly and to utilize adequately the water and soil resources of the Trinity Basin, from literally its highest divide down to the Gulf of Mexico.”

But for the towns on the East Fork and their homegrown association, all was far from rosy as the Trinity improvements took shape and as the date for awarding the contract on Lavon Dam grew steadily closer.

There were, in fact, serious underlying problems — problems that stemmed mainly from the fact that the various forces working to improve and develop the Trinity watershed had highly mixed priorities. The Army Corps of Engineers was





Members of the Tri-County Lavon Reservoir Association examine plans for Lavon Reservoir near the future lake site.

concerned primarily with flood control. The Agriculture Department's major interest was soil conservation. Above all else, the political and business leaders of the big cities wanted a Trinity canal that would transform Dallas/Fort Worth into a major inland port.

*Last but not least, the small, thirsty towns along the East Fork desperately wanted a permanent, dependable water supply. If the Lavon Reservoir failed to fill this need, it might well be decades before another opportunity would present itself.* But among the larger, more visible players in the high-stakes Trinity game, this was a decidedly minor consideration.

As mentioned in the previous chapter, leaders of the East Fork communities had launched an aggressive campaign of letter-writing, telephone calls and public relations efforts during the fall of 1945 in support of their water supply goals. These overtures were directed to a number of individuals in key positions to help, ranging from TIA engineer Forrest L. Park to Colonel Griffiths to Congressman Sam Rayburn. (Rayburn's vital role, both in securing funding for Lavon and in its eventual designation as a water-supply lake will be discussed in detail in the following chapter.)

For one thing, the East Fork community leaders wanted the Trinity Improvement Association to lend its considerable clout to their campaign and not allow



it to be “buried” beneath the larger, much more highly publicized crusade to canalize the river from Fort Worth to the Gulf. A letter from W. Hammond Moore, manager of the McKinney Chamber of Commerce and secretary of the Tri-County Lavon Reservoir Association, to TIA engineer Park, and dated October 11, 1945, conveys something of the sense of urgency with which Collin County leaders viewed the matter.

*“At a recent meeting of the executive committee of the Chamber of Commerce, I was instructed to extend an invitation to you to appear before the committee for a discussion of the future uses of the Lavon Reservoir in Collin County.*

*“If you will name the date that will be convenient, I will make the necessary arrangements with the committee for your appearance.*

*“We wish to thank you for your interest and sincerity, hoping that we will be able to work out some benefit for McKinney and Collin County from this proposed project.”*

On December 1, 1945, a letter signed by Collin County Judge J.C. “Jim” Cantrell and all four members of the County Commissioners Court was sent to Rayburn, expressing strong concern about just what kind of lake the federal government was about to bestow on Collin County.

*“From the information we received . . . the Lavon Dam is to be only a flood control dam which means that during part of the season the lake would be empty,” the letter said, pointing out that this would not only make it unusable as a water supply but even of doubtful recreational value.*

*“. . . if recreational features could be developed, our citizens believe it would help offset some of the loss the county will suffer because of the construction of the dam,” the letter concluded. “We, as a court, trust you will use your influence in helping to get this dam made into a Reservoir Dam as well as a Flood Control Dam.”*

As the letters indicate, many citizens of Collin County saw the construction of a non-water-supply lake on more than 13,000 acres of choice agricultural real estate — particularly one that would be dry a good part of the time — as being of no real benefit to them. It would only detract from the county’s tax base, critics said, while providing nothing of substance to the county in return. And when the letter-writing campaign failed to produce the desired results quickly, many citizens rose up angrily to oppose the lake.



In an interview in August 1988, Truett Smith, one of the principal founders of the North Texas Municipal Water District and one of about 100 persons who attended the organizational meeting of the Tri-County Lavon Association, recalled the feelings expressed early in 1946 by a large percentage of Collin County citizens:

*"They were going to build us a lake, but they were going to make it a 'mosquito pond' with no water (supply) whatsoever, just strictly flood control. People didn't like that."*

According to McKinney's Roland Boyd, the sentiment against a lake designed only for flood control ran so high that an organized effort was launched in early 1946 to prevent construction of the lake. Ironically, says Boyd, one of the chief aims of the Tri-County Lavon Association actually became to oppose Lavon.

Boyd vividly remembers how his fellow organizers "drafted" him to head the new association. "They pulled a trick on me," he says. "There were twelve of us sitting in this office, and they started going around the room, asking each person if he could take over as president. They all had some excuse — their doctor wouldn't let them or they were having problems with their business or something. They had it fixed where I was the last one to say anything, and since I was just starting to practice law, I didn't have an excuse, so I got elected. It took me a month to figure out what had happened."

Within weeks after the Tri-County Association was founded, members launched a letter-writing "blitz" at Colonel Griffiths that made the campaign of the previous fall seem mild by comparison. Letters descended on the Corps of Engineers office in Galveston from every corner of the East Fork Watershed — from bankers, merchants, elected officials, school administrators, civic leaders, Chamber of Commerce officers and ordinary citizens.

*"The citizens of some 4,000 square miles adjacent to the Lavon Reservoir respectfully claim that the provision to include water conservation storage in the lake will greatly increase the agricultural possibilities of the East Fork flood plain and, of much greater importance, the industrial potentialities of the area," wrote Truett Smith in his capacity as cashier of the First State Bank of Wylie.*

*"Just recently a question has developed concerning the advisability of including conservation storage in the government's Lavon Dam project, and I respectfully submit my argument in favor of this needed storage," added Rockwall School Superintendent J.A. Wilkerson.*



*"I am writing you in connection with the proposed Lavon Dam, especially with reference to making it a 'water reservoir project.' . . . We need at least as much water in the future as we have used in the past, and if we are to obtain and keep any additional people or industries, we must have an even more abundant supply of water," chimed in A.H. Eubanks, Jr., cashier of McKinney's Central National Bank.*

*"We would earnestly solicit that you add conservation storage to the (Lavon) soil and flood control project because of the many advantages and added benefits that will accrue by virtue thereof," wrote Rockwall real estate abstractor O.L. Steger.*

But as the weeks went by, with no indication that the COE or other concerned federal agencies were softening their stand on the future role of Lavon, public anger began to flare. To Tri-County Association President Boyd, it became clear that, failing some sign of flexibility by the government on the water storage issue, his chief responsibility in his new position was to mount a no-holds-barred fight against construction of the lake.

"It was my job to defeat the lake, period," he recalls. "We just weren't going to have that (a lake for flood control only)," he recalls. "When I was elected president of the association, the whole object was to defeat it. It didn't matter what it took, if we couldn't have water out of it, we were going to defeat it."

Matters came to a head when Boyd led a group of some 400 concerned citizens from the three counties represented by the Tri-County Lavon Association to a Corps of Engineers public hearing at the courthouse in Denton on April 16, 1946. The group went fully prepared for a bitter face-off, but what started as a crusade was eventually transformed into a valuable lesson — and a compromise.

"We filled up the auditorium," says Boyd, "and when the officer in charge (Col. H.R. Norman) got through telling about the way they were going to do it (Lavon) and why, I asked to get the floor with those 400 people behind me. I started telling him what on earth was wrong with it, and I really got on the Colonel's nerves. He was about ready to start cussing me, but I wouldn't stop."

Despite Colonel Norman's attempts to quiet Boyd and recognize other speakers, the harangue by Tri-County Lavon Association members went on for thirty minutes or more by Boyd's recollection. And finally, pounding on the table for order, the COE officer exploded:

"Damn it, Mr. Boyd, you can keep me here until this time next spring and my answer will still be the same."



To which Boyd retorted heatedly: "Would you mind telling me why, Colonel, since it doesn't make sense? You've heard what these 400 people think about it. Why can't you see our point?"

It was only when the meaning of the Colonel's response to these questions sank in that the reasons for the COE's adamance about making Lavon a flood control-only lake became clear to the citizens group, Boyd says.

"We could spend \$12 million building Lake Lavon and fill it up with water for you to use, and it wouldn't last more than five years," Norman told them angrily. "Not if the damned farmers keep on planting up and down the hills and the silt keeps coming into the lake and filling it up. I'm not going to throw government money away on something like that."

So caught up had they been in their zeal to obtain a dependable supply of water that the citizens had failed to realize the absolute necessity of an active soil conservation program to protect that water supply. Colonel Norman pointedly called attention to the fact that citizens of Collin County had twice voted down a proposal to establish a soil conservation district in the county, and he made it clear that, without such a district, no city or town on the East Fork would ever run a single gallon of Lavon water through its municipal water mains.

"I started arguing with him," Boyd recalls, "and he said, 'Well, you've had two elections. What was the outcome?'"

"I said, 'It (the soil conservation district) was defeated decisively both times.'"

"And he said, 'That's exactly what I'm talking about.' Suddenly, it became very clear what we had to do."

According to Truett Smith, who was also present at the meeting, Colonel Norman left no room for doubt. "He told us very bluntly, 'You guys can put it down that you're not going to get a reservoir at Lavon unless you do something about that problem,'" Smith recalled more than forty years later.

Former Collin County Judge Jim Cantrell also remembers the Denton meeting with great clarity:

*"Although many people were against the lake because it would take some of our finest acreage and some of our tax revenues would be lost as a result, I had decided I was in favor of it," Cantrell says. "I took that political position, but I was greatly disturbed by the plan to make it only a flood-control lake."*

*"We were contending at the meeting that we wanted 100,000 acre-feet of water for municipal use in addition to the flood control," Cantrell*



*adds, "and they (the COE) said, 'But you don't even have a soil conservation district in the county where the lake's being built,' and they were right. Most of us (in the delegation) had voted for soil conservation, but many people hadn't because we had failed to get the message down to the grassroots."*

In his capacity as county judge, Cantrell says he felt he could do something to remedy this situation. As he recalls:

*"I said, 'Give us three months and we'll have it.' I didn't know how we were going to do it, but I walked out on the courthouse steps and told the people from Collin County, 'You heard what they said and you know what we have to do.' So we came back home and called another election, and this time it carried beautifully."*

Once it became clear that the lack of an active soil conservation district and close cooperation with the Soil Conservation Service could keep them from obtaining a major water-supply lake on the East Fork, the leaders and citizens of Collin County moved as rapidly as possible to clear this obstacle. By now, it was obvious that there was no time to lose if Collin County — and, by implication, other areas standing to benefit from the waters of Lake Lavon — were to get their share of federal attention. Although those who benefited from the water storage in a COE lake would be required to repay the government for the cost of constructing the storage over a period of years, only Washington possessed the wherewithal to come up with the required initial outlay of millions of dollars.

As Trinity Improvement Association engineer Forrest L. Park noted in letters to W. Hammond Moore, manager of the McKinney Chamber of Commerce, and J.H. Merritt, the TIA board member representing Collin County, dated January 25, 1947:

*"We wish to call to your attention the apparent advisability of the completion, before the end of the federal fiscal year on June 30, of the organization of the new soil conservation district in Collin County. . . .*

*"The Soil Conservation Service, acting for the U.S. Department of Agriculture, (has) entered into final working agreements with soil conservation districts representing all of the Upper Trinity Watershed except Collin County and started actual expenditures of flood control funds appropriated under the 1944 Flood Control Act. . . .*

*"I do not know whether it is necessary for Soil Conservation Service*



*expenditures to be made in Collin County before the end of this initial year of the Trinity project . . . but certainly it would do no harm if the organization of the new district was fully completed and working agreements made with the Soil Conservation Service before June 30, 1947."*

Over the next year, the intricate and interwoven relationship between soil conservation, flood control and a dependable water supply became apparent to many in Collin County. Paul Hardin, who succeeded Moore both as manager of the McKinney Chamber and secretary of the Tri-County Lavon Reservoir Association, became one of the leaders in the movement that would lead to the formation of the North Texas Municipal Water District. He recalls the dawning of that realization in these terms:

*"The whole big idea was that if we could get all the land terraced and all of it under grass the way it should be, then this would greatly extend the life of Lake Lavon. Put the grass on the hill and then you can have these reservoirs to protect the bottom land from flooding, and you can also make the conservation pool in Lavon last for many, many years."*

Once this idea was driven home, Collin County became one of the soil conservation showplaces of the entire nation. Close to 100 small flood-control lakes would be constructed with Soil Conservation Service funds to augment Lavon, and the county would also become the site of one of a network of "demonstration farms" constructed by the SCS to illustrate how the principles of conservation could be applied on the typical family farm.

"We bought a sixty-acre tract a mile or so from Princeton, and we got all kinds of pledges and lots of volunteers to help," explains Hardin. "Everybody pitched in and did a hell of a lot of work. We terraced and cultivated the land, built a house, a barn and a pond, put in an irrigation system, planted an orchard, did all those things. When we finished it, we had about 50,000 people who came from everywhere to see it — including H.L. Hunt, the big oilman from Dallas. It got us all kinds of good publicity."

With the help of such favorable attention plus the friendly ear and continuing support of Sam Rayburn in Washington, the future of Lavon as a water-supply reservoir — while still not totally assured — appeared much more hopeful by early 1947 than it had just a few months earlier.

In an article in the January 1947 issue of *Waterways* magazine, the TIA's John Fouts reflected that new optimism when he wrote:



*"The conservation storage of Lavon Reservoir . . . is expected to yield great economic advantages to the East Fork area, the towns and cities of which now depend largely on deep wells, which are beginning to over-tax the water-bearing sands. The area has been an agricultural one until the last decade, during which some material amount of industry has come in. Its aggressive citizens say that they must cease to 'mine' their resources by shipping out only raw materials; that their area must process at least some of their largely agricultural products. Lavon storage is essential to this processing."*

By the time this article was published, bids on the construction of Lavon were scheduled to be opened by the COE on November 7, 1947, and it was projected that a contract would be awarded before the end of the year. Meanwhile, though, the appropriations bill that would actually fund the lake had to make its tedious way through Congress.

Before the end of 1946, groundbreaking ceremonies were held for Benbrook (June) and Grapevine (December) Reservoirs, two of Lavon's "sister lakes" in the Trinity master plan, and by mid-July of that year, the appropriations bill for Lavon had passed the House of Representatives and been sent to a Senate committee for more discussion.

The Lake Lavon-to-be was rapidly moving from the drawing-board stage toward reality, but years of construction work — as well as the potential for more years of filling time, depending on the unpredictable rainfall patterns along the East Fork — still stood between the area towns and their best hope of quenching their long thirst.

Even if it was now safe to assume that Lavon would, indeed, offer permanent water storage, now that the big flap over a soil conservation district was over and done with, how was that water going to get from the lake to the towns? As members of the Tri-County Lavon Reservoir Association gathered on September 17, 1947, following a meeting between an association committee and COE officials at which permanent recreational facilities for Lavon were discussed, it was becoming apparent that the association was in the process of winning a major victory: Lavon *would* be both the great water resource and recreational asset that the association had fought so diligently for.

But at the same time, a second, more unsettling, realization was beginning to dawn. The Tri-County Lavon Reservoir Association was, after all, merely a loose-knit coalition of representatives from a handful of small towns. It had neither the



money nor the authority to build pipelines, pump stations or water treatment plants — much less the capacity to handle all the legal and technical details involved in getting the future water of Lavon from lake to consumer.

Although the association had done an admirable job thus far of making the case for an East Fork water-storage reservoir to various segments of the federal government, it had no official status whatsoever as far as the Texas Legislature and the State Board of Water Engineers were concerned — and little influence in Austin. It was becoming increasingly clear, however, that some type of legally constituted public authority would have to be created if Lavon water was ever to reach the homes and businesses that so desperately needed it. To accomplish this, action by the Legislature would undoubtedly be essential, and with water conservation groups from the Pecos to the Sabine now clamoring for the lawmakers' attention, getting this action would be no easy task.

As Truett Smith put it wryly: "Now that we were going to get all this water, what the hell were we going to do with it? How are we going to use it?"

At the moment, these loomed as the biggest questions of all.

As the summer of 1947 faded into fall, events seemed to move with ever-increasing speed, and it was soon obvious that the long wait for Lavon to start becoming a reality was almost over. Bids on the initial phase of construction of the 9,540-foot earthen dam that would create the lake were opened as scheduled at Corps of Engineers state headquarters in Galveston at 2 p.m. on November 7, and Col. Bernard L. Robinson, district Army engineer, promised fast action.

The COE immediately announced that Fuller Construction Company had submitted the low bid and would be awarded the contract. "We hope to have the dirt flying before the end of this year," Robinson said.

On December 12, directors of the Tri-County Lavon Association met at Wylie in a celebratory mood, which was captured in an article published on Christmas Day in the *McKinney Examiner*.

"The Tri-County Lavon Reservoir Association has set the groundbreaking for their \$12 million project for Dec. 27, 1947," the newspaper reported, "with the Honorable Sam Rayburn turning the first spade full of earth."

Sure enough, two days later, at 10:30 a.m. on a chilly Saturday morning, Rayburn sank a ceremonial silver-plated shovel into the black, waxy earth two and a half miles east of Wylie on what had been, until recently, the R.E. Alexander farm, and Lavon Reservoir officially became a reality.



With Roland Boyd presiding as master of ceremonies and an audience made up of Colonel Henry Hutchings and other COE officers, state and local dignitaries, Tri-County Association members, newspaper reporters and several hundred interested citizens looking on, Congressman Rayburn also delivered the main address for the occasion over a statewide radio hookup.

Other speakers on the program included Rockwall County Judge Bill Lofland, Trinity Improvement Association President John Fouts and Collin County Judge Jim Cantrell. Rockwall's J.O. Wallace, McKinney's J.H. Merritt and Fouts used a three-handled shovel for their groundbreaking chores, which followed Rayburn's, and Wallace presided at a luncheon which followed at the Rotary Club Hall in Rockwall.

The event received widespread coverage by area media, and, predictably, much of the attention was focused on the new lake's envisioned importance as a component in the grandiose Trinity Canal plan, rather on the precious water supply it would represent.

"Here is the first step in the comprehensive Trinity program — soil and water conservation on the lands where the rains fall," the *Dallas Times Herald* quoted Fouts as saying in his talk, then added:

*"The final phase of the Trinity plan will be navigation, he pointed out, adding that the plan calls for canalization of the Trinity for barges. Citing benefits for Southwestern industry from such a navigation program, he asserted that heavy merchandise can now be shipped by water from Pittsburgh to Houston more cheaply than by rail from Dallas to Houston."*

The *Fort Worth Star-Telegram* offered similar observations:

*"Fouts was one of the speakers who drove home a message for water and soil conservation. He outlined the multipurpose of the reservoir — flood control, storage of water, soil conservation — and declared that the final phase of the Trinity River improvement will bring navigation as a lure for industries that depend on water transportation."*

Such glorified visions on the part of the big cities of the region did nothing, however, to dampen the celebration of the folks from the small towns along the East Fork.

At long last, the lake of which so many of these people had dreamed for so long was about to be a dream come true. But with the fulfillment of that dream came awesome new challenges and responsibilities. The *Times Herald* called



attention to this sobering fact in a thoughtful editorial published the day after the triumphant Lavon groundbreaking. As the newspaper noted:

*"The one natural resource most needed at this time by Dallas, Fort Worth and other North Texas cities is water. Without an ample water supply, these cities will soon reach their maximum growth. . . .*

*"So far, individual cities in this area have provided themselves with water through local programs. But the need has outgrown local resources. The procurement of water enough, not only for traditional uses, but to accommodate expanding industry, is a regional problem. . . .*

*"However, although water storage must be undertaken over a large area, it is still of vital importance for local communities, not only to provide purification and distribution facilities, but to pay their share of dam construction (as they would with Lavon through their participation in the North Texas Municipal Water District). This is true not only of the larger cities, but of the small towns. . . . Other improvements have their places, but the foundation of them all is a dependable water supply."*

No one realized the validity of these statements more clearly than the water-conscious local leaders along the East Fork, and yet none of them knew at this point precisely how the regional approach to water supply and storage could be put into effect. Although one or two water districts were in their embryonic formative stages in West Texas at this time, they were designed for much different situations than those facing the East Fork region.

"We had nothing to pattern after and no examples to follow, and that made it tough," Truett Smith would recall decades later. "When you have an old furrow to go by, it's not too hard to plow a straight row, but when you're plowing new ground, it can get pretty rough."

In other words, the Tri-County Lavon Reservoir Association was about to venture into uncharted waters. And before it had journeyed much further, those at the association's helm would find it necessary to make many crucial decisions — including one to kill off their own organization, then immediately "resurrect" it in a new form.

. . . .

In January 1948, actual construction work began at the Lavon Reservoir site — not with three-handled spades or silver shovels this time, but with massive machines capable of moving up to 8,000 cubic yards of dirt per day.



On the mild spring afternoon of April 22 of that year, directors of the Tri-County Association gathered at the east end of the dam site to watch the progress of the work for a while. They were gratified by what they saw and by the estimate provided by Fuller Construction Company and the COE that the dirt work covered by the initial contract should be completed before the end of the summer.

Later that same afternoon, the directors drove into Wylie for a business session in which they voted their association out of existence.

Specifically, they approved a resolution terminating the Tri-County Lavon Reservoir Association, representing communities in Dallas, Rockwall and Collin Counties, and created an entity known as the East Fork Association to replace it. In so doing, they broadened their area of representation to include Grayson, Fannin, Hunt and Kaufman Counties in addition to the three counties mentioned above.

As the directors noted in the resolution, the Tri-County Association had been organized with three principal goals. In the exact words of the resolution, these goals were to:

1. *"Get Lavon Reservoir changed from purely flood control to both flood control and conservation storage."*
2. *"Get responsibility and authority for recreation on the lake lodged in some federal agency."*
3. *"Get construction started."*

Whereas all three goals had now been accomplished, the resolution said, it was now time to move on into another phase of "unified, organized and coordinated action" for the improvement of the entire East Fork Watershed. Existing officers of the old association would constitute the Executive Committee of the new association, and the new office of general manager would be created. Anyone living in or owning property in the 2,055-square-mile area defined as the East Fork Watershed was to be eligible for membership in the new association.

Before they adjourned, the directors approved a motion calling for an "immediate" start in planning "a program of education on the possibilities of the development" of the East Fork Watershed.

A momentous step had been taken that day, but it was only one of many that still lay ahead. In the months to come, in order to fulfill Lavon's promise, some type of legally constituted vehicle had to be found to (a) oversee and administer the water rights in the lake, and (b) undertake the giant task of pumping, purifying, transporting and selling the water to the communities that were depending



on it for survival and growth. If this vehicle were successful — whatever it turned out to be — it would become as great a wellspring of hope as the lake itself.

As it turned out, the struggle to build this vehicle was helped along, at least in part, by a fortuitous “accident.”

In late 1948, Jim Cantrell left his position as county judge of Collin County, in which he had played a major role in winning the Lavon battle, and entered the banking business, first in McKinney and later at Princeton. “At the time, I felt that I had pretty well served my day insofar as the lake and the water situation were concerned,” Cantrell recalls. “But then one day, I got a telegram from the governor of Texas (Beauford Jester) telling me that I had been appointed to a committee to study the Water Code of Texas. I knew very little about the Water Code, but working with the committee gave me an opportunity to travel around the state to study water conditions and see how the code could be revised and made more workable.”

This unexpected appointment also brought Cantrell into close contact with some of the state’s most prominent figures and leading experts in the field of water conservation and development. Among this group were several individuals who would be instrumental over the next two or three years in making the North Texas Municipal Water District a reality.

They included engineers James Cotton and T. Carr Forrest, who would later become partners in the firm of Forrest & Cotton and serve as the principal engineering consultants for the district, and attorney John D. McCall, described by Cantrell as “the best known lawyer in the state in matters relating to water,” and who would eventually draft the legislation creating the NTMWD. They also included A.P. “Andy” Rollins, veteran chairman of the Texas Board of Water Engineers, who would, after his retirement from the water board, become the first general manager of the NTMWD.

According to Cantrell’s recollection, it was, in fact, a telephoned warning from Rollins at one critical point during this period that prevented the East Fork Association from losing its rights to Lavon’s water supply to a group further down the Trinity.

“One day at Princeton I got a call out of the blue from Andy,” Cantrell says, “and he told me, ‘Unless you people file for that water right away, you’re going to lose, because the downstream people are ready to file and they’re going to file any day now. The law is first in time, first in right, so unless you beat them to the punch, you’ll lose the water.’”



Cantrell quickly called the mayors of ten towns in the area surrounding the lake site and they hurriedly organized a meeting on a Monday night at the Harris Cafe in Garland.

"I asked John D. McCall to come because of his legal knowledge, and Carr Forrest came, too, because they were close friends," Cantrell says. "And with their help, we made a decision at that meeting to appoint Garland as a trustee for all of us for the purpose of filing for the water rights. We filed the following Wednesday, and the downstream people filed on that Friday, just two days later. That's how close it was."

For the communities along the East Fork, a critical battle had been won, but it was actually only one isolated example of the fierce competition for water that was touching off similar battles all across the state.

By the last years of the 1940s, the campaign to protect and develop Texas water resources had taken on many of the aspects of a latter-day search for the "holy grail."

Cities and towns everywhere had come to the realization that progress and prosperity were possible only with an adequate, reliable water supply — a realization underscored by the fact that the average statewide rainfall for 1947 had been well below normal at 24.75 inches and the average for 1948 would amount to just 21.79 inches, the lowest in more than thirty years (the mean average since record-keeping began in 1892 is just over 28 inches).

As John Carpenter, president of Texas Power & Light Company and a leader of the Trinity Improvement Association, pointed out in a letter to McKinney's Paul Hardin, secretary of the East Fork Association, in March 1948:

*"During the past several years the available supply of water for municipal, industrial and irrigation purposes has been critically short in many sections of Texas, ranging from the West Texas plains to the Gulf Coast and the Rio Grande. In many instances, existing lakes or storage reservoirs have reached dangerously low levels, due to insufficient rainfall and heavy use, and the water table of the underground water supply continues to drop at an alarming rate as more water wells are drilled and the existing wells are pumped harder in an effort to supply the demand for water. . . .*

*"From time to time the Texas Legislature has enacted special laws with the object of correcting apparent defects in the existing water laws of the state with the result that we now have a confusing legal founda-*



*tion with conflicting laws, and with basic laws without legal means of enforcement."*

*"Our water problems cannot be solved without proper and adequate water laws. Texas needs, and must have, its water laws examined and rewritten."*

In addition to the many regional groups pressing for water-related legislation, the Texas Water Conservation Association had become one of the most highly visible lobbying organizations in Austin. It was this group that undertook the considerable job of reviewing and examining the whole maze of Texas water laws and recommending that confusing and outdated statutes either be revised or replaced by more effective ones.

The general manager of this association, J.C. Sturrock, summed up the statewide situation in a letter to Hardin, dated April 25, 1949.

*"The Texas Water Conservation Association has helped bring about . . . the culmination of the dreams of our people in many areas for dams and reservoirs for storing and conserving the waters of our rivers and streams. But our work is not completed and will not be as long as there are acute water shortages in almost every section of Texas while approximately 80 percent of the average annual flow of our streams flows into the Gulf of Mexico unused in the form of storm and flood waters."*

Consequently, many bills relating to the effort to utilize this wasted water were being introduced in the Legislature, which was being asked, among other things, to approve a conservation compact for the Pecos River, fund a dam on the Rio Grande, pass a bill specifying underground water rights and enact others establishing various river authorities as agencies of the state.

Among this storm of legislation was a bill to create the state's first "municipal water district" on the Colorado River in far West Texas, an entity in which the cities of Big Spring, Snyder and Odessa had a vital interest. In June 1949, this enabling legislation was passed by the Legislature, and by August, a functioning board of directors held its first meeting.

Although the situation which the newly instituted Colorado River Municipal Water District was designed to address was far different from the one confronting the East Fork communities, it at least offered some type of legal precedent on which to build. It was a welcome spark of light in an otherwise dark and nebulous area.

Steering new legislation through the Legislature was always tricky, and under



present circumstances, leaders of the East Fork Association could see that it would be dangerously easy for legislation pertaining to what was now being referred to as the “Lavon water project” to get lost in the shuffle.

Continuing to add to the general confusion were the mixed priorities of the many interests working to develop the Trinity. As Hardin expressed it many years later: “The only thing the people who wanted navigation on the Trinity cared about was having enough water available to control the flow of the river and keep the water level high enough (for barges). The powers that be were interested in protecting Dallas and Fort Worth, and they could easily say to hell with that little old bunch over there on the East Fork.”

Nevertheless, despite the risks involved, it seemed obvious by early 1950 that the time to jump into the legislative fray could not be delayed much longer.

As Jim Cantrell recalls: “We told ourselves, ‘OK, we’ve filed for the water. Now we’ve got to do something about it.’ So with the leadership of John D. McCall and the know-how of Carr Forrest and other knowledgeable people, we set out to form a district.”

Looking back on those efforts today, several key differences stand out between the legislation framed by McCall and the bills used to establish other Texas water districts and river authorities. One of the most important of these lies in the manner in which the NTMWD’s board of directors is selected. In most other such entities, board members are either (1) appointees of the governor, (2) citizens of member cities elected by popular vote, or (3) mayors or city council members of the member cities whose board service constitutes an “extra job.”

As current NTMWD Executive Director Carl Riehn explains, all three of these other selection methods have certain drawbacks. “When directors are elected, there’s a tendency to turn the district into a competing political entity which may not always have the best interests of its member cities at heart,” he says. “On the other hand, when mayors and council members become directors, they tend to favor their own cities over common concerns and they also often don’t have sufficient time. And, of course, when the governor appoints your directors, you lose any chance of local control.”

*NTMWD directors are instead appointed by their city councils. They may be former city officials, but may not presently hold an elective municipal office. They also may not be municipal employees of the cities they represent, Riehn points out. Thus, while they are directly answerable to their various city governments, they are better able to consider overall area needs and regional concepts.*



*"This has been a key to keeping a healthy balance in our district," Riehn says.*

Another major difference is the fact that, unlike most other districts, the NTMWD is not limited to a specific geographical area. Theoretically, the district could operate in any political subdivision within the state where its services may be sought, so long as local voters approve membership in the district or a contract for nonmember customer services is signed with the local governing body.

There is one other significant difference as well. The district is empowered to assess and collect property taxes if it so desires, but it has never utilized this power. As a result, Riehn says, it has never competed for local tax dollars with the cities and counties of its service area.

While McCall and his law firm worked to perfect the legal language of the enabling legislation, the East Fork Association did what it could to establish a "higher profile" for itself and its cause. It took part in a number of high-visibility events honoring various COE officers for their role in alleviating regional water problems. It played an active role in negotiating for extensive recreational facilities on the future shoreline of Lavon. And with the help of Radio Station KMAE of McKinney, it even launched its first organized publicity campaign, which included weekly news releases to all newspapers and radio stations in the region, a 15-minute weekly radio program, and frequent spot announcements on the station about the project.

As the association gradually gained momentum, Garland, being the largest city represented by the group, began to assume more of the leadership role that had been borne by McKinney during the early days of the organization. The Garland Chamber of Commerce became a willing partner in promotional events for the Lavon project, and publisher W.H. Bradfield of the *Garland Daily News* provided both personal support and valuable news coverage.

Money was frequently a problem for the association, especially when it came time to pay for such essentials as legal services. Paul Hardin remembers one occasion when, as secretary-treasurer of the association, he was attempting to raise funds to cover some sort of emergency and Bradfield came to his aid.

"He (Bradfield) said, 'Well, I've got some mad money here, so I'm going to start this thing off.' I remember it distinctly because I'd never heard that expression (mad money) before. Anyway, he pulled out a \$50 bill and handed it to me, and the next thing you know, we had raised \$500. That was just the way things operated back then — just people taking an interest and working together."



On September 8, 1950, the City of Garland, acting for the association, formally asked the State Board of Water Engineers to conduct a feasibility study on how best to utilize the future water resources of Lavon.

At the same time, McCall was working with association President Roland Boyd, also an attorney, on the exact language of a bill to authorize the creation of a state-chartered water district, and engineers Forrest and James Cotton (who had recently left the COE to enter into a partnership with Forrest) prepared preliminary studies of how such a district could supply water to its constituents.

"The board met night after night with McCall and either Forrest or Cotton," Truett Smith recalled. "We'd start around 5 p.m. and many, many an evening we'd still be going strong at 9 o'clock. So many decisions had to be made in completing the organization of the district and determining how we were going to transmit the water and so forth. Today, those would be fairly simple decisions, but at that time they were rather earthshaking."

On November 27, 1950, in a meeting at the Garland City Hall, the association formally voted to ask the Legislature for enabling legislation to form a district, and just over a month later, on December 29, a legal notice on the application for legislation establishing the "Lavon Water District" was published for the first time in the *Rockwall Success* weekly newspaper.

During the next few weeks, however, leaders of the East Fork Association and their advisors apparently settled on a somewhat more expansive name for the proposed new district. On January 19, 1951, McCall presented them with a draft of a bill calling for the creation of the "North Texas Municipal Water District," and on February 12, the bill was submitted simultaneously to both houses of the Legislature as House Bill 241 and Senate Bill 141.

After all the frantic activity, drawn-out meetings and seemingly endless details of the past few months, approval of the legislation came almost uneventfully. The only slight hitch came in the form of some minor opposition in the Senate, but after the bill was amended, it was guided into law with the help of Senator George Parkhouse of Dallas, the veteran lawmaker who had introduced it in the first place and who was described by Truett Smith as "a staunch friend of the district."

The final Senate vote was 25–1 in favor of the bill and the House vote was a unanimous 121–0. A set of four House amendments was approved in the Senate by a vote of 29–0, and on April 20, 1951, the bill was signed into law by Governor Allan Shivers. (See Appendix for the full text of the bill.)



Although it created an entity that was different in many respects from any other water district ever established in Texas, the legislation passed with surprising ease and “almost no obstacles,” according to Smith. McCall is given much of the credit for this feat by virtually everyone who was closely associated with the legislative effort.

“We could never have done it without John,” says Jim Cantrell. “I’ll never forget him and the contribution he made.”

On May 29, elections were held in all ten of the original member cities of the district to authorize their participation in its activities, expenses and benefits, and in all ten the proposal received overwhelming endorsement, although balloting was light. A total of 1,986 votes were cast for confirmation of the district with just 14 cast in opposition.

In an editorial published two days after the elections, the *Dallas Morning News* offered these observations about the significance of the new entity that had just been created:

*“There is a pattern for the future in the formation of the North Texas Municipal Water District. . . . This is the second extensive intercity water district formed in Texas. The other is the Snyder-Big Spring-Odessa district which has started building a network of water pipelines from a lake to be constructed in Scurry County and an underground water supply in Martin County.*

*“The ten cities and towns of Dallas, Collin, Kaufman and Rockwall Counties will profit immensely from the great supply of water that will be available to them from the Lavon Reservoir. Water is the No. 1 need of most new industry today.*

*“The pattern they are helping to set is one that will be adopted eventually in many parts of Texas and other states. But it should show the way particularly here in the environs of Dallas. . . . There should be a water supply plan for this entire metropolitan area.”*

Slightly more than two weeks later, after directors were appointed by the city councils of the ten member cities, an organizational meeting was held on the evening of June 14 at the Mesquite City Hall, where the final official act in the creation of the North Texas Municipal Water District was carried out. The first slate of officers included Jim Cantrell of Princeton, president; H.R. Bisby of Garland, vice president, and Hansford Ray of McKinney, secretary. The following month, Wylie was selected as the site for the district’s permanent headquarters.



At the moment, Lavon Dam was still only a steadily lengthening pile of raw dirt, and the lake it would eventually form held not so much as a single bucketful of water. Its founders could not know that five long years of trials and obstacles still separated the fledgling district from its goal of delivering water to the communities of the East Fork.

The fountainhead still lay somewhere beyond the horizon, but now, at least, the route toward it seemed clear, and hopes had never been higher that it could — and would — be reached.





# 3

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## The Rayburn Factor — A Big Hand From Washington

*“Upon my return to Washington, the United States Engineer’s Office contacted me to determine if I was still interested in having conservation storage included in their report to Congress (on Lavon Dam) and I advised them that I was definitely interested in having it included. . . . You may be assured that I will keep in contact with the United States Engineer’s Office in an effort to be of all assistance possible in this matter.”*

— Sam Rayburn, Speaker of the  
U.S. House of Representatives  
May 21, 1946

When Sam Rayburn, the venerable Democratic congressman from Bonham, was asked to turn the first spadeful of earth to symbolize the start of the long-awaited Lavon Dam, it was much more than just another ceremonial ritual or an opportunity for political speechmaking. It was a fitting and deeply felt expression of gratitude from the membership of the Tri-County Lavon Reservoir Association and from thousands of citizens who realized that the lake to be created by the dam could never have happened without Rayburn’s unflagging support for the project and the influence he wielded in the nation’s capital.

At this particular juncture, Rayburn was serving as Democratic minority leader in the House during an involuntary two-year break in his record tenure as speaker of the House — a role for which he is most often remembered today. After a





Sam Rayburn, Speaker of the U.S. House of Representatives was an instrumental friend to Lake Lavon and an advocate for programs to meet the needs of his constituents.



period of Democratic domination during President Franklin Roosevelt's twelve-year administration, during which Rayburn first became House speaker in September 1940, Republicans had won control of both the House and Senate in the 1946 mid-term elections.

The GOP victory produced what President Harry Truman scornfully called "that do-nothing 80th Congress" and temporarily gave the powerful post of House speaker to Representative Joseph W. Martin of Massachusetts. But fortunately for the water-deprived towns of the East Fork, Rayburn and Martin were close friends despite their political differences, and Truman's "do-nothing" tag did not apply to the Lavon Dam project. Rayburn was able to use his influence in behalf of the dam even while deprived of the House speakership, and when the Democrats regained control of the House in 1948, Rayburn again became speaker. From that point on, except for another two-year period following the 1952 elections, he would serve continuously as House speaker — arguably the second most powerful job in Washington — until his death in November 1961. In so doing, he would hold the speakership longer than any man in American history.

As Rayburn's speech at the Lavon groundbreaking reflected, there were many pressing national and international concerns demanding Congress' attention in those busy and challenging postwar times. The rapidly deteriorating relationship between the United States and the Soviet Union often occupied Rayburn's attention, as did the desperate U.S. efforts to rebuild war-ravaged Western Europe through the Marshall Plan, and he outspokenly feared a third World War. But as both his presence at Lavon that day and his many months of behind-the-scenes efforts in behalf of the dam and reservoir illustrated, Rayburn had never forgotten the "folks at the forks of the creek" who had elected him to Congress in the first place.

By the time of the Lavon dedication, Rayburn had been serving Texas' Fourth Congressional District — comprised of Fannin, Grayson, Hunt, Collin, Rockwall and Kaufman Counties — for more than three and a half decades, having first won the district's congressional seat in 1912. In a House of Representatives where such veteran Texas congressmen as Albert Thomas of Houston, Wright Patman of Texarkana, Bob Poague of Waco and George Mahon of Lubbock held dominant positions, Rayburn was the most powerful Texan of all.

He had been a confidant of six Presidents, beginning with Woodrow Wilson, and had been instrumental in passing much of the key legislation pertaining to the nation's defense in two World Wars. But although his time and energies were



often directed toward world problems, these issues never caused him to neglect the concerns of his home district. Despite the fact that he became virtually unbeatable at the polls, he also never forgot that he had won his first primary election by just 490 votes out of more than 21,000 cast. Hence, he maintained a strong and active grassroots organization in every city and town in the district — and among his oldest and most valued political supporters were such men as J.O. Wallace of Rockwall, Truett Smith of Wylie, Roland Boyd of McKinney, Jim Cantrell of Princeton and others.

They steadfastly supported Rayburn's cause at home, and they had learned from long experience that he would just as steadfastly support theirs in Washington.

In representing a district that was, in most respects, a classic slice of small-town and rural America, Rayburn was always a strong supporter of legislation that benefited the nation's farm families and their communities. He had been the original champion of legislation to bring affordable electric power to rural homes through the Rural Electrification Administration, and, in fact, as a tribute to Rayburn, the first REA power was delivered in late 1947 to rural cooperatives in Grayson, Fannin and Hunt Counties.

Rayburn had been a key supporter of the Denison Dam project, which created Lake Texoma and, in turn, provided power for these REA cooperatives, as well as water for agriculture and industry and outstanding recreational facilities. And he had also used his influence to get four other major proposed North Texas reservoirs — Benbrook, Grapevine, Lavon and Garza-Little Elm — included in the Rivers and Harbors Act of 1945. But Rayburn realized, by virtue of his long experience in the committee rooms, offices and back corridors of Congress, that the inclusion of these lakes in this particular piece of legislation did not ensure their construction.

Like every other worthwhile project considered by Congress, they would have to be shepherded past many pitfalls and around numerous obstacles if they were to reach fruition and ultimately benefit the public. But once the lakes had been authorized by Congress, the "homefolks" knew that their best hope of attaining that goal was their friend in Washington — "Mr. Sam."

. . .

It might have been easy for someone who had spent so many years at the seat of national political power to take his status at home for granted — and, indeed, during the crucial war years, Rayburn remained at his congressional post to deal with urgent matters pertaining to the war effort, even at election time. But when



“Mr. Sam” did return to the Fourth District to campaign, he set a rigorous and exhaustive schedule for himself.

As one of Rayburn’s top lieutenants, Truett Smith vividly recalled the tireless manner in which the speaker “stumped” his way through Collin County.

*“Campaigning for public office in the ’40s and ’50s was a lot different from the way they do it now,” Smith said. “There was no TV or radio coverage, so you had to go out in person to all these little boon-dock areas and meet the old boys who were sitting and whittling at the country store and all that. And although Rayburn never had any really serious challengers that I remember, he believed in getting out there with his constituents, talking about the issues and listening to what they had to say.*

*“So he would call me up and say, ‘I’m coming back to hit the campaign trail for a few days. Can you give me a hand?’ And I’d say, ‘Sure.’ He had people doing the same thing in various areas around the six counties, and among us we’d work out a schedule. Maybe he’d spend the night in Hunt County with some of his supporters, and the next morning he’d start out with me for a one or two-day swing through Collin County. I would go pick him up over at Josephine, say, and we’d politick there for a while. Then we might make stops at Nevada and Lavon and maybe Copeville, then wind up at Wylie in time to have lunch with thirty or forty people.*

*“He’d make a little speech, and then I’d take him over to Murphy, where somebody else would pick him up and take him on to Plano and Allen and McKinney. That was the way we did it, and I was active in every campaign from 1945 until his death. We had a regular nucleus of people who did this every campaign.”*

Another key member of this nucleus was Rockwall banker and longtime Trinity improvement advocate J.O. Wallace, whose daughter, Evelyn Lofland, recalled the warmth and closeness with which Rayburn regarded his small-town friends during a 1989 interview.

*“Sam was the dearest friend of our family,” Mrs. Lofland said, “and he always ate with us whenever he came to this county. I remember the meals my mother used to serve him and how much he loved my mother’s cooking. He and my mother and dad were just the best friends in the world. Dad was one of Sam’s strongest supporters, and Sam really adored him.”*





Sam Rayburn, Speaker of the House (left), Avery Dowell of McKinney, and J.O. Wallace of Rockwall attended a meeting in Wylie regarding Lake Lavon in 1946.

Not coincidentally, where the fate of a certain dam and lakesite was concerned, many of these same beloved Rayburn constituents were also urgently searching for a water supply for their communities, and some were destined to become “prime movers” in the Tri-County Lavon Reservoir Association.

It was because of this connection that Smith and other key backers of the Lavon project were able to arrange a personal appearance by Rayburn one evening early in 1946 at a meeting at the Wylie City Hall, following a reception for the congressman at the home of Wylie Mayor D.W. Click. It was on this historic occasion that many in the group of about sixty prominent citizens of the East Fork basin received their first authoritative information on plans and prospects for Lavon Dam. Before the meeting was over, the stage had been set for the founding of the Tri-County Association.

“A group of us had discussed the situation informally on several occasions before this,” Smith recalled, “but finally we decided we really ought to get the thing organized. Wylie seemed like a good central meeting place, so we agreed to host the thing, and we had a really nice meeting. Some of the top people from the whole area were there — guys like Jim and Charlie Cantrell from Princeton;



R.B. Beavers from Farmersville; Roland (Boyd), Hansford Ray and Avery Dowell from McKinney; Alex Schell, Jr., from Plano; Mr. Wallace from Rockwall, and Hack Roach from Garland.”

Although the dam and the type of lake to result from it had been discussed informally for several months, this meeting was the first step toward an organized movement within the East Fork watershed.

“From that night on, the movement pretty well caught fire,” Smith said. “Rayburn gave us advice on how to proceed and all that sort of thing. He was so fundamental and so vital in getting everything done, and with the kind of power he had, he could pretty well do what he wanted to.”

In the months that followed the creation of the Tri-County Lavon Reservoir Association at the end of February 1946, Smith and Boyd made a number of trips to Washington to confer with Rayburn and seek his intercession with various federal entities ranging from congressional committees to the Departments of Agriculture and War in behalf of Lavon.

“The association paid my expenses up there (to Washington) to talk to Mr. Rayburn,” Boyd recalls, “and I made the policy to always write a letter and leave it with him when I went up there and asked him to do something.”

It soon became clear to the visitors from Collin County that Rayburn was utilizing his influence and persuasiveness to the utmost among his associates on Capitol Hill and among the labyrinth of involved federal agencies in order to guide Lavon in the direction they wanted

Throughout the spring and summer of 1946, Rayburn was busy behind the scenes. On March 13, he sent a brief note to Boyd, saying: “I have talked to the Chief of Engineers (Lt. Gen. R.A. Wheeler) about the type of Lavon Dam. He would be glad to have any suggestions that you people in that neighborhood would like to make. Get this data together as early as possible and send it to me and I will see that it gets into General Wheeler’s hands.”

In a letter to J.O. Wallace dated May 21, Rayburn relayed this information:

*“Upon my return to Washington, the United States Engineer’s Office contacted me to determine if I was still interested in having conservation storage included in their report to Congress (on Lavon Dam) and I advised them that I was definitely interested in having it included.*

*“You may be assured that I will keep in contact with the United States Engineer’s Office in an effort to be of all assistance possible in this matter.”*

Just over a week later, on May 29, Rayburn received a letter from General



Wheeler — obviously in response to earlier inquiries by the congressman — promising that the design of Lake Lavon would include conservation storage. And the very next day, May 30, Rayburn sent Wallace another message, enclosing a copy of Wheeler's letter.

*"You will see from . . . the third paragraph (of Wheeler's letter) that a multiple use dam will be built," Rayburn wrote. "I trust this will be pleasing to you, and I think that is what you asked me to try to work out."*

On June 6, when the House passed the Rivers and Harbors Authorization Bill, of which Lavon was a part, it stipulated that the lake would include conservation storage — a major victory for the East Fork forces. On July 22, Rayburn received a second letter from General Wheeler, pledging COE consideration of local views on conservation storage in Lavon, provided that President Truman signed the Rivers and Harbors Bill into law, which he soon did. Also in July, the COE was authorized by Congress to construct, operate and maintain recreational facilities on lakes under its jurisdiction, including Lavon.

Sometimes, according to Boyd, Rayburn was openly critical of certain federal agencies. After Collin County voters approved the establishment of a soil conservation district and the district began working to have a number of small erosion-preventing lakes built, Boyd recalls that Rayburn had some especially harsh words about the Soil Conservation Service.

"I think we ought to let the Corps of Engineers handle it (construction of the lakes)," Boyd quotes Rayburn as saying. "Those Soil Conservation Service people don't seem capable of moving a single spadeful of dirt. They've spent millions of dollars so far, and I haven't seen any dirt moved yet. They're the best map-drawers you ever saw in your life, but they're not worth a damn when it comes to action."

Such critical comments frequently had a way of "lighting a fire" under those at whom they were directed, Boyd notes. When he returned to Texas and relayed Rayburn's complaints to SCS officials, Boyd recalls that it touched off a flurry of heated denials. But as a direct result, the SCS brought a construction manager named Black Jack Johnson of El Paso, whom Boyd describes as the "best dirt mover in the State of Texas," to Collin County to get the project underway.

"Johnson decided the thing for us to do was to build eight of these lakes all at once," Boyd recalls. "He said, 'Do you think that will impress Speaker Rayburn?' and I told him I was sure it would." During the next few years, approximately 100 small lakes were built in the county, and thousands of acres of eroded, "worn-out" farmland were made productive again.



Obviously, Lavon's backers could not travel to Washington in person to convey every plea or ask every question about the lake. Frequently, they resorted to letters to Rayburn, among which was the previously mentioned message from Rockwall's Wallace concerning the decline of farm production in Rockwall County.

*"We can not only stop this decline," Wallace wrote in the February 14, 1947, letter, "but . . . produce more in Rockwall County than we have ever produced before. It has been my thought . . . that we must bring into the rural areas some industries where one or more (members) of the farm families can work and whose wages will help these families to enjoy the comforts of life to which they are entitled.*

*"This last thought prompts me to say we must have the Lavon Lake in which to store the most valuable resource we have — water. I have been advised that President Truman recommends an appropriation in his budget. Can you bring me down to date and will you advise me the strategy we should follow from here on?"*

With his letter, Wallace enclosed an article by columnist Wick Fowler of the *Dallas Morning News* in which Fowler quoted Wallace as saying that "15,000 acres of rich land" had been lost to erosion in Rockwall County. The article continued:

*"Folks with too much water at their doors worry as much as those with too little. Rockwall faces both of these trials.*

*"Not long ago, a half-block of the business district, situated above the surrounding flood country on a subterranean rock shelf, burned as the fire engines sucked air instead of water. The town well was sufficiently productive, but the storage tank was emptied too quickly. Rockwall's 1,400 people stood by wondering if the whole town would be destroyed. . . .*

*"Now the people are looking toward the Lavon Dam site with dreams of water for irrigating the valley lands and an end to nightmares of floods and their \$400,000 annual damage to this section."*

Rayburn replied to Wallace's letter on February 19, expressing his appreciation for the information. "I am going to do everything I can to get some money to start our project," he assured Wallace. But he also warned that "our Republican brethren" were threatening to withhold funds from the new budget for any dam construction not already in progress.

Obtaining the initial start-up funds for Lavon was a tedious, time-consuming project, the complete ins and outs of which may not have been fully known to



anyone other than Rayburn himself. But by February 11, 1947, the congressman was able to offer a mixture of “good news and bad news” in a letter to Collin County Judge Jim Cantrell:

*“Replying to your letter, I find that we were able to get in the budget estimate for the Lavon Dam, \$1,600,000 for work there for the fiscal year of '48, which of course as you know begins the first of July 1947,” Rayburn wrote.*

*“What these Republicans are going to do about propositions of this kind, no one can tell. There is strong talk that there will be no appropriations made for any construction where work is not already in progress. It appears to me that is a very foolish view, as I know there are many propositions that are highly deserving that have just not raised appropriations.*

*“You may rest assured that I will do my very best to get enough money to get a start on the Lavon Dam.”*

When Paul Hardin succeeded W. Hammond Moore as secretary of the Tri-County Lavon Reservoir Association in June 1947, he also became heavily involved in the Washington trips, frequently accompanying Boyd or Smith or both during the critical period when funding was being sought to begin construction of Lavon Dam.

In those days, when jetliners were unheard of and flights between Dallas and Washington were long and loud aboard propeller-driven DC-6's, such trips bore little similarity to the type of quick, quiet, untroubled air travel that is routine today. As Smith remembered it:

*“Paul and I would have to get to (Dallas) Love Field about one o'clock in the morning, so that we could get to National Airport in Washington by about the time the sun came up. Generally, we would get a day room in some little old two-bit hotel so we could shave and clean up, and then we'd be in Mr. Rayburn's office by the time he got there around 9 a.m.*

*“Most of the time, we'd try to schedule two hearings in the same day — one in the morning and one in the afternoon. This was a convenience for us because, of course, we had difficulty scraping up money for these trips, and we didn't have these huge expense accounts that would let us stay over for two or three days. We would catch a plane out of Washington about 5 p.m. and usually get back to Love Field about the same*



*time we had taken off the night before. We were always operating on a shoestring. If we got a \$100 check for expenses on a trip like that, it was a good donation."*

But the weary, under-financed Dallas-Washington travelers were also playing for high stakes in the federal budget.

"The big thing at this point was getting the money to get it (Lavon) started," Hardin recalls. "We had meetings all around the area to keep the interest going, and I guess I made probably two or three trips to Washington with Roland and Truett during that period, and sometimes there was just Truett and me. We'd go in to see Mr. Rayburn, and he'd haul us down the hall and before some committee."

Rather than testifying before all these committees themselves, however, the men from the East Fork frequently remained in the background and let Rayburn do the talking.

"Actually, all we'd do is make a little presentation to Mr. Rayburn," Hardin says. "We'd tell him we were ready to do so-and-so and ask him what we needed to do next. We not only had to convert him to our way of thinking sometimes, but we also had to convince him to go get the money. He would listen to us, offer a little advice or give us a little speech and send us on our way. The next thing we knew, all the stuff would be done, not while we were there waiting as I recall, but it would get done somehow."

Of particular importance in this process, Hardin says, was the support of Wright Patman, Rayburn's fellow congressman from Texas, and Representative Jamie Whitten, a Democrat from Mississippi and a member of a House subcommittee on agriculture appropriations.

"He had to have Patman's support to get the money he needed," adds Boyd, "because it wasn't easy to get as much as Rayburn was asking for. He was breaking all records, but he finally got it. Of course, he had lots of help from the rest of the Texas delegation, which was very powerful at the time."

Even so, there were fears in some quarters that, with funds so tight, a degree of infighting might develop for whatever money was available among the Texas congressional districts involved in building COE lakes. If it came to such a struggle, some East Fork leaders worried that they might lose out to well-organized and well-financed Dallas interests.

In a note to Rayburn in early April 1947, Boyd raised a question concerning a request to the federal government by the Dallas City Council that Lake Dallas, the city's primary water-supply lake, be made a part of the proposed Garza-Little



Elm Reservoir near Lewisville. At the same time, Dallas voted to ask for 310,000 acre-feet of water storage in the Lewisville project and another 85,000 acre-feet in the proposed Grapevine Reservoir. The city also sought another 105,000 acre-feet in the Lewisville reservoir in exchange for a perpetual flowage easement from Lake Dallas.

"Just wondered if this would affect Lake Lavon," said Boyd's note, which was attached to an article about the council action from the *Dallas Morning News*.

Rayburn promptly wrote back, saying: "I do not think that the matter connected with Lake Dallas will in all probability have anything to do with Lavon Dam. I am still trying to follow our budget estimate in the Appropriations Bill and am going to work it out so that we can get some money to start on if possible. However, I do not yet know what the exact program is and would not want you or anyone else to proceed on the theory that the dam will be built this year."

By late June, though, despite Rayburn's cautious posture, obtaining the first funding for Lavon had become a *fait accompli*. On June 26, the House Appropriations Committee approved an initial allotment of \$500,000 for construction of the reservoir "as soon as funds become available," and less than a week later, the measure passed the full House. The same amount was subsequently approved by the Senate.

Although it was only a modest start toward a project with an estimated price tag of \$12 million, "Mr. Sam" had done his job admirably thus far. His friends on the East Fork knew they would have had virtually no chance to win the start-up funds for Lavon without his continuous work and support.

Under the circumstances, it seemed only appropriate to express their gratitude in a "typically Texas" fashion — with a mammoth barbecue at which Rayburn would be the guest of honor.

At a meeting on June 30, members of the Tri-County Lavon Reservoir Association appointed a committee to plan the barbecue, voted to invite Col. D.W. Griffiths of the Army engineers as a second honored guests, and also raised the not-inconsiderable amount of \$705 in contributions from various sources to pay the expenses of the cash-short association. The cities of Wylie and Lavon each pledged \$100, as did three businesses — First State Bank of Rockwall, R.E. Alexander & Son and Brooks & West. The First State Bank of Wylie added a \$50 donation, and a number of individuals contributed smaller amounts.

Ticket sales for the October 8 barbecue, priced at \$1.50 per person, went briskly, and other donations of food, time and energy poured in for the event,



assuring that its cost would not have to come out of the association's meager coffers.

"It was one helacious barbecue and one of the biggest events we ever had," recalls Paul Hardin. "Somebody donated a cow, and somebody else donated a pig. Somebody else dug a huge barbecue pit, and we barbecued all night long. The next day, we must have had 5,000 or 6,000 people out there (at the lake site). I'll never forget how much Alex Schell, Jr., (of Plano) enjoyed that occasion. I think he had more fun than anybody, and he helped the rest of us have fun, too. He could tell stories like you wouldn't believe."

Less than a month later, the bids on the first phase of Lavon's construction were opened, and in late December 1947, Rayburn again returned to the lakesite for the most triumphal moment of all — the groundbreaking for Lavon Dam.

Despite the elation that surrounded him that day and the sense of personal pride he must have taken in this event, Rayburn's speech at the groundbreaking clearly illustrated the far-flung interests and worldwide concerns with which he and other leaders in Washington were forced to deal daily during this trying period. He voiced the widespread fear that the Iron Curtain which already divided Europe, might fall across the Atlantic, separating the United States from the other Western Allies.

"Before breakfast tomorrow," he warned solemnly, "the tinder may be lighted that will bring the third world war. . . . No one in or out of government knows if war will come this year or next."

He also cautioned against isolationism on the part of the U.S. that had helped set the stage for both previous World Wars, and he urged support for the newly launched Marshall Plan, relating that massive effort to relieve suffering in Europe to farm families and small towns thousands of miles away in North Texas.

"The humanitarian phase of this program should appeal to every good citizen," Rayburn said. "I'm willing to appropriate the money for the starving. . . . It is just as important to the cotton farmers of Collin County that Western Europe be rehabilitated as it is to the people of war-torn Europe."

Without rehabilitation, he emphasized, there could be no revival of world trade and no great market for the agricultural wealth of the United States.

He predicted that the agricultural and industrial development of the Southwest was just beginning, and he called soil conservation the greatest domestic need confronting America. "If we continue the vandalism of the soil another 25 years," he said, "we won't have anything to sell or give the nations looking to us for help."



In taking note of Rayburn's appearance at the Lavon ceremonies, biographer C. Dwight Dorough, author of the book, *Mr. Sam*, offers these observations:

"With his Denison Dam completed, he had turned his attention to a companion project which would protect for the future the thousands of acres of fertile land in Collin, Kaufman and Rockwall Counties

"Rayburn used such occasions (as the groundbreaking) as an excuse to discuss the most pressing legislative problems. Fresh from the fall session of Congress, he was in none too pleasant a mood. There was even a note of alarm in his utterances as he referred to the unfinished business connected with the Marshall Plan and the unrest throughout the world from the aftermath of war."

Among those in the audience on that historic day, the only Rayburn quality that was more impressive than his tremendous grasp of national and international issues may have been his willingness and ability to find time to address the concerns of the people of the East Fork basin. Admittedly, they were concerns that might seem minor in the face of the Communist menace, the ravages of the war just past and the specter of another world conflict, but Rayburn realized how important they were to the "folks at home."

For their part, those folks never forgot Rayburn's favors and friendship.

"There was absolutely nobody like Sam Rayburn," says Jim Cantrell, looking back at those times. "He was the greatest congressman there ever was. When he was home in Bonham, he was always available. Anytime you went over there, he would see you, and we went over there many times. Nowadays, congressmen hardly ever come home, and when they do, you can't get in to see them."

Although the most critical point in securing a major water storage lake on the East Fork passed with the beginning of work on Lavon Dam, Rayburn would stay in close touch with the project and later with the effort to put Lavon's water supply to use for the public good. Through letters and quiet behind-the-scenes initiatives, he kept the project on track as it made its way through the labyrinth of federal agencies and congressional committees through the closing ceremonies for Lavon Dam (at which he was again the main speaker) and beyond. The value of his help is incalculable.

As Truett Smith expressed it: "He was kept advised of our progress at all times, and he was always willing to help. After we got the storage of water in the lake assured, we had to come up with some way to utilize it, and all during that time, right up until his death, he stayed in close touch with what was going on."

Indications of the continuing reliance on Rayburn by the East Fork Associa-



tion and other Lavon backers can be found in the following letter to the House speaker, dated December 9, 1950, from association Secretary Hansford Ray.

*“At last night’s meeting . . . to prepare for the Lavon Water District,” Ray began, “we discussed the very vital need of conduits for releasing municipal water through the dam.*

*“Since most of the cities cannot take their water from the channel, a conduit system will be necessary. We would be very grateful if the U.S. engineers of the Fort Worth office could be instructed to make a survey of the possible cost and feasibility of including water conduits during the spillway construction. Since the spillway is under construction now, time is essential in this matter.*

*“All the cities concerned are most thankful for the time taken from your very important office to lend this assistance, and pray that your able leadership in world affairs will be successful.”*

In other words, “We need help, and we need it fast!” And “Mr. Sam” never failed to respond to such entreaties. He was never too busy to help.

He also never missed an opportunity to appear at water-related ceremonies in the Trinity Basin — from the dedication of a series of small Soil Conservation Service lakes in an isolated section of Collin County to the unveiling of a giant dam — to make a speech, mingle with his constituents and promote his populist ideals.

During almost half a century in Congress — including a total of 18 years as speaker of the House — Sam Rayburn compiled a record of leadership and accomplishments that may never be equalled. The effects of that leadership were often felt from coast to coast, and sometimes to the four corners of the earth.

But among his innumerable contributions to his nation, his state and his district, the blue waters of Lake Lavon that now flow into the homes and businesses of hundreds of thousands of water users will always remain “Mr. Sam’s” greatest legacy to his neighbors along the East Fork.

At its completion, Rayburn was gratefully referred to as the “legislative father” of Lavon Dam by Rockwall’s J.O. Wallace. Of all the titles he held over the years, none was more richly deserved.





# 4

## When the Wells Ran Dry and the Lakes Disappeared

*"The hard fact is that Texas simply does not have enough water in the right places to support its fast-growing population, industry and agriculture."*

— *Life Magazine*  
July 13, 1953

Even to habitual "water worriers," the first summer of the 1950s gave absolutely no advance warning that North Texas and the rest of the Southwest were about to suffer through the worst and most prolonged drought in the region's recorded history. If anything, weather conditions that summer suggested just the opposite. An unusually wet year in 1949 was followed by another in 1950, as rainfall totals hit 6.31 inches in May, followed by a respectable 3.03 inches in June, a soggy 7.70 inches in July and even a near-record 4.31 inches in normally arid August, enroute to a total for the year of almost 41 inches, well above the area's 36.8-inch annual average.

Along the East Fork, where by early 1951 construction of Lavon Dam was proceeding on schedule and the framework for the proposed North Texas Municipal Water District was being assembled, water supply prospects had never been brighter. Even by the most optimistic projections, Lake Lavon was five years away from being a usable source of water, but for the first time, there was every indica-



tion that the perennial water shortages that had plagued the area since the arrival of the first settlers would soon be a thing of the past.

The pervasive feeling that the worst of the century-old cycles of flood and drought was nearing an end in the Trinity watershed was heightened by the obvious attention being given to the area by the federal government, thanks in large measure to the continuing influence of Sam Rayburn. In addition, a request by new Texas Senator Lyndon Johnson had spurred the U.S. Bureau of Reclamation to begin an in-depth study of Texas water problems in 1949, and Congress was demonstrating a willingness to appropriate funds to alleviate those problems.

While much of this effort was directed at West Texas, the Upper Trinity Basin by now was becoming both a conservation showplace and one of the major national centers of activity for the Army Corps of Engineers. Demonstrating the status of the area was the establishment on April 16, 1950, of a new COE district office in Fort Worth and the transfer to this new location of many of the functions formerly handled by the Galveston office.

"In general," said a directive from the office of the district engineer in Galveston, announcing the move, "all projects which are functionally flood control and water conservation are to be transferred to the Fort Worth District, and all projects which are functionally navigation and coastal drainage are to remain in the Galveston District."

This brought the Corps' presence much "closer to home" and made its representatives much more readily accessible — and those concerned with Lavon's development lost no time in making the most of this.

The following letter, for example, was directed to Lt. Col. Delbert B. Freeman, district engineer for the new Fort Worth office, by McKinney's Roland Boyd, chairman of the Trinity Improvement Association's Recreation Committee, on April 14, 1950 — two days before the new office officially began operation.

"In view of the transitional period at the Fort Worth and Galveston District offices," Boyd wrote, "this committee respectfully asks for the privilege of having representative members confer jointly with yourself and the Southwestern Division engineer in regard to the review of the acquisition of lands for recreational areas. Since acquisition of land is well advanced on Lavon and Benbrook reservoirs, we would appreciate as early a conference as is practicable."

In response, Colonel Freeman agreed to experiment with a totally new policy of recreational development in the Lavon area — one that would lead to the construction of one of the most extensive network of recreation facilities ever



built on a single lakeshore by the COE. Although they had no direct bearing on its status as a water-supply lake, these amenities would make Lavon one of the state's most popular lakes for camping, picnicking and water sports. The experiment at Lavon also would set the stage for other recreational improvements at other COE lakes in the region.

During those early '50s, the Upper Trinity was the scene of some of the most concentrated and prolific lake-building activities in the annals of the COE. In addition to Lavon, major dams were also under construction at Benbrook, Grapevine and Lewisville. Scores of small flood-control lakes also were being built by the Soil Conservation Service, and because of these myriad projects, the prospects for a sufficient long-term water supply had never been better.

The only potential for really serious trouble lay in the short-term. *Because of the disruptions of World War II and the Great Depression, no major water-supply reservoirs had been completed in North Texas since the early 1930s.* The demand for water had soared tremendously during that twenty-year interval, and it was rapidly becoming apparent that existing lakes could not accommodate the explosive growth of the area for much longer — not even in unusually wet years.

At best, the dams under construction were still years away from actually impounding water, and the apparatus for getting that water to the public was still in the sketchiest early planning stages and presumably even further away from fulfilling that function. Thus, the inevitable question arose: If it should suddenly turn dry before the new lakes could fill and be brought on line . . . what then?

It was a question with disastrous implications, but one with which most area municipal officials were not overly concerned as 1951 began. As long as rainfall in the Trinity watershed remained at or above normal, everything would be all right. *But beginning as early as the fall of 1950, an ominous trend had started to manifest itself. Abruptly, the heavy rains that had characterized the first three quarters of the year came to an almost total halt. They stopped so completely, in fact, that total precipitation as recorded at Dallas Love Field amounted to less than a single inch for the entire last quarter of the year — a period that normally produced eight and a half times that amount.*

The new year of 1951 brought no relief. An abnormally dry spring was followed by a scorching-hot summer. By August, as the area sweltered through a record 22 straight days of 100-degree temperatures and water consumption soared to an all-time high, some people had begun to stare apprehensively into the bright, cloudless skies and wonder aloud when the "dry spell" would end.



The answer, had they known it, would have been utterly devastating.

Fortunately, though, virtually no one realized at this point the enormity of the calamity to come or that this was just the beginning. *Ahead lay six straight years of rainfall ranging from skimpy to nonexistent — and a water crisis of unprecedented proportions.* As she had so often before, Mother Nature was about to play a cruel trick. It would cause untold hardship and economic loss, and before it was over, it would touch the lives of practically every resident of the region.

Meanwhile, already feeling the first reverberations of the population explosion to come, some small communities decided to take “stopgap” measures to tide them over until water from Lavon became available. In Mesquite, where voters had approved their town’s participation in the new North Texas Municipal Water District by a resounding margin of 108–1, city fathers ordered a third artesian well dug at a cost of \$42,000. The well, designed to serve a newly annexed residential area where homeowners were having to haul in water for household use, was only a minor part of a \$750,000 bond program to finance water and sewer improvements. But it showed Mesquite’s inability to wait on Lavon and its reluctance to “put all its eggs in one basket” when it came to water.

*“We need to be planning for a city of 5,400 in ten years,” warned Mesquite Mayor John Lawrence. For a town of less than 1,700, as of the federal census of 1950, that projection must have sounded pretty optimistic to most Mesquite residents, but the mayor’s forecast turned out to be low by more than 20,000 people.*

Neighboring Garland, which had also approved joining the NTMWD by a wide margin, already had an estimated population of 14,000 at this point, and with additional families moving in at the “astonishing rate of 115 per month,” the city faced an even more critical situation. Garland’s already beleaguered water system and overtaxed water supply were being overwhelmed by the population boom, even with emergency infusions of water from an old industrial well and water tower. *Every summer from 1951 until the first Lavon water flowed into local mains in 1956, “the city ran a dead heat with disaster,” in the words of Garland historian Michael R. Hayslip.*

A general feeling of desperation was prevalent among suburban towns as the blistering summer of 1951 wore on. As the *Dallas Morning News* reported on July 15:

*“Fading water resources in a score of communities around Dallas spurred suburban leaders into action Saturday.*

*“Grand Prairie, Irving and Arlington, caught up in the mushroom-*



*ing growth between Dallas and Fort Worth, joined hands to search for lake water.*

South of Dallas, Lancaster and Hutchins studied a two-way proposal: Either tap Dallas' big mains or build a two-town lake of their own.

