

# THE GOVERNOR'S WATER CONFERENCE

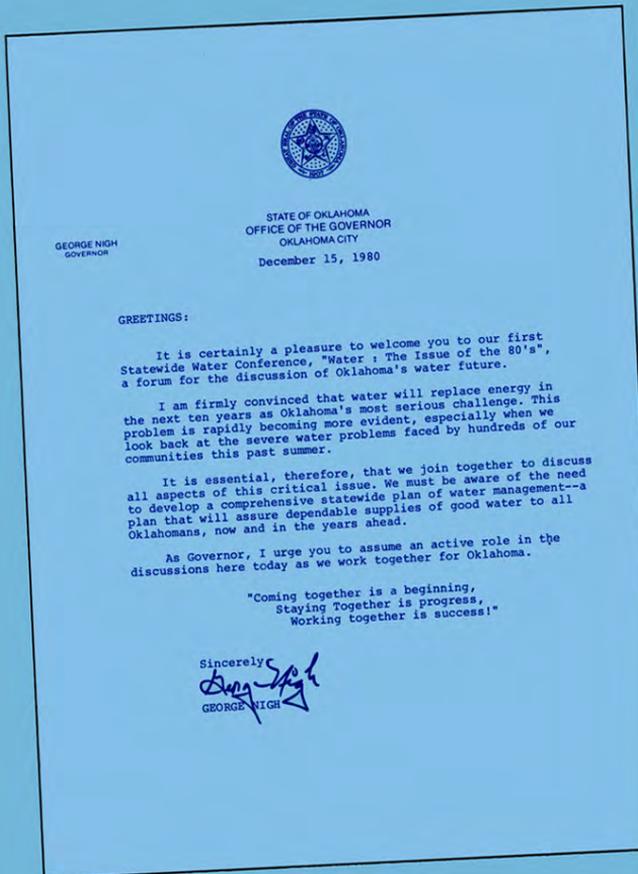
"WATER: The Issue of the 80s"

December 15, 1980

Skirvin Plaza Hotel      Sheraton Century Center  
One Park Avenue      Broadway and Main  
Oklahoma City, Oklahoma



George Nigh  
Governor



## AGENDA

### SHERATON CENTURY CENTER

- 8:00 — 9:00 Registration
- 9:00 — 9:05 Opening Remarks  
Gerald Borelli, Chairman  
Oklahoma Water Resources Board
- 9:05 — 9:15 Welcome and Introduction  
Robert S. Kerr, Jr., Conference Chairman
- 9:15 — 9:40 Keynote Address  
The Honorable George Nigh, Governor
- 9:40 — 10:10 Water Resources Development Financing  
— A Discussion of Alternatives  
Dr. Herbert Grubb,  
Director of Planning  
Texas Department of Water Resources
- 10:10 — 10:30 Arkansas Red River Basin Chloride Control  
W.M. (Bill) Gamel, Chief of Engineering  
Tulsa District Corps of Engineers
- 10:30 — 10:50 Oklahoma Water, Present and Future  
Joe Hail, Conservation Officer  
Western Area Power Administration  
Golden, Colorado
- 10:50 — 11:20 Oklahoma Comprehensive Water Plan  
James R. Barnett, Executive Director  
Oklahoma Water Resources Board
- 11:20 — 11:30 Wrap Up  
Robert S. Kerr, Jr.

### SKIRVIN PLAZA HOTEL

- 11:45 — 1:30 Luncheon  
Jim Gillie, Assistant to the Vice President  
Public Affairs  
Phillips Petroleum Company  
Congressional Delegates in Attendance
- 1:30 — 3:15 Afternoon Sessions
- 3:15 — 4:20 General Assembly  
Summarization of Afternoon Sessions  
by Moderators
- 4:20 — 4:30 Closing Remarks  
Governor Nigh
- 4:30 Adjourn

# Water: A Time For Action

## The Governor's Second Annual Water Conference



December 1, 1981

Lincoln Plaza Inn  
Oklahoma City, Oklahoma

### Water: A Time For Action AGENDA

- 8 A.M. REGISTRATION, COFFEE**
- 9:00 WELCOME, OPENING REMARKS**  
James H. Norick, Honorary Host  
Robert J. LaFortune, Conference Chairman
- 9:20 KEYNOTE ADDRESS**  
The Honorable George Nigh
- 9:45 CONCURRENT SESSIONS, DISCUSSION**  
Water for Agriculture  
Water for Commerce and Industry  
Public Water Supply
- NOON LUNCHEON PROGRAM**  
"National Water Policy — A New Partnership,"  
The Honorable Garrey E. Carruthers, Assistant  
Secretary of Interior for Land and Water  
Resources  
The Honorable Marvin York, President Pro  
Tempore, Senate  
The Honorable Dan Draper, Speaker,  
House of Representatives
- 2 P.M. CONCURRENT SESSIONS, ACTION  
RECOMMENDATIONS**  
Water for Agriculture  
Water for Commerce and Industry  
Rural Water  
Municipal Water
- 4:15 CO-CHAIRMEN REPORTS, RESPONSE**  
Robert J. LaFortune  
Gerald E. Borelli  
Patty Eaton  
Dr. Tom Hurst
- 4:45 CLOSING REMARKS, ADJOURN**  
Gov. Nigh  
James H. Norick

### CONFERENCE SPEAKERS



Dr. Carruthers



Mr. Draper



Mr. York



Mr. LaFortune



Mr. Norick



Mr. Borelli



Mrs. Eaton



Dr. Hurst

*"The test of our progress is not whether we  
add more to the abundance of those who  
have too much; it is whether we provide  
enough for those who have too little."*

—Franklin Delano Roosevelt

Governor George Nigh  
invites you to share in seeking  
creative alternatives in addressing  
Oklahoma's water issues of importance  
at the  
Governor's Second Annual Water Conference  
on Tuesday, December 1, 1981  
beginning at 8 a.m.  
at the Lincoln Plaza Inn  
Oklahoma City, Oklahoma



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## Water: Meeting the Challenge

December 7, 1982

Hilton Inn West, Oklahoma City



Governor George Nigh

- |                  |   |
|------------------|---|
| <p>10:30</p>     | <p><b>THE EPA'S CHANGING ROLE</b><br/>         Frederic A. Eidsness, Jr., Assistant<br/>         Administrator, Office of Water, EPA</p>  |
| <p>11:00</p>     | <p><b>NEW RESPONSIBILITIES<br/>         FOR OKLAHOMA</b><br/>         Glenn H. Sullivan, Executive Vice-President,<br/>         The Benham Group</p>  |
| <p>NOON</p>      | <p><b>LUNCHEON PROGRAM</b> - South Ballroom<br/>         Governor George Nigh<br/>         The Honorable Marvin York, President<br/>         Pro Tempore, Senate<br/>         The Honorable Dan Draper, Speaker,<br/>         House of Representatives</p>  |
| <p>8 a.m.</p>    | <p><b>REGISTRATION</b> - Lobby</p>  |
| <p>9:00</p>      | <p><b>GENERAL SESSION</b> - North Ballroom<br/>         Welcome - Robert S. Kerr, Jr.,<br/>         Conference Chairman</p>   |
| <p>9:15</p>      | <p><b>KEYNOTE ADDRESS</b><br/>         The Honorable George Nigh<br/>         Governor of Oklahoma</p>  |
| <p>9:45</p>      | <p><b>FEDERAL WATER PROGRAMS</b><br/>         William R. Gianelli, Assistant Secretary of the<br/>         Army for Civil Works</p>   |
| <p>2-4 p.m.</p>  | <p><b>CONCURRENT SESSIONS</b> - North Ballroom<br/>         Public Water Supply - <i>Allegheny Room</i><br/>         Water for Commerce and Industry -<br/> <i>Blueridge Room</i><br/>         Water for Agriculture - <i>Cumberland Room</i><br/>         Water Awareness - <i>Shenandoah Room</i></p> |
| <p>4:15-5:30</p> | <p><b>CRACKER BARREL SESSION</b> - Gazebo<br/>         Cheese and crackers in a relaxed atmosphere<br/>         and an opportunity to have your question<br/>         answered by an expert.</p>  |
|                  | <p><b>CONSERVATION —CALIFORNIA'S<br/>         HOTTEST EXPORT</b> - Ronald B. Robie,<br/>         Director, California Department of<br/>         Water Resources</p>  |



**William R. Gianelli** has been responsible for the Army Corps of Engineers Civil Works Program for water resources since June 1981. He was director of the California Department of Water Resources during construction of initial features of the \$2.5 billion State Water Project.



**Frederic A. Eidsness** administers the Clean Water and Safe Drinking Water Acts, manages a multi-billion dollar sewage treatment program, establishes national regulations to control the discharge of industrial pollutants and oversees \$70 million in state program grants.



**Ronald B. Robie**, director, California Department of Water Resources, has served as vice-chairman of the State Water Resources Control Board, Consultant to the Assembly Committee on Water (California Legislature), and is a nationally recognized authority on water conservation.



**Glenn H. Sullivan**, executive vice-president and principal water resources engineer with the Benham Group, is a specialist in wastewater and water resources development. He has experience in conducting feasibility and economic studies and solving water and energy problems.

### MODERATORS AND PANELISTS

**Public Water Supply** - *Allegheny Room*

**Moderator:** William Morgan, Mayor, City of Norman

**Panelists:**

Dr. Jay Lehr, Executive Director, National Water Well Assn.  
 Andy Peck, Oklahoma Representative, Bureau of Reclamation  
 John Marsh, President, Engineering Enterprises, Inc.  
 Larry E. Stephenson, State Director, FmHA  
 Ed Schermerhorn, Rate Review Committee, City of Tulsa

### Water for Agriculture - *Cumberland Room*

**Moderator:** Ferdie J. Deering, Former Editor, "Oklahoma Farmer Stockman"

**Panelists:**

Dr. Norman N. Durham, Director, Oklahoma Water Resources Research Institute, OSU  
 Bob Day, Irrigation Specialist, SCS  
 Dr. Billy Tucker, Extension Agronomist, OSU

**Mini-Reports by:**

Mike Mathis, Hydrologist Supervisor, OWRB  
 Joseph P. Marak, Section Supervisor, State Board of Agriculture  
 Robert Toole, Assistant Director, Oklahoma Conservation Commission  
 John Morgan, Assistant Manager of Pollution Abatement, Oklahoma Corporation Commission

### Water Awareness *Shenandoah Room*

**Moderator:** JoAnn Puckett, President, League of Women Voters

**Panelists:**

R. Thomas Lay, General Counsel, OWRB  
 Dr. Wayne Pettyjohn, Head of Department of Geology, OSU  
 Dr. Harry Mapp, Professor of Agricultural Economics, OSU  
 Jim Schuelein, Hydrologist-Meteorologist, OWRB

### Water for Commerce and Industry *Blueridge Room*

**Moderator:** Ronn Cupp, Director of Governmental Affairs, Oklahoma State Chamber of Commerce

**Panelists:**

Charles Tyree, Chief, Environmental Affairs, OG&E  
 Sen. Tim Leonard, Oklahoma State Legislature  
 Bill Bryan, Engineer, Cities Service Company  
 Harry Hansen, President, Pollution Control Assn., Inc.  
 Rosie Stoops, Executive Director, Lake Eufaula Assn.  
 Dr. Wayne Turner, Professor; Rick Webb, Research Engineer,  
 OSU School of Industrial Engineering

Announcing

# The Governor's Fourth Annual Water Conference October 25, 1983

in Conjunction with

## The 52nd Annual Convention and Water Resources Seminar of the National Water Resources Association October 24-27, 1983

Tulsa Assembly Center  
Tulsa, Oklahoma



The Honorable George Nigh  
Governor of Oklahoma

### AGENDA

#### MONDAY, OCTOBER 24 • WATER MANAGEMENT SEMINAR

- 8:00 Registration - Gallery, Third Level  
9:30 Welcome, George Proctor, President  
Keynote Address, The Honorable Wes Watkins  
10:00 "Planning - A Skill for Water Managers"  
11:00 "Effective Meeting Techniques"  
Noon Recess  
1:30 "Computers and Information Systems for Water Management"  
3:00 Adjourn

#### TUESDAY, OCTOBER 25 • JOINT SESSIONS Oklahoma Governor's Water Conference / NWRA

- 9:00 Musical Interlude, The Marching Scots of McLain High School  
9:30 Call to Order, George Proctor, NWRA President  
Welcome, The Honorable James Inhoff, Mayor of Tulsa  
10:00 Keynote Address, The Honorable Donald Hodel, Secretary of Energy  
10:30 State of the Association Address, President George Proctor  
11:00 "The Rio Grande - Ribbon of Life," Bureau of Reclamation  
11:20 Address - The Honorable Don Nickles  
12:30 Awards Luncheon  
Luncheon Address, The Honorable George Nigh, Governor  
2:30 Announcements, Gerald E. Borelli, Chairman  
James R. Barnett, Executive Director  
Oklahoma Water Resources Board  
"Financing Water Projects, Oklahoma Style" Robert M. Cochran  
Senior Vice President, Stifel Nicolaus & Company

- 3:10 Panel Discussion - "Outlook for State and Regional Water Development"  
Brig. Gen. Robert J. Dacey, U.S. Army Corps of Engineers  
Commander and Division Engineer, Southwest Division  
Eugene Hinds, Director, Bureau of Reclamation Southwest Region  
Roland R. Willis, State Conservationist, Soil Conservation Service  
Alfred Clebsch, Jr., Regional Hydrologist, U.S. Geological Survey  
4:30 Adjourn

#### WEDNESDAY, OCTOBER 26

- 9:00 Opening Remarks  
Vern Fahy, Director, North Dakota  
"The Continuing Struggle for Water Projects"  
The Honorable Allen Olson, Governor of North Dakota  
9:30 "Developing Ground Water Resources," Dr. Wayne Pettyjohn  
Chairman, Department of Geology, OSU  
10:00 "World Water Watch," Valsin Marmillion, Manager of Public  
Information Programs, Atlantic Richfield Corporation, Los Angeles  
10:45 "Financing Cost-Shared Projects," N.L. Hagan, Vice President  
Municipal Utilities Department, Merrill Lynch, New York City  
11:15 Presentation - Lt. Gen. Joseph K. Bratton, Chief of Engineers  
U.S. Army Corps of Engineers  
11:45 Presentation - The Honorable Robert Broadbent  
Commissioner, Bureau of Reclamation  
12:30 Recess  
2:30 "Hydropower," Multi-Image Show by the Bureau of Reclamation  
3:00 Washington Report, J.W. "Pat" O'Meara  
NWRA Executive Vice President  
3:30 Committee Chair Reports, Adoption of Resolutions, Business Meeting  
5:00 Adjourn  
7:00 All States Banquet, John Specht, Master of Ceremonies



Rep. Wes Watkins



Commissioner  
Robert N. Broadbent



Sen. Don Nickles



Secretary Donald Hodel



Robert M. Cochran



Eugene Hinds



Brig. Gen. Robert J. Dacey



Lt. Gen. Joseph K. Bratton

# Fifth Annual GOVERNOR'S WATER CONFERENCE

## Fifth Annual GOVERNOR'S WATER CONFERENCE

### Paying for Water— It's Up to Us

Hilton Inn West, Oklahoma City

EARLY BIRD RECEPTION  
December 11, 6:30-7:30 p.m.

#### AGENDA—December 12, 1984

- 8 a.m. Registration, Coffee
- 9:00 Welcome—Gerald E. Borelli  
*Chairman, Oklahoma Water Resources Board*
- 9:15 Keynote—Joan M. Kovalic,  
*Executive Director, Gen. Counsel,  
Interstate Conference on Water Problems*
- Keynote—James R. Nelson, PhD  
*Prof., Agricultural Economics, OSU*
- 10:00 Remarks—The Honorable  
Don Nickles  
The Honorable Wes Watkins  
Other Congressmen Invited
- 10:30 Coffee, Visit Exhibits
- 11:00 Interstate Water Issues  
Michael C. Turpen, *Attorney General*  
R. Thomas Lay, *Gen. Counsel, OWRB*

12:15 p.m. Luncheon Program, Introductions  
The Honorable George Nigh,  
*Governor*  
The Honorable Robert A. Olson,  
*Acting Commissioner, Bureau of  
Reclamation*

1:55 PLANNING AND PAYING FOR  
WATER  
Moderated by JoAnn Puckett,  
*President Oklahoma League of Women  
Voters*

Using Hydraulic Analyses in  
Planning or Expanding Water  
Systems  
Cecil Wildman, P.E.,  
*Settle and Spear Engineers, Inc.*

Oklahoma's Loan and Grant  
Assistance to Water, Sewer  
Improvements  
James R. Barnett,  
*Executive Director, Oklahoma Water  
Resources Board*

Realism in Rate-Setting  
Claudia Peck, PhD, *Asst. Prof. Home  
Economics, OSU*

Rate Structures for Rural Water  
Marie Dunn, CPA, *Oklahoma Rural  
Water Association Board*

2:55 Break

3:10 WATER TO GROW ON—WATER FOR  
COMMERCE AND INDUSTRY  
Moderated by Charles L. Tyree  
*Chief, Environmental Affairs, ONG*

Who Pays, Who Benefits from  
Conservation?  
Francis M. Epplin, PhD, *Asst. Prof.  
Agricultural Economics, OSU*

Conservation Practices as Means of  
Improving Water Quality  
John Hassell, *Director of Water  
Quality Programs, Oklahoma  
Conservation Commission*

Oklahoma's Waterway—the Giant is  
Awakening  
Robert W. Portiss, *Port Director  
Port of Catosa*

How Much Regulation for  
Industry's Water?

4:15-5:30 Cracker Barrel Session—Informal  
Question and Answer Period  
"Around the Cracker Barrel."

## SPEAKERS



R. Thomas Lay

R. Thomas Lay assumed his role as General Counsel of the Oklahoma Water Resources Board in 1976. He received his BS degree from Oklahoma State University in 1970 and his JD degree from Oklahoma City University School of Law in 1973. Subsequently, Lay served as Assistant Municipal Counselor for the City of Oklahoma City and later was engaged in the private practice of law. He has served as Assistant Attorney General and is a member of the Oklahoma State, Oklahoma County and American Bar Associations. Lay's present duties involve him in all major aspects of Oklahoma water law.



Joan M. Kovalic

In addition to leadership of ICWP, Kovalic is an associate of the Washington, D.C. law firm of Talt, Stettinius and Hollister, serving as counsel on environmental, water quality and water resources matters. Kovalic earlier had served as deputy director of EPA's Office of Water Program Operations, during which time she directed the multi-billion dollar grant program

for the construction of municipal wastewater facilities and developed legislation including Clean Water Act amendments of 1981.

Kovalic holds a B.A. in social relations and an M.S. in public administration from Carnegie-Mellon University; a J.D. degree from George Washington University Law School and attended seminars at Harvard University and the Brookings Institute. She is a member of the American Bar Association, Pennsylvania Bar Association, District of Columbia Bar Association, U.S. District Court and U.S. Court of Appeals for the District of Columbia.



Robert A. Olson

Prior to his appointment to Acting Commissioner, Robert A. Olson was Assistant Commissioner—Planning and Operations. He managed the Boulder City, Nevada, area of the

Department of Energy's Western Area Power Administration and directed WAPA's power activities in the southwest, including the marketing of power from Hoover, Davis, Parker and Glen Canyon Dams on the Colorado River. He is an electrical engineer, a graduate of South Dakota State University and an associate of the Bureau of Reclamation since 1965.



Michael C. Turpen

Michael C. Turpen was elected Attorney General in 1982, having served previously as Muskogee County District Attorney, Muskogee County Chief Prosecutor and First Assistant District Attorney. He is a graduate of the University of Tulsa and the TU College of Law. In 1975 Turpen was named the Outstanding Young Lawyer of the Year by the Oklahoma Bar Association.

He has served as adjunct professor at Northeastern State University, Connors State College and Oral Roberts University College of Law, and is the recipient of many awards including the 1981 Maurice Merrill Golden Quill Award for his contribution of the outstanding article of the year to the Oklahoma Bar Journal.



James R. Nelson

Nelson joined the faculty of Oklahoma State University in 1975 from a previous position on the faculty of the University of Idaho. He holds BS and MS degrees from Texas Technical University and a PhD degree from Oklahoma State University. Nelson has worked in rural development with emphasis on the development of land and water resources and the economics of rural community services. He has authored more than 100 papers on rural development and agricultural economics.

*Looking Back as  
We Plan Ahead*

Sixth Annual  
GOVERNOR'S  
WATER CONFERENCE  
Hilton Inn West, Oklahoma City

Early Bird Reception  
December 3, 1985  
6:30-7:30 p.m.  
Gazebo, Hilton Inn West

**A** GENDA FOR  
THE CONFERENCE

December 4, 1985

8 a.m.  
Registration, Coffee

9:00  
Welcome — Gerald E. Borelli,  
Chairman, Oklahoma Water  
Resources Board

9:10  
Edmond High School Show Choir  
Act II — Terry Attebery, Director

9:30  
Keynote — The Honorable  
George Nigh, Governor

10:00  
Coffee Break

10:20  
National Water Policy  
Lt. Gen. John W. Morris (USA Ret)  
President, J.W. Morris, Ltd.

10:50  
Dam Safety — Who is Responsible?  
Slide Show Prepared by the National  
Association of Conservation Districts

11:20  
Perspective from Capitol Hill  
Remarks by Members of Oklahoma  
Congressional Delegation

12:15  
Luncheon Program  
Presentation of Awards, Remarks  
Gov. Nigh

The Nation's Water Quality  
Lawrence J. Jensen, Assistant  
Administrator Designate  
Office of Water, U.S. EPA

2:00  
Is Cost-Sharing Leaving America's  
Infrastructure High and Dry?  
Debate by Brian Robison,  
Chris Man  
Heritage Hall Upper School  
Glenda Ferguson, Coach

3:00  
Ground Water Management  
A. Wayne Wyatt, Manager,  
High Plains Water  
Conservation District No. 1

3:30  
Break

3:45  
Oklahoma's Reach to the Clouds  
Weather Modification Slide Show  
Prepared by the Oklahoma Water  
Resources Board

4:05  
Is Chloride Control in  
Oklahoma's Future?  
Glenn Sullivan, P.E.  
The Benham Group

4:30  
Closing Remarks, Adjournment

4:30-5:30  
Cracker Barrel Session — Your  
opportunity to meet speakers,  
have your questions answered and  
visit around the cracker barrel.

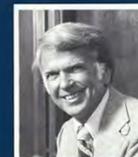
Sixth Annual  
GOVERNOR'S  
WATER  
CONFERENCE

DECEMBER 4, 1985

CONFERENCE  
SPEAKERS



Lawrence J. Jensen



Governor George Nigh



John W. (Jack) Morris



A. Wayne Wyatt

1985 Oklahoma Water Pioneers

V. Ray Trent  
Leonard A. Solomon  
Marvin Scherler  
P. Ward Perryman  
Forrest Nelson  
L.L. (Red) Males  
Glade R. Kirkpatrick  
Sen. Robert S. Kerr  
Nolen J. Fuqua  
Ferdie J. Deering  
Bemice N. Crockett  
Francis J. Borelli

David R. Strickland  
Harold B. Scoggins  
Frank Raab  
Harold Norris  
Donald O. McBride  
Richard C. Longmire  
Robert S. Kerr Jr.  
Newton R. Graham  
L.B. (Ed) Edinger  
Jacques Cunningham  
Dr. Lloyd E. Church



Governor George Nigh

# WATER: THE LIFEBLOOD OF ECONOMIC DEVELOPMENT

Seventh Annual

## GOVERNOR'S WATER CONFERENCE

Lincoln Plaza, Oklahoma City  
October 28, 1986

### Early Bird Reception

October 27, 1986  
6:30–7:30 p.m.  
Senate Room, Lincoln Plaza

### AGENDA

#### October 28, 1986

Gold Crown Room

#### 8 a.m. Registration, Coffee

9:00 Welcome—Introductory Remarks  
Gerald E. Borelli, Chairman  
Oklahoma Water Resources Board

9:20 Federal Water Policy—What's  
in it for Oklahoma? Robert K.

Dawson, Assistant Secretary of  
the Army for Civil Works

9:40 What's in the Bureau's Future?  
C. Dale Duvall, Commissioner,  
Bureau of Reclamation

#### 10:00 Break

#### 10:20 Remarks—Congressional Delegation

The Honorable Don Nickles  
The Honorable Dave McCurdy  
The Honorable James R. Jones  
The Honorable Mike Synar

11:20 Weak Infrastructure: Down the  
Drain with Economic Recovery  
Dr. Francis Tuttle, Oklahoma

Secretary of Commerce

#### 11:40 How Much Quality Can We Afford?

John M. (Jack) Campbell,  
Deputy Asst. Administrator  
for Policy, Planning and Evaluation, EPA

#### 12:15 Luncheon Program—Stars Room

Introductions, Special Award  
Robert S. Kerr, Jr., OWRB

Remarks — Water Pioneer Awards  
Governor Nigh

#### Water and a Firmer Financial Future

The Honorable Henry Bellmon  
David L. Walters

2:30 Program Resumes in Gold  
Crown Room

Edmond High School Show Choir  
Act II, Terry Attebery, Director

2:50 Administration Water Policy—  
Help or Hindrance? Joseph  
Haas, Associate Chief, USDA  
Soil Conservation Service

3:10 Cost-Sharing and User Fees—  
Another View Joseph Farrell,  
President, American Waterways  
Operators, Inc.

3:30 Adjournment—Mr. Borelli

## Conference Speakers



Robert K. Dawson



C. Dale Duvall



Joseph Farrell



Dr. Francis Tuttle



John M. (Jack)  
Campbell

### 1986 Oklahoma Water Pioneers

Col. Francis J. Wilson

George W. Reid

James "Buster" Hight

L.T. Gov. Spencer Bernard

A. A. Sewell

James H. Irwin

Marvin T. Edmiston

Clarence Base

Orville B. Saunders

W.R. Holway

Early R. Cass

# Agenda

8 a.m. **Registration, Coffee**

9:00 **Welcome**  
Gerald E. Borelli, Chairman  
Oklahoma Water Resources Board

**Introductory Remarks**  
Glenn Sullivan, Secretary  
Dept. of Natural Resources  
Conference Chairman

9:20 **Clean Water Act Update**  
Robert E. Layton Jr.  
Administrator, Region VI, EPA

9:40 **A New Direction for the Bureau**  
Joe D. Hall, Deputy Commissioner  
Bureau of Reclamation

10:00 **Coffee Break**

10:20 **The New Water Resources Development Act**  
Col. Frank M. Patete  
District Engineer, Tulsa District,  
U.S. Army Corps of Engineers

10:40 **Outlook for Navigation**  
Harry N. Cook, President  
National Waterways Conference

11:00 **Remarks**  
Congressional Delegation

12 Noon **Luncheon Program**  
**Introductions—Mr. Sullivan**  
**Address, Presentation of Water Pioneer Awards**  
Governor Henry Bellmon

2:00 **Tulsa's Stormwater Management Strategies**  
Stan Williams, Director, Dept.  
of Stormwater Management

2:30 **Water Magazine—a Panel Discussing Current Issues**  
Moderator: Mr. Sullivan

Panelists:  
Charles Huddleston, Attorney  
Franco-American/Water Rights

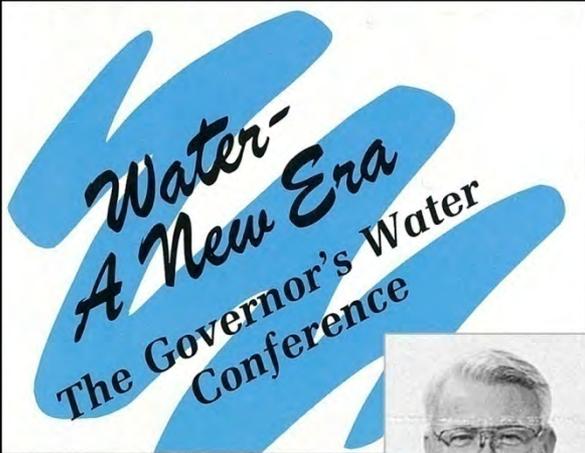
Robert Johnson  
Chief Staff Officer, NRWA  
Is the Government Selling  
Rural Water Short?