*"In industrial Garland, the city council sought to close a deal . . . for a deep well used by Luscombe Aircraft Corp. during World War II.*

*"At Terrell . . . the city council renewed its efforts to become a member of the 10-town North Texas Municipal Water District, which plans to tap Lavon Lake. (These efforts never came to fruition, however.)*

*"At Rylie, on the Dallas-Kaufman Highway, owners of exhausted shallow wells are digging cisterns while paying \$4 for 1,200 gallons of water delivered to their homes. Water well failures also are reported along the Seagoville Highway. . . ."*

This time, however, it was not merely the smaller towns and cities that were destined to reel under the chokehold of the drought and dwindling water supplies. Dallas was enjoying the greatest boom in its history — its population had jumped from 294,000 in 1940 to more than 450,000 by 1951 — and in many respects its water supply crisis was even more severe than that of its smaller neighbors.

Ironically, however, it was the very plight of Dallas that would eventually lead to a solution, both for itself and many of its smaller neighbors.

. . .

By mid-summer 1952, not even the most optimistic of public officials and water engineers could deny that Dallas, Rockwall, Collin and Kaufman Counties — along with most of the rest of Texas and Oklahoma — were in the grip of a drought rivaling that of the "Dust Bowl" era of the 1930s.

Aggravated by summer temperatures that were even more extreme than those of 1951, water consumption hit almost unbelievable levels. In August 1952, while U.S. Weather Bureau thermometers at Love Field were recording 25 straight days of 100-degree readings and the city was also setting a record for the most 100-degree days in a whole summer (35), Dallasites were gulping down more than 3.75 billion gallon of water. This eclipsed the record consumption of the previous August by more than 1 billion gallons.

The Dallas City Council enacted the first water-rationing ordinance in the city's history that summer, strictly limiting lawn sprinkling, car washing and other nonessential uses of water, and providing stiff fines for violators. Residents



with street addresses ending in odd numbers were allowed to water only on odd-numbered days, and those with even-numbered addresses only on even-numbered days.

Within a matter of a few weeks, many smaller municipalities followed Dallas' example with water-rationing measures of their own. But in a very real sense, it was comparable to shutting the barn door after the horses had already escaped. Countless private wells went dry while others turned brackish and polluted, and Dallasites could visually measure their disappearing water supply by watching White Rock Lake, one of their major reservoirs, recede until it was little more than a pond surrounded by a sea of dry, cracked mud.

With the area water supply now being measured in hundreds of hours, Dallas desperately turned to the distant Red River as an emergency source of water. This was far from a permanent solution, however, and the imported water was far from ideal because of its exceptionally high salt content. Even when it was diluted with purer lake water, it caused many complaints.

"It had a tendency to rust out water heaters and washing machines a lot faster than normal," recalls former NTMWD director Clifford Carpenter of Farmersville. "The housewives got mad as hops about it."

That was just one of many problems, however. Another was algae, which multiplied rapidly as a result of high temperatures and low water levels in area reservoirs. Although the algae posed no health threat to the public, it gave the water a "foul taste and odor," in the words of the *Dallas Morning News*, that could not be removed by standard water treatment procedures and presented municipal water officials with "one of their worst headaches."

Thirsty Dallasites had no alternative, however, but to hold their noses and drink the stuff. "It's salty, it stinks and it tastes awful," they said, "but there's one good thing about it — it's wet!"

As if the water shortage were not bad enough by itself, it triggered myriad other problems to which few North Texans had ever given much thought in the past. As crops of feed grains and hay withered in the fields, the expense of buying feed for dairy cattle skyrocketed, causing many farmers to sell off their herds and threatening a severe shortage of milk. Dry conditions also led to thousands more grassfires than normal across the area, destroying wildlife and leaving countless blackened fields and pastures in their wake.

In the midst of all this, however, came a warning of how quickly the Trinity Basin could swing from one extreme to the other. On a front page dominated by



articles on drought relief efforts and heat-related deaths, the *Dallas News* of August 21, 1952, carried a news story that began:

*"Drought-blighted Dallas, where a 24-inch rainfall deficiency has accumulated in two years, was told Wednesday that a flood which would cut the city in half is still a definite possibility in the Trinity River lowlands.*

*"The warning came from Col. H.R. Hallock of the Army Corps of Engineers. . . ."*

Studies by the COE, undertaken in response to requests by the Trinity Improvement Association, showed that virtually all major railroads and federal highways, as well as power plants, postal facilities, major industries and thousands of homes, could be inundated by a flood on the Trinity. To eliminate the threat, some \$5 million worth of new levees would have to be built.

As it turned out, of course, such a flood was about the last thing that residents of North Texas had to worry about during the first half of the 1950s. It would not be until the spring of 1957, when torrential downpours would break the drought and inundate the area under some 22.5 inches of rain in April and May alone, that Colonel Hallock's warning finally hit home.

. . .

By mid-1952, the drought was statewide in scope, and water — or more precisely the lack of it — was the hottest topic from El Paso to Texarkana and from Brownsville to Amarillo. Cries for help were coming from everywhere, but no one seemed to know exactly what to do, and relief efforts were hampered by political squabbling.

It was only because of wrangling in Austin and reluctance on the part of the conservative administration of Governor Allan Shivers to ask Washington for financial aid that Texas was not declared eligible for federal disaster-relief assistance until September 1952 — several months after the fact.

The governor had called a statewide drought relief conference in August, but it quickly disintegrated into a debating session. Argument raged over whether Texas should accept additional federal funds during a presidential election year in which Shivers and other state leaders had broken ranks with the national Democratic Party and would support Republican Dwight D. Eisenhower that fall over Democratic nominee Adlai Stevenson.

On August 23, after several days of haranguing, Shivers formally asked President Truman to declare Texas a drought-disaster state, but it was not until Sep-



tember 5 that Texas was officially added to the list of states eligible for emergency funds. Subsequently, the state — especially those areas west of Wichita Falls, Abilene and San Angelo — received large infusions of federal relief funds. But even the federal government could not create water where there was none, and as *Life Magazine* noted in its issue of July 13, 1953:

*"The hard fact is that Texas simply does not have enough water in the right places to support its fast-growing population, industry and agriculture."*

At this point in time, only one federally funded lake in the entire state — Falcon Reservoir, a cooperative project with Mexico on the lower Rio Grande River — was designated primarily for water supply. Seventeen other existing and future lakes, including Lavon, were primarily for flood control and/or power generation, although Lavon and seven others of these did include some conservation storage.

*Meanwhile, more than 53 million acre-feet of water was being lost to runoff in Texas rivers during an average year (although certainly no year between 1951 and 1957 could be considered anywhere near average in this regard).*

Perhaps an even harder fact to swallow was that Texas had no comprehensive plan for dealing with the crisis that had suddenly descended on it. By the time the U.S. Bureau of Reclamation completed the study it had been asked to undertake by Senator Johnson and issued its report, it was December 1952, and too late to offer any immediate benefit to those suffering from the drought. Nevertheless, it presented a coldly objective appraisal of the problem and could form the basis for a long-range program for the future.

With the aim of devising such a program, Governor Shivers appointed a 90-member committee, with J.B. Thomas of Fort Worth as its chairman, to examine the state's water problems and propose solutions. The "Thomas Committee," as it became known, recommended that instead of leaving water resource management and development to the federal government, the state should provide financial assistance for local water projects in the form of a \$100 million revolving fund. It also recommended reorganizing the State Board of Water Engineers and preparing a long-range water policy for the whole state.

But while all this activity had considerable potential merit, it could not take the place of rain — and rain was destined to be a scarce commodity in Texas for four more long years.

As water researcher Walter Prescott Webb observed in his book, *More Water for Texas: The Problem and the Plan*, written in mid-1953:



*"People everywhere are grasping at all possible solutions, and some have even turned to artificial rainmaking. What is happening now is but a repetition of what has happened over and over in Texas, and throughout the western portion of the United States. It has happened several times in my memory, and it will happen many more times in the future. Drought is the certain recurring weather phenomenon of more than half the state and of about half the nation.*

*"As a result of several successive years of moisture deficiency, people have become water conscious, and all sorts of plans are being suggested for doing something about it. Many of these plans have merit, but any plan that promises quick relief through human agency is a fraud. A good rain is the only quick solution to the problem . . . and nature has as yet not yielded the secret of making rain. Unfortunately, a good rain washes away more than the drought; it (also) washes away much of man's interest in providing for the next one. . . ."*

There was certainly no shortage of interest as the summer of 1952 faded into fall (with a grand total of 0.37 of an inch of rainfall recorded at Love Field during September and October). Even in the midst of dire conditions, however, it was still possible to find some humor in the situation. As *Dallas Morning News* columnist Paul Crume noted in his front-page "Big D" column on September 18:

*"The homebuilders were complaining Wednesday because their Parade of Homes had been rained out two nights in a row while the rest of Dallas got hardly a drop. Heck, they could make a million dollars by taking a big ad in this newspaper saying: 'Buy Where It Rains.' . . .*

*"Tuesday, a lawyer who is also a gentleman farmer got on the shopper's bus at the courthouse. He and another guy who looked like just a farmer were talking about the drought and the high cost of feed. There was a single cloud in the sky, and the farmer pointed at it. 'Looks like it might rain,' he said. 'Don't point at it,' said the lawyer in an anguished voice. 'It might go away.'"*

A few days later, on September 23, Crume also made the point that folks in some sections of the state were far worse off than those along the Trinity.

"The drought is really getting bad in West Texas," he wrote. "Guy we know has been getting letters from out there with the stamps paper-clipped on."

As it turned out, though, this drought was going to hang around long enough to hold everyone's interest for years to come. As severe as matters were in 1952,



the driest, most devastating period for the Trinity Basin would not arrive until 1955 and 1956, and those years would leave area leaders more determined than ever that the crisis in which they found themselves must never be repeated.

Even as the effects of the drought steadily worsened, two hopeful developments were quietly taking place. The infant North Texas Municipal Water District, with the help of the consulting engineering firm of Forrest and Cotton, was beginning the planning for a water distribution system to serve ten member cities spread out over many miles. And, even before construction of its dam was totally complete, Lake Lavon was slowly beginning to accumulate measurable amounts of water.

As early as late December 1952, following a rare two-month period of substantial rainfall, the Corps of Engineers reported that the lakebed already held just over 9,000 acre feet of water. This increased to 9,383 acre feet by early January 1953, and as the projected date for the closing of the dam that October steadily approached, excitement began to build. And nowhere was the excitement greater than in Wylie, the closest city to the lakesite, which had by now been designated as the home base of the NTMWD.

By the late spring of 1953, plans were being made for another gala barbecue to celebrate the dam's completion, more plaudits for the Army engineers and another major speech by Sam Rayburn to highlight the closing ceremonies. The barbecue should be free to all comers, organizers from the East Fork Association and another group known as the Upper East Fork Association decided, and it was envisioned as the biggest public picnic ever staged in the area.

At the same time, plans also were being formulated for elections in each of the member towns of the NTMWD to authorize their city councils to enter into formal water-supply contracts with the district. These elections were originally projected to coincide with the completion of Lavon Dam, but would eventually be set for December 5, 1953, slightly more than a month after the dam closing.

Clearly, there was much to celebrate along the East Fork, but elsewhere across Texas, the spring and summer of 1953 was far from being a picnic, as an Associated Press dispatch from Laredo, dated June 12, attested.

"Rain began falling in Laredo at 9 p.m. Friday, only 28 hours after hundreds of Laredo residents had gathered in the downtown plaza to pray for an hour for rain," the news story began.

Unfortunately, though, even after the Laredoans' prayer was seemingly



answered, the Rio Grande, on which their city depended for its water, was still described as “just a mere teasing trickle.” It was just one more bit of proof that there was no “quick fix” for this drought.

Meanwhile, more record-breaking heat engulfed North Texas, and prayers for rain were also being directed upward from many towns and cities of this area. On June 15, 1953, the *Dallas News* reported that the city’s average water consumption was approaching 100 million gallons per day, an all-time high for the period — and the “dog days” of July and August were still to come. At the same time, the city was having to serve desperate water customers in other communities.

“Dallas, which has had its troubles with water supply lately, Monday took on another 878 new customers — the residents of Fruitdale,” the *News* reported on June 16. Dallas City Manager Elgin Crull was quoted as saying that the wells in Fruitdale, a “bedroom community” south of the city, were “turning bad.”

(Under the circumstances, it was not difficult to understand why Crull had declared, some three months earlier, that Dallas would need water from Lavon to meet its long-range needs. On March 6, 1953, Dallas officials had opened negotiations with the NTMWD to obtain water for the southeastern sections of the city. And although Dallas would not become a member of the NTMWD, its subsequent commitment to buy large quantities of water from the district would prove to be of the utmost importance in financing the overall operation of the district.)

Meanwhile, even in the face of the water crisis gripping the state and the area, there were still those who remained stubbornly and outspokenly optimistic.

*“We have plenty of water falling on this watershed for every foreseeable purpose now,” said Trinity Improvement Association General Manager John Fouts in a speech in Dallas during that same hot, dry June (total rainfall for the month was an almost unrecordable 0.04 of an inch). “The shortage is of men’s vision and of engineers’ imagination in not seeing how water can be conserved and used over and over again.”*

A couple of months later, in August 1953, veteran TIA engineer Forrest Park, urging large-scale cooperative water resource development efforts by Dallas and Fort Worth, warned area municipalities to “get off water wells” and to “quit depending on underground water as quickly as possible.”

Park echoed Fouts’ earlier declaration that, despite the disastrous effects of the drought, there was actually no shortage of water. *“Down the Trinity River every day an average of 400 million gallons of water passes Fort Worth,” he*



*emphasized, "and that flow is increased to a billion gallons by the time it passes Dallas on its way to the Gulf of Mexico. The amount of water that flows unused by Dallas would be enough to supply New York City."*

Fouts' and Park's words may have been small comfort at the moment, but they would prove both accurate and prophetic in years to come.

As the fall of 1953 approached, many crucial developments were taking shape for the North Texas Municipal Water District. Countless hours of meetings and exhaustive behind-the-scenes work over the past two and one-half years had brought the district from its earliest embryonic stage to the very threshold of becoming a functioning service entity. And now, several of the most important events in that evolutionary process were about to occur in rapid succession.

On September 8, NTMWD directors from the ten member cities — Garland, Mesquite, Wylie, Plano, McKinney, Rockwall, Royse City, Forney, Princeton and Farmersville — plus a representative from Terrell, met at Wylie in an atmosphere of expectant excitement. Their business included plans for the dam closing and upcoming election as well as a review of engineering studies on what one newspaper described as "a 100-mile network of pipelines crisscrossing an area of 500,000 acres" to serve the ten towns. They also heard assurances that participation by Dallas was now an "integral part" of the district's overall plans — a part that would be essential in the infant district's ability to finance the pipeline and other vital facilities.

When the long-awaited celebration marking the completion of Lavon Dam and the end of nearly six years of construction was finally held on October 27, 1953, it lived up to the expectations of everyone concerned. The *Wylie News*, which published a special commemorative edition in honor of the occasion, described the crowd that turned out for the free barbecue and gate-closing ceremonies as "the largest ever assembled in the East Fork watershed."

Estimates of the number in attendance ranged from 8,000 to 10,000. They dined on 2,800 pounds of barbecue and "trimmings," watched Congressman Sam Rayburn press a button which officially closed the twelve huge steel floodgates in the concrete spillway, and listened to an array of speakers.

Rayburn devoted much of his principal address of the evening to an attack on Republican Agriculture Secretary Ezra Taft Benson and "people in Washington who are more anxious to balance the budget than . . . defend our civilization." But he also recalled Lavon's groundbreaking in December 1947, and he turned



his attention for a few moments to the great \$12 million dam now stretching across two miles of Collin County landscape.

*"Conservation of this good earth is the nation's number one domestic problem," he said.* "We need more big dams like this one for flood control, irrigation, recreation, water storage and, wherever feasible, for the generation of electric power. We need not only to save this soil, but we must rebuild it."

It was a fitting and almost perfect climax to a long and arduous battle. Even the fickle weather of the East Fork watershed cooperated for once, drenching the lakesite with a welcome downpour the evening before the ceremonies, then turning off clear and pleasant for the big day itself.

East Fork Association President Truett Smith, who served as master of ceremonies, predicted that the dam's completion would set off far-reaching changes for the area, which he said would someday be "dotted by industrial plants" as well as "rich, productive farms."

Paul Hardin, manager of the East Fork Association, expressed thanks to the scores of volunteers who helped with the event, calling their cooperation "the best we've ever seen." Playing key roles in feeding the thousands who showed up for the free barbecue were Alex Schell of Plano, who served as general chairman of the food committee; Ben Jackson of Garland, who secured the calves for the barbecue, and W.W. Barker of Wylie, chairman of the serving committee, which recruited servers from various Future Farmers of America chapters in the East Fork basin.

*From the standpoint of the NTMWD, a milestone of at least equal importance was reached on December 5, when voters in the district's ten member cities overwhelmingly approved contracting with the district for water.* The combined margin of victory in the ten cities was 2,155 to 106, with Wylie having the distinction of approving the issue without a single dissenting ballot, by a vote of 146-0. In McKinney, where the largest turnout was registered, the vote was 528 for and 23 against. In Garland, the margin was 348 to 7 in favor. This "whopping majority," as it was termed by the *Garland Daily News*, cleared the way for the issuance of \$9.2 million worth of bonds to finance the district's water delivery system.

Immediately following the election, a jubilant NTMWD Chairman Jim Cantrell announced that contracts would be signed on December 12 and that the district's directors would ask the State Water Board in Austin for a permanent permit to 100,000 acre-feet of Lavon storage. He also made it clear that the district would willingly supply water to other nonmember customers in addition to Dallas.





C. Truett Smith of Wylie performed M.C. duties, introducing guests at the ceremony for closing of Lavon Dam, October 27, 1953.

*"We'll have access to this huge supply of water as long as we put it to beneficial use," Cantrell said. "Wherever the lines pass near a community, it will be the policy of the district board to let them connect on and to sell them water."*

The moment when a householder in the East Fork basin could turn a tap and watch Lavon water gush forth was still a long time off, but the most formidable steps toward that goal had been successfully taken.

What took place next — during the brief twelve-month span from late 1953 to late 1954 — seems almost miraculous, even today, some four decades after the fact. It not only stands as one of the most striking natural phenomena in the history of Northern Texas, but also as perhaps the greatest irony to come out of the calamitous era of "The Drought."

Suddenly, almost inexplicably, Lavon became a lake!

While other reservoirs appeared destined to dwindle away to nothing — or, at best, barely managed to maintain their existing water levels during this period — the water storage in Lavon rose by almost unbelievable leaps and bounds. It rose, and rose, and it continued to rise, seemingly in defiance of all logic.



NORTH TEXAS MUNICIPAL WATER DISTRICT



Roland Boyd (left), McKinney, Speaker Sam Rayburn (center), and Paul Hardin (right), McKinney, on the speakers platform at the ceremony for the closing of Lavon Dam.



Honored guests on the platform for the Lavon Dam Closing (L-R): J.O. Wallace, Rockwall; unidentified; Col. H.D. Vogel, Corps of Engineers; Col. H.R. Hallock, Corps of Engineers; Roland Boyd, McKinney; Sam Rayburn, Speaker of the House.





Members of Future Farmers of America serving dinner (barbecue and Finney bread) to the guests at the Lavon Dam ceremony, 1953.

By January 21, 1954, less than three months after the dam closing, Lavon already held 16,560 acre-feet of water. Just a week later, following heavy rains along the East Fork, that figure had jumped to 25,078 acre-feet. By mid-March, that figure had more than doubled and was continuing to increase daily.

The incredible sight of this new reservoir filling so quickly with shimmering blue water in the midst of the greatest area water crisis of all time made Lavon a mecca for throngs of curious, drought-weary North Texans. As the *Garland Daily News* observed in its edition of March 18, when storage in the lake, as reported by the Corps of Engineers, stood at more than 55,000 acre-feet:

*"Lake Lavon, located 15 miles east of Garland on Highway 78, has a bright future as one of North Texas' favorite 'playgrounds' if the weekend traffic there now is an indication. . . .*

"On Sunday, parking places are hard to find at the observation point and recreation area on the west side of the dam. Traffic on Highway 78 from Garland to the lake is bumper to bumper throughout the afternoon."

On Sunday, April 4, 1954, the *Dallas News* published a front-page aerial photograph of the amazing "overnight" lake.



*“Drought-worried Dallas was cheered Saturday,” the caption under the photo said, “by the news that Lavon Lake, a future city water source, now holds 11,000,000,000 gallons, slightly more than double the 5,000,000,000-gallon supply there only two months ago.”*

The phenomenon continued unabated through the spring and summer, until, by August, only eight months after the closing of the dam, the lake was rated by the COE as 80 percent full with more than 98,000 acre-feet of storage.

“It was absolutely no time in filling,” recalled Wylie’s Truett Smith many years later. “Right after the dam was finished, people were speculating about how long it would take to fill, and some newcomers were talking in terms of years. They would say, ‘Well, it’ll take one hellava lot of rain to fill that lake up.’ *And I’d tell them, ‘You just wait. You guys haven’t lived here all your life, and you don’t realize how prolific this watershed is.’*”

Smith was right. Before the summer of 1954 was over, there was so much water in Lavon that directors of the NTMWD voted to release 50,000 acre-feet of water that the district could not yet use in order to relieve drought-stricken rice farmers downstream who were facing total disaster otherwise. The farmers were allowed to purchase the water for the nominal fee of \$1 per acre-foot — a modest investment which not only saved a \$10 million rice crop but also provided the NTMWD with some much-needed operating cash.

After fifteen days, the flow of water was halted at the rice farmers’ request when torrential rains along the Texas Gulf Coast made further releases from Lavon unnecessary. But the water district was widely praised for its “humanitarian” decision, and the approximately 16 million gallons of water released were not even missed by the district, although they made a huge difference to the farmers.

In fact, by early 1955, the water level in Lavon was back up to 112,345 acre-feet, or about 36 billion gallons, and Dallas mayoral candidate R.L. Thornton, Sr., was meeting with NTMWD Chairman Cantrell to explore ways to speed up delivery of Lavon water to Dallas.

“Bob Thornton is a man of vision, and you can be sure he is investigating personally every possible solution to the water problem, both on an emergency and a long-range basis,” the *Dallas Times Herald* quoted a Thornton campaign leader as saying. The same article also quoted a letter to Thornton from Cantrell, which said in part:

*“I cannot state definitely at this time how much (water) could be made available (to Dallas), but it would amount to a substantial volume.*



*Since the City of Garland is one of the towns in the district to secure this water, it would be relatively simple to extend the pipeline to the Pleasant Grove-Pleasant Mound area of your city. I might also add that the water will be treated and ready for use."*

Former NTMWD Director Clifford Carpenter of Farmersville personally recalls one of Thornton's visits to the water district office following his election as mayor to meet with NTMWD General Manager A.P. Rollins.

"Uncle Bob came down with Dallas City Councilman W.C. Miller one afternoon in July 1956, and you could tell that they were really hurting," Carpenter says. "We had the meeting with them, and Andy Rollins said, 'Now you understand, Mayor Thornton, that we can't sell any water that's in the mud pool.'

"And Uncle Bob replied, 'The hell you say! That (mud) is all we've had to drink for the past two years!'"

At any rate, Lavon's water level had reached a new all-time high by mid-April 1955, when spring rains sent the water lapping at the 71.3-foot marker on the COE gauge at the dam. Engineers estimated that the 44 billion gallons now impounded in Lavon amounted to 11 billion gallons more than the combined storage in Lake Dallas, Grapevine Reservoir and Garza-Little Elm Reservoir at the time.

"Location of the Lavon drainage basin is an area which normally gets from 10 to 15 more inches of moisture than the lake basins west of Dallas," the *Dallas News* reported by way of explanation.

"It just rains a lot more over here," the newspaper quoted Truett Smith as saying knowingly.

In all probability, that one simple fact can be credited with saving Dallas from an almost certain water disaster in 1956 as the city struggled through the final full year of the drought — one that turned out to be the driest year of the entire period — and the second-driest of the last half-century — with a total of just 23.65 inches of moisture recorded from the first of January through the end of December.

(Despite Lavon's uncanny ability to fill with water when reservoirs all around it were in danger of drying up, it had become apparent by the spring of 1955 to leaders of the NTMWD that the lake as it presently existed was not going to be nearly sufficient to handle the needs of the district's service area for the fifty-year period originally envisioned. Even before the first gallon of water had been pumped from the lake for public use, it was obvious that Lavon's water storage



capacity would have to be greatly increased. This will be discussed in detail in the following chapter.)

On June 13, 1956, at the beginning of what promised to be a terrible and trying summer, this ominous headline appeared on the front page of the *Dallas Times Herald*:

WATER SUPPLY DWINDLES HERE

*"Dallas is entering its hot weather, high consumption period with some four months less supply of water than it had last year," the article beneath the headline began.*

*"Faced with a rising consumption rate that reached well past the 142 million gallon mark Monday, Dallas officials ordered engineers to resume tapping the mineral-laden Lake Dallas reservoir."*

At the moment, the article continued, the city's reservoirs held an estimated 18 billion gallons less than in June 1955, although the situation was still not quite as bad as it had been in 1952 when water rationing was first imposed. The difference, however, was 50 billion gallons of salty Red River water, which had been diverted into Lake Dallas since the first of the year. The Red River water was being mixed with what little water remained in the city's water supply lakes to try to reduce the salt content.

In many respects, the mid-portion of 1956 was the worst of all. For one thing, residents of the Dallas area were bone-weary, worn-down and demoralized by the severity and the interminable nature of the drought. For another, this was, in many respects, the worst in a long series of unbearably hot, dry summers. *From the end of May until the beginning of October, a grand total of less than three inches of rainfall was recorded at Dallas Love Field.* And when September — normally a fairly moist month — brought not so much as a single trace of measurable precipitation, it seemed as though the fates had decreed that the drought should go on forever.

Dallas was not the only city suffering at this time. Farmersville's two small lakes were by now depleted to the point of nonexistence, and an acute water shortage in Terrell caused that city to seek emergency water supplies from Forney.

During all this time, however, the pipelines from Lavon had been steadily making their way toward those communities in desperate need of water. By late October, all was in readiness, and in early November 1956, an increasingly desperate City of Dallas became the first municipality to receive Lavon water from the North Texas Municipal Water District.



“Thirsty Dallas will tie another lake onto its widening system of pipelines Thursday,” the *Dallas News* reported on October 28, “when salt-free water will start flowing from a 35 billion gallon pool behind Lavon Dam.

“At the same time, Lavon Lake water will begin moving into three growing suburbs, Garland, Mesquite and Forney. The City of Dallas can take up to 15,000,000 gallons a day under its contract with the ten-town system, for which it was to pay an estimated \$475,000 a year.”

Actually, because of technical problems, the first discharge of water from Lavon did not occur until November 9, but when it finally happened, those who benefited from it could scarcely have been more grateful.

The drought would not officially be broken until the spring of 1957, when a mind-bending 13.74 inches of rainfall was recorded in May alone (compared to a normal of 4.97 inches), bringing precipitation for the first five months of the year to 36.62 inches — almost 20 inches above normal — and triggering the widespread flooding of which Army engineers had been warning for years. Even so, that flooding would have been far worse if it had not been for Lavon and the other lakes completed during the drought. At long last, they were able to prove their worth as flood-control reservoirs as well as water supply lakes.

In reality, however, the interminable trauma of the most prolonged and pronounced water shortage in the history of North Texas had effectively ended that November day in 1956 when Lavon water first flowed to the rescue. By the end of the month, Dallas had received water for 19 days and Garland for 14 days. Mesquite received its first water on December 1 and water reached Forney two days later. The rains had yet to come, but the worst of the emergency was over.

The story of the men and measures that made these climactic events possible is told in detail in the following chapter.





# **FIRST NTMWD DELIVERIES TO THE CITIES**

**First Delivery:** Dallas 11/09/56

## **Original Members**

|              |                                                 |
|--------------|-------------------------------------------------|
| Garland      | 11/15/56                                        |
| Mesquite     | 11/30/56                                        |
| Forney       | 12/03/56                                        |
| Plano        | 01/01/57                                        |
| Farmersville | 01/15/57                                        |
| McKinney     | 03/15/57                                        |
| Royse City   | 03/20/57                                        |
| Rockwall     | 04/01/57                                        |
| Wylie        | 06/21/57                                        |
| Princeton    | 07/23/57 (Emergency basis)<br>meter set 7/23/63 |
| Richardson   | 07/05/67                                        |

## **Customer Cities**

|                        |          |
|------------------------|----------|
| Allen                  | 10/28/74 |
| Caddo Basin SUD*       | 02/93    |
| Cash W.S.C.*           | 01/83    |
| College Mound W.S.C.   | 01/09/86 |
| East Fork W.S.C.       | 12/12/66 |
| Fairview               | 06/01/66 |
| Fate                   | 12/02/57 |
| Forney Lake W.S.C.     | 08/01/66 |
| Frisco                 | 08/01/86 |
| Gastonia-Scurry W.S.C. | 10/02/79 |
| Kaufman                | 04/23/76 |
| Kaufman Four-One       | 05/01/91 |
| Lavon                  | 08/02/67 |
| Lucas                  | 05/70    |
| Milligan W.S.C.        | 11/23/65 |
| Mt. Zion W.S.C.        | 04/80    |
| Murphy                 | 03/30/61 |
| Nevada                 | 05/24/60 |
| Parker**               | 03/03/75 |
| Rose Hill W.S.C.       | 03/11/81 |
| Rowlett                | 12/08/65 |
| Sachse                 | 02/02/59 |
| Seis Lagos             | 06/06/74 |
| Sunnyvale              | 12/14/59 |
| Wylie NE W.S.C.        | 03/24/66 |

\* SUD = Special Utility District  
W.S.C. = Water Supply Corporations

\*\* (Originally Pecan Orchard W.S.C.)



# 5

## From Lake to Faucet — Getting the Water Flowing

*"Because you [Sam Rayburn] have followed so closely the progress of the Lavon Dam and Reservoir project, I feel that it is desirable to inform you that we are now making rapid progress in completing the final section of the embankment. I am hopeful, therefore, that the construction work will be completed by the early part of October. At that time the gates can be closed and the intentional impoundment of water can be initiated."*

— Col. H.R. Hallock

District engineer, Corps of Engineers  
August 25, 1953

*I*n one ironic sense, the infamous drought of the 1950s and the North Texas Municipal Water District could practically be called "twins." As fate would have it, these two great opposites were born almost simultaneously during that torrid summer of 1951 — one as a fearful by-product of the destructive forces of nature, the other as a means to combat those same forces.

When the NTMWD completed its organization in June of that year, just as the drought was gaining a toehold, the district officially became a regional authority with the legal right to conduct business in behalf of its member cities. And yet its capabilities were as limited at the moment as those of any newborn infant when it came to counteracting the drought's toll or serving the public. Before the district could begin fulfilling its mission, it would have to find its way through a seemingly endless maze of financial, technical, legalistic and political obstacles.



But even as the drought strengthened its suffocating grip on the Trinity Basin and the rest of Texas, the district also gradually grew stronger. Thus, while most of the newspaper headlines and public concern would be focused over the next five or six years on the dramatic impact of the drought, an equally important but less spectacular drama was unfolding behind the scenes with the NTMWD. With quiet resolve and persistence, the architects of the struggling young district were fighting and winning many key battles during this period — battles that would eventually bring rich benefits to the entire region.

One of the most formidable problems facing the district during these early days was obtaining a formal contract with the Army Corps of Engineers detailing the volume of storage that would be available to the NTMWD in Lake Lavon, the price to be paid for it, and the terms under which the water storage agreement could be renewed. (It should be noted that the COE does not contract for the water in its reservoirs *per se*, but for the storage space in which that water is contained.) There was also the matter of how much water should be retained in the lake and how much should be released to flow downstream.

One of the most pressing questions — and one that the newborn district had to answer quickly — was how to get an intake facility for removing water included in the Lavon construction plan. The facility was initially estimated to cost \$92,000, an astronomical sum for an organization which currently had no permanent address, no staff except for officers and board members who volunteered their time, and virtually no operating funds. (At the time, the district was still dependent on donations of \$50 or \$100 from friendly businessmen, concerned citizens and its own leaders to pay its week-to-week expenses.)

Under the circumstances, the biggest question of all was how the district would be able to raise the millions of dollars needed to get Lavon water from the lake to the faucets of individual consumers in the ten member cities.

Fortunately, the district was able to obtain expert help from three major sources during this formative period. Attorney John D. McCall, senior partner in the law firm of McCall, Parkhurst & Crowe, who had drafted the legislation to create the district in the first place, continued to provide invaluable legal assistance. McCall and his firm kept a steady stream of letters headed toward various government agencies and served as a liaison between the district and these agencies. Financial expertise, meanwhile, came from W.C. “Decker” Jackson, president of First Southwest Company of Dallas, a firm that would be instrumental in charting a funding program for the district through the issuance of revenue bonds. And



finally, the Fort Worth engineering firm of Forrest & Cotton, which had already done preliminary studies in preparation for establishing the district, now set about drafting a full-scale operating plan for the NTMWD — a plan without which the waters of Lake Lavon might just as well have been on Mars.

As Roland Boyd, one of the district's founders and president of the East Fork Association during the early 1950s, would put it decades later in looking back on this crucial period: "If you want to know the truth, the North Texas Municipal Water District was built by Forrest & Cotton. There's just no other way to put it. I made many trips to Fort Worth during those days (the early 1950s) to have lunch with them. They would pick my brain, and I would pick theirs. All I got out of it was a free lunch, but I didn't care as long as they helped us do what we needed to do."

According to Paul Hardin, another early leader of the NTMWD, all three of these firms "carried us on the cuff for years and years" while the district was strapped for funds.

Truett Smith summed up the firms' contributions to the district in these terms: "They each played a vital role because they were all specialists and professionals in their own fields, and we needed that combination. You know, an engineer would really be no good in working out the financial details of a deal, and a financial consultant wouldn't be much help working out the legal aspects of a bond indenture. But by working in concert, each in their own area, it all came together for us. John McCall was a fabulous person to know; Decker Jackson was as sharp as a tack in his field, and we also had a lot of respect for Forrest & Cotton."

The company that served as consulting engineers to the NTMWD throughout its crucial formative period and for a number of years afterward was actually only a few months older than the district itself. According to the recollections of E.H. "Whitey" Ingram, one of its first employees, Forrest & Cotton officially began business on January 1, 1951.

"I went to work there on January 15," Ingram recalled in an interview, "and they were a brand-new firm. Of course, Mr. Forrest had been around for years, and had had two or three other partners before he and Mr. Cotton got together. Mr. Forrest was the 'glad-hander' politician of the group, and Mr. Cotton was the quiet, dedicated engineer. They complemented each other very well."

Over the next few years, the firm's rapid growth paralleled that of the NTMWD. By the mid-1950s, Ingram says, approximately 70 engineers were employed by Forrest & Cotton.



The purely technological abilities represented by T. Carr Forrest and James A. “Jim” Cotton, the two veteran engineers who joined together to form the firm, was accentuated by the fact that Cotton was himself a former Army engineer, who had just retired from the corps after working in its Fort Worth office. Forrest & Cotton’s excellent understanding of COE procedures and outstanding rapport with the Fort Worth District is illustrated by the following letter from Forrest to the COE’s Lt. Col. Clayton B. Lyle, Jr., dated April 23, 1952:

*“This will acknowledge your letter of April 9 and the receipt of a set of plans for the water intake structure at Lavon Dam and Reservoir. These plans are in complete accord with the original grade plan which we submitted to you for your consideration. This structure will permit the district to have access to the raw water in the reservoir without any difficulty.”*

Forrest’s conciliatory words notwithstanding, however, there *were* difficulties with almost every aspect of the NTMWD’s early dealings with the COE. Often it was a matter of logical local needs colliding head-on with firmly established government policies and procedures, and in several instances these conflicts took months — and sometimes even years — to resolve.

In working out such difficult matters, the district was fortunate to receive the unfailing support and ongoing intercession in Washington of old friend Sam Rayburn. Among other things, Rayburn pushed for the earliest possible closure of Lavon dam and a study of the East Fork channel, which contained numerous potential trouble spots below the lakesite.

Like the water district, the East Fork Association had at first been so elated by winning conservation storage in Lavon that other considerations were pushed temporarily into the background. But by mid-1952, it had become obvious that narrow or restricted portions of the East Fork channel below the lakesite posed a serious problem for the release of floodwaters that would ultimately be necessary in spite of the current drought.

In one of his first official acts, Truett Smith, who had recently succeeded Roland Boyd as president of the East Fork Association, appointed a three-member committee, chaired by J.O. Wallace and including D.L. Boyd and William Morris, to confer with the Army engineers and make recommendations as to how the channel could be improved.

Unfortunately, the committee was told, the cost of making a channel study



alone would run to \$50,000 and many times that amount would be needed if the channel were to be straightened and widened as the association hoped. At the moment, no money was available, not even for the study, the COE said.

The next step, as usual, was to turn to Rayburn.

An initial request for assistance with this particular problem came in the form of a letter to Rayburn from Smith. Dated March 11, 1953, the letter began:

*"In the name of the East Fork Association, I have made a request to the Fort Worth District Office, Corps of Engineers, to complete the closure on Lavon and to make a survey of the channel condition below Lavon."*

Smith's letter was accompanied by a summary of potential flooding problems on the channel that could threaten 55,000 acres of prime farmland downstream.

*"One of the prime reasons for construction of Lavon was to prevent flooding, not to prolong it as could possibly happen under present conditions," the summary pointed out. "It is estimated that only 500 acre feet per day could be released (from Lavon) without causing channel flooding. . . . The widening and straightening of the channel of the East Fork below Lavon is a necessity if the bordering landowners are to realize the full advantages of the reservoir."*

On the same date, Smith also sent a letter to Col. H.R. Hallock, district engineer at the Fort Worth COE office, calling attention to the same problems. Smith also enclosed a copy of the Hallock letter in his communication to Rayburn, who responded with the kind of dispatch that his East Fork constituents had learned to expect of him.

In pursuing this matter, Rayburn addressed a note to Maj. Gen. S.D. Sturgis, chief of the Army Engineers, dated March 30, 1953, in which he employed the same gentle, prodding approach that had been so successful in the past in gaining favorable attention for the concerns of the NTMWD and the East Fork Association.

*"I understand that a request has been made through your Fort Worth, Texas, office for a closure of the Lavon Dam and a channel survey below the dam," Rayburn wrote. "In my opinion, this is work that needs to be done, and any consideration you might be able to extend with reference to this matter will be greatly appreciated."*

Unquestionably, Rayburn's influence was a major key in getting Lavon Dam closed before the end of October 1953. The extent of that influence is obvious in the following letter, dated August 25, 1953, from Colonel Hallock of the COE to Rayburn.



*"Because you have followed so closely the progress of the Lavon Dam and Reservoir project," Hallock wrote, "I feel that it is desirable to inform you that we are now making rapid progress in completing the final section of the embankment. I am hopeful, therefore, that the construction work will be completed by the early part of October. At that time the gates can be closed and the intentional impoundment of water can be initiated."*

The matter of the channel study was destined to drag on for some time, however. Eventually both the study and the necessary modifications to the East Fork channel downstream would be carried out, but it would be a long and involved process.

In the meantime, as the lake filled with unexpected speed during 1954, it was decided to release small, manageable amounts of water continuously from Lavon to guard against the likelihood of severe flooding in case of heavy rains.

As an August 1954 report to Smith from Wallace's committee observed:

*"Recently, for some 10 to 15 days, there was discharged out of Lavon Reservoir approximately 500 cubic feet per second (3,750 gallons per second). This was about all the East Fork channel could take care of—and had it have discharged very much more, it would have caused serious losses from overflow. . . ."*

*"Bear in mind that (in the future) water from the flood control pool will be discharged just as rapidly as possible. It is estimated this will be at the rate of 2,000 cfs (15,000 gallons a second) for approximately 90 days. . . . Straightening and widening of the Trinity is likely a four-year job — and until this is done, without question, the prudent and foresighted thing to do is to immediately discharge all water the river channel will take care of. It is estimated this will only reduce the water in the conservation pool in the next 60 days some three to four feet. If we start to do this immediately, we will have just that much more insurance against flooding a large part of the trade area in the bottoms from Wylie to Rosser."*

At the specified future release rate of 15,000 gallons per second, it was estimated that Lavon's waters could flood a downstream area up to three miles wide. (This was something that would come back to haunt the COE when the drought was broken by massive flooding in the spring of 1957. But as of the summer of 1954, the release of water from Lavon was merely a boon for the rice farmers along the lower Trinity.)



Concern about the channel was only one of many issues that would arise concerning Lake Lavon and its far-reaching impact on the East Fork area during this time, and in each instance, the “Rayburn touch” always seemed to make a difference.

Suddenly, concerns that had gone unnoticed until now appeared to be popping up everywhere. The Collin County Commissioners Court discovered, for example, that many school bus and mail routes within the county would be disrupted by the lake, and, predictably, County Judge W.E. Button turned to Rayburn for help.

“Our problems would be only half as great if this lake were not in the shape of a ‘Y,’” Button agonized in a letter to the congressman. “We . . . feel like our road problems are many times as numerous and many, many times as serious as those of any other lake. The Corps of Army Engineers is requesting that we sign a document that shoulders all the responsibility for these road problems on our commissioners. We hate to accept this responsibility under any terms. We much prefer that the Corps of Engineers move to McKinney and work out these problems themselves. . . .”

This never happened, of course — not even Rayburn’s clout could accomplish such a miraculous feat — but the congressman did intercede, and the problem was finally resolved by some give and take on both sides.

Rayburn also was eventually able to persuade the federal government to include the cost of the Lavon intake facility in the overall COE budget for the dam with the understanding that the NTMWD would begin repaying this cost as soon as it became financially able, along with the agreed-upon cost of construction for the lake’s conservation storage.

Rayburn had several communications with Brig. Gen. Claude H. Chorpening, the COE’s assistant chief of engineers for civil works, stressing the need for federal funds to pay for the intake facility. Chorpening found several precedents for such a move, and apparently, the COE was willing enough to stand the additional cost, but certain parties in Congress were attempting to take away the Army engineers’ authority to negotiate expenses relating to conservation storage.

A memo written by Rayburn sometime in the spring of 1951 made the following points about the issue:

*“Certainly, it stands to reason that, if an intake is ever to be built, it should be done before the dam is closed. It seems to me that this would appeal to some of the senators as a reason for acting now. . . .”*



*"The (Texas) Legislature having just this session provided for the setting up of a water district makes this the first opportunity to get down to brass tacks on what the Engineers should do for the benefit of the district. When the district is finally . . . in a position to issue revenue bonds, it is expected that it will pay back the extra expense caused by installation of the intake. . . .*

*"If the Senate committee could make a statement that the establishment of a conservation pool carries with it the intent that water should be used and that the only proper way to make use of that water is through the construction of an intake — which will eventually cost the Engineers nothing — Chorpene might have enough to go on."*

Subsequently, in May 1951, Rayburn's unyielding efforts paid off. Congress passed a special bill which restored certain provisions of the Flood Control Act of 1944 and allowed the COE to pay for the intake facility on a temporary basis.

Almost exactly a year later, on May 14, 1952, the COE's Fort Worth District awarded a contract for construction of the intake facility to E.E. Ericson & Company of Dallas. Ericson's bid of \$75,181 was the lowest of eleven submitted and well under the government's cost estimates. *The contract called for the completion of the structure, containing 21.5 tons of reinforcing steel and 500 cubic yards of concrete, within 180 days.*

Another hurdle had been cleared, but several much thornier issues still remained to be resolved. Some of the thorniest pertained to the contract which the NTMWD had to execute with the COE before it could hope to deliver water to anyone. Among them were the questions of (1) how much the district would have to pay the COE for the cost of constructing the storage, (2) how much Lavon water the district could claim, and (3) how the district could ensure that it could retain these rights permanently.

In July 1952, the district was stunned to receive a letter from the COE's Colonel Hallock indicating that the *estimated cost of water to the NTMWD would be a staggering \$31.80 per acre foot. This was more than six times what the district had been expecting to pay and was viewed by district officers as a "totally impossible" figure, one that could send the retail cost of treated water completely out of reason for homeowners.* Some months earlier, Hallock's predecessor as district engineer in the Fort Worth COE office had indicated that the NTMWD would have to pay no more than an "incremental cost" of \$12 per acre foot. And subsequent calculations by Forrest & Cotton in behalf of the water district sug-



gested that the true incremental cost was only around \$5 per acre foot. Now the COE was asking for more than six times that figure.

Hallock's letter also raised serious concerns about the amount of water for which the district could contract with the COE, the terms of payment involved and the district's ability to protect its investment in a water system by guaranteeing its right to renew its contract with the COE. But for the moment, these matters all took a back seat in importance to the shock of the \$31.80-per-acre-foot price now being proposed by the Army.

As Jim Cantrell emphasized in a detailed written response to Colonel Hallock on August 29, 1952:

*"Manifestly, the project which otherwise we are now ready to finance cannot be financed or constructed if the Government sees fit to use this new method of determining the cost of the storage which the district is seeking to purchase.*

*"There isn't much necessity of proceeding with the consideration of (other contract matters) unless the Government is willing to make this storage space available to the district at a cost which it can afford to pay."*

Cantrell also expressed the district's fears that, if it contracted temporarily for less than the 100,000 acre feet of storage originally discussed — as suggested by the COE as a cost-saving move — the State Board of Water Engineers (from which the district also had to obtain a permit) might allocate the water to someone else in the meantime.

Furthermore, Cantrell told Hallock, the district was worried by the term "mutual consent" in the renewal clause of the proposed fifty-year contract with the COE. The NTMWD wanted to be assured of permanent water rights under the contract — and for good reason.

As Cantrell explained:

*"Obviously, you will see that this lack of right in the municipality to renewal might interfere seriously with its then outstanding obligations and its commitments, and that it would invalidate the extensive investments it shall have made for the purpose of conveying the water from the reservoir to the several municipalities. . . . During the last 39 years of the life of the contract, the district could not finance . . . needed improvements unless it were assured of a right to an extension of the contract with the Government. . . .*



*“You will appreciate our position now that we are otherwise ready to proceed with this project, which is essential to the welfare of the people comprising these ten cities. If you are unable to recede from the new method of determining the cost the district must pay for the storage space, we will appreciate your processing this reply in such manner that it can be considered by higher authorities as promptly as possible.”*

Another long, hard fight lay ahead — one that would take many months of negotiations to settle. The issues of cost and quantity of water storage and the renewal of the contract would remain troublesome “bones of contention” until well after the new lake was filled.

. . .

The impasse over the COE contract would drag on for the better part of two years, and although dialogue continued between the parties month after month, neither side showed any tendency to yield.

In the interim — although the outcome of everything rested on the district’s ability to execute a contract with the government — an incredible number of business decisions had to be made, and the district had to keep trying to move ahead on other fronts.

Ongoing negotiations on several different subjects were taking place during this time with the City of Dallas, some of them in an atmosphere of tight secrecy. With a growing water emergency occupying its city government, Dallas was also attempting to contract with the COE for conservation storage in Garza-Little Elm Reservoir (now Lake Lewisville), and there was considerable comparing of notes between the NTMWD and the city. Whatever terms Dallas was able to get on the purchase of raw water from Garza-Little Elm, the NTMWD had every intention of duplicating at Lavon.

Desperately in search of other sources of water, Dallas leaders were also keenly interested in obtaining water from Lavon when it became available, and although Dallas would not become a member of the district, it would become the largest initial user of Lavon water as the NTMWD’s very first customer. The water purchase agreement reached by the district and Dallas early in 1954 would be vital in the district’s efforts to sell bonds to build its water system.

This treated water service agreement would be the culmination of talks that began reaching the serious stage in the summer of 1952 with a series of conversations between NTMWD lawyer McCall and Dallas City Attorney Henry Kucera. While Kucera made it clear that Dallas was not in a position to make any capital



contribution toward constructing the district's filtration plant, McCall assured him that none was necessary. "I told him that any deal we had would be merely a sale of water and the cost of filtration would be included in the price," McCall wrote on September 8, 1952, in a letter to Forrest & Cotton.

In a "P.S." at the end of the letter, McCall added pointedly:

*"Kucera said it would be important that we avoid any impression which might be conveyed that 'Big D' is trying to hog the water supply at Lavon. I told him I thought a proper contract with the City of Dallas would supplement and complement our position, rather than create that embarrassment, but that we would all be careful."*

Meanwhile, by mid-1953, planning for the district's water treatment and distribution system was moving into high gear, although no one could be sure at this point just what shape the system would finally take. Because of the various possibilities that had to be considered, many contingencies had to be included in the plans.

Former Forrest & Cotton engineer Carl Shimek, who spent two years preparing cost estimates and researching the district's needs, remembers that period vividly.

"We considered a number of different plans — about thirteen in all — using different combinations of cities and pipeline sizes, capacities and what-not," Shimek says. "We considered including the City of Richardson, which, as it turned out, didn't come into the original system. There was also interest from Kaufman, Terrell and other cities, and all this had to be considered."

The interest by Dallas had by far the greatest impact on the planning process, however.

"Because Garza-Little Elm was slow to fill, Dallas was looking for any additional water it could acquire," Shimek explains. "There was a lot of discussion between Carr Forrest and Dallas City Attorney Kucera, and they eventually worked up an agreement whereby Dallas would purchase a minimum of 7.5 million gallons a day, which would greatly reduce the burden on the ten member cities and also make the district's financing work. To illustrate the relative size of that transaction, according to my memory, the district initially pumped 12.6 million gallons per day to all its cities, and Dallas took 7.5 million gallons of that — or almost half again as much as the other cities combined."

From the fall of 1952 until the spring of 1954, drafts of the proposed contract between the government and the NTMWD kept passing back and forth between



the parties, but progress toward an agreement was still painfully slow. As the stalemate continued, area newspapers began referring to the contractual “hold-out” by the water district and speculating on how long it could last in the face of federal adamance.

As it turned out, the cost factor was not the major stumbling block. Through a complex formula, the government had arrived at an annual cost figure of slightly more than \$50,000 annually, which the district was to pay over a 46-year period to retire a debt of \$1,405,752.57, the amount charged for the cost of constructing the storage and intake facilities, plus interest of 2.5 percent on the unpaid balance.

It was also agreed that the district should have access to the full 100,000 acre feet it had requested, specifically the storage space between the elevations of 453 and 472 feet above mean sea level. The “sticking point” remained the manner in which the contract could be renewed after the initial fifty-year period.

In a letter to NTMWD President Jim Cantrell on October 31, 1952, the COE’s Colonel Hallock referred to certain steps he had taken “which I hope will lead to a modification of the renewals article of the contract.” It was a promising sign, but as it turned out, the modifications were not enough to relieve the district’s concerns, and the frustrating impasse was destined to continue for more than a year.

In May 1953, attorney McCall pleaded the district’s case on the renewal clause in a long, detailed letter to Sam Rayburn. Addressing the congressman as “Dear Sir and Friend,” he went to great lengths to explain the district’s position.

*“The specific question,” he wrote, “is whether the North Texas Municipal Water District . . . can obtain a permanent (emphasis McCall’s) water right at Lavon Reservoir. The draft of contract which has been submitted by the (COE) Fort Worth District Office provides that it shall be effective for a period of fifty years and contains a renewal clause as follows: ‘This contract shall be subject to renewal by mutual agreement for an additional period not to exceed fifty years during the useful life of the project. . . .’”*

As McCall pointed out, this arrangement would have been perfectly satisfactory “under ordinary circumstances,” but the circumstances faced by the NTMWD were highly unusual, since there were “ten or twelve” cities involved.

*“All of these cities cannot be ready to assume the burden necessary to taking water from the project at the same time (emphasis McCall’s),”*



*he explained. "It may be ten or fifteen years before the last of these cities would be in position to take water from the reservoir. In the meantime, the district will go forward with its financing, perhaps on a 40-year basis. If this is so, the district will have its initial bond issue in an amount sufficient to pay for the purification and treatment plant or plants and so many of the supply lines as are justified and necessary to serve the cities which will be ready immediately to take the water and pay for it. . . .*

*"It is fundamental that a project of this kind cannot be financed through revenue bonds (and we hope to use revenue bonds, rather than tax bonds) unless the assured supply of water is available for at least the term of the bonds. Now the 50-year term is, of course, satisfactory as to the first installment of the bonds. . . . But if we have no definite (emphasis McCall's) assurance of a water supply beyond 50 years we cannot extend assurances to these smaller communities that they will be permitted to participate. . . . You cannot finance on a provision which says that the renewal will be 'by mutual agreement for additional period.' Moreover, some of the cities who go into this project originally may have some trepidation in the prospect that, unless mutual agreement is worked out at the end of 50 years, they may find themselves fully equipped with cast iron supply lines which are installed to last for a hundred or two hundred years and with no water to run through those lines."*

McCall praised the cooperative attitude of the Army Engineers' Fort Worth office, but explained that the COE was barred under existing regulations from signing any binding agreement for a period of more than fifty years.

By July 1953, evidence was apparent that Rayburn had interceded with the office of the chief of the COE in Washington, which was pressing the Fort Worth District for a report on the situation. A tedious process of review followed as the contract dispute filtered its way through the various channels of government.

The first sign of a breakthrough surfaced at the end of August, when McCall reported the following information in a memo to Forrest & Cotton and the water district board:

*"In a telephone conversation with Colonel Vogel (of the COE), he suggested that I write a memorandum which he can use with Mr. Joe Kimbel, counsel for the Corps of Engineers of the Washington office. He*



*says that he found that the members of the staff and particularly the Civil Functions part of the office are deeply interested in making the Army contracts conform with our wishes. He says the trouble is with the lawyers, and he will send to Mr. Kimbel anything I hand him."*

Bolstered by this encouraging development, the district moved determinedly ahead on other fronts while it waited for the COE contract imbroglio to be resolved.

On September 8, 1953, the district officially filed its application with the State Board of Water Engineers for a permit to withdraw up to 60,000 acre feet of water annually from Lake Lavon. This was another essential bureaucratic hurdle that had to be cleared before water could be delivered, but one that was unlikely to be nearly as difficult to consummate as the COE contract. A public hearing on the application was scheduled for January 11, 1954, at the state board's Austin office.

At this same time, First Southwest Company, in conjunction with another financial firm, Keith B. Reed & Company of Dallas, was preparing for the issuance of \$9.2 million in revenue bonds to cover the cost of constructing a water system for the district — now estimated at \$7,967,400 — plus interest and reserve fund requirements.

"Our conclusions were reached after a very careful analysis of the income and operating expenses of the district as estimated by the consulting engineers," officials of the two firms noted in a memo to the NTMWD board of directors on July 14, 1953, "and our opinion is based on the district's entering into firm contracts with the various constituent cities and the City of Dallas."

By this time, it was also becoming increasingly urgent that the district come up with a price structure for the water it planned to sell to its member and customer cities. This, too, was easier said than done, however. Since the cities were spread out over a vast area, the actual cost of delivering water depended to a large extent on their distance from the treatment plant to be built at Wylie. On the other hand, a question arose as to whether or not it was fair to charge each city a different rate based entirely on geography. As Jim Cantrell recalls:

*"The cost to Wylie would have been just nine cents per thousand gallons, while Garland would've had to pay 19 cents, McKinney 34 cents, Princeton about 70-something cents and so on. The executive committee met in a very crucial session and decided that we would average all these figures together and charge everybody the same uniform rate.*



*We didn't have a single negative vote on the board, even though some cities could have saved a lot of money if we'd done it the other way."*

Actually, the uniform rate of 18 cents per thousand gallons that was eventually set represented a huge increase in water expense for all the cities involved. As current NTMWD Executive Director Carl Riehn explains: "Up until this time, the cities had had very little water expense other than the cost of drilling wells — maybe three or four cents per thousand gallons total — so it took real courage to face up to this higher cost."

The principal key that allowed a uniform rate to be established, Riehn points out, was a formula informally known as "minimum taker pay," under which each city a minimum amount of water from the district, even though the city might not actually require this amount. Minimums varied for each member city, based on population and previous water usage levels.

Under the original contracts signed by the district and member cities, six-year minimum water purchases were established with increases each year based on projected growth. Garland, for example, as the largest member city, agreed to buy at least 825 million gallons the first year and to increase its annual minimum to more than 1 billion gallons over six years. Much smaller Wylie, meanwhile, had a first-year minimum of just 51 million gallons and an increase to just 61 million in the sixth year.

Local conditions varied greatly, of course, from city to city. "Mesquite surpassed its sixth-year minimum (183 million gallons) in its very first year," Riehn notes, "while it took McKinney until 1973 to reach its sixth-year minimum (628 million gallons)."

The "minimum take or pay" formula not only enhanced the value of the district's bonds and guaranteed that it could meet its operating expenses, but it also allowed it to charge the lowest water rate in the entire region. Under it, fast-growing cities paid their fair share of the district's expenses and small, outlying towns were not penalized with rates they could not afford. After the first six years, minimums were based on each city's highest previous year's use or on the original contract minimum, whichever was higher.

According to Truett Smith, the board representative of Wylie, the town that ostensibly had the most to lose from the decision to adhere to a uniform water rate, this may have been the most difficult task of all facing the board during this formative period.

"It was probably the thorniest question and one of the hardest decisions we



ever had to make,” Smith recalled in an interview. “It was pretty difficult to say to Wylie, which was right by the plant, that you’re going to have to pay the same water rates as Farmersville or Mesquite or Plano, with all the expense of piping treated water to them. There were a lot of discussions about this, and we listened to what the engineers had to say, but when it came right down to it, we knew the engineers couldn’t resolve the thing. So we finally just scrapped all the technical stuff and said ‘to heck with it.’ We decided we were all in this together and the important thing was to be fair, so we gave everybody the same rate. I think it was the mark of being good neighbors and realizing that we had to sink or swim together. We couldn’t do it separately.”

This unanimity was one of the most noticeable — and unique — characteristics of the board during those early, often trying years, and it illustrated one of the key differences between the NTMWD and other state-mandated organizations. Many of these other entities were governed by boards appointed by the governor, but the NTMWD board had a structure unlike any other similar body. Member cities of more than 5,000 population (only Garland and McKinney qualified in the early to middle 1950s) were each allowed two members on the board, while smaller cities had just one board member, all of whom were appointed by their respective city councils. (Charter members of the board, all of whom took office in 1951, included H.L. Roach and H.R. Bisby of Garland, C. Hansford Ray and H.L. Shoap of McKinney, Clifford Carpenter of Farmersville, R.M. Rhea of Forney, N.E. Shands of Mesquite, A.R. Schell, Jr., of Plano, Jim Cantrell of Princeton, J.O. Wallace of Rockwall, Homer Stimson of Royse City and Truett Smith of Wylie.)

“We thought the control of the district should be in the hands of the cities that were eventually going to pay the bill for the district’s operation,” Smith said. “This took Austin politics out of the situation and kept the operation of the district in local hands, not the governor’s. I think that’s been a much better way of doing it.”

. . . .

After thousands of hours of negotiations, months of planning, hundreds of pieces of correspondence and bitter delays when time often seemed to stand still, the district’s hard work began to pay major dividends in a hurry during the first few weeks of 1954. Suddenly, after an interminable period of impasse, it was as though the logjam was coming apart and everything was starting to happen at once.

Following the January 11 hearing, the State Board of Water Engineers granted



the district a permit to use Lavon water just as the NTMWD had requested, with the stipulation that the permit was subject to obtaining a contract with the Corps of Engineers. And although there was still no such contract at the moment, there were growing signs that a compromise on the troublesome renewal clause was finally in the offing.

On January 14, John McCall told Sam Rayburn in a letter that the COE's General Chorpene had "finally come around" to the view that the NTMWD should have a permanent right to Lavon storage, but "his legal department held that the law would have to be amended before the contract could be written in that form."

Further correspondence in early March between McCall and Rayburn indicates that Rayburn had again met with General Chorpene to discuss the matter. Then, on March 9, the *Dallas Times Herald* broke the news that the contract impasse was nearing an end. A report from the newspaper's Washington bureau appeared under the following headline:

ENGINEERS BELIEVE WATER GROUP TO END  
LAVON CONTRACT HOLDOUT

*"The Army Corps of Engineers is confident that the North Texas Municipal Water District will break down and sign a 50-year contract for water supplies from Lavon Reservoir instead of holding out for permanent rights," the article began.*

*"Brig. Gen. C.H. Chorpene, testifying before the House appropriations subcommittee on civil functions, said federal statutes do not permit the government to commit itself in regard to water rights longer than 50 years, the assumed life of the project."*

The article later quoted Chorpene as follows:

*"Looking at it from the local viewpoint, I suppose they are going to sell bonds to provide a water plant for the community, and from their standpoint it would be preferable to have a permanent right in the storage there. However, we do not believe we can make such an agreement. Certainly, something is going to break soon, because they want the water, and if there is not some legislation enacted, I am quite sure they are going to come around and sign a contract with us."*

Exactly a week later, on March 16, 1954, Chorpene's prediction was fulfilled when the NTMWD board of directors did, indeed, sign the much-debated and long-delayed contract with the COE. In the end, this initial contract was unaffected by any federal legislation, and its renewal clause retained the fifty-year



limitation that the water district had fought so hard to eliminate. The key to the breakthrough, however, lay in the addition to the clause of two simple words — *prior right* — which, in effect, guaranteed that the district could retain its water rights in Lavon beyond fifty years. Another slight change in wording — one that made the *terms* of a new contract, rather than the contract itself, subject to mutual agreement — was also important.

*“It is the understanding and expectation of the parties hereto,” the renewal clause read, “that upon expiration of this contract the District shall have the prior right, subject to any required approval of appropriate State authorities, to negotiate for further use of storage space then available for water supply purposes. The terms of the new contract shall be subject to mutual agreement at the time . . .”*

Even after the contract was signed, McCall continued to press the case for permanent water rights in COE lakes in letters to various members of Congress. He also sought the support of the Texas Legislature in asking for federal legislation to allow such rights to be granted to entities like the NTMWD. These efforts would eventually bear important fruit for the district in its future contractual dealings with the COE, but would have no direct bearing on the initial contract covering Lavon water storage.

On the very same day that the COE contract was signed, the district board also passed a resolution authorizing NTMWD President Cantrell to sign a 35-year water supply contract with the City of Dallas, under which Dallas would be allowed to buy up to 10 million gallons of water per day from the district. In some respects, this contract was almost as significant as the agreement with the COE, in that it cleared the way for the long-awaited sale of the district’s revenue bonds and, in turn, the construction of a water system.

And in a meeting the following day, March 17, the board approved a historic resolution by Homer Stimson, the director representing Royse City, calling for a uniform rate of 18 cents per 1,000 gallons of water for all member cities of the district “if finances will allow.” The exact price of the water was less important than the board’s agreement in principle that no member city should be charged more for water than any other.

With these “giant steps” finally out of the way, the other pieces of what had once seemed an almost unsolvable puzzle rapidly began to fall into place.

In a rare indulgence, the board of the NTMWD hailed the district’s achievements by buying a full-page advertisement in *Dallas Magazine*.



*“WATER ushers in a new era of opportunity in ten North Texas communities,” the ad crowed with justifiable pride.*

It was true, but before that new era could officially begin, there was still a lot to be done.

. . .

With the way now cleared to move full speed ahead to secure financing, the NTMWD and its financial advisors worked throughout the spring and early summer of 1954 to complete final preparations for selling the district’s first revenue bonds.

The sale was held on August 2 at the Mercantile National Bank in Dallas, with consortiums representing nearly 70 firms entering bids on the NTMWD’s \$9.2 million bond package to construct a \$2 million filter plant and a 100-mile-long network of trunk line mains through which Lavon water would one day reach the district’s thirsty member cities.

The bid of a syndicate of 31 investment banking firms headed by Blythe & Company of Chicago and the national brokerage firm of Merrill, Lynch, Pierce, Fenner & Beane — and bearing a highly favorable interest rate of 2.984 percent — was accepted by the district.

As the *Dallas Morning News* accurately observed in reporting the sale: “Financing of the revenue bonds was made possible when Dallas, several months ago, contracted to buy an average of 10 million gallons of water a day from the water district.”

Appropriately, a delegation of district officials went directly from the bank where the bond sale was held to the Dallas City Hall to call on Mayor R.L. Thornton and members of the City Council and to thank them for their assistance. Mayor Thornton congratulated the visitors on the “very good” interest rate they had received and was assured that the lower-than-expected rate would help hold down the cost of treated and delivered water for all concerned.

All that remained now was the formality of registering and delivering the bonds to the successful bidders in Chicago. But it would be up to a brand-new NTMWD chief executive to head up a district delegation that traveled to the “Windy City” to carry out this task.

On the very eve of the bond sale, Jim Cantrell, who had served as president since the district’s founding, resigned to become head of the Baptist Foundation in Dallas, and the board of directors was faced with the job of finding a successor.



"On the same day the bonds were to be signed, I moved to Dallas," Cantrell recalls, "and that's how I came not to be a part of this important event."

While Cantrell would remain a staunch friend and supporter, his official connection with the district he had helped to create and then guided for the first three years of its life now came to an end.

Elected to replace him just a few minutes before the bond sale as the second president of the NTMWD was another charter board member, H.R. Bisby of Garland, who inherited a heavy load of unfinished business but who would prove more than equal to the tasks ahead.

Bisby, a retired theatre owner, former Garland city councilman and former four-term president of the Garland Chamber of Commerce, had won the respect and admiration of his fellow East Fork leaders during a decade of work to obtain a dependable water supply for the area. "Biz," as he was known to his fellow directors, had been serving as vice president of the district prior to Cantrell's resignation.

Bisby headed a group representing the district which flew to Chicago on September 19, 1954, to deliver and sign the bonds in the offices of the Columbian Bank Note Company. Others making the trip included C. Hansford Ray, district secretary; W.C. Jackson, Jr., president of First Southwest Company; Clarence Sample, vice president and trust officer of Mercantile National Bank, and John McCall, the NTMWD's tireless attorney.

Shortly after the Chicago trip, First Southwest's "Decker" Jackson expressed the feelings of many when he addressed a note of appreciation to Bisby.

*"Dear Bis," he said, "Now that the financing of the North Texas Municipal Water District has been completed, I want to . . . express my appreciation for your splendid cooperation and assistance. . . . I must say that we have never worked with a finer group of men than the directors of the North Texas Municipal Water District. Further, we feel that the board of directors is indeed fortunate in having you, with your fine business judgment and natural ability and acumen to serve as president."*

Not long after their return from Chicago, Hansford Ray conveyed some welcome and unexpected news to Bisby. The district's first attempt to pay the maintenance and operation fees on Lavon required under the COE contract had resulted in a pleasant surprise.

"I mailed a check to (the engineers) for \$6,397 in payment for one year's main-



*From Lake to Faucet — Getting the Water Flowing*



C. Hansford Ray (left), NTMWD secretary-treasurer, and H.R. Bisby, president of the NTMWD Board of Directors signed documents in Chicago for the first sale of bonds to begin construction for the NTMWD, September 19, 1954.



Present for the first bond sale were; (Seated L-R): C. Hansford Ray, NTMWD secretary-treasurer; Walter C. Cleave, Blythe & Company; H.R. Bisby, president of NTMWD; and Gordon E. McDonald, Blythe & Company. (Standing L-R): W.C. "Decker" Jackson, First Southwest Company; John D. McCall, McCall, Parkhurst & Crowe; Hugh Bass, Keith B. Reed & Co.; Frank Medanich, First Southwest Company; and Clarence Sample, Mercantile Bank.



tenance and operation at Lavon Dam,” Ray wrote. “However, this morning they returned the check, stating that since we released this water as the result of an emergency . . . we did not (have to) pay. This is good news and we can remember this. We probably will not have to pay this expense until we actually start selling water.”

With Bisby at the helm and the Blythe & Company bond check safely deposited in the district’s bank account, the NTMWD moved ahead rapidly with its construction program. In November 1954, with the active help of Truett Smith, the board approved the purchase of a 25-acre tract at Wylie to be used as the site of the water treatment plant and the district’s first permanent offices. The purchase price of \$500 per acre was considered rather steep by some board members, but the sellers agreed to furnish the district an easement, at no cost, for construction of the raw water pipeline from Lavon, an offer that led to a speedy consummation of the deal.

By December 1954, a report to Bisby from Forrest & Cotton showed a flurry of activity on many fronts.