Marshall Hawkins  
Financial Consultant  
Water Development Financing

R. Thomas Lay, Attorney  
Ute Reservoir Water Rights

Myron Knudson, Director, Water  
Mgmt. Div., EPA Region VI  
Matador Oil Co./Oklahoma Water  
Quality Standards

3:40 **Adjournment—Mr. Sullivan**



## *Eighth Annual Governor's Water Conference*

December 16, 1987

## *Speakers*



**Robert E. Layton, Jr.**



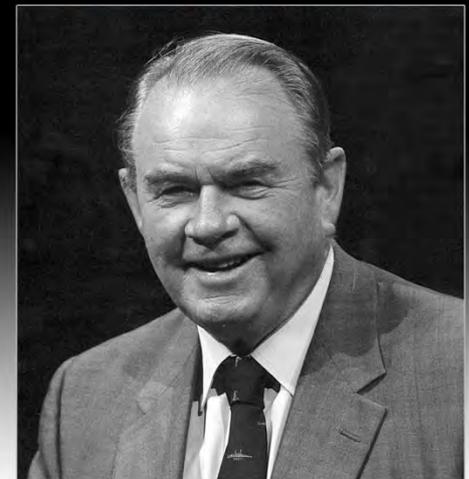
**Joe D. Hall, P.E.**



**Harry N. Cook**



**Col. Frank M. Patete**



**Governor Henry Bellmon**

# “Water Quality— Balancing the Interests”

December 14, 1988

## 9th Annual Oklahoma Water Conference

Marriott Hotel  
3233 Northwest Expressway  
Oklahoma City

### Agenda

- |        |  |       |   |       |  |
|--------|--|-------|---|-------|--|
| 8 a.m. | <b>Registration, Coffee</b>  | 10:25 | <b>Overview of Groundwater Quality</b><br>Marian Mlay, Director<br>Office of Groundwater Protection<br>Office of Water<br>EPA, Washington, D.C.   | 12:15 | <b>Luncheon Program</b>  |
| 8:30   | <b>Welcome</b><br>Robert S. Kerr, Jr., Chairman<br>Oklahoma Water Resources Board            | 10:45 | <b>Panel</b><br><b>Costs and Benefits of Clean Water</b><br>Terry Childers, City Manager<br>City of Oklahoma City<br>James P. Odendahl, Manager<br>Environmental and Regulatory Affairs<br>Weyerhaeuser Company<br>James W. Bennett, Executive Director<br>Oklahoma Wildlife Federation<br>Ed Long, Agribusinessman |       | <b>Remarks</b> — Mr. Kerr<br>Glenn Sullivan, Secretary<br>Department of Natural Resources<br><b>Address</b> — Governor Henry Bellmon<br><b>Legislative Accomplishments Prospects<br/>for the 42nd Session</b><br>Sen. Ray Giles, Chairman<br>Senate Natural Resources Committee<br>Sen. Ben Brown, Chairman<br>Natural Resources & Regulatory Services<br>Subcommittee, Comm. on Appropriations<br>Rep. Cal Hobson, Chairman<br>House Natural Resources Committee<br>Rep. Glen D. Johnson, Chairman<br>Committee on Appropriations and Budget<br><b>Presentation of Water Pioneer Awards</b><br><b>Adjournment</b> —Mr. Kerr |
|        | <b>Federal Agencies' Contributions<br/>to Water Quality</b>                                  | 11:45 | <b>The Washington Perspective</b><br>Oklahoma Congressional Delegation<br>Representative Wes Watkins<br>Senator Don Nickles<br>Invited:<br>Representative Mike Synar<br>Representative James Inhofe<br>Representative Dave McCurdy<br>Representative Mickey Edwards   |       |  |
| 8:45   | Brig. Gen. Robert C. Lee<br>Commander, Southwestern Division<br>U.S. Army Corps of Engineers |       |   |       |  |
| 9:05   | Billy Martin, Director<br>Great Plains Region<br>Bureau of Reclamation                       |       |   |       |  |
| 9:25   | Joseph D. Winkle<br>Deputy Administrator, Region 6<br>Environmental Protection Agency        |       |   |       |  |
| 9:45   | Charles R. Burchett, District Chief<br>U.S. Geological Survey                                |       |   |       |  |
| 10:05  | <b>Coffee Break</b>  |       |   |       |  |

## Agenda

- 8 a.m. Registration, Coffee**
- 8:30 Welcome**  
Robert S. Kerr, Jr., Chairman  
Oklahoma Water Resources Board
- 8:45 Keynote**  
Dennis Underwood  
Commissioner (Designate)  
Bureau of Reclamation
- 9:05 Federal Activities in the State and Region**  
Dan Mauldin  
Deputy Director of Civil Works  
U.S. Army Corps of Engineers
- 9:25** Robert E. Layton, Jr.  
Administrator, Region VI  
Environmental Protection Agency
- 9:45** Gary Margheim  
Associate Deputy Chief for Progra  
USDA Soil Conservation Service
- 10:05** John R. George  
Assistant Regional Hydrologist  
U.S. Geological Survey
- 10:25 Coffee Break**
- 10:40 Update on the Governor's Environmental Concerns Cour**  
Ross O. Swimmer  
Council Coordinator
- 11 a.m. Are Wetlands Worth the Cost?**  
Michael Spear, Panel Moderator  
Regional Director, U.S. Fish  
& Wildlife Service
- Panelists:  
Ken McFall, President  
Oklahoma Farm Bureau  
Russell Rhoades, Director  
Environmental Services  
Region VI, U.S. EPA  
Michael Luzier, Director  
Environmental Regulations  
National Assn. of Home Builders  
Donald McCrory, Port Director  
Memphis/Shelby County  
Port Commission  
Barry Rought, Chief of Planning  
Southwest Division, U.S. Army  
Corps of Engineers

## The Tenth Annual Oklahoma Water Conference

December 13, 1989  
Marriott Hotel  
3233 Northwest Expressway  
Oklahoma City

### Oklahoma Water - From Dust Bowl to Wetlands



#### **12 noon The Washington Perspective**

\*Congressional Delegation

Sen. David Boren	Rep. Dave McCurdy
Sen. Don Nickles	Rep. Mickey Edwards
Rep. Wes Watkins	Rep. James Inhofe
Rep. Glenn English	Rep. Mike Synar

\*contingent upon Congressional recess date

#### **12:30 Luncheon Program**

##### **Introductions and Remarks**

Mr. Kerr

##### **Prospects for Statewide Water Development Revolving Fund**

Rep. Cal Hobson, Chairman  
House Budget and Appropriations  
Committee

Sen. Ben Brown, Chairman  
Senate Natural Resources and  
Regulatory Services Subcommittee  
of the Appropriations and Budget  
Committee

##### **Gubernatorial Address**

Governor Henry Bellmon

##### **Presentation of Oklahoma Water Pioneer Awards**

Glenn Sullivan, Secretary  
Department of Natural Resources

**Adjournment**—Mr. Kerr

# Eleventh Annual

# OKLAHOMA WATER CONFERENCE

December 5, 1990  
Marriott Hotel  
Oklahoma City

## Drowning In The High Cost Of Water

### Drowning in the High Cost of Water

A strategy conference to cope with the ever increasing costs of providing water to the public. The issue is multi-faceted: the reduction in federal funds, increased cost-sharing and user fees and compliance costs of new EPA regulations.

#### Agenda

**8 a.m. Registration, Coffee**

**8:30 Welcome**—Robert S. Kerr, Jr., Chairman  
Oklahoma Water Resources Board

**8:40 Keynote**  
**Drowning in the High Cost of Water**  
E. Donald Elliott, General Counsel  
Environmental Protection Agency

**9:00 Managing Our Water Resources**  
Maj. Gen. Patrick J. Kelly  
Director of Civil Works  
U.S. Army Corps of Engineers

**9:20** Joe D. Hall, Deputy Commissioner  
Bureau of Reclamation

**9:40 Coffee Break**

**9:55**

**Panel—Increased Costs . . .**  
**Where's the Money to Come From?**

#### Moderator:

James R. Barnett, Executive Director  
Oklahoma Water Resources Board

#### Panelists:

Jack Brown, Chairman  
Tulsa Metropolitan Utility Authority

Henry Lamb, Executive Vice-President  
Land Improvement Contractors of America

Larry Wornom, Director  
Lincoln County Conservation District

Ernie Fawcett, President  
National Rural Water Association

Wm. Don Kiser, Attorney  
Fagin, Brown, Bush, Tinney & Kiser

**11:15**

#### The Washington Perspective

Sen. Don Nickles  
Rep. Glenn English  
Rep. Mickey Edwards  
Rep. James Inhofe  
Rep. Mike Synar  
Rep. Wes Watkins

**Noon**

#### Luncheon Program

**Introductions and Remarks**—Mr. Kerr

#### Water Funding Prospects in the 43rd Legislature

Sen. Darryl F. Roberts  
Senate Majority Leader  
Rep. Glen Johnson, Speaker-Designate  
House of Representatives

#### Oklahoma Water Pioneer Awards

Governor Bellmon  
Glenn Sullivan, Secretary  
Department of Natural Resources

**Address**—The Governor-Elect

**Adjournment**—Mr. Kerr

# Twelfth Annual Governor's Water Conference

December 18, 1991  
Marriott Hotel  
Oklahoma City

## Groundwater Oklahoma's Buried Treasure

"How well will we manage it?"

### Morning Agenda

8 a.m.

Registration, Coffee

8:30

#### Welcome

Robert S. Kerr, Jr., Chairman  
Oklahoma Water Resources Board

8:45

#### Keynote—New Respect for an Old Resource

Ramona Trovato, Director  
Groundwater Protection Division  
U.S. Environmental Protection Agency

9:10

#### Panel—Defining the Problems

##### Moderator:

Kathy Peter, District Chief  
U.S. Geological Survey

##### Panelists:

David G. Boyer, Hydrogeologist  
K. W. Brown Environmental Services  
College Station, Texas

Kathy McNally, Director of National Affairs  
Oklahoma Farm Bureau

Phil Brown, Chief  
Community and Business Programs  
Farmers Home Administration

10:10

#### Coffee Break

10:30

#### Panel—Protecting a Fragile Resource

##### Moderator:

Glenn Sullivan, Engineer  
Sullivan & Associates

##### Panelists:

Dr. Larry W. Canter, Director  
Environmental & Groundwater Institute  
University of Oklahoma

David Pope, Chief Engineer  
Kansas Division of Water Resources

Blaine Reely, Director of Public Works  
City of Enid

11:30

#### The Washington Perspective

Rep. Mike Synar

#### Noon

#### Luncheon Program

##### Introductions, Remarks

Mr. Kerr

##### Address

Sen. Don Nickles

#### Observations from the Oklahoma Legislature

Sen. Ray Giles, Chairman  
Senate Committee on Natural Resources  
Rep. Larry Rice, Chairman  
House Committee on Energy,  
Environment and Natural Resources

#### Oklahoma Water Pioneer Awards

Patty Eaton, Executive Director  
Oklahoma Water Resources Board

#### Adjournment—Mr. Kerr

### The 1991 Oklahoma Water Pioneers

The Oklahoma Water Pioneer Awards were initiated in 1985 to recognize those men and women who have made significant contributions in the management, planning, development and conservation of Oklahoma's water resources.

Their vision inspired those less daring; their strength of conviction upheld us; their devotion to progress for all Oklahomans provided abundant supplies of good water for our homes, cities, farms and industries.

Gov. Raymond Gary

Ed Edmondson

Heber Finch

Jack Grimmitt

November 18, 1992  
Marriott Hotel  
3233 Northwest Expressway  
Oklahoma City



## Agenda

- 8 a.m.** Registration, Coffee
- 8:30** **Welcome**  
Robert S. Kerr, Jr., Chairman  
Oklahoma Water Resources Board
- 8:45** **The Future of the Clean Water Act and The Safe Drinking Water Act**  
Ben Lesser, Special Assistant  
to the Assistant Administrator  
for Water, U.S. Environmental  
Protection Agency
- 9:10** **The Consequences of "Can't"**  
Eric J. Groves, Attorney  
Groves & Tague, Oklahoma City
- 9:30** **The Best Water in the Nation**  
Governor David L. Walters
- 9:50** **Coffee Break**
- 10:05** **Drinking Water—the Widening Gap Between Needs and Resources**  
Steven L. Elstein, Assistant  
Director, Water Quality Issues  
U.S. General Accounting Office
- 10:25** **Regional Systems—The Dallas Success Story**  
Mike Marcotte, Director  
Dallas Water Utilities
- 10:45** **Yes We Can! Financing Options**  
Robert M. Cochran  
Executive Vice-President  
Stifel, Nicolaus & Co., Inc.
- 11:05** **How Can Small Systems Comply?**  
Walter E. Hill  
Deputy Under Secretary for Small  
Community and Rural Development  
U.S. Department of Agriculture
- 11:25** **Clean Water Act Impacts on Agriculture**  
John Baker, Agriculture Advisor  
to the Administrator—EPA

- 11:45** **Oklahoma Water Gazette**  
10-Minute News Updates  
**Moderator:** Glen Cheatham, Jr.  
Executive Vice-President  
Arkansas Basin Development Assoc.
- HB 2227—the Department of Environmental Quality (DEQ)**  
Sen. Cal Hobson, Co-Chair  
Joint Legislative Environmental  
Task Force
- Navigation—Montgomery Point L&D**  
Bob Portiss, Director  
Port of Catoosa
- Water Research at the Universities**  
Dr. Tom Collins, Director  
Oklahoma State University Center  
for Water Research
- 12:30** **Luncheon Program**
- Introductions and Remarks**  
Mr. Kerr
- Remarks**  
Congressman Mike Synar
- Other Members of the Congressional  
Delegation
- Oklahoma Legislature  
Sen. Kevin Easley  
Rep. Larry Rice
- Oklahoma Water Pioneer Awards**  
Patty Eaton, Executive Director  
Oklahoma Water Resources Board
- Adjournment**  
Mr. Kerr

## Accommodations



Guestrooms are available at a special Conference rate of \$70 per night, single or double. Please make reservations by November 9 by calling the Marriott Hotel at (405) 842-6633.



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# HOW CLEAN?



# HOW COSTLY?



# HOW CAN WE?

THIRTEENTH ANNUAL  
GOVERNOR'S WATER CONFERENCE



November 17, 1993

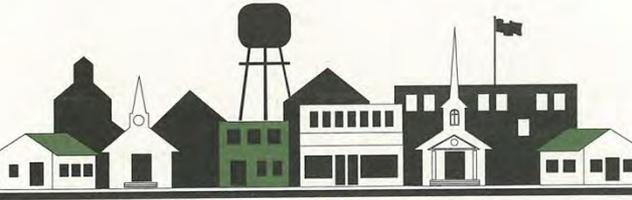
Marriott Hotel  
3233 Northwest Expressway  
Oklahoma City, OK

## AGENDA

- 8:00 a.m. Registration, Coffee
- 8:30 **Introductory Remarks**  
Robert S. Kerr, Jr., Chairman  
Oklahoma Water Resources Board
- Welcome**  
Governor David Walters
- 9:00 **Federal Mandates: One Size Fits All?**  
Mayor Susan Savage, City of Tulsa
- 9:25 **Communities in Crisis**  
Ann Cole  
Small Community Coordinator  
U.S. Environmental Protection Agency  
Office of Regional Operations
- 9:50 **Coffee Break**
- 10:15 **Panel: Meeting the Mandates  
with Innovation**
- Moderator:** Connie Irby  
Deputy Executive Director  
Oklahoma Department of Commerce
- Panelists:**  
Lonnie L. Farmer, Member, OWRB  
*Regional Rural Water Systems*
- Wayne Hill, City Manager, Guymon  
*New Ways in Wastewater Treatment*
- Lee Chew, County Commissioner  
Washington County  
*Sales Tax Can Finance Infrastructure*
- 11:15 **The View from Capitol Hill**  
Oklahoma Congressional Delegation
- 11:45 **Luncheon Program**
- Introductions and Remarks**  
Mr. Kerr

1:45

2:45



## MANDATES WITHOUT MONEY

The Fourteenth Annual Governor's Water Conference - November 17, 1993

*When EPA Came to Buffalo Gap*  
Robert E. Roberts, Secretary  
South Dakota Department  
of Environment and Natural Resources

**Remarks**  
Members of the Oklahoma Legislature

**Oklahoma Water Pioneer Awards**  
Duane A. Smith, Assistant Director  
OWRB

**Oklahoma Water Gazette**  
10-Minute News Updates

**Moderator:** Mike Henson  
Member, OWRB

*Consequences of Flooding*  
Jack Page, Manager  
Development Services  
City of Tulsa PWA

*Navigation Fuel Taxes*  
Bob Portiss, Director  
Tulsa Port of Catoosa

*Water Rights: Impact of the  
Franco Decision*  
Diane Pedicord, General Counsel  
Oklahoma Municipal League

*DEQ: The First Half-Year*  
Roger Miner, Chairman  
Oklahoma Environmental Quality Board

**Questions and Answers**

**Adjournment**  
Mr. Kerr

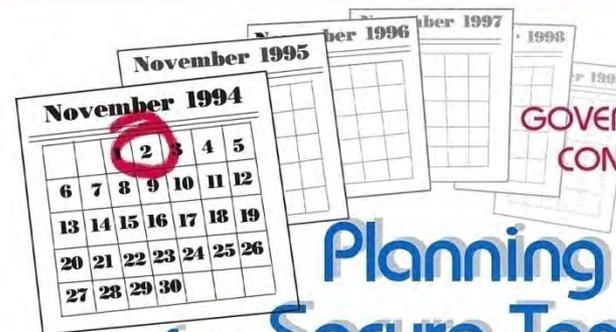
November 2, 1994  
Marriott Hotel  
3233 Northwest Expressway  
Oklahoma City

**Fifteenth Annual  
Governor's Water Conference**

**Planning Today for a Secure Tomorrow**

**Agenda**

- 8:00 a.m. Registration, Coffee**
- 8:30**      **Introductory Remarks**  
J. Ross Kirtley, Chairman  
Oklahoma Water Resources Board
- 8:40**      **Water Resources: Strategies  
to Carry us Forward**  
Senator Gene Stipe  
Oklahoma Senate
- 9:00**      **Oklahoma Comprehensive Water Plan**  
Patricia P. Eaton  
Executive Director, Oklahoma Water  
Resources Board
- 9:20**      **Sharing the Challenge: Floodplain  
Management into the 21st Century**  
Raymond "Buddy" Young  
Region VI Administrator, Federal  
Emergency Management Agency
- 9:45**      **Coffee, Networking, Exhibits**
- 10:10**    **Panel - Water Planning Issues  
on the Horizon**  
Moderator: Kathy D. Peter  
District Chief, U. S. Geological Survey
- Agribusiness and Environmental Concerns**  
Drew Kirshen  
Professor of Law, College of Law  
University of Oklahoma
- Indian Water Rights: The Tribal Perspective**  
Phillip D. Lujan  
Associate Professor, Department of  
Communication, University of Oklahoma
- Neosho River Basin: Multistate  
Planning and Multipurpose Uses**  
Col. Otis Williams  
District Engineer, Tulsa District  
U.S. Army Corps of Engineers



**GOVERNOR'S WATER  
CONFERENCE 1994**

**Planning Today  
for a Secure Tomorrow**

**Oklahoma's New Wetlands Strategy**

Mason Mungle  
Executive Director, Oklahoma  
Conservation Commission

**11:15      Questions and Answers**

**11:35      The View from Capitol Hill**  
Oklahoma Congressional Delegation

**12:30      Luncheon Program**

**Introductions and Remarks**  
Mr. Kirtley

**Oklahoma Water Pioneer Awards**  
Ms. Eaton/Mr. Kirtley

**Legislative Committee Updates**

Joint Committee on Financing Environment,  
Infrastructure for Economic Development  
Representative Randy Beutler, Co-Chairman

Kiamichi River Basin Water Supply Study  
Senator Jack Bell, Chairman

**Introduction of Gubernatorial Candidates**  
Patricia Acebo, President  
League of Women Voters of Oklahoma

Lt. Governor Jack Mildren  
Wes Watkins  
Frank Keating

**3:00      Adjournment**  
Mr. Kirtley

November 15, 1995

Sixteenth Annual  
Governor's Water Conference

**The Shifting Federal Role:  
Oklahoma's Opportunity to Redefine  
Water Policies**

- 8:00 Registration
- 8:30 Welcome  
J. Ross Kirtley, Chairman  
Oklahoma Water Resources Board
- 8:45 Budgets in Crisis: If They Hand You  
a Lemon, Make Lemonade!  
D. Craig Bell, Executive Director  
Western States Water Council
- 9:05 Panel - The Downsizing Dilemma  
Moderator: Christopher J. Brescia  
Executive Director, Midwest Area  
River Coalition - MARC 2000
- Col. Timothy L. Sanford  
Commander, Tulsa District  
U.S. Army Corps of Engineers
- A. Stanley Meiburg, Deputy Regional  
Administrator, U. S. Environmental  
Protection Agency, Region 6
- Charles Rainbolt, State Director  
Rural Economic  
& Community Development
- Elizabeth Harrison, Area Manager  
Bureau of Reclamation
- 10:20 Questions and Answers
- 10:25 Coffee, Networking, Exhibits
- 10:45 The Honorable Frank Keating  
Governor of Oklahoma
- 11:05 Panel - New Directions, New Destinies  
Moderator: Dick Seybolt, Member  
Oklahoma Water Resources Board
- Bill Moyer, Executive Director  
Oklahoma Municipal League
- Rob Johnson, Chief Executive Officer  
National Rural Water Association

November 15, 1995  
the shifting federal role --  
oklahoma's opportunity to redefine water policies

Ronn Cupp, Vice-President, Oklahoma  
State Chamber of Commerce & Industry

Jarold Callahan, Executive Director  
Oklahoma Cattlemen's Association

Scott Robinson, President  
Arkansas Basin Development Association

12:20 Questions and Answers

12:30 Luncheon Program

Introductions, Remarks  
Mr. Kirtley

Oklahoma Congressional Delegation  
Questions & Answers

Oklahoma Comprehensive Water Plan  
Gary L. Sherrer, Executive Director  
Oklahoma Water Resources Board

Update from the Oklahoma Legislature  
Speaker Glen Johnson  
Representative Mike Mass  
Senator Robert M. Kerr

Oklahoma Water Pioneer Awards  
Mr. Kirtley, Mr. Sherrer

3:00 Adjournment - Mr. Kirtley

**1995 Oklahoma Water  
Pioneer Awards**

The Oklahoma Water Pioneer Award was initiated in 1985 to honor the men and women who have made significant contributions in the planning, development, management and conservation of Oklahoma's water resources.

Their vision in water development inspired those less daring; their strength of conviction upheld us; their commitment to progress for all Oklahomans gave us abundant supplies of good water for our homes, cities, towns and industries.

- ♦ Norman N. Durham
- ♦ Billy Ray Wilson
- ♦ Oscar Hughes
- ♦ Paul E. Thornbrugh

Seventeenth Annual Governor's Water Conference

November 20, 1996  
Marriott Hotel - Oklahoma City

*"Working Together in Managing 21st  
Century Water Resources"*

**AGENDA**

- 8:00 *Registration*
- 8:30 *Welcome*  
J. Ross Kirtley, Chairman  
Oklahoma Water Resources Board
- 8:45 *Forging Unity from Diversity on Capitol Hill*  
J.D. Williams, Washington, D.C. Attorney  
Specialist in Legal and Political Affairs
- 9:10 *Panel - Partners in Infrastructure Financing*  
Moderator:  
Gary L. Sherrer, Executive Director  
Oklahoma Water Resources Board
- Charles P. Rainbolt, State Director  
Rural Development
- James G. Fulmer, President, CEO  
Oklahoma Finance Authorities
- Joe S. Freeman, Chief  
Financial Assistance Division  
Oklahoma Water Resources Board
- Leo Presley, Director  
Oklahoma Department of Commerce
- 10:15 *Coffee, Networking, Exhibits*
- 10:35 *Partnering with the States in Regulation*  
William B. Hathaway, Director  
Water Quality Protection Division  
Region 6, U.S. EPA
- 11:00 *Teamwork in Tempering Drought*  
Dr. Donald A. Wilhite, Director  
National Drought Mitigation Center  
University of Nebraska - Lincoln



*Working Together  
in Managing 21st Century  
Water Resources*

Seventeenth Annual Governor's Water Conference

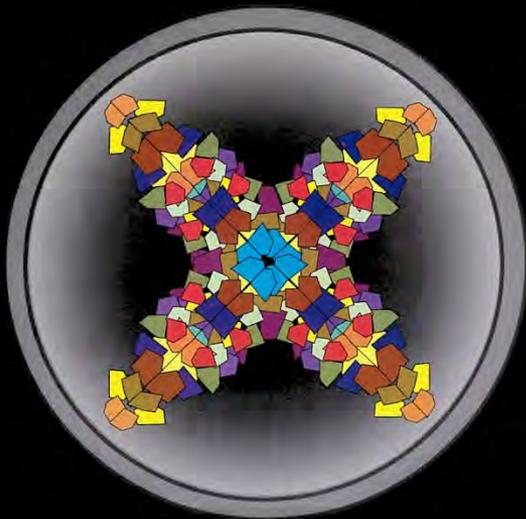
- 11:25 *Cloud Seeding as a Water Management Tool*  
  
Patrick H. Sweeney, President  
Weather Modification, Inc., Fargo, N.D.
- 11:50 *Luncheon Program*  
Introductions - Mr. Kirtley
- The Honorable Frank Keating  
Governor of Oklahoma
- The View from the State Capitol  
Senator Robert M. Kerr  
Chairman, Senate Rules Committee
- Speaker-Elect Loyd L. Benson  
Oklahoma House of Representatives
- Representative Mike Mass, Chairman  
Subcommittee on Natural Resources,  
Appropriations and Budget Committee
- The View From Capitol Hill  
Senator Don Nickles  
Other Members of the  
Congressional Delegation Invited
- Oklahoma Water Pioneer Awards
- 2:30 *Adjournment - Mr. Kirtley*

*1996 Oklahoma Pioneer Awards*

The Oklahoma Water Pioneer Award was initiated in 1985 to honor the men and women who have made significant contributions in the planning, development, management and conservation of Oklahoma's water resources.