Plans had been made for plant layout and site grading at the Wylie site, and hydraulic design of the plant was described as 95 percent complete, structural design of major plant units 80 percent complete and mechanical design 70 percent complete. Design work was moving ahead on a schedule that would allow the project to be advertised for bids in February 1955.

Surveying was in progress for the Wylie-Garland-Dallas-Mesquite-Forney branch of the district’s pipeline, and terminal sites had been acquired in Dallas and Garland. A Mesquite site had been selected, but the owner and the district had not yet come to terms on price.

Surveys were also in progress on the Rockwall-Royse City and the Wylie-McKinney-Princeton-Farmersville pipeline branches, and surveying had been completed on the Wylie-Plano branch. Locations for terminal sites had been selected in Rockwall, McKinney, Princeton and Farmersville, although the Farmersville property owners did not appear agreeable to selling.

“The office work in connection with the plans and specifications for the terminal tanks and pipelines,” Carr Forrest wrote in concluding the report, “has progressed to the point where we can safely say that the total work in connection with these plans is more than 50 percent complete. Our anticipated target date for full completion of all plans for advertising is during the month of February (1955).”



Best estimates still placed the completion of a fully functional water supply system at least two years into the future, but there was finally ample reason for optimism.

For the first time since the district's creation, it was firing on all cylinders. At long last, all systems were "go."

. . .

At the same meeting in early November 1954 at which the purchase of the Wylie plant site was approved, the water district's board took yet another momentous step.

On that day, A.P. "Andy" Rollins, who had just recently retired from the same State Board of Water Engineers that had helped determine the fate of the NTMWD, was hired as the district's first full-time professional employee with the title of general manager. The volunteer efforts of many people had carried the district a long way, but the time had come to start building a full-time staff.

When Rollins officially assumed his duties on January 1, 1955, it marked the beginning of a new era — one in which the young district would cultivate its own professional know-how instead of relying totally on outside experts.

In the view of those who knew him best, it would have been impossible to find a better person to launch this era than Andy Rollins.

"J.O. Wallace used to say that Andy would have come here and worked if we hadn't paid him a cent," says Clifford Carpenter, long-time director from Farmersville, who succeeded H.R. Bisby as NTMWD president in June 1956. "This area along the East Fork was home to him, and he was so glad for a chance to come back here that he said he would have just worked for nothing."

Hack Roach of Garland was one of the directors who interviewed Rollins for the job (Rollins was one of three applicants, all of whom were experienced engineers and one of whom was City of Dallas Water Superintendent K.F. Hoefle), and he came away deeply impressed, both with Rollins' qualifications and his commitment to the task at hand.

"There was some talk about him being too old and so forth," Roach recalls, "but he was my man from the beginning. I just liked the way he talked, and I felt that he was knowledgeable and dedicated to making the thing work — like all the rest of us were. You couldn't beat Andy Rollins. He was definitely the man to have as our first manager."

Andrew P. Rollins, a native of the Merit community in Hunt County and one of 13 children — every one of whom earned a college degree — was admittedly no





Inspecting construction at the Water Plant are Frank Honeycutt, Jr., P.E., (left) and E.H. "Whitey" Ingram, P.E., (right) of Forrest & Cotton. They stand in front of the Chemical Building in early 1956.

"spring chicken" when he accepted the challenge of managing the NTMWD. He was past 70 years of age and a veteran of nearly half a century as a civil engineer. Following his graduation from Texas A&M College in 1906, he had worked on numerous water-related projects in South Texas and New Mexico, served over-





Joining the workforce at the Chemical Building are: A.P. Rollins, NTMWD general manager (5th from left), and E.H. "Whitey" Ingram, P.E., (2nd from right) and Frank Honeycutt, Jr. (right) of Forrest & Cotton.

seas as a captain with the Army engineers and Army tank corps during World War I (rising to the rank of battalion commander), then become a partner in a consulting engineering firm in Dallas.

In 1935, he had been named director of public works for the City of Dallas, a



post he held for four years. In 1939, he obtained his professional degree as a civil engineer from A&M, and the following year became a partner with Carr Forrest in a firm known as Rollins & Forrest (one of the predecessors to Forrest & Cotton). In 1946, he became chief of the construction division of the Veterans Administration, a post he held until 1949, when he was appointed to the State Board of Water Engineers.

Rollins' sympathy for farmers, which often prompted him to let farm families tie into passing NTMWD supply lines, especially in return for easements, was well known. He vividly recalled his own boyhood on a family farm bisected by the Hunt-Collin County line.

"During the years when cotton was selling for a nickel a pound, we had wheat in the granary, potatoes in the hills, pork and beef in the meat house, milk, butter and homemade syrup on the table, and we put away sufficient feed each year to carry the livestock," he reflected. "A low price for cotton simply meant we had less money to spend. We raised our living on the same farm where we raised our cotton. Sometimes Father and Mother found it difficult to buy clothes for us, but we were always well fed."

Rollins had witnessed first-hand as a youngster the desperate search for enough water during dry times and the ravages of flooding during wet times.

"Dry summers and falls were frequent during my farming days," he said. "The need for water caused us to dig many wells, and every damp spot in the earth was explored. Many of these wells would furnish only two to four barrels of water per day, and a ten-barrel well was quite an asset. We used to sing, 'You don't miss the water till the well goes dry.'"

When he began his engineering career, Rollins noted, water distribution systems were designed on the basis of a per capita consumption of fifty gallons per day. By 1955, per capita consumption levels had risen to 125 gallons per day and were destined to rise still further — a sign post of progress and a testimony to advancing lifestyles.

"It is customary for us to become concerned about a water supply when we are in the midst of a drought," he emphasized shortly before he assumed his duties at the NTMWD and moved into a small, temporary office "Out of the drought experiences, we build to meet a recurrence. Progress has been made, but much more must be done if we are to meet the increasing demands from a diminishing supply. . . . With the increased demand for water . . . we are beginning to believe that there will soon be a need for all the water we can conserve."



Rollins' engineering knowledge and broad grasp of the water problems facing Texas in general and his home area in particular were probably unexcelled at the time. They would be major assets as the NTMWD moved resolutely toward its first water deliveries, and they undoubtedly saved the district many problems in years to come.

Carl Shimek, a Forrest & Cotton engineer who worked closely with the district at this time, recalls that Rollins made a crucial decision to increase the size of all pipelines being built by the district in 1955–56. This decision meant that the pipelines would convey much more water to the cities for many years longer before it became necessary to “parallel” those original lines.

“Rollins knew that at some point the capacity wouldn’t be enough to serve the growth of those cities,” Shimek says. “So it was decided to take alternate bids on each pipeline one size larger than the estimates were based on. As a result, all the pipelines were built larger than originally planned, except for the line from Dallas to Mesquite, which had to be built in a hurry.”

Because of the competitiveness of the bidders, Shimek adds, the larger pipelines were actually built at no increase in cost estimates — thanks to the foresight of Andy Rollins.

Rollins also moved quickly to hire enough paid employees to handle the district’s rapidly expanding operations. One of the first of these to join the NTMWD was D.B. Dickson, a veteran engineer who was working at the time as water superintendent for the Cities of Highland Park and University Park.

In a 1989 interview, Dickson recalled how he became the district’s first plant supervisor:

*“Mr. Rollins came to me one day and said, ‘Mr. Dickson, we’re starting a water plant out here at Wylie, and I wonder if you could help me out on personnel by telling me how many people I need and what kind.’ So I made him out a list of operators, chemists, flunkies and so forth that amounted to about 22 or 23 employees. He thanked me and said that was just what he needed, but he came back a few days later and said, ‘I need a little bit more help.’”*

What Rollins actually needed turned out to be Dickson himself.

*“He said, ‘I’m just wondering if I’m going to have to get a shotgun to get you out of this office and out to our plant,’” Dickson recalls. “And I said, ‘Well, no, I guess not. I’m not married to this job here.’”*

*“And he told me to go tell my boss I was getting off the payroll right*



*then, because he'd already turned my name in to the district directors as the new plant supervisor. Andy Rollins was quite a character, but a fine person. I never worked for a better man in my life."*

. . .

The water treatment and distribution system being constructed by the NTMWD was one of the largest projects of its kind ever undertaken in Texas up to that time. *By Carl Shimek's estimate, the \$9 million cost of the system would be the equivalent of between \$40 million and \$50 million today.*

Because of its size and uniqueness, the project received considerable attention in the press. When the first section of 42-inch concrete pipe was lowered into a trench to mark the beginning of the \$1.13 million Lavon-to-Dallas pipeline, newspaper reporters and photographers were on hand to record the event.

The pipeline would soon supply "Big D" with up to 15 million gallons of water per day under terms of an amended contract that increased the maximum amount from 10 million gallons daily. Furthermore, as Rollins pointed out to the media, the line was actually capable of delivering 30 million gallons per day or more if needed — and as rapidly as the demand for water was growing, it seemed likely that this level of need could be reached at some point in the not-too-distant future.

There was, however, a serious problem with this projection. When it went into full operation, the new filtration plant would be capable of treating no more than 20–30 million gallons per day under normal conditions, and this would have to be spread among the ten cities of the NTMWD as well as Dallas. As this realization dawned, it was becoming obvious that the big new plant now taking shape at Wylie — a plant that many had originally felt would be sufficient to handle the district's needs for a quarter century or more — might well be pushed to its capacity in less than a decade.

E.H. "Whitey" Ingram, who helped to design the plant as an engineer for Forrest & Cotton and later took a job with the district, remembers when the first doubts began to arise about the original plant's capacity. "The original concept was 25 years," Ingram says, "and in the beginning no one gave any thought to the possibility that a second plant would be needed before that. There was just no indication at the time the plant was being planned that we would see the kind of growth that actually happened."

. . .

On August 7, 1956, with the treatment plant 93 percent complete, the NTMWD



*From Lake to Faucet — Getting the Water Flowing*



Placing the first joint of pipe to bring surface water to the cities are (L-R): Directors H.R. Bisby; Clifford Carpenter; C. Hansford Ray; Ray Sorenson, P.C. Sorenson Co., contractor; Mr. Brown, P.C. Sorenson Co.; A.P. Rollins, NTMWD general manager; T. Carr Forrest, Forrest & Cotton; Ray Foley, Gifford-Hill Pipe Co.; Directors H.L. "Hack" Roach; J.O. Wallace; N.E. Shands; and A.R. Schell, Jr.

board acted on a motion by Rockwall's J.O. Wallace and a second by C.L. McCuistion (who had recently taken Forney's spot on the board, succeeding R.M. Rhea) to hire Ingram as project engineer and D.B. Dickson as plant supervisor.





Addressing the gathering in 1956 to commemorate the opening of the NTMWD Water Treatment Plant is Sam Rayburn. The crowd then toured the plant which could treat up to 20 million gallons per day (MGD).

On September 4, Leon Holbert was hired as chief chemist, W.E. Trammel as a mechanic and Joe Newsom as a lab technician. Approval was also given by the board to hire 13 operators.

The final countdown had begun, and from this point on, Dickson found himself at the center of the frantic activities of the next two months as the district rushed to get the critically needed water flowing.

Finally, on November 8, 1956, everything appeared to be ready. Dickson instructed his people to check all the filters, valves, feeders and other equipment to make certain that everything was in order. A representative of Forrest &





Master of Ceremony duties were performed well by C. Truett Smith of Wylie during the plant dedication.

Cotton made one final check. Then, shortly after 2 o'clock that afternoon, Dickson gave the order to "crank this thing up."

As urgent as the situation was, Dickson can find a trace of humor in what happened next as he looks back on it today.

"Evidently somebody had left the wrong valve open," he explains, "because all of a sudden, the plant mechanic came running up to me and yelled, 'Come here! You won't believe what's happening!'"

"I ran outside and saw water coming out the door of the filter plant and running down the steps. I hollered, 'Shut her down!' and we did. It took us all night to dry out the building by mopping and running the air conditioner. But the next morning, I said 'Let's go,' and we finally put the plant on line and started pumping water to the cities."

From the grassroots start of many years earlier, a miraculous milestone had been reached. But by the time the first treated Lavon water gushed through the four-county network of pipelines, it was already apparent to the leaders of the NTMWD that, wonderful as this long-awaited flow was, it was not enough.

There was little time for self-congratulation. By now, the message was pain-





Construction of the original Raw Water Pump Station No. 1 near Lavon Dam is almost complete in this photo from February 1957. (Photo by Clint Grant, *Dallas Morning News*)

fully clear: Another treatment plant was going to be needed very soon — but that wasn't all.

As incredible as it seemed, Lake Lavon itself was going to have to be enlarged if the district hoped to keep pace with the soaring demands of an exploding population.





*From Lake to Faucet — Getting the Water Flowing*



First employees to join the force (L-R): E.H. "Whitey" Ingram, P.E., Leon Holbert, Kelly Lamb, and Harold Montgomery (right) join in Civil Defense training with Wylie Mayor R.J. Hall (2nd from right).



The NTMWD Water Treatment Plant treated the first surface water to flow to the cities in November 1956.



# 6

## Planning to Meet an Exploding Demand

*"... It is our opinion, considering the probable yield of Lavon Reservoir and the past and expected future growth of the member cities and customers served by the district, that the entire conservation storage in the existing Lavon Reservoir would be required to serve the district's customers by 1970 in the event a severe drought should occur."*

— Carl Shimek  
Forrest & Cotton  
October 1965

Up until the early to mid-1950s, the communities to the north and east of Dallas had, with rare exceptions, witnessed only a slow, sustained growth that had averaged around 2 percent per year (and in some cases far less) since the turn of the century. Plano, for instance, had grown from 1,304 people to just 2,126 during the five-decade span between 1900 and 1950. Rockwall had grown even more slowly during this same period, from 1,245 to 1,501, while Mesquite had grown slightly faster, percentage-wise, from 406 to 1,696.

Even Garland, recognized as the epitome of a boom town as far as this area was concerned, had followed the same identical pattern until war-related industrialization had sent its population soaring from 2,233 to 10,571 between 1940 and 1950. At the time, this jump of more than fourfold in a single ten-year span was considered a truly remarkable statistic, and although additional growth was



a foregone conclusion, few could envision any future increase that would be more dramatic than what had already taken place.

In retrospect, it seems safe to say that virtually no one could foresee what was actually about to happen — an outburst of suburban growth that would rank the area, over much of the next quarter-century, among the fastest-growing in the nation. Every town and city in the region was anticipating a healthy rate of growth, but it was simply impossible to comprehend the kind of runaway expansion that lay just ahead. As a result, even the best and most experienced planners of the period were working with future population projections that were, to say the least, woefully inaccurate.

As of November 1953, for example, the leaders of the North Texas Municipal Water District were designing a water system based on future population estimates that are utterly laughable today. Garland, they were told, would have a population of 37,600 in 1970 and 60,000 in 1980. In actuality, Garland would grow at well over double this rate, reaching a population of 81,437 by 1970 and 138,857 by 1980. Other then-current population projections with which the district was working were even further off the mark. Mesquite was supposed to have just 10,500 people in 1970, when, in fact, it would have 55,131. By 1980, meanwhile, Plano was expected to have only 12,000 inhabitants — or less than one-sixth of its actual 1980 population of 72,331.

### **Population Growth of Garland, Mesquite, and Plano<sup>1,2</sup>**

| <u>City</u> | <u>1950</u> | <u>1960</u> | <u>1970</u> | <u>1980</u> | <u>1990</u> | <u>1993</u> |
|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Garland     | 10,291      | 38,501      | 81,437      | 138,857     | 180,650     | 184,450     |
| Mesquite    | 1,684       | 27,526      | 55,131      | 67,053      | 101,484     | 106,400     |
| Plano       | 2,115       | 3,695       | 17,872      | 72,331      | 128,713     | 149,100     |

**1** Source: U. S. Census from North Central Texas Council of Governments except as noted.

**2** Source of 1950 data: U. S. Census data cited in "Report Covering The Proposed Construction and Financing of Works for the Treatment, Transmission and Sale of Water from Lavon Reservoir, Collin County, Texas by the North Texas Municipal Water District," Forrest and Cotton, Consulting Engineers, June 1954.



True, the projections for some of the other member cities were considerably more accurate, and a few, in fact, were even overly generous. *But within the brief two-year span between 1953 and 1955 (when plant construction was not complete and no water had yet been delivered), it became painfully apparent that the area's suburban population growth — and, in turn, its demand for water — was going to be far greater than anyone had dared to imagine when the decade began.*

As early as the spring of 1955 — fully a year and a half before the first water was scheduled to be pumped into the NTMWD pipeline network for delivery to the cities — leaders of the district had reached the disquieting conclusion that its 100,000 acre feet of storage in Lavon Reservoir would not be nearly enough to meet the coming demand.

In a special meeting of the district's board of directors on May 2, 1955, President H.R. Bisby discussed the appointment of a committee "to study present and future problems of water supply . . . based on probable future growth and limited storage." The committee was chaired by Truett Smith and its members included J.O. Wallace, N.E. Shands, H.L. Roach, Clifford Carpenter and C.H. Ray.

At the meeting, Smith reported that the committee had already discussed the idea of increasing the storage capacity in Lavon, and he suggested that a presentation to this effect be filed with the State Board of Water Engineers "to protect the district while investigations were being carried out to determine the feasibility" of such a plan.

There was not unanimous agreement among the directors, however, on the need for what must have seemed at the time a most drastic move. The minutes of that special meeting note that there was "much discussion" of the matter, but that a motion for further study by the committee was later "adopted unanimously."

As Smith recalled the situation many years later, Garland, Plano and other burgeoning suburbs were worried that water which the district was selling (and considering selling) to Dallas and other nonmember cities would endanger their own water supply in years to come. "They (directors from those suburban cities) were getting concerned that North Texas wasn't taking care of the future like it ought to and that maybe they should go out and try to get some additional water on their own," Smith said. "That would have been a big mistake for the whole area."

Not only were the suburban cities growing at a much faster pace than antici-



pated, but the City of Dallas was also pressing to acquire more water from the NTMWD than the 7.5 million to 10 million gallons per day originally discussed. As Dallas Water Superintendent Henry Graeser pointedly mentioned in a letter to NTMWD General Manager A.P. Rollins on September 22, 1955:

*"Another matter which I am sure you will want to take up with your board is the possibility of the City of Dallas acquiring all of the excess capacity available from your filtration plant . . . we would like to have your considered opinion as to how much finished water Dallas could depend on from Lavon on a sustained basis of, say, a year or two years. We figure that our system could absorb as much as 30 million gallons per day from the east, but we realize that you probably will not have this amount available at all times."*

Graeser, of course, was still concerned at this time about the continuing drought and a water emergency similar to the one experienced by Dallas in 1952–1953. But in spite of the water shortage, Dallas, too, was experiencing a burst of growth that would increase its population by 135,000 between 1950 and 1960 — and much of this growth was occurring on the city's east side, where the water purchased from the NTMWD was scheduled to be used.

Clearly, more water had to be obtained. And just as clearly, based on the experiences of the past decade, doing so would likely be a long, involved process, one that would entail extensive negotiations with the Corps of Engineers, and, in all likelihood, direct action by Congress.

Carr Forrest of Forrest & Cotton outlined how this process could be expected to work in a letter to NTMWD General Manager A.P. Rollins on September 19, 1955.

*"If it (Lavon) is to be modified in any respect, it appears to us that it would be proper for the Congress, through a subsequent authorization, to request the Corps of Engineers to review the project with the intent of determining whether it is practical to increase the conservation storage . . . and, if so, to what extent," Forrest explained.*

*"Since this authorization must emanate in Congress . . . it would be proper for the (NTMWD) board to discuss this matter with its congressional representatives prior to the time when Congress reconvenes and ascertain their views in this respect," he continued. "We suggest that this be done."*

To get the ball rolling, Smith and his committee struck out on several different



courses of action during that summer and fall. One of the most important of these was a call paid by the district's board of directors to Sam Rayburn at his home in Bonham on October 24.

Some two and a half weeks later, Smith wrote Rayburn to thank him for his help and enclosed a copy of a letter he had sent to the COE district engineer in Fort Worth requesting information on the cost of feasibility studies on increasing Lavon's storage pool in increments of 50,000 acre feet from its present 100,000-acre foot capacity to 350,000 acre feet. He also enclosed a copy of the district engineer's reply that such studies would cost \$25,000.

*"The North Texas Municipal Water District anticipates a demand for water for municipal and industrial purposes greatly in excess of the dependable yield of the existing conservation pool in Lavon Reservoir," Smith said. "It has been assured that, should it be found feasible to increase the conservation pool storage space, funds can be made available to the district through the issuance of additional revenue bonds to pay for its pro rata part of the cost. . . ."*

Smith also renewed the district's request for COE studies aimed at developing a flood control plan along the East Fork below Lavon Dam. These studies, he told Rayburn, would cost \$75,000, according to COE estimates.

*"Your assistance in obtaining authorization for the Corps of Engineers to make the studies . . . will further exemplify your untiring zeal to render worthy service to your district, your state and your nation," Smith concluded diplomatically.*

Rayburn fired back a reply the very next day, assuring Smith that "I am glad to have this information and when I get to Washington I will go to work on it."

In the meantime, acting in response to urging by Smith's committee, the NTMWD had filed a presentation with the State Board of Water Engineers on May 12, 1955, asking the state board to investigate the feasibility of increasing Lavon's storage capacity. The state board's response on June 20 made it clear, however, that only federal action could provide such storage and that such a study by the state would be inappropriate.

The presentation was refused, the board said, "inasmuch as it seeks to investigate the feasibility of altering a project which has already been constructed by the United States government." An investigation "by anyone of another's dam and reservoir" was not within the authority of the state board, the response added. (Although rejected, the NTMWD's request would date its interest and would, if



necessary, secure the district's claim to an expanded Lavon, since "first in time is first in line" is the long-standing rule in Texas.)

There was little apparent movement on the matter at the federal level until the following spring. In early March 1956, Smith and Paul Hardin traveled to Washington to convey their water storage concerns and a plea for funds to members of the House Appropriations Committee and other congressional leaders. Apparently, they were unable to meet personally with Rayburn on this trip, but they were assisted by his aide, John Holton, with whom they left a file of correspondence.

It was at about this same time that Rayburn received a letter from Maj. Gen. E.C. Itschner, the COE's assistant chief of engineers for civil works, in which Itschner assured Rayburn: "I shall be pleased to look into this matter and inform you thereon at an early date."

While the water district and the City of Dallas were supposedly allied in their quest to utilize Lavon and the water resources of the East Fork for their mutual good, there were also undercurrents of potential friction in their relationship.

Smith, for one, did not entirely trust Dallas' intentions. Not only was Dallas in urgent need of cultivating every source of water it could possibly find, but certain municipal leaders in Dallas were also eager to exercise control over the area's total water supply.

As Smith himself would recall more than three decades later:

"Dallas always had the attitude that they wanted to be in charge. Henry Graeser, the Dallas water superintendent, once expressed the opinion in a speech that it only made sense for Dallas to control all the water resources in this whole area. Then Dallas would be able to sell the excess at retail prices to everybody else. If that had ever become a reality, all the rest of us would've been begging for water and paying through the nose for it."

Under the circumstances, concern was steadily mounting among NTMWD board members over what some were now calling the "Dallas threat" — a move by the desperate metropolis to claim for itself all remaining available water in the East Fork. General Manager Rollins explained the rationale behind that concern in a letter to Smith on April 25, 1956.

*"The concern of the directors is probably accentuated by recent activity of the City of Dallas," Rollins noted. "Dallas filed a presentation with the Board of Water Engineers of Texas in 1955 for the purpose of establishing a priority of right to all available water in the East Fork.*



*That city is now making surveys to determine the feasibility of impounding available water in a reservoir to be created by the construction of another dam several miles below Lavon Dam."*

On that same day, Smith forwarded a copy of Rollins' letter to Rayburn, along with one of his own. Both expressed the willingness of the district to bear the actual cost of providing the additional Lavon storage "should the Corps of Engineers find it feasible" through its studies. Furthermore, said Smith, "we have been assured of our ability to finance such costs by our financial agents."

He concluded with this pointed comment:

*"Because of the impending need for additional water by the constituent cities of our district within the next few years, and further because of the seriousness of the Dallas threat, we obviously are quite concerned."*

It should be mentioned that populist/Democrat Rayburn himself had no great love for the conservative/Republican stronghold of Dallas, and his dislike was heightened by the fact that Dallas was represented in Congress from the mid-'50s to the early '60s by Bruce Alger, a notorious right-wing reactionary who was roundly despised by the rest of the Texas delegation. As veteran NTMWD board member Loncy Leake of Mesquite puts it succinctly: "Sam Rayburn hated Dallas, yet he realized that the district needed Dallas as a customer city to provide a financial base."

The district was clearly going to fight for its rights to additional East Fork water resources, and it had again enlisted the help of a powerful ally. But the fight was destined to be a long one.

One of the biggest early stumbling blocks in getting the process started was the seemingly simple question of who should request a COE feasibility study. Attorneys for the NTMWD were told, on one hand, that Congress could not appropriate money for the study unless the COE made a formal request for it. The COE maintained, on the other hand, that it could not act until it received a request from Congress. Even when it was determined that the COE budget contained ample money to do the study without additional appropriations, the Corps still declined to act without a congressional request for the study.

Roland Boyd, the district's general counsel, asked Rayburn to help clarify the situation in a letter dated November 15, 1956. "We would appreciate your advice if there is anything we can do to further this tremendously important project," Boyd wrote. "We feel that this means much to the economy of North Central Texas."



By early 1957, new NTMWD President Clifford Carpenter of Farmersville was being advised by Boyd, who had just returned from a key meeting in Washington, that the district needed to seek specific authority from the House Public Works Committee in order to pursue its goals.

"We should start in this direction and should stay on that course unless the Chief of Engineers himself or some of his immediate staff told us that they would not need additional authority," Boyd wrote on January 9. "... it definitely would be a mistake for us to take the question up directly with the chief's office until we (have) a conference with (the U.S. division engineer in Dallas)."

This communication came just as the district was about to approach the Chief of Engineers directly with the help of Rayburn's office, and it resulted in a major change of tactics. On January 17, a delegation from the NTMWD including Boyd, Rollins, Smith, Carpenter and Hansford Ray met with Brig. Gen. L.E. Seeman, COE division engineer, at his office in Dallas. During a detailed discussion, the group found Seeman to be "very cooperative and very conscious of water supply problems in this area."

The following week, Smith, Carpenter and Boyd were in Washington (Rollins was ill with a virus and unable to travel) to confer with Rayburn, Congressman Jim Wright of Fort Worth, Senator Lyndon Johnson's administrative assistant, Walter Jenkins, and other federal officials on proposed legislation to increase conservation storage in Lake Lavon to its "maximum potential."

Wright told the group that he felt they should appear later in the year before the House Appropriations Committee and suggested that they could save a year and a half by getting the Lavon enlargement included in the current year's Omnibus Civil Works Bill.

Boyd returned to Dallas greatly encouraged. "I do not feel that the outlook for our situation could possibly be any better at this stage," he reported to the water district board. Unfortunately, however, Boyd's optimism proved highly premature.

The wheels of the ponderous federal machine were beginning to turn, but as Smith, Rollins, Boyd and other "prime movers" in the NTMWD were coming to realize, the intricate mechanism on Capitol Hill moved at a pace all its own. Also, it did not always follow the obvious course — and only by applying a combination of patience and persistence could it eventually be expected to grind out the desired results.

A number of other trips to Washington would be necessary, along with count-



less pieces of correspondence and the unraveling of mountains of red tape before the enlargement of Lavon finally became a reality.

Could the leaders of the NTMWD have foreseen, during those early days of 1957, all the pitfalls and delays that lay ahead, they surely would have been demoralized. The truth was, it would take an incredible nine and a half more years — until the fall of 1966 to be exact — for this tedious process to run its maddening course and the first small “token” appropriation for enlarging Lavon to be approved by Congress.

Neither Sam Rayburn nor A.P. Rollins, both of whom were instrumental in the success of this long effort, would live to see that victory, but it *would* eventually happen.

. . .

As it turned out, by far the most significant historic event of 1957 had nothing to do with the campaign to enlarge Lavon. Instead, it was unquestionably the end of the worst drought ever recorded in Texas and the region.

Although conditions had varied greatly across the state, and the East Fork basin had not suffered nearly as severely as some other areas just 25 or 30 miles to the west, general drought conditions had prevailed in most of Texas for seven long years and led many to wonder if they would ever cease.

Nothing lasts forever, of course. And when the drought finally ended that spring, it did so, quite literally, with a splash. January and February of 1957 brought no signs of relief, with below-normal rainfall totals for both months. March was wetter, although the 3.75 inches of precipitation recorded still left the first-quarter total below average. But then, in April and May, the “bottom fell out” in the form of continuous downpours that continued day after day.

Within that two-month period, nearly 22.5 inches of rain were recorded at Dallas Love Field. This figure was within an inch and a half of the total for the entire year of 1956, and it broke the back of the drought for good. It also touched off massive flooding.

A banner front-page headline in the *Dallas Times Herald* of June 1 told the story of the sudden extreme turnaround in weather conditions:

RAINS PERSIST IN WATERLOGGED TEXAS

FOLLOWING DELUGES UP TO 11 INCHES

*“Dallas was expecting more thunderstorms Saturday,” the story under the headline reported, “after closing out May with 13.74 inches compared to a normal of 4.97.”*



Rainfall for the first five months of the year had already exceeded the normal total for the year of 36 inches, the article continued. Floods had ruined the area's wheat crop and were threatening 7,000 acres of onions in North Texas. Clearly, the mercurial Texas weather remained as unpredictable and untamed as ever.

Two days later, on June 3, the newspaper reported that flood damage in Texas and Oklahoma would probably exceed \$150 million. And as Truett Smith and other NTMWD officials had feared and predicted, much of that damage was along the East Fork channel downstream from Lavon, where they had been seeking a flood control plan for several years.

*"A spokesman for the Southwestern Division, Corps of Engineers, said in Dallas Monday that engineers expect to make temporary repairs at some East Fork levees," the Times Herald reported, "and are considering the feasibility of financing permanent repairs."*

*"Levees were broken or eroded at numerous points south of Lavon Lake during April and May floods. Engineers have been subjected to considerable criticism for permitting flood control releases from Lavon to wash downstream, inundating thousands of acres of farmland."*

What had happened was precisely what Truett Smith had begun warning the COE about in the summer of 1954. But during the three intervening years, nothing had been done even to plan a solution, much less to implement it, and now disaster had struck. It was yet another indication of how ponderously the federal government moved, even in the face of urgent need.

At least, however, the severity of the flooding had the effect of spurring Washington to belated action. On June 8, following a meeting on the East Fork situation with Roland Boyd, Sam Rayburn announced his support of a \$30,000 flood control survey of the East Fork channel and for the deepening of the channel below Lavon. Rayburn also spoke out in opposition to Dallas' plans to construct a new reservoir in that area.

This time, with Rayburn and Senator Johnson actively supporting the measure, Congress would act without delay to approve funding for the survey, and on August 27, President Eisenhower would sign into law a bill including those funds.

It was a classic situation of "better late than never" and yet another illustration of how government tends to react to a crisis after the fact rather than acting in advance to prevent it.

. . .



As if more evidence were needed that Lavon's enlargement was vital to the NTMWD's future ability to supply its members and customers with sufficient water, consumption by the district continued to rise steadily even after the drought was broken. By August 1957, just nine months after the first delivery of water, the district was supplying 640 million gallons per month. But this was a mere "drop in the bucket" compared to what lay ahead.

For the calendar year of 1957, the district treated and delivered an average of 12.25 million gallons daily. By 1964, it was treating and delivering 22.22 million gallons per day, or almost twice as much as during its first year of delivery. But even these figures were somewhat deceptive when used to project future consumption, since the minimum of 7.5 million gallons per day taken by Dallas remained constant during this time. Thus, all the growth in consumption had occurred at a dramatic rate in other area cities.

As Forrest & Cotton's Carl Shimek pointed out in a letter to Roland Boyd in October 1965, this meant that usage by member cities and customers that were subject to variation had increased from an average of just 4.74 million gallons per day in 1957 to 14.72 million per day in 1964.

"The consumption by this portion of the district's service area, then, is approximately triple the consumption in the first year of operation eight years ago," Shimek noted. "This has been largely caused by the tendency toward increased urbanization in the district's service area, and this trend is continuing at an increased rate."

An even greater jump could be expected, Shimek pointed out, by virtue of a 1965 agreement under which the district began selling water to Richardson as a customer city. The NTMWD and Richardson had been engaged in discussions about a long-term water contract for several years, and now that the contract was signed, it meant that Richardson would be taking approximately 10 million gallons per day from the district. The communities of Sachse, Sunnyvale and Murphy, meanwhile, had also signed contracts as customers of the district, and both Mesquite and Garland had greatly increased their demand for water.

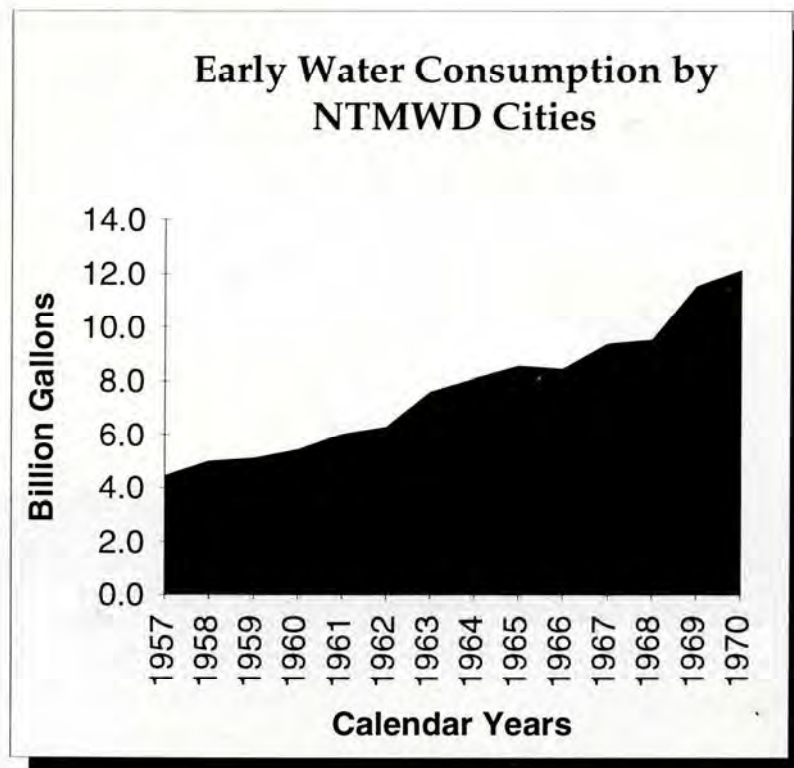
"The estimated safe yield of the existing Lavon Reservoir was initially set at 35 million gallons per day at the time the reservoir was completed," Shimek pointed out. "This yield is expected to decrease in the future by virtue of the effect of runoff-reducing improvements constructed in the contributing watershed. It is our opinion, considering the probable yield of Lavon Reservoir and the past and expected future growth of the member cities and customers served by the



### Early Water Consumption By NTMWD Cities

| <u>Calendar Year</u> | <u>Total Consumption<br/>(Billion Gallons)</u> | <u>Daily Average<br/>(Million Gallons/Day)</u> | <u>City of Dallas<br/>Consumption<br/>(Billion Gallons)</u> | <u>Rainfall<br/>(Inches)*</u> |
|----------------------|------------------------------------------------|------------------------------------------------|-------------------------------------------------------------|-------------------------------|
| 1957                 | 4.5                                            | 12.25                                          | 2.7                                                         | 49.16                         |
| 1958                 | 5.0                                            | 13.73                                          | 2.7                                                         | 38.36                         |
| 1959                 | 5.1                                            | 14.02                                          | 2.7                                                         | 41.94                         |
| 1960                 | 5.5                                            | 14.94                                          | 2.7                                                         | 36.76                         |
| 1961                 | 6.0                                            | 16.52                                          | 2.7                                                         | 33.04                         |
| 1962                 | 6.3                                            | 17.23                                          | 2.7                                                         | 45.26                         |
| 1963                 | 7.6                                            | 20.82                                          | 2.7                                                         | 21.73                         |
| 1964                 | 8.1                                            | 22.22                                          | 2.7                                                         | 41.01                         |
| 1965                 | 8.6                                            | 23.51                                          | 2.7                                                         | 33.92                         |
| 1966                 | 8.5                                            | 23.19                                          | 2.7                                                         | 46.01                         |
| 1967                 | 9.4                                            | 25.71                                          | 2.7                                                         | 43.43                         |
| 1968                 | 9.5                                            | 26.15                                          | 2.7                                                         | 43.34                         |
| 1969                 | 11.6                                           | 31.68                                          | 2.7                                                         | 35.14                         |
| 1970                 | 12.1                                           | 33.26                                          | 2.7                                                         | 39.57                         |

\* Rainfall measured at Lavon Dam





district, that the entire conservation storage in the existing Lavon Reservoir would be required to serve the district's customers by 1970 in the event a severe drought should occur."

Even without another drought, however, the demands generated by burgeoning population growth were clearly going to push the district to its utmost existing capacity within a few years. Under the circumstances, a vastly enlarged storage pool in Lavon was an utter necessity, and other possibilities for expanding the district's water supply resources would have to be explored as well.

Among the options discussed was construction of a second reservoir in which the district could obtain water rights. But the big question was "Where?" Over the NTMWD's vigorous opposition, the City of Dallas had pressed ahead with plans for a new Forney Reservoir on the East Fork below Lavon. After a series of hearings on Dallas' application for the reservoir before the State Board of Water Engineers in Austin that stretched from May to November 1958, the board finally issued a favorable response.

The NTMWD succeeded in convincing the Board of Water Engineers to insert language recognizing the district's prior need for and interest in expanding Lavon and thereby reserving those future water rights for the district. At this point, although the district had filed a formal protest against the application, it decided not to pursue an appeal, thus clearing the way for what is known today as Lake Ray Hubbard.

This development had vast implications for the district. What it meant was that the NTMWD would, in all likelihood, have to move beyond the East Fork basin to gain storage in a new reservoir. Among the likeliest sites was one near Cooper in Hunt County which had first been approved, in principle, by Congress in 1955, and communications between district officials and the COE concerning that possibility began as early as the summer of 1960.

At about this same time, the district also gave considerable attention to the idea of building a reservoir near Farmersville, as an alternative to expanding Lavon, and the consulting engineers of Forrest & Cotton went so far as to develop detailed cost estimates for such a project. One idea was to "trade" some flood control storage in a new Farmersville Reservoir for additional water supply storage in Lavon, providing the COE would agree. It was estimated that the lake at Farmersville would cost about \$10.75 million to construct and would raise the total dependable yield of the two-reservoir system to nearly 84 million gallons per day. After Dallas' plans for Lake Ray Hubbard were approved, however, the Farmersville



Reservoir concept was dropped and all subsequent efforts at obtaining a second reservoir were directed toward the Cooper project.

But while the major problem was securing enough raw water, there were other growth-oriented needs that also had to be addressed. Once the raw water was secured, for example, greatly increased treatment capabilities would also be necessary. Shimek had begun work in 1959 on plans for expanding the district's existing treatment plant, but as the early 1960s unfolded, it grew increasingly apparent that an entire new second plant was the only effective long-range answer.

The period between the late 1950s and the mid-1960s was one characterized by the disturbing realization that the task of obtaining a dependable water supply for the district's service area had barely begun — and by a series of lingering, unanswerable questions that always seemed to be hovering in the background:

*How many more years would it take for Congress and the COE to come to terms with the NTMWD on the proposed enlargement of Lavon? Would they act in time to avert the region's next major water emergency? How many people would end up going thirsty if the current population explosion should collide with a new drought?*

Just before Christmas 1959, some discouraging information came from Rayburn's office. As far as could be determined, no Corps of Engineers lake had ever had its conservation storage capacity increased following its initial construction. This meant that if the district did succeed in its efforts to get Lavon's storage increased by up to 350 percent, it would be establishing a nationwide precedent in the process.

The discovery was not viewed as good news, but the district's leaders were determined to press on. While they waited and hoped for federal action, they took whatever steps could be taken at the state level to protect the district's rights to the future additional water supply in Lavon — assuming there ever *was* such additional supply.

On January 8, 1960, the NTMWD board voted in favor of filing a request with the State Board of Water Engineers to establish priority rights for additional storage in Lavon "or in an additional reservoir upstream," and this time the state board reacted favorably.

On February 4, the state board issued an order designating the NTMWD as its official "agent" to negotiate with the COE for the enlargement of Lavon and the acquisition of additional storage space therein. This in no way hastened the



**History of Expansions  
of the NTMWD Water Treatment Plants  
Wylie, Texas**

| <b>Plant</b> | <b>Capacity Added</b> | <b>Total Capacity</b> | <b>Date Completed</b> |
|--------------|-----------------------|-----------------------|-----------------------|
| I            | 20 MGD                | 20 MGD                | November 1956         |
|              | 25 MGD                | 45MGD                 | May 1962              |
|              | 25 MGD                | 70 MGD                | June 1965             |
| II           | 35 MGD                | 105 MGD               | June 1971             |
|              | 70 MGD                | 175 MGD               | July 1974             |
|              | 70 MGD                | 245 MGD               | July 1984             |
|              | 105 MGD               | 350 MGD               | March 1988            |

enlargement, but at least it ensured that no other Texas entity would be able to claim the storage space.

Meanwhile, the sharply increasing demand for water meant that the district could not wait for increased storage in Lavon to expand its water treatment capabilities. Two enlargements in the original treatment plant — one of 15 million gallons per day in completed in May 1962 and another of 15 million gallons per day finished in June 1965 — doubled the district's capacity from 30 to 60 MGD and bought time until a second treatment plant could be designed and built.

As the district waited for action from Washington, it also moved ahead with the legal and financial work that would be required for the district to issue more bonds and repay the federal government for the proposed expansion work at Lavon.

In a letter to the NTMWD board of directors in April 1962, attorney Roland Boyd outlined what was being done in these areas by the firm of Boyd, Viegel & Gay of McKinney, the district's general counsel, and by the Dallas firm of McCall,



Parkhurst, Crowe, McCall & Horton, the district's bond counsel, both of which were working with First Southwest Company, the district's financial advisor.

*"General counsel will have the direct responsibility of negotiating with the Corps of Engineers . . . the contract for storage rights to be executed between the parties," Boyd explained, "with participation by bond counsel in such matters as will affect the district's ability to finance this undertaking."*

The doggedness and determination with which the NTMWD pursued the goal of an enlarged Lavon from the late 1950s through the mid-1960s — often going for months during this interval of nearly a decade without seeing any clear signs of progress — can be attributed in large measure to the persistent fear of another drought.

As longtime district director Conway Senter of Forney, who served for some 35 years on the board, recalled in looking back at that often-frustrating period:

*"The drought was still on our minds. It was uppermost in our minds. The area was growing at a much faster rate than anybody had anticipated, and if the growth continued, even another small drought was going to leave us without enough water to meet our needs."*

There was even concern at this time that the network of small soil conservation dams built above Lavon by the Soil Conservation Service might withhold needed water from the reservoir.

"They were certainly beneficial to the soil in the area, but there was some discussion (about the small lakes) when we were desperate for water — or when we thought we might be," Senter said. "These dams kept the soil from washing away, but they also trapped a lot of runoff and kept it from getting to Lavon."

Thus was raised yet another gnawing question for the NTMWD: When the studies on raising the height of Lavon Dam were finally completed, would they show that the combined effect of these small dams upstream made increased storage in Lavon unfeasible after all?

In retrospect, it may seem a pointless worry, but at the moment, no one knew the answer.

. . .

One factor that undeniably contributed to delays and confusion in the campaign to enlarge Lavon was the illness and death of Sam Rayburn, the district's oldest friend and staunchest ally in the nation's capital.

Rumors that the House speaker's health was failing had circulated in Wash-



ington during much of 1960, but “Mr. Sam” had been well enough to campaign hard for fellow Texan Lyndon Johnson’s nomination as President and had, in fact, delivered the main nominating speech for Johnson at the Democratic National Convention. Then, despite his disappointment at LBJ’s first-ballot defeat by Senator John F. Kennedy of Massachusetts, Rayburn had played an instrumental role in persuading Johnson to accept second place on the ticket and had worked diligently for a Democratic victory.

That November, in the same election that gave Kennedy the White House, Rayburn had won reelection without opposition to his 25th term in the House of Representatives, and on January 3, 1961, he was elected speaker of the House for the tenth time (and ninth full term) as the 87th Congress convened.

On June 12, Rayburn officially doubled the record of Henry Clay, the man who had served the second-longest tenure as House speaker, but by then it was apparent to his friends and associates that Rayburn was seriously ill. On August 31, suffering from what he described as “lumbago,” Rayburn came back to Bonham to rest and try to recuperate. He never returned to Washington.

In early October, he was admitted to Baylor University Medical Center in Dallas, where, after several days of tests, he was diagnosed with far-advanced, inoperable cancer. On October 31, he was allowed to go home to spend his last days, and on the morning of November 16, at the age of 79, Sam Rayburn quietly slipped into history. He was buried two days later in Bonham’s Willow Wild Cemetery with President Kennedy, Vice President Johnson and dozens of the world’s top political figures in attendance.

It is impossible today to calculate how much the loss of Rayburn and the tireless energy with which he had always worked to benefit the East Fork Basin and the NTMWD may have set back the effort to enlarge Lavon, but it seems safe to say that its impact was considerable. For a full year before his death, “Mr. Sam” had not been physically able to intervene with his customary vigor in behalf of the district, and his failing health had come at a time when his influence was sorely needed.

As Truett Smith, his longtime friend and an active participant in every Rayburn reelection campaign from 1945 until his death, would recall in years to come:

*“He was always there, giving us advice, telling us how to proceed and all that. And his help was so fundamental and vital in getting the legislation we needed through Congress. He had the kind of power that he could pretty well do what he wanted to do. He just knew how to get things done in Washington. He knew how better than anybody else.”*



Congressman Ray Roberts, who was elected as Rayburn's successor to represent the Fourth District of Texas, did his best to promote the interests of the NTMWD and the East Fork. But as a freshman congressman who was far less familiar than Rayburn with the corridors of power and the avenues of expediency on Capitol Hill, he could not be expected to be as effective as the man he replaced.

A letter written by Roberts to Smith on August 17, 1962, was marked by an apologetic tone over the lack of progress on the Lavon enlargement.

*"This is to let you know that I am still in touch with the East Fork project," Roberts said. "However, it is still in the Bureau of the Budget, and I have been unable to get an estimate as to when the processing will be finished and transmitted to the Congress."*

*"Since the bureau is still holding this, along with many other reports in connection with this program, it now looks doubtful that there will be an Omnibus Public Works Bill this year. Be assured I am doing my best to keep up on this and will let you know when any action is taken."*

Roberts' commitment to the project enabled it to win approval, at least in principle, before the final adjournment of the 87th Congress. The measure would still have to fight its way through the always-uncertain appropriations process, however.

By early 1964, Roberts was also able to report some progress on another front after finally obtaining a firm assessment from the Corps of Engineers as to what their plans actually were and how soon they might be implemented.

On February 5, Col. F.P. Koisch of the COE's Fort Worth district replied to a letter from Roberts with the most definitive information yet obtained concerning the Lavon enlargement.

*"Present schedules call for completion of advance planning during fiscal year 1966, and construction could be initiated during fiscal year 1967," Koisch wrote, adding quickly: "Of course, you realize this schedule is dependent on future appropriations by the Congress. It is also dependent on local interests furnishing the required assurances of cooperation in connection with the channel improvement and negotiation of a satisfactory contract for the disposition of the conservation storage in Lavon."*

Rollins replied within about a week, assuring Roberts that the district would do everything possible to cooperate and expressing the hope that "construction can be initiated and completed ahead of schedule."



By the summer of 1964, the district's patience and persistence was finally producing results. As Col. E.W. Fischer of the COE's Dallas office reported to Roberts on August 31:

*"Pre-construction planning for the proposed enlargement was initiated in February of this year and will continue through fiscal year 1966. During this period an aerial mosaic will be prepared and the pertinent contours will be surveyed in the field. The surveys are scheduled to be completed early in 1965. A tentative (property) acquisition line based on the pertinent contours . . . will be superimposed on the aerials and on ownership maps for inclusion in reports scheduled for completion in April of 1966."*

The "monumentation" — the COE's term for the actual raising of the dam — could be initiated by July 1966, Fischer added, "providing appropriations for construction are received."

Subsequently, in May 1965, attorney John E. Gay of the law firm of Boyd, Veigel & Gay, the NTMWD's general counsel, appeared before the House Appropriations Committee in Washington, using population and water consumption figures to press the district's case.

*"As can be readily seen by the . . . figures, the North Texas Municipal Water District will be using the safe yield of Lavon Reservoir by the late 1960s," Gay testified.*

*"The modification of Lavon Dam and Reservoir to provide an additional water supply storage capacity of 262, 000 acre feet has been approved by the Congress. . . . This additional storage will give a dependable yield of approximately 79 MGD, which will provide an adequate water supply for a period of approximately ten years.*

*"By the most optimistic estimates on the construction of the modified reservoir, the additional storage and the yield therefrom will not be available until the approximate time that the estimated safe yield from the present reservoir will be exceeded; therefore, it is vitally necessary . . . that the modification of the Lavon Reservoir be started as soon as possible."*

Gay returned to the Appropriations Committee in April 1966 to plead the district's case once more, and his appearances helped clear the last obstacles for Lavon's enlargement.



At first, the appropriations came small and grudgingly — only \$230,000 in fiscal 1965 to complete the COE studies, followed by \$800,000 in fiscal 1966 to cover planning and design work and other preliminaries.

It was a bare-bones beginning for a project that would cost a total of more than \$32 million — but it was at least a start.

On September 29, 1966, the following triumphant headline appeared on the front page of the *Wylie News*:

HOUSE OKAYS FUNDS FOR LAKE LAVON EXPANSION

Less than a week later, the appropriations measure also passed the Senate. It had taken 11 long, arduous years for the Lavon expansion to reach this point, and seven more years would elapse before the first water would be available from the new storage space.

But from this point on, a larger Lavon became a virtual certainty.





# 7

## New Challenges and New Leadership

*"AND NOW THEREFORE BE IT RESOLVED: That the board of directors of the North Texas Municipal Water District does now express its deep appreciation for the service of A.P. Rollins by affirming and designating the board's decision to employ (him) as its first general manager as the single most significant decision made by the said board in the history of the district."*

— Resolution passed by  
NTMWD Board of Directors  
January 1965

The decade of the 1960s was one of almost constant "growing pains" for the North Texas Municipal Water District. It was also a time of unprecedented challenges and considerable frustration, compounded by a top-level management crisis that consumed nearly half of a decade in which the district was desperately trying to respond to increasingly urgent demands for more water and additional services.

In addition, faulty projections of area population growth — which inevitably seemed to fall far below actual increases — continued to hamper the district's efforts to develop comprehensive plans for the future. As late as April 1960, the district's consulting engineers were basing their projections on an estimated population of the NTMWD service area of just 203,000 by 1975, and yet by 1969



the area's population would already have passed the 200,000 mark. Estimates for the more distant future were even less accurate. A total service area population of 485,000 was forecast for the year 2010. In actuality, more than 800,000 persons would reside in the area by the end of 1992.

It was also a time of major transition in the leadership of the NTMWD.

The deaths of two key early leaders of the district — former President H.R. Bisby of Garland in February 1961 and charter board member Alex Schell, Jr., of Plano in May 1964 — were keenly felt. But at the same time, new leaders were appearing on the scene to carry on the district's work.

By virtue of its phenomenal population growth — from just over 1,700 in 1951 to more than 27,000 in 1960 — Mesquite became the third NTMWD member city (along with Garland and McKinney) to qualify for a second board member, and attorney Loncy L. Leake was appointed in June 1960 to fill that new position. Leake, whose association with the district now spans 34 years and includes three terms as president, joined the board at the height of the struggle to enlarge Lavon and at the beginning of negotiations to secure water rights in a new reservoir near Cooper.

In a highly transitional period, marked by crucial events, Leake quickly became one of the board's most respected and influential members. When Mesquite's senior board member, banker N.E. Shands, declined to accept the NTMWD presidency in 1964, the board turned to Leake, and despite his relatively short tenure on the board, he became the presiding officer during an extremely difficult period. (Leake would be elected to a second term as president in 1972–73 and to a third term in 1987–88.)

"Those early '60s gave me my first glimpse at how politics work in the area of water," Leake recalls, "and I found it very interesting. My service on the board was, and has been, a rich, rewarding experience, particularly the opportunity of serving with Mr. Shands. He was a father figure to me, but he was very unpretentious and withdrew from public acclaim. He wouldn't serve as president because he said he didn't feel he was equipped for the job, but it was Mesquite's turn (under the system of rotating the presidency among member cities), and when they asked me, I said, 'Heck, yes!'"

The change that most seriously impacted the day-to-day operations of the district during Leake's first term as president was the resignation, in the summer of 1964, of A.P. Rollins, who had served for nearly a decade as the district's first and only general manager. Andy Rollins' contribution to the NTMWD during this



time, as a highly respected engineer, an efficient administrator and an admired leader, is almost impossible to exaggerate.

The esteem with which he was held by others in his profession is illustrated by a letter addressed to Rollins in March 1963 by Marvin C. Nichols of the Fort Worth engineering firm of Freese, Nichols & Endress in response to the NTMWD's annual operations report for 1962.

*"... this report is the most comprehensive in respect to pumpages, costs, chemical dosages, etc. of any report which we see. We receive a number of similar reports each year and yours is the best," Nichols wrote.*

*"Andy Rollins was just an excellent, excellent man for the time he was there," says A.H. Eubanks, Jr., veteran director from McKinney, who was first named to the board during this period. "He did a remarkable job leading the district."*

*"Andy would probably have been lost in this day and time," Leake remarked during a 1989 interview, "but for the time he served as general manager, he was the ideal man for the job. He had been on the State Board (of Water Engineers); he was a good engineer; he knew how to treat water, and he was a wonderful representative for the district."*

By this time, however, Rollins was past his 80th birthday and failing health forced him to give up the demanding role he had held for nearly ten years. He informed the board of his decision to resign on July 7, 1964, and although the board delayed its formal acceptance of his resignation until December 9 in hopes that he might be able to return, he never sufficiently regained his health. Thus, the district was left without its top management official at a time when there was a heavy load of urgent business and many crucial decisions to be made.

An eloquent resolution was passed by the board in January 1965 in recognition of Rollins' contribution to the district. It praises "his experience and skill as an administrator, his dedication and his creative efforts" as well as his "vision . . . (and) his devotion to the cause of water conservation," and it concludes:

*"AND NOW THEREFORE BE IT RESOLVED: That the board of directors of the North Texas Municipal Water District does now express its deep appreciation for the service of A.P. Rollins by affirming and designating the board's decision to employ (him) as its first general manager as the single most significant decision made by the said board in the history of the district."*



Perhaps an equally dramatic testimony to Rollins' outstanding qualities lies in the fact that, for more than three years after his death on June 7, 1966, the board would be unable to find a suitable replacement. Today, nearly three decades later, a copy of the resolution, along with a portrait of Rollins, hangs in a place of honor in the NTMWD headquarters building at Wylie.

Amid the ongoing campaign to enlarge Lavon and discussion concerning a new lake elsewhere, demands for water by Dallas, Mesquite and Garland were still skyrocketing because of rapidly increasing populations. Dallas officials were expressing serious concern over low water pressure and the amount of water being consumed by Mesquite and Garland. Simultaneously, fast-growing Richardson would open negotiations with the NTMWD in the mid-1960s about becoming the district's newest customer city — which would mean still greater demand. Meanwhile, the district's existing water delivery resources were being severely strained and no real relief would be possible until the latest of two 15 million-gallons-per-day expansions of the water treatment plant could be rushed to completion in mid-1965. A contract on the work, which included the installation of a fourth clariflocculator and two filters, was awarded in October 1964.

Making matters worse at this time was the return of drought conditions, which, although they were not nearly as long in duration, were every bit as severe in the short term as the drought of the '50s. In 1963, for example, rainfall over the district averaged only 21.74 inches or about 17.5 inches below normal. Together with above-average summer temperatures, this sent water demand in the district soaring to more than 40 million gallons daily for "many days," in Rollins' words.

There was no letup the following year, either. The summer of 1964 brought new records in water consumption as more than 1.4 billion gallons of water were pumped from Lavon in a single month. This can be compared to a total of just 6.29 billion gallons of water treated and delivered by the district during all of 1962. Fortunately, the district's new booster station at Murphy was completed in May 1964, enabling the delivery of 4 million gallons of water per day to Plano, which was beginning to show signs of rivaling Mesquite and Garland in growth.

In 1965, the City of Richardson signed its first contract as a water customer with the district, and the district contracted to build a new 60-inch transmission line to a terminal site in northwest Garland. Both Richardson and Garland would draw water from the unique, multi-use "Apollo Site," as it became known, and a new line from the site, begun in 1967, would also reinforce the supply into the



**1957-1980 Water Consumption by NTMWD Cities**

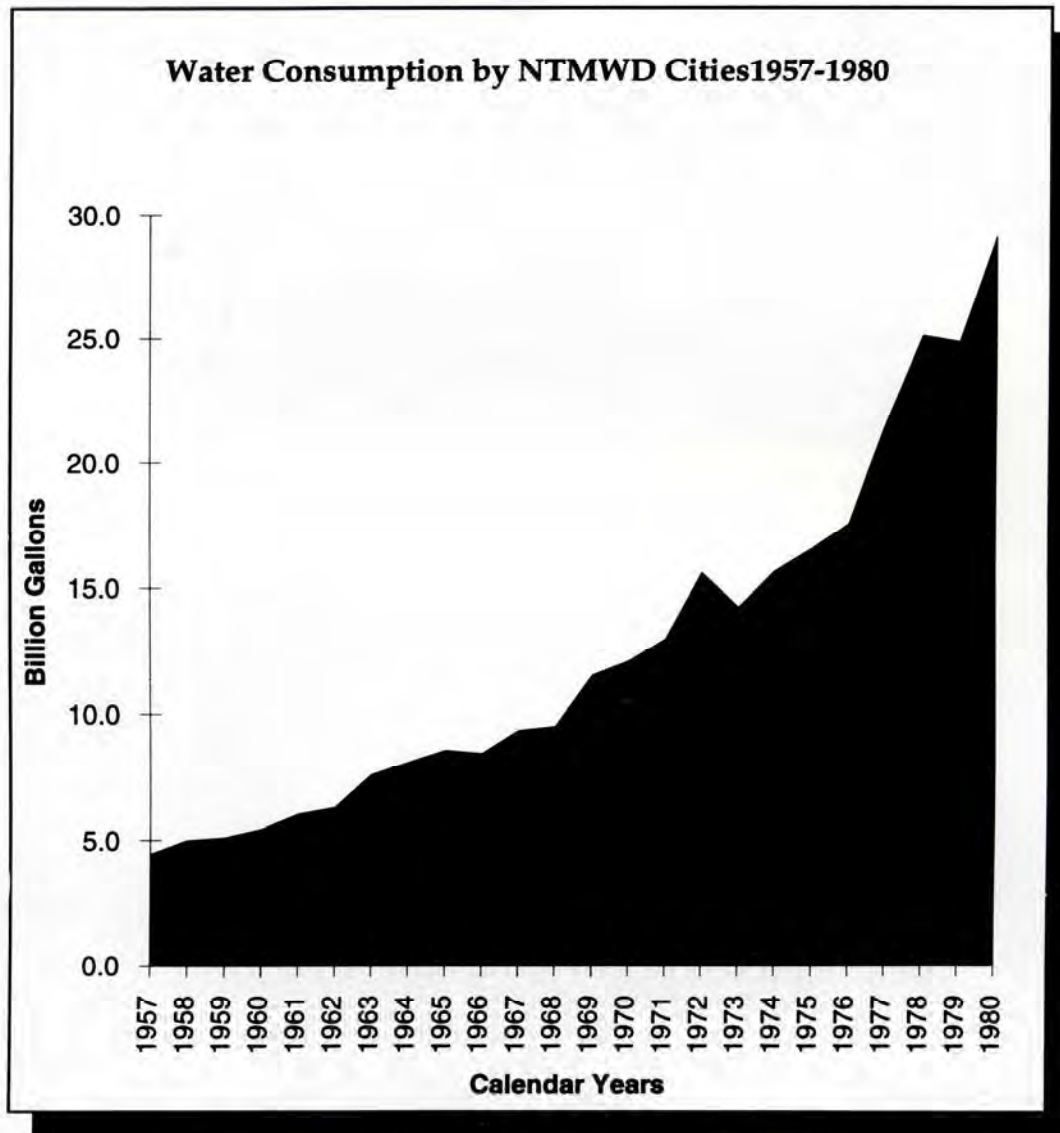
| Calendar Year | Total Consumption<br>(Billion Gallons) | Daily Average<br>(Million Gallons/Day) | City of Dallas<br>Consumption<br>(Billion Gallons) | Rainfall<br>(Inches) |
|---------------|----------------------------------------|----------------------------------------|----------------------------------------------------|----------------------|
| 1957          | 4.5                                    | 12.25                                  | 2.7                                                | 49.16                |
| 1958          | 5.0                                    | 13.73                                  | 2.7                                                | 38.36                |
| 1959          | 5.1                                    | 14.02                                  | 2.7                                                | 41.94                |
| 1960          | 5.5                                    | 14.94                                  | 2.7                                                | 36.76                |
| 1961          | 6.0                                    | 16.52                                  | 2.7                                                | 33.04                |
| 1962          | 6.3                                    | 17.23                                  | 2.7                                                | 45.26                |
| 1963          | 7.6                                    | 20.82                                  | 2.7                                                | 21.73                |
| 1964          | 8.1                                    | 22.22                                  | 2.7                                                | 41.01                |
| 1965          | 8.6                                    | 23.51                                  | 2.7                                                | 33.92                |
| 1966          | 8.5                                    | 23.19                                  | 2.7                                                | 46.01                |
| 1967          | 9.4                                    | 25.71                                  | 2.7                                                | 43.43                |
| 1968          | 9.5                                    | 26.15                                  | 2.7                                                | 43.34                |
| 1969          | 11.6                                   | 31.68                                  | 2.7                                                | 35.14                |
| 1970          | 12.1                                   | 33.26                                  | 2.7                                                | 39.57                |
| 1971          | 13.0                                   | 35.70                                  | 2.7                                                | 37.58                |
| 1972          | 15.6                                   | 42.80                                  | 3.0                                                | 18.81                |
| 1973          | 14.3                                   | 39.10                                  | 2.7                                                | 49.28                |
| 1974          | 15.7                                   | 43.00                                  | 2.7                                                | 46.52                |
| 1975          | 16.6                                   | 45.50                                  | 3.2                                                | 28.73                |
| 1976          | 17.6                                   | 48.20                                  | 2.9                                                | 37.15                |
| 1977          | 21.6                                   | 59.10                                  | 2.8                                                | 31.29                |
| 1978          | 25.1                                   | 68.80                                  | 2.8                                                | 29.16                |
| 1979          | 24.9                                   | 68.10                                  | 3.2                                                | 41.95                |
| 1980          | 29.1                                   | 79.80                                  | 3.7                                                | 27.33                |

\* Rainfall measured at Lavon Dam

Casa View terminal to help meet the requirements of Mesquite, Dallas, Forney and Sunnyvale.

While taking care of immediate needs such as these, the district was also looking more than a decade and a half into the future. In July 1964, at almost exactly the same time that Rollins was stepping down as general manager, the NTMWD board was receiving a detailed report from consulting engineers Forrest & Cotton on water supply, treatment and transmission facilities that would be needed to meet the demands of 1980. By this time, planners were equipped with far more accurate population and consumption estimates than had been available a





decade or so earlier, and the report was both an eye-opener and a cause for considerable concern.

Written by engineers William B. London and Carl Shimek, the report included three major findings, which it summarized as follows:

- 1. It is expected that the total demand for treated water will increase from an average of 21 million gallons per day in 1963 to approximately 77 MGD in 1980.*
- 2. This growth will require improvements costing approximately \$3.9 million in the immediate future and a total of about \$16 million by 1980 for treatment and distribution facilities alone.*





As NTMWD'S cities grew in population, treatment and filtration capacity also expanded. Construction to add filters to the original water treatment plant was underway in November 1961.



Expansion of Lake Lavon required many years of testimony before Congress. New faces present at this meeting, estimated to be about 1967, include Mayor Rob Harrington of Plano, Mayor R.B. Beaver of Farmersville, E.L. Kohn of Royse City, Mayor Jim Toler of Garland, Director A.H. Eubanks of McKinney, Director Dewey Moore of Garland, Director G.W. Range of Garland, and Director R.E. Clements of Princeton.

*3. The expected increase in water supply from the proposed Lavon enlargement is roughly equivalent to the estimated 1980 demand. After that, additional supplies will be necessary.*

By now, in addition to supplying Dallas and its ten member cities, the district was also selling water to the towns of Fate, Murphy, Nevada, Sachse and Sunnyvale — a total of 16 communities in all. The average water consumption by the





(Left) Apollo Reservoir and Pump Station, the first link to the City of Richardson, can store 5 million gallons of treated water. Built in 1968, the Apollo site also furnished additional delivery and storage for Garland. In the foreground are the 72-inch inside diameter outlet pipeline to the pump station and a 48-inch butterfly valve to control flow. (Right) Apollo to Casa View Pipeline was also part of this new system which helped to provide additional water to Mesquite, Forney, and Kaufman.

district's members and customers had showed an annual increase of 9.4 percent over the seven-plus years since the district had first begun delivering water. This translated to a 94 percent increase for a full decade, which was in line with a projected area population increase of 93 percent between 1960 and 1970.

Meanwhile, several other communities were expressing interest in tapping into the district's water resources. These included Rowlett, Josephine, Allen and Lavon, all of which were very small towns at the time, so the report concluded that the impact of these demands would likely be relatively small as well. But the same could not be said for Richardson, with which the NTMWD board was negotiating a contract for water sales at the time the report was issued.

"It has been estimated that Richardson will have a maximum daily demand by 1970 of approximately 23 MGD," the report said, "increasing to about 39 MGD in 1980." Since Richardson was currently obtaining about 13 MGD from the City of Dallas, the engineers noted, this meant that Richardson alone might require as



much as 26 MGD from the NTMWD by 1980 — or roughly 5 MGD more than the district's entire consumption in 1963.

Clearly, as the report noted: "This demand for water is of a magnitude to warrant further discussion."

The report also painted a disturbing picture of the district's water supply situation. The estimated safe yield of the original conservation storage pool at Lavon was perceived at the time to be 35 MGD, and this would probably be reduced, the report noted, because of the small flood control lakes that had since been built in the watershed. By 1970, consumption of district members and customers could be expected to reach 30.7 MGD, and, the report warned, "the present reservoir could be heavily taxed with the occurrence of a severe drought toward the end of this decade."

Meanwhile, the enlargement of Lavon could be expected to come to the rescue by increasing the reservoir's safe yield to about 79 MGD, according to Corps of Engineers estimates, and yet, as the report pointed out, this would barely be sufficient to cover the projected 1980 consumption demand of 77 MGD by member and customer cities. "It is expected . . . that water may be available from the enlarged reservoir by 1970," the report added — in a projection that turned out to be considerably off the mark. In fact, actual construction on the Lavon Dam enlargement would not officially even begin until the spring of 1970 and would not be completed until 1975, proving once again that hindsight is, indeed, always better than foresight.

For obvious reasons then, as the report pointed out, the district was pushing ahead with plans to seek a new water supply source outside the East Fork Basin. In conjunction with the Sulphur River Municipal Water District, the NTMWD had filed with the Texas Water Commission (the successor agency to the State Board of Water Engineers) an application for storage rights in the proposed Cooper Reservoir on the South Sulphur River. In the never-ending scramble among Texas cities for sufficient water, the City of Irving later entered the fight for additional supply and filed a similar application.

At the moment, the amount of water that might eventually be obtained from this new source was totally unknown. So were its effect on the future finances of the district and the timetable for its availability, but in a sense, the lack of foreknowledge about the Cooper project may have been something of a blessing in disguise. As this book is being written, almost thirty years have elapsed since that report was issued, but because of an incredible series of obstacles and delays,



the first gallon of Cooper water still has yet to reach the NTMWD's consumers. (The complete story of the Cooper Reservoir and the many problems that have assailed it will be told in detail in Chapter Ten.)

Unfortunately, although there were other experienced staff members who could step in and try to deal with the pressing matters facing the district, finding someone who could permanently fill A.P. Rollins' shoes was destined to be a long, frustrating task — one that would consume most of the rest of the decade.