Their vision in water development inspired those less daring; their strength of conviction upheld us; their commitment to progress for all Oklahomans gave us abundant supplies of good water for our homes, cities, towns, farms and industries.

**Senator Henry Bellmon**  
**James M. Hewgley, Jr.**  
**Ladd Hitch**  
**Phillip Klutts**  
**Donald R. Vandersypen**



# OKLAHOMA WATER

## A KALCIDOSCOPE OF ISSUES

### 18th Annual Governor's Water Conference

November 5, 1997  
Marriott Hotel - Oklahoma City

#### AGENDA

- 8:00 **Registration**
- 8:30 **Welcome**  
J. Ross Kirtley, Chairman  
Oklahoma Water Resources Board
- 8:45 **Native American Water Issues**  
Larry EchoHawk  
Professor of Law, Brigham Young University
- Bob Rabon, General Counsel  
Choctaw Nation, Chickasaw Nation
- Tim Vollmann, Regional Solicitor  
SW Region, U.S. Department of Interior
- 9:50 **Coffee, Networking, Exhibits**

- 10:10 **State Agency Issues**  
Panel Moderator: Richard Sevenoaks, Member  
Oklahoma Water Resources Board
- Duane A. Smith, Executive Director  
Oklahoma Water Resources Board
- Mark S. Coleman, Executive Director  
Oklahoma Department of Environmental Quality
- Dennis V. Howard, Commissioner  
Oklahoma Department of Agriculture
- John Hassell, Director, Water Quality Programs  
Oklahoma Conservation Commission
- 11:00 **Can Good Water and Poultry Production Co-Exist?**  
M. Susan Savage, Mayor  
City of Tulsa
- 11:20 **Legal and Environmental Issues Affecting Animal Feeding Operations**  
Janie Simms Hipp, Attorney  
National Agricultural Law and Research Center
- 11:45 **Interstate Water Gazette**  
Moderator  
Glen Cheatham, Jr., Executive Vice-President  
Arkansas Basin Development Association

*Here Comes El Nino*  
Ken Crawford, State Climatologist  
Oklahoma Climate Survey

*The Arkansas Shiner Minnow*  
Jerry Brabander, Field Supervisor  
Tulsa Office, U.S. Fish & Wildlife Service

*Weather Modification*  
Patrick H. Sweeney, President  
Weather Modification, Inc., Fargo, N.D.

12:30 **Luncheon Program**  
*Introductions - Mr. Kirtley*

Brian Griffin, Secretary of Environment  
Chairman, Governor's Animal Waste and  
Water Quality Protection Task Force

#### *Legislative Issues*

Speaker Loyd L. Benson  
Oklahoma House of Representatives

Senator Billy Mickle  
Majority Floor Leader, Oklahoma Senate

Senator Bill Gustafson  
Senate Minority Leader

Representative Larry Rice  
Chairman, House Committee on Energy,  
Environment and Natural Resources

Representative Al Sadler  
Chairman, Natural Resources Subcommittee  
House Appropriations and Budget Committee

*Oklahoma Water Pioneer Awards*  
Duane A. Smith, Executive Director

2:30 Adjournment - Mr. Kirtley

#### 1997 Oklahoma Water Pioneer Awards

The Oklahoma Water Pioneer Award was initiated in 1985 to honor the men and women who have made significant contributions in the planning, development, management and conservation of Oklahoma's Water Resources.

Their vision in water development inspired those less daring; their strength of conviction upheld us; their commitment to progress for all Oklahomans gave us abundant supplies of good water for our homes, cities, towns, farms and industries.

*Wayne A. Pettyjohn, Ph.D.*  
*Lonnie L. Farmer*  
*John "Jack" Story, Jr.*

## AGENDA

9:30 *Registration, Coffee, Exhibits*

10:00 *Welcome*

J. Ross Kirtley, Chairman  
Oklahoma Water Resources Board

*Welcome to Muskogee*  
Jim Bushnell, Mayor

10:15 *National Outlook for Water Development*

Dr. Joseph W. Westphal  
Assistant Secretary of the Army  
for Civil Works

10:40 *The Corps' Mission in Oklahoma*

Col. Leonardo V. Flor, District Engineer  
Tulsa District, U.S. Army Corps of  
Engineers

11:00 *State of the State's Environment*

Duane A. Smith, Executive Director  
Oklahoma Water Resources Board

Dennis V. Howard, Secretary of Agriculture

Mike Thralls, Executive Director  
Oklahoma Conservation Commission

Jon L. Craig, Director, Water Quality Division  
Oklahoma Department of Environmental  
Quality

12:00 *Luncheon Program*

Musical Interlude  
Parkview School Jazz Band  
Jim Gilmartin, Director

Introductions - Mr. Kirtley

Legislative Update  
Sen. Ben Robinson, Sen. Rick Littlefield  
Rep. Bill Settle, Rep. Larry Adair

The Honorable Frank Keating  
Governor of Oklahoma

Oklahoma Water Pioneer Awards  
Mr. Smith

1:40 *Insight to Oklahoma Water Law*

Drew Edmondson, Attorney General  
State of Oklahoma

2:00 *Native American Issues*

Chris Kenney, Native American Coordinator  
U.S. Department of Interior, Bureau of  
Reclamation

Joe Byrd, Principal Chief  
Cherokee Nation

Bill Anoatubby, Governor  
Chickasaw Nation

2:45 *Is Drought Our Destiny?*

Albert Ashwood, Director  
Oklahoma Department of Emergency  
Management

Dr. Kenneth C. Crawford, Director  
Oklahoma Climatological Survey

3:10 *Environmental Initiatives for Oklahoma*  
Brian C. Griffin, Secretary of Environment

Patsy Bragg, Vice-Chair,  
Tulsa Metropolitan Utility Authority

3:40 *A Delicate Balance:  
Environment and Economy*

Gregg Cooke, Region 6 Administrator  
U.S. Environmental Protection Agency

4:00 *Adjournment* - Mr. Kirtley

1998 Oklahoma Water Pioneer Awards

Bill Secret  
Robert W. "Bob" Portiss

The Oklahoma Water Pioneer Award was initiated in 1985 to honor the men and women who have made significant contributions in the planning, development, management and conservation of Oklahoma's water resources.

Their vision in water development inspired those less daring; their strength of conviction upheld us; their commitment to progress for all Oklahomans gave us abundant supplies of good water for our homes, cities, towns, farms and industries.

*Rollin' on the River  
Toward Changin' Times*



19th Annual  
Governor's Water Conference

Muskogee, Oklahoma  
September 29-30, 1998

November 17, 1999

Agenda

8 a.m. Registration

8:30 Welcome

Lonnie Farmer, Chairman  
Oklahoma Water Resources Board

8:35 Lieutenant Governor Mary Fallin

8:50 Water Quality Issues 2000 and Beyond

Carolyn S. Richardson  
Director of Environmental Advocacy  
California Farm Bureau Federation

Gregg Cooke

Administrator, Region 6  
U.S. Environmental Protection Agency

Patsy Bragg, Chair

Tulsa Metropolitan Utility Authority

9:45 Water for Oklahoma 2000

PANEL

Chuck Thomas, Member  
Stillwater City Commission

Gene Whately, Executive Director  
Oklahoma Rural Water Association

Zach D. Taylor, Executive Director  
Association of Central Oklahoma Governments

Purcy Walker, Commissioner  
Beckham County District 3

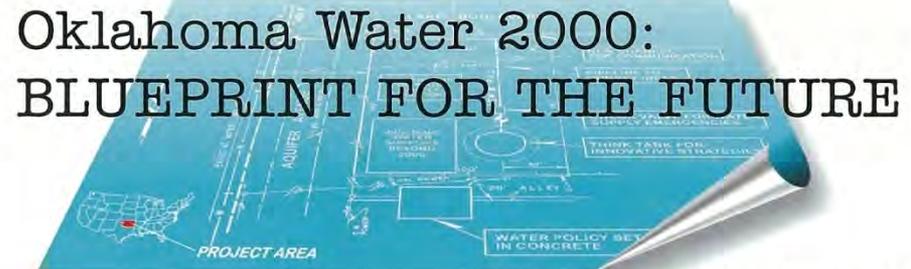
10:25 Break - Coffee/Exhibits

10:45 The Federal Agencies Look Ahead

PANEL

Col. Leonardo V. Flor, District Engineer  
U.S. Army Corps of Engineers  
Tulsa District

Mark F. Becker, Hydrologist  
U.S. Geological Survey



# Oklahoma Water 2000: BLUEPRINT FOR THE FUTURE

20th Annual  
Governor's Water Conference

Larry Caldwell, State Conservation Engineer  
Natural Resources Conservation Service

Elizabeth Cordova-Harrison, Area Manager  
Oklahoma - Texas Area, Bureau of Reclamation

11:30 The Industry Underwrites Hail Suppression

Carroll Fisher, Insurance Commissioner  
Oklahoma Insurance Department

11:50 Kiamichi River Basin Plan: Deadline 2/2000

Greg Pyle, Chief  
Choctaw Nation

Duane A. Smith, Executive Director  
Oklahoma Water Resources Board

12:40 p.m. Luncheon Program

Introductions – Mr. Farmer

Water Pioneer Awards

Mr. Farmer, Mr. Smith

Legislative Outlook – 21st Century

Congressman Ernest Istook  
Congressman Frank Lucas  
Congressman Wes Watkins  
Speaker Loyd Benson, House of Representatives  
Representative Randall Erwin  
Representative Larry Rice  
Senator Mark Snyder  
Senator Rick Littlefield

Luncheon Address

Larry Watkins, General Manager  
Electric Cooperatives of Oklahoma

Grant Presentation 2000 Ceremony  
Rural Economic Action Plan (REAP)

Representative Mike Mass  
Mr. Smith

2:30 Adjournment

Mr. Farmer

1999 Oklahoma  
Water Pioneer Awards

*Sidney D. Williams  
James Eddie Phillips  
Jimmie Pigg*

The Oklahoma Water Pioneer Award was initiated in 1985 to honor the men and women who have made significant contributions in the planning, development, management and conservation of Oklahoma's water resources.

Their vision in water development inspired those less daring; their strength of conviction upheld us; their commitment to progress for all Oklahomans gave us abundant supplies of good water for our homes, cities, towns, farms and industries.

# OKLAHOMA WATER

Shaping The Future

November 15, 2000

Program



## 21st Annual GOVERNOR'S WATER CONFERENCE

Myriad Convention Center  
Oklahoma City, Oklahoma

- 8 a.m. **Registration**  
2nd Level – Myriad Convention Center
- 8:30 **Welcome**  
Lonnie Farmer, Chairman  
Oklahoma Water Resources Board
- 8:40 Governor Frank Keating
- 9:00 **Water for Oklahoma City's Future**  
Mayor Kirk Humphreys, Oklahoma City
- 9:20 **Water for Oklahoma: The Kiamichi Basin Plan**  
Brian C. Griffin, Secretary of Environment
- 9:40 **The Waste by Pollution Ruling**  
Duane A. Smith, Executive Director  
Oklahoma Water Resources Board
- 10:00 **The Importance of Research in Weather Modification Planning**  
Dr. Kelvin Droegemeir, Director  
Center for Analysis and Prediction of Storms – University of Oklahoma
- 10:20 **Coffee/Exhibits**
- 10:40 **The Continuing Development of the McClellan-Kerr Arkansas River Navigation System**  
Scott Robinson, Director  
Port of Muskogee
- 11:00 **New Protection for the Nation's Waters**  
Gregg Cooke, Administrator, Region 6  
U.S. Environmental Protection Agency
- 11:20 **Endangered Species – The Ultimate Trump Card**  
William H. Satterfield, Attorney  
Balch & Bingham, Birmingham, AL
- 12:00 **Luncheon Program**
- Gold on Tap – Water in the 21<sup>st</sup> Century**  
T. Boone Pickens, President, CEO  
Mesa Water, Inc., Dallas, TX

### Washington D.C. Outlook

#### State Legislative Outlook

Senator Billy Mickle  
Majority Floor Leader, Oklahoma Senate

Senator Jim Dunlap  
Incoming Republican Floor Leader  
Oklahoma Senate

Representative Larry Adair  
Speaker-Elect  
Oklahoma House of Representatives

Representative Randall Erwin  
Chairman, Natural Resources Appropriations  
and Budget Subcommittee  
Oklahoma House of Representatives

Others Invited

#### Rural Economic Action Plan (REAP)

Announcement of 2001 Grant Recipients  
Mr. Smith

#### Oklahoma Water Pioneer Awards

Mr. Farmer, Mr. Smith

2:30 **Adjournment**

### 2000 Water Pioneers

*Michelle (Mike) Henson  
James C. Leake  
Jim C. Murphy*

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# Agenda

## 8:a.m. Registration

2<sup>nd</sup> Level - Myriad Convention Center

## 8:30 Welcome

Grady Grandstaff, Chairman, Oklahoma Water Resources Board

## 8:40 Governor's Address

Frank Keating, Governor of Oklahoma

## 9:00 State/Tribal Water Compact and Water Marketing Update

Howard Barnett, Governor Keating's Chief of Staff and a representative of the Choctaw and/or Chickasaw Nation

## 9:30 Thirsting for Power: Potential Impact of New Powerplants on Oklahoma Water Supplies

Ted Coombes, President, Southwest Power Resources Association

## 9:50 Water Gazette

### Terrorism - Protecting Our Water Sources

Albert Ashwood, Director, Oklahoma Department of Civil Emergency Management

### Compacting to Protect State Water Rights

Dean Couch, General Counsel, Oklahoma Water Resources Board

### Well Drillers Advisory Council

Danny Ewbank, Ewbank Inc. Fairview, Oklahoma

### Economic Impact of the McClellan-Kerr Arkansas River Navigation System

Scott Robinson, Director Port of Muskogee

## 10:20 Coffee/Exhibits

## 10:40 National Agenda for Water

Roberta (Robbi) Savage, Executive Director, Association of State and Interstate Water Pollution Control Administrators - Washington DC

## 11:00 Big Plans for Small Systems

Robert Johnson, CEO, National Rural Water Association, Duncan, Oklahoma

## 11:20 Meeting Oklahoma's Future Water Infrastructure Financing Needs

Gene Rainbolt, Chairman of the Board, BancFirst

# 22nd Annual Governor's Water Conference

# Water

the KEY to  
Oklahoma's Future

November 14, 2001 - Myriad Convention Center - Oklahoma City, Oklahoma

## 11:40 Oklahoma Comprehensive Water Plan - a New Focus

Duane Smith, Executive Director, Oklahoma Water Resources Board

## 12:00 Noon - Luncheon Program

### The Texas Water Plan, a Regional Approach

Texas State Senator J. E. "Buster" Brown

### Washington DC Outlook

Oklahoma Congressional Delegation

### State Legislative Outlook

Senator Cal Hobson, Vice Chairman, Senate Appropriations Committee, Oklahoma State Senate

Senator Jim Dunlap, Republican Floor Leader, Oklahoma State Senate

Representative Larry Adair, Speaker, Oklahoma House of Representatives

### Rural Economic Action Plan (REAP)

Announcement of 2002 Grant Recipients  
Mr. Smith

### Oklahoma Water Pioneer Awards

Mr. Grandstaff, Mr. Smith

## 2:30 Adjournment

## 2001 Oklahoma Water Pioneer Awards

**Robert Johnson**  
**Phillip B. Lorenz**  
**Ken McFall**  
**James H. Norick**

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23rd Annual

# Oklahoma

## Governor's Water Conference

Coordinated by the Oklahoma Water Resources Board

October 9, 2002

Adams Mark Hotel &  
Conference Center  
Tulsa, Oklahoma

# Celebrating Water

Past Successes/Future Challenges

## AGENDA

### 8 a.m. Registration

#### 8:30 Welcome

Grady Grandstaff, Chairman  
Oklahoma Water Resources Board  
Bill LaFortune, Mayor  
City of Tulsa

#### 8:50 Addressing Interstate Water Quality Issues

Brian Griffin, Secretary of Environment  
State of Oklahoma

#### 9:10 Celebrating 30 Years of Clean Water

Allan Stokes, Chief Operations Officer  
America's Clean Water Foundation

#### 9:30 Tribal Water Rights and Water Quality Administration

Taiawagi Helton, Professor  
University of Oklahoma College of Law  
Lindsay G. Robertson, Associate Professor  
University of Oklahoma College of Law  
Michael Brophy, Attorney  
Ryley, Carlock & Applewhite

#### 10:30 Coffee/Exhibits

#### 10:45 A Century of Water for the West: The Bureau of Reclamation's Centennial Celebration

Larry Walkoviak, Manager  
OK-TX Area Office, Bureau of Reclamation

#### 11:05 The Legal Ramifications of Water Transfer

Drew L. Kershen, Earl Sneed Centennial  
Professor, University of Oklahoma  
Gary Allison, Professor  
University of Tulsa College of Law

#### 11:40 Science for a Changing World

Kim T. Winton, Oklahoma District Chief  
U.S. Geological Survey

#### Noon Luncheon Program

##### OK Water Pioneer Awards

##### State of the State's Water

Duane A. Smith, Executive Director  
Oklahoma Water Resources Board

##### The Outlook from Washington D.C.

Oklahoma's Congressional Delegation

##### State Legislative Outlook

Sen. Rick Littlefield  
Sen. James Dunlap  
Rep. M.C. Leist  
Rep. Mark Liotta

##### Oklahoma's Gubernatorial Candidates

Brad Henry  
Steve Largent  
Gary Richardson

#### 2:30 Adjournment



## Celebrating Water

Past Successes/Future Challenges

TWENTY-THIRD ANNUAL OKLAHOMA GOVERNOR'S WATER CONFERENCE - OCTOBER 9, 2002

2002

### OKLAHOMA WATER PIONEERS

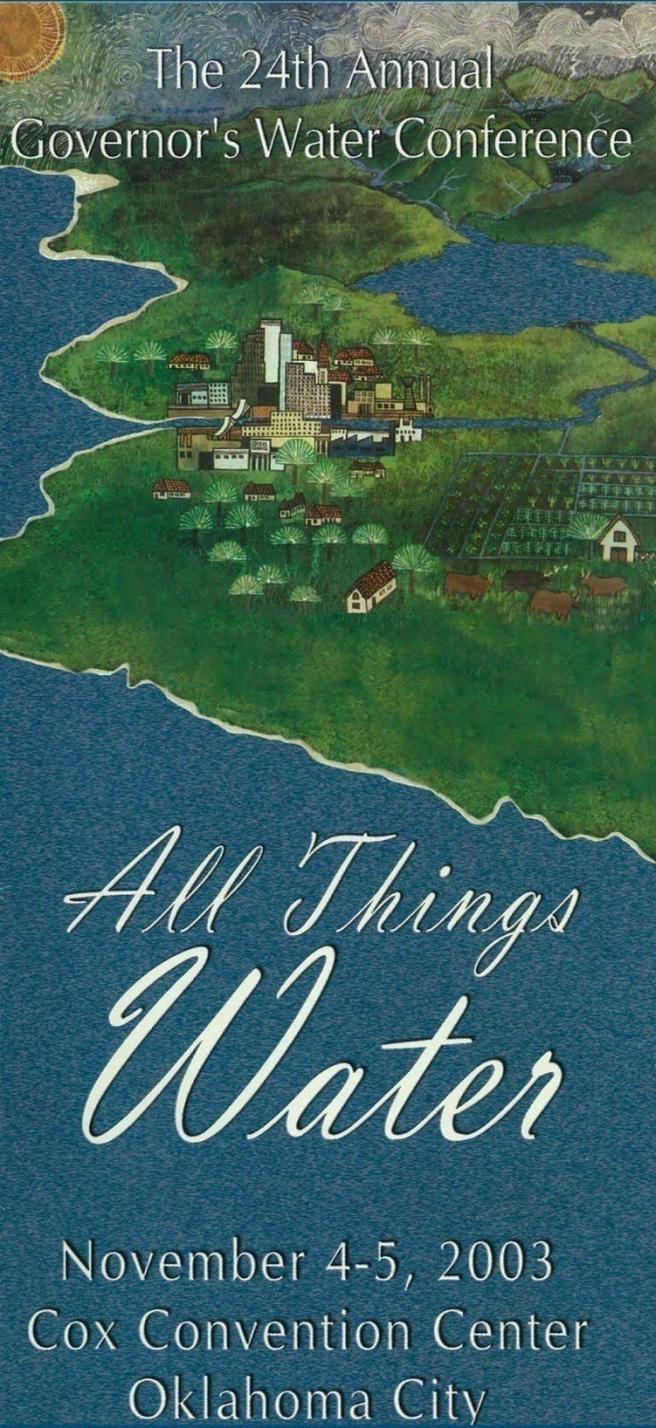
*Frank Condon*

*Mae Cooper*

*Murray Williams*

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*"Their vision in water development inspired those less daring; their strength of conviction upheld us; their commitment to progress for all Oklahomans gave us abundant supplies of good water for our homes, cities, towns, farms, and industries."*



# The 24th Annual Governor's Water Conference

## All Things Water

November 4-5, 2003

Cox Convention Center  
Oklahoma City

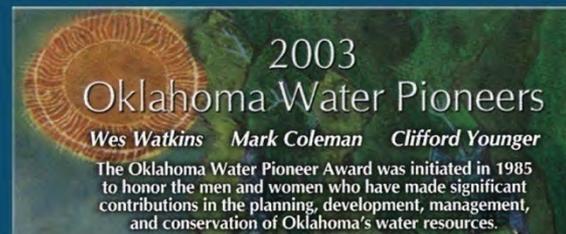
### November 4

#### Arbuckle Simpson Aquifer Symposium

- 1:00 Registration
- 1:30 Welcome and Introductions  
*Grady Grandstaff, Chairman  
Oklahoma Water Resources Board*
- 1:45 Water 2025 Initiative: Preventing Crises and Conflict  
*John Keys, Commissioner, Bureau of Reclamation*
- 2:05 Can Private Property Rights be Protected Without Strong Regulations?  
*Gregory Ellis, General Manager  
Edwards Aquifer Authority (San Antonio)*
- 2:25 Water Law Issues in Senate Bill 288  
*Drew L. Kershen, Earl Sneed Centennial Professor  
University of Oklahoma*
- 2:45 Coffee Break
- 3:00 Study Overview and Technical Challenges  
*Moderator: Duane Smith, OWRB Executive Director  
Randall Ross, U.S. Environmental Protection Agency  
Noel Osborn, OWRB  
Neil Suneson, Oklahoma Geological Survey  
Scott Christenson, U.S. Geological Survey*
- 4:00 Local Water Management Issues  
*Dick Scalf, Ada Water Resources Board  
Jim Crosby, Manager, City of Yukon  
Senator Jay Paul Gumm  
Representative Susan Winchester*
- 5:00 Adjournment
- 6:00 Reception

### November 5

- 8:00 Registration
- 8:30 Welcome and Introductions  
*Grady Grandstaff, Chairman  
Oklahoma Water Resources Board*
- 8:50 Keynote Address  
*Governor Brad Henry*
- 9:10 State of the State's Water  
*Duane Smith, Executive Director  
Oklahoma Water Resources Board*
- 9:30 Western States Water Issues  
*Paul Sweeney  
NRCS Liaison to Western Governor's Association*
- 9:50 EPA Update  
*Miguel Flores, Director of Water  
EPA Region 6*
- 10:10 Corps of Engineers Activities  
*Christine Altendorf  
Tulsa District, U.S. Army Corps of Engineers*
- 10:30 Coffee Break/Exhibits
- 10:45 Cabinet Secretary Panel - Water for the Environment, Agriculture, Tourism and Recreation, and Transportation  
*Miles Tolbert, Secretary of Environment  
Terry Peach, Secretary of Agriculture  
Kathryn Taylor, Secretary of Commerce & Tourism  
Phil Tomlinson, Secretary of Transportation*
- 12:00 Luncheon Program  
U.S. Coast Guard Public Service Awards  
Oklahoma Water Pioneer Awards  
Featured Luncheon Speaker, George Nigh  
Water Outlook from Washington DC  
*Oklahoma Congressional Delegation (invited)*  
State Legislative Water Perspective  
*Speaker Larry Adair  
Representative Jari Askins  
Representative Danny Hilliard  
Senator Jay Paul Gumm*



# OKLAHOMA WATER. A QUALITY OF LIFE

25<sup>th</sup> Annual Governor's Water Conference

October 19-20, 2004

Tuesday, October 19

## A Symposium on Tribal Claims and Water

- 1:00 **Registration**
- 1:30 **Welcome & Overview**  
Duane A. Smith, OWRB Executive Director  
Justice Yvonne Kauger, Oklahoma Supreme Court
- 1:50 **Land of Many Cultures: American Indians in Oklahoma**  
Bob Blackburn, Director, Oklahoma Historical Society
- 2:10 **Coordination of State/Tribal Water Quality Administration**  
Miles Tolbert, Oklahoma Secretary of the Environment
- 2:30 **Negotiating Indian Water Rights Claims**  
Susan Cottingham, Director, Montana Reserved Water Rights Compact Commission
- 2:50 **EPA Perspective on Tribal Water Claims**  
Chuck Sheehan, Regional Counsel, U.S. Environmental Protection Agency
- 3:10 **Break**
- 3:25 **Congressional Viewpoint**  
Ryan Jackson, Counsel, Senate Environment and Public Works Committee
- 3:45 **Town of Taos & Aboya Water Right Adjudication**  
Tomas Benavidez, Town Attorney, Taos, New Mexico
- 4:05 **Tribal Perspectives**  
Chad Smith, Principal Chief, Cherokee Nation  
John Berrey, Chairman, Quapaw Tribe  
Bill Anoctabby, Governor, Chickasaw Nation
- 5:05 **Resolution of Tribal Water Claims**  
Lindsay Robertson, Associate Professor, OU College of Law
- 5:25 **Adjournment to Reception**