Taking over initially for Rollins was treatment plant supervisor D.B. Dickson, who was named acting manager on an interim basis while the board looked for a permanent successor to fill the vacant general manager's position. And while Dickson was very adept in the areas of operation, chemistry and mechanics, he did not have an engineering degree, and by his own admission he was not comfortable as an administrator.

"I tried to carry on for about a year and a half after Andy left," he recalls, "but I soon began to realize — and maybe the board realized it even before I did — that I wasn't really qualified for the (general manager's) job. Old Andy was a damned good engineer and a good administrator, but administration had just never been my area of expertise. Mine was operations.

"I'd handled a lot of the personnel matters while Andy was in charge, and he and Whitey (Ingram) and I had worked together just fine when the district started out. We shared the responsibility, and we kept everything going, but it was different when Andy wasn't there anymore."

A.H. Eubanks, Jr., longtime NTMWD director from McKinney who was named to the board while Dickson was acting manager, recalls that there were sharply differing opinions among board members as to how to fill the vacancy left by Rollins' departure.

"The board was split on the issue," Eubanks says. "The root of it was a debate over whether we should go outside and try to find as strong a manager as possible or if we should promote someone from the inside. The whole thing was stuck on high center for a while, but the board finally decided to go outside. The idea was to find someone (like Rollins) with good state connections and an engineering background."

Lengthened by the debate, the search for a new general manager continued through most of 1965. Finally, at a called meeting on November 23, a majority of the board voted to offer the position to Garner Jones, an engineer and former



D.B. Dickson served as NTMWD's first Treatment Plant supervisor and later as acting general manager in the absence of A.P. Rollins. After his retirement, Mr. Dickson would return to NTMWD as the appointee of the City of Plano as the second Plano director on the NTMWD Board.



McKinney resident who worked for the State Water Conservation Board in Austin and who also had an extensive background in soil conservation.

Members of a search committee appointed by the board had given Jones a "glowing recommendation," according to Alex Schell III, of Plano, who had just been appointed at this juncture to the seat on the board formerly held by his late father. But within a short time after Jones actually took over as general manager on January 1, 1966, it quickly became obvious that something was wrong.

"He was a fine gentleman, but he wasn't as strong a manager as we had thought he was, and it wasn't long after his appointment that some members of the board became dissatisfied with him," says Eubanks.

"He was a very affable fellow, who got along fine with the employees," Schell says. "He was always pleasant and smiling and happy to take the district car and drive us to meetings and so forth. But he didn't have the ability to run the water district, and it eventually became apparent that we had to do something."

Loncy Leake agrees. "Garner was a good man, but he was not an administrator," he says. "He was in over his head. Some things he did well, but he just wasn't the man for the job."

It took the board two difficult years, until January 1968, to decide that the situation was untenable and ask for Jones' resignation. The decision was precipitated, according to a number of board veterans who were actively involved, by a debacle over the budget for 1967 in which a committee had to be assigned to rework Jones' original figures. At any rate, by the time the board decided to act, it had elected Schell president, and it became his unpleasant task to inform Jones that his services were being terminated.



"It was my bad and sad duty to have to tell him," Schell says wryly, "and I also ended up having to explain things to his wife, who called me all upset. I said, 'This is a board action and I regret very much that we took Mr. Jones out of an environment where he was happy and performing well and put him in this environment where he just didn't work out.'"

According to Dickson, Jones had been "good buddies" with several board members prior to his hiring and had attended the same church in McKinney as board member Hansford Ray before moving to Austin. "He persuaded them that he could handle the job and they fell for it," says Dickson, "but the truth was, he had no experience with an operation like this. He didn't know anything about water treatment or management or psychology, so they ended up firing him."

By this time, Dickson, who had served in the interim between Rollins' departure and Jones' hiring and who had remained as assistant general manager under Jones, was no longer available to fill in. Dickson had made the decision to leave the NTMWD and go back to work for the City of Dallas. He would later have the distinction of being the only former employee of the district to serve on the board of directors when he was appointed a representative of Plano in the 1970s, but after Jones was ousted, it was necessary to place someone else in charge of district operations temporarily.

The man selected to assume this responsibility was E.H. "Whitey" Ingram, who was named to the position of acting general manager at a special meeting of the board of directors on January 29, 1968, the same day Jones was dismissed.

Ingram, who had been hired at the same time as Dickson and had helped assemble the first staff to man the district's treatment plant, undoubtedly knew as much about the "nuts and bolts" of the district as anyone. Even moreso than Dickson, Ingram had been on the "ground floor" during the formative stages of the NTMWD when, as an engineer for Forrest & Cotton, he had helped design and build the first pipelines, and he was intimately familiar with the mechanical workings of the district.

But like Dickson, he also had no previous experience with policy-making functions, interacting between government agencies or implementing high-level decisions.

"I really never got involved with the board much until after D.B. left," Ingram recalled in a 1988 interview. "I was a construction inspector by trade, and except for going to one board meeting before I was hired, I hadn't had any dealings with the board."



It would be unfair and inaccurate to imply that nothing of substance was being accomplished by the district during this transitory period. But the pace of events, as reflected in the NTMWD's annual operations reports, was noticeably slowed by the management crisis. The 1966 operations report, for instance, noted that five new water supply corporations had signed up as customers of the district, but it was also sprinkled with references to problems and delays.

In 1967, Richardson took delivery on its first water from the district and a third Garland delivery point was placed in service. Plans for rerouting the Rockwall pipeline around the nearly completed Lake Ray Hubbard were being finalized at this time, but it was not until after Ingram had taken over as acting manager in 1968 that bids were opened and a contract awarded on this project.

But what probably rank today as the two most important events of this unsettled interval — events that would have an incalculable impact on the future of the district — would occur within 14 months of each other in 1967–68 with virtually no fanfare (and without so much as a passing mention in the district's annual reports).

*On May 5, 1967, acting for the NTMWD, President Clifford Carpenter and Secretary Truett Smith signed a contract with the Corps of Engineers that guaranteed the district 100 percent of the water storage space in a modified Lavon Reservoir. And on March 29, 1968, contracts were signed with the COE giving the district rights to more than one-third of the conservation storage in the proposed Cooper Reservoir.*

Between them, these two projects could eventually be expected to add an estimated safe yield of 100 MGD to the district's overall supply of raw water, effectively quadrupling that supply. It would be a long, long time, though, before the first drop of this water was actually available, and in the meantime, there was an incredible amount of work that would have to be done to keep the district afloat.

Ingram would, in Dickson's words, "wrestle with" the job of acting manager for more than a year and a half, from early 1968 until the summer of 1969, when the board would finally bring the district's lingering management crisis to a close by hiring a young city manager from Mesquite named Carl Riehn.

Only 36 at the time he was named to fill the newly created position of executive director (the board had voted to discontinue the title of general manager) on August 28, 1969, Riehn already had earned impeccable credentials as an administrator.





Carl W. Riehn (center) joins E.H. "Whitey" Ingram, P.E. (left) and Col. Ralph S. Kristoferson, Corps of Engineers, to discuss the impending expansion of Lake

After receiving a bachelor's degree in business administration with a major in public administration from Texas Technological University, Riehn had completed a graduate fellowship in governmental administration at Southern Methodist University in 1959. He had then held positions with the Cities of Arlington and Garland, before being named city manager at Sulphur Springs in 1960.

During his five-and-one-half-year tenure at Sulphur Springs, Riehn had also served as president of the East Texas City Managers Association in 1964, and had come to Mesquite in August 1966 to assume the city managership of what was then Texas second-fastest growing city.

In many respects, Riehn was Andy Rollins' opposite. He was more polished, more organized and certainly more youthful, with a crisp, businesslike manner that was far removed from the backslapping "good old boy" approach employed by Rollins. But this time, the board had done its job well and made certain that it had found the right individual for a highly specialized and extremely sensitive post.

"Boards of directors really do damned little most of the time," says Loncy Leake philosophically. "But when they appoint good administrators, they are kind of



like Presidents who appoint Supreme Court justices, in that that is where they leave their mark on history. And in retrospect, if hiring Andy Rollins was the most important decision this board ever made, then hiring Carl Riehn was at least the second most important decision. We have had success and been fortunate, I think, mostly because we appointed two strong administrators."

Clearly, Riehn brought to the district the administrative experience, governmental skills and leadership abilities that had been sorely lacking for more than half a decade. And he quickly made his mark and established a style of his own.

As Leake puts it:

*"I don't remember any policies being actually developed and written down until Carl Riehn came aboard in '69. We may have had written policies, but I don't remember the board developing policies on serving its customers, at least not in any tangible form. After Carl came, all that changed."*

Even today, A.H. Eubanks, Jr., takes pride in his role as a member of the selection committee, chaired by Truett Smith, that offered the district's top job to Riehn.

"I'm going to brag about what we (the committee) did," Eubanks says, "because I think it was one of the best things that ever happened to the district when we prevailed on Carl to come to work for us. He was just exactly what we were looking for, although we didn't know it at the time and some of us were a little bit hesitant, since Carl was city manager of one of our member cities. That might have gotten downright nasty if we had let it, but fortunately it was handled in a manner that was very acceptable to everybody concerned."

Riehn's arrival signaled the beginning of a broad evolutionary process for the district, one in which it became a more efficient and well-defined organization, while still holding fast to the same forthright principles and all-for-one spirit that had characterized it from its birth.

At first, however, Riehn had far more to think about than merely implementing policy. After five years marked by delays, indecision and a lack of firm direction, the district was going to have to pull itself together in a hurry or risk falling hopelessly behind the demands of its service area. On the same day that Riehn was hired, the NTMWD board heard Forrest & Cotton's William London warn that "next year (1970) will be a critical year. The point is supply and treatment capacity more than anything else."

In a report to the new executive director, "Whitey" Ingram, who now assumed



the title of manager of operations, summarized what had been accomplished in 1969.

Bids had been opened and contracts awarded in July for the new Wylie-Rockwall and Plano East pipelines, as well as a reservoir and pump station on Shiloh Road in Garland. In September, the City of Lucas had executed a contract with the district to purchase water, becoming the 16th wholesale customer of the district. Since Riehn's September arrival, bids had also been opened and a \$4.4 million contract awarded in December on a sorely needed 35 MGD addition to the district's treatment plant, with completion set for May 1971.

Water pumped and treated by the district had set new records and was "in excess of original design capacity," Ingram reported. A "soaring total" of more than 12.4 billion gallons of raw water had been withdrawn from Lake Lavon, and 11.6 billion gallons had been treated and delivered to member cities and customers for a daily average of just over 34 MGD.

This represented a jump of some 2 billion gallons over the previous year, or the largest annual increase in the district's 13-year history. Furthermore, the amount of water treated and delivered in 1969 was more than double the total of 5.45 billion gallons recorded in 1960.

In addition, a new daily record had been established on July 13, 1969, when 69,982,000 gallons of treated water were delivered, and the daily average for that whole month had been more than 62.5 MGD — all the product of a plant with a "nominal design capacity" of just 60 MGD.

And yet, in spite of this unprecedented demand, Ingram added, "water quality was maintained at its usual high level. . . . The water produced . . . was excellent."

It soon became clear that more record-setting water consumption levels loomed just ahead, and the question of whether the district could maintain the high water quality to which Ingram referred was one of the most pressing of many problems facing Riehn as he began his first full year at the helm of the NTMWD.

To the credit of the district and its volunteer leaders, the new executive director would have a number of major assets in his favor as he confronted those problems. Among these were an experienced, capable operating staff, well-maintained facilities and a sound financial condition. In these, Riehn and his board of directors could take justifiable comfort, along with the fact that the district had weathered perhaps the shakiest period in its existence and emerged with no apparent lasting damage.



But as the 1969 annual report concluded:

*“Extensions and improvements implemented this year, including the plant expansion now underway, will be needed immediately in keeping abreast of the demand for water in the district’s growing service area.”*

Only unusually favorable weather conditions — something that could never be counted upon in the East Fork Basin — could prevent the water demand for 1970 from being even higher than during the historic record year of 1969, cautioned William London, the report’s coauthor.

In a letter to Henry Graeser, water superintendent of the City of Dallas, dated February 4, 1970, Riehn made no effort to conceal the critical circumstances he had inherited or his own concern about the months to come.

*“As you are aware,” Riehn wrote, “the district is in an unfortunate situation. With approximately \$6.5 million of construction underway to increase our capacity, we still are in danger of not being able to meet the total demand in a dry 1970 summer. If the district fails to provide adequate service, it could be a very critical factor in our efforts to service this section of the Dallas Metropolitan Area in the future. Therefore, if you have any advice, suggestions or the capacity to assist us during this time, it would be greatly appreciated.”*

Ahead lay not only a new year, but an entire new decade. Before they were done, the Seventies would exert many far-reaching and irreversible changes on the area. In meeting these changes, the North Texas Municipal Water District would find both its resources and its resolve tested as never before.





# 8

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## A Bigger Lavon, a Bigger District — and Bigger Responsibilities

*"No sooner had the water treatment crisis eased a little than we began to get requests from both member and non-member cities for wastewater treatment facilities and programs. By 1972, we had received resolutions from 18 city councils asking the district to go into regional wastewater treatment."*

— Carl Riehn  
NTMWD Executive Director

As the 1970s began, the North Texas Municipal Water District could be accurately described as being in a state of "flux," and the fact that the district had been without effective staff leadership for more than four years was only one contributor to this condition. As Carl Riehn quickly discovered when he assumed the position of executive director, the district had also reached a period of major transition in its development. It was in the process of evolving from the small "grassroots" organization it had been in the 1950s into the vast regional service agency it would become by the 1980s. Effective planning for the future had never been more important, but at the same time, the needs of the present had never been more pressing.

After half a decade in which everything had seemed to move in slow motion much of the time, the district was about to be switched into "fast-forward" whether



it liked it or not. It was going to have to keep pace or else, and it no longer had the luxury of time.

"After the hectic pace at Mesquite, which was the second fastest-growing city in Texas at the time," Riehn recalls, "it seemed awfully quiet around here at first, but that didn't last long. The board of directors had done an outstanding job of keeping everything functioning in the absence of Andy Rollins, who had been a very strong administrator. But they had been having to work without any administrative leadership from the staff, and the district's consultants were, in effect, running the district. What was needed was coordination of their efforts."

In some respects, the district had been operating without a clear sense of direction. Because of this, delay had sometimes replaced action while urgency had turned into desperation. The still-unanswered question of how to expand the district's water treatment capabilities was probably the most glaring example of this.

"The existing water plant had reached its maximum capacity of about 70 million gallons a day," says Riehn, "and it was our biggest immediate problem. The question was whether to expand the old plant again or build a new plant somewhere else, and the board was in disagreement on what to do. They had been told of their options, but no design work had been done, and the consultants weren't actually in agreement, either. It was a really desperate situation. We had to do something, and we had to do it fast."

Riehn turned to a form of communication not previously used at the NTMWD — the administrative memorandum — to put the problems facing the district into perspective, clarify the board's options, outline the financial considerations involved and offer clear-cut recommendations. Administrative Memorandum No. 9, issued in March 1970, provides an excellent example.

*"As the board is aware," Riehn wrote, "if the weather conditions are comparable to 1969 during the summer of 1970, we will have extreme difficulties in meeting the demands of the member and customer cities. . . .*

*"In summary, the engineers' report reflects that during 1969 the district drew from storage to meet peak demands with plant operating at maximum capacity. In other words, we were using water at a faster rate than the plant was capable of producing. Therefore, the raw water intake system was studied to determine if any modifications could be made to provide additional capacity."*



What these studies found, the memo continued, was that, for an extremely modest investment of \$3,500, restrictions in the raw water transmission lines could be removed and the plant's capability increased by about 2 million gallons per day. For obvious reasons, Riehn recommended taking this step and also asking the Corps of Engineers to keep Lavon's elevation as high as possible during the summer months, which could also increase the NTMWD's pumping capacity.

Clearly, these were merely short-term or "stop-gap" measures, but they could also mean the difference between coping with the looming emergency and being overwhelmed by it. And in the meantime, Riehn also offered direction toward a much more permanent solution.

"Within about two months after I joined the district, the board made the decision to build a whole new plant," says Riehn, "and before the end of 1969, they had authorized the sale of \$900,000 in revenue bonds to cover the engineering on the new plant. They were great to work with, and there was no dissension on the issue at all. The only thing the board had needed was someone to explain all the implications of the options they had."

It was decided to construct a second treatment plant that could be expanded in phases to a maximum capacity of 280 MGD, and on January 29, 1970, a contract was awarded for construction of the initial phase of Raw Water Intake Structure and Pump Station Number Two. ("I said at the time that the plant would never be built to its maximum capacity in my lifetime," Riehn recalls wryly, "but I was wrong. After the initial phase and four expansions, it was finished in 1990, many years ahead of our original projections.")

The initial phase, constructed at a total cost of more than \$5 million on a newly acquired site adjacent to the old plant, was completed in two segments. The first, capable of treating 35 MGD, was rushed to completion in June 1971 in time for that year's peak summer demand, and the second was completed in 1973, giving the district a total treatment capability of about 140 MGD in its two plants. But in the meantime, the district had to make it through several difficult summers under less than optimum conditions.

Sometimes, it seemed those summers of the early 1970s would never end. This was especially true in July 1970, when only 0.14 of an inch of rainfall was recorded in the area, and it was "touch and go" as to whether the supply of treated water could keep pace with the demand.

"We had to stack sandbags around part of the old plant that summer," Riehn





Plans are finalized for a second plant. Engineer William B. London, Forrest & Cotton (left) points out the details to Director Alex R. Schell III, Plano, and Carl W. Riehn.

recalls, “because we were bringing raw water in so fast that it was sloshing over and threatening to drench the whole place.”

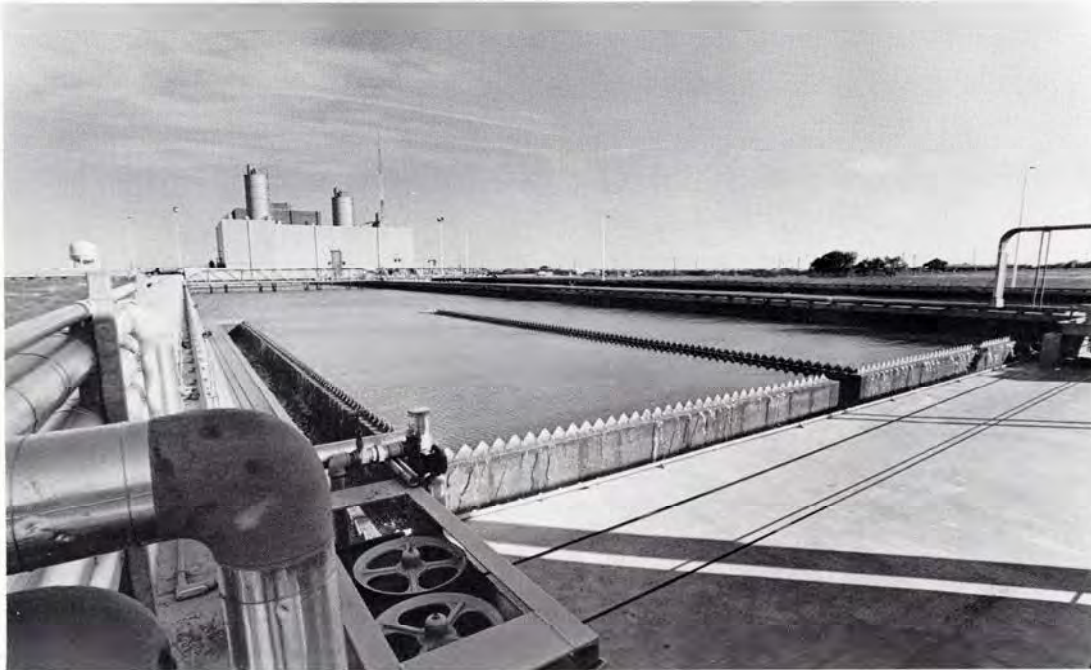
Other difficult times followed. In early October 1971, the elevation of Lavon hit an all-time low of 466.17 feet after another hot, dry summer during which the district delivered record amounts of water. Fortunately, the water level quickly rose again as a result of 10.44 inches of rainfall that fell during that month, compared to a normal average of just 5.5 inches. But this brief respite was followed by the driest calendar year in the district’s history in 1972, when only 18.81 inches of precipitation — just over half the annual average — fell in the NTMWD service area.

The completion of the first phase of the new plant gave the district an additional 35 MGD of capacity and effectively brought an end to one of the most severe crises ever faced by the NTMWD. But there was no time for the district to sit back and relax.

There were other potential crises to be averted, other responsibilities to be met and new challenges to be explored. In fact, the \$3.9 million contract for



*A Bigger Lavon, a Bigger District — and Bigger Responsibilities*



NTMWD Water Treatment Plant II opens its doors to water treatment for the region in 1971.



U.S. Representative Ray Roberts speaks at the NTMWD Plant II dedication ceremony. With him on the dais are (L-R): C. Truett Smith, Wylie; Carl W. Riehn, NTMWD executive director; and Conway Senter, Forney, president of the NTMWD Board of Directors.





Congressman Ray Roberts unveils the plaque for NTMWD Water Treatment Plant II, beginning a new era of plentiful treatment capacity for cities in the NTMWD region.

Phase Two of the new plant was let in November 1972, even before Phase One was fully operational.

One of the "new frontiers" which the district began seriously exploring during this period was the emerging need for regional wastewater treatment. This need was first outlined in a ten-county study conducted by the North Central Texas Council of Governments in 1970, in which NCTCOG recommended the establishment of a regional wastewater system on the East Fork.

As critical as water volume or availability can be, it was becoming obvious that the maintenance of quality is an issue that also must be addressed. The environmental movement was in its infancy at this time, but as Riehn noted in an August 1970 memorandum to the board, "the cry for better water quality control is being heard across the nation and in the State of Texas . . . (and) is resulting in many unfortunate problems for cities that are already strained to the maximum." Within the next year or two, the district received strong impetus to move into this new area of regional service when a number of cities asked for its help with wastewater problems.



“No sooner had the water treatment crisis eased a little than we began to get requests from both member and nonmember cities for wastewater treatment facilities and programs,” Riehn says. “By 1972, we had received resolutions from 18 city councils asking the district to go into regional wastewater treatment.”

This would lead the NTMWD in a direction that its founders had never envisioned for it. It would also lead to sharp controversy and dissension among its own membership. Chapter Nine will discuss in detail how the district responded to this massive challenge.

. . .

On May 29, 1970, when dedication ceremonies were finally held for the enlargement of Lavon Dam, it was a time of sharply mixed emotions for veteran leaders of the NTMWD. In one sense, it was a cause of celebration, since a project that had been sought by the district for more than fifteen years was at last coming to fruition. But in another sense, the ceremonies were symbolic of the district’s continuing frustration in its efforts to obtain new sources of raw water.

As originally conceived, the Lavon enlargement should have actually been producing water by this time, but as matters now stood, completion of the project was estimated to be more than five years away. And no one could pinpoint for certain the day when the first water could actually be pumped from the lake’s new storage. That depended entirely on how generous — or stingy — an always-fickle Mother Nature would be with her rainfall once the dam was raised. In the meantime, the district could only continue to wait, and hope.

Not surprisingly, the cost of the Lavon enlargement project had risen steadily since the first federal funds had been appropriated. A project that had been estimated to cost some \$32 million in the mid-1960s now had a price tag of close to \$60 million, of which the NTMWD would be required to repay approximately \$42 million, representing the cost of the new conservation storage, to the federal government. The additional storage would be created by raising the dam 12 feet and extending its embankment by 10,000 feet — or nearly two miles.

From an engineering standpoint, it was not difficult to raise the Lavon spillway, but the concrete section of the dam was a different matter. Not only did the COE have to find a way to raise twelve tainter gates, but also had to reinforce the dam to compensate for the extra pressure. To accomplish this, a coffer dam had to be built on one half of the dam at a time in order to keep the structure operational. To deal with any flooding, only one gate could be out of service at a time.





Ceremonies for the Lavon Enlargement were led by C. Truett Smith of Wylie (left), U.S. Congressman Ray Roberts, and A.H. Eubanks (2nd from right) of McKinney, who was president of the NTMWD Board of Directors. Two representatives of the Corps of Engineers, Col. Menan Whitsitt and Col. Ralph S. Kristoferson (right), also presented some remarks.



President A.H. Eubanks (left) leads the dignitaries in breaking ground for the Lavon Enlargement using an old Fresno Scraper drawn by a mule. Congressman Ray Roberts joins in with Bartel Zachry of H.B. Zachry Co., Col. Menan Whitsitt and Col. Ralph S. Kristoferson of the Corps of Engineers.



*A Bigger Lavon, a Bigger District — and Bigger Responsibilities*



A display of the evolution of construction equipment was on hand to entertain and inform those attending the groundbreaking for the Lavon Enlargement.



At the pre-bid conference for the Lavon Enlargement were Lt. Col. Harvey Emig, E.H. "Whitey" Ingram, P.E., and Carl W. Riehn of NTMWD, Robert B. Crockett and Victor P. Macha of the Corps of Engineers.



The spillway bridge also had to be raised one span at a time. All new concrete had to be prestressed to the existing concrete. It was slow work and because of its highly unusual nature, engineers from other COE districts frequently visited the site to observe the job in progress.

The agreement between the district and the COE specified that, if the project was completed in 1975, as scheduled, the district would begin repaying its portion of the cost at that time with an annual payment of \$960,000, which would increase to \$1,879,375 per year by 1986. These projected payments were in sharp contrast to the mere \$65,000 per year that the district was paying the COE in the early 1970s for the original storage in Lavon.

The original storage in Lavon cost the district only about a half-cent per 1,000 gallons of water, whereas the rate climbed to about 5.5 cents per 1,000 gallons for water from the expanded storage. This tremendous jump in the cost of raw water from Lavon new storage was the major factor in convincing the Texas Water Commission to require that, in the future, all water-supply lakes in the state should be built to their maximum capacity to begin with. Once again, the NTMWD found itself charting new territory for its cities and, in some cases, for the entire state.

On the bright side, however, in return for this investment, the district would receive the rights to an additional 280,000 acre-feet of water, or a total of 380,000 acre-feet in Lavon. The safe yield of the lake's conservation storage space would almost triple, from 35 million gallons per day to 94 MGD.

In the meantime, however, even after construction on the enlargement began, there remained the ongoing necessity of periodic trips to Washington by district officials to plead their case before various congressional groups in order to see that construction funds for the project were kept flowing.

The late 1960s and early 1970s were a time of serious budget-cutting efforts in Washington, and the general area of public works was a popular target for budget-cutters in both the Johnson and Nixon administrations. Only the fact that the Lavon project was classified as being "underway" at this time saved it from the axe in 1968, when eighteen other major projects were suspended. Two years later, President Nixon clamped a "freeze" on all public works projects, and although the Lavon enlargement was again spared, regular "fence-mending" expeditions to the nation's capital remained a necessity.

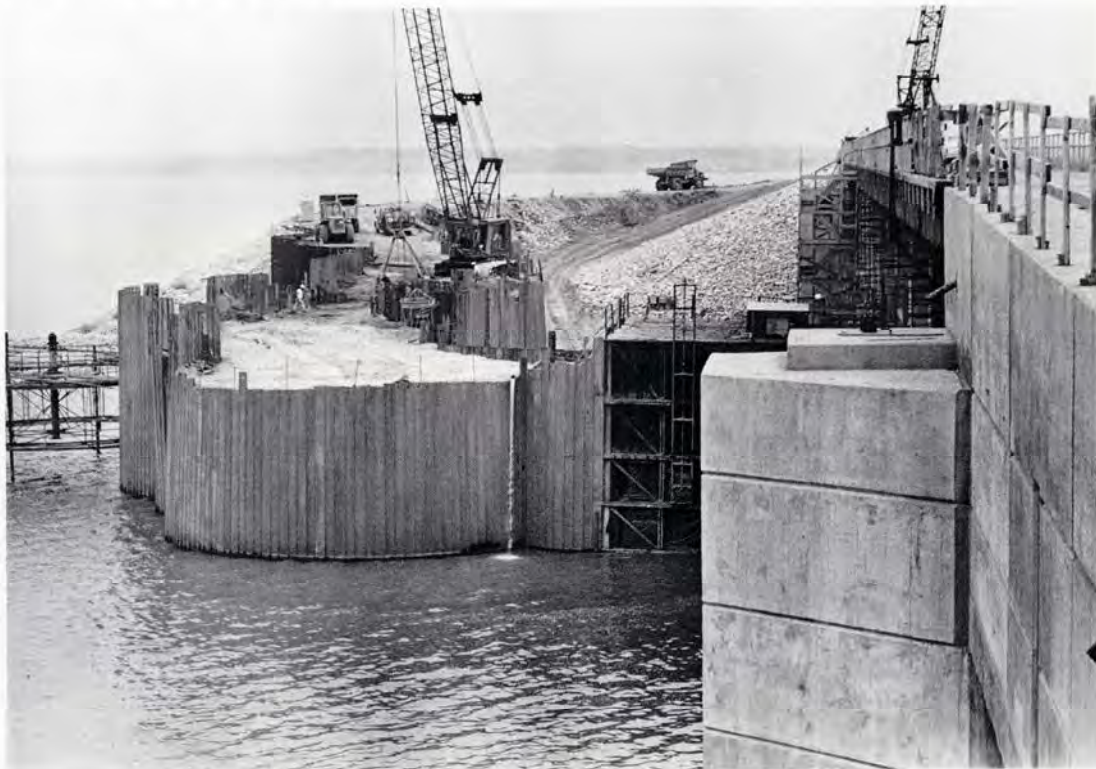
In May 1971, for example, Riehn and John E. Gay, the district's legal counsel, appeared before the Public Works Subcommittee of the House Appropriations



*A Bigger Lavon, a Bigger District — and Bigger Responsibilities*

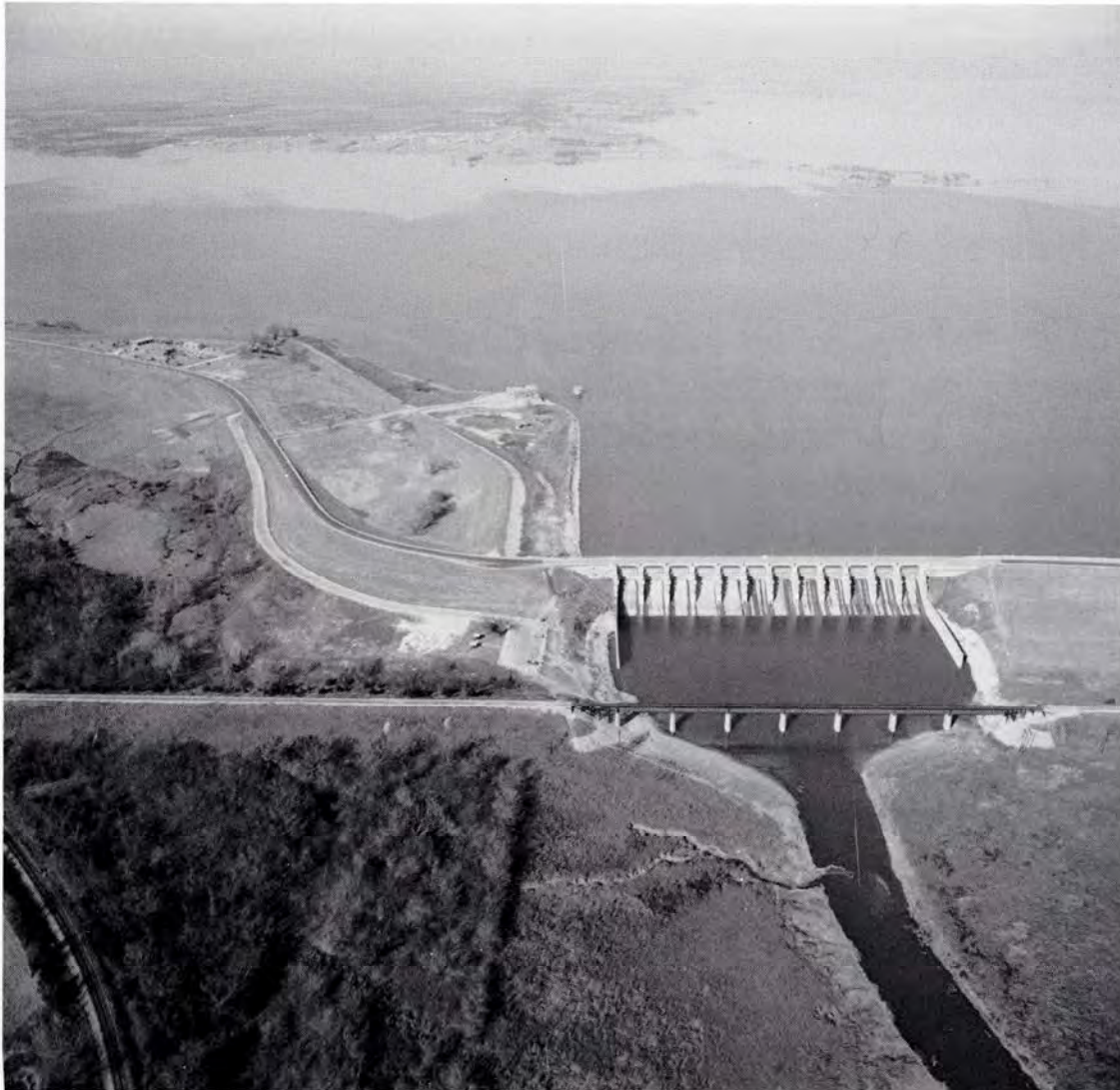


Zachry Co. working on raising the tainter gates on Lavon Dam Enlargement between 1970 and 1973.



Expansion of the Lavon Dam in the early 1970s (looking east).





Lavon Dam after enlargement.

Committee to request some \$12.2 million for the Lavon project in fiscal 1972. A statement submitted to the subcommittee by the district read in part:

*"This project is vitally needed to meet the raw water supply needs of the ever-expanding population within the 1,250-square-mile service area of the district. Therefore we plea(d) that the funds as requested by the President in his budget for Fiscal Year 1972 be considered as an absolute minimum in the amount of \$12,260,000. It is hoped that the committee will consider the need for the early completion of this project, and that, if funds are available, additional amounts would be appropriated to meet the capability of the Corps of Engineers on the project, which has been placed at \$16,900,000."*



The massive cost of the Lavon enlargement was a particular source of chagrin to those who had been associated with the NTMWD since its earliest days and who had spent countless hours struggling to make the project a reality.

McKinney's Roland Boyd, who had first served as president of the Tri-County Lavon Reservoir Association, the district's predecessor, and later as general counsel for the NTMWD during its drawn-out negotiations with the federal government, sums up the feelings of those early leaders when he says:

*"In the beginning, there was the feeling that our original 100,000 acre-feet in Lavon would last for fifty years, but within three years (after the district was formed), we could already see that it was too small. Then we started trying to get it increased to its maximum potential, but we were so crazy that if we hadn't had Mr. (Sam) Rayburn, we'd never have gotten it at all. At one time, though, if we had acted early enough, we could have gotten that additional conservation storage for \$2 million, instead of the \$40 million-plus it ended up costing us. But that has been the history of everything in water development."*

Hindsight is, indeed, always better than foresight, as Boyd's recollections clearly reveal. But if the Lavon enlargement fell victim to ballooning costs and seemingly endless delays during the two decades it took to move it from the drawing board to reality, another federal project in which the NTMWD had a vital interest was destined to fare much, much worse and take far longer.

By the early 1970s, the Cooper Reservoir had been on the Corps of Engineers' list of approved projects for more than fifteen years, and there seemed every reason to hope that actual construction of the new lake, to be located on the South Fork of the Sulphur River in Hopkins and Delta Counties near the City of Cooper, would begin soon. Along with the City of Irving and the Sulphur River Municipal Water District, both of which also held storage rights in Cooper, the NTMWD had signed a contract with the COE in 1968, fully expecting that construction would begin within a year or two.

At that time, it was estimated that the Cooper Reservoir, in which the NTMWD held a permit from the Texas Water Rights Commission for the use of 114,265 acre-feet, could be built for a total cost of less than \$10 million and that, by the late 1970s, it would provide a yield of 44 MGD — or 36 percent of its total storage — for the district.

Unfortunately, however, unforeseen problems had surfaced in the form of new federal laws which were designed to protect the environment, but which



would have the effect of creating a greater mountain of red tape and legal obstacles than the lake planners of the 1950s could ever have envisioned.

By 1973, when the Cooper project should, by all rights, have been underway and moving steadily toward completion, it had instead become mired in legalistic limbo. As Carl Riehn observed in a report prepared at the time:

*"The (Cooper) project is currently under injunction until an environmental impact statement is completed and approved. No actual construction has started, but the Corps of Engineers does continue to acquire the needed land."*

Most likely, it is just as well that no one could foresee what actually lay ahead. An incredible series of pointless legal delays, stretching from the early 1970s through the mid-1980s, would prevent the Cooper Reservoir from producing its first water for public use for almost forty years after it was approved for construction. And those same delays would cause the overall cost of the lake to skyrocket to unbelievable heights. (See Chapter Ten).

On June 28, 1973, the board of directors of the North Texas Municipal Water District formally approved a contract making the City of Richardson — by now a teeming suburban community of more than 50,000 people — the eleventh member of the district. This action climaxed a period of more than twenty years during which Richardson and the NTMWD had gradually been drawn closer together by developing circumstances.

Less than two weeks earlier, on June 15, Richardson voters had overwhelmingly approved a proposition to allow their city to be annexed to the NTMWD. The vote was 417 "for" and just 13 "against."

Actually, Richardson had been invited to become one of the original members of the district at the time it was organized in 1951. But at the time, residents of the small farming community of about 1,300 had not been able to foresee the great spurt of growth that would soon begin there, and municipal officials had believed that the town's wells could meet its water needs indefinitely. Later, as its population mushroomed, Richardson had begun buying large quantities of water from the City of Dallas and had opened negotiations as early as 1964 to become a water customer of the NTMWD.

A contract to sell water to Richardson had been signed by the district in 1965, but the facilities to deliver all the water needed did not exist at the time. Late the same year, the district awarded a contract on an 11.4-mile, 60-inch pipeline de-



signed to serve Garland and Plano as well as Richardson. This project, a key component of the so-called “Apollo System,” was completed in 1966 and in 1967, Richardson received its first 156 million gallons of water from the district. By 1968, Richardson’s consumption of NTMWD water had jumped to 409 million gallons, and this was only the beginning.

Richardson had executed a water purchase agreement with the City of Dallas which allowed it to buy up to 10 MGD, but because the rates charged by Dallas were considerably higher than those charged by the NTMWD, Richardson looked increasingly to the district to meet its growing demand for water. Another factor that led Richardson into serious negotiations about joining the district was the fact that heavy development was now occurring in that portion of the city lying east of North Central Expressway, an area that was not conveniently served by Dallas water.

Consequently, on December 27, 1971, Richardson Mayor Raymond D. Noah addressed a letter to NTMWD President Dyon (pronounced “Don”) Cantrell of Princeton, in which he said:

*“The City Council of the City of Richardson . . . has unanimously come to the conclusion to solicit membership in the North Texas Municipal Water District and the representation associated therewith.*

*“It is the feeling of the City Council that time has made numerous changes in our region and that it would be beneficial both to the City of Richardson and the NTMWD for the City of Richardson to participate in the actions of the district.*

*“We respectfully ask that the NTMWD act on this request as quickly as possible. . . .”*

While no NTMWD board members seemed to object to the idea of selling water to Richardson, directors were far from unanimous on the question of actually allowing a nonmember city to join the district. There had been no expansion of the district’s ten-member-city makeup since its creation 20 years earlier, and some directors voiced the feeling that Richardson had “missed its chance” when it failed to become a founding member of the district, and that it should not be allowed to come in at this late date. The matter was debated vigorously and at length over a period of months.

Some, such as Mesquite’s Loncy Leake, were outspokenly in favor. “It was a good deal for both parties,” Leake says. “Richardson needed us because there was nowhere else for them to get enough quality water at such an affordable



price, and we needed them to buy water from us to help cover our increased expenses resulting from the Lavon enlargement.”

There were some, however, who still resented the fact that Richardson’s City Council had spurned the infant NTMWD in the early 1950s. And there were others who were strongly opposed to granting full membership to any “outsider,” regardless of the circumstances.

According to some recollections, one of those who initially expressed serious reservations about the wisdom of admitting Richardson as a member was Wylie’s Truett Smith, who not only ranked as a “founding father” of the district but as one of its most influential directors and its longtime secretary-treasurer.

As Carl Riehn recalls the situation, Smith eventually changed his position because of two major factors.

“For one thing, it was obvious that Richardson was going to be one of the largest water users in the area,” Riehn says, “and Truett could see that if Richardson would take all its water from North Texas, it would go a long way toward paying the high cost of the Lavon enlargement. For another thing, Richardson made it clear that it would support the district’s regional wastewater program and would contract for services under that program, and Truett was very interested in involving the district in this type of ‘big picture’ activities. Anyway, when Truett decided to support Richardson’s request for membership, he also swung a lot of other people over to that position.”

Even Smith’s influence failed to win unanimous support for admitting Richardson, however. Plano’s Alex Schell III, remained opposed to Richardson’s membership because of a dispute that dated back to his father’s tenure as mayor of Plano.

The dispute had arisen over the fact that during the 1950s Richardson had quietly annexed into its city limits a strip of property lying along Renner Road and within Collin County. In effect, says Schell, Richardson had “jumped the county line” to grab land to which the City of Plano felt it was entitled, and his father, Alex Schell, Jr., a founder of the NTMWD, had never forgiven the neighboring city for this incursion.

As Schell recalls:

*“My father told me on his death bed, ‘Son, don’t let Richardson come into the water district because they did us dirty on the city limits.’ So when Richardson made the bid to come in, I explained to (district legal counsel) Roland Boyd that I didn’t object to serving them as a*



*customer city, but because of that bitter feeling, it was my father's wish that they never be allowed to come in as a member."*

Boyd's response, according to Schell, was that Richardson could not legally be barred from membership in the district, so long as it met all district requirements. "Under state water rights laws, you can't keep them out," Schell quotes Boyd as saying, "so I dropped the subject and never brought it up again."

Board members did stipulate that, like all other member cities, Richardson would be required to take 100 percent of its water from the NTMWD, and Richardson agreed, despite the fact that the city would have to do extensive repiping in the areas formerly supplied by Dallas. Over time, the lower cost of NTMWD water would more than make up for this expense.

After the vote that officially made Richardson a district member, Schell also demonstrated that he harbored no hard feelings by picking up Richardson's two new representatives on the board, Jack McJunkin and Marvin Youngblood, and driving them to their first board meeting.

"I hadn't known either Jack or Marvin before," Schell says, "but if they were going to be part of us, I wanted to welcome them to the board with open arms."

Schell's action in this instance illustrates what Loncy Leake calls the "musketeeer philosophy" that has always prevailed on the NTMWD board — "all for one and one for all."

According to Carl Mann, who joined the board a few months after Richardson's admission to begin a 12-year tenure as a director from Mesquite, this is one of the attributes that impressed him most about the board.

"The important thing to me," he says, "was the ability of everyone to discuss, disagree, vote, and then put the whole thing behind them and start all over again as friends. As a board, I don't know how you could hope to do any better than that."

By the early 1970s, the wave of growth that had swept over Mesquite, Garland and Richardson was starting to pour into Plano as well. Between 1900 and 1960, Plano's population had increased by less than three fold — from 1,304 to 3,695, according to federal census figures — but by 1970 it had jumped to 17,872. The crest of the wave was still to come, as Plano would explode into a city of more than 72,000 people by 1980 and more than 128,000 by 1990. But city officials could now see that crest coming, and they knew that they would have to act quickly to upgrade municipal services or risk being swept away by it.



Plano's growth meant the addition of a second seat for the city on the NTMWD board — a seat filled by former district employee and Plano resident D.B. Dickson — but it also meant a great deal more. In the short span of ten years, Plano had changed from one of the smallest cities in the district to one of the largest, and its municipal infrastructure and capacity for public service was being strained to the utmost.

On May 25, 1972, Plano Mayor Norman Whitsitt wrote a letter to the NTMWD's president and board of directors, explaining why Plano urgently needed a new delivery point to supply its snowballing water needs.

*"The City of Plano is faced with supplying the needs of a population of 30,000 to 50,000 people in the next few years," Whitsitt explained, "and much of the (water) system was constructed when its financial ability rested with a population of 2,000 to 8,000 people. Accordingly, it had not been practical to construct the distribution system in a manner that would provide the capacity required to convey large volumes of water entirely through the system. . . . It appears, therefore, that a more economical arrangement could be obtained by conveying water through a supply line designed solely for transmission to the delivery point proposed in the western part of the city."*

It quickly became apparent that, although the previously mentioned "Apollo System" was designed to benefit Plano, as well as Garland and Richardson, the tremendous development taking place on Plano's west side necessitated the construction of an entire new pipeline and additional pumping facilities. So, in 1973, the NTMWD issued \$2 million worth of bonds to finance what is now known as the Plano West pipeline.

As it had from the beginning, the district had paid for all expansions and improvements through the issuance of these bonds and had never relied on ad valorem tax revenues, although the district had the authority to levy and collect taxes if approved by the citizens. (In adopting a record fiscal 1973 budget of \$3.3 million, the district was actually able to lower the price of water to its member cities from 24.2 cents to 23 cents per thousand gallons.

At about this same time, Plano's growth-related needs would also provide impetus for the district's move into wastewater treatment when the burgeoning suburb became one of the first two member cities to request the aid of the NTMWD in expanding a wastewater treatment plant.

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On December 1, 1975, more than two decades after the NTMWD had initially asked the Corps of Engineers to study the feasibility of enlarging Lake Lavon, the gates were finally closed on the Lavon Dam expansion, and the top of the reservoir's conservation pool was officially raised from 472 to 492 feet above mean sea level.

It is one of the peculiarities of history — as well as a telling indication of the change that had taken place in government attitudes toward such projects over the twenty-plus years since the original Lavon Dam had been closed — that there was absolutely no ceremony to mark this milestone event.

As far as can be determined, it was the first and only time in the annals of the corps that the COE had increased the conservation storage capacity of a previously constructed reservoir. The enlarged dam would create a lake with 380,000 acre-feet of storage — more than three times the original capacity — and it would change the shape and size of the lake to such an extent that it would no longer look like the same body of water from the air.

And yet, this time, there were no gala celebrations, no speechmaking or flagwaving, no giant barbecues, no storm of media coverage, no hoopla at all. Except for official entries in the records of the COE, the event — as momentous as it was — passed virtually unnoticed.

"Once the construction got started," says Carl Riehn, "it went so smoothly and uneventfully that hardly anybody realized when it was finished."

Unlike the original Lavon, which amazed observers by filling almost "overnight," the lake's new storage space would be agonizingly slow to fill. More than fourteen months would pass after the enlarged dam was closed before the lake's water level would inch its way into the new storage space and the district could finally begin utilizing the increased supply of water from Lavon.

The dam closing came at the end of what Riehn describes as "a very tough year" for the district. After two extremely wet years in 1972–73, during which area rainfall averaged more than ten inches above normal, 1975 was a relatively dry year, with precipitation running some eight inches below normal. In this, the twentieth year of water deliveries for the NTMWD, the demand for water had increased by 400 percent since 1956, and yet, the district was still having to meet this demand from a storage pool that had never actually increased.

In 1976, the district would deliver 17.58 billion gallons of water to eleven member cities and seventeen customer cities and water supply corporations, compared to just 4.47 billion gallons delivered during the district's first full year of



water service in 1957. But, again, this would be accomplished with no real increase in storage.

It was an almost miraculous feat, accomplished only by efficient operation, careful planning — and a certain measure of luck.

“By this time, we had been in trouble with Lavon’s safe yield just about forever,” says Riehn. “Fortunately, though, when you get even average rainfall, a reservoir will actually produce significantly more water than the established safe yield.”

If this had not been true, the cities served by the NTMWD would literally have been “sucking air” through their water mains in the mid-1970s. Before the new storage in Lavon became available, the lake’s “safe yield” was set at just 34 MGD. And yet, as anyone with a calculator can quickly determine (by dividing the 17.58-billion-gallon total for 1976 by the 365 days in a year), the district was actually delivering an average of more than 48 MGD that year.

At midnight on February 11, 1977, according to official COE records, the water level in Lavon reached an elevation of 472.04 feet, marking the first time that water had actually entered the new conservation storage space. And it would be more than two years later — on May 11, 1979, to be exact — that the lake’s elevation passed 492 feet for the first time, signifying that the new storage space was finally filled to capacity.

The new water storage arrived none too soon and was nothing short of a godsend for a district which, during both 1978 and 1979, supplied an average of more than 68 million gallons of water daily to its members and customers — an increase of 20 MGD over 1976.

At this point, the district could only be thankful that it had never been forced to find out if the original storage pool in Lavon could somehow have kept pace with such growth demand or the demand resulting from a drought similar to the one of 1951–57.

After all, even miracles have some limitations.





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## Tackling the Huge Task of Wastewater Treatment

*For every gallon of fresh water it consumes, modern society produces a certain amount of wastewater, and in the service area of the North Texas Municipal Water District, this amounts to tens of billions of gallons of wastewater annually. Only by scientifically treating and returning this water to a pure, natural state can we protect our lakes and streams from contamination and ensure an adequate supply of fresh water.*

For the stalwart, isolated farm families who made up most of the population of North Central Texas in the Nineteenth Century, getting rid of their wastewater was a decidedly minor concern. Since they had no indoor plumbing or flush toilets, they also had no sewage disposal problems — at least none that they could perceive. When they were finished with the few bucketfuls of wash water they used in an average day, it could simply be thrown out the back door or poured on the garden. And if they needed to dispose of something really noxious, it seemed perfectly acceptable to dump it into the nearest river or creek with no consideration of the potential consequences for those who lived downstream. According to the prevailing opinion of the day, water that flowed for any distance over rocks and sand would purify itself automatically.

While common sense most likely told these pioneers not to locate the family well in too close proximity to the family privy, most of them had only the most elementary notions about pollution, sanitation and their relationship to health



and sickness. Undoubtedly, this is one reason why so many of them suffered from typhoid, gangrene, scarlet fever, tuberculosis and a host of other infectious diseases.

As more and more people arrived, towns sprouted up on the prairie, and the problem grew much more pronounced. In turn-of-the-century communities, raw sewage frequently ran in the streets, filling the air with its stench. Once-pristine streams sometimes became little more than open sewers, and contaminants often leached into wells, making their water unsafe for human consumption.

*Today, however, we know that the effective treatment and purification of wastewater is every bit as important as having an adequate supply of fresh water in the first place — and that, in fact, the two are inseparable.* We know that there is really no such thing as “disposing” of wastewater, because the earth’s total supply of water is finite and unchanging. It can be redistributed, but additional water cannot be created, so it is necessary to recycle the water we use and to reuse it over and over again.

For every gallon of fresh water it consumes, modern society produces a certain amount of wastewater, and in the service area of the North Texas Municipal Water District, this amounts to tens of billions of gallons of wastewater annually. Only by scientifically treating and returning this water to a pure, natural state can we protect our lakes and streams from contamination and ensure an adequate supply of fresh water.

Thus, in the early 1970s, when the NTMWD was first asked to consider expanding its activities into the field of wastewater treatment, it seemed to many to be both a logical extension of the district’s services and a practical step to protect the region’s vital fresh water supply as well.

It was soon after the creation in 1967 of the Texas Water Quality Board as the state’s primary water pollution-control agency that local municipal governments began to come under increasing pressure to improve their wastewater treatment capabilities. As early as February 1969, Forrest & Cotton engineer Carl Shimek called attention to the emerging situation and its background in a letter to Rockwall’s J.O. Wallace, who was serving at that point as chairman of the NTMWD’s Water Pollution Committee.

*“Until recent times,” Shimek observed, “the state has not undertaken to regulate the quality of surface waters as such. Instead, its efforts have generally been oriented through the Texas State Department of Health toward the protection of public health, and it has attempted to accom-*



*plish this by reviewing plans for treatment facilities to insure that they would provide a specified degree of treatment when they were placed in service. The degree of treatment required was applied uniformly over the entire state, and was not necessarily related to the suitability of the receiving waters for various beneficial uses.*

*"In 1963, there began to emerge a departure in methods when the Legislature created the Texas Water Pollution Control Board (and established) a procedure . . . for requiring anyone discharging wastes to secure a permit authorizing such discharge. . . . Following this action by the state, new federal legislation established the Federal Water Pollution Control Administration . . . and required all states to adopt quality standards for their streams. During the 1967 session of the Texas Legislature, the Texas Water Pollution Control Board was renamed the 'Texas Water Quality Board,' and a large part of the staff formerly employed by the Texas Department of Health was transferred to the (new board) to enable it to process and enforce waste discharge permits and to concern itself with quality standards for the streams in Texas."*

The 1967 Legislature had also passed an act giving agencies such as the NTMWD the power to construct regional waste collection and treatment facilities, Shimek's letter noted. In the belief that urban growth areas could best be served by regional facilities, such agencies as the district had also been empowered to acquire existing facilities.

*"Considering the foregoing developments and the fact that the district is obligated to concern itself with the quality of water in Lavon Reservoir," Shimek concluded, "it thus appears that the district should consider establishing a position with regard to water quality and waste treatment in its area."*

In Shimek's view, the district had several options:

- 1. It could decide to confine its activities to supplying water to its member cities and customers, but this would mean, in essence, that the water quality in the NTMWD service area would be determined and controlled by some other agency or authority.*
- 2. It could expand its responsibility to include handling wastes in the East Fork Basin where a need existed and police any discharges reaching Lavon in order to safeguard its water quality.*



*3. It could extend its responsibility to include the handling of wastes for all member cities and customers that it now served or might serve in the future.*

If the district decided to pursue the third option, it would be the biggest single step in its history, one that would take it into “uncharted territory” far beyond the role that the district’s founders had envisioned for it.

There would be much discussion and debate over the issue. Some NTMWD board members were openly hesitant about the idea of the district’s getting into the business of handling “dirty water,” but others saw it as a natural adjunct to the district’s established service of supplying clean water and closely linked to the issue of water quality.

While he allowed both sides to have their say, it was obvious within a few months after he was named executive director of the NTMWD that Carl Riehn saw the wastewater crisis as a huge opportunity, both for the district and for the concept of regionalization in which he believed deeply.

In response to the action by the Legislature, the North Central Texas Council of Governments launched a major study of the ten-county Dallas-Fort Worth Metropolitan Area to examine existing facilities, identify existing problems and recommend specific action. When NCTCOG issued its report on this study, it greatly strengthened the position of those, both inside and outside the NTMWD, who wanted the water district to institute a wastewater program. The report called for the development of large, joint-use, regional treatment systems for the Dallas-Fort Worth area — specifically including one on the East Fork.

However, as Riehn observed in an administrative memorandum to the NTMWD board in August 1970, NCTCOG did not have the legal authority to operate such a system, so someone else would obviously have to step into this role if it were to be done. From all indications, the water district *did* have the legal authority to undertake this task, and Riehn left no doubt as to who he believed the “someone else” should be.

As early as June of that year, Riehn had written a letter to William J. Pitstick, executive director of NCTCOG, to emphasize the district’s interest in being designated as the regional wastewater authority for the East Fork.

“We believe that if such a system is economically feasible, the district could offer many advantages to the area by assuming the responsibilities for development and operation of such a system,” Riehn wrote.

When it appeared that NCTCOG itself might seek the authorization of the



Legislature to assume the role of waste management agent for the entire Dallas-Fort Worth area, however, Riehn was quick to disagree with this approach.

*"It would appear to me that COG could furnish a much more valuable service by assisting the existing local government entities . . . (in) the implementation of the program," he told Pitstick in a July 13 letter.*

*"This should result in quicker action in many cases and certainly more local control, thus avoiding the fight of metropolitan government. . . .*

*"Bill, I hope that you realize I am not being critical, as I am sincere in my belief that NCTCOG has been good for the area . . . (but) NCTCOG should, in my opinion, work toward gaining the confidence of and assisting the local entities, rather than absorbing the local functions."*

In his August memorandum to the NTMWD board, Riehn made it clear that he thought the district should move ahead on a wastewater system.

"It would appear appropriate for a study to be made by the staff to determine the desires of the member cities concerning the feasibility of the district's becoming involved in such an operation," he said, "and a plan for funding the preliminary engineering and financial study to implement the first phase of such a system."

As Riehn pointed out, the cities of Garland, Richardson, Plano and Sachse were already involved in a study on the possibility of a joint wastewater treatment system that would utilize a new Garland plant on Duck Creek. Meanwhile, numerous other area cities were also anticipating problems in meeting the higher, more stringent treatment standards that were being imposed.

*"It is apparent that a regional sewerage system is inevitable on the East Fork of the Trinity," Riehn said in his memorandum. "Then the obvious question must be answered: 'Who will coordinate and manage such a regional system?'"*

It quickly became just as apparent, however, that the issue would not be settled quickly or easily. There remained sharp — and potentially divisive — differences of opinion as to what the final answer to this question should be.

. . .

As it ran its inevitable course, the NTMWD's move toward instituting a regional wastewater system was destined to put a severe strain on the district's relationship with at least one of its member cities and to test the "one for all, all for one" philosophy and posture of the district's board as it had never been tested before.



For Garland, the district's largest member city and one with expansive wastewater treatment plans of its own already in the works, the situation eventually became an extreme "sore spot." The City of Garland initially approved the district's plans to conduct a feasibility study for a regional East Fork sewerage system, and, as Garland Assistant City Manager G. Chris Hartung advised Carl Riehn in a letter dated December 8, 1970, the Garland City Council had authorized the city to spend up to \$5,000 as a participant in the study.

But, meanwhile, Garland had already undertaken its own study of future water utility needs independent of the NTMWD, and was well advanced with plans for its Duck Creek wastewater treatment plant, a facility which it hoped to interest such other area cities as Richardson and Plano in using. And as the months passed, it became increasingly apparent that Garland not only opposed the NTMWD's effort to win designation by the state as agent for a regional wastewater system, but that some Garland municipal leaders believed this role rightfully belonged to their city.

It was not the first time that a dispute had arisen between Garland and the water district. During the mid-1960s, Garland had asked to purchase some 400,000 gallons of raw "industrial water" per day from the district to be used for cooling purposes at a new electrical power plant to be built on the east shore of Lake Lavon by the city's municipally owned power system. NTMWD General Manager A.P. Rollins had initially denied the request, ruling that all the water in Lavon was already "committed," and in so doing had touched off a lengthy squabble that lasted well beyond Rollins' own retirement.

*"The present demands for domestic and municipal uses are in excess of the dependable yield of the existing Lavon Reservoir," Rollins wrote in December 1963. "The engineers estimate the demands for domestic and municipal uses in the year 1990 will exceed the dependable yield of the enlarged Lavon Reservoir."*

*"It appears, therefore, that to permit direct diversion of water from Lavon Reservoir for industrial uses . . . would further limit the district's ability to fulfill its existing contracts."*

Time would prove that the estimates cited by Rollins were less than accurate, of course, and the dispute, which, in the words of Mesquite's Loncy Leake, was caused by "some bad advice" given the district at the time, was eventually settled in Garland's favor. In December 1964, the Garland municipal power system was granted the rights to 2,000 acre-feet of raw water per year for its Ray Olinger



Generating Plant, and construction was allowed to proceed. Later, in 1973, the district agreed to amend the industrial water contract with Garland to allow an enlarged power plant to use up to 4,000 acre-feet of water per year. (Most of this water was immediately returned to the lake after use, anyway.)

But in the opinion of some, the argument left a lingering feeling of resentment among certain Garland officials. This feeling seemed to be substantiated in May 1966 when Garland Assistant City Manager Norman Groves contacted several other fast-growing suburban member cities — including Plano, Richardson and Mesquite — to propose that they join Garland in a study of future water needs to be conducted on their own, without the participation of the NTMWD. Since each member city had contractually agreed to take all its water from the district, this was seen by many as a calculated move to weaken the district and divide its membership. Garland also approached the Texas Water Rights Commission about securing water rights permits independent of the NTMWD, indicating an intention to form a separate water authority in the NTMWD service area.

Plano City Manager E.C. Drumb expressed the sentiments of many in the district about such a move in a letter to NTMWD Director Alex Schell III on May 5, 1966, when he wrote:

*"I feel that our water district has done an excellent job in making long-range plans on securing a future water supply for its member cities and customers to this date. . . . It is my opinion that what Garland is attempting to do would be a duplication of work that has already been done by the water district. . . . If they are trying to go off on their own with the help of Plano, Richardson and Mesquite, we would be defeating the purpose of all our work in the last few years. . . ."*

Schell's response a few days later contained even stronger language.

*"Garland's plan would reduce the effectiveness of their association and the North Texas Municipal Water District," Schell told Drumb, "and it would create the worst type of dog fight every time someone went to Austin on a question of water rights. . . ."*

*"The recent Garland request to the Texas Water Rights Commission on the subject of water rights permits, and now this plan offered by Garland, indicates that they feel they are big enough to have their own water district. If we (Plano) were in such a partnership, I would be afraid our rights might be second to those of Garland."*

After receiving similar responses from officials in Richardson and Mesquite —



and a notable lack of encouragement from Austin — Garland eventually allowed the matter to die, but the friction caused by the power plant issue and the independent water study may have added fuel to the later dispute over the regional sewerage system.

“Garland developed a contract for wastewater services and tried to get some other cities to sign it, but none of them would go along,” Riehn says today. “And when we asked the Texas Water Quality Board to designate North Texas as the regional authority for wastewater, Garland objected.”

When the NTMWD board voted on the issue on November 22, 1971, both of Garland’s representatives — Robert L. Jordan and G.W. Range — cast their ballots against a resolution requesting the state board designation. The only other director to cast a “no” vote that day was McKinney’s A.H. Eubanks, Jr., whose opposition had little relationship to Garland’s, but which reflected the feeling that the district simply had “no business” handling wastewater.

“I did not see the necessity nor the advantage of the North Texas Municipal Water District performing that function,” Eubanks recalled in a 1989 interview. “I felt that if we attended to the water business and let somebody else tend to the wastewater business, we’d be better off. Why take on a bunch of trouble when we were successful at what we had been doing and were sailing high?”

Eubanks makes it clear that he did not oppose the concept of a regional wastewater system, merely the district’s serving as a vehicle for it.

“I thought it was a good thing,” he says, “and I thought McKinney should get into it, but I didn’t think the water district had any business taking over the management of the thing.”

Eubanks says that he cast his dissenting vote knowing that the resolution would be overwhelmingly approved. But the former director, who retired from the board in 1983 after twenty years of service, leaves no doubt that he would vote the same way today if he had it to do over.

“I was very successful in not obtaining a single, solitary convert to my position,” he says lightly. “Carl (Riehn) believed very strongly in regional wastewater treatment, and he was the chief leader of the thing. Carl, bless his heart, is an expansion man, and I’ve told him this. He likes to expand and that’s fine. He saw an area where the district could expand its boundaries, and he went for it, and he was successful with it.

“It was such a new area that we were able to get a government grant that paid practically all the cost of our first wastewater plant (Plano’s Rowlett Creek facility),



just to try out the regional concept. Carl deserves to be congratulated for that, but I still don't think that the water district had any business in it (wastewater). Somebody had to do it, but I don't see why it was us."

Once the district had passed the resolution to seek the status of official wastewater authority for the East Fork area, Riehn acted immediately to try to obtain some of the federal grants that were being handed out by Washington to finance antipollution efforts. On June 22, 1971, Riehn wrote to Congressman Ray Roberts to apprise him of the district's interest and also to make a case for awarding larger federal grants for regional projects than those currently available to individual cities.

Under present conditions, Riehn pointed out, the federal grant program was "compounding the problem," rather than helping to solve it, because a city acting alone could actually obtain a greater pro rata portion of the cost of building a wastewater collection and treatment system than could two or more cities acting in partnership.

*"The Environmental Protection Agency and the Texas Water Quality Board endorse, support and coerce for the development of regional systems," Riehn wrote, "on the basis that these systems can provide higher quality effluent at reduced . . . costs while containing raw sewerage. . . . But the grant program makes no differential between regional systems and cities; therefore, the cities may obtain the same 55 percent grant without a regional system. If additional grants could be made to regional systems, then the larger costs for interceptor lines necessary to the regional systems could be offset and would provide an economic advantage to the (participating) cities."*

The situation cited by Riehn was corrected to a significant extent by passage of the federal Water Pollution Control Act of 1972, which Roberts, as chairman of the Public Works Subcommittee of the House Appropriations Committee, actively supported in Congress. Under the provisions of this act, the NTMWD was able to obtain federal grants covering 75 percent of the cost of facilities built over the next few years to serve Plano and Mesquite.

"Like Sam Rayburn before him, Ray Roberts was always a great friend and firm supporter of the district and its goal of providing the best possible service," Riehn says.

What the district proposed to the Texas Water Quality Board, after completion of its feasibility study in late 1971, was that, instead of trying to serve the



entire East Fork area from one central wastewater treatment plant, as the COG plan had suggested, several strategically located plants should be built.

“Maybe the ideal situation would have been to have just one giant plant on the East Fork if it could have been financed,” Riehn says, “but in this large an area, the cost was simply prohibitive, not because of the plant itself, but because of all the miles of collection lines that would have been necessary, so we proposed a multi-plant system.”

In essence, Garland asked the Texas Water Quality Board to follow the COG plan by designating its Duck Creek site as the regional sewage treatment center for the East Fork. But by the time the conflicting proposals came before the state board in the spring of 1972, the NTMWD had received overwhelming support for its position.

City after city — eighteen in all — had by now formally requested that the district implement a regional wastewater treatment system and/or assist them in their own sewage treatment programs. Even the powerful Trinity River Authority of Texas had pledged its “full support” to the district’s efforts to serve the sewage collection and treatment needs of the East Fork.

And so, on April 26, 1972, the state board issued an order which read in part:

*“The North Texas Municipal Water District is designated as the governmental entity to design, construct and be the operating agency for a regional sewerage system in the defined (East Fork) area and to provide the services therefore.*

*“The Duck Creek site described in the North Central Texas Council of Governments’ Upper Trinity River Basin Comprehensive Sewerage Plan will not be designated as a regional sewage treatment center.*

*“After development of the area-wide system, the North Texas Municipal Water District shall provide regional wastewater collection and treatment service to all legal entities requiring such services within the defined area, upon such terms as may be agreed upon by the parties or as may be ordered by the board if agreement cannot be reached.”*

The board’s decision did not, however, make it mandatory that all NTMWD member cities participate in the regional wastewater system. Garland was thus given full freedom to develop its own collection and treatment facilities, and it chose to do exactly that.

As Riehn explains: “The state board gave the district only the authority to operate on voluntary contracts with member and nonmember cities, just as we



did with water, and still allowed any city in the region to develop its own wastewater treatment system if it wanted to.”

Most importantly, however, the board’s action now allowed Garland to bring its active opposition to the district’s regional program to an end. Since the state board had ruled, that opposition could serve no further purpose, and since the way was now clear for Garland to proceed independently with its Duck Creek plant, it had won a partial victory.

As a result, Garland today remains one of only two NTMWD member cities (the other being Farmersville) that do not contract with the district for some form of wastewater services.

The feasibility study prepared by Forrest & Cotton and presented to the district in mid-1971 (before the state’s ruling on the regional authority) assumed — wrongly, as it turned out — that Garland would be one of nine participating cities in the initial phase of the regional wastewater system, which was projected to be adequate to serve the East Fork area through 1990.

The study included a plan for absorbing existing sewerage facilities into the system and repaying a portion of their cost (estimated at \$5.2 million) to the municipalities that had built them, including Garland, Richardson, Plano, Allen and Rowlett. Even with this expense included, the study indicated that the net capital costs of a nine-city regional system would be appreciably less than the cost of each city building its own facilities.

*“A regional system would cost less to operate and maintain,” the Forrest & Cotton report stated, “primarily because treatment operation and maintenance costs per unit decline with increased plant size.”*

The plan derived from the study was flexible enough to serve as a blueprint for a regional system, even without Garland’s participation, and it had become obvious by the time the district won its designation as regional authority for wastewater in the East Fork Basin in the spring of 1972 that the most pressing need for new facilities was in Plano and Mesquite.

“Plano was a key factor in getting our program launched,” Riehn says today. “They were growing like mad, their old plant was being pressed far beyond its capacity, and the state had refused to grant a permit to expand it because the NCTCOG plan made it virtually certain that a regional authority would be coming into the picture.”

A contract calling for the district to take over the operation of Plano’s Rowlett



Creek Plant was the first to be signed by the NTMWD after its designation as regional wastewater authority. The district intended to expand the Rowlett Creek facility into one of four treatment plants in its regional system, but much work would have to be done first simply to bring the facility up to required standards in order to meet the needs of Plano alone. Mesquite also faced a critical need for greatly expanded collection and treatment facilities and had reached an agreement even earlier, in August 1971, for a sewerage compact contract with the district, pending approval by the state. The City of Wylie and others, meanwhile, also wanted the water district to assume responsibility for running existing wastewater facilities and constructing new ones.

“That first year, 1972, was a very busy time for us,” Riehn recalls. “Fortunately, though, we had had a sort of ‘trial run’ to help us get ready for all this activity.”

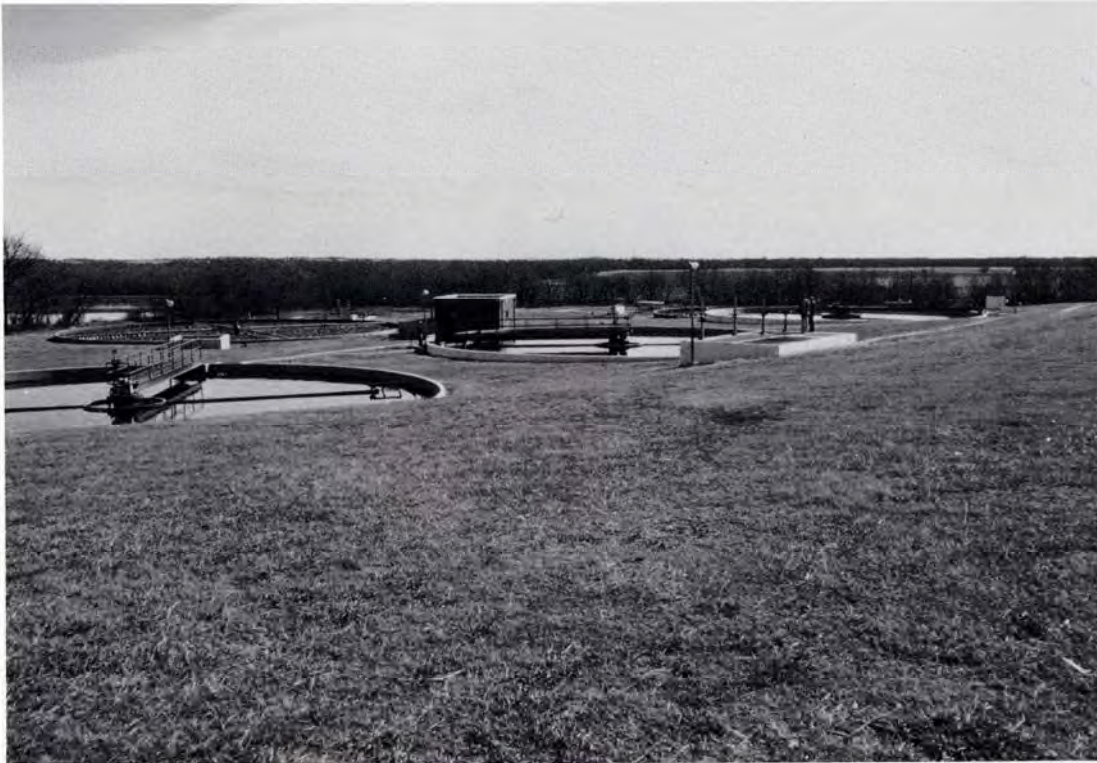
In the spring of 1971, nearly a year before it became the major wastewater agency for the East Fork, the NTMWD had been asked by Dallas to act as administrative agent for the control of sewage and pollution around Lake Ray Hubbard, an arrangement subsequently ordered by the Texas Water Quality Board. One early concern of the district was control of residential septic tanks in the area, but at about this same time, the district was approached by a development company known as Leisure Systems, Incorporated, which faced an unusual problem in the small Rockwall County community of Heath.

Until the construction of Ray Hubbard, Heath had been an isolated farming hamlet that had remained virtually unaffected by the growth around it and had never developed — or needed — very much in the way of municipal services. The town, for example, had no water system of its own, but received water from two small water supply districts. And it had no sewer system whatsoever, a fact that failed to concern city fathers until Leisure Systems sought a permit to build an exclusive condominium development called the Rush Creek Yacht Club, located on the shore of the lake and within the Heath city limits.

The city government of Heath was eager to approve the development but did not have the capability of providing or operating a sewer system for it — a system that would have to be among the most efficient anywhere, since it would be discharging its treated wastewater directly into the Rush Creek yacht basin. The resulting situation presented the NTMWD with an ideal opportunity to demonstrate its abilities in both innovative service and state-of-the-art wastewater treatment technology, and in October 1971, the district board approved a three-



## *Tackling the Huge Task of Wastewater Treatment*



Mesquite Wastewater Plant in 1976, after NTMWD assumed operations of the plant for the city in 1972.

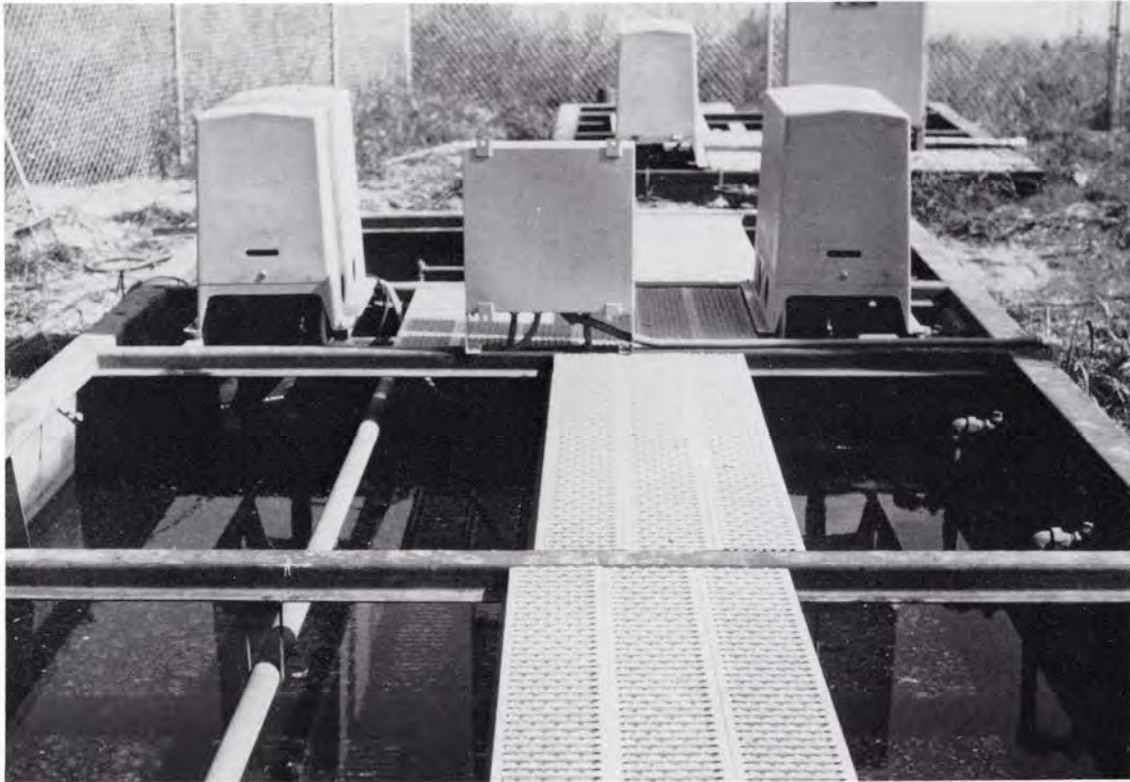
party contract with Leisure Systems, the City of Heath and the NTMWD as signatories.

“Under the terms of our agreement,” says Riehn, “the developer would put up the funds to build a small treatment plant and collection lines. North Texas would obtain the necessary state permit, supervise construction, then own and operate the plant, and the City of Heath would bill the customers and pay the water district from the proceeds. We also had to get an easement from the City of Dallas, which owned the site on the lakeshore where we were going to build the plant.”

What the district produced over the next few months was a small, functioning prototype of the wastewater treatment facility of the future. The Rush Creek plant initially was capable of filtering and treating 20,000 gallons of wastewater per day to a 10–15 rating, meaning 10 milligrams per liter of biochemical oxygen demand (BOD) and 15 milligrams per liter of total suspended solids (TSS), one of the highest ratings attainable at that time.

“This is a far higher quality than the norm for the State of Texas, which is 20–20,” Riehn points out, “and much higher than the federal minimum stan-





Rush Creek Wastewater Plant in 1972, about the time of its initial operation by NTMWD. This plant could treat 20,000 gallons per day to meet 10–15 standards.

dard of 30–30. As our first venture into wastewater treatment, it showed what a water district could do in this area if it really wanted to. It was not only a technical success, but a creative and very unusual project. It illustrated our willingness and ability to work with a community on almost any mutually beneficial basis.”

The Rush Creek project was merely the first of several small, specialized, high quality wastewater treatment facilities soon to be built and operated by the NTMWD, including those serving the Chandler’s Landing and Shepherd’s Glen developments in the Ray Hubbard area and the Seis Lagos Municipal Utility District, which serves a residential community northwest of Wylie.

But it also helped to set the stage for bigger projects that lay just ahead, as well as to establish a standard of quality that would become the trademark of all NTMWD wastewater treatment facilities.

Although it had already been active in this capacity for months, the NTMWD officially commenced operations as the regional wastewater authority for the East Fork on October 1, 1972, by assuming control of Plano’s Rowlett Creek Plant.



Under terms of the contract, the district would be fully responsible for the plant's operation and for imposing necessary standards "for discharge of a safe and non-polluting effluent."

Although ownership of the existing plant would remain with the City of Plano, the city was given the right to turn over to the district total financing of the plant's expansion into what would become the northern "anchor" of a regional system. Mesquite was being considered as the site for a plant that would serve the same purpose for the southern sector of the region, pending approval of a regional plan by the Texas Water Quality Board and the federal Environmental Protection Agency.

On November 30, 1972, as another climactic point in a climactic year, the district's board of directors authorized the formation of the East Fork Water Quality Advisory Council. This body was made up of one representative from each city of 10,000 or more population in the NTMWD service area, then divided into two sections representing the upper and lower portions of the East Fork Basin, and one representative of the smaller cities in the basin was then appointed from each section.

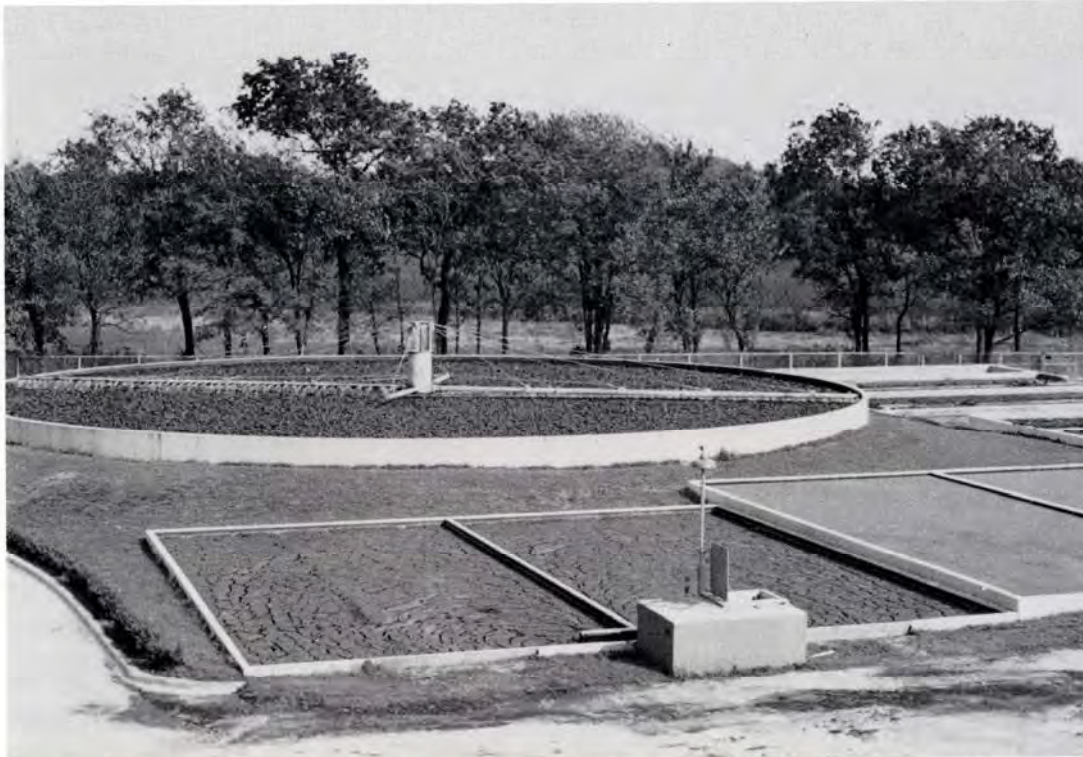
*The function of this council was to examine in detail the wastewater treatment needs of the region and to advise the water district board on how best to devise a regional plan to serve those needs.* The council's recommendations over the next few months resulted in the issuance of District Policy Number 10, a broad-based guideline under which the district could work in a variety of ways to meet the wastewater requirements of all types and sizes of communities.

The policy statement began with this introduction:

*"The NTMWD will work with all incorporated municipalities and non-municipal service entities in the area of the East Fork of the Trinity River to assure adequate water quality in the reservoirs and streams. The objective of the district will be to work with the municipalities on a voluntary basis to provide advanced wastewater treatment facilities capable of meeting all effluent and stream qualities as established by the Texas Water Quality Board and Environmental Protection Agency. All sewer system planning, projects, and policy shall be submitted to the East Fork Water Quality Advisory Council for review and comment before NTMWD board consideration, except in matters of an emergency nature."*

Under the terms of this policy statement, the district could provide services in three broad areas. As set forth in the statement, they included:





Plano Wastewater Plant in 1972, shortly after the City of Plano signed the contract with NTMWD for wastewater treatment services through the new NTMWD Regional Wastewater System. This trickling filter plant could treat 2 million gallons per day (MGD).

*“A. ADVISORY SERVICE — The district may offer assistance to municipalities by reviewing (their) wastewater treatment operation(s) and making recommendations for improvements therein. Further, the district may contract to provide minimum level specialized service such as laboratory analysis, electrical and mechanical maintenance, and operational review and evaluation on a cost basis. The cost would include man-hours, transportation, and materials.*

*“B. OPERATIONAL SERVICE — The district may provide operational service including personnel and all costs for the operation of a wastewater treatment plant, based on a voluntary contract and annual budget with a municipality. This service would primarily be employed in the operation of a plant owned by the municipality which can, with proper operation and maintenance, meet necessary quality requirements or that may be utilized until the plant can be expanded or combined facilities provided.*



*“C. FINANCIAL ASSISTANCE—The district may provide . . . design, construction and financing of single plants where joint and combined facilities are not economically feasible. Revenue bonds would be sold based on contracts with the municipality for advanced wastewater treatment facilities. When district financing is utilized . . . it will be mandatory that the district operate and maintain the facilities.”*

Within a few years, the district would utilize all three of these major avenues. It would construct plants in North and South Rockwall, Wylie and Murphy as special projects, act as advisors, construction managers and later operators for a Frisco plant, and assume full operation of facilities for other cities.

By the end of December 1972, two engineering firms had been hired by the district to prepare plans for the upper and lower portions of the East Fork Basin, and preliminary versions of these plans had been reviewed and approved by the board. In all, seven cities were actively negotiating with the district for regional wastewater services.

Like other regional authorities across the country, the NTMWD was under pressure from the federal government to complete its plan by no later than July 1, 1973. Areas without approved plans by that date, especially those in heavily populated urban areas, could expect to receive no further wastewater treatment grants from Washington until the planning process was finished.

Thanks to the tireless efforts of the NTMWD board and staff and those of the East Fork Water Quality Advisory Council, however, plans for the East Fork Basin were completed well in advance of the deadline.

In a letter dated April 19, 1973, the Texas Water Quality Board informed the district that it had completed its review of the NTMWD's regional plan and concurred with its basic concepts, including the advantages of a multi-plant system over one large regional plant.

“We foresee no difficulties in the acceptance of the NTMWD's conceptual planning,” the letter said.

During the 1973 session of the Texas Legislature, in order to more clearly define and broaden the district's authority to provide regional services to cities on a voluntary basis in the areas of both liquid and solid waste management, the NTMWD began seeking an amendment to the original act that had created the district. And in 1975, this amendment was enacted.

This additional legislation specifically authorized the district to “purchase, construct, acquire, own, operate, maintain, repair, improve, or extend inside and



outside its boundaries, at any location whatsoever” any facilities, plants or equipment necessary to “collect, transport, process, treat, dispose of, and control all municipal, domestic, industrial, or communal waste whether in fluid, solid or composite state.’

The amendment also specified that revenue bonds for waste collection, treatment and disposal could be issued independently of water revenue bonds issued by the district.

*With the passage of this amendment, plus the approval of its regional plan by state and federal agencies, the NTMWD had all the tools required to develop one of the nation’s most advanced and efficient intercity wastewater treatment systems — which it has proceeded to do.*

That system now includes four regional wastewater treatment plants — Floyd Branch, Mesquite, Rowlett Creek and Wilson Creek (the largest tertiary treatment plant in Texas) — with a combined permitted capacity of more than 69 million gallons per day. In addition, the district operates a regional interceptor system encompassing 48.9 miles of pipeline and a total of twelve local sewer plants in eight communities. All together, NTMWD owns ten of the plants it operates. With expansions underway in 1993, the district will soon have a total permitted treatment capacity of more than 78 MGD.

As Riehn observes today:

*“Our wastewater program is an excellent example of how the district actively helps cities with their specialized individual needs instead of just trying to make money for itself. The only stipulation we place on the cities is that each pay its fair share so that none of them has to carry someone else’s load.*

*“This posture on the part of the board is what has enabled us to work with so many cities in such diverse ways.”*

As a result, no area in the United States can claim a cleaner or higher quality water supply for its use today — or tomorrow.





**NORTH TEXAS MUNICIPAL WATER DISTRICT  
REGIONAL WASTEWATER SYSTEM**

| <b>Regional System:</b>                                  |                                    | <b>Permitted<br/>Capacity (MGD) <sup>1</sup></b> |
|----------------------------------------------------------|------------------------------------|--------------------------------------------------|
| <b>Regional Wastewater Plants (WWTP):</b>                |                                    |                                                  |
|                                                          | Floyd Branch WWTP <sup>2</sup>     | 4.75                                             |
|                                                          | Mesquite WWTP <sup>2</sup>         | 25.00                                            |
|                                                          | Rowlett Creek WWTP <sup>2</sup>    | 16.00                                            |
|                                                          | Wilson Creek WWTP <sup>2</sup>     | 24.00                                            |
| <b>Sewer System:</b>                                     |                                    |                                                  |
| Forney:                                                  | Forney Plant <sup>3</sup>          | -                                                |
| Frisco:                                                  | Cottonwood Creek Plant             | 0.30                                             |
|                                                          | Stewart Creek Plant                | 0.60                                             |
|                                                          | Stewart Creek West Plant           | 1.50                                             |
| Heath:                                                   | Rush Creek Plant <sup>2</sup>      | 0.04                                             |
|                                                          | Shepherd Glen Plant <sup>2</sup>   | 0.18                                             |
| McKinney:                                                | North McKinney Plant <sup>3</sup>  | -                                                |
| Murphy:                                                  | Murphy Plant <sup>2</sup>          | 0.25                                             |
| Princeton:                                               | Princeton Plant                    | 0.30                                             |
| Rockwall:                                                | North Rockwall Plant <sup>2</sup>  | 1.20                                             |
|                                                          | South Rockwall Plant <sup>2</sup>  | 1.50                                             |
| Royse City:                                              | Royse City Plant                   | 0.26                                             |
| Seis Lagos MUD <sup>4</sup>                              | Seis Lagos Plant                   | 0.25                                             |
| Wylie:                                                   | Wylie Plant <sup>2</sup>           | 2.00                                             |
| <b>Total treatment capacity</b>                          |                                    | <b>78.13</b>                                     |
| Total number of plants                                   |                                    | 16                                               |
| <b>Regional Interceptors: (Pipeline length in miles)</b> |                                    |                                                  |
|                                                          | Upper East Fork Interceptor System | 37.7                                             |
|                                                          | Southside Interceptor (Rockwall)   | 4.3                                              |
|                                                          | Forney-Mesquite Interceptor        | 6.9                                              |
| <b>Total interceptor length</b>                          |                                    | <b>48.9</b>                                      |

<sup>1</sup> Million Gallons per Day

<sup>2</sup> Number of plants owned by NTMWD: 10

<sup>3</sup> Abandoned; flow sent to regional plant

<sup>4</sup> Municipal Utility District

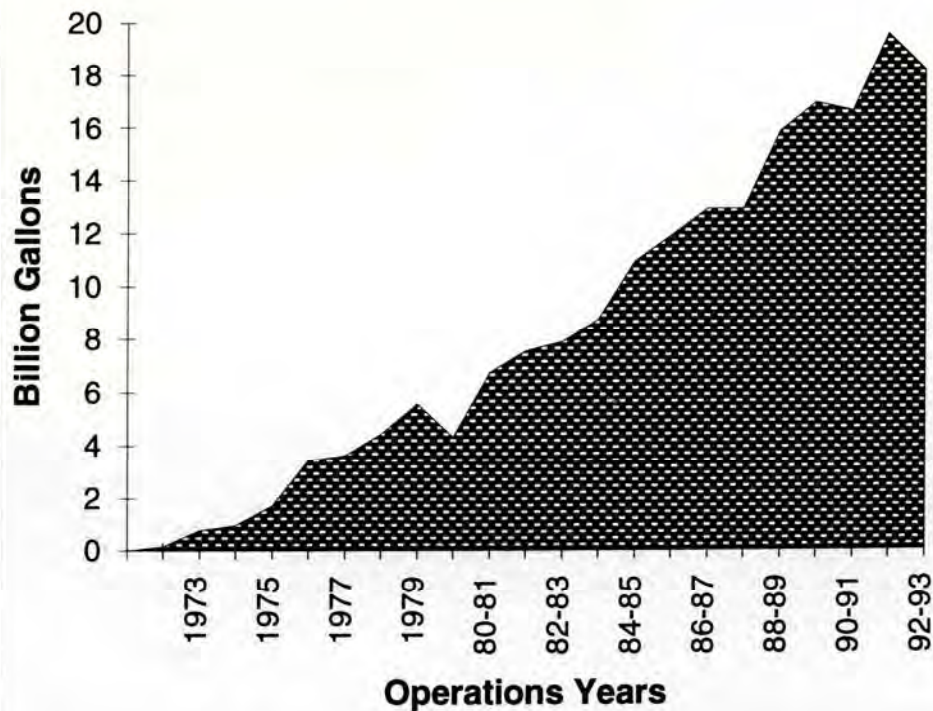


# NORTH TEXAS MUNICIPAL WATER DISTRICT

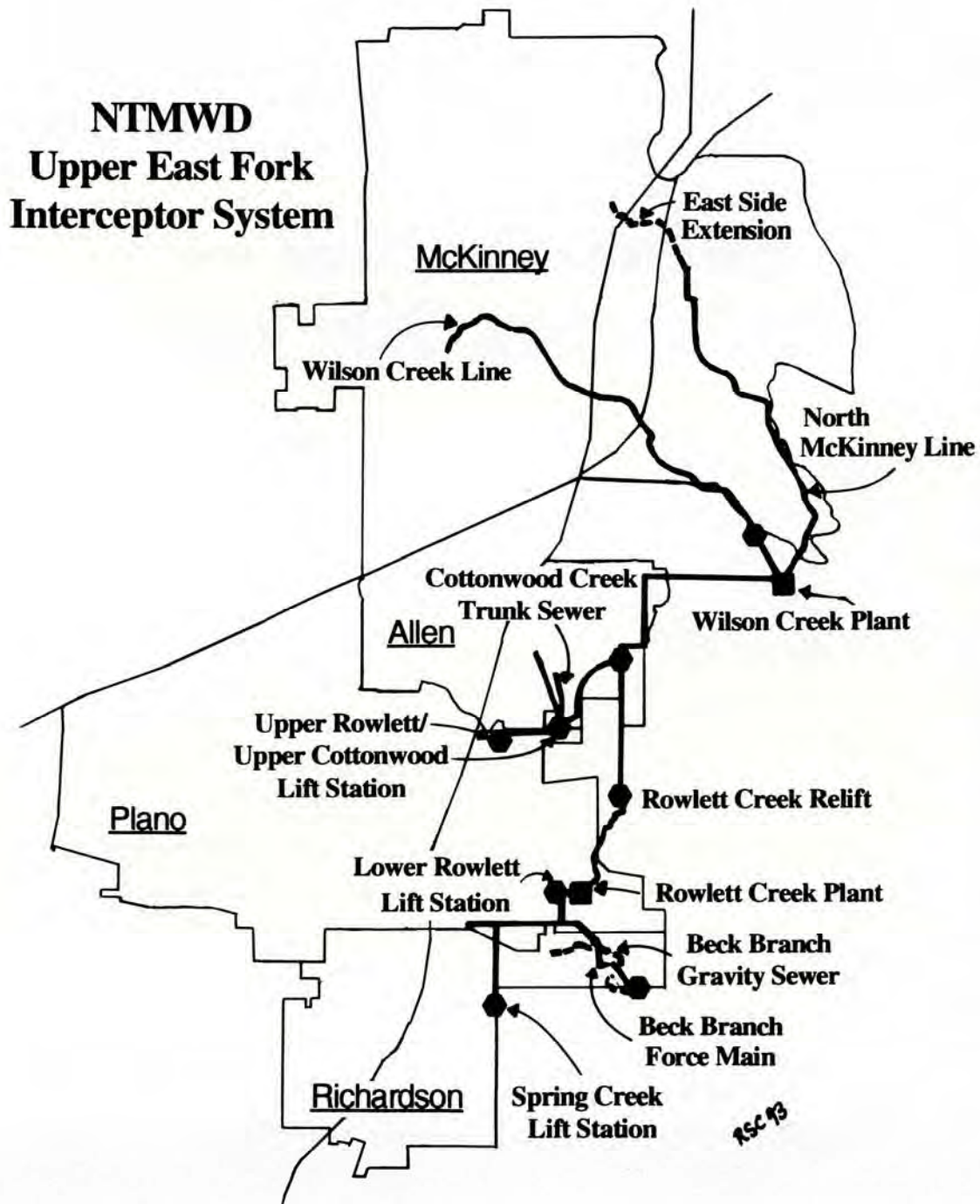
## NTMWD Annual Wastewater Volume Treated

| <u>Year</u> | <u>Billion<br/>Gallons</u> | <u>Year</u> | <u>Billion<br/>Gallons</u> |
|-------------|----------------------------|-------------|----------------------------|
| 1972        | 0.2                        | 82-83       | 7.9                        |
| 1973        | 0.8                        | 83-84       | 8.7                        |
| 1974        | 1.0                        | 84-85       | 10.9                       |
| 1975        | 1.7                        | 85-86       | 11.9                       |
| 1976        | 3.4                        | 86-87       | 12.9                       |
| 1977        | 3.6                        | 87-88       | 12.9                       |
| 1978        | 4.4                        | 88-89       | 15.8                       |
| 1979        | 5.6                        | 89-90       | 16.9                       |
| 1980        | 4.3                        | 90-91       | 16.6                       |
| 80-81       | 6.8                        | 91-92       | 19.5                       |
| 81-82       | 7.6                        | 92-93       | 18.2                       |

## NTMWD Wastewater Volume Treated 1972 to 1992-93









# 10

## The Cooper Reservoir — Winning a Long, Bitter Battle

*“Truett, we’ve got a real problem. We’ve got a chance to build this Cooper Reservoir, but there’s no way that our three little cities can do it by themselves. You’ve gone through the process of building a dam and setting up a water district and everything. Would you all (the NTMWD) be interested in taking part in Cooper?”*

— Brent Tarter  
Sulphur River MWD

Regardless of how diligently we may plan or how carefully we may calculate, our attempts to forecast the future are a risky business at best — and, at worst, they can be a courtship with disaster. As Robert Burns observed more than 200 years ago, the “best-laid plans of mice and men” often go awry. And in all the annals of water resource development in America, there is surely no more indisputable — or maddening — proof that this old adage still holds true than the Cooper Reservoir.

As early as 1937, as a direct result of the federal Flood Control Act of 1936, surveys had been conducted for a proposed reservoir on the South Sulphur River near the town of Cooper, and before the end of the decade the lakesite had appeared on Army Corps of Engineers maps. Congress specifically authorized construction of the lake in 1955, and just two years later, the first appropriations for preconstruction planning were approved. In July 1958, construction of chan-



nel and levee improvements below the lakesite were begun, and the federal government began intermittently acquiring land for the project as funds were made available.

Inspired by the speed with which Lake Lavon and other area reservoirs had come into being, engineers, politicians, civic leaders and city planners alike were confidently predicting that water from Cooper would be flowing through the pipelines of area cities and the North Texas Municipal Water District by the early 1970s at the latest.

For the time in which they were made, there was nothing unusual or unrealistic about those predictions. But knowing the regulatory pitfalls and legalistic maze that developers face nowadays, no one would dare make such predictions in the 1990s, partly because of the example set by Cooper. Indeed, the very “can-do” spirit that fueled these optimistic projections of decades past often seems today to be part of a bygone era.

Because of an almost inconceivable series of delays, the Cooper Reservoir has remained little more than a mirage, insofar as water consumers in the NTMWD service area are concerned, for close to forty years. As this is written, the best projections for when the first Cooper water will finally reach any of the faucets of the 800,000 people who rely on the NTMWD for water, is “sometime in 1995.”

Roughly four decades and a million frustrations after the reservoir initially won congressional approval, the obvious question is, “What happened and why?”

Many factors played a role in this long and bitter episode. They included seemingly unavoidable disputes among federal, state and local agencies. They included the fact that the proposed lake’s waters were being sought by several different entities, and, as with Lake Lavon, there were strong differences as to how much of these waters should be designated as conservation storage and how much should be allowed to flow downstream. At one point in the late 1950s, it was discovered that the original site proposed for the Cooper Dam was located on an underground fault, so the site had to be relocated. And four times, the project was delayed while plans and specifications were reevaluated so that the scope of the lake could be enlarged to its optimum feasible size.

The factors also included the rise and growth of the environmental movement during the 1960s and ’70s, along with an increasing tendency to question the effects that any large development would have on the environment.

But the most important factor of all — the one that would do more than any other to create inexcusable delay and send the eventual cost of the project soar-



ing by more than twelve-fold over original cost estimates — can be summed up in just two words:

Legalistic obstructionism.

As readers may recall from earlier chapters, the Cooper Reservoir was first envisioned as a second source of water for NTMWD members and customers even before the district's first source — Lake Lavon — officially produced its first gallon of treated water for human consumption.

In those drought-plagued days of the mid-to-late 1950s, it was firmly believed that, within a decade or so, both a larger Lavon and an entire new supplementary supply of water would be urgently needed.

Forney's Conway Senter, who first joined the NTMWD board of directors in 1958 and served continuously until his death in 1993, recalled that the expansion of Lavon and the availability of the Cooper Reservoir were being envisioned at that time as virtually simultaneous occurrences.

"We were talking about both of them at the same time," Senter recalled during an interview in September 1989. "We had a little more control over the Lavon situation, because we could proceed without anybody else's permission except the cities that were already involved. But when we started talking about Cooper Lake and going over into somebody else's backyard (outside the water district's established service area), we had to approach things in a different way. We had to show other concerned people that all the benefits weren't going to come to us, but that everyone would benefit."

A series of town meetings was arranged between representatives of the district and citizens and officials of other cities interested in Cooper Lake. Several of these cities, including Sulphur Springs, Commerce and Cooper, were members of the Sulphur River Municipal Water District, an entity patterned in some respects after the NTMWD, but lacking its strength, population and financial resources.

"These towns were all pretty eager," Senter recalled. "Their biggest concern was the money factor, and they also knew that they weren't going to use enough water by themselves to substantiate building a lake in the area. So while they undoubtedly had some problems with 'city slickers' coming down there to take their water, once we convinced them that we weren't going to steal it all and that we could help them get such a large project instituted for our mutual benefit, then they didn't seem to have any big worries."



Actually, according to the recollections of Wylie's Truett Smith, the towns of the Sulphur River Municipal Water District were eager for the participation of the NTMWD in the Cooper project. Smith remembered receiving a telephone call during the early 1960s from Brent Tarter, a government professor at East Texas State University in Commerce and a member of a three-man committee investigating the possibility of obtaining water from Cooper. During their conversation, Tarter, who would later serve as president of the Sulphur River Municipal Water District, outlined the situation faced by the smaller district and suggested how the NTMWD might be able to help.

"Truett, we've got a real problem," Smith recalled Tarter saying. "We've got a chance to build this Cooper Reservoir, but there's no way that our three little cities can do it by themselves. You've gone through the process of building a dam and setting up a water district and everything. Would you all (the NTMWD) be interested in taking part in Cooper?"

At the time, the Sulphur River District had committed itself to pay 100 percent of the cost of conservation storage in Cooper. But because of recently enacted state requirements that all Texas reservoirs be built to optimum capacity — a direct result of the tremendous escalation in cost per acre-foot in the enlarged Lavon storage, in comparison to storage in the original lake — the small district was unable to meet the additional financial requirements. This, in a nutshell, was the "real problem" to which Tarter referred.

Smith's response was immediately positive. "I said, 'Sure, Brent.'" Smith recalled. "'Give me a little time and let me come up and talk to you.' So I talked to (General Manager) Andy Rollins and we set up a meeting a few days later at Brent's home in Commerce. What we told them at that meeting was basically, 'Yeah, sure, we're interested.' And that was really the start of the Cooper Reservoir, or at least of our interest in it."

The situation was somewhat different, however, where another seeker of Cooper water was concerned. This was fast-growing Irving, whose population was in the process of soaring from just over 2,600 in 1950 to nearly 46,000 in 1960 and more than 97,000 in 1970. Irving had been buying most of the water to meet its expanding needs from Dallas, but it was searching desperately for a new water source. While the NTMWD did not necessarily welcome Irving's competition for Cooper water, Senter said, there was a feeling that having more than one entity requesting the water might speed up the lake's construction.

"We would like to have had all the water (in Cooper), but we thought the



justification (for building another water-supply lake) would be greater if Irving was involved,” Senter explained. “I mean it was easier to justify to the Texas Water Development Board if we asked them for permission to divide up the water than if we asked for the whole thing.”

By July 1966, when a report was submitted by the NTMWD to the Texas Water Development Board in regard to its plans for the development of water resources in Lavon and Cooper, everything looked to be on track. In presenting the report, Roland Boyd, the district’s general counsel, spoke confidently of how the two reservoirs would soon be used as tandem components of a vast water supply system.

“We already have permits and we expect to sign contracts in the near future for all the conservation storage in the soon-to-be enlarged Lavon Reservoir,” Boyd said, “and part of the conservation in the soon-to-be constructed Cooper Reservoir, in the Sulphur River Basin. We are already planning to move water from the Cooper Reservoir into Lavon Reservoir.”

The report, prepared in connection with a proposed statewide water plan, also made it clear that the NTMWD would prefer to treat and deliver all the water moving west from Cooper by way of Lavon.

If water was to be moved westward from Cooper to Irving, a distance of more than 75 miles, Boyd pointed out (without actually mentioning Irving by name), “both geography and economy dictate that it be moved through our area.” Water to be used by users to the west could be piped into Lavon along with water to be used by NTMWD members and customers, and could also be treated before being sent on to the west through the district’s new Plano West pipeline, thus avoiding costly “duplication.”

After negotiations, the City of Irving seemed amenable to this plan and to the idea of sharing the cost of the Cooper-Lavon pipeline with the NTMWD. Faced with a water contract with the City of Dallas that was due to expire in 1975, Irving also expressed keen interest in buying water from the district’s enlarged Lavon storage on an interim basis until Cooper was ready for use.

Nobody had the remotest idea in 1966–67, when these negotiations were taking place, that not a single drop of Cooper water would be available to anyone for more than a quarter-century.

. . .

The first major “fly in the ointment” where Cooper was concerned developed in mid-1967 after the NTMWD, the City of Irving and the Sulphur River Municipal



Water District believed they had reached an agreement in principle with the Corps of Engineers on the amount of storage each could claim in the lake. The controversy stemmed from new requirements set forth by the recently created Federal Water Pollution Control Administration and centered around how much water would have to be released for what the government called “regulation of streamflow for the purpose of water quality control” below the lakesite.

In some ways, the dispute bore similarities to the argument with the Corps of Engineers over whether part of the water from the original Lake Lavon could be used for conservation storage or if most of it would be released for flood control. This time, however, the impasse was over water to be released to maintain water quality in areas downstream.

The COE was refusing to allow the project to proceed until it was assured that enough water could be released from Cooper to ensure the maintenance of downstream water quality. Meanwhile, the Texas Water Development Board was refusing to agree to such release, since Texas law did not include water quality control as an approved use of impounded water, and Texas Attorney General Crawford Martin was indicating that he would take the case to court rather than give in.

In January 1966, the Texas Water Rights Commission had granted a permit to the NTMWD, the City of Irving and the Sulphur River Municipal Water District, giving the three entities 100 percent of the 273,000 acre-feet of water supply storage which it was estimated Cooper would contain when filled. Irving and the NTMWD were granted equal shares in the storage of 100,625 acre-feet apiece, while the Sulphur River District was granted 71,750 acre-feet.

Everything had looked fine at that point, but by the summer of 1967, a sudden hitch had developed. The Corps of Engineers announced that it would insist on reserving 63,370 acre-feet of Cooper storage per year to maintain water quality not only in the Sulphur River Basin below the lakesite but in Lake Texarkana, also situated downstream, and in the Red River, into which the Sulphur River flows just below Texarkana in southwest Arkansas.

The Texas Water Development Board, an agency created in 1957 as part of a statewide water plan, was a financial participant in the Cooper project, along with the three local entities, and when it learned of the requirement to allocate part of Cooper's storage for pollution control, it refused to sign the COE contract.

TWDB Executive Director Joe G. Moore, Jr., said no provision for the release



of “water quality water” had been figured into the plans for the project and that his board had previously been unaware of these federal demands until the unexpected announcement by the COE.

“What the board does here will set the precedent not only for other reservoirs in the Red (River) and its tributaries, but also for the question of water quality dedication in the Trinity, the Brazos, the Sabine and the Neches — in fact, wherever a federal project may be envisioned,” Moore told the Associated Press.

Actually, the issue was not entirely new. The U.S. Public Health Service had long called for the reservation of space in federally built reservoirs for the purpose of pollution control downstream. But it had been widely assumed by the TWDB and others that the COE would not take a firm stand on the question where Cooper was concerned.

At any rate, the TWDB showed no signs of yielding the point, but neither did the COE, which was under increasing pressure from environmentalist forces in Washington to put such pollution controls into effect in all its projects nationwide. Similar problems had already arisen in other states, including California, Colorado and Oklahoma, but as the *Dallas Times Herald* observed in a report on September 17, 1967:

*“Texas, however, is different. It reserved all of its public lands and the water supply on those lands when it became a state. This concession by the federal government grew from Texas’ status as a (separate) nation when it was brought into the Union, and was the cornerstone of the tidelands dispute which the state eventually won.”*

In the dispute over the so-called tidelands — an oil-rich offshore area along the Texas Gulf Coast — Texas had fought off a federal attempt to declare federal ownership of the area, hence retaining state ownership of petroleum deposits worth billions of dollars.

*“. . . the project (is) in a deadlock, where it is likely to remain through a series of legal and congressional wrangles which will test Washington’s power over use of the nation’s water for pollution control . . .” the Times Herald reported. “Texas water lawyers look for a tidelands-type flareup to develop from the Cooper Dam deadlock.”*

Numerous trips to Washington by delegations from the NTMWD and other concerned agencies, as well as lengthy meetings between state and federal officials, continued through the late summer and fall of 1967. At one point, the state threatened to “go it alone” if the COE stuck to its demands by building another



reservoir below the Cooper site with state funds, thereby sidestepping the federal antipollution requirements.

“Strong talk on the very hot Cooper Reservoir issue kept the Water Development Board in all-day session,” the weekly *Texas Water Report*, an Austin-based newsletter, noted in a September 1967 issue.

In the weeks that followed, however, the Texas agencies interested in the Cooper project called on the state’s “big guns” in Washington for help — including Congressmen Ray Roberts and Wright Patman and Senators Ralph Yarborough and John Tower.

After delegations from several East Texas towns joined a group from the NTMWD in a conference in Washington with members of the Texas congressional delegation, Representative Patman, who had arranged the meeting and in whose district the Cooper Dam would be located, expressed hope that the dispute could be worked out.

“All the parties are sincerely looking for a solution,” Patman told the press.

By the end of the year, and after numerous other meetings, the parties were apparently near a settlement, and the *Texas Water Report* of December 7, 1967, offered the following encouraging comment:

*“Agreement in principle was announced after the meeting in Washington on the Cooper Dam . . . with details to be worked out in a contract to be drawn by the Corps of Engineers, leaving out the 63,000 acre-feet of storage space in the reservoir for water quality control.”*

For once, it appeared that Uncle Sam had yielded on a point of contention, but the *Report* made it clear that it might not happen again.

*“Executive Director Moore of the Water Development Board said the agreement on Cooper would not eliminate the possibility that water quality storage space may be required in other Sulphur (River) reservoirs built by the U.S.,” the newsletter said. “However, if the contract between the Corps and the Water Development Board can be agreed on now, it will allow approval of the contracts with the three other local groups for water supply storage space in Cooper. . . .”*

On January 15, 1968, Moore addressed a letter to the NTMWD, the City of Irving and the Sulphur River District which outlined important changes in the draft of a new proposed COE contract on Cooper. While he made it clear that the language of the contract had not yet been approved by the higher echelons of





Congressman Ray Roberts meeting with officials of NTMWD (L-R): Directors C. Truett Smith, D.B. Dickson, General Manager Garner Jones, Directors Dewey Moore, C. Hansford Ray, Clifford Carpenter, Mayor O.W. Hampton of Wylie, Directors H.L. "Hack" Roach, Alex R. Schell III, Attorney John E. Gay, Director A.H. Eubanks, and Leon Ussery.

the COE, he said he believed it could serve as a basis for a "mutually acceptable" agreement.

One of the key stipulations in the contract draft was that the amount of storage previously designated for water quality purposes was now being redesignated to "municipal and industrial purposes."

After several more months of discussion, the COE contract — with the water quality storage requirement deleted from it — was finally signed by all concerned in July 1968, apparently clearing the way for actual construction of the project to begin.

Over the next year or so, the NTMWD conducted ongoing negotiations with the City of Irving concerning the best means of transporting and utilizing the water from Cooper, and Irving expressed interest in building the joint pipeline that had first been mentioned in mid-1966.

Once again, the Lavon enlargement and the Cooper Reservoir could be men-



tioned in the same breath, as projects that could be expected to come to fruition almost simultaneously, or at least within a few years of each other. The NTMWD's annual report for 1970 described both as now being "in the construction phase," although nothing more than downstream channel work and land acquisition had actually been done where Cooper was concerned.

Despite the fact that a major obstacle had been cleared and the Cooper project again appeared to be moving ahead at a normal pace, some two and one-half years had elapsed since the NTMWD had first been granted storage rights in the reservoir-to-be. If this delay had not occurred, actual dam-building might conceivably have been taking place at the Cooper site by this time — and if it had, much further delay might have been avoided.

As it was, storm clouds were gathering on the horizon for Cooper — storm clouds that would make the tiff between the Texas Water Development Board and the Corps of Engineers seem inconsequential by comparison.

In May 1971, NTMWD Executive Director Carl Riehn, along with John Gay, the district's legal counsel, appeared before the Public Works Subcommittee of the House Appropriations Committee in Washington to plead the case for increased federal funding to allow the Cooper Reservoir to move forward.

These were tight budgetary times on Capitol Hill, with the national defense budget claiming priority over all else, but the NTMWD, along with representatives from Irving and the Sulphur River District, were asking Congress to more than double the appropriation for Cooper included in President Richard Nixon's budget for fiscal 1972.

*"The Cooper Dam and Reservoir project on the South Sulphur River in the State of Texas has been postponed and delayed for sixteen years," read the NTMWD statement to the subcommittee. "The need for the project has compounded, with the Sulphur River flooding the basin, causing tremendous damage, and an increasing need for municipal and industrial water uses. The current drought conditions add to the conflict of the communities relying on the project for water supply purposes. The North Texas Municipal Water District urges the U.S. Congress to increase the President's budget from \$1,150,000 to \$3,600,000."*

During this period, the assistance of Congressman Ray Roberts was invaluable in sparing Cooper funding from the budgetary axes on Capitol Hill. "Ray warned us about people who were trying to kill Cooper," recalls John Gay, "and once I



remember he had me stay over in Washington for a couple of extra days just to protect our rear.”

Ironically, however, events that were taking place elsewhere at this same juncture would make the appropriation of *any* funds for Cooper a pointless gesture — not only for fiscal 1972, but for many years to come. A totally unforeseen disaster was about to befall the Cooper project, one that would ultimately stretch the sixteen-year delay cited by Riehn and Gay before the subcommittee into a stalemate spanning four decades.

That very same May, a Corps of Engineers contract for construction of levee and channel improvements on the Sulphur River — essential prerequisites to the beginning of construction of the Cooper Dam — was halted by court order, pending the filing of an environmental impact statement.

Prior to the passage by Congress of the National Environmental Policy Act of 1969 (NEPA), it had not been necessary for the COE and its partners in reservoir projects to file such statements. But within a few short years, crusading environmentalist groups had become a powerful lobby in Washington, wielding tremendous clout with Congress and the federal bureaucracy, and forcing water resource developers across the country to justify their projects and offer proof that they would not damage the environment. The environmentalists had by now moved far beyond the issues of soil and water conservation and water and air pollution, and a particularly sensitive issue had become the impact of development on wildlife and its natural habitat.

“We didn’t even know what an environmental impact statement was supposed to contain,” says Carl Riehn today, “because we had never had to prepare one before. But our contention was that the law could not be retroactive, and because the Cooper project was already ‘in progress’ at the time the law was passed, Cooper should be exempt from the environmental impact statement requirement.”

While it was true that a significant amount of money had already been spent on preconstruction work — 64 percent of the levees and 85 percent of the necessary downstream channel work had been completed — construction on the dam itself had not started, however. Thus, the ruling of the U.S. District Court for the Eastern District of Texas, in response to litigation filed by the Texas Committee on Natural Resources, was that work on Cooper could not proceed until an environmental impact statement was filed and approved.

Even today, well over two decades later, the motives behind the legal opposition to Cooper are still unclear. As nearly as can be determined, there was no



opposition whatsoever in the local areas that would actually be impacted by the lake. And, in fact, because of the extensive downstream work that had been done, the impact on the environment and wildlife figured to be negligible — far less than the effects of periodic flooding which the lake was designed, in part, to alleviate. The Texas Committee on Natural Resources, headed by Mrs. Peggy Amerson, was the only group ever to file a legal action against the dam and reservoir. The committee was, and still is, a privately funded, Dallas-based organization whose sources of financing remain as unknown today as the rationale behind its efforts to sabotage Cooper and deny local communities the water they desperately needed.

Plano's Alex Schell III recalls a debate arranged by the League of Women Voters between proponents of the lake and representatives of the Texas Committee on Natural Resources. The debate was held in Plano while the case was pending in federal court.

"Carl (Riehn) was talking about how people needed the water from the lake, and Ned Fritz (representing the Texas Committee on Natural Resources) started saying that it was going to destroy the environment and kill all the wiggle-tails and so forth," Schell recounted in a recent interview. "I was only an interested spectator at first, but I kept hearing all this stuff about preserving the environment until I just couldn't keep quiet any longer.

"I finally stood up and said, 'Well, I understand that now that you folks have moved here (to Plano), you want to keep your own space and keep the environment just like it is, but why would you have moved here in the first place if people hadn't planned for the development of the area and provided you with the services you need?' I really got kind of insensed about it, and I said it a little stronger than that."

Schell's remarks drew an approving response from the audience, including a pat on the back from one woman, who told him: "I was just waiting for somebody to say that!" And his argument seemed to leave the environmentalists speechless, for once.

"Curiously enough, there was no rebuttal to what I said, not even from Mr. Fritz," Schell said. "He just kind of grinned."

But as the NTMWD was about learn, what seemed to be simple common sense at a public gathering could be hopelessly obscured in a court of law by legal redtape and subjective judicial interpretations. And because of the complexities involved, preparation of the environmental impact statement (EIS) was a slow



and tedious task that dragged on far longer than anyone had anticipated when it began.

In a memo to other concerned parties dated February 26, 1974, Carl Riehn wrote hopefully:

*"The alternative studies are to be completed by March 1, 1974, and it is currently scheduled that the environmental impact statement would then be complete by August 1974."*

While the process dragged on, everyone holding a stake in Cooper's future was growing fidgety, anxious and confused. There was talk about "de-authorizing" the reservoir as a federal project and asking the state to build it instead. There was perturbed correspondence flowing back and forth among local agencies in Texas, their representatives in Congress and the federal bureaucracy.

As Congressman Wright Patman observed, the federal government already had a hefty investment in the project — one that would have to be largely written off as a loss if the lake were not built.

"It seems that the Cooper Reservoir project is a perennial piece of news, and all of us in East Texas are most anxious for this project to get underway," Patman wrote in a letter to New Boston Mayor John H. McCoy in June 1975. "Of course, it is true that the amount of money already spent by the federal government in today's dollars is approaching the almost unbelievable figure of around \$30 million, and at that, I am certainly not allowing the full effect of inflation."

Despite all the agitation, however, it was not until 1977 that the COE was able to submit its environmental impact statement to the court. In the meantime, the NTMWD tried to exert as much pressure as possible to speed up the process, without much success. *Finally, in December 1975, the board of directors adopted a resolution authorizing the district to intervene in the case on the side of the COE.* From this point on, the board would take an active role in fighting the lawsuit.

The urgency with which the NTMWD viewed the Cooper situation during this period is revealed in a statement by Carl Riehn presented during a meeting at the Delta County Civic Center in Cooper on March 6, 1975.

*"The Cooper Reservoir project is an integral part of the district's overall raw water plan," Riehn said. "If this reservoir is not to be completed under the existing federal contract prior to 1983, the NTMWD must take other steps to assure the citizens in the area an adequate water supply. Therefore, physical construction should commence no later than early*



*1977 or the NTMWD must take other steps to provide water to meet these needs."*

It was not to happen, of course, and the district would, indeed, be forced to look far afield for some alternative sources of water. *The Cooper dilemma would lead directly to efforts to secure water from Lake Texoma and the construction of a massive pipeline through which to deliver that water.* (See Chapter Eleven.)

During this interval, desperate communities in the Cooper area had to turn to boiling water for household use because of the extremely low supply, and a small municipal lake was actually built as a stop-gap measure, after the City of Cooper's existing water supply was declared unsuitable by the State Health Department. At one point in 1978, the Governor's Office of Disaster Emergency Services helped arrange for a Texas Forestry Service water truck to bring emergency drinking water to Cooper residents.

Meanwhile, the Texas Water Development Board, which had been a party to the original Cooper contract with the COE, and which had assumed part of the cost of the project, discovered that legal problems existed with its contract. Consequently, in 1976, while the court battle over the lake was going on, the TWDB withdrew as a participant and the portion of the cost it was to have borne was assumed by the NTMWD, Irving and the Sulphur River MWD.

It was not until December 1978, a year after it was submitted, that U.S. District Judge William Wayne Justice issued a response to the Cooper EIS prepared by the Army Engineers, and when he did, it was not at all what the district or the COE had been hoping for.

In his memorandum opinion, Justice found the EIS inadequate in four main areas. Among other things, it did not contain a plan for the mitigation of fish and wildlife losses or the losses of wildlife habitat resulting from the project. Historically, regulators ignored the benefits of added habitats for fish and wildlife produced by new reservoirs, and Justice's opinion continued that tradition. The court also found that the COE had failed to cooperate with the U.S. Fish and Wildlife Service and the Texas Parks and Wildlife Department in formulating a mitigation plan. It further ruled that the Corps had failed to offer sufficient alternatives to the Cooper Lake project, such as constructing the reservoir solely for water supply without recreational facilities, or flood control measures and water supply sources that did not entail the building of this particular lake.

What the ruling meant was that, unless the case were appealed to the U.S. Fifth Circuit Court of Appeals, the COE would have to go back to the drawing



board and come up with a supplementary environmental impact statement (SEIS). This, in turn, meant the loss of still more valuable time, and attorneys for the NTMWD argued strongly for an appeal.

Many of the government lawyers assigned to handle the case for the COE, however, were young and relatively inexperienced. They were reluctant to appeal because the entire case was based on provisions of the National Environmental Policy Act of 1969 (NEPA), and no clear-cut legal precedents had yet been set in interpreting the law.

"Our position," says Riehn, "was that the judge and his staff knew nothing about environmental matters and the best thing to do was file a quick appeal and say that the judge was wrong, but the Corps and their attorneys chose to take the other route and do the SEIS instead. I think we would have had just as good a chance to win an appeal on the first statement as on the supplementary statement. The Corps had originally predicted that an acceptable EIS could be done in six months, but as it turned out, it couldn't be done in six years. We felt that enough time had been lost, but we were only intervenors in the case, and we were overruled."

The situation was further complicated by the fact that, by this time, the Cooper project had found its way onto an environmental "hit list" prepared for new President Jimmy Carter. The list, which included many needless "pork-barrel" projects as well as some, like Cooper, that were truly worthwhile, touched off what Riehn calls "hysteria and havoc in the water industry" all over the country.

When the supplemental statement was filed with the Environmental Protection Agency in March 1981 and with the court four months later, it attempted to address all the issues raised by the court. It included recommendations for acquiring 25,500 acres of wildlife mitigation lands and deleting all remaining channel and levee work from the project.

But the court's reaction to the SEIS was utterly devastating to the defendants and intervenors in the case. *On December 28, 1982, a year and five months after the court received the supplemental statement, Judge Justice issued an opinion in which he rejected the supplementary statement and indicated that he would impose a permanent injunction against the construction of the lake.*

Nearly 45 years after it was first proposed, and nearly three decades after it was authorized by Congress, the Cooper Reservoir appeared doomed — condemned to permanent limbo by the action of a single federal judge.

"By this time," recalled Wylie's Truett Smith years later, "we had an awful lot



of time, money and worry tied up in this litigation, and we'd been discussing this thing at just about every board meeting from the middle 1960s on, although it didn't always show up in the minutes. We decided we weren't going to quit now."

On February 24, 1983, even before Justice officially announced his injunction, the NTMWD board of directors authorized an appeal of Justice's order, and this time their patience and persistence finally paid off. This time, the federal attorneys for the COE agreed, and although the appellate process would take another eighteen months to run its course, it was a case of "better late than never."

The end of the thirteen-year legal struggle came on July 16, 1984, when the Fifth Circuit Court of Appeals in New Orleans reversed the opinion of the district court, upbraided Justice for exceeding his authority, and dissolved his injunction against the Cooper project.

*"The injunction issued by the district court in this case violates the basic premises of judicial review under NEPA," read the opinion of the appellate court. "... the district court in this case, rather than review the SEIS for substantial compliance with NEPA, has delivered a detailed, didactic treatise on how the SEIS should have been written. It had, in effect, told the Corps that it will not allow the project to go forward until the Corps rewrites the SEIS according to the court instructions. Because the injunction exceeded the court's authority, it must be reversed, and accordingly, the injunction entered on March 21, 1983, is dissolved."*

The opinion concluded with what were surely the most encouraging words yet to reach the NTMWD on the subject of the Cooper Reservoir:

*"Let the work on this project, legally halted since 1971, begin."*

The sighs of relief from Northeast Texas probably could have been heard all the way to Washington.

. . . .

After the victory came the celebration. On October 27, 1984, at festivities reminiscent of the Sam Rayburn era, citizens of Cooper, Commerce, Sulphur Springs and the cities of the NTMWD service area, gathered to applaud the decision of the appeals court and mark a "new beginning" for the lake they had feared was lost just a few months earlier.

The "Cooper Lake Celebration," as it was called, featured a barbecue, music by high school and jazz bands and a speech by Congressman Sam B. Hall, Jr., an active proponent of the project who had consistently supported it in Congress through its long ordeal.



In a status report on the project the following January, it was noted that 98 percent of the land for the lake — more than 25,000 acres — had by now been acquired and that 90 percent of the boundary survey work had been completed. Construction was also underway on boundary fencing, a relay tower and an access road. The supplementary environmental impact study had been completed and approved, and the acquisition of mitigation lands was awaiting congressional action. Work had also started on engineering and design for the dam's embankment and spillway and the relocation of various county roads.

For his part in "staying hitched" with the NTMWD on the Cooper project during its long ordeal, Riehn gives credit to Walter Helm of Sulphur Springs, longtime president of the Sulphur River Municipal Water District. Not only did Helm and his organization support the legal fight for the lake, but also continued to push and prod the COE to keep the project on schedule after it was finally begun.

"He was instrumental in getting the project done," says Riehn. "He used a lot of his own personal funds in the effort and went to Washington to exert pressure in behalf of the lake. Then his doggedness and persistence helped move the project along and reduce actual construction time."

At long last, formal groundbreaking ceremonies for the Cooper Dam were held on July 2, 1986, with a host of dignitaries in attendance. Speakers included former Congressman Hall, now a federal judge; Congressmen Jim Chapman and Ralph Hall; U.S. Senator Phil Gramm, and Maj. Gen. Jerome B. Hilmes, COE Southwestern Division engineer.

*When a fact sheet on Cooper was sent to members of the Texas congressional delegation a few months later (1986), the projected overall cost of the project was listed as \$140 million. In 1968, three years before the first injunction had been slapped against it, the COE had estimated that the lake could be built for about \$26 million.* At that time, the estimated cost was increasing at the rate of 7 percent (or more than \$3.4 million) per year, so if the lake had been built near the time it was originally authorized, it is reasonable to assume that the cost would have been far, far less.

By the time the lake was declared complete in 1992, the total estimated cost of the project had risen slightly, to \$144 million.

Such is the price of progress — and legal obstructionism.

Was it worth it? Since the exceptionally wet years from the late 1980s through the early 1990s have reduced water usage while keeping area reservoirs filled to



*The Cooper Reservoir — Winning a Long, Bitter Battle*



A celebration for Cooper Lake. At the groundbreaking at the Convention Center in Sulphur Springs are dignitaries from the local sponsors, senators, representatives, and the Corps of Engineers. Dyon Cantrell (2nd from right), president of the NTMWD Board represents the cities served by NTMWD. Also present were Judge Sam B. Hall, Jr., Congressman Ralph Hall, Congressman Jim Chapman, Walter Helm of Sulphur Springs, Maj. Gen. Jerome B. Hilmes, southwestern division engineer of the Corps of Engineers.



U.S. Senator Phil Gramm addressed the crowd gathered for the celebration with the theme "Let the work . . . begin" from the Appeals Court Ruling.



U.S. Representative Jim Chapman encouraged the audience with the benefits that water from Cooper Lake would bring to the local communities, to the NTMWD region and to the City of Irving. Now that project was about to begin.



optimum levels, and since, under these circumstances, water from Cooper has not yet actually been needed, it might be easy to answer "No." But in the long term, many observers believe that even this huge price tag will be more than justified.

"Cooper will certainly be a boon to the North Texas District," says Alex Schell, "because, according to the people who analyze East Texas water, the raw water in Cooper is supposed to be the best raw water we can hope to obtain.

"Besides," he adds, "if we had not fought the lawsuit and finally won after all those years, I think all of our members and customer cities would be hard pressed to have the volume of high-quality water necessary for the future, because we don't have any other readily available source, even now, and it would take a lot of time to build another lake."

*The most tragic part of the cost, however, is not covered in official Corps of Engineers reports, but is the needless expense incurred by several small cities to assure themselves of a water supply during the time when the Cooper project was stalled in court.*

"The City of Cooper built its own small reservoir during that period," says Carl Riehn in citing some examples. "Later this reservoir was inundated by the new lake and the Corps of Engineers had to buy the land. The City of Commerce turned to the Sabine River Authority and contracted for water from Lake Tawakoni, then built a pipeline which will eventually have to be replaced. And the City of Sulphur Springs built Lake Sulphur Springs, which never would have been necessary if Cooper had been built within the originally estimated time frame. These are all instances in which money was wasted because of the delay."



*The Cooper Reservoir — Winning a Long, Bitter Battle*



Seven years later, ceremonies at the foot of Cooper Dam marked the end of construction. Present for the occasion were: (L-R) U.S. Congressman Ralph Hall, U.S. Senators Lloyd Bentson and Phil Gramm, U.S. Congressman Jim Chapman, Brig. Gen. Stanley G. Genega, and Federal Judge Sam B. Hall., Jr.



Unveiling the sponsors' plaque are: (L-R) Don Abernathy, Sulphur River Municipal Water District; Roy Brown, mayor of Irving; Ron Holliday, Texas Parks & Wildlife Department; and Brett Hall of Rockwall, president of the NTMWD Board of Directors.





Construction of Cooper Pipeline, Section 2, included 13.8 miles of 84-inch inside diameter pipe installed for the original contract cost of \$14,219,523.00.

After ceremonies officially marking Cooper's completion were held in September 1991, more than a half-century after it was initially proposed by the COE, the new lake filled quickly because of heavy precipitation. Today, its total conservation storage is 273,000 acre-feet — or nearly 30 percent less than Lake Lavon's 380,000 acre-feet — and the NTMWD has the right to withdraw up to 44 million gallons per day, whenever it is needed. It has become an asset whose full future value is impossible to calculate.

In maintaining adequate, dependable supplies of high-quality water, time is always the enemy. Once lost, time cannot easily be recovered, and neither can the high financial toll which it exacts in the process. *Potential sites for reservoirs are also limited and cannot be replaced once they are lost, whether to other types of development or to environmental objections.* But even when municipalities and their citizens are lulled into complacency by extended periods of prolific rainfall, agencies such as the NTMWD cannot afford to relax their efforts.

As this is written, the pipeline that will carry raw water from Cooper to Lake Lavon is nearing completion as a joint project — one that was first proposed more than a quarter-century ago — between the district and the City of Irving.



One of only a handful of 84-inch-diameter pipelines in the state, it is being completed now, at a total cost of \$49.3 million, even though no one can say for certain when conditions will require the first water for use by NTMWD members and customers to start flowing through it. Its completion will coincide with construction of the district's third water treatment plant at Wylie. Water from Cooper Lake is expected to be available in Lake Lavon sometime in 1995.

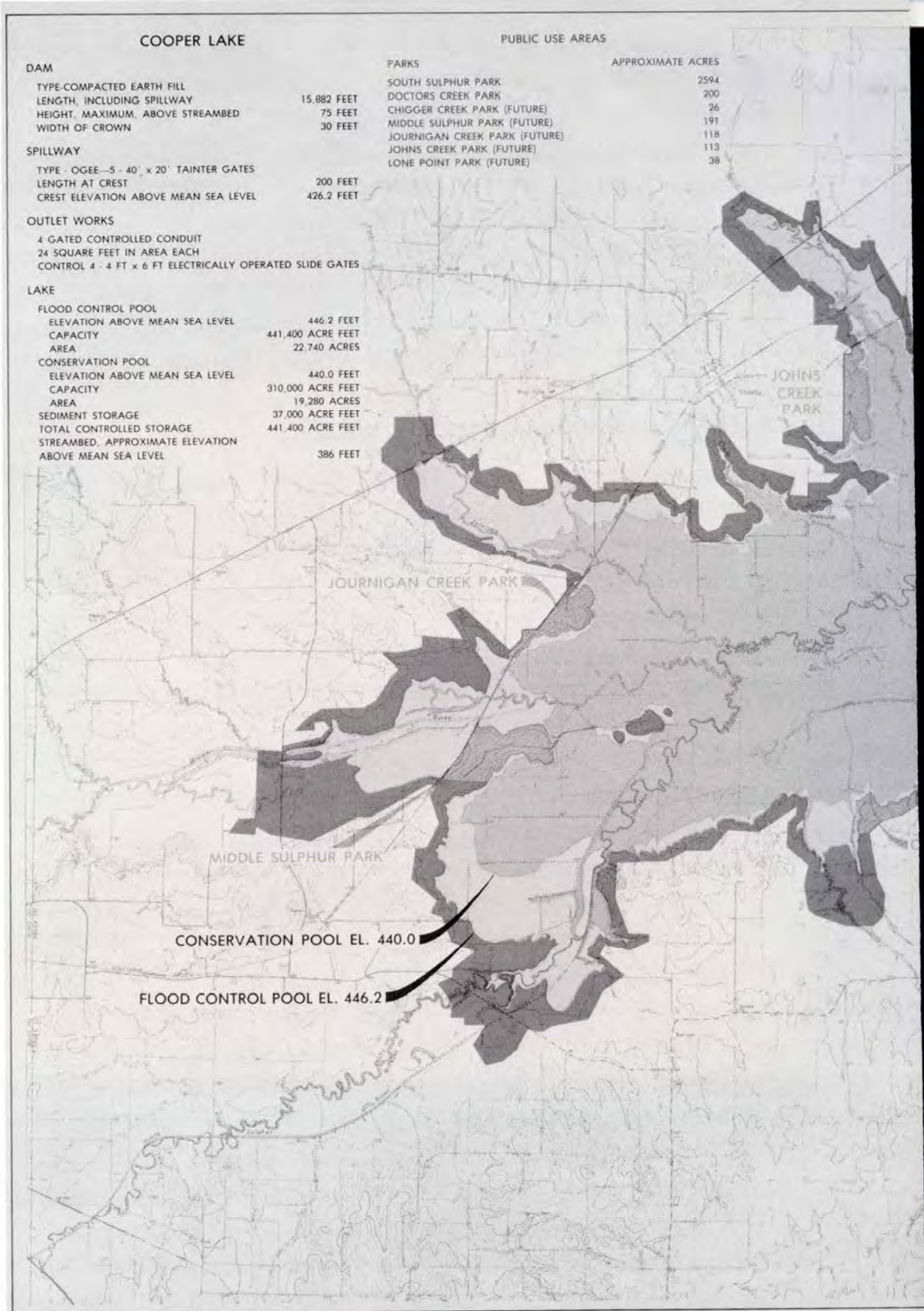
These facilities are being pushed toward completion today because, even if the best-laid plans *do* sometimes go awry, tomorrow has an uncanny way of getting here before we realize it. No matter how wet the weather may be at present, time is marching on — and, like an invisible predator, the next drought cycle is inevitably approaching.

This time, when it arrives, Cooper will be ready.