Wednesday, October 20

## Governor's Water Conference Program

- 8:00 **Registration**
- 8:30 **Welcome and Introductions**  
Ervin Mitchell, OWRB Chairman
- 8:35 **Video - "Oklahoma Water: A Quality of Life"**
- 9:05 **Keynote Address**  
Lt. Governor Mary Fallin
- 9:20 **Congressional Senate Candidate Forum**  
Representative Brad Carson  
Dr. Tom Coburn
- 9:50 **Water Development Infrastructure Financing**  
Scott Meacham, Director, Oklahoma Office of State Finance
- 10:05 **Planning for the Future of the Grand River Basin**  
Kevin Easley, General Manager, Grand River Dam Authority
- 10:20 **Break / Exhibits**
- 10:35 **Infrastructure Financing Panel**  
Moderator: Joe Freeman, OWRB  
Ted Lockin, Mayor of Bartlesville  
Dennis Krueger, General Manager, Kiwash Electric Cooperative  
Dr. Joe Taron, Chairman, Pattawatomie Co. Dev. Authority  
Chris Cochran, Senior Vice President, Capital West
- 11:30 **Water Magazine**  
**Oklahoma River Development Project**  
Jim Hasenbeck, Studio Architecture, Oklahoma City  
**Arkansas River Vision Plan**  
Kevin Conner, Carter & Burgess, San Antonio, TX  
**Navigation Update**  
Scott Robinson, Director, Port of Muskogee  
**Interstate Compact News**  
Dick Seybolt, Chairman, Arkansas-Oklahoma Arkansas River Compact Commission
- 12:15 **Luncheon Program**  
**Oklahoma Water Pioneer Awards**  
**State of the State's Water**  
Duane Smith, OWRB Executive Director  
Miles Tolbert, Oklahoma Secretary of the Environment  
**Water Outlook from Washington D.C.**  
Oklahoma's Congressional Delegation (invited)  
**Oklahoma State Legislative Water Perspective**  
House Speaker-Elect Jari Askins  
Representative David Braddock  
Senator Johnnie Crutchfield  
Senator Jay Paul Gunn
- 2:30 **Adjournment**

Coordinated by The Oklahoma Water Resources Board  
Duane A. Smith, Executive Director

Registration Coordinator: Mary Nell Brueggen

Conference Coordinators: Mike Melton, Mary Schooley,  
Brian Vance, Darla Whitley, and Barry Fogerty



2004 Oklahoma Water Pioneers

Glenn Sullivan Joe Taron

# Investing in Water

## It's Time for Action!

### Oklahoma Groundwater Symposium

#### TUESDAY, NOVEMBER 1

- 1:00 Registration
- 1:30 **Welcome and Overview**  
*Duane A. Smith, Executive Director, OWRB*  
*Rep. Curt Roggow*
- 1:40 **Keynote Address--Water Follies: Ground Water Pumping and the Fate of America's Fresh Waters**  
*Robert Glennon, Professor, Univ. of Arizona College of Law*
- 2:25 **Oklahoma Groundwater Law**  
*Dean Couch, General Counsel, OWRB*
- 2:40 **Oklahoma's Dependence on Groundwater**  
*Kim Winton, Director, OK Water Science Center, USGS*
- 2:55 **Pitfalls in Groundwater Planning**  
*Todd Halihan, Professor of Geology, OSU*
- 3:10 **Break**
- 3:25 **Unconstitutional Takings of Water Interests**  
*James H. Davenport, Esq., Chief*  
*Water Division, Colorado River Commission of Nevada*
- 3:45 **Groundwater Quality Standards & Implementation**  
*Derek Smithee, Water Quality Division Chief, OWRB*
- 4:00 **Groundwater Panel**  
**The Water Well Drilling Industry: Protecting Our Groundwater**  
*Cheryl Cohenour, Cherokee America Drilling*  
*(CRC&Associates)*  
**Developments in USGS Groundwater Research:**  
**Age-Dating Groundwater**  
*Scott Christenson, Hydrologist, USGS*  
**Arsenic in Our Groundwater: A Municipal Approach**  
*Brad Gambill, City Manager, Norman, Oklahoma*  
**Arbuckle-Simpson Hydrology Study Update**  
*Noel Osborn, Geologist, OWRB*
- 5:00 **Adjourn to Reception**

#### WEDNESDAY, NOVEMBER 2

- 8:00 **Registration**
- 8:30 **Welcome and Introductions**  
*Rudy Herrmann, OWRB Chairman*  
*Pete White, Chairman, Oklahoma City Water Utilities Trust*
- 8:50 **State of the State's Water**  
*Duane A. Smith, OWRB*
- 9:10 **Water for the Environment**  
*Miles Tolbert, Secretary of Environment*
- 9:30 **Water for Agriculture**  
*Terry Peach, Secretary of Agriculture*
- 9:50 **Helping Oklahoma's Small Communities**  
*Steve Thompson, Executive Director*  
*Oklahoma Department of Environmental Quality*
- 10:10 **Break/Exhibits**
- 10:25 **Federal Water Resources Development & Planning Panel**  
**U.S. Army Corps of Engineers Activities**  
*Colonel Miroslav Kurka, Tulsa District Engineer*  
**Bureau of Reclamation Activities**  
*Mike Ryan, Great Plains Regional Director*  
**Natural Resources Conservation Service Activities**  
*Larry Caldwell, National Policy Coordinator*  
*Watershed Rehabilitation*
- 11:25 **Protecting the Nation's Waters**  
*Susan Branning, Assistance Branch Chief, EPA Region 6*
- 11:45 **Illinois River Update**  
*Drew Edmondson, OK Attorney General*
- Noon **Luncheon Program**  
**Luncheon Address**  
*Lt. Governor Mary Fallin*  
**Oklahoma Water Pioneer Awards**  
**Water Outlook from Washington D.C.**  
*Oklahoma's Congressional Delegation*  
*Blu Hulseley, Majority Counsel, U.S. Senate Committee*  
*on Environment & Public Works*  
**Oklahoma State Legislative Update**  
*Sen. Richard Lerblance, Rep. Susan Winchester,*  
*Sen. Kenneth Corn, Rep. Don Armes, Sen. Jeff Rabon*
- 3:00 **Adjournment**



2005 Oklahoma Water Pioneers



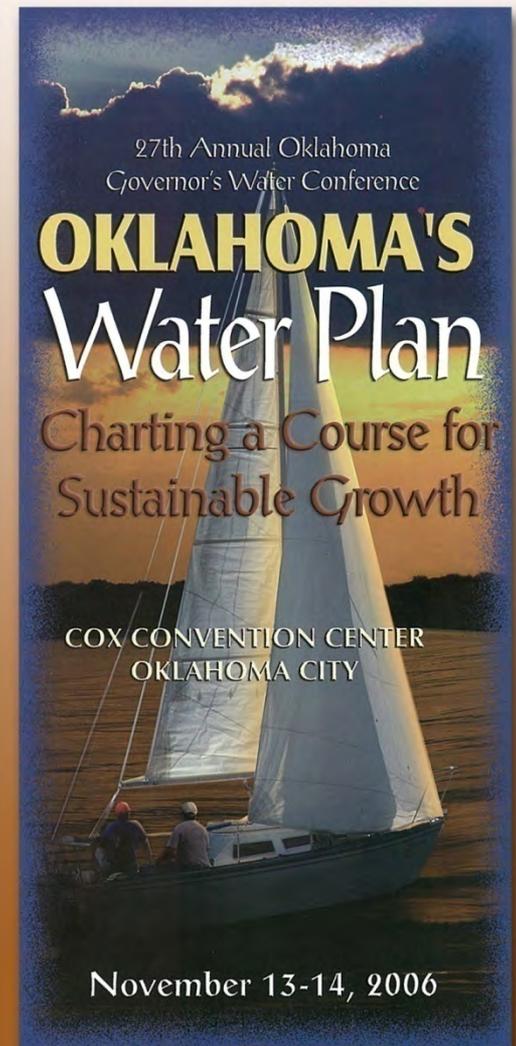
Jay Galt, 1943-2005 Julian Fite, 1945-2005

**MONDAY, NOVEMBER 13, 2006**

- 1:00 REGISTRATION**
- 1:30 Welcome and Overview**  
*Duane A. Smith, Executive Director, OWRB*  
*Rep. Guy Liebmann*
- 1:50 Comprehensive Water Planning in New Mexico**  
*John D'Antonio, New Mexico State Engineer*
- 2:10 Panel—Oklahoma's Water Planning Process**  
**OCWP Study Organization and Management**  
*Mike Mathis, OWRB Water Plan Coordinator*  
**Stakeholder Involvement and Participation**  
*Dr. Will Focht, Director*  
*Oklahoma Water Resources Research Institute*  
**Water Infrastructure Inventory**  
*Trish Weedn, Executive Director*  
*Oklahoma Association of Regional Councils*  
**Federal Planning Assistance**  
*Sue Haslett, Planning and Environmental*  
*Division Chief, U.S. Army Corps of Engineers*  
*Tulsa District*
- 3:10 Partnerships in Regional Water Planning**  
*Representative of U.S. Bureau of Reclamation*
- 3:25 Break**
- 3:40 Future Water Policy Considerations**  
*Rudy Herrmann, OWRB Chairman*
- 3:55 Planning for Environmental Protection**  
*Steve Thompson, Executive Director*  
*Oklahoma Dept. of Environmental Quality*
- 4:10 Banking on Bristow's Water Future**  
*Kel Kelly, President, Spirit Bank*
- 4:25 Panel—Incorporating Water User Concerns**  
**Municipal Interests**  
*Danny George, Executive Director*  
*Oklahoma Municipal League*  
**Agricultural Interests**  
*Terry Peach, Secretary of Agriculture*  
**Industrial/Navigation Interests**  
*Ronn Cupp, Senior Vice President*  
*Government Affairs, The State Chamber*
- 5:10 Watershed Planning in Oklahoma**  
*Clay Pope, Executive Director*  
*Oklahoma Association of Conservation Districts*
- 5:25 Summary & Adjournment to Reception**

**TUESDAY, NOVEMBER 14, 2006**

- 8:00 REGISTRATION**
- 8:30 Welcome and Introductions**  
*Rudy Herrmann, OWRB Chairman*
- 8:45 Keynote: The Worst Hard Time**  
*Timothy Egan, Author*
- 9:30 The Oklahoma Drought**  
*Ken Crawford, Director*  
*Oklahoma Climatological Survey*
- 9:50 Coffee Break/Exhibits**
- 10:10 Update of the Oklahoma Comprehensive Water Plan**  
*Duane Smith, OWRB Executive Director*
- 10:30 State of the State's Environment**  
*Miles Tolbert, Secretary of Environment*
- 10:50 Legal Considerations in Oklahoma Water Planning**  
*Gary D. Allison, Professor of Law*  
*University of Tulsa*
- 11:10 Oklahoma's Future: Strategies for Our 2nd Century**  
*Larry Rice, Executive Assistant to the President*  
*University of Tulsa*
- 11:30 Oklahoma Legal Briefs**  
*Attorney General Drew Edmondson*
- Noon LUNCHEON PROGRAM**  
**Gubernatorial Address**  
**Oklahoma Water Pioneer Awards**  
**Water Outlook from Washington D.C.**  
*Michele Nellenbach, Senior Professional Staff*  
*Member, U.S. Senate Committee on*  
*Environment & Public Works*  
**State Legislative Water Perspective**  
*Rep. Lance Cargill, House Speaker Designate*  
*Rep. Don Armes*  
*Sen. Charlie Laster*
- 2:30 Adjournment**



**2006 OKLAHOMA WATER PIONEERS**

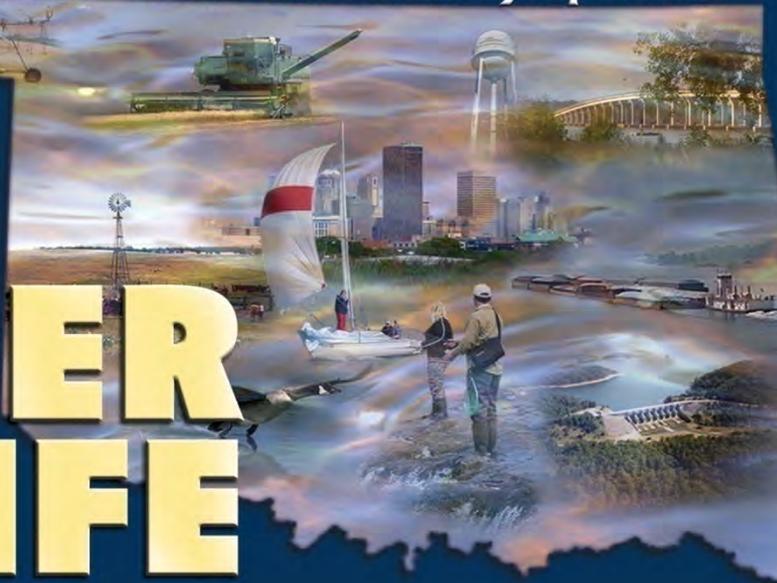
**W. C. Austin**  
**Ervin Mitchell**

# 28th Annual Governor's Water Conference & 5th Annual OWRRI Water Research Symposium

Cox Convention Center  
Oklahoma City, OK

October 23-25, 2007

# WATER for LIFE



## Tuesday, October 23

8:00 Registration

8:30 Welcome

*Dr. Glenn Brown, Biosystems & Agricultural Engineering, Oklahoma State University*

8:45 **Session 1A: The Arbuckle-Simpson Hydrology Study—Hydrology of the Arbuckle-Simpson Aquifer**

*Session Chair: Noel Osborn, Water Resources Geologist, Oklahoma Water Resources Board*  
Overview of the Arbuckle-Simpson Hydrology Study  
*Noel Osborn, OWRB*

*Geologic Framework of the Arbuckle-Simpson Aquifer*  
*Dr. Todd Halihan, Assistant Professor, School of Geology, OSU*

*Groundwater Hydrology of the Arbuckle-Simpson Aquifer*  
*Scott Christenson, Hydrologist, New Mexico Water Science Center, U.S. Geological Survey*  
*Stream Hydrology and Water Balance of the Arbuckle-Simpson Aquifer*  
*Dr. Baxter Vieux, Director, Center for Natural Hazards & Disaster Research, Oklahoma Univ.*

10:00 **Break/Student Poster Competition Viewing**

10:30 **Session 1B: The Arbuckle-Simpson Hydrology Study—Putting the Pieces Together for Water Management**

*Session Chair: Noel Osborn, OWRB*  
The Role of Science in Evaluating Management Options for the Arbuckle-Simpson Aquifer  
*Noel Osborn, OWRB*

*Modeling Surface Water Rights*  
*Benjamin Harding, Principal Engineer, Hydrosphere Resource Consultants*

*Modeling Fish Habitat in Streams Draining the Arbuckle-Simpson Aquifer*  
*Dr. Bill Fisher, Research Ecologist, Oklahoma Cooperative Fish & Wildlife Research Unit, OSU*  
*Simulations of Groundwater Flow in the Arbuckle-Simpson Aquifer*  
*Scott Christenson, USGS*

11:45 **Luncheon**

*ARS Water Resources Research in Oklahoma: From Floods to Droughts & Everything in Between, A Story Worth Telling*  
*Jurgen Garbrecht, Agricultural Research Service, U.S. Department of Agriculture*

1:30 **Session 2: Updates & New Developments**

*Session Chair: Dr. Glenn Brown, OSU*  
*Issues with Setting Water Quality Based Endpoints for a Quantitative P Index*  
*Dr. Dan Storm, Biosystems & Agricultural Engineering, OSU*  
*Harmful Algal Bloom Management Policy for Corps of Engineers Tulsa District Reservoirs*  
*Dr. Gerard A. Clyde, U.S. Army Corps of Engineers, Tulsa District*  
*Research & Evolving Tools on Earthen Embankment Breach Failure Processes & Erodibility*  
*Dr. Greg Hanson, USDA-ARS*

3:00 **Break/Student Poster Competition Viewing**

3:30 **Session 3: The Grand Lake Watershed Interstate Public/Private Plan**

*Session Chair: Dr. Michael Smolen, OSU*  
Introduction to Cooperative Programming in the Four States & the Four-State Alliance Partnership  
*Dr. Michael Smolen, OSU*

*Grand Lake—It's a Big Watershed*  
*Carl Metcalf, Grand Lake Watershed Alliance Foundation*  
*Grand Lake Watershed Implementation (Oklahoma) & Four State Planning Efforts*  
*Dr. Kevin Gustavson, Oklahoma Conservation Commission*

*Watershed Education Programs & Stakeholder Groups in the Shoal Creek & Elk River Watershed of Missouri*  
*Drew Holt, University of Missouri Extension*

*Watershed Education Programs & Stakeholder Groups in the Neosho River Watershed of Kansas*  
*Jim Triplett, Pittsburgh State University*

5:00 **Adjournment to Reception**

## Wednesday, October 24

8:00 Registration

8:15 **Welcome & Introductions**

*Dr. Marlene Strathe, Interim President, OSU*

8:30 **Oklahoma's Water Future**

*Dr. John F. Luthy, President, The Futures Corporation*

9:15 **Session 4: Defining Water Sustainability**

*Session Chair: Dr. Kim Winton, Director, Oklahoma Water Science Center, USGS*  
*Assessment of Water Availability in Regional Aquifer Systems Using Modflow's Farm Process*  
*Randall T. Hanson, Research Hydrologist, USGS*  
*Precipitation Variability & Sustainability of Water Supply & Demand*  
*Dr. Jurgen Garbrecht, USDA-ARS*  
*An Introduction to Ecological Flows*  
*Rachel Esralew, Stream Ecologist, USGS Oklahoma Water Science Center*  
*Ellen Tejen, The Nature Conservancy*

10:45 **Break**

11:00 **Session 5: Science and Policy**

*Session Chair: Ed Rossman, Assistant Chief, Planning & Environmental Division, Corps of Engineers, Tulsa District*  
The Division of Agricultural Sciences & Natural Resources' Initiative in Water Resources  
*Dr. Robert Whitson, Vice President, Dean and Director for Agricultural Programs, OSU*  
*Shared Vision Planning Applied to Regulatory Decisions*  
*Hal Cardwell, Corps of Engineers, Institute for Water Resources*  
*Bill Warwick, Corps of Engineers, Institute for Water Resources (retired)*  
*Gene Lilly, Corps of Engineers, Tulsa District*

*Assembly & Use of a Decision Support System in an Efficient Drinking Water Distribution*  
*Planning of Public Rural Water Supply Systems in Northeastern Oklahoma*  
*Anna Childers, OSU*

*Tribal Water Quality: A Cherokee Nation Perspective*  
*Cara Cowan Watts, Cherokee Nation Tribal Council*

12:30 **Luncheon**

*Mark Nichols, OWRB Chairman*

*OWRRI Student Poster Competition Winner Announcement*

*EPA Pisces Award Presentation*

*Oklahoma Water Pioneer Awards*

*Water Planning at the Federal Level*

*John Paul Woodley, Jr., Assistant Secretary of the Army, Civil Works, Corps of Engineers*

2:00 **Oklahoma Legal Briefs**

*Attorney General Drew Edmondson*

2:20 **Conservation as a Planning Tool**

*Gary Mast, Deputy Undersecretary for Natural Resources & the Environment, USDA*

2:40 **Water Plan Update**

*Overview of the Oklahoma Comprehensive Water Plan*

*Duane Smith, OWRB Executive Director*

*OCWP Public Participation*

*Dr. Will Focht, Director, Oklahoma Water Resources Research Institute*

*Private Sector Partnering*

*John Rehring, Vice President, Camp Dresser & McKee, Inc.*

3:25 **Break**

3:40 **Kansas Water Plan**

*Tracy Streeter, Director, Kansas Water Office*

4:00 **OCWP Forum**

*Oklahoma Water: Envisioning the Next 50 Years. Moderator: Dr. John Luthy*

*Terry Peach, Oklahoma Secretary of Agriculture*

*Ron Stahl, Discover Oklahoma, Oklahoma Tourism & Recreation Dept.*

*Zach Taylor, Executive Director, Association of Central Oklahoma Governments*

*Howard (Bud) Ground, Manager, State Governmental & Environmental Affairs, Public Service Company of OK*

*Tom Buchanan, General Manager, Lugert-Altus Irrigation District*

5:30 **Adjournment to Reception**

6:30 **"Celebration of Oklahoma Water" Banquet**

## Thursday, October 25 (Rooms A & B)

8:00 Registration

8:15 **Welcomes & Remarks**

*Duane Smith, OWRB Executive Director*

8:30 **Sustainable Water Planning**

*Miles Tolbert, Oklahoma Secretary of the Environment*

8:50 **Bureau Update**

*Robert W. Johnson, Commissioner, Bureau of Reclamation*

9:10 **Responding to Climate Change**

*Dealing with Climate Change in Oklahoma*

*Ken Crawford, State Climatologist, Oklahoma Climatological Survey*

*The National Water Program Strategy*

*James R. Brown, Chief, Planning and Analysis Branch, U.S. Environmental Protection Agency, Region 6*

10:00 **Break**

10:15 **A View from the State Legislature**

*Senator Glenn Coffee, Co-President Pro Tempore*

*Senator Jay Paul Gumm, Co-Chairman, Energy & Environment Committee*

*Representative Guy Liebmann, Chairman, General Government & Transportation Committee*

*Representative Skye McNeil, Vice-Chair, Natural Resources Committee*

11:00 **Water Outlook from Washington DC**

*Oklahoma's Congressional Delegation*

**Adjournment**

## 2007 Oklahoma Water Pioneers



Ken Crawford



Jerry Johnston

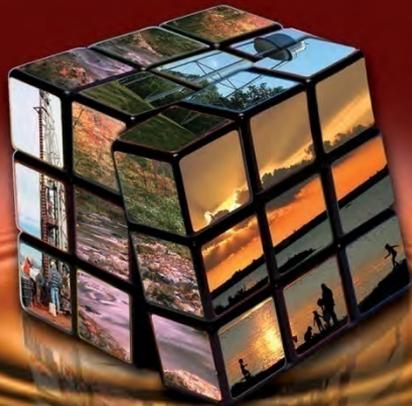


Don Kiser

29th Annual  
Governor's Water Conference  
&  
6th Annual  
OWRRI Water Research Symposium

Sheraton-Reed Conference Center  
Midwest City, OK

October 28-30, 2008



Oklahoma Comprehensive Water Plan

Water Solutions  
for Oklahoma

**October 28**

**GOVERNOR'S WATER CONFERENCE AGENDA**

- 7:45 **Registration**  
8:15 Welcome  
Mark Nichols, Chairman, OWRB  
J.D. Strong, Oklahoma Secretary of the Environment
- 8:30 Comprehensive Water Planning in Oklahoma: Duane Smith, OWRB Executive Director
- 9:15 The Corps of Engineers' Water Planning Role: Steve Stockton, Director of Civil Works, Corps of Engineers
- 9:30 The Corps' Tulsa District - Working with Oklahoma: Col. Anthony Funkhouser, Tulsa District Engineer
- 9:45 **Break**  
10:15 OCWP Public Participation: Will Focht, Director, OWRRI  
10:35 **Panel: OCWP Technical Studies**  
Overview: John Rehring, Camp Dresser & McKee Inc.  
Statewide Water Supply/Demand Analysis: Kelly DiNatale, Senior Water Resources Engineer, CDM  
Public Water Provider/Infrastructure Survey: Bryan Mitchell, Deputy Project Manager for the OCWP, CDM
- 11:40 **Break**  
Noon **Conference Luncheon**  
Oklahoma Water Pioneer Awards  
Chairman Nichols, Duane Smith  
Legislative Water Perspective  
Senator Glenn Coffee, Co-President Pro Tempore  
Representative Dale DeWitt  
Water Outlook from Washington DC  
Representative Mary Fallin  
Representative Tom Cole
- 1:40 **Break**  
2:00 Interior Update  
Kris Polly, Dep Asst Sec for Water and Science, Dept of Interior
- 2:20 The New State/Federal Water Planning Model  
Fred Caver, President, Caver & Associates Inc.
- 2:40 The Great Lakes Compact  
Cameron Davis, President, Alliance for the Great Lakes
- 3:00 Water Supply Management in a Variable Climate  
Ken Crawford, Director, Oklahoma Climatological Survey
- 3:20 Arbuckle-Simpson Study Proposed Management Options  
Noel Osborn, Water Resources Geologist, OWRB  
Scott Christenson, Hydrologist, U.S. Geological Survey
- 4:20 **Adjourn to Reception**

**October 29**

- 7:45 **Registration and Poster Viewing**  
8:15 Welcome  
Duane Smith, OWRB Executive Director  
Mayor Mick Cornett, Oklahoma City
- 8:40 The Energy/Water Nexus  
Tom Price, Jr., Senior VP-Corporate Development, Chesapeake
- 9:00 The Tribal Role in Water Plan Development  
Governor Bill Anoatubby, Chickasaw Nation
- 9:20 Nexus Between Water Supply Planning & Environmental Flows - The Texas Experience  
Bill Mullican, Water Science & Cons, Texas Water Dev Board
- 9:40 Partnerships in Oklahoma Water Quality  
Steve Thompson, Executive Director, ODEQ

- 10:00 **Break & Poster Viewing**  
10:30 **Panel: Protecting Oklahoma's Water Interests**  
Michael Fuhr, Director, Nature Conservancy of Oklahoma  
Jeff Todd, Attorney, Oklahoma Farm Bureau Legal Foundation  
Diane Pedicord, General Counsel, Oklahoma Municipal League  
Bob Portiss, Director, Tulsa Port of Catoosa
- 11:20 **Panel: Regional Water Solutions for Oklahoma**  
Rob Johnson, CEO, National Rural Water Association  
Steve Lewis, Manager, City of Norman  
Kelly Hurt, Engineer, Chickasaw Enterprises
- Noon **Conference Luncheon**  
4-H Speech Contest Winners  
From Wall Street to Main Street: The Financial Crisis & Its Impact on Water Infrastructure: Chris Cochran, Capital West Securities Inc.  
Rick Smith, Municipal Finance Services Inc.

**October 29**

**OWRRI WATER RESEARCH SYMPOSIUM AGENDA**

- 1:30 **Session 1: Updates and New Developments**  
Chair: Ed Rossman, Adjunct Professor, Environmental Science, OSU
- 3:00 **Break & Poster Viewing**  
3:30 **Session 2: Trends in Water Use**  
Chair: Stan Paxton, USGS Oklahoma Water Science Center - Chief, Study Section
- 5:00 **Adjourn to Reception & Poster Viewing**

**October 30**

- 7:45 **Registration and Poster Viewing**  
8:15 Welcome & Introductions: Glenn Brown, Symposium Chair, and Professor, Biosystems and Agricultural Engineering, OSU  
Burns Hargis, System CEO & President, OSU
- 8:30 **Session 3: Climate Change and Water Planning in Oklahoma**  
Chair: Jurgen Garbrecht, Research Hydraulic Engineer, ARS USDA
- 10:00 **Break & Poster Viewing**  
10:30 **Session 4: Information/Data Flow Through Federal Agencies**  
Chair: Kim Winton, District Chief, USGS
- 12:00 **Symposium Luncheon**  
Announcement of Poster Contest Winners  
Presentation: Transbasin Water Supply in the Kingdom of Urartu: Jurgen Garbrecht, ARS USDA
- 1:30 **Session 5: Water Research by Tribes in Oklahoma**  
Chair: Talee Redcorn, Minerals Council, Osage Nation
- 3:00 **Break**  
3:30 **Session 6: Water Budgets as a Basis for Water Resource Management**  
Co-Chairs: Noel Osborn, OWRB, and Jeanne Schneider, Meteorologist, ARS USDA
- 5:00 **Adjourn**

**2008 Water Pioneers**



Garner Garrison



Mason Mungle



Robbie Robbins

# 30th Annual Oklahoma Governor's Water Conference

# 7th Annual OWRRI Water Research Symposium



## Governor's Water Conference

### Tuesday, November 3

- 7:45 