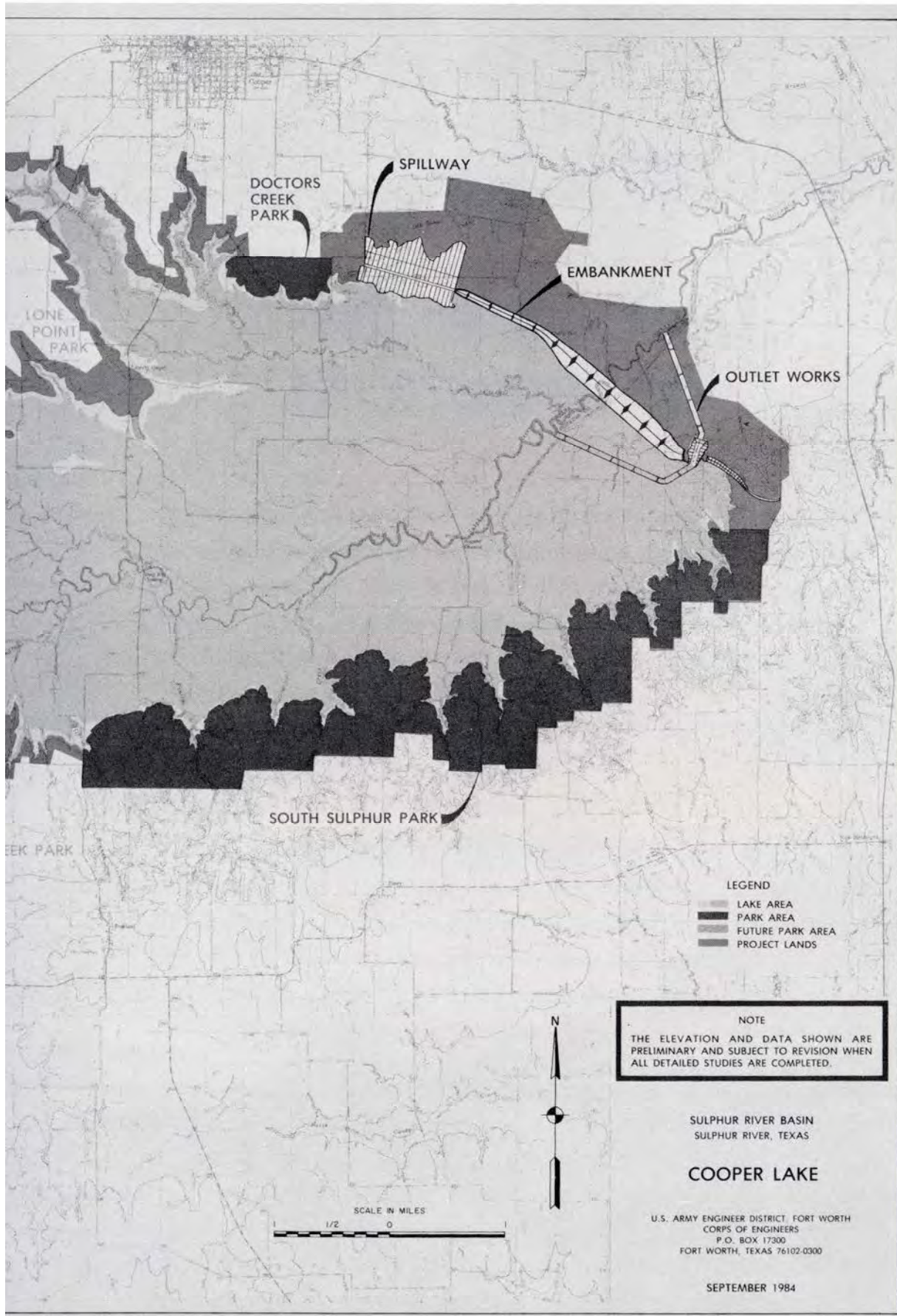


# NORTH TEXAS MUNICIPAL WATER DISTRICT





## *The Cooper Reservoir — Winning a Long, Bitter Battle*





# 11

## Reaching for the Red — The Texoma Project

*The big interstate reservoir straddling the Texas-Oklahoma state line was one of the largest man-made lakes in the nation — 57 miles long from east to west, up to ten miles wide and with 5.4 million acre-feet of storage — yet only a tiny fraction of its conservation storage was being claimed and used.*

While the long legal struggle over the Cooper Reservoir was running its course, the population of the North Texas Municipal Water District's service area was effectively doubling. Between 1971, when the lawsuit was filed, and the ruling of the appeals court which closed the case in 1984, the area had grown from some 200,000 residents to nearly 600,000, creating a demand that left the district with no choice but to seek out other potential sources of water.

In the late 1970s, when it appeared that the Cooper impasse might continue indefinitely, the district approved a wide-ranging series of studies of alternative water plans, looking at several of the major river basins to the east and north of the NTMWD service area in search of relief.

"Timewise, we were in a bind," says Plano's Alex Schell III. "We had no guarantee when we would get water from Cooper — or *if* we would ever get water from Cooper — so we had to start hunting for other sources. We started looking



everywhere, considering every available option and trying to estimate what the costs would be to us.”

In February 1979, the NTMWD board of directors approved alternative water supply studies in three separate areas — the extreme northeastern corner of the state, plus the Sabine River Basin and the Red River/Cypress Creek Basin — and assigned a different consulting engineering firm to carry out each of them. The Sabine study was assigned to URS/Forrest & Cotton, the northeastern area study to Shimek, Jacobs & Finklea, and the Red River/Cypress Basin study to Freese & Nichols.

“We were faced with the necessity of planning for a population that was expected to reach 2 million people by 2030,” says Executive Director Carl Riehn. “And the board said, ‘Look, we’ve been counting on Cooper for all these years, and it’s not panning out. We’ve got to do something to solve our raw water needs.’”

Cooper was an integral part of a three-pronged water development plan that had been formulated in the early 1970s and also included the enlargement of Lavon and the planned construction of yet another new reservoir, to be known as New Bonham and to be located in Fannin County north of the existing Bonham Reservoir. Of the three planned developments, however, only the Lavon enlargement had come into being by the end of the ’70s, and with the Cooper project bogged down in court, it appeared that the only realistic solution was to obtain unallocated water storage in an existing reservoir.

“We still had every intention of building Cooper as soon as we could,” says Riehn. “We were spending \$200,000 a year in legal fees to fight the Cooper injunction, and we were determined not to give up on it. But we also knew that we couldn’t wait another twenty years for another reservoir to be built. We had to do something quickly, and that meant obtaining storage in an existing reservoir.”

As the study by Freese & Nichols proceeded, the Cypress Basin was rather quickly ruled out as a raw water source, primarily because of the distance between the only large reservoir in the basin — Lake O’ The Pines near Jefferson — and Lavon, where any new water supply would have to be piped. After that, the attention of the district and its consultants became increasingly focused due north, on the Red River.

The Freese & Nichols study first suggested that water for the NTMWD could be diverted from a portion of the Red River lying downstream from the dam creating Lake Texoma. In August 1981, the district board went so far as to approve



NORTH TEXAS MUNICIPAL WATER DISTRICT

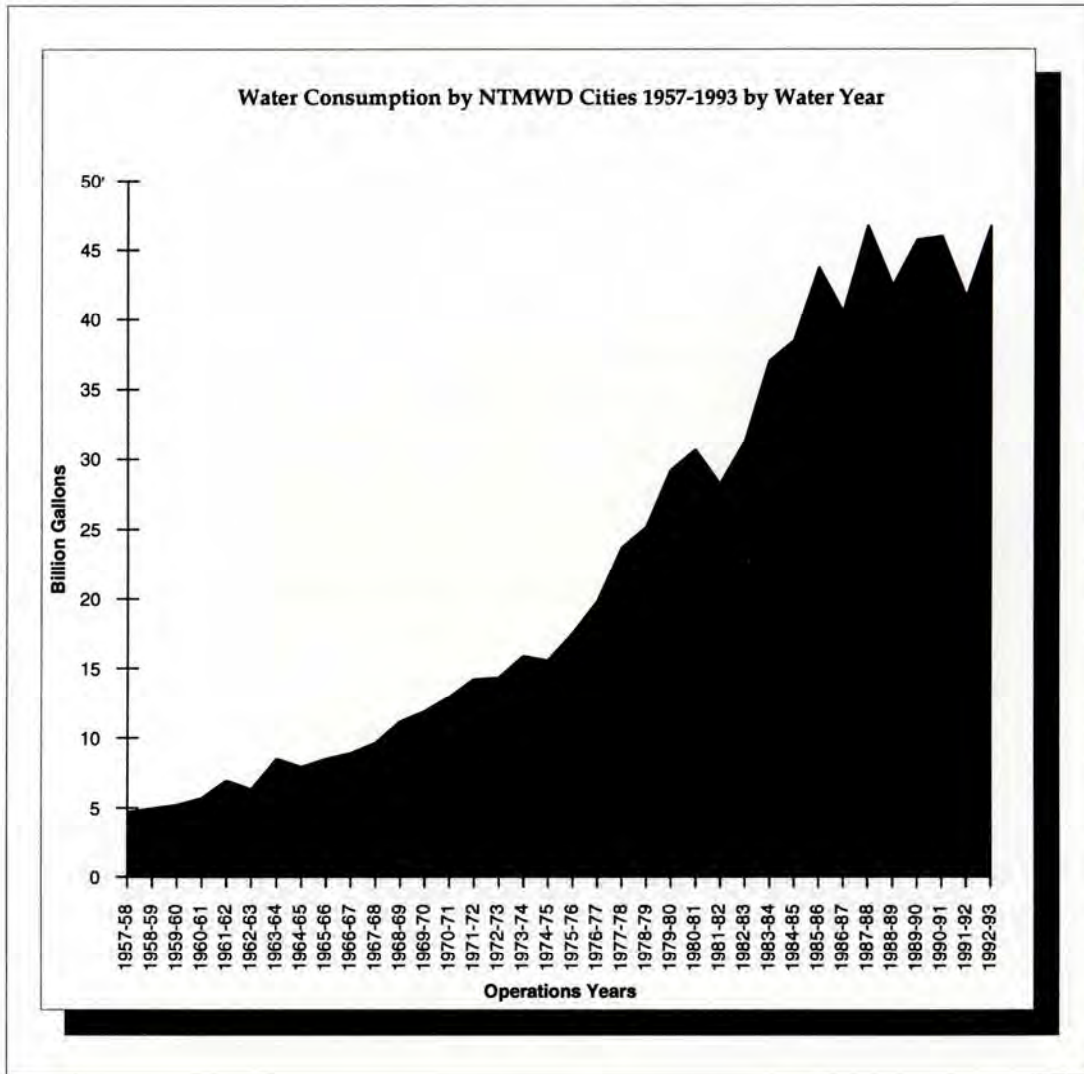
**1957-1993 Water Consumption by NTMWD Cities**

| <b>Operations<br/>Year<sup>1</sup><br/>(Aug-July)</b> | <b>Total<br/>Consumption<br/>(Billion Gallons)</b> | <b>Daily Average<br/>(Million<br/>Gallons/Day)</b> | <b>City of Dallas<br/>Consumption<br/>(Billion Gallons)</b> | <b>Rainfall<br/>(Inches)<sup>2</sup></b> |
|-------------------------------------------------------|----------------------------------------------------|----------------------------------------------------|-------------------------------------------------------------|------------------------------------------|
| 1957-58                                               | 4.7                                                | 12.96                                              | 2.6                                                         | 43.41                                    |
| 1958-59                                               | 5.0                                                | 13.60                                              | 2.7                                                         | 37.80                                    |
| 1959-60                                               | 5.2                                                | 14.28                                              | 2.6                                                         | 36.42                                    |
| 1960-61                                               | 5.7                                                | 15.58                                              | 2.7                                                         | 36.80                                    |
| 1961-62                                               | 7.0                                                | 19.02                                              | 3.4                                                         | 38.46                                    |
| 1962-63                                               | 6.3                                                | 17.36                                              | 2.2                                                         | 36.73                                    |
| 1963-64                                               | 8.5                                                | 23.30                                              | 3.2                                                         | 24.72                                    |
| 1964-65                                               | 8.0                                                | 21.77                                              | 2.5                                                         | 45.62                                    |
| 1965-66                                               | 8.5                                                | 23.24                                              | 2.4                                                         | 43.83                                    |
| 1966-67                                               | 8.9                                                | 24.40                                              | 3.0                                                         | 33.73                                    |
| 1967-68                                               | 9.6                                                | 26.42                                              | 2.7                                                         | 53.10                                    |
| 1968-69                                               | 11.1                                               | 30.49                                              | 3.1                                                         | 36.07                                    |
| 1969-70                                               | 11.9                                               | 32.54                                              | 2.6                                                         | 34.76                                    |
| 1970-71                                               | 12.9                                               | 35.34                                              | 2.5                                                         | 28.21                                    |
| 1971-72                                               | 14.2                                               | 38.89                                              | 3.1                                                         | 34.67                                    |
| 1972-73                                               | 14.3                                               | 39.22                                              | 2.5                                                         | 36.46                                    |
| 1973-74                                               | 15.8                                               | 43.43                                              | 2.6                                                         | 41.95                                    |
| 1974-75                                               | 15.5                                               | 42.58                                              | 3.2                                                         | 50.50                                    |
| 1975-76                                               | 17.5                                               | 47.84                                              | 3.2                                                         | 31.54                                    |
| 1976-77                                               | 19.8                                               | 54.15                                              | 2.7                                                         | 32.61                                    |
| 1977-78                                               | 23.6                                               | 64.68                                              | 2.9                                                         | 27.32                                    |
| 1978-79                                               | 25.1                                               | 68.72                                              | 3.0                                                         | 42.28                                    |
| 1979-80                                               | 29.1                                               | 79.85                                              | 3.7                                                         | 26.09                                    |
| 1980-81                                               | 30.6                                               | 83.91                                              | 3.5                                                         | 37.90                                    |
| 1981-82                                               | 28.2                                               | 77.19                                              | 2.9                                                         | 52.68                                    |
| 1982-83                                               | 31.2                                               | 85.44                                              | 3.2                                                         | 43.39                                    |
| 1983-84                                               | 37.0                                               | 101.42                                             | 3.5                                                         | 35.52                                    |
| 1984-85                                               | 38.5                                               | 105.36                                             | 2.7                                                         | 47.97                                    |
| 1985-86                                               | 43.7                                               | 119.79                                             | 3.8                                                         | 38.00                                    |
| 1986-87                                               | 40.6                                               | 111.12                                             | 2.2                                                         | 36.99                                    |
| 1987-88                                               | 46.8                                               | 128.09                                             | 2.8                                                         | 31.78                                    |
| 1988-89                                               | 42.4                                               | 116.26                                             | 2.2                                                         | 48.70                                    |
| 1989-90                                               | 45.7                                               | 125.33                                             | 3.6                                                         | 44.10                                    |
| 1990-91                                               | 46.0                                               | 126.05                                             | 3.2                                                         | 40.05                                    |
| 1991-92                                               | 41.6                                               | 114.05                                             | 2.3                                                         | 55.44                                    |
| 1992-93                                               | 46.7                                               | 128.00                                             | 1.7                                                         | 36.01                                    |

<sup>1</sup> In 1980, NTMWD began operations in twelve month periods beginning in August and ending July 31 of the following year. For convenience, all the data in this table has been converted to an Operations Year basis.

<sup>2</sup> Rainfall measured at Lavon Dam





the filing of an application with the Texas Water Commission for a permit to divert up to 89,600 acre-feet of water per year (the equivalent of 80 million gallons per day) from this part of the river. But the idea was later discarded when it was determined that a water supply from this source would be dependent on the release of overflow water from Texoma — a situation that was rife with problems.

Under terms of the Red River Compact, an agreement ratified by Texas, Oklahoma, Louisiana and Arkansas in 1979, all water rights in the river above Denison Dam — the structure creating Lake Texoma — were to be divided equally between Oklahoma and Texas, but below the dam, all four states shared the water rights. This meant that, even in times of normal release rates, much less water would be available to the NTMWD if it tapped into the river below the dam.



The only practical long-term solution seemed to lie in Texoma itself. The big interstate reservoir straddling the Texas-Oklahoma state line was one of the largest man-made lakes in the nation — 57 miles long from east to west, up to ten miles wide and with 5.4 million acre-feet of storage — yet only a tiny fraction of its conservation storage was being claimed and used. Built just prior to and during World War II, the lake had been conceived as a flood control and hydro-power project by the Corps of Engineers. After the war, it had developed into one of the water sports and recreational centers of the Southwest, but there had been little demand for it as a water supply. Apparently, the storage would also be relatively inexpensive. Freese & Nichols calculated that the NTMWD could obtain the rights to 100,000 acre-feet per year of Texoma water at an annual cost (over forty years) of \$145,000.

But other entities and agencies were also casting covetous glances at the big lake. As an April 11, 1979, memorandum from S.W. Freese pointed out:

*“Now that . . . the Army Engineers are studying the reallocation of Lake Texoma storage space to municipal purposes, in my opinion there is bound to be a ‘scramble’ for storage space in Lake Texoma.”*

This lent a further degree of urgency to the situation, but the whole idea of using Texoma-Red River water was greeted with something less than enthusiasm by some officials of the water district’s member cities. Many of them still held vivid memories of the City of Dallas’s nightmarish experience with the Red River’s corrosive, high-chloride water during the drought of the 1950s, and they wanted no part of something like that.

“We got lots of feedback from members who said, ‘Oh, my gosh, all that salt is going to be a real problem,’” Riehn recalls. “Our board was also very concerned about the effect on our overall water quality.”

Because of widespread fears that the Texoma water might “ruin pipes, meters and everything else,” the NTMWD board adopted a cautious approach. Before proceeding, the board voted to retain the services of James M. Montgomery Consulting Engineers of Pasadena, California, a firm with heavy experience in blending high-chloride water from the Colorado River with higher quality water from northern California for use in Los Angeles.

“This firm had worked closely with the Metropolitan Water District of Southern California, which serves 11 million people and is one of the few districts in the nation that really dwarfs North Texas,” explains Riehn. “When the Montgomery firm issued its report in December 1980, it showed there would be no health



or corrosion problems from using the Texoma water. In fact, they told us that their blended water in L.A. wasn't as good as the water straight from Texoma, even before it was blended."

It was only at this time, more than a quarter-century after the fact, that it became apparent why Dallas had had so many problems with Texoma water during the '50s, and why the NTMWD did not necessarily have to expect those problems to repeat themselves. At the time of the 1951–57 drought, Dallas had tapped into the Red River at Gainesville, the closest point to Dallas, in an area where both natural salts and sodium from nearby oil fields were flowing into the river. As a result, the Red River water used by Dallas had contained up to 2,000 milligrams per liter of sodium, whereas the water which the NTMWD proposed to divert from the main body of the lake contained only 300 to 500 milligrams per liter. Also, the Red River water used by Dallas in the 1950s entered the city's water mains virtually undiluted, simply because the area's other water resources were so nearly exhausted that almost no water was available for mixing purposes.

By blending the Texoma water with Lavon water, the Montgomery report noted, the NTMWD could reduce the level of sodium to a mere 50 to 100 milligrams under normal circumstances, although it might rise considerably during periods of drought. Furthermore, efforts were now being made at both the state and federal levels to curtail the flow of natural salts and man-made pollutants into Texoma, and these efforts could be expected to result in significant future reductions in the lake's mineral content.

At about the same time, engineering studies also revealed that only 25 miles of pipeline would have to be constructed in order to bring Texoma water into Lavon. This was because, from a point near the Howe community in Grayson County, the flow could be channelled into Sister Grove Creek, thence into the West Fork of the Trinity, which would carry it into the East Fork and on to Lavon.

Given all these factors, it seemed both logical and prudent to reach out for the Red River water in Lake Texoma as a desirable alternative to Cooper.

Unfortunately, though, legal problems were destined to beset this plan, too, causing further delay and complications, although none as drawn-out or damaging as those ensnarling Cooper. Once more, "environmental issues" would suddenly enter the picture, and before the situation could be resolved, *it would offer a prime example of how some groups use these issues as a convenient tool to sidetrack sorely needed projects, when, in fact, their objections are based*



*more on social and economic priorities than on any genuine concern for the environment, as implied by their initial arguments.*

In April 1984, with the approval of the NTMWD's Future Water Supply Committee, the effort to obtain unappropriated water storage in Lake Texoma moved into high gear. At that point, the district officially substituted a request to divert water from the main body of the reservoir to replace its earlier application for diversion from the river below the lake.

As Carl Riehn assured the district's board of directors in an administrative memo:

*"It has been determined that the water quality in Lake Texoma has improved over the years due to the effort of the Red River Authority and the Railroad Commission to alleviate the man-made pollution in the basin above Lake Texoma. A federal chloride removal program for the natural pollutants has been developed and is currently under review by the Congress."*

The only remaining obstacle seemed to be obtaining a contract for the storage from the COE, but this was to prove more difficult than anticipated. Although a large amount of Texoma water had originally been allocated for hydropower projects, only a small portion of the allocation had ever actually been used, but before that water could be shifted to municipal and industrial uses, the COE had to agree to change the allocation.

One major problem was that two large Texas electric cooperatives held rights to energy generated by water from Texoma's hydropower pool, and they opposed the reallocation of the water, even though it was not actually needed to generate power. "The issue was resolved only after lengthy negotiations in Washington," says Riehn, "in which Bob Dawson, assistant secretary of the Army for civil works, developed a compromise plan to compensate the power groups."

In order to get the storage it needed — a minimum of 75,000 acre-feet and preferably more — the NTMWD attacked the problem on two fronts. It asked Texas Congressmen Tom Vandergriff and Ralph Hall for help in amending a public works omnibus bill to allow the district an allocation of up to 100,000 acre-feet in Texoma. But knowing that such action might be subject to delay, the district also negotiated with the COE for enough storage to yield 75 million gallons per day in the meantime.

A bigger problem, however, turned out to be the requirement of what is known



as a "Section 404 permit" from the Corps. This type of permit was part of federal antipollution legislation first passed in the early 1970s and was required for water projects affecting any "navigable stream." (Over time, the definition of "navigable stream" had been broadened, for the purposes of this law, to include any stream that supports water vegetation, even if it was in no way actually navigable.)

While the NTMWD worked on obtaining the permit, progress was being made in other areas. By April 1985, a Texoma storage contract with the COE had been approved by Corps officials in Fort Worth, Tulsa and Washington, and was awaiting only approval by Assistant Army Secretary Dawson. And in October of that year, officials of the district, including President Truett Smith, Secretary Ben Whisenant, Future Water Committee Chairman Marvin Youngblood and Riehn, met with the Greater Texoma Utility Authority, the agency providing water to the Sherman-Denison area, to sign an agreement to begin construction on the Lake Texoma Diversion Project.

Under terms of the agreement, signed on the exact spot off the Rocky Point Peninsula where the NTMWD planned to build an intake structure and pump station, the district and the GTUA would enter into a joint venture to contract for a total of 90 million gallons of water per day. Up to 72 MGD would be available to the district and the remaining 18 MGD would be allocated to the GTUA.

To help raise the estimated \$105 million needed for these improvements and others, the district formulated a five-year program to increase water rates incrementally to member and customer cities by 30 cents per 1,000 gallons, and district officials met with the city councils of each member city to explain the program and the reasons for it.

"We felt it was absolutely essential to press ahead with our plans and agreements, in spite of the fact that there were still some legal loose ends to be tied up," says Riehn today. "We were really concerned that we were going to have a drought before we could get Texoma on line, and we were already seriously overdrifting Lavin. It was a very uncomfortable situation."

At the time, the district still had hopes of having the first water from Texoma in Lavin and ready for treatment and delivery before the end of 1987, but it was not to be. Clouds of controversy were forming that would totally disrupt this hopeful schedule. Having heard of the district's diversion plan, the owners of marinas and other recreational facilities on Texoma began to express fears that the plan would seriously lower the level of the lake and threaten their businesses.



NORTH TEXAS MUNICIPAL WATER DISTRICT



Director C. Truett Smith of Wylie



Director Marvin Youngblood of Richardson



Signing the Texoma Contract with the Greater Texoma Utility Authority for use of water drawn from Lake Texoma, NTMWD officials joined with local officials on Lake Texoma. C. Truett Smith of Wylie, president of the NTMWD Board (top left); Director Marvin Youngblood of Richardson, chairman of the NTMWD Future Water Committee (top right); and joined by Director Ben Whisenant of McKinney, NTMWD secretary.



The Army Engineers and other experts offered assurances that no discernible change in the Texoma water level would result from the diversion, but these parties continued to express their concern during the nine months of intensive work spent by the district in meeting the requirements of the Section 404 permit.

Finally, by the late spring of 1986, the district had met all these requirements and was ready to respond to concerned groups at the public hearing that was a prerequisite to issuing the permit. Because of the climate of feeling among the marina owners, NTMWD officials anticipated problems at the hearing, which was scheduled for the evening of July 15 at Grayson County Junior College in Sherman, and they called upon their member cities for help.

As Riehn explained to Garland City Manager James Spore in a letter dated June 27, 1986:

*"Storage rights have been acquired from the federal government and a water right permit from the Texas Water Commission; however, the last remaining outside action is a Section 404 permit from the U.S. Army Corps of Engineers. A public meeting has been called on the request of recreationalists and marina owners that fear the water level on Lake Texoma will be drastically affected. To offset the hysteria at the public meeting the NTMWD requests your assistance in firming up our need for the water."*

Riehn asked that each member city send a representative to the meeting, and most complied. The district also compiled detailed answers to an anticipated list of twelve questions likely to be asked by concerned citizens. The answer to Question 7 on the list pointed out, for example, that the water allocated to the NTMWD amounted to a mere 2.8 percent of the total storage of Texoma and that much if not most of the water to be diverted would otherwise have been discharged downstream as part of the hydropower pool. Even in a "worst case scenario," the level of Texoma could not be expected to fall more than a foot per year due to this diversion.

Concerns had also been expressed about the possible negative impact the transfer of water might have on various forms of wildlife, including such endangered species as the bald eagle and whooping crane, although none of these birds had been sighted in the area for many years. And fishermen were worried that enough fish, fish eggs and the organisms on which fish feed might be diverted along with the water to cause a shortage of fish in Texoma. Again, the district offered assurances that the diversion plan "would not appear to create any major hazard or even



a potential hazard” to any endangered species, and that screens on the intake facility would prevent the “entrainment” and loss of fish.

Following the hearing, there was another delay of several months while the COE reviewed the facts. The permit was finally granted in December 1986, giving the NTMWD all the legal authority it needed to begin withdrawing water from Texoma. Before anyone had a chance to celebrate this hard-won victory, however, threats of legal action began to surface. Initially, the main source of these threats was the Lake Texoma Association, an organization composed primarily of business people in the area. But other powerful forces were also beginning to line up to oppose the Texoma Diversion Project and throw its entire future into doubt.

. . .

Before the end of 1986, both the Texas Parks and Wildlife Department and the U.S. Fish and Wildlife Service had completed studies of the potential environmental effects of the transfer of water from Texoma to Lavon. They concluded that the impact would be “less severe” than originally believed and that “practicable solutions” to any problems could be worked out. Both agencies reported these findings to Col. Frank M. Patete, commander of the COE’s Tulsa District.

It was because of these reports and other testimony by environmental experts that the COE issued a “Finding of No Significant Impact” — or FONSI — in regard to the environmental effects of the NTMWD’s Texoma project. In other words, there was no cause for concern.

But by early 1987, the furor over the diversion plan had escalated to such proportions that it now involved the Oklahoma Legislature and the U.S. Congress. In early January, the Oklahoma State Senate added fuel to the simmering controversy by adopting a resolution opposing the transfer of “substantially large amounts of water” out of the Red River Valley area.

Later the same month, U.S. Representative Ralph Hall of Texas’ Fourth Congressional District attempted to mediate the dispute by calling another public meeting in Sherman and inviting all interested parties and individuals to participate. Hall had been one of the supporters of a bill passed by Congress in 1986 designating recreation as one of the official purposes of Lake Texoma — a development long awaited by recreationalists — but now it seemed that this legislation was serving only to “muddy the waters” and intensify the diversion dispute.

Some recreationalists were declaring that, because of the 1986 bill, a large portion of Texoma’s storage space should now be allocated to recreation, although



such allocations are extremely rare. Obviously, such a move would have prevented the use of the water for municipal and industrial purposes, and one of Hall's motives in calling the public meeting was to clarify his own position on the issue.

*"My priority for Lake Texoma is potable water, and such priority has never changed," the congressman said in a statement released prior to the meeting. "However, as I have often stated, no priority that I have expressed is to the exclusion of the other purposes of the lake. . . .*

*"I was pleased to add 'recreation' as one of the purposes of this project, and I have continually pledged to pursue a stable and acceptable level for Lake Texoma as a necessary goal for full realization of the . . . recreational potential. . . . In other words, I believe potable water is the number one thrust, but not to the exclusion of the other uses. I believe if we work together we can realize all the uses."*

The meeting organized by Hall was held on St. Valentine's Day, February 14, 1987, and although it was certainly no "love fest," it did manage to produce a proposed agreement designed to end the conflict. The meeting was attended by representatives of the NTMWD, the GTUA, the Cities of Sherman, Denison and Pottsboro, and the Lake Texoma Association.

In a memorandum circulated shortly after the meeting, the NTMWD accused the Lake Texoma Association of creating "an atmosphere of confusion and distrust in the minds of many business people and marina owners." But the memorandum also indicated that the district would be willing to accept the agreement under two conditions.

First, the district wanted clarification of a section of the agreement which would have restricted it from withdrawing water from Texoma at any time the lake reached a level of 612 feet (above mean sea level) or less. As the memorandum noted: "A major problem occurs due to the fact that the lake may stay between 612 and 610 (MSL), which would appear to prohibit NTMWD from taking (any) water from Texoma."

Second, the district wanted a "non-litigation clause" included in the agreement to prevent the filing of lawsuits by any of the parties once the agreement was signed.

*"The Lake Texoma Association and some other individuals are threatening a lawsuit on the project," the memorandum warned. "It is their position that, right or wrong, they can delay the project for a significant length of time in the federal courts."*



On February 24, 1987, just ten days after the meeting in Sherman, the district's board of directors went so far as to pass a resolution accepting the agreement if the two specified changes were made, and on March 5, Carl Riehn issued a statement expressing the district's desire to "cooperate with all of the parties involved."

At the same time, he also sent each of the five other parties a draft of a proposed agreement in which the NTMWD accepted more restrictions on its use of Texoma water than it was legally required to accept. The district agreed, for example, to implement an "emergency policy" when the level in Texoma reached 612 MSL, under which other sources of water would be used. It also agreed that, if the level in Texoma should fall to 610 MSL, no water would be taken from the lake unless other reservoirs controlled by the NTMWD were in similarly critical condition. In this case, Texoma water would be taken only in proportion to that taken from other sources.

The district also agreed to change the official name of the project from "Texoma Diversion Project" to "Texoma Water Project," since the term "diversion" seemed to have a bad connotation with some of the parties.

In return for these concessions, the district asked that one section of the agreement contain the following stipulation:

*"In consideration for the agreement by the North Texas Municipal Water District to limit withdrawals of water from Lake Texoma to which it otherwise is legally entitled to make, all other parties to this agreement covenant not to bring, support or encourage any legal proceedings relating to the Lake Texoma Water Project by any person(s) or entity(ies) (other than right-of-way acquisition or condemnation actions)."*

Sure enough, when the lawsuit feared by the NTMWD was actually filed in the U.S. District Court for the Northern District of Oklahoma a few weeks later, the plaintiff was not the Lake Texoma Association, a signatory to the agreement, but the Oklahoma Wildlife Federation, an affiliate of the powerful National Wildlife Federation. Officials of the water district remain convinced, however, that the action of the wildlife group was actively supported — and probably financed in part — by the same Texoma marina operators and other business interests represented by the Lake Texoma Association.

"The marina people knew they couldn't win a suit based on lowering the lake level," says Riehn, "because the experts all said our plan would have no real effect on the lake, so they teamed up with the wildlife people to try to stop us on the basis of purported environmental issues."



The marina operators were divided into two distinct groups, Riehn says. “The small operators on the Oklahoma side of the lake were actually afraid we were going to pull the lake level down enough to leave them high and dry, despite all the assurances they’d been given,” he explains. “The big operators on the Texas side knew better, but they were worried that our request for water was only the beginning. If we got water from Texoma, they feared that other entities would soon be wanting to do the same and that, eventually, the lake’s level could be lowered substantially.”

Ironically, the plaintiffs were attempting to stall the Texoma project with the identical tool that other “environmentalists” had used to block the Cooper Reservoir project for thirteen years. It was the lack of an environmental impact statement — the same old bugaboo that had sidetracked Cooper and necessitated the Texoma project in the first place — on which the litigation was based. Specifically, the lawsuit asked for an injunction nullifying the Section 404 permit issued the previous year on the Texoma project by the Corps of Engineers until an EIS was prepared and filed with the court.

As it had been in the Cooper case, the COE was the primary defendant in the Texoma lawsuit, but the NTMWD and the GTUA both promptly intervened in the case on the side of the Corps, with the district’s board of directors approving the intervention and the hiring of additional legal help on April 23, 1987.

“We had learned from the Cooper case to hire our own attorneys and not rely exclusively on the U.S. attorney’s office to defend the case,” Riehn says today. “A lot of projects just die, simply because they can’t get out of the courthouse. In fact, that has become the goal of many plaintiffs if they can’t stop a project any other way. So in this case, we wanted to do as much as possible to keep the legal wheels turning.”

In the early going, the prospects for a quick, favorable decision by the court did not look promising, especially when a powerful lineup of intervenors — headed by the State of Oklahoma and including the Sportsmen’s Clubs of Texas and the Prairie and Timber Audubon Society — entered the case on the side of the plaintiff.

This time, however, the case was in the hands of a different court and a different judge — one who, fortunately, refused to be swayed by obstructionary nonsense.

When the five-day trial ended on December 1, 1987, U.S. District Judge Thomas R. Brett of Tulsa issued the following ruling:



*"The Court determines herein and declares that the United States Army Corps of Engineers did not violate the National Environmental Policy Act in granting Permit No. TXR3001311; and further the injunction prayed for herein by Plaintiffs and Intervenor . . . to revoke or suspend issuance of said permit until and unless an Environmental Impact Statement on the project is completed is denied. Costs are hereby assessed against the nonprevailing Plaintiff and Intervenor."*

In an opinion filed on January 5, 1988, Judge Brett cited a 1978 ruling by the U.S. Supreme Court in a case involving a nuclear power plant in Vermont, in which the high court stated:

*"(A)dmistrative proceedings should not be a game or a forum to engage in unjustified obstructionism by making cryptic and obscure reference to matters that 'ought to be' considered and then, after failing to do more to bring the matter to the agency's attention, seeking to have that agency determination vacated. . . ."*

The judge concluded that the COE had "considered each potential environmental problem that came to its attention." He took note of the fact that the Corps had "twice extended the public comment period to insure that all parties could be heard" and had "requested additional studies on all potential environmental problems" before issuing a FONSI on the permit application.

*"Since the Corps found no significant impact, the Corps was not required to produce an Environmental Impact Statement (EIS), as its Environmental Assessment (EA) was adequate and complied with the law," the judge wrote.*

The exceptionally strong wording of the judgment made an appeal or any further legal maneuvers by the plaintiff unlikely, and there were none. As Kent L. Jones, a Tulsa attorney who assisted the NTMWD in the case, commented in a letter to district officials immediately after the judgment:

*"The plaintiffs could ask Judge Brett to reconsider his opinion, but that would certainly be a waste of time based on the thoroughness of the judge's opinion."*

Mercifully and permanently, the case was closed.

. . .

Even during the months that the Texoma project was being contested in court, the NTMWD was moving resolutely ahead with construction of the facilities necessary to send Texoma water flowing south.



*Reaching for the Red — The Texoma Project*



NTMWD Water Treatment Plants I and II in 1987, about the time that a \$9.7 million contract was awarded for the final expansion of Plant II. Before the expansion, total treatment capacity was 245 million gallons per day (MGD), while afterwards the plants could treat 350 MGD. In 1958, the original phase of Plant I could treat 20 MGD.



A.B. Simmons, Water Plant superintendent and 18-year employee, shows off Sedimentation Basin No. 8, completed in the final phase of construction on NTMWD Water Treatment Plant II in 1988.





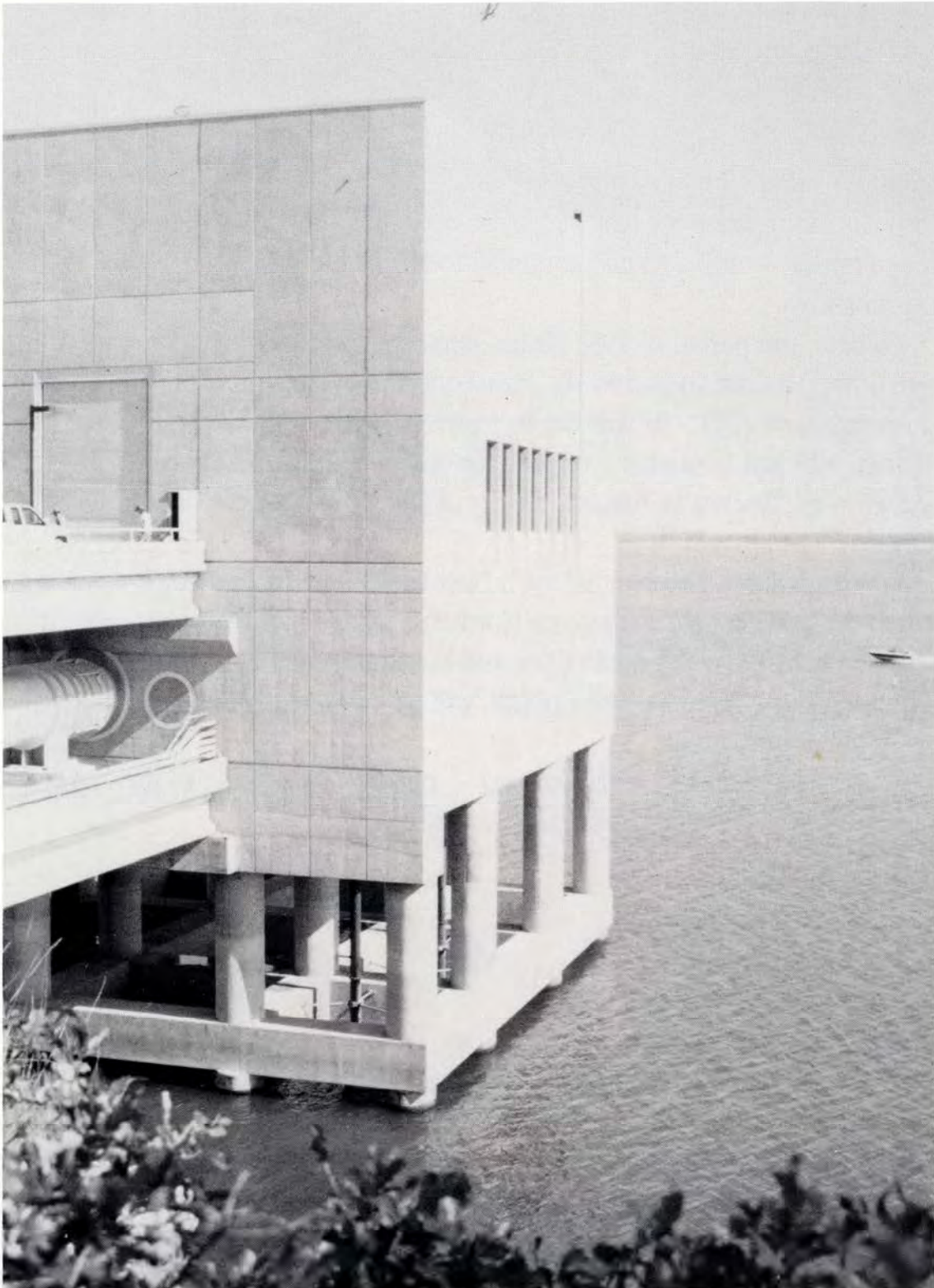
Construction of Texoma Pipeline Section II shows the contractor backfilling around the pipe. Section II included six miles of 72-inch inside diameter pipeline. Total cost for all of the pipeline was over \$1 million per mile.

In February 1987, the board of directors had authorized the sale of more than \$24.5 million in water system revenue bonds, and in late May, only a matter of weeks after the lawsuit was filed, the board served notice that the NTMWD did not intend to lose the court case by awarding a \$7,340,658 contract for construction of the Texoma intake structure and pump station. (At the same meeting, a \$9,705,780 contract also was awarded for the expansion of Water Treatment Plant II.)

“There was, admittedly, some element of risk involved in proceeding,” says Carl Riehn, “but we didn’t feel it was extremely great. At the time, it looked as if the risk of *not* proceeding might be greater. The NTMWD had never failed to meet the needs of its cities, but without this project, the effects of a drought could be disastrous.”

About a year later, with the lawsuit now settled, construction began on the \$9,653,000 first phase of the 72-inch-diameter pipeline that would link Texoma and Lake Lavon. The total cost of the pipeline when it was completed early in 1990 reached \$25 million — or almost exactly \$1 million per mile — and the overall construction costs entailed by the Texoma project came to \$52.7 million.





NTMWD Texoma Pump Station stands complete and ready for service in 1989. NTMWD owns rights to 75 MGD of water in Lake Texoma.



It is another of the endless ironies of nature that, as critically urgent as the need for Texoma water was perceived to be in the “normal” climate of the mid-1980s, record wet weather conditions have prevented the necessity, as of this writing, of pumping and treating any water from this source for delivery to NTMWD members and customers. Although small amounts of water have been sent through the pipeline for test purposes, none has yet been diverted for public consumption — and a glance at rainfall totals for the past several years readily explains why.

To date, the period of 1987-88 has been the last in which rainfall totals fell significantly below normal in the East Fork Basin. The abundant precipitation since that time (1991-92 was the wettest two-year period in the history of the district, with annual rainfall averaging almost 55 inches) has kept Lavon brim-full and allowed Texoma to remain “on the sidelines” in the role of an unused reserve.

Sooner or later, however, all such “wet spells” inescapably come to an end. When the next drought settles over Northeast Texas — when crops wither, lawns scorch, the earth cracks, dust blows, and humans and animals suffer alike under a burning sky — Texoma, like Cooper, will be there, ready to take center stage and come to the rescue.

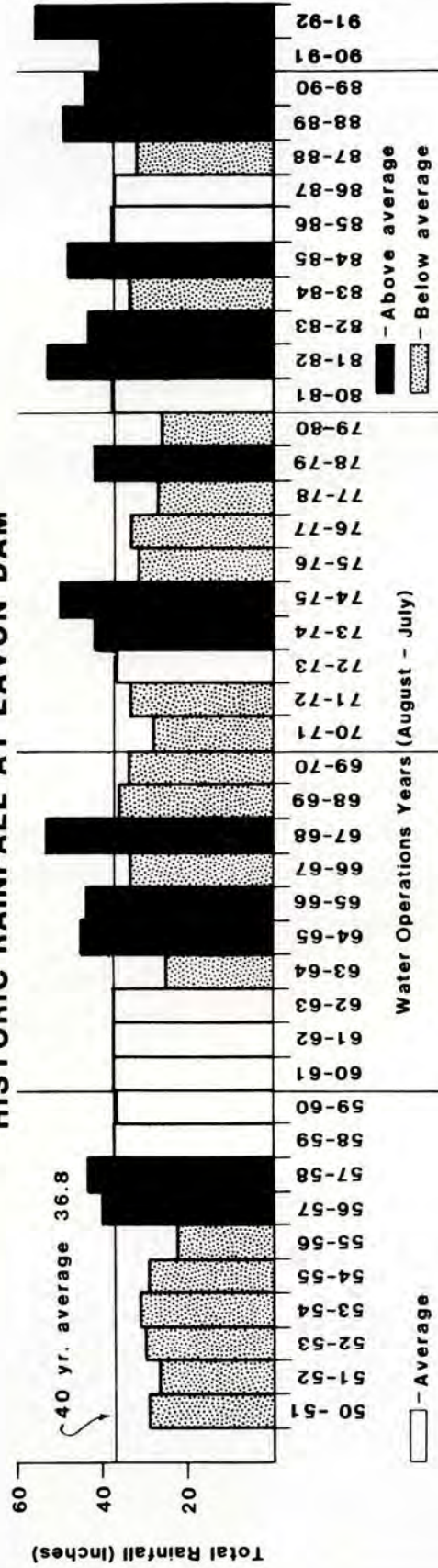
When that happens — who knows? — perhaps even some of the “environmentalists” will find it in their hearts to applaud.





# NORTH TEXAS MUNICIPAL WATER DISTRICT

## HISTORIC RAINFALL AT LAVON DAM



RSC892



# 12

## Wilson Creek — A New Era in Wastewater Treatment

*"Many wastewater plants across the country discharge their effluent into water storage reservoirs. The difference is that almost none of these other plants are anywhere near as efficient as Wilson Creek, and their discharges aren't monitored like ours are. We perform tests monthly at twelve different sampling locations in Lavon to assure that the quality, clarity and content of our lake water remains the same, and we can't detect any changes caused by Wilson Creek discharge. In some ways, the treated wastewater entering the reservoir is actually cleaner than the lake water it flows into."*

— Carl Riehn  
NTMWD Executive Director, 1993

Although modern science and technology can now eliminate virtually all of the odor once associated with "sewer plants" and turn out treated wastewater of such purity that it poses no threat whatsoever to the environment, many citizens remain understandably opposed to having a wastewater plant near their homes or businesses. Nevertheless, it came as a surprise to officials of the North Texas Municipal Water District when a loud public outcry arose over the district's plans to build one of the nation's most "environmentally friendly" wastewater facilities on Wilson Creek northwest of Lake Lavon.

The opposition was particularly surprising in view of the fact that the site of



the proposed plant was considered virtually ideal. Not only was it situated far out in the countryside, well away from heavily populated areas, but it was also within the drainage basin of Lake Lavon, the district's only available source of raw water at the time and the body of water into which the treated effluent from the new plant would be discharged.

As NTMWD Executive Director Carl Riehn puts it:

*"Anybody who thought we were going to pollute our own water supply by discharging smelly, contaminated sewage into it had to think we were crazy. Our plans called for one of the first large, truly state-of-the-art treatment plants in the United States, one that would produce the purest effluent ever seen in Texas."*

Plano's David B. McCall, Jr., chairman of the district's Wastewater Committee, describes the opposition that developed to the Wilson Creek project as "incredibly illogical and ill-advised."

Nevertheless, before it was over, few protests in the annals of "environmentalism" would match the intensity of the furor that boiled up during the early 1980s over the proposed Wilson Creek Regional Wastewater Treatment Plant near the City of Lucas in northeast Collin County. As damaging and time-consuming as both the Cooper and Texoma controversies had proved for the district, neither had generated the outpouring of wild rumors, hysteria — and sometimes sheer lunacy — that would dog the Wilson Creek project over the next few years.

The protests, and the flurry of lawsuits that accompanied them, were mounted primarily by a single small community, the City of Lucas, and seldom has such an effort been marred by more hostility, groundless fears, lack of understanding and refusal to listen to reason. In the end, the series of obstructive tactics undertaken by officials and citizens of Lucas would all be ruled illegal or otherwise defeated, but not until they had threatened a major crisis for some of Texas' fastest-growing cities.

As it ran its bitter course, the campaign by Lucas officials and a group calling itself the "Lucas United Citizens Against Sewage" (LUCAS) would delay construction of the Wilson Creek Wastewater Treatment Plant for more than five years. In the meantime, the cities of Plano, Richardson, Allen and McKinney would be forced to consider placing a moratorium on new development until their inadequate and overtaxed existing sewage treatment facilities could be replaced.

As previously discussed in Chapter Nine, the NTMWD had been designated in the early 1970s as the authority to administer a regional wastewater treatment



system for the East Fork Basin, and by the end of that decade had built a number of treatment facilities and collection lines to serve communities ranging in size from a few hundred to tens of thousands of residents.

The district had developed its first regional wastewater treatment facility on Rowlett Creek in Plano to serve Plano and part of Richardson. After signing a contract for wastewater treatment services with Plano in 1972, the district had assumed the operation of a small primary-secondary trickling filter plant with a capacity of just 1.8 million gallons per day and a 20–20 permit. (These two numbers refer to the amount of biochemical oxygen demand or BOD and the amount of total suspended solids, TSS, remaining in treated effluent when measured in milligrams per liter; 20–20 is the maximum content of BOD and TSS allowed by the state. By contrast, today's Wilson Creek plant has a 5–5 rating for BOD and TSS.

In October 1975, after working with the City of Plano to obtain a state permit and increase the plant's capacity to 6 MGD, the NTMWD board voted to acquire the plant and in 1978 authorized doubling its capacity, to 12 MGD, transforming it in the process into the Rowlett Creek Regional Wastewater Treatment Plant. The entire \$4.4 million cost of this expansion was paid in local funds, with no federal grant involved. (Meanwhile, the district had also expanded existing facilities or built new ones to serve the communities of Mesquite, Rockwall, Allen, Murphy and Heath.)

But as the 1970s drew to an end, it had become apparent that major new facilities were going to be an absolute necessity for the fast-growing suburban cities to the north of Dallas. The rapid growth of Plano and the northeast portion of Richardson was setting off heavy residential development in hitherto unpopulated areas. This alone was enough to put a strain on the Rowlett Creek plant, and, to compound the problem, the population boom was also reaching the cities of Allen and McKinney to the immediate north, creating further demand. Allen, in particular, had mushroomed from a hamlet of less than 700 people in the early 1960s to a thriving city of 8,300 by 1980.

Since 1976, the district had been seeking a state-federal grant to pay for the preparation of a facility plan to meet the growing needs of the area, but because of funding delays, it was not until April 1979, that the NTMWD submitted a formal application for a grant to the Texas Department of Water Resources. Eleven months later, in March 1980, the TDWR approved the grant, which made available a total of about \$158,000 in state and federal funds for the study.



Government regulations made it necessary, however, that the district obtain approval from the federal Environmental Protection Agency before a wastewater plant could be constructed. And as one of the steps toward gaining such approval, the EPA required that a Community Advisory Committee (CAC) be formed to study the need for additional wastewater treatment facilities and formulate a plan to meet those needs. To ensure that various elements of the community would be able to express their feelings about the proposed project, the CAC was to be composed of representatives from (a) business, (b) elected officials, (c) environmental interests, and (d) the general public.

The NTMWD board of directors acted quickly to comply with the EPA directive. In May 1980, the board appointed a sixteen-member committee, composed of four members each from the cities of McKinney, Plano, Richardson and Allen, and instructed the district's consultants and staff to work closely with the CAC.

Meanwhile, the NTMWD began negotiating for the purchase of a 224-acre tract along Wilson Creek situated northeast of Lucas, an incorporated rural community of about 1,700 people, consisting almost entirely of multi-acre homesites. The acquisition of several other adjacent tracts over the next few months eventually increased the total size of the tract to 403 acres. At the time it was purchased, district officials planned to use the property as a solid waste disposal site and did not foresee its possible future use as the site of a wastewater treatment plant, primarily because of its distance from the cities needing additional wastewater facilities.

"Our first consideration was to greatly increase the capacity of the Rowlett Creek Wastewater Plant," explains Riehn, "and we commissioned a preliminary study of this possibility. But the CAC laid out boundaries for where a new wastewater plant could be located that didn't include the Rowlett Creek site, so we were forced to rule out that possibility and look to other sites."

Trouble started almost immediately, however, and within a few weeks, property owners in the vicinity of the Wilson Creek site, who claimed that they were being denied adequate representation on the CAC, were raising an alarmed outcry to the Dallas regional EPA office.

Over the next year and a half, the committee held a total of nine work sessions and three public meetings. In addition, one large-scale public hearing was conducted by the NTMWD on the overall facility plan. District officials repeatedly offered assurances that the plant they proposed to build would pose absolutely no environmental problems. It would not create foul odors affecting adjacent



properties, cause water pollution or threaten the health of any living organism. It would, in fact, be infinitely cleaner, safer and less intrusive than any of the older sewage treatment facilities it was designed to replace.

These assurances did little or nothing, however, to placate the aroused residents of Lucas and Fairview, small communities near the Wilson Creek site, who were adamantly opposed to having a “sewer plant” in their vicinity. In September 1980, Lucas Mayor Pro Tem Milton Gosney had been appointed to represent Lucas on the CAC, but in March 1981, the City of Lucas demanded that it be given additional representation on the committee. The NTMWD board denied this request, feeling that an unworkable imbalance would result, so Lucas next took its demands to the EPA.

In response, EPA Regional Administrator Adlene Harrison ruled that the CAC must be expanded by adding four members from Lucas to bring the committee’s total membership to twenty, but Fairview’s demands for CAC representation were turned down.

“The EPA suggested that it was simply a matter of educating people, explaining what we were planning to do, and getting them on our side,” Riehn recalls wryly. “Well, that was fine — just as long as we didn’t build this plant near anybody’s property. The committee set up general guidelines on where the new wastewater plant should be located, and the Wilson Creek site was within this area. Even after the City of Lucas was granted representation, almost all the committee members agreed that we needed more wastewater treatment facilities; they just didn’t agree on where, and the committee became split by all kinds of objections.”

With the help of the consulting engineering firm of Shimek, Jacobs & Finklea, Inc., the NTMWD attempted to explain both the critical need for the new plant and the treatment processes that were available. Through the procedure of filtering air through chemical air scrubbers, for example, the hydrogen sulphide which causes most of the unpleasant odor associated with older sewage treatment plants is quickly neutralized and dissipated. Then, through a series of clarification, aeration, filtration and chlorination processes, fully 98 percent of the pollutants that consume oxygen or are suspended in the water are removed from the effluent, along with 80 percent of the nutrient phosphorous, which can encourage algae growth. Officials explained that all of these processes would be used in the proposed plant — wherever it might be located — to control odor and produce the cleanest effluent in Texas.

The response by some members of the CAC was to turn a deaf ear to these



assurances and insist that a list of alternatives to the one-plant concept be developed.

The consultants then proposed three possible alternatives to building a single regional plant, and the committee added a couple of its own. One alternative basically called for expanding the Rowlett Creek plant to a capacity of 41.5 MGD and using it to handle the bulk of the wastewater, with a small 2.5 MGD plant to serve McKinney. It was ruled impractical because of the density of development around the Rowlett Creek site and the lack of available land — although delay in the single-plant project would make it necessary by the mid-1980s to increase Rowlett Creek's capacity from 12 to 16 MGD.

Other alternatives ranged from building three additional plants and expanding Rowlett Creek to 22 MGD, to constructing separate plants for all the cities involved and enlarging Rowlett Creek to 24.5 MGD. Committee member Neil Sperry suggested expanding all existing plants. Some members insisted that a minimum of 500 acres should be required for a wastewater treatment plant site, in order to create a large buffer zone around the treatment plant. Others expressed the opinion that wastewater treatment plants should be restricted to industrial areas, despite the high cost of land and the distance from bodies of water into which effluent could be discharged.

The public meetings were invariably marked by histrionics and raw emotions. One tearful Lucas resident testified that she feared the "terrible odor" from the plant would prove fatal to her horses — despite the fact that they were pastured fully a mile and a half from the plant site. And that, unfortunately, was just the beginning.

After consideration, none of the alternatives appeared feasible to the NTMWD board, and all appeared to entail vastly increased costs over the plan utilizing the single-plant concept. A majority of the members of the CAC found the single-plant concept to be the "best possible approach," but could not reach a decision on the best location. Faced with this impasse, the district served notice that it was rejecting the alternative multi-plant plans and concentrating on the development of a single site.

Even then however, there were three sites considered by the district for the new plant. One was on Sloan Creek, one on Muddy Creek and the third was a portion of the tract on Wilson Creek earmarked for a solid waste site. It was only after intensive further study that the Wilson Creek site was chosen. To make this possible, it was necessary for the NTMWD board to authorize the purchase of



75 acres of the property by the wastewater system from the solid waste system. (The regional solid waste program of the district will be discussed in detail in the following chapter.)

In an administrative memorandum issued in January 1982, outlining the progress — or lack thereof — toward a solution that could be accepted by all parties, district officials admitted that a “high level of animosity” had developed, but blamed it on a “planned program of opposition” being conducted by the City of Lucas and the group calling itself LUCAS.

“Through the use of organized meetings and the development of a sales program of fear and damage to property values,” the memorandum charged, “many individual citizens of the Lucas area were convinced of imminent dangers to their families, homes and properties if this program proceeded. Therefore, at public meeting after public meeting, the same testimony was heard, and when answers were provided, the same hysteria prevailed and continued to be repeated. Only one solution was acceptable to this group, and that was a program that did not locate a plant within four miles of the extraterritorial jurisdiction of the City of Lucas.”

The memorandum concluded with these comments:

*“It is unfortunate that an issue of this nature is so emotional. But the public participation program did appear to meet the requirements of federal regulations and has assured the public of knowledge concerning the project and an opportunity to testify concerning (it).*

*“The opinion of the executive director is that technically the program has been a success and that the best site possible has been chosen for service to the planning area and adjacent properties. The site provides a large area of buffer zone due to hundreds of acres of Lavon Reservoir to the north and east of the site. The adjacent properties are sparsely settled and are in an area that is planning low-density development. The site would (allow) interceptors to be economically provided from the entire service area. . . . The recommended site location also provides for return flows to Lavon Reservoir, a major ingredient in the overall objectives. . . .*

*“The plant site is not located within the city limits of any community, but is within the extraterritorial jurisdiction (meaning within one-half mile of the city limits) of the City of Lucas. Based upon legal counsel’s opinion, if a discharge permit is issued by the appropriate*



*agencies, the plant could be constructed in this area. . . . Based on this information, it is recommended that the board of directors adopt Resolution No. 82-3 approving the Upper East Fork Basin Facility Plan and submitting all material to the Texas Department of Water Resources in accordance with federal regulations.”*

In a heated rejoinder to the board’s decision to stick with the Wilson Creek site, Councilman (and soon-to-be-Mayor) Gosney of Lucas, a member of the CAC, branded the public participation program “a total whitewash” and a “debacle,” accused the NTMWD of playing “good ole boy politics” and charged that it had addressed citizens’ concerns with “misinformation” and “non-answers.”

Clearly, the months of workshops, public meetings and painstaking explanations had done nothing to ease the friction or heal the wounds. On the contrary, they had merely set the stage for an even more acrimonious phase of the conflict.

“Lucas’s whole point,” Riehn says today, “was that North Texas had already decided on the Wilson Creek site before all this took place, and that simply wasn’t true.”

The battle lines were drawn. And for the next three and one-half years, the district would be forced to defend its right to build the state’s most advanced wastewater treatment plant in courtrooms from McKinney to Austin.

. . . .

In scheduling its own public hearing on the Wilson Creek proposal — an essential final step before a state permit could be issued for the plant’s construction — the Texas Water Commission allowed fourteen cities, groups and individual property owners to take an active part in the proceedings. Two other homeowner groups and one individual were denied the right to testify.

The hearing was originally set for May 6, 1982, but because of the intensity of the controversy surrounding the plant and a request for a continuance by attorneys representing the City of Lucas, a series of postponements developed that delayed the commission’s final decision for well over a year.

In asking for more time to prepare their case against the plant, Lucas attorneys Stuart Henry (an Austin-based lobbyist for the Sierra Club) and John Tresnicky cited the importance of the issue. “This permit will allow the largest discharge of sewage ever discharged into a reservoir in the State of Texas,” Tresnicky told TWC examiner Phillip Paine.

“It’s getting to the point,” Henry added, “where urban areas think they can



get rid of their junk — whether it's radioactive waste or wastewater — in these small communities. It seems to me the best way to assure that one of these 'well-operated, up-to-date' plants *is* well-operated would be to put it in the back yard of one of these cities (Plano, Richardson, Allen and McKinney), not in Lucas. That way, the elected officials responsible for the plant can be held accountable."

While opponents outnumbered supporters of the Wilson Creek plant at the May hearing, those in favor of the project countered such attacks with points of their own. Noting that Collin County was the second fastest-growing county in Texas at the time, Paul Oliver, executive director of the McKinney Chamber of Commerce, urged opponents to be reasonable.

"We've got to have a regional sewer plant," Oliver said. "It's not going to hurt Lake Lavon, and it's not going to hurt people two miles or ten miles away."

The unexpectedly long delay gave foes of the plant ample opportunity to air their charges and objections in the media. In a May 26, 1982, article in the *Plano Daily Star-Courier*, for example, a Lucas resident whose eleven-acre homesite included part of an old gravel pit, expressed fears that the plant would undermine the value of his property and adversely affect his "organic lifestyle."

"We have a water purifier and a water distiller," he told a reporter. "It (apparently referring to chemically treated water) wears out your clothes (and) there's no telling what it'll do to your insides. We grow most of our own vegetables and eat almost all organic. We'd hate to live with the chemicals. That's what we did when we lived in the city."

Former CAC member Neil Sperry, a well-known radio personality, author and horticulture expert, who lived almost a mile from Wilson Creek, added this admonition: "We get our water from Lake Lavon, so if the plant is constructed, we're going to have the treated effluent right on our land."

The press, meanwhile, amply demonstrated how altering a single term in a published article can create a negative connotation and aggravate an already tense situation. In report after report, various newspapers habitually stated that effluent from the plant would be "dumped into Lake Lavon," while steadfastly avoiding such less inflammatory terms as "discharged" or "released."

The baselessness of all the repeatedly expressed fears and warnings continues to disturb Carl Riehn even today, more than a decade later.

"Many wastewater plants across the country discharge their effluent into water storage reservoirs," he says. "The difference is that almost none of these other



plants are anywhere near as efficient as Wilson Creek, and their discharges aren't monitored like ours are. We perform tests monthly at twelve different sampling locations in Lavon to assure that the quality, clarity and content of our lake water remains the same, and we can't detect any changes caused by Wilson Creek discharge. *In some ways, the treated wastewater entering the reservoir is actually cleaner than the lake water it flows into.*"

When the TWC hearing finally began, it seemed for a while that it would never end. "It turned out to be the longest public hearing ever held in Texas on a wastewater plant up to that time," recalls Riehn. "It involved a total of 48 days of testimony stretched out over a nine-month period. It was a horrendous mess and very expensive for everyone concerned."

Finally, in November 1983, the TWC approved a permit for the Wilson Creek plant that would allow it to treat 8 million gallons of wastewater per day initially and discharge the treated effluent into Lake Lavon. Under the terms of the permit, the capacity of the plant could be increased in stages to 24 MGD if the NTMWD could show that discharges from the plant were not having an adverse effect on the water quality in Lake Lavon. In order to safeguard the lake as a source of drinking water for almost 550,000 people at that time, the commission also imposed stringent standards for the effluent produced by the plant.

(The Wilson Creek permit specified that treated wastewater discharged from the new plant must meet a rating of 5-5-2-1, which means a maximum allowable of 5 milligrams per liter of biological oxygen demand, or BOD; 5 milligrams per liter of total suspended solids, or TSS; 2 milligrams per liter of ammonia, and 1 milligram per liter of phosphorus. *Not only does the plant remove 98 percent of the pollutants that consume oxygen or are suspended in the water, but it also reduces by 80 percent the nutrient phosphorus which can encourage algae growth. Most municipal wastewater plants, by contrast, have ratings of 20 milligrams per liter or higher for BOD and TSS and are not even rated for ammonia or phosphorus removal.*)

Admittedly, some of these regulations and restrictions were unprecedented in Texas and went beyond the district's original plans for the plant, but officials of the NTMWD and the four cities who were depending on the plant's services readily agreed to meet all these standards.

"I'm glad they've recommended that a facility be built," said Plano Mayor Jack Harvard. "I'm not overjoyed with the (stringent permit requirements), but if that's what the state wants, that's what we'll do."



The requirements would increase the cost of the project, noted Richardson Mayor Martha Ritter, and therefore mean added expense for the taxpayers. “But if this is the way it has to be,” she added, “then it has to be.”

For its part, the district was eager to accept another new challenge and again “break new ground” in its ongoing efforts to balance public service with environmental considerations. As the *Austin American-Stateman* noted in an article published shortly after the Wilson Creek permit was approved, this was the first time that the TWC had placed the full responsibility for protecting water quality on the shoulders of a utility district.

*“Unlike other wastewater permits,” the newspaper pointed out, “the Lavon permit was written in stages. For the first 8 million gallons, the commission issued a standard Texas permit, with usual limits on suspended solids and biochemical oxygen demand, which are the measures of treated sewage quality. The commission added requirements for some removal of nutrients, which feed algae growth in lakes. . . .*

*“(Water Commission Hearing Examiner Phillip) Paine said if the district can prove the discharge does not hurt the lake, it will be allowed to increase its discharge to 24 million gallons at the same level of treatment.”*

The NTMWD accepted the responsibility with confidence — confidence that was underscored by the TWC’s decision to allow the district to conduct its own water quality testing program at Lavon, rather than assigning this task to state inspectors.

“In all probability, some of the restrictions on Wilson Creek were the result of pressures generated by opponents of the plant,” says Riehn, “but we knew we could meet the state requirements, and we wanted to prove once and for all that it could be done.”

But despite initial claims that their position had been “vindicated” by the restrictions, Lucas officials continued their “war” against Wilson Creek by filing a series of lawsuits against the NTMWD, the Cities of Plano, Richardson, Allen and McKinney, and the TWC itself.

The Lucas litigation pursued two main avenues. First, it appealed the decision of the TWC to issue the permit, seeking an injunction to set aside the permit and sending that question to a district court in Travis County for a decision. Meanwhile, the main thrust of Lucas’ legal claims against the NTMWD was its contention that the plant could not be built or operated within the small city’s extraterritorial



jurisdiction without its permission. Both actions were based on the shakiest of legal foundations, and yet, until they were settled, the threat of delay and the serious consequences that could result remained an ever-present problem.

The *Allen American* reported on December 12, 1983:

*"Lucas has entered phase II of its prolonged effort to defeat North Texas Municipal Water District's plans to build a wastewater treatment plant along Wilson Creek."*

*"According to Lucas City Councilman Roger Stevens, his city's intention to 'not let this thing die' may have severe implications for immediate growth in Allen and Plano."*

The article quoted Bill Petty, director of community development for the City of Allen, as saying that a moratorium on building permits in the city was a distinct possibility, "considering you can only build as fast as your services grow."

In the same article, Councilman Stevens made it clear that delay — and the problems it could create for the four cities relying on the plant — was the primary goal of the Lucas group.

*"When you're a small city with no political clout such as ours, the only way you can win is to delay the project," Stevens said. "As a result of that delay, it is likely that the cities involved will experience problems in treating sewage as they grow, and it is likely that the EPA will step in and call for a moratorium on building permits."*

Even as the Lucas interests continued their tactics of agitation and delay, the NTMWD moved resolutely ahead with its planning, and Carl Riehn confidently told the *McKinney Courier-Gazette* in February 1984 that those plans were on schedule.

*"We expect a report on what is to be built by March 15," Riehn said.*

*"We expect to start road work in November, and to complete the 8 million-gallon-per-day phase by late 1986."*

Riehn added that he did not expect an injunction to be placed on any phase of the construction, regardless of what the Lucas opponents might do. "You have to have a reason to stop something," he said, "and they don't."

Because the district anticipated that the Lucas forces might file a separate suit to try to block the sale of the revenue bonds necessary to finance the project, the district's legal staff took steps to avert this possibility by initiating a bond validation lawsuit in advance of any such attempt.

"The state attorney general will not approve bonds if any type of legal action is



pending against them,” explains Riehn, “so we decided to dispose of this potential legal problem before it had a chance to happen.”

In July 1984, in ruling on the bond validation suit, Judge John McCraw of 219th District Court in Collin County found that the bond sale was valid and could proceed. Almost simultaneously, an increasingly desperate Lucas City Council authorized the recodification of a package of existing city ordinances in a deliberate but futile attempt to create further stumbling blocks for the Wilson Creek project.

Meanwhile, a potentially more serious challenge to the project was being played out in Austin, where District Judge Charles Matthews was considering a demand by Lucas that the permit issued for the Wilson Creek plant by the TWC be declared void because the permit did not require that a “mixing zone” be established for the plant. After the state commission had earlier refused a request for a rehearing on the case, Lucas’ attorneys had filed suit, contending that such a zone must be used to dilute the effluent from the plant before it was allowed to enter Lake Lavon to ensure that the reservoir did not become polluted.

Judge Matthews denied this contention, however, in a November 1984 ruling described by Riehn as being “clear-cut” enough to rule out a successful appeal. The persistent Lucas forces did appeal, however, only to suffer another telling defeat in October 1985, when the Third District Court of Appeals in Austin upheld the trial court’s ruling.

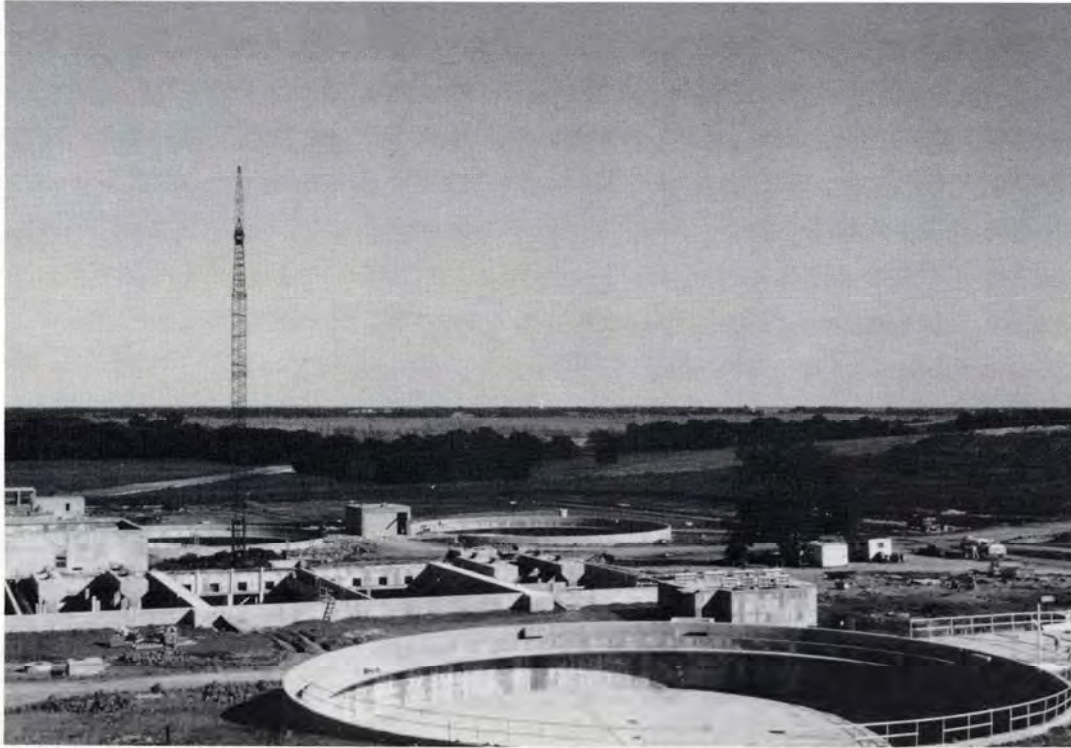
For several months before the decision by the appellate court, it was becoming clear that the Lucas litigation was based more on inflamed emotions than sound legal principles or even common sense. At a town meeting in late March 1985, Lucas Mayor Gosney denounced the Wilson Creek plant as “a timebomb of contamination of the water supply,” and called on citizens to dig deeper into their pockets to support the legal battle despite the increasingly heavy odds against its success.

“It is in our best interest to continue the fight,” he said. “Do not begrudge the tax dollars spent on it.”

By this time, however, the courts had already delivered what became “strike three” for the plant’s opponents. In January 1985, Judge McCraw of Collin County ruled that ordinances passed by the Lucas City Council which would have severely restricted construction of the facility and the flow of traffic to it were unenforceable and not in good faith, in that they were designed to selectively penalize the NTMWD.

McCraw held that, as a general law city, Lucas had no authority under state





Construction of the Wilson Creek Wastewater Treatment Plant began in 1985. This plant treats wastewater to produce the cleanest effluent in Texas.

statutes to enforce ordinances in its extraterritorial jurisdiction. The judge further ruled that the city at present did not have the means to enforce the new ordinances, even within its city limits. The 75 acres on which the wastewater plant was to be located lies totally outside the Lucas city limits, although part of the remaining tract owned by the water district is within the corporate limits of the city.

This judgment cleared the way for the beginning of actual construction on the first phase of the Wilson Creek plant, and on February 20, 1985, bids on the project were opened and a \$13,974,000 contract was awarded to Austin Power Company, the low bidder.

After these legal victories, the district's costly and time-consuming ordeal was almost over. Although Judge McCraw's ruling was appealed, and, in February 1986, a new trial was ordered by the Texas Fifth District Court of Appeals in Dallas, the appellate court also ruled that 28 sections of the Lucas city code were unenforceable against the NTMWD. Yet another appeal sent the case all the way to the Texas Supreme Court, where, in June 1987, the ruling of the lower appellate court was upheld.

The case was then returned to Judge McCraw's court, where, in essence, he





Headworks Building of the Wilson Creek Plant, designed to fit into the rural landscape is one of two buildings visible from the nearest road.

reaffirmed his earlier ruling, clearing the last legal obstacle for the plant, which, by this time, had already been in operation for several months.

On the morning of October 16, 1987, NTMWD President Loncy Leake of Mesquite welcomed a delegation of state and local dignitaries and other special guests to formal dedication ceremonies for one of the most modern — and least offensive — wastewater treatment plants in the nation. Other district officers and directors attending included Jimmy Whitaker of Farmersville, vice president; Alex Schell III, of Plano, secretary; Terry Sam Anderson of Mesquite, Dyon Cantrell of Princeton, Raymond Cooper of Wylie, William B. Finney of McKinney, Brett Hall of Rockwall, Paul Hardin of McKinney, E.L. Kohn of Royse City, David B. McCall, Jr., of Plano, Jack I. McJunkin of Richardson, G.W. Range and Richard Roach of Garland, Conway Senter of Forney, Nick Woodall of Rockwall and Marvin Youngblood of Richardson.

The ceremonies were highlighted by remarks by Buck Wynn III, and John Houchins of the Texas Water Commission, the presentation of a commemorative plaque to the district by TWC Chairman Paul Hopkins, and bus and walking tours of the site.



*Wilson Creek — A New Era in Wastewater Treatment*



Wilson Creek Regional Wastewater Plant, completed in 1987, originally had a treatment capacity of 8 million gallons per day (MGD).



Dedication Ceremonies at Wilson Creek on October 16, 1987, were open to the public.



## NORTH TEXAS MUNICIPAL WATER DISTRICT

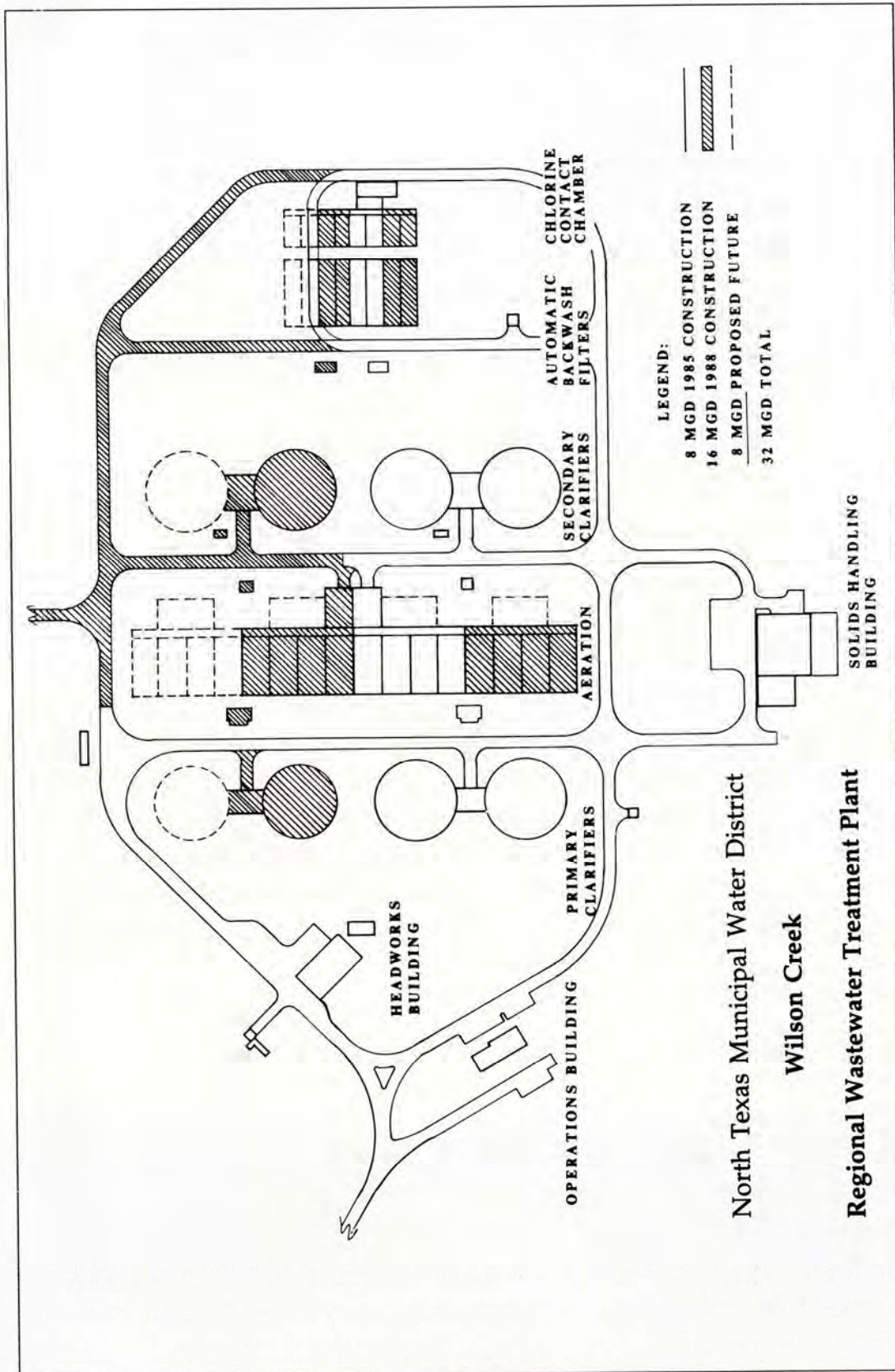


Paul Hopkins, chairman of the Texas Water Commission, unveiled the dedication plaque.



Loncy L. Leake, of Mesquite, president of the NTMWD Board (2nd from right) introduced guests from the Texas Water Commission: Buck Wynn III (right), Chairman Paul Hopkins (2nd from left), and Carl W. Riehn, NTMWD executive director.







Reagan Cook, information officer for the district, pointed out to media representatives that the NTMWD had gone to considerable lengths to make the design of the plant blend harmoniously with the rural character of the area. The operations building resembles a farmhouse and the headworks building has the appearance of a barn. The gradually sloping site, which allows most of the treatment system's clarifiers, basins, tanks and other structures to remain out of sight of the county road on which the plant faces, also allows the effluent to be carried through the treatment process by gravity, thereby saving the cost of electrical power that would otherwise be required for pumping.

"As you drive up, you can't help but notice how rural the site is," said Cook. "We wanted the plant to fit into the environment."

"Most people don't want to live next to a wastewater treatment plant, and I can understand that," the TWC's Hopkins remarked during the dedication ceremonies. "But I tell you, I wouldn't mind living next to this one."

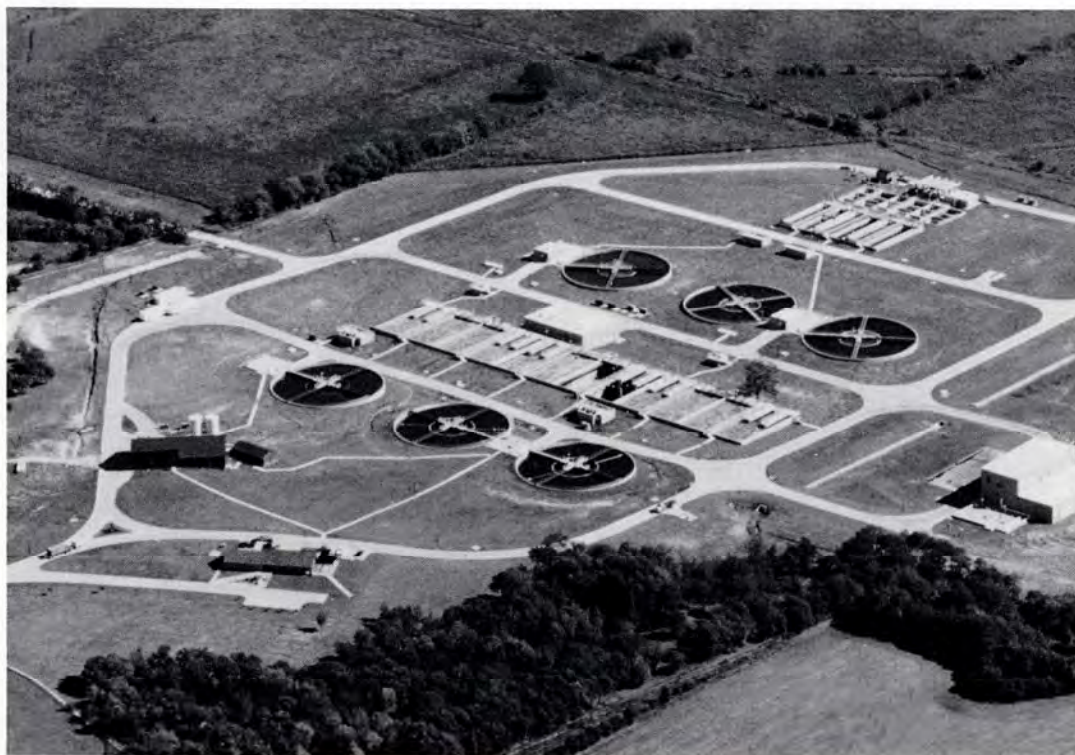
As this book is written, the NTMWD has invested a total of \$25 million in wastewater treatment services at the Wilson Creek Regional Wastewater Plant. In addition to the plant itself, the district has also constructed 36.5 miles of interceptor lines at a cost of \$28 million to serve the four cities utilizing the plant, and a \$26 million program has been initiated to build additional sewer pipelines for the cities.

To date, explains Carl Riehn, the City of Plano has borne the major share of the cost of the system, merely because it has by far the largest population and relies much more heavily than the other three cities on the plant's services. "As the other cities grow," he adds, "they will gradually assume a greater share of the cost, and they will all pay less than they would if they operated their own wastewater treatment systems."

Since it began operating in 1987, the Wilson Creek plant's capacity has been increased in increments to 24 million gallons per day, and plans call for another increase to 32 MGD in 1997. Supplemented by the Rowlett Creek plant in Plano and the Floyd Branch plant at Richardson, the fully developed Wilson Creek plant is expected to meet the needs of Plano, Richardson, Allen and McKinney until at least 2007.

But this is only part of the Wilson Creek story. The experience gained through this revolutionary facility and the technology developed there has been vital in upgrading and expanding other major components of the NTMWD's regional wastewater system.





Wilson Creek Wastewater Plant in 1994 could treat 24 million gallons per day (MGD) to tertiary standards, making Wilson Creek the largest tertiary plant in Texas.

For example, when a \$15 million expansion of the Mesquite Regional Wastewater Treatment Plant was recently completed, doubling the plant's capacity from 12.5 to 25 MGD, new systems of odor control perfected at Wilson Creek were used, and an interceptor system similar to the one used for Wilson Creek was completed in late 1992 to link Forney with the Mesquite plant.

"This expansion puts the southern portion of our wastewater service area in great shape," says Riehn. "Mesquite could basically double its population with the plant it has now, and the Forney interceptor line is sufficient to handle a population four times as large as Forney's is today."

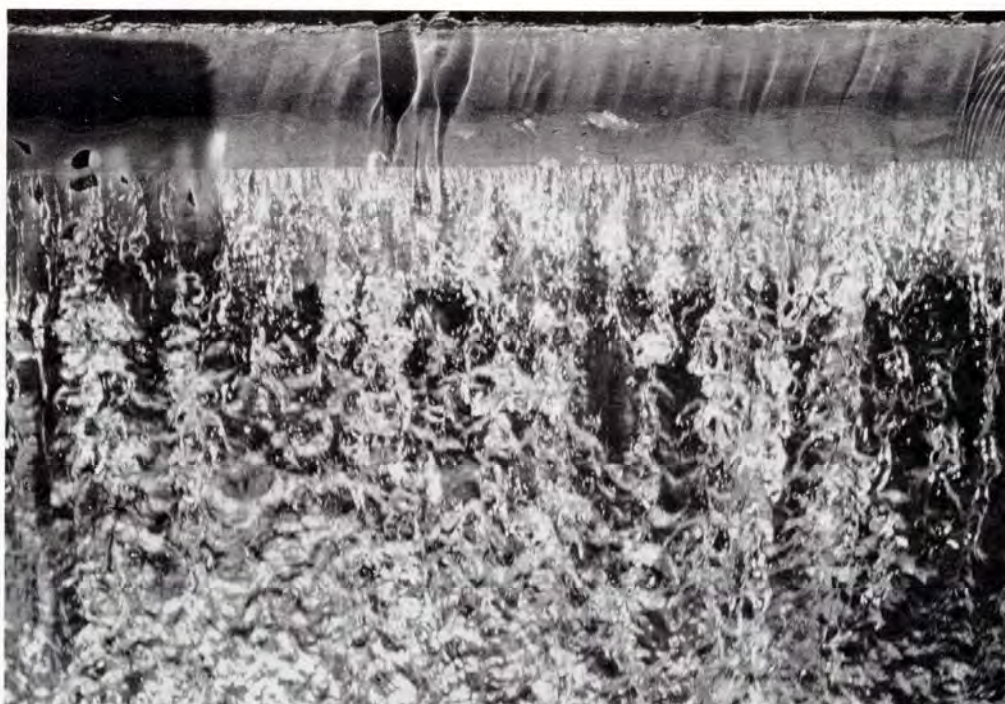
But as unlikely as it may seem to those who are not familiar with the striking new breakthroughs in wastewater treatment represented by the Wilson Creek plant, one of the plant's most vital roles in the future will be as an additional source of clean, reusable water.

"We have one of the few state permits ever issued that allows us to divert the same volume of water from Lake Lavon as the amount of wastewater discharged into it," says Riehn. "This simply adds that much — currently about 12 million





NTMWD Floyd Branch Regional Wastewater Plant, shortly after expansion by NTMWD up to 4.75 MGD from 2.25 MGD. This expansion added a second treatment train, advanced secondary treatment processes, and included filtration and chlorine disinfection.



Sparkling effluent leaving the NTMWD Floyd Branch Wastewater Treatment Plant is treated to advanced secondary standards and preserves the quality of water in the streams.



gallons per day — to our raw water supply, and this much extra water could be crucial in times of drought.”

The treated effluent from Wilson Creek, with 98 percent of pollutants removed, flows directly into the tailwaters of Lavon, entering the reservoir at a point approximately six miles upstream from the NTMWD raw water intake structure. Monitoring of the lake has shown that the effluent takes a year or longer to reach the intake area, and during this interval, it is mixing with the other lake water and further cleansed and diluted through a variety of natural processes. By the time it enters the intake structure, there is no detectable difference between it and the rest of the water in the lake.

“This is a truly fantastic story,” says Riehn. “Of course, you can’t just run an unlimited amount of effluent into a reservoir. No matter how clean it is, a certain amount of blending and dilution needs to take place. But the fact remains that that 12 million gallons of water per day that flows from Wilson Creek into Lavon adds materially to our usable water supply.”

At the same time, the removal of phosphorous and other algae-producing nutrients by the plant means that the process which causes a lake to lose oxygen and “age” over time is not being affected by the plant discharge into Lavon, thereby safeguarding the reservoir’s high-quality water.

The significance of Wilson Creek is two-fold and has many implications for the maintenance of adequate safe water supplies in the ever-more-crowded and congested world of tomorrow. First, it has proved that a 5-5-2-1 plant can be operated at a reasonable cost. And second, it has demonstrated conclusively that the treated effluent from such a plant can be combined with fresh water supplies with no detrimental effect.

. . .

As of mid-1993, the City of Lucas still provided no municipal wastewater collection or treatment services to its residents, and all homes within its corporate limits still had no choice but to rely on septic tanks.

As an interesting footnote to the prolonged controversy triggered by the small community, it has continued — just as it did throughout the years of crisis and outcry over Wilson Creek — to purchase its entire public water supply from the NTMWD.





# 13

## Meeting the Urgent Need for Solid Waste Disposal

*"Everybody wants you to pick up the garbage, but nobody wants you to put it down."*

— Carl Mann  
former NTMWD president  
and director from Mesquite

Despite a growing nationwide interest in recycling such once-expendable "throwaway" materials as metal, glass, paper and plastic, Americans still produce millions of tons of nonreusable solid waste each year — and North Texans definitely contribute their share.

To most citizens, the cans or bags of garbage which they set in their alleys or beside their curbs once or twice a week are simply "trash," and once it disappears into the garbage collector's truck, it is quickly forgotten. And yet, it is precisely at this point that the permanent, safe disposal of the waste that we all help to generate becomes a major concern for every city in our region.

Much of the problem with solid waste revolves around a simple but illogical paradox. While each of us contributes to the glut of garbage that must be disposed of annually, none of us wants it to be disposed of anywhere near our homes, our places of work, our schools, playgrounds or parks. As Carl Mann, former NTMWD president and longtime director from Mesquite, observes: "Everybody wants you to pick up the garbage, but nobody wants you to put it down."

Yet it has to be put down somewhere — and in ever-increasing quantities.



Despite the success of some recycling campaigns and high hopes for the success of others in the future, the volume of solid waste continues to grow each year. Figures compiled over the last dozen years clearly reveal the scope of that growth in the NTMWD service area.

In 1980–81, the first year that the district was actively engaged in solid waste disposal, a total of just under 142,000 tons of waste was received from all sources using NTMWD facilities. By 1991–92, that figure had soared to more than 354,000 tons — a net increase of more than 212,000 tons, part of which was attributable to the addition of Allen and Frisco to the system.

The development of new technologies, such as nonpolluting incineration, recycling, composting, waste reduction, etc., may one day help reduce the sheer bulk of the disposal problem, but for the time being, most solid waste still has to be buried in landfills, and, realistically speaking, that situation is not likely to change much over the next decade or so.

At first glance, then, Northeast Texas would seem to be very fortunate, in that it has ample unused land available for landfills in spite of all the development that has taken place in the region. When space is exhausted in existing landfills in other major U.S. population centers, solid waste must sometimes be shipped hundreds of miles by rail or carried far out into the ocean by ships and dumped there. This has led to a widespread misconception that the country is “running out of space” for new landfills, but nothing could actually be further from the truth.

Contrary to this popular myth, there is plenty of land left to contain the nation’s output of solid waste for many years to come. In fact, according to a report by the Reason Foundation, all the garbage produced in the United States over the next 1,000 years could be stored in one “super landfill” occupying less than one-tenth of one percent of the nation’s surface area.

So, in reality, the solid waste disposal problem has much less to do with a shortage of land suitable for this purpose than it does with opposition by government agencies and a relatively small segment of the public to the use of this land for landfills.

Although they have no effective means of replacing all landfills at the moment, certain people have come to dislike the whole landfill concept. And while nobody could be expected to welcome the idea of having a landfill next door to his or her home or business, some of these people have simply decided that landfills are unacceptable anywhere and under any conditions.

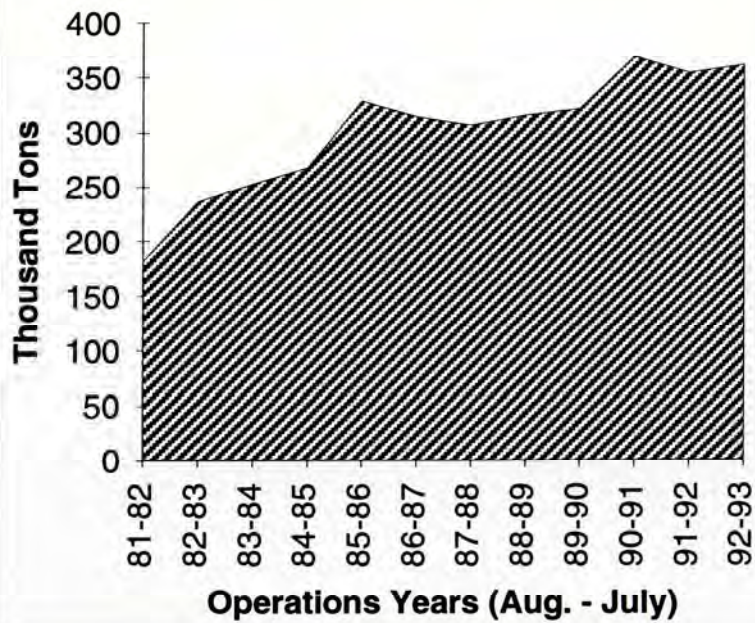
Within the past decade or so, more than half of the 18,500 municipal solid waste



### NTMWD Solid Waste Volume

| <u>Year</u> | <u>Volume<br/>(1,000 Tons)</u> |
|-------------|--------------------------------|
| 81-82       | 181                            |
| 82-83       | 236                            |
| 83-84       | 253                            |
| 84-85       | 268                            |
| 85-86       | 328                            |
| 86-87       | 314                            |
| 87-88       | 306                            |
| 88-89       | 315                            |
| 89-90       | 321                            |
| 90-91       | 369                            |
| 91-92       | 354                            |
| 92-93       | 361                            |

### NTMWD Annual Solid Waste Volume





landfills that were operating in 1979 have been shut down, most of them because they ran out of space, but some as a result of environmental lawsuits. Meanwhile, as the “garbage explosion” has continued unabated, government restrictions and legal action have also reduced the number of new landfills coming into use from more than 300 per year in the late 1970s to as few as 50 per year in the 1990s. As a result, authoritative studies show, by as early as the middle of this decade, only about 4,000 landfills are expected to remain open in the entire country.

Obviously, many of these will have to serve more than one community — a fact that has led the NTMWD to take an increasingly active role in the area of solid waste management.

“For the foreseeable future, landfills are still the most workable, cost-effective answer to the question of what to do with our solid waste in this region,” says NTMWD Executive Director Carl Riehn. “But we’ve reached the point where it’s no longer feasible for every city to operate its own landfill. In many cases, a single landfill can serve a number of cities. This is why we feel this is a very promising area for the type of regional service in which North Texas specializes.”

Garbage is not the subject of very many mealtime conversations. But it was on the basis of a few casual remarks during a luncheon meeting in the spring of 1978 that the subject of solid waste disposal and the possibility that the NTMWD could become involved in it was first brought to the attention of district officials.

“I was having lunch with City Managers Bob Huey of Richardson and David Griffin of Plano,” recalls Riehn, “and they started talking about some of the common problems they were having in solid waste and how they were trying to set up a joint system of disposal.”

At the time, Plano had run out of space in its small landfill, had bought a new site on Maxwell Creek near Sachse, and was interested in utilizing the Lookout Drive Transfer Station that had recently been built by Richardson. Meanwhile, Richardson was rapidly exhausting the capacity of its Brumit Landfill (now the site of the city’s Breckenridge Park), and was also looking for new landfill space.

“Both city managers agreed that it was no longer a good situation for every city to try to maintain its own landfill,” Riehn says, “but both were also having problems convincing their respective city councils of the advantages of a joint solid waste program. And as the discussion went on, they jokingly started saying, ‘You know, Carl, North Texas needs to think about getting into solid waste.’

“I told them, ‘Well, if you’re really serious, we *will* look into it.’”



Another early supporter of the district's entry into solid waste management was former Richardson Mayor Raymond D. Noah, who had been instrumental in his city's decision to join the district in the early 1970s. "I suggested to Carl (Riehn) early on that the district needed to be involved in solid waste disposal," says Noah. "I told him, 'You're the only ones with the capability of handling the problem.'"

The first step for Riehn was to bring the matter before the NTMWD's Wastewater Committee for discussion. The committee agreed that development of a regional solid waste disposal system seemed a logical extension of the district's existing regional programs and also would serve to protect water quality, so the matter was soon referred to the board of directors.

There was considerable impetus being generated at this time at the state and federal levels for moving the responsibility for solid waste management from individual cities to intercity authorities. Much of this impetus was a result of the passage by Congress of the Resource Conservation and Recovery Act of 1976, which called upon every state to develop a comprehensive plan for the handling of solid waste.

As early as November 1977, Governor Dolph Briscoe had designated the Texas Department of Health as the lead agency in developing a plan for Texas. And in February 1978, the Department of Health had sent letters to the mayors of all Texas cities explaining provisions of the new law, which included:

- *Providing technical/financial assistance to state and local governments for the development of solid waste management plans;*
- *Providing training grants in occupations related to solid waste disposal;*
- *Prohibiting future open dumping on the land;*
- *Providing guidelines for all aspects of solid waste disposal systems and promoting their construction and application;*
- *Establishing a cooperative effort among federal, state and local governments and private enterprise to recover valuable materials and energy from solid waste.*

As Jack C. Carmichael, director of the State Health Department's Division of Solid Waste Management, explained in a letter to mayors, the Texas plan specifically called for dividing the state into regions.

*"Governor Briscoe will designate the boundaries of the municipal solid waste management regions that will be created for inclusion in Texas' plan," Carmichael wrote. "... he has asked the (Health) Department to seek the advice of local officials with respect to the allocation of solid*



*waste planning and operational responsibilities to state, regional and local governmental units."*

On May 30, 1978, after NTMWD board members had approved the idea of exploring this new field, Riehn wrote a letter to Carmichael to inform him of their interest.

*"Although we currently are not involved in any regional solid waste disposal," Riehn wrote, "it is the intent of the board to offer this service through the NTMWD to the cities in our area on a voluntary basis. . . . In the Dallas-Fort Worth Metroplex, it would appear that a system similar to the (district's) regional wastewater treatment program might have merit. . . ."*

By midsummer, the NTMWD board had made the decision to move ahead, and in an August 2 letter, Riehn accordingly notified Carmichael of the district's plans and also asked for some help.

*"The (NTMWD) is under negotiations with two municipalities to develop a regional solid waste disposal program," he wrote. "This would include the acquisition, management and operations for disposal of municipal solid waste.*

*"At this point, we are attempting to develop a contract for consideration by municipalities and the board of directors of the NTMWD. We have found difficulty in obtaining sample contracts used by other entities that are specific and yet provide flexibility for potential growth. Therefore, we are requesting copies of any regional solid waste disposal contract available. Your assistance will be greatly appreciated."*

Carmichael responded several weeks later by sending copies of several sample contracts, which the district was able to use as guides in formulating its first solid waste contracts with the cities of Plano and Richardson.

By March 1979 — almost a year after they had first broached the subject to the district — drafts of a lengthy and complex contract had been prepared and forwarded to City Managers Huey and Griffin. But because of the innovative nature of the contract and the fact that the various entities were "plowing new ground," the city councils of Richardson and Plano would spend several months studying the contract's provisions and working out various points, particularly those relating to the costs involved, before giving their final approval.

As Riehn explained in an administrative memorandum to the board in November 1979:



*"The actual amount of dollars (to be) paid for the existing system has not been completely formalized, but appraisers have appraised the Maxwell Creek (Landfill) site, the site for the Plano Transfer Station, the site of the existing Richardson Transfer Station, and the rolling stock involved with a total cost of approximately \$1,700,000. It is proposed that meetings will be held to formalize the actual costs, and that they would later be approved prior to formal execution of the contractual agreements."*

The Maxwell Creek site referred to in the memorandum was located at the time in the extraterritorial jurisdiction of the City of Sachse (it has since been annexed into the Sachse city limits) and the City of Plano had purchased the property. However, it had never yet been used as a landfill, and all the engineering and site preparation work remained to be done.

(In a study completed in early 1980 by Shimek, Jacobs & Finklea Consulting Engineers, it was determined that the overall cost of implementing the regional solid waste program would include constructing a new transfer station, roads and levees for the new landfill and therefore be much higher than the figure cited above. It would be necessary to issue a total of \$6.2 million in revenue bonds to finance the program's start-up.)

The contracts were approved by the two cities and the district board before the end of November 1979 and signed by NTMWD President Carl Mann of Mesquite, who jokingly says today, "I've got the distinction of having my signature on the first fee revenue-based garbage contracts ever written in the State of Texas."

As an interesting footnote, the only member of the district board to vote against approving the contracts was McKinney's A.H. Eubanks, who had also opposed the district's initial venture into wastewater treatment. The vote of the board on the solid waste contracts was 12-1 in favor (several directors were absent and did not vote).

The following major provisions were included in the contracts with Richardson and Plano, as authorized by the board:

1. *The cities would retain responsibility for collecting trash and garbage with the NTMWD providing transfer station(s) and transportation from station to disposal site. The NTMWD would be responsible for developing the most cost-effective system possible and disposing of the material in the most economical method (i.e. landfilling, recycling or energy generation).*
2. *The cities would agree to have all their trash and garbage brought to the*



*transfer station(s) for disposal by the district, but the district would not be required to accept any industrial or hazardous waste that was not "readily and legally subject to ordinary landfill disposal."*

3. *The district would have the right to determine the size, location and number of transfer stations required as a matter of policy not covered by the contracts.*
4. *The cities would be charged a proration of costs between the cities on the basis of weight, by the ton of solid waste handled by the district, with the district providing the scales and method of weighing.*
5. *The cities would pay the district from the collection of garbage fees, which would continue to be a function of the cities, and the NTMWD would issue garbage fee revenue bonds to finance the purchase of initial facilities and the construction and purchase of future facilities.*

The issuance of this type of bonds was, in itself, a totally new procedure — not merely for the district, but for the state as a whole. These first solid waste revenue bonds ever issued in Texas, prepared by First Southwest Company, the district's longtime financial advisors, and McCall, Parkhurst & Horton, bond legal counsel, were sold on June 26, 1980 and signed by Garland's Richard Roach, who had by now assumed the district presidency.

As of April 15, 1980, the day the contracts between the NTMWD and the Cities of Richardson and Plano took effect, the district was officially in the business of solid waste management and disposal. On that date, it assumed operation of Richardson's Lookout Drive Transfer Station and its Brumit Landfill, which had only a very brief remaining lifespan.

By this time, the district was moving forward with the 100-acre site for the new joint-use Maxwell Creek Landfill, which would enable it to close the Brumit Landfill in early 1982. (An additional 100 acres would be added to the Maxwell Creek site in 1985.)

Although the district once again found itself moving into uncharted territory, it felt fully prepared to deal with the physical and logistical problems of developing a regional solid waste system.

As Riehn confidently pointed out in a letter to the State Health Department's Carmichael on June 6, 1980:

*"It is our goal to develop a staff competent to perform this service in accordance with state and federal requirements. Therefore, we are embarking on a short-term, mid-term and long-term program. The*





NTMWD Lookout Transfer Station in Richardson was the first solid waste facility in the NTMWD after transfer of these services from Richardson. NTMWD would expand cost effective, regional solid waste disposal services by 1994 to Plano, Richardson, McKinney, Frisco, and Allen.

*short-term program includes the takeover of the cities' operation at the transfer station and the existing landfill site. It is proposed to start the development of the Maxwell Creek site in the near future and to move the landfill operation within the next six to twelve months. . . . A long-term program is being planned for the acquisition of additional land that could be utilized as a major site for the northern service area of the NTMWD with landfilling and other methods that may prove to be economical."*

Surprisingly, perhaps, there was not the slightest hint of trouble when the district activated the new landfill at Maxwell Creek in March 1982 and completed the closure of the Brumit site in November 1983.

"There were no public outcries, no legal attacks and no efforts to obstruct our plans," Riehn recalls. "In fact, there have never been any exceptional problems relating to the Maxwell Creek site in all the thirteen years of its operation since, even though none of the stringent environmental requirements that apply to





NTMWD heavy equipment constructs a new pit at the Maxwell Creek Regional Landfill. After completion and lining, this pit aided in the disposal of over 360,000 tons of solid wastes each year from customers of the NTMWD Regional Solid Waste System.

landfills today were in effect when it opened. It was just a matter of hauling the trash there and burying it.”

Thus far, everything was proceeding smoothly and almost exactly as planned, and this pleasant state of affairs would continue for several years. But district officials had no way of anticipating the series of unpredictable challenges and disruptive attacks that loomed unseen just ahead.

They were unaware that this was merely the calm before the storm, and that the NTMWD was sailing directly into the eye of a legalistic hurricane.

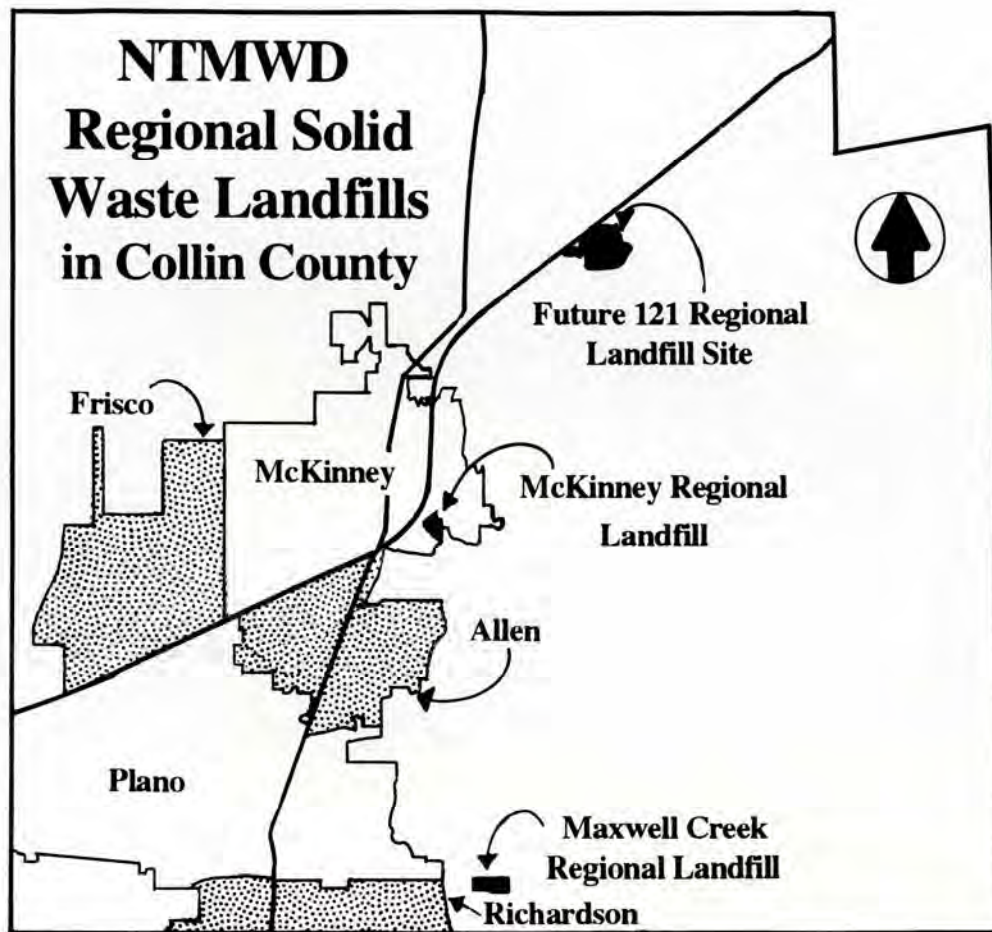
It was a storm that has still not fully run its course, even as this is written.

. . .

Plano’s rapid growth had quickly made it obvious that the city’s solid waste disposal needs could not be met for long by one transfer station shared with Richardson. So in 1982, the NTMWD undertook development of a second transfer station — the first that it had developed on its own and also the first to be located within the City of Plano.

In August 1982, a contract had been awarded for the new Parkway Transfer





Station, and construction had begun soon after on a seven-acre tract on Plano Parkway west of Coit Road. The station, which opened in 1984, was designed to serve the fast-growing western sector of the city, and it was completed and placed in operation totally without incident. In this split-level station, city garbage trucks enter on one level and dump their loads into pits, where the waste is moved by hydraulic devices, partially compacted and deposited into larger trucks on a lower level for the trip to the landfill. Under ordinary circumstances, an average of more than 100 trucks can be expected to enter or leave a transfer station each working day.

Within a year or two, however, it became apparent that equally intensive development in North Plano was going to necessitate the construction of another transfer station to serve that area of the city by the end of the decade.

To accommodate this second transfer station and other public facilities, the City of Plano and the NTMWD jointly purchased a 146-acre tract on Custer Road





NTMWD Parkway Transfer Station was the first transfer station constructed in the NTMWD Regional Solid Waste System. It opened in 1984 with a capacity to process 750 tons per day through hydraulic push pits in the enclosed building.

about a half-mile south of State Highway 121 in an area that was zoned “agricultural” at the time. At a price of \$36,000 per acre, the property represented a joint investment of about \$6 million, most of which was paid by Plano in order to develop a future park and a water pump station on 130 acres of the tract.

Plans called for the tract’s remaining 16 acres, for which the district paid some \$690,000, to house the transfer station, a highly specialized split-level facility capable of handling 750 tons of garbage per day.

Since the Custer Road site was in a sparsely populated area where no extensive development had yet occurred, few if any problems with nearby property owners were anticipated — particularly in view of the fact that there had been no negative reaction whatsoever to the Parkway Transfer Station.

The first indication that dark, ominous clouds were gathering over solid waste operations in the populous suburbs north of Dallas materialized rather unexpectedly in late 1986. Within a few weeks after a routine rezoning request on the property was filed with the Plano Planning and Zoning Commission, the period of smooth sailing came to an abrupt end.



After heatedly debating a site plan and rezoning request to allow construction of the transfer station and twice postponing action on the request, the Plano Planning and Zoning Commission stunned municipal officials on December 15, 1986, by denying the request.

The denial was partially based on arguments by property owners in the area of low-density housing surrounding the tract, who opposed the transfer station because they objected to the truck traffic it would generate along Custer Road.

In voicing his opposition to the request, commission member Cecil Ewell “blasted city officials and the NTMWD,” according to an article in the *Allen American*, and was one of five commissioners who voted to deny the rezoning. Despite assurances from the Plano municipal staff that Custer Road, which is also designated as State FM Road 2478, would be widened by the state when the transfer station began operating, in order to accommodate the additional truck traffic, Ewell remained adamant.

“If we get those garbage trucks on that road, we’re going to kill someone,” he said. “It’s a death trap.”

Meanwhile, a group of about 25 residents of neighboring Allen were also taking issue, with the request, since the site of the proposed transfer station was located on the border between the two cities. They were among some 75 citizens who attended the commission hearings.

Warren Blackmon, one of a handful of Allen property owners living just east of the site, said he was “elated” at the turndown by the planning commission. Like a number of others who appeared in opposition to the transfer station, Blackmon seemed reluctant to believe that the station’s function would merely be to transfer solid waste from smaller collection trucks to larger vehicles, which would then convey it on to the Maxwell Creek Landfill.

“That (the station) is a garbage dump most any way you look at it,” he maintained.

But Plano Mayor Jack Harvard expressed surprise and dismay at the planning commission’s action. “We didn’t realize we had a zoning issue here,” he said. “We decided to put the facility in an area before it was developed (to avoid possible objections).” He promised that the Plano City Council would give “careful consideration” to the planning commission’s 4–2 vote to deny the rezoning, but added that if the Custer Road site could not be used, the city would be left in a “no-win situation.”

The controversy bubbled on for several weeks and into the new year of 1987.



A few letter writers, including one woman who was still smarting over the building of a "sewer plant" near Lucas by the NTMWD, bombarded area newspapers with letters to the editor, all of which basically said the same things. They accused the City of Plano and the water district of "secretly pre-purchasing land" for objectionable projects in defiance of citizens' wishes.

Commissioner Ewell was quoted in several newspapers as saying he was "astounded at the arrogance" of the NTMWD. A few citizens complained that they would be afraid to let their children play in the proposed park if it were adjacent to the transfer station, and one even expressed fear that garbage trucks would pose a threat to school buses operating in the area.

The hullabaloo was not quite loud enough to wake the dead, but the board of directors of one area cemetery association, whose burial ground was located some 3,000 feet from the proposed transfer site, did call an emergency session to proclaim its displeasure.

"We simply cannot have a respectful ceremony with all those trucks going up and down the street, not to mention the smell associated with a garbage dump," said a spokeswoman for the Rowlett Creek Cemetery Association. "I just can't understand why they want to place it (the transfer station) so close to many families' final resting place."

It was later brought out that fewer than three burial ceremonies per month were conducted at the cemetery on average, that each normally lasted only ten to fifteen minutes, and that the likelihood of their being disrupted by trucks passing on a highway hundreds of feet away was decidedly remote.

Fortunately, when the issue came before the Plano City Council on January 12, 1987, cooler heads prevailed. Unwavering support for the transfer station by the city staff, plus assurances that traffic generated by the station would not create either a disruption or a safety hazard in the area, set the stage for a total reversal of the planning commission's decision to deny the rezoning request.

By a 4-0 margin (one member was absent), the council voted to grant the request and allow construction of the transfer station to proceed, thus bringing the controversy to an abrupt end.

"We are very pleased to be able to move forward," said Carl Riehn. "What we are doing is for the citizens. When the smoke finally settles, people will discover that this is a plan they can be proud of."

Plano Mayor Harvard criticized some planning commission members who had opposed the project for circulating incorrect information about it and the NTMWD.



"No matter where you put a facility like this, you will have opposition," Harvard observed, noting that the city had been working on the transfer center project for three years and that at least ten sites had been considered for it.

Many of the home owners who had complained lived as much as two miles from the site, Harvard said, and would be totally unaffected by the transfer station or the truck traffic.

There were a few grumbles from opponents following the council's action, but with no legal grounds on which to contest the decision in court, the opposition yielded and the dispute ended.

In October 1987, the NTMWD was granted a permit for the new Custer Road Transfer Station by the State Department of Health, and construction started the following year. It began daily operation in February 1990, and as of May 1993, it was handling 2,387 truckloads of solid waste per month, or an average of 119 per day. Like the Plano Parkway Transfer Station, the Custer Road facility can handle up to 750 tons of solid waste per day.

For the record, the fears of those who believed the trucks moving in and out of the Custer Road station would create a safety hazard have proved groundless. As promised, left-turn lanes have been added to the road to facilitate truck traffic and prevent congestion. To date, there have been no reported fatalities or injuries as a result of accidents involving trucks using the station.

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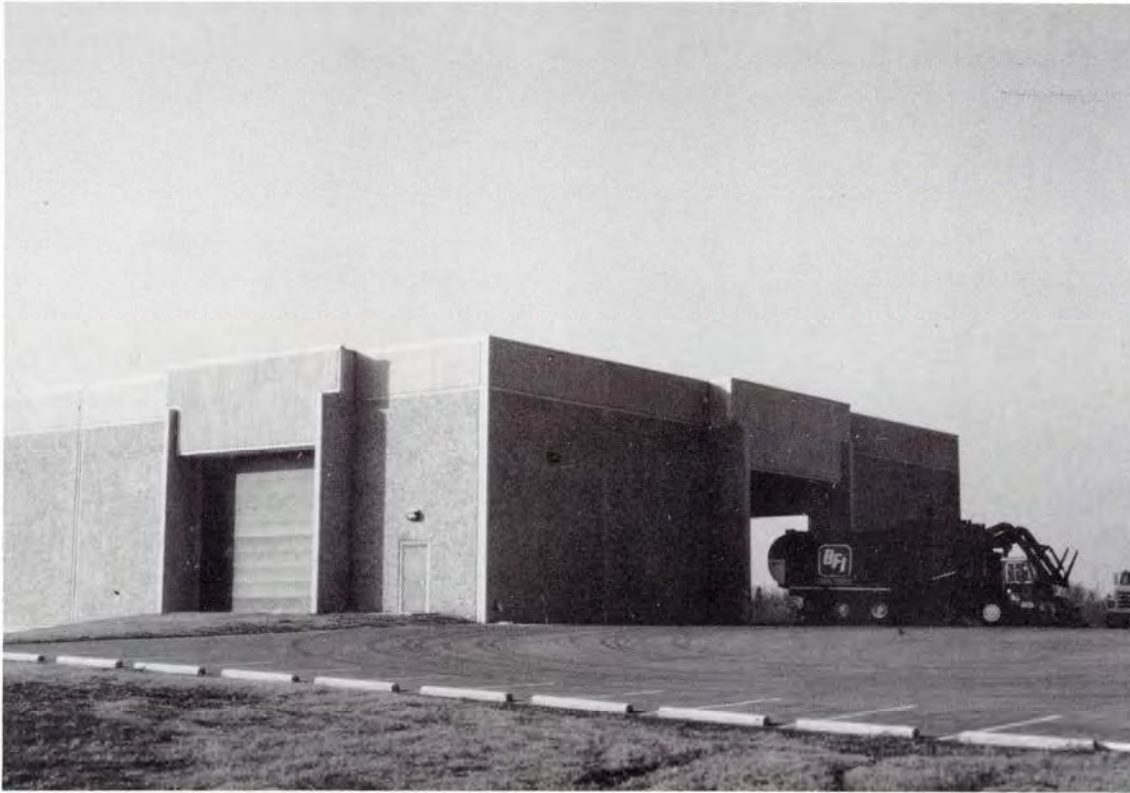
Although the dispute over the Custer Road Transfer Station produced numerous newspaper headlines and sharp exchanges, it was actually, in the words of one NTMWD official, only "a small display of negativism" and one in which the opposition remained "civilized."

It was, in fact, a mere whimper in comparison to the uproar that was to greet the NTMWD's next effort to meet the region's solid waste needs and lead to what has become one of the most bitterly fought and frustrating episodes in the district's history.

Where the Custer Road dispute was only a brief skirmish, the fight over the district's plan to expand and improve a thirty-year-old landfill at McKinney — which began to emerge just a few months after the Custer Road matter was settled — was destined to grow into something resembling all-out war.

Thus far, the McKinney Landfill dispute has spanned more than five years, during which it has defied legal precedents and state regulations, kept the solid waste disposal needs of tens of thousands of citizens in a dangerous state of





NTMWD Custer Transfer Station serves the north Plano, Frisco, Allen, and McKinney areas with a capacity of 750 tons per day. It opened in 1990.

limbo, created turmoil from McKinney to Austin, and made an expensive mockery of common sense.

And the most tragic aspect of the conflict, in the view of NTMWD officials, is that it was all so unnecessary.

Origins of the conflict can be traced to early 1988 and a seemingly innocent request to the NTMWD by the City of McKinney. Prior to the 1980s, McKinney had not experienced the type of growth enjoyed by the Collin County cities to its immediate south, and because of its relatively slow growth, it had been able to get by with smaller and less efficient facilities for handling its wastewater and solid waste. But as the city gained population and state/federal regulations relating to the environment became increasingly stringent, McKinney, an original member of the NTMWD's water system, turned to the district for assistance — first with wastewater, then with solid waste.

In October 1987, when McKinney became one of the four cities to begin using the state-of-the-art Wilson Creek Regional Wastewater Treatment Plant, the city closed down its old, outdated sewer plant, which had also been located on Wilson Creek. But as the decade neared an end, McKinney city officials found





David Matthews, NTMWD scales operator at the Custer Transfer Station, uses the computerized scales to weigh the collection trucks entering the station and to calculate the solid waste tonnage for each visit of every truck.

themselves confronting unexpected difficulties at the old site, which was located on part of a tract of approximately 160 acres that the city had also been using for a landfill since the 1950s, long before a state permit was required. The site had first been permitted by McKinney in 1980, some 24 years after it went into use.

Remaining at the abandoned wastewater plant site were several sludge lagoons still partially filled with liquid, and McKinney was under orders from the Texas Water Commission to empty the lagoons and fill them in. However, because of recently instituted environmental restrictions, the liquid could no longer be discharged into Wilson Creek unless it was first treated and most of the pollutants removed.

“City Manager Don Paschal of McKinney asked if North Texas would take this liquid and treat it at our Wilson Creek Wastewater Plant,” says Carl Riehn. “We conducted a study which showed that this could be done successfully, but it also showed that to fill the lagoons with dirt would cost an estimated \$5 million, and McKinney just didn’t have that much money to spend on something like this.”

District engineers then came up with a plan that would not only eliminate this expense, but provide important additional landfill space for McKinney.

“The question we raised was, if the lagoons had to be filled and it was too expensive to fill them with dirt, why not fill them with garbage?” Riehn says. “It sounded like an ideal solution to their problem and ours, too, and when we mentioned it to McKinney, they commissioned the firm of Espey, Huston & Associates to study that possibility. This study determined that it would be too expensive a project for McKinney to undertake alone, so at this point, the city



asked North Texas to take over their whole landfill and incorporate the lagoons into it.”

Previously, the district had considered further expansion of the Maxwell Creek site, but there were several obvious problems involved. For one thing, any new expansion would necessitate crossing the creek and opening a new section to the south of it, which would affect the cost of the operation. For another, the site had been annexed by this time into the city limits of Sachse, whereas it had only been in Sachse’s extraterritorial jurisdiction when the landfill was opened.

But the foremost factor was a local political climate in Sachse that had made “landfill” a dirty word. The citizens of Sachse were already embroiled in a dispute with the City of Garland over its plans to establish a new landfill south of Sachse, and the whole subject of landfills was now a touchy one in the small city. Under these circumstances, NTMWD officials felt that any attempt to expand Maxwell Creek would be similar to pouring gasoline on a smouldering fire.

The district also had more than 300 acres of property adjoining the Wilson Creek Wastewater Treatment Plant that had originally been earmarked for use as a landfill, but this alternative, too, was marred by the combined problems of high costs and a high risk of angry protests and potential legal challenges.

“We would have had to build \$3 million worth of roadways to serve the Wilson Creek site,” says Riehn. “On top of that, there was the opposition from Lucas that would almost certainly surface. We decided it was best to back off in Sachse, put Wilson Creek on hold, and accept McKinney’s invitation to take over an existing landfill and correct some existing problems at the site. It seemed to be the most logical, beneficial and cost-effective move for everybody.”

As Riehn points out, the NTMWD also took the concept to the State Department of Health, whose officials endorsed it as a “win-win-win” situation for all concerned.

Consequently, on August 3, 1988, Riehn informed Paschal that both the district’s Regional Solid Waste Committee and the board of directors had approved the utilization of the McKinney Landfill and directed the NTMWD staff to take the necessary steps to submit a permit application to the state. The tone of Riehn’s letter made it apparent that he expected the district to be able to move forward quickly in implementing the program. And he congratulated McKinney for being an “outstanding example” of a city that was working to use “innovative procedures and technology for the benefit of the citizens served.”

In retrospect, however, it is hard to imagine today how choosing one of the



other routes toward putting a regional landfill into service could have led to anything worse than the nightmarish struggle into which the NTMWD was unknowingly headed.

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By this time, the district had learned from experience that strict federal mandates, tough state regulations, aroused citizens groups and its own unwavering commitment to protect its high-quality public water supply left absolutely no room for shortcuts where environmental safeguards were concerned. As a result, the district commissioned another scientific study of the McKinney site to determine exactly what steps should be taken to make it 100 percent environmentally safe.

In order to make the site permittable as a regional landfill, the studies showed, a number of steps would have to be taken to remedy potential problems that had been accumulating there for decades.

"Some of the old landfill was only five feet deep," says Riehn, "when the average excavated depth should be forty feet, so we had to ask ourselves, 'Do we want to take responsibility for that old landfill as it stands?' And the answer was, 'No, definitely not.'"

"What we decided we should do was dig up and rebury everything that had been buried up to that time. This would allow us to use all the necessary safeguards to the water supply and also increase the capacity of the landfill. It would be an expensive process, but our studies showed that we could afford it if we were not out any expense for the land, and the City of McKinney agreed to a no-cost lease on the property for the life of the landfill."

Based on a recommendation by the engineering firm of Harding Lawson Associates, the district also decided to go far beyond the standard protective structures specified by EPA and State Health Department regulations. In addition to a required three-foot clay liner around the landfill, the district proposed to build an impenetrable slurry wall of ultra-dense Bentonite clay that would completely enclose the site and extend all the way down to the solid layer of Austin chalk underlying it.

The district also proposed to construct a series of levees capable of preventing flooding of the site, even in the most extreme conditions. In a void between the levees and the landfill, the district proposed to install monitoring devices that could detect any leaks immediately — although the possibility of leaks was virtually nonexistent.



In March 1989, Riehn informed Dr. Robert Bernstein, commissioner of the Texas Department of Health, that Pierce L. Chandler had been designated as consulting and design engineer for the McKinney Sanitary Landfill Expansion project. And eleven months later, in February 1990, the district's formal application for an amendment to the original McKinney Landfill permit, transferring authority for its operation to the NTMWD, was forwarded to the Health Department's Division of Solid Waste Management.

At this point, the project seemed to be proceeding precisely on schedule. A staff shortage caused by budget constraints at the Health Department, coupled with minor technicalities necessitating changes in the application, slowed progress to some extent, but by July 1991, the application was declared administratively complete by the State Health Department.

All told, the district had spent \$120,000 at this point to develop the engineering concepts used in the plan that was finally laid before the State Health Department, and NTMWD officials felt that it was one of the most thorough and comprehensive plans ever devised in Texas.

Following its own detailed studies, the Health Department also declared the district's plan administratively and technically complete in August 1991, apparently clearing the way, pending a public hearing, for the issuance of a permit and the start of construction at the landfill.

But while this process had been taking place, opposition to the district's plan to convert the McKinney Landfill into a regional facility had begun to form behind the scenes. Now that this opposition was boiling to the surface, a growing body of damaging misinformation about the NTMWD plan was starting to circulate. And when the Texas Legislature passed a bill concerning solid waste during its 1991 session, it created an unusual situation in which the McKinney project became "caught in the middle" and suddenly vulnerable to attack.

In transferring all solid waste regulatory powers from the Health Department to the Texas Water Commission and establishing new guidelines for issuing landfill permits, effective March 1, 1992, the bill gave opponents an unexpected opportunity to sabotage the plan. It was an opening that, in a purely legal sense, they did not deserve — but one they would use tenaciously and to maximum advantage, nevertheless.

"The transfer of authority didn't officially take place until several months after the law was passed" explains Riehn, "and the legislation clearly stated that any project already declared complete would be allowed to proceed under the old



Health Department rules, but in this case some Texas Water Commission staff simply ignored the law.”

It was decided that, instead of abiding by the letter of the law and allowing the Health Department to complete the processing of the NTMWD’s permit request, the Health Department and the TWC would hold a joint public hearing on the application in February 1992.

It was at this hearing that the opposition launched its surprise assault.

“We were aware that some people in the neighboring Town of Fairview were upset over plans to expand the McKinney Airport,” says Riehn, “but I had met with the mayor of Fairview and several council people, and they had never raised any objections about the landfill. Then a group from Fairview including several city officials suddenly appeared and asked to be a party to the hearing, and when their request was granted, they immediately asked for a continuance because they said they hadn’t had time to prepare their case.”

At the February hearing, the TWC also asked for more time to study the plan, citing the commission’s impending entry into the field of solid waste. A delay was thus assured, and the hearing did not reconvene until May 1992. By then, with the Health Department totally out of the picture and the TWC in complete charge, it soon became clear that the engineering plan submitted by the NTMWD was in trouble.

The Fairview group, calling itself Concerned Citizens Over Fairview’s Future (CCOFF) and headed by its founder, Debbie Edmondson, claimed that the landfill plan was “fatally flawed” and posed a threat to the “entire region’s water supply,” despite the fact that none of CCOFF’s members had any expertise in this area.

The Town of Fairview, meanwhile, went to great lengths to disassociate itself from CCOFF. In an open letter to the citizens of the community, written at the time of the initial hearing, Fairview Mayor Leahray Wroten appealed for reason and calm.

*“I have researched this issue and am convinced that this plan is absolutely no threat to the Town of Fairview in any way,” the mayor said. . . . Since this utility (NTMWD) is also responsible for this region’s water supply, they will, out of necessity, take proper precautions to insure that this landfill does not negatively impact their nearly one million users. . . .*

*“This town has had a twenty-year working relationship with NTMWD that has always been honest, open and direct. Their reputation in the*



*industry, and with other cities, is above reproach. They have a track record of excellent performance and a willingness to immediately solve any problems that arise. We have no reason to distrust NTMWD."*

Unhappily, however, the mayor's plea — and numerous other appeals to logic and reason — went totally ignored by CCOFF and other opponents of the landfill plan.

Joining CCOFF in fighting the plan and asking to be a party to the hearing was a second organization known as Groups Allied to Stop Pollution — or GASP — represented by a spokeswoman named Lorrie Cotterill. Although the request by GASP was initially denied because the organization could not prove that any of its members actually lived in Collin County, it would continue to be, in Riehn's words, "a real thorn in the landfill's side" for the duration of the controversy.

GASP purposely and knowingly used "scare tactics" and distributed false and misleading information about the alleged dangers associated with the landfill, NTMWD officials charge. Much of this misinformation was picked up by the media and repeated as fact, causing various other groups and even some elected state officials to speak out against the landfill plan.

"They are professional landfill fighters who know what they're doing," Riehn says of GASP, "and their goal is essentially to halt the permitting of any more landfills in the State of Texas. "They want everybody to have to recycle everything or turn it into mulch, and they're trying to drive up the cost of landfills and make recycling mandatory."

As a result of this "disinformation" campaign, such stalwart community organizations as the League of Women Voters chapters in both Richardson and Collin County eventually issued statements opposing the NTMWD plan for the landfill. It also moved State Senator Ted Lyon to write a letter to TWC Chairman John L. Hall in which Lyon called upon the commission to deny the transfer of the landfill permit from the City of McKinney to the NTMWD.

*"(T)he approval of this permit transfer would provide a deadly result from the major source of drinking water for citizens of Collin County," Lyon wrote. "It is my recommendation that this permit be denied at the earliest date possible."*

It should be noted that Lyon never contacted district officials to discuss his concerns or to request answers before expressing his opposition to the project (and thereby aligning himself with influential Fairview residents during an election year).



The district did its best to counteract the disastrous spread of “disinformation” — including circulating a letter which refuted, point by point, Lyon’s contentions that the landfill plan constituted a public menace — but with little apparent success.

One of the most ironic aspects of the bizarre case is that, through it all, the McKinney Landfill remained in operation, just as it had for many years. It still contained the same amount of land as always; it was still duly permitted by the state and could remain in operation as long as it still had space available. The only matter in question was whether it could be taken over by the NTMWD and run as a completely safe, up-to-date nonpolluting facility. The opposition hoped that, if it continued to be run by the City of McKinney without the proposed improvements and environmental safeguards, it would be closed by new laws scheduled to take effect in 1993.

As McKinney Mayor John E. Gay pointed out in an April 5, 1992, article in the *McKinney Courier-Gazette*, there was never any question of closing the landfill or of enlarging its boundaries.

*“We were permitted 160 acres in 1980, and this is the same 160 acres,” Gay said. “We are not going to acquire any more land to expand and we will be solely confined to the existing tract. . . . I can tell you this, I would rather see it (the city’s solid waste) confined to one site than in ditches all over the place. And it (the landfill) is there; it has been permitted, and it is in operation.”*

When the hearing reconvened, some members of the TWC staff, including several who had previously approved the landfill plan while with the Health Department, now took issue with the design. “They didn’t like the slurry walls despite the fact that the same kind of walls are used around hazardous waste sites approved by the TWC,” says Riehn, “and they didn’t like the dewatering system that was to collect and pump out any liquid that got into the areas behind the levees.”

What followed was an exercise in total confusion, as one part of the state bureaucracy battled another. The state first made a motion that the permit be denied, but the hearing examiner ruled the motion out of order because it was based on the wrong set of regulations. Two days later, the state appealed the examiner’s ruling to the three-member Texas Water Commission itself.

“In essence,” says Riehn, “they had overruled their own commission, and the whole hearing was shut down. Then a motion was made to throw out our



application and make us start the process all over again, despite the fact that the hearing had never been held.”

Following a series of technical conferences, the district agreed to eliminate the slurry wall from its plan and instead to construct a three-foot clay liner with a 14-to-15-foot layer of earthen “ballast” inside it. This design, recommended and preferred by the TWC staff, would result in a loss of 12 percent of the available space in the landfill, as well as in a net increase of \$1.5 million in operations costs, but the district felt it had no other choice.

The NTMWD agreed to have the redesign completed by November 9, 1992, after which the state would have approximately a month to recommend changes. The new hearing would then be scheduled to open in January 1993.

Meanwhile, says Riehn, various groups were complaining right and left, in what he calls “a comedy of horrors,” and while the tedious — and seemingly endless — process of trying to satisfy the TWC was going on, the “scare campaign” was gaining momentum in the media.

“Wilson Creek Contaminated,” read the front-page headline in the *Plano Star Courier* of July 22, 1992. In actuality, however, the story beneath the headline explained, the “contaminants” — traces of vinyl chloride and arsenic — had been found in the clay banks of the creek, not in the water itself. Still, the story was picked up by one area TV station, adding to fears that pollutants were seeping out of the McKinney landfill into the creek. The NTMWD’s tests indicated that no such thing was happening, but every “brush fire” incident of this nature tended to weaken the district’s case in the eyes of the public.

In a fiery letter to the “Viewpoints” section of *The Dallas Morning News*, McKinney Mayor Gay condemned the “falsehoods, half-truths and innuendos” that were being reported about the landfill. As for the “contamination” of Wilson Creek, he added, “That is so much hogwash. The introduction of a box of table salt into Lake Lavon is contamination by definition, but would anyone know it? Certainly not. Verified tests have not indicated any unacceptable contamination from the landfill.”

When the TWC finally opened the rehearing of the case in McKinney in late January 1993, it stretched over a period of seven weeks, with four days of arguments and counter-arguments heard each week. At its conclusion, all parties were given thirty days to submit final written arguments, followed by two weeks for rebuttals and sixty days for the hearing examiner to decide whether to grant or deny the permit transfer.



On August 25, following a recommendation by the office of the TWC's executive director that the plan and application of the NTMWD be approved, the permit was issued.

"To date," says Carl Riehn, "the district has spent a total of \$1.4 million in technical and legal fees — most of which should never have been incurred — to obtain permission to use a landfill that will last about ten years. But the most tragic thing about all this is the cost to the citizens of our service area, a cost that could have been avoided if a few people had not been misled by misinformation."

As costly as it has been however, the battle over the McKinney Landfill has not kept the district's regional solid waste program from continuing to grow. Contracts for solid waste services were signed by the NTMWD with the City of Frisco in February 1990 and the City of Allen in June 1991, while the McKinney issue remained in doubt.

And with the McKinney issue settled at last, the City of McKinney will become the fifth municipality to contract with the district for solid waste services which now benefit more than 350,000 residents of Dallas and Collin Counties.

"Our experience in the McKinney case is far from an isolated one," says Riehn. "Similar battles have been going on in Lubbock, in Waco and all over Texas. There is such chaos in the environmental world today that the regulatory agencies are caught in a quandary.

"We desperately need people in these agencies who understand the technicalities involved and the tools we have at our disposal to protect the environment. We also need people who understand that our concern for the environment is every bit as real and as strong as theirs is.

"Otherwise," he concludes, "we can expect more chaos, more unjustified fear on the part of the public, more costly legal battles, and very little to be accomplished. Another unfortunate victim of the confrontation is the unfortunate citizen who is misled into believing that his community and way of life will be ruined. GASP is not held accountable for that environmental/emotional impact."





# 14

## Environment Vs. Need — Walking a Chalk Line

*"We must walk a chalk line in everything we do," says Riehn. "We must be ready to dispose of solid waste and treat wastewater when the cities of this region turn to us for help in dealing with problems that they don't wish to handle alone. But we must perform these crucial functions without damaging the environment or endangering our water supply."*

— Carl Riehn  
NTMWD Executive Director

While some who call themselves "environmentalists" disregard history and stubbornly cling to the notion that agencies such as the North Texas Municipal Water District represent "enemies" to the environment that must be confronted at every turn — and thwarted whenever possible — nothing could actually be further from the truth. On the contrary, the NTMWD shares many of the goals and ideals of true environmentalists and has established itself as a pioneer in protecting our environment. Indeed, long before Americans had ever heard of the so-called environmental movement, the NTMWD's primary concerns were preventing the pollution of our lakes and streams, and safeguarding the delicate balance of nature in the use and reuse of our precious and finite water resources.

Providing a water supply that is not only dependable, economical, safe and clean — but one that also exceeds every state and national standard for quality



and purity — is the cornerstone on which the NTMWD has been built. The district's very existence, as well as its enviable reputation in the national water industry, is based on its proven ability over nearly four decades to deliver some of America's best water at the fairest possible price.

"Clearly, any threat to the water supply of this region is a threat to the district itself," says Executive Director Carl Riehn, "so it would make no sense at all for us to do anything that would pollute our water supply or impair its high quality in some way. And yet, time after time, over the past twenty years or more, virtually every major development we've undertaken has been subjected to protests, lawsuits and attacks that accused us of wanting to do exactly that."

Instead of fighting the district on environmental grounds, those who have tried to obstruct its programs should realize that, if they are true environmentalists, they and the district are actually on the same side in most instances, Riehn emphasizes. Both are trying to prevent pollution, safeguard public health and protect the environment, and no one is more dedicated to this effort than the officers, directors and staff of the NTMWD.

Unlike many of the activists in the environmental movement, however, the NTMWD has access to the latest scientific information and technological expertise in planning and implementing its programs. The combined skills of its staff and consultants give the district rare capabilities both in providing utilities on a regional scale while simultaneously eliminating the causes and sources of pollution.

"The average citizen has no idea how much the technology of wastewater treatment and solid waste disposal has progressed over the past twenty or thirty years, or how much more efficient these processes have become," Riehn says. "This is one reason that it's so easy to frighten the public with scare tactics and false information about 'garbage dumps' and 'sewer plants.'"

There are also other fundamental differences between those who provide the type of vital public services provided by the NTMWD and those whose only concern is maintaining a pristine, utterly risk-free environment, regardless of the hardships and costs involved.

*"Some people say that the only acceptable level of risk is none at all," says Dolan McKnight, the district's research and development officer, "but this is not a realistic approach. Natural foods contain far more cancer-causing agents, for example, than treated water, but the risk-assessment people in the regulatory agencies sometimes set totally unrealistic standards for water."*

"We have to use some reason in determining what is an acceptable level of





NTMWD Water Treatment Plants I and II complete with total capacity to treat and distribute 350 MGD. The final expansion of Plant II concluded in 1988, thirty-one years after the opening of Plant I and eighteen years after the start of Plant II.

risk in our society today,” adds Riehn. “It’s far more dangerous to get in your car and drive around the block than it is to drink 1,000 gallons of water from an approved public water supply. And yet, many so-called experts insist on eliminating all the potential for ill-effects from our water, no matter how minuscule the risk may be to human health.”

There is also the matter of cost to be considered. When does the cost of trying to eliminate all risk — an impossibility in the first place — become totally prohibitive and prevent the public from obtaining the basic services it must have at a price it can afford to pay? This is a question that too many “experts” fail to take into account, but one that must inevitably be answered by the NTMWD.

Thus, by far the largest difference between the district and the groups and individuals who have often made themselves its adversaries is that the district must strive to maintain a constant balance between the demand for essential public services and the need to maintain a safe, healthful environment.

“We must walk a chalk line in everything we do,” says Riehn. “We must be



ready to dispose of solid waste and treat wastewater when the cities of this region turn to us for help in dealing with problems that they don't wish to handle alone. But we must perform these crucial functions without damaging the environment or endangering our water supply."

When given a chance, the district has repeatedly proved that it *can* walk this chalk line. The overwhelming success of the Wilson Creek Regional Wastewater Treatment Plant — a facility opposed with the most acrimonious type of bitterness by some environmental extremists — offers striking proof of the district's ability to achieve such balance. It requires the best that science and technology can offer, plus skilled engineering and dedicated administration, but it *can* be done.

"For obvious reasons, Northeast Texas can never again be the natural, unspoiled, virgin wilderness that it was 200 years ago," says Riehn, "but its millions of residents can still live in a healthy, unpolluted environment with all the clean water and efficient public services they require. We don't have to sacrifice one for the other, in spite of what some extremist groups seem to believe."

In years to come, once the storm of protests and the clouds of disinformation have cleared away, the NTMWD intends to produce further proof that the balance between service and safety can be maintained by making NTMWD solid waste services a model for others to follow. These services are designed to utilize the latest technological safeguards, such as clay liners, and sophisticated monitoring and sampling and retrieval systems.

Even at best, such achievements never come easily. But when the NTMWD and other governmental entities charged with this responsibility are constantly assailed by opponents who use innuendo, misinformation and "facts" with no basis in reality as tools to unnerve the public, the task becomes infinitely harder — and consummately more expensive than necessary.

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As our complex, industrialized society has evolved over the decades, certain synthetic organic compounds have been produced in sufficient quantities to begin showing up in tiny quantities in the nation's water supply. One group of these synthetics, known as trihalomethanes, has caused particular concern among some groups.

Trihalomethanes are produced through a combination of natural organic chemicals and the chlorine routinely used to purify water intended for public consumption, and they have been shown to be carcinogenic in extremely high



concentrations. As a result, although such concentrations would never occur in a water supply under normal circumstances, increasingly loud demands have been heard that all such compounds be removed from drinking water.

"It's extremely difficult to filter all of these compounds out of water," explains Carl Riehn. "It's also terribly expensive. The activated carbon filters that would have to be used would literally cost more to install than it cost to build our water treatment plants themselves. Operating costs are also very high because the carbon has to be removed from the filters and cleaned or replaced after use.

"The key question is: How much of these trihalomethanes does it take to pose a real danger to health? In quantities of 100 parts per billion — the maximum allowable under current EPA regulations and at least twice the amount present in any NTMWD water supplies — the risk of cancer would theoretically increase by one case per year in every one million people, and even that is mere conjecture."

One of these trihalomethanes is formaldehyde, which is present in much higher concentrations in an ordinary glass of cola than it is in drinking water, notes NTMWD Information Officer Reagan Cook. "And yet I'm not aware of any mass-movement to restrict cola-drinking," he adds pointedly.

Throughout its history, no one has ever had to coerce the NTMWD into taking all necessary measures — and even a number of "extra steps" — to ensure the purity and quality of the water it provides to its member and customer cities. As Riehn points out: "All our water, in all our treatment plants, has been filtered since we started, and all our treatment plants use dual-media filters containing rock, sand and carbon, although filtration is still not used in much of the rest of the nation. But if we are needlessly forced to use granular activated carbon filters to remove trihalomethanes, everyone will end up having to pay far more for water — and with no scientific data to assure that health risks are real and will be reduced."

Even fluoride, a chemical which has been routinely added in small quantities to public water supplies for many years as an effective deterrent to tooth decay, has become a target of "scare tactics" used by environmental extremists, who have claimed a link between fluoride and a rare form of bone cancer.

The uproar grew out of a study in which five out of more than 1,000 laboratory rats developed cancer after drinking water with between 45 and 78 times the amount of fluoride approved by the U.S. Environmental Protection Agency. A later study, however, found no evidence of cancer in test animals given similar



high concentrations of fluoride, and prompted Dr. Donald Crow, chief of the Texas Department of Health to issue a statement reassuring the public that water fluoridation poses no health threat.

"The human evidence worldwide, as documented by the World Health Organization, has shown no relationship between fluoride levels and cancer," Dr. Crow announced in March 1990. "Data collected in Texas by TDH also indicates no correlation."

Incredibly, there has even been an outcry in some circles against the use of chlorine, which destroys many types of disease-causing bacteria in public water supplies and prevents an incalculable number of illnesses and deaths, but which purportedly increases the risk of cancer by an almost nonexistent amount.

The absurdity of the chlorine controversy caused former NTMWD chemist Leon Holbert, now with the Texas A&M Extension Service, to remark:

*"Sure, we can reduce the risk of cancer by not chlorinating the water. People will die so quickly from other diseases that they won't live long enough to get cancer!"*

While the public water supply has been subjected to more than its share of unwarranted demands associated with "health risks," regulations on the quality of water in the nation's rivers and streams, imposed to prevent real or imagined risks to aquatic life, have created an even more bizarre situation.

*"As strange as it seems, our standards for the water we drink are actually less restrictive than our standards for the stream water in which aquatic life exists," says Dolan McKnight. "In effect, if you drew a glass of water from a tap in your home and only drank half of it, you couldn't legally pour the other half into a stream."*

The criteria under which such restrictions are imposed is not what amount of pollutants would actually kill fish and other aquatic life, but merely what amount *might* keep them from growing as rapidly as normal or reduce the number of offspring they produce, McKnight points out.

"What North Texas is trying to do," Riehn emphasizes, "is improve the environment and reduce the risk to wildlife and the public, but also stay within the framework of gaining reasonable benefits from our available resources.

"We'll be the first to admit that we *are* living in a different world today, that society *is* creating synthetic compounds that once didn't exist, and that we *do* need to set reasonable limits. But the key word is 'reasonable.' We don't need unreasonable restrictions that divert scarce funding, drive up the cost of our



services, keep us from using our resources effectively, penalize the citizens we serve, and really have no practical value in safeguarding human health or protecting the environment.”

. . .

In the treatment of wastewater as well as in the supplying of fresh water for consumer use, the NTMWD has a long history of going well beyond what has been mandated by state or federal laws. In order to provide a truly superlative level of service, the district has always been committed to do more than it was required to do.

There is no better example of this commitment than the district's Wilson Creek Wastewater Treatment Plant, by far the most efficient facility of its size in Texas. But Wilson Creek is only the beginning of this story. Currently, *all* wastewater plants owned by the NTMWD are rated as advanced secondary plants, which means that they go far beyond meeting the minimum standards of both the state and federal governments.

“Under the Clean Water Act of 1972, the EPA set a goal of achieving a secondary standard of 30–30 (meaning 30 milligrams per liter each of biological oxygen demand, or BOD, and total suspended solids, or TSS, nationwide,” Riehn explains. “But our goal at that same time was to go to an advanced secondary standard of 10–15 which means that our plants are far more efficient on BOD and suspended solids.

“Nobody stood over us and told us we *had* to do this,” he adds. “We did it because we wanted to protect our water quality, and we knew that, in Texas, when you put treated effluent into a stream, sooner or later it's going to end up in the public water supply. We also had eighteen cities asking us to do this, and we felt that 10–15 was an achievable level without excessive expense. But the point is, we did it without any outside pressure because we wanted to safeguard our water quality.”

And while the other wastewater plants operated by the NTMWD are not required by their permits to produce as clean effluent as Wilson Creek's 5-5-2-1, some of them routinely meet that exceptionally high standard in the areas of biological oxygen demand, suspended solids and ammonia.

“We make sure that all our plants do the best job possible,” Riehn emphasizes. “Our Mesquite plant, for example, has a 10–15 permit, but about 99 percent of the time, it runs at 5–5 on its BOD and TSS.”

Riehn and other NTMWD officials are determined to seek even higher levels of



efficiency in wastewater treatment in years to come — with or without any upgrading of state and federal minimum standards.

“The future will call for more plants with the high-tech features and high capacity of Wilson Creek,” says David McCall, chairman of the district’s Wastewater Committee, “and not just to meet federal or state requirements, but also to be able to reuse the water in our lakes.”

“We’ve discovered that these higher standards aren’t actually as expensive as they were once believed to be,” says Riehn, “and this is one genuine benefit we’ve derived from the environmental movement. It made us stretch at first to go that extra mile. Now our experience has taught us that we *can* do a better job, and in some cases, we wouldn’t have had that experience if it hadn’t been for the environmentalists.”

Again, however, it is important to realize, in wastewater treatment as in everything else, practical limits are still a fact of life, and not every iota of risk can be eliminated, regardless of how efficient future plants may become.

“National risk-assessment figures show that smoking causes some 600,000 instances of cancer annually, while all the nation’s wastewater plants combined cause just 1.29 instances per year,” notes Reagan Cook. I’d say that puts wastewater pretty far down the list as a potential health threat.”

An entire modern mythology has sprung up in recent years around the “garbage crisis” that supposedly exists in the United States, but in the opinion of some of the most knowledgeable experts in the field of solid waste disposal, it is a “crisis” that has been blown totally out of proportion, causing unnecessary panic.

*“The garbage problems that Americans face are real, and solving them in sensible ways will cost money and make demands on our life-styles,” say William Rathje and Cullen Murphy in their 1992 book, Rubbish! The Archaeology of Garbage, What Our Garbage Tells Us About Ourselves.*

*“. . . But crisis thinking typically results in ill-conceived and counterproductive initiatives,” they add. “A more rational garbage policy would consist of . . . making improvements at the margin all the time, applying the fruits of advancing technology and of new knowledge about human behavior, thinking through the second-, third-, and fourth-order consequences of proposed initiatives — and then turning our minds to other things.”*



(The above statement, incidentally, could be called an accurate description of what the NTMWD is doing with all its regional services.)

As Americans have been besieged with advice on how to be “good environmentalists,” many of the hysterical myths associated with garbage have been accepted as fact and have become deeply rooted in the public mind. The Reason Foundation, a nonprofit public “think tank” based in Santa Monica, California, has compiled hard facts to disprove the most pervasive of these myths.

We are not, for instance, running out of landfill space, as extremists often claim. In reality, the Reason Foundation emphasizes, all the garbage that America is likely to produce in the next 1,000 years could fit into a landfill occupying less than one-tenth of one percent of the land area of the continental United States. Land shortages exist in some localities, but not on a nationwide basis.

Neither are Americans especially wasteful people, as is frequently charged. American households actually produce only about 7 percent more solid waste on average than the Japanese, who are widely perceived as being extremely frugal and conservation-conscious. The amount of waste produced in the U.S. in relation to the gross national product has been falling, not rising.

The idea that we should “recycle everything” has some major flaws, the foundation notes. Recycling itself can cause environmental harm in the form of increased fuel consumption and more air pollution, so the environmental cost of some types of recycling may exceed any possible benefits. The only areas in which recycling is truly successful are those where favorable market conditions exist.

The oft-repeated contention that there is simply no safe way to dispose of solid waste is simply not true — and it is becoming less true every year. Today’s emerging technologies signal a new era in solid waste disposal that poses no threat to human health or the environment, and the NTMWD is in the forefront of these developments.

*“With the property we have now, we’re in good shape on landfill space until about 2030,” says Jack McJunkin, chairman of the district’s Solid Waste Committee, “and by then, we’ll be able to take advantage of a number of technological developments.”*

One of the most exciting prospects for solid waste disposal is nonpolluting incineration. “I’ve pushed to set aside room at all our major solid waste facilities to include incineration in the future,” McJunkin says. “Although there are still a lot of unresolved issues, we may one day be able to use steam power from incineration to run our plants.”



The list of myths goes on, but the implications are clear: A large percentage of the American public is being duped into accepting “facts” that are actually either distortions of the truth or outright lies.

As authors Rathje and Murphy point out:

*“Popular misconceptions about what landfills are filled with are matched by popular misconceptions about how fast they are filling up. There can be no disputing the fact that there is, for the time being, an acute shortage of landfills still available to take deposits, especially in the northeastern United States. Since 1978, according to the Environmental Protection Agency, some 14,000 landfills have been shut down (leaving some 6,000 in operation).”*

These figures somewhat overstate the problem, however, and even the EPA is “halfhearted” about offering them, the authors add. Many of the shutdown ‘landfills’ were actually open dumps closed for environmental reasons, and most have tended to be relatively small.

Among the most common public misconceptions about landfills is how much they contain of various substances. For example, it has been widely reported that about 30 percent of the nation’s landfill contents consists of plastic, which Rathje describes as “everybody’s favorite villain.” And yet, based on extensive excavations in eleven major landfills from coast to coast, Rathje found that plastic makes up only about 10 percent of landfill contents — just a third of what has long been accepted as “fact.”

Furthermore, the percentage of plastic shows no signs of increasing over what it was twenty years ago, contrary to another myth. One key reason for this is that manufacturers have steadily developed lighter-weight plastic packaging. Since 1977, the weight of a two-liter soda bottle has dropped from 68 grams to 51 grams and a plastic milk jug from 98 to 60 grams.

*Despite massive recycling efforts that predate the environmental movement by decades, paper remains a far greater consumer of landfill space than plastic. It is not only the largest single component of landfills, but also the fastest-growing component.* “From 35 percent in 1970, paper has burgeoned to 50 percent,” says Rathje. The most common variety is newspapers, which occupy up to 15 percent of some landfills.

Fully 9 percent of all residential garbage by weight is edible food, studies have shown, and another 11 percent consists of such inedible “leftovers” as fruit and vegetable peels, skins and bones. In other words, the food and food residue that



we throw away makes up about one-fifth of all our garbage when calculated by weight.

*"This represents a phenomenal waste of money," says Rathje. "... If each household wasted less food, the resulting decrease in refuse could be felt instantly."*

Yet another popular fallacy concerns disposable diapers, which are widely condemned, but which 85 percent of parents of infants and toddlers now use exclusively. While it is true that some of the materials in disposable diapers are non-biodegradable, these diapers account for less than one percent of the space in landfills, and it can be argued that the energy expended in washing, drying, picking up and delivering reusable diapers could cause even greater environmental harm.

The point is that the nation's "garbage crisis" is not the product of two or three easily identifiable "culprits." All of us contribute to it in one way or another; all of us share in the responsibility for dealing with it — and all of us also have the power to lessen its severity to some extent, if we only will.

"We need to educate the public about the solid waste we all generate as consumers and home owners," says Reagan Cook. "The average citizen also needs to understand that he or she can do something to control this."

As mentioned in Chapter 13, Northeast Texas is fortunate in that it still has ample space for landfills within close proximity to the developed areas that produce solid waste. Not all parts of the country are nearly so lucky.

By contrast, the New York Metropolitan area is desperately short of space. New York City operates the 3,000-acre Fresh Kills Landfill on Staten Island, the world's largest landfill, which has been in use since 1948. When the landfill opened, the site was a marsh; today it is a mountain whose core is garbage — a core that measures up to 150 feet thick in some places.

Fresh Kills receives more than 100,000 tons of solid waste per week, but this is only about half of what the "Big Apple" produces, and when the 2.9 billion cubic feet of space in the giant landfill is exhausted in about 2005, no one knows for sure what will happen to New Yorkers' garbage. For many years, the city dumped part of its solid waste into the ocean. Recently, it tried shipping some of it by train to distant out-of-state landfill sites, but protests at its destination points put an end to this practice, at least temporarily.

Not surprisingly, residents of New Jersey, a state with a critical landfill short-



age, pay the nation's highest cost for solid waste disposal (more than \$130 per ton compared to a nationwide average of just over \$30 per ton), and permitted landfill sites are priced at up to \$500,000 per acre for land that would otherwise sell for \$20,000 per acre. More than half of New Jersey's solid waste is exported out of state. Pennsylvania may also have to begin exporting its garbage by as early as 1997.

For urban centers in the overcrowded Northeast, incineration may be the only feasible solution to the problem by the end of the century, short of shipping garbage to the uninhabited reaches of Nevada or Arizona for burial. But even in New York State, studies have found some 200 square miles of land suitable for landfills — conceivably enough to last for centuries — if protesters will allow it to be used for this purpose.

A primary reason for most landfill crises, including the one in which the NTMWD became embroiled in the 1990s, is the much-publicized NIMBY (not in my backyard) syndrome. It has delayed or prevented the opening of new landfills to replace those reaching capacity, and even expanding existing landfills to increase capacity has run up against NIMBY opposition.

NIMBYs are certainly no strangers to the NTMWD, and landfills are not their only targets. Their philosophy and impact on public services will be discussed in more detail a little later.

Meanwhile, about 73 percent of the nation's municipally collected solid waste still ends up in landfills, and for the NTMWD service area there is no question that properly designed and operated landfills are likely to remain the disposal method of choice for a long time to come for any materials left after alternative methods are applied.

"As long as the landfill concept works as well as it does in our geographic area, it will be the best and most economical way to dispose of solid waste," says Plano's Alex Schell III. *"In areas where new landfills can't be developed because of overcrowding, people will have to resort to other methods, such as incineration, which is very costly even when it works right, but certainly preferable to hauling it off in barges and dumping it into the sea."*

In Schell's view, there is no reason to look beyond the landfill concept in Texas for the foreseeable future. "If a landfill is properly designed, properly contained and properly engineered — as ours are — then it works fine and nothing bad happens," he emphasizes. "In cases where they aren't properly designed and contained, then, yes, there can be leakage. But ours haven't caused any problems



and we don't anticipate any problems, so *I think that landfills are the way to go in this area until you reach the point in technology where some new, cost-effective system can be developed.*"

Many people have the notion that landfill sites become worthless wastelands once they reach their capacity and are closed, but nothing could be further from the truth. Richardson's former landfill site is now a very attractive and heavily used public park, and scores of other "retired" landfills across the country have been similarly transformed into parks, golf courses and even upscale residential neighborhoods. New York's Kennedy and Newark Airports are both built on old landfills, as is the Veterans Administration Hospital in Cincinnati.

Millions of people use these facilities each day, most of them blissfully unaware of the compacted garbage of previous generations lying directly beneath them — further proof that, when properly sited and operated, landfills pose little threat either to human health or the environment.

Complicating the solid waste problem and adding immeasurably to public confusion surrounding the issue is the fact that the environmental extremists are divided into two separate camps, each advocating its own approach and pursuing its own agenda while often ignoring those of the other.

Those known as "source reductionists" concentrate their efforts on banning certain types of products that add to the volume of solid waste, such as packaging materials, plastics and disposable diapers. Their lobbying/agitation tactics have led to many nonsensical state laws and city ordinances across the country.

The "forcible recyclists," meanwhile, attempt to make recycling mandatory for everyone. Toward this goal, they often try to block or delay the opening of new landfills or the expansion of existing ones, as they did in the case of the NTMWD's McKinney Landfill. They operate on the simple premise that if there is no place to put the garbage, it will have to be recycled.

(All non-recyclable organic material, they maintain, can be converted into methane gas, a source of energy. The problem with this, of course, is that virtually no facilities now exist to collect and store the gas. For this reason, even in large landfills equipped with vents to release methane gas, it is usually burned on site and serves no useful purpose.)

*"Unfortunately," says the Reason Foundation's Lynn Scarlett, "efforts to ban products and force recycling usually have four adverse consequences: (1) decisions are based on momentary fads, rather than on real costs and benefits;*



*(2) actual legislation tends to be shaped by special interests; (3) regulations have unintended consequences, which may be worse than the original problem, and (4) regulations fail to achieve their objectives, leading to pressure for even more regulation."*

The pressure generated by these two groups is usually felt most keenly by elected political officials and/or their appointees, who, because of their lack of background, general knowledge and experience in the area, tend toward the same emotional, ill-informed response as private citizens.

"You can't expect every political officeholder to be an expert in solid waste disposal or wastewater treatment or water resource management and development," says Carl Riehn, "but we desperately need people in positions of political power who will at least listen to the experts before making their decisions. Too often, in our experience, the regulatory bodies have ignored the experts and allowed themselves to be stampeded by misinformation."

Anyone who insists on pursuing a utopian solution to environmental problems is inevitably doomed to disappointment, Riehn adds. "We can't go back to the days when there was no packaging industry, no plastics, no disposable convenience products, and not very many people," he says. "And we can't leap forward into some future time when we can press a button and make our waste materials disappear or beam them into outer space. We have to use our present capabilities to deal with our problems. Those of us who still believe that landfills are the best available system for disposing of solid waste don't necessarily think this will hold true forever. At some point in the future, we'll undoubtedly have other alternatives, but for today, landfills simply make sense."

In their well-intentioned efforts to prevent pollution, both public officials and private citizens should stop looking for panaceas or miraculous "silver bullets" that will solve every problem, William Rathje says.

*Source reduction, recycling, incineration and landfills all have their advantages and disadvantages, and the goal should be to discern where and how each of these approaches can work best among America's widely disparate communities and regions.*

"Extremism with respect to garbage solutions is ideologically satisfying," Rathje adds, "and some of the nation's most prominent extremists on garbage issues have played a valuable educational role. In the real world, however, an insistence on utopia always causes trouble."

. . .



While much of the “utopian” philosophy has recently been focused on the area of solid waste, it has also spilled over into other fields — and wherever it has gone, trouble has followed.

A slightly different version of “utopianism” has inspired such groups as the Texas Committee on Natural Resources — the same organization whose lawsuit stalled the NTMWD’s Cooper Reservoir project in the courts for thirteen years — to try to halt construction of virtually every proposed new reservoir in the state.

In the spring of 1993, more than two decades after it asked a federal court for an injunction to prevent the construction of Cooper Reservoir, the same Texas Committee on Natural Resources was hinting at similar action if the City of Dallas proceeded with a master plan to build a series of small recreational and flood control lakes along the Trinity adjacent to the downtown area.

“The goal of these people seems to be nothing short of keeping every stream in Texas just as God created it,” says Reagan Cook, “and it doesn’t seem to matter how much the public needs a project or how desirable and beneficial that project may be for most of us. This group’s philosophy seems to be that any man-made development is bad and that all streams should be left in their ‘natural state,’ regardless of the consequences. *They either overlook the fact that water conservation has provided and protected resources for millions of people, or they scorn that conservation for bringing in more people.*”

It is among the “utopians” that the approach to risk reaches the most bizarre extremes. In their view, any risk whatsoever to the environment, wildlife or human health is unacceptable — no matter how inconsequential it may be. Studies show, for example, that the risk of any given person being struck by lightning is three times as great as the risk of the same person contracting cancer from chloroform in a public water supply.

The NTMWD recognizes that so long as any potential for harm exists, efforts to develop additional safeguards must continue. One example of these efforts can be found in the Continuous Automated Monitoring System (CAMS) which conducts hourly tests of changes in river flow, dissolved oxygen, water temperature, specific conductance and pH in the East Fork, West Fork and main stem of the Trinity River. Along with several other municipal and regional entities, the NTMWD pays a portion of the cost of operating CAMS and of developing one of the most extensive water quality databases in the nation.

The CAMS system is especially valuable in measuring the quality of treated wastewater and ensures that the district will have adequate data on which to



base future facility expansions and management decisions. It has shown conclusively that water quality in the Trinity has vastly improved over the past decade or more.

Still, there are those within the environmental movement who keep pressing for additional regulations and restrictions, and their persistent allegations of potential health risks and environmental damage continue to sidetrack vital developments and undermine the public interest.

One by one, water-supply and flood-control lakes that had been in Army Corps of Engineers plans for decades have fallen victim to the “utopian” philosophy — and to litigation or the threat of litigation by groups espousing it — until every proposed COE reservoir project in Texas has now been abandoned or shelved indefinitely.

Deep cuts in federal appropriations for public works projects have been a definite factor in vastly reducing the number of such projects nationwide. But Texas — once a national showplace for reservoir development — has been especially hard hit. And the anticipated expense of drawn-out legal battles and extended construction delays as a result of new environmental laws has left the Corps reluctant to proceed with projects that would require years to complete, even under ideal circumstances.

Because of a string of abnormally wet years, beginning in the late 1980s and extending through mid-1993, there has been little recent impetus for braving lawsuits and incurring the huge costs of constructing lakes. But with Texas’ population continuing to mushroom and existing public water supplies dangerously inadequate in a number of areas, many of these unbuilt reservoirs are likely to be desperately needed in the not-too-distant future. (See Chapter Fifteen. )

When and how needed reservoirs will be built remains very much in doubt today, as does the question of who will build them. But in the opinion of many observers, they will not be built by the lawsuit-weary COE, or with federal funds.

“In my opinion, Cooper will be the last lake ever built in the State of Texas by the Corps of Engineers,” says Mesquite’s Loncy Leake. “One reason is that there just isn’t any money available. Another is that both the federal and state governments are becoming more and more a bureaucracy of regulators. They’re devoting more and more time and effort to enacting regulations and less and less to development.”

Building new reservoirs is, of course, not the only way to meet the water needs of a steadily increasing area population. Better use of existing resources, as illus-



trated by the NTMWD's Texoma project, is an important part of the solution as well. But, again, such projects also are frequently opposed on environmental grounds.

Clouding the future of water resource development is a legal atmosphere that continues to be unstable, shifting and muddled where environmental issues are concerned. "Each new session of the Legislature and each new session of Congress produces new laws that alter the regulatory apparatus, change the requirements and confuse the issues," says Leake, a veteran attorney. "We need regulations, but it would be nice if someone in government would do something *for* water development for a change."

Much of the federal legislation passed in recent years has heavily impacted the COE's ability to move ahead on new water resource development projects. As Lt. Gen. H.J. Hatch, the chief of engineers for the Corps, explained recently: "The secretary of the Army has been directed to include environmental protection as one of our primary missions, and the Water Resources Development Act of 1990 (WRDA-90) established a 'no net loss' policy as an essential part of all water resources development."

Under WRDA-90, environmental protection must be given equal consideration with flood control and navigation in the planning, design, construction and operation of COE projects, and no new project may result in any overall net loss to the nation's wetland base, as defined by acreage and function.

By and large, the government regulators are reacting to pressure from the extremists, Leake contends. "No matter what the project is, you've always got opposition from people who call themselves environmentalists," he says. "The opposition of the environmentalists is very strong and too many people are being swayed by their negative message. I hate to admit it, but they're getting their message across better than we are right now."

The last thing the NTMWD wants, Leake and other officials emphasize, is to create an "us versus them" atmosphere where environmental issues are concerned. "We want to address the legitimate concerns of everyone affected by any of our projects, and we always want to be sensitive to real issues," says Carl Riehn, "but we can't allow falsehood and exaggeration to keep us from fulfilling our commitment to the communities we serve."

The disarray that has long characterized statewide water planning, plus heavy budgetary constraints in Austin, make it unlikely that the State of Texas will be in a position to finance any reservoir construction in the foreseeable future, Leake



says. Thus, the financial burden will almost certainly fall on individual cities and their taxpayers — and the expense in many cases will not be limited to actual construction costs, but will entail mammoth legal fees to overcome the challenge of “utopianism.”

But even the most “utopian” of true environmentalists have caused less trouble than those who use environmental issues as a “smoke screen” to promote their own economic self-interests.

“As we’ve seen over and over again, many of those who have climbed on the environmental bandwagon are a lot more interested in their pocketbooks than in the environment,” says Riehn. “We saw it at Lake Texoma, where a group of marina operators were afraid their business would be adversely affected if we took water from the lake. And we’ve seen it at Wilson Creek, the Custer Road Transfer Station and the McKinney Landfill, where a few property owners have tried to stop needed facilities from being built because they were afraid their real estate values might suffer.”

These are representative of an anti-growth, anti-development, anti-change mentality that seems to say, “I’ve gotten what I wanted, so everyone else can go to blazes.” And nowhere is this mentality more clearly demonstrated than in the self-serving posture of the NIMBYs — a growing and highly vocal minority made up to a large extent of relatively affluent citizens who are determined to preserve the sanctity of their properties at all costs.

Their battle cry can be heard across the region: “Not in my backyard!”

A NIMBY can be described as someone who feels that owning a home or a piece of business property gives him or her the right to control or restrict development in the entire surrounding area. Those afflicted with the NIMBY syndrome tend to regard the rest of society with suspicion, most government agencies with fear and distrust, and all public works projects as leper colonies in disguise.

“They’re the same people who buy a home near an airport for the sake of convenience because they fly a lot, then oppose the expansion of the same airport because of the noise and congestion that will result from *other* people using it,” says Riehn. “Or they buy a piece of residential property on the shore of a new lake, then try to stop construction of a public park nearby because it may attract too many ‘outsiders.’”

“These people are opposed to almost everything except restricted single-family residences and seem to want their entire world to consist of 3,000-square-foot homes on one-acre lots. They not only oppose wastewater treatment plants, trans-



fer stations and landfills anywhere near them; they also fight commercial development, less-expensive housing, hospitals, nursing homes, transportation centers, correctional institutions, cemeteries and other public facilities.”

Even projects that are roundly applauded by dedicated environmentalists are now frequently being targeted by NIMBYs. As Rathje notes:

*“(G)arbage-sorting centers and recycling centers, like any public works projects, are increasingly becoming objects of NIMBY-type opposition. . . . The work being done inside them may very well be God’s. But . . . they bear the unholy taint of garbage.”*

By one name or another, NIMBYs have been around for a long time and are not likely to become extinct anytime soon. In the meantime, the best defense against them is to recognize their self-serving negativism for what it is and stop taking them so seriously.

“No one in his right mind wants a lead smelter or a fertilizer factory next door to him,” says Riehn. “But if you get upset at the idea of a few garbage trucks passing within a block of your house or the fact that you live within two miles of a modern, virtually odorless wastewater treatment plant, it may be time to ask yourself if you’ve been infected by NIMBYism.”

. . . .

Environmentalism is an issue that will not — and undoubtedly should not — go away. More than any other movement of this century, it has exposed the excesses and neglect of past generations that could endanger the environment, wildlife and human health, and it has set the stage for vast improvements in the science of pollution control and prevention. Meanwhile, it has made the NTMWD and similar entities more conscious than ever of the need to preserve and protect water resources.

Most of the tens of millions of Americans who are concerned about the environment and the state of the earth today are realistic and progressive enough in their attitudes to realize that not all “natural” phenomena are inherently good, just as all man-made things are not inherently bad. They also realize the indispensable role that science and technology play in making our world a safe, comfortable place to live.

Along with the NTMWD, they are prepared to walk the “chalk line” that balances environmental protection with public need.

But on the other side are what economist and university professor Richard L. Stroup, coauthor of a task force study on environmentalism for the National Center



for Policy Analysis, calls “a small minority of environmentalists . . . (who) do not believe in human progress, asserting that there is nothing to progress to.”

Often idealizing the life of the American Indian or life in medieval communities, these people believe that the best of all possible worlds “lies not in the future, but in the past,” Stroup says. “They oppose science, technology, industrialization and economic growth. At times, they imply that humans are an unfortunate accident of evolution and have no natural place on our planet.”

Reduced to its simplest form, says Stroup, their philosophy is:

*“If man does it, it’s bad; if nature does it, it’s good — even if it’s the same thing.” In their view, nature should be left strictly alone and undisturbed, no matter how harsh or destructive it may be. If floodwaters ruin homes and ravage crops, it is because humans put the homes and crops in the wrong place. By the same token, irrigating desert land to make it bloom and produce an agricultural bounty for mankind is wrong, because the desert is no longer in its arid, nonproductive “natural” state.*

The reactionary environmentalists thrive on crises, and it is always to their advantage to magnify any element of risk and to blame it on scientific or technological “meddling.” Meanwhile, they conveniently overlook the fact that deadly water-borne diseases ran rampant before modern water treatment techniques were instituted.

“Even though a ‘time bomb’ has been supposedly ticking away for years,” says Elizabeth Whelan, author of the book, *Toxic Terror*, “no scientifically creditable evidence exists for the ‘explosion’ of death and disease cited by the environmentalists. Those ‘seeping,’ ‘oozing’ and ‘brewing’ chemicals about which the nation is all shaken up seem not to have affected our health in any measurable way. Indeed, the technological society that produced those chemicals has improved our health far more than it has harmed it.

“All one has to do is look at the substantial increase in life expectancy and decrease in the death rate which Americans have enjoyed during this century to realize that the sum of all the health hazards to which we are exposed must be less than it was in the past,” she concludes.

The reactionary environmentalists have stampeded government into instituting many foolish, counterproductive laws and restrictions. Recently, for example, the Environmental Protection Agency shut down some three dozen wells in California because the water contained trace elements of a “carcinogenic chemical.”



What the EPA ignored in taking this action was that the level of known carcinogens is many times greater in ordinary California tap water than in the water of the wells that were closed.

“Cancer-causing chemicals are naturally present in almost every meal we eat and in almost all the air we breathe,” says Stroup. “We can’t create a cancer-free environment, but thoughtless regulations can make us less safe.”

One unhappy by-product of the “climate of fear” created by the reactionary and “utopian” schools of thought can be seen in the huge disparity between what we spend as a nation on pollution cleanup — some of it mandated by pointless laws — and on furthering the scientific knowledge that could produce a permanent cure for the pollution problem. Currently, our hodgepodge of panicky antipollution efforts costs about \$72 billion per year, or roughly eight times what we spend on all forms of basic scientific research.

Realistically speaking, it will probably take years to remedy this situation, clarify the legal issues relating to the environment and unravel the regulatory maze that now surrounds it. In all likelihood, there will be many more clashes between the more radical environmental elements and local governmental entities attempting to provide essential public services.

*One of the chief goals of the NTMWD for the balance of the 1990s and beyond will be to continue to make maximum use of state-of-the-art science in regionalizing solid waste disposal, wastewater treatment and water purification. Another will be to refine and streamline all district programs to serve the public with maximum efficiency and cost-effectiveness, while always giving careful consideration to legitimate health and environmental concerns.*

“We won’t shy away from our responsibilities, even if it means having to fight more lawsuits and obstructive tactics,” says Carl Riehn. “When we’re asked to fill a need, we’ll do our best to fill it, but we’ll always do it in environmentally sound, scientifically proven ways.”

In other words, for as long as necessary, the NTMWD will continue to walk that “chalk line.”





# 15

## Lessons of the Past and a Look Toward the Future

*"To ensure that our children and our children's children have the quantity and quality of water they need, we have to keep our eyes focused on 2050. We need to have our plans clearly formulated at least that far ahead. Persistent planning for the future is all that's allowed our water supply to stay ahead of a constantly increasing demand,"*

— Loncy Leake, Chairman  
NTMWD Water Committee  
and director from Mesquite

Almost a half-century has now elapsed since a handful of pragmatic but visionary men planted the seeds from which the North Texas Municipal Water District has grown. During that span of time, the scope and character of the district and the communities it serves have changed enormously, but the principles and ideals on which the district was founded have never varied. And the pioneering spirit that motivated those early leaders to venture into new and challenging areas of service and mutual problem-solving remains as strong today as it was when they banded together some 48 years ago to form the Tri-County Lavon Reservoir Association.

The accomplishments over the past four decades of the uniquely crafted entity that grew out of that association to become today's NTMWD go far beyond providing essential day-to-day services at an affordable cost to dozens of member and customer communities. As it has performed these vital functions, the



district has also served as a unifying force for the communities of its region, helping them to overcome obstacles jointly that might otherwise have separated them, and enabling them to work together for the common good.

Today, the isolated small towns and hamlets that dotted the East Fork Basin in the 1940s and 1950s have been absorbed into the expanding, ever-changing fabric of one of the nation's most populous and fastest growing metropolitan areas.

As of mid-1993, the district provides water across 1,600 square miles of service area to more than 800,000 individual users — a figure that is expected to approach 1 million by the turn of the century. Meanwhile, its regional wastewater treatment and solid waste disposal programs presently serve 400,000 and 350,000 persons respectively. And one of the best illustrations of how quietly, efficiently and harmoniously the district works with the cities using its services is the fact that the majority of private citizens who benefit daily from its services are totally unaware of its existence.

"Even in our charter-member cities, most folks simply don't know we're out here," says NTMWD Executive Director Carl Riehn, "but if we weren't doing our job, you can bet they'd find out about us in a hurry."

Despite its "low profile" with the public, the district has become a national — even international — model of how well the concept of regionalized services can work for the benefit of all concerned. Its successful trail-blazing example has been studied by observers from many other states and foreign countries, who have used it as a guide in formulating programs to fit their own needs.

"Part of the district's uniqueness lies in the fact that you have businessmen running a governmental entity," says Richardson's Jack McJunkin. "This has enabled us to do some pretty unusual things and also to look well into the future."

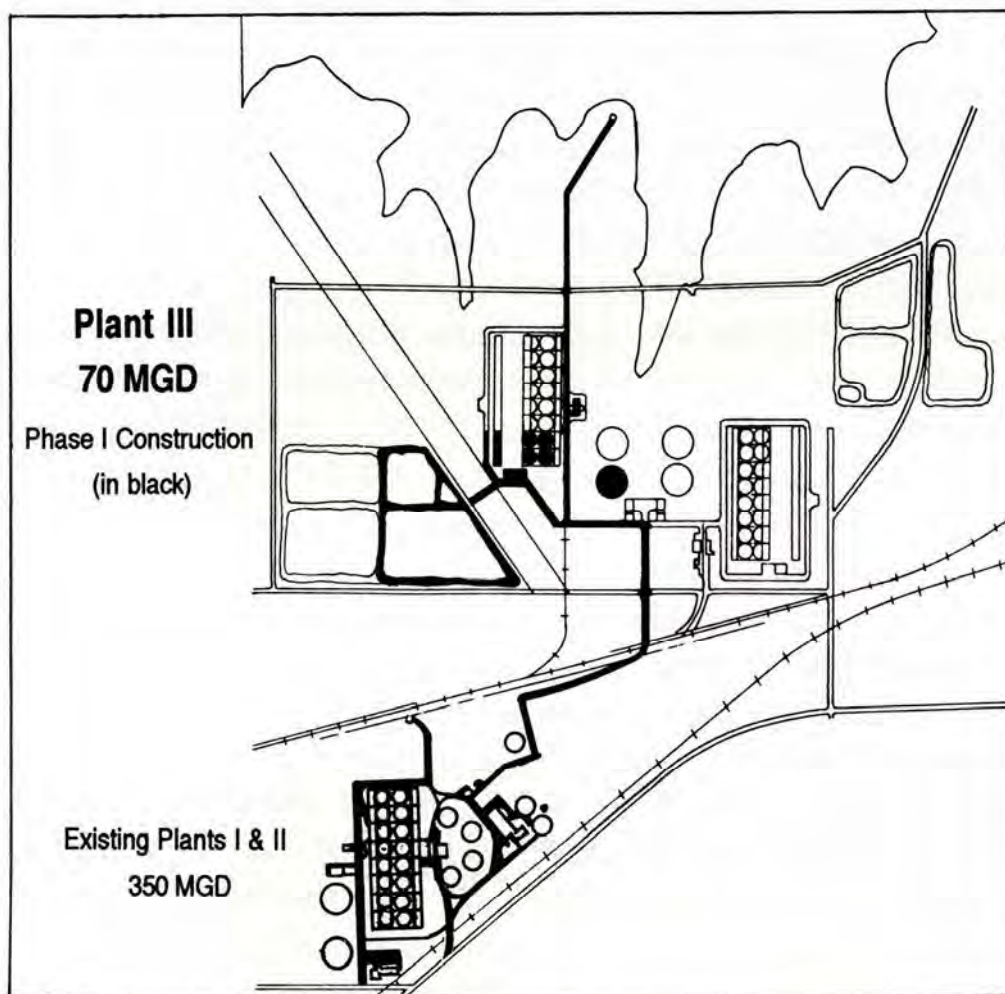
While continuing to utilize the services of top consulting firms in the legal, financial and engineering fields, the district has also assembled one of the nation's most knowledgeable and best-trained "in-house" staffs of experts in areas ranging from research and development to the day-to-day operation of water treatment plants, wastewater plants and solid waste facilities.

"One of our most important strengths has been our employees," says Loncy Leake, the veteran director from Mesquite. "Because of their dedicated performance and low turnover rate, we've always had the quality personnel we needed to do the job right. As a board, we need to do everything in our power to see that this continues."

One cannot speak of dedicated employees of the district without mentioning



### NTMWD Water Treatment Plant III (Phase I)



the late John S. Waddell, Jr., who served the NTMWD for almost eighteen years and held the post of deputy director at the time of his sudden death in March 1992. Waddell joined the district in October 1974 and his responsibilities included coordinating operations of the district's three regional systems — water, wastewater and solid waste — and he brought unique skills and strengths to this demanding job.

"John was an outstanding businessman, an effective leader and a good friend," says Riehn. "He inspired confidence in our organization and has been greatly missed by everyone with whom he worked."

The district's staff as a whole draws high praise from directors and officers of the NTMWD.

*"It's impossible to say enough about the loyalty, efficiency and work ethic of*



*our managers and the people who work under them," says McKinney's Robert C. Allen, the district's immediate past president (1992–93), who has served on the board of directors since 1988. "From top to bottom, our staff is made up of highly skilled people who are committed to doing their best — and it shows."*

Both the district's management and staff are classified as "excellent" by Richardson's Jack McJunkin. "We've set forth clear goals, given our management and staff the tools to get the job done, and they've done the rest," McJunkin says.

Garland's Richard Roach wholeheartedly agrees. "Through the years, the district has done an outstanding job of hiring personnel," says Roach. "The result of that is a dedicated group of people, a smooth operation in all areas, and very few personnel problems."

Together, the officers, directors, administrators and staff of the NTMWD continue to explore new ways of putting the regionalization concept to practical use, realizing that the years ahead will bring increasingly greater demands in this area. As dramatic as the region's growth has been in the past, many projections point to even more impressive growth in the future. By some authoritative estimates, the Dallas-Fort Worth Metroplex will experience the highest rate of population growth of any urban area in North America over the next few decades.

*This means that the demand for NTMWD regional services may increase even more rapidly during the forty years just ahead than it has during the forty years just past. It means that existing resources must be fully utilized, that new sources of water must be found or created, that new treatment facilities and delivery systems must be built, that new science and technology must be incorporated into every program and service, and that new challenges must be faced and overcome to achieve a balance between preservation and productivity. Even as suburban cities and their infrastructures expand, for example, older elements of those infrastructures are having to be rebuilt, possibly leading the district into more previously unexplored areas of service. Many cities have fewer sources of revenue today, so each source must be more productive, and regional services must play their role.*

*And while all this is going on, the district must continue — as it always has — to deliver the same high-quality water and the same high-quality service that its members and customers have learned to expect from it, while simultaneously protecting the environment and controlling costs.*

Fortunately, the district shows every indication that it can successfully handle



all these myriad responsibilities — although, for a number of reasons, the “chalk line” mentioned in the preceding chapter may become more and more of a “tight-rope” in years to come.

Of all the crucial lessons learned by the NTMWD in the past, none is more important than recognizing the need to look constantly ahead, and, while always hoping for the best, to prepare resolutely for the worst. Planning adequately for future needs — in terms of decades, rather than years — and then acting decisively to develop the resources to meet those needs have always been hallmarks of the district. And in today’s increasingly complex, crowded and confusing world, planning and follow through are more important than ever.

This is why the NTMWD is actively at work today to design the facilities and secure the water resources that will be necessary in the year 2050 when the district could be called upon to serve a population of 2.5 million or more. It is also why the district has not allowed itself to be lulled into a false sense of security by its relatively enviable position among public water supply entities in Texas and the Southwest. Not even the bountiful rainfall of the past several years, which has kept area reservoirs filled to the brim and all but washed away most people’s fears of future droughts, has kept the district from searching determinedly for additional sources of water.

For those who have forgotten the harsh lessons of the 1950s, or those who never encountered them in the first place, the obvious question would seem to be: “Why? In the midst of plenty and with vast existing supplies of water that have never yet been tapped, why bother?”

Indeed, on the surface, the NTMWD would seem to be in a highly advantageous situation. In addition to the safe yield of 94 million gallons per day from Lake Lavon, the district also has 75 MGD from Lake Texoma available immediately and holds the rights to an additional 44 MGD from the Cooper Reservoir, giving the district a total capacity of 213 MGD. A \$25 million pipeline to bring raw water from Texoma to Lavon has been completed and ready for use for several years. Meanwhile, the first two phases of an even more expensive 84-inch pipeline linking Cooper with Lavon are nearing completion on a schedule that will make the first Cooper water available in 1995. But no water from either of these latter two sources has even been needed as yet by district members or customers because of heavy rainfall.

In view of such massive untouched reserves, it would seem perfectly justifiable



for the district to “rest on its laurels” now, or at least to relax its efforts for awhile. Instead, it has chosen the exact opposite course, pressing ahead without pause in quest of even more water — water that may not actually flow into NTMWD pipelines before the mid-21st Century, but which can be available much sooner if necessary.

“In spite of all the persistent rain we’ve had recently, there’s no question that another drought is coming,” emphasizes Carl Riehn. “The only real questions are ‘When will it happen?’ and ‘How severe will it be?’ Sooner or later, this area is certain to see drought conditions that will be as bad as, or maybe even worse than, those of the 1950s. When they come, the district intends to be as well-prepared as possible.”

Guided by this philosophy, the NTMWD in 1991 opened negotiations with the Oklahoma Water Resources Board (OWRB) aimed at securing what is believed to be the first interstate water agreement of its kind in the United States.

Under a plan approved by the Oklahoma board and authorized by the Oklahoma Legislature, the NTMWD would be granted the right to purchase surplus water from the Sardis Reservoir and the Kiamichi River Basin in southeastern Oklahoma. The reservoir, with a safe yield of 140 million gallons per day is located about fifty miles north of the Texas-Oklahoma border and near the town of Clayton. It is in a sparsely populated area that presently requires only about 500,000 gallons of water per day from the lake and is projected to need no more than 10 MGD in the foreseeable future.

Known informally as the “Kiamichi Project,” the plan would add the surplus storage capacity of the reservoir — up to 130 MGD to the total resources of the NTMWD, giving the district enough water to meet anticipated demand until the mid-years of the 21st Century.

“To put it into perspective, the Kiamichi Project would give us access to more water than our storage rights in Lake Texoma and Cooper Reservoir combined,” explains Riehn. “Under present growth conditions, the water we have available from Lavon, Cooper and Texoma will meet the needs of the district until about 2007, at which time the Kiamichi Project would kick in.” (Before the water could flow to users in the district’s service area, of course, the longest and most expensive pipeline ever constructed by the NTMWD would have to be completed.)

This type of agreement to sell and transfer water from one state to another would apparently be unprecedented in the history of U.S. water transactions, according to officials in both states.

Even with formal endorsement by the OWRB and the passage of a resolution



by the Oklahoma Legislature authorizing the sale of the water, there has been some opposition to the move by residents of the Sardis Reservoir area and a few Oklahoma lawmakers, whose main concern is excessive lowering of the lake's water level. The ensuing debate has delayed finalization of the agreement and led NTMWD officials to warn that they would be forced to explore other alternatives if the delay should continue indefinitely.

But on June 8, 1993, the OWRB approved a resolution authorizing Chairman Kerr to execute an agreement with the NTMWD, subject to whatever revisions to the original plan might be deemed necessary by the chairman, and as of late summer, the climate appeared favorable for the historic agreement to be signed.

Whatever its eventual outcome, the Kiamichi Project once again demonstrates both the innovative approach and the farsighted planning with which the district is preparing for the future. It is also safe to assume that it will not be the last such initiative undertaken by the district.

The NTMWD is not waiting for a firm commitment on additional sources of raw water to increase its pumping and treatment capacity. In March 1988, the district completed the last expansion of its Water Treatment Plant II to bring its total treatment capacity to 350 MGD.

As "insurance" for the future, the district awarded a \$19.4 million contract in May 1993 for the initial 70 MGD phase of Water Treatment Plant III, to be built adjacent to Plants I and II in Wylie. Later, the new plant can be expanded as needed in increments of 35 MGD up to an ultimate maximum capacity of 560 MGD.

"This planning and plant site development allows us to economically expand our facilities to meet the cities' needs," says Riehn. "This enables us to obtain the most economical unit cost for water and assures our member and customer cities that their water needs will be met at reasonable rates for the next thirty to forty years."

Adds Richard Roach: "I would characterize the district as being in excellent shape where our overall water supply situation is concerned."

To make certain that this situation continues, construction of the second phase of Plant III could begin before the turn of the century, depending on population trends and weather patterns.

*"To ensure that our children and our children's children have the quantity and quality of water they need, we have to keep our eyes focused on 2050," says Loncy Leake, current chairman of the NTMWD Water Committee. "We need to have our plans clearly formulated at least that far ahead."*





NTMWD Water Treatment Plant III, under construction on a new site adjacent to existing Plants I and II. Construction of Phase I began in 1993, and when complete this phase will add 70 MGD in capacity. Total treatment capability then will be 420 MGD. Eventually, Plant III will be able to treat 560 MGD of high quality drinking water, making total treatment capacity for NTMWD in the future 910 MGD.

“Persistent planning for the future is all that’s allowed our water supply to stay ahead of a constantly increasing demand,” Leake adds. “When it finally does stop raining, we’re going to say, ‘Thank God, we took the steps we did,’ and we’d like for those who come after us to be able to say the same thing fifty or sixty years from now.”

From a statistical standpoint, there is every reason to believe that Texas will face a water crisis of truly monumental proportions long before the middle of the 21st Century. Figures contained in a report prepared in 1989 by G.E. Kretzschmar, then executive administrator of the Texas Water Development Board, strongly suggest that the state’s soaring population growth and its basically static water supply level are on a perilous collision course.

At that time, as the state was formulating its latest in a long series of statewide water plans, conservative projections showed Texas’ population climbing from



16.4 million in 1985 to 20.8 million in 2000, to 26.6 million by 2020, and to 31.6 million by 2040. In other words, in a space of 55 years, the population of the state was expected to almost double.

A second series of projections forecast even greater population growth — to 29.8 million in 2020 and 38.2 million in 2040, *but even if the lower estimates should prove more accurate, they still spell big trouble — and a lot of water-starved Texans — unless massive new sources of water can be found over the next few decades.*

*This is because, according to the same report, the state's available water supply is expected to increase only about one-fourth as much as its population during this same time period.* The dependable yield from the state's 187 lakes classified as major reservoirs was set at 11 million acre-feet per year, with another 5.3 million acre-feet available from underground aquifers for a total of 16.3 million acre-feet per year. Development of additional surface water sources was projected to increase the total only to about 21.5 million acre-feet per year, the report said — for a net gain of only 5.2 million acre-feet. (This was assuming the aquifers continue to supply the same amount of water as in the past, a dubious assumption in the view of some experts.)

Considering this, it is understandable that when the subsequent statewide plan, designed to supplant a previous plan drafted in 1984 and entitled *Water for Texas Today and Tomorrow*, was released in 1990, it placed its heaviest emphasis on conservation and reduced consumption, rather than on developing new water resources.

As the weekly publication, *Texas Water Report*, noted:

*"The basic message of the revised plan is that Texas, faced with a growing population, will have to make better use of its water resources. . . . The revision places more stress on water conservation and water quality protection issues and less on building reservoirs."*

As the principal author of the plan, Kretzschmar stressed the seriousness of the state's water situation and warned of potential hardships ahead. He pointed out that it is becoming increasingly difficult — and much more expensive — to build new reservoirs. He admitted that "in a number of areas of the state today, available yield in existing surface water or groundwater supplies will barely be sufficient to meet water demands during a critical drought period" and pointed out that aquifer levels and yields had been "significantly reduced" in some areas.

"New surface water development has also become increasingly constrained,"



Kretzschmar said, "with the most favorable sites for reservoir projects already developed; the remaining sites are generally less desirable because of distance from demand centers, potential yields, costs and higher environmental values." In addition, many of the remaining sites have not been protected for that purpose and have fallen victim to development or obstructionism.

Some provisions of the plan drew an immediate critical response from local water agencies. A letter from James R. Nichols, chairman of Freese & Nichols, Inc., consulting engineers for the NTMWD, dated September 12, 1990, took particular issue, for example, with the plan's "assumption that a 15 percent reduction in per capita municipal use can be achieved throughout Texas without hardship."

*"People use water to make their lives better," Nichols wrote. "Such amenities as ample water for bathing, garbage disposals, swimming pools and lawn watering all serve to improve the quality of life. Over time, these uses of water may become luxuries few can afford, and per capita water use may be reduced, but the reduction will not be painless. In our opinion, this change should not be forced by policy implemented from above or by the simple failure to provide enough water to give people a choice."*

In the letter, Freese also expressed concern over the "planned depletion of reserve water supply capacity and the planned underdevelopment of water supplies for growing water needs."

Some of the more apparent fallacies of the new water plan were pointed out most forcefully in the following paragraph of Freese's letter:

*"Prudent planning and development of water supplies in Texas in the past have met existing needs and provided a reasonable reserve of dependable yield for future growth. The draft plan would eliminate this reserve over the next 50 years. In this century, 192 major water resource projects have been built in Texas. . . . The draft plan calls for development of 17 projects in the next 50 years. This is fewer major reservoirs in 50 years than were developed in the 1980s, or in any decade since the 1930s. The draft plan projects a population increase of 18 million between 1990 and 2040, compared to an increase of 11 million between 1940 and 1990. The projected population increase in the next 50 years is 1.6 times greater than that of the last 50 years, but the draft plan calls for developing 1/9 as many new water supply projects."*



Because the state's geography, topography, water supply and economic interests vary so greatly from region to region, it has proved extremely difficult to formulate a water plan that addresses the needs of all Texans. This difficulty has been apparent in every water plan put forth in this century, and it continues to be apparent in the 1990 plan, which was "updated" in 1992 with a hodgepodge of new recommendations on what should be done to improve the plan by the Legislature, the governor, the lieutenant governor, the attorney general and the Texas Water Commission.

Meanwhile, some authorities believe that water use in Texas could more than double by 2030. If it does, much of the state could literally be "sucking itself dry" by that time, and the 1990 water plan will have faded into history as just one more in a long series of failed attempts to solve Texas water problems at the statewide level.

*If this should happen, it will be doubly tragic because there is actually no shortage of potentially available water in Texas. Studies show that in the wettest years between 1940 and 1970, up to 57 million acre-feet of annual runoff was recorded statewide, and even drought years produced some 23 million acre-feet of runoff. The problem is that the total storage capacity of all existing Texas reservoirs produces a safe yield of only about 11 million acre-feet per year, so most runoff continues to be lost.*

Efforts to produce a statewide water plan that is realistic, comprehensive and equitable to all sections of the state is complicated by a perennial "piecemeal" approach by the Legislature which has led to the creation of an incredible assortment of local agencies. In addition to fifteen river authorities, several multi-city water districts similar to the NTMWD and municipal water departments, Texas laws allow for the formation of no less than eleven other types of local water entities, all with their own constituencies and priorities.

Given all these political and logistical circumstances, effective planning and decisive action at the regional level would appear to be more important today than ever before.

"In many respects, it is much easier to identify development patterns, population trends, socioeconomic priorities and natural limitations on a regional basis, rather than on a statewide basis," says Carl Riehn. "Therefore, it may be more logical to let individual regions or watersheds formulate their own plans, and then let the state coordinate those plans to make sure that the needs of all regions receive fair and equal consideration."



Adds Loncy Leake: "Certainly, we need vision for the future, but maybe even more than that, we need perseverance for both the future and the present. We have to keep a 'worst-case scenario' in mind, even during wet cycles like the one we've been experiencing lately, when none of our cities are even using the minimum amount of water under their contracts. From the district's perspective, we need incentives to conserve water, but our bondholders also need to know that we're going to sell enough water to pay off our bonds."

Faced with such often-contradictory circumstances and such worrisome figures as those cited above, it is little wonder that the NTMWD has taken the lead among local and regional authorities in looking beyond the borders of Texas for water to meet the future needs of the citizens it serves.

. . .

While securing an adequate supply of quality water for the 21st Century must be considered the number one priority of the NTMWD in the 1990s, its officers, directors and staff also must deal decisively with other crucial issues as well. And although they are unrelated to the development of new water resources, some of these issues will directly impact the district's ability to deliver enough potable water to its users in decades to come.

One of the clearest messages conveyed by the 1990 Texas Water Plan is that, as the state's reserves dwindle, it will become increasingly reliant in the future on the reuse of water to extend its supplies. This means that more and more wastewater treatment plants with the advanced capabilities of the NTMWD's Wilson Creek Plant must be brought on line across the state. It also means that more and more of the wastewater produced within the NTMWD's service area must be treated according to the standards set by Wilson Creek, so that it can "rejoin" the supply of raw water available to the district.

As previously noted, the treated and purified effluent from the Wilson Creek Plant adds the equivalent of up to 24 million gallons per day of reusable water to the district's raw water resources. Over time, this amount will increase as new scientific methods are employed on an ever-broadening scale in wastewater purification.

In late 1992, for example, the new North McKinney interceptor line, the last link in the district's original Upper East Fork Interceptor System, began carrying the rest of McKinney's wastewater to Wilson Creek for treatment and enabled the permanent shutdown of a 46-year-old wastewater plant. When this happened, the old plant's effluent, treated to the state standard of 20–20, was replaced by



sparkling-clean effluent treated to strict 5-5-2-1 standards by the largest tertiary treatment plant in Texas — Wilson Creek.

A few months later, in the spring of 1993, the district took another major step in regional wastewater treatment when it completed \$14.3 million worth of expansion and improvements at the Mesquite Treatment Plant. Not only was the plant's capacity doubled, to 25 MGD, but the installation of primary clarifiers, fine-bubble air diffusion devices and other advanced systems resulted in more effective odor control and improved overall treatment standards of 10-15-3 for the plant.

The district now operates a total of sixteen wastewater plants, including ten which are owned by the district. They have a combined total capacity to treat more than 75 MGD, and together comprise a potential source of reusable water greater than the NTMWD's storage rights in Lake Texoma.

"The perfection of new methods of sewage treatment is producing some remarkable results," says Loncy Leake, "and we need to keep working for even greater improvements by incorporating the best that science and technology can offer into all our facilities."

In virtually all urban areas in Texas and the Southwest, the reuse of purified wastewater will become an increasingly desirable — and even essential — option during the next century, says NTMWD Director David B. McCall of Plano, chairman of the district's Wastewater Committee.

"We believe that, through its unprecedented experience with state-of-the-art technology at Wilson Creek and other facilities, North Texas is pointing the way toward a new era in regional water management and the safe recycling of 'used water,'" McCall says. "With the further advances that can be expected in the science of wastewater treatment over the next decade or two, this is only the beginning of what can be achieved in this area."

. . .

Far from being deterred by the controversy over its plans to convert the McKinney Landfill into a regional solid waste disposal site, the NTMWD is moving rapidly and resolutely ahead in its efforts to secure sufficient landfill space to handle the region's needs far into the next century with advanced techniques.

Even with recycling efforts gaining momentum, the North Central Texas Council of Governments has estimated that the total amount of solid waste generated in the Dallas-Fort Worth area will increase by 30 percent during the next two decades, climbing from about 15,000 tons per day in 1990 to about 20,500 tons



per day by 2010. NCTCOG has urged governmental entities engaged in solid waste management to plan "well ahead of time" for the capacity to handle this increase, and the NTMWD has responded decisively.

By the fall of 1993, the district had completed the purchase of an 1,176-acre tract on State Highway 121 in northern Collin County, a few miles from the town of Anna. Other available acreage adjoining the tract could increase the size of the site to about 1,400 acres, of which 750 acres could be developed as one of the largest landfill sites in the entire Southwest, surrounded by a large and attractive protective buffer.

"We feel that the Highway 121 property is virtually ideal as a landfill site," says Riehn. "It is in open countryside, well away from developed areas, yet near enough to be convenient, and because of its size, it would have a much longer lifespan than other landfill sites in our region."

Preliminary estimates indicate that the Highway 121 tract could contain 40–50 million tons of solid waste and serve as a regional landfill for forty years or more depending on future population growth and future recycling trends. With a projected lifespan of about ten years for the McKinney Landfill and an estimated six years of engineering and design work that would be necessary at the 121 site, it could be ready for use by the early years of the 21st Century.

In addition, the district still owns more than 200 acres adjacent to the Wilson Creek Wastewater Plant which was originally earmarked as a landfill. But in all probability, with the purchase of the 121 site, the Wilson Creek tract would be held for use on a contingency basis and only in the event of an emergency situation.

"Acquiring the Highway 121 site is one of the most important steps yet taken in our regional solid waste program," says Director Jack McJunkin of Richardson, chairman of the district's Solid Waste Committee. "It not only has the size and space capabilities to last for a long time, but also eliminates most of the environmental concerns that might be present at other sites. In addition, the price of the land makes the site an economically sound investment, even with the expense of engineering and development."

. . .

What do the next forty-plus years hold in store for the North Texas Municipal Water District? Where does it go from here? What successes will it encounter? What disappointments and failures?

Supplying complete answers to these questions is, of course, beyond the capabilities of mere mortals. Just as no one living at the time of the district's formation



in 1951 could possibly have foreseen the phenomenal growth or the incredible chain of events that have occurred since, no visionary of today can possibly predict all the changes and challenges that await the district and the East Fork region during the next four decades. The future is always a complex puzzle with many missing pieces, but from the pieces at our disposal, a number of assumptions and “educated guesses” are possible.

It can reasonably be assumed, for instance, that the population of the region will continue to grow; that by, say, 2034, several million more people will be living in the Dallas-Fort Worth Metroplex, and that each of them will require the kind of essential services provided by the NTMWD.

It can also be reasonably assumed that, by that time, Texas and the region will have experienced at least one more major drought — and possibly several — and that many Texans will have suffered severe hardships because of a shortage of water. The odds are overwhelming, however, that whatever hardships may be experienced by citizens of the NTMWD service area, they will be relatively mild in comparison to those felt in many other less well-prepared sections of the state.

“For the time being, we can meet our water-supply needs for the foreseeable future,” says Riehn. “But this certainly doesn’t mean we can let up in our efforts to find additional sources of water. If we want to stay even, we’re going have to keep working every bit as hard in the future as we’ve ever worked in the past.”

As they look ahead, leaders of today’s NTMWD mention a number of other “have-tos” which they urge the leaders of tomorrow to keep firmly in mind.

- “We can’t turn back the clock,” says Riehn, “so we have to continue to change with the times. Environmental issues, for example, are not going to go away — and shouldn’t — and environmental regulations and restrictions are likely to get even tougher. The best we can hope for is that logic and common sense, tempered by sound science, will prevail in our approach to the environment.”
- “We have to continue to learn,” says Darwin L. Whiteside of Royse City, NTMWD president for 1993–94, “and to apply new knowledge and new methods in solving our problems. What works best today may be outmoded tomorrow. We have to keep pace.”
- “No matter how vast the differences that we encounter in the future may be,” says Riehn, “we can never forget that our basic mission remains the same — to provide the highest quality water and the most dependable service at the lowest possible cost.”



- *"We have to remember that our strength lies in our unity and in our ability to work together for the benefit of all our cities," says Leake. "From the beginning, there's been a rare spirit of cooperation and feeling of camaraderie on our board. We don't always agree on everything, but once we've stated our positions on an issue, we've always been able to set aside our differences and maintain respect and consideration for each other. We have to hold onto that ability."*

Wylie's Truett Smith, one of the founders of the NTMWD and a guiding force behind its progress for close to half a century, attributed much of its early success to a simple "good neighbor policy" on the part of its leadership.

"We had a high hill to climb, and none of our little towns could possibly have climbed it alone," he said. "The only way we could do it was to be good neighbors and sink or swim together."

The future represents yet another high hill. From here, no one can see to the top of it or know what pitfalls may lurk along the way. The only certainty is that the summit *can* be reached by people with skill, knowledge, fortitude and patience who will work cooperatively and harmoniously together for their mutual well-being. This will hold as true among the peaks and valleys of the 21st Century as it did in the distant past.

Today, even with the tremendous growth of the NTMWD and the area it serves, there are still important ties to that past and to the wise and dedicated leaders with which it provided the district. In a number of instances, descendants and other family members of the district's "founding fathers" are carrying on the work of the district's board of directors. These include Garland's Richard Roach, son of Hack Roach; Princeton's Dyon Cantrell, nephew of Jim Cantrell; Plano's Alex Schell III, son of A.R. Schell, Jr.; Rockwall's Bill Briggs Lofland, grandson of J.O. Wallace, and, of course, Wylie's Rita Smith, widow of Truett Smith.

One of the most unusual cases of "passing the torch" involves Forney's C.L. McCuistion, who first joined the NTMWD board in June 1956, was succeeded in 1958 by Conway Senter, and then returned to the board as Senter's successor in August 1993 — some three and one-half decades later — following Senter's death.

Other recently appointed directors include Johnie Marshall of Garland, who was named to the board in 1991, replacing G.W. Range, who had served as a director for twenty years; Larry Parks of Rockwall, who joined the board in April 1993 to complete the term of Nick Woodall; Billy Keller of Richardson, who was appointed in 1991 to replace Marvin Youngblood, one of Richardson's original



directors, who served for 18 years, and Harry Tibbals, who became Wylie's second director in 1990 after that city officially passed the 5,000 population mark.

Just as Truett Smith, Jim Cantrell, J.O. Wallace, A.R. Schell, Jr., Hack Roach and their colleagues reached out to claim a better life and a brighter future when they formed the Tri-County Lavon Reservoir Association, the high caliber of today's NTMWD leadership allows the district to look to the decades ahead with the same kind of confidence and optimism shown by those early leaders.

In many respects, the future is always a towering challenge and an incomprehensible mystery. It is a formidable obstacle, but it is also a golden opportunity for those who are willing and able to make the climb.

As Truett Smith himself might say: "Bring on the next forty years!"





# C O N T E N T S

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|           |                                                                             |            |
|-----------|-----------------------------------------------------------------------------|------------|
| <b>1</b>  | <i>Downpours and Dust Devils — A Texas Tradition . . . . .</i>              | <i>7</i>   |
| <b>2</b>  | <i>From Decades of Crisis Springs a Fountainhead of Hope . . . . .</i>      | <i>23</i>  |
| <b>3</b>  | <i>The Rayburn Factor — A Big Hand From Washington. . . . .</i>             | <i>47</i>  |
| <b>4</b>  | <i>When the Wells Ran Dry and the Lakes Disappeared. . . . .</i>            | <i>62</i>  |
| <b>5</b>  | <i>From Lake to Faucet — Getting the Water Flowing. . . . .</i>             | <i>83</i>  |
| <b>6</b>  | <i>Planning to Meet an Exploding Demand . . . . .</i>                       | <i>116</i> |
| <b>7</b>  | <i>New Challenges and New Leadership. . . . .</i>                           | <i>136</i> |
| <b>8</b>  | <i>A Bigger Lavon, a Bigger District — and Bigger Responsibilities. . .</i> | <i>153</i> |
| <b>9</b>  | <i>Tackling the Huge Task of Wastewater Treatment . . . . .</i>             | <i>173</i> |
| <b>10</b> | <i>The Cooper Reservoir — Winning a Long, Bitter Battle . . . . .</i>       | <i>194</i> |
| <b>11</b> | <i>Reaching for the Red — The Texoma Project . . . . .</i>                  | <i>218</i> |
| <b>12</b> | <i>Wilson Creek — A New Era in Wastewater Treatment . . . . .</i>           | <i>238</i> |
| <b>13</b> | <i>Meeting the Urgent Need for Solid Waste Disposal . . . . .</i>           | <i>260</i> |
| <b>14</b> | <i>Environment Vs. Need — Walking a Chalk Line . . . . .</i>                | <i>285</i> |
| <b>15</b> | <i>Lessons of the Past and a Look Toward the Future . . . . .</i>           | <i>306</i> |
|           | <i>Appendix . . . . .</i>                                                   | <i>324</i> |
|           | <i>Index . . . . .</i>                                                      | <i>332</i> |

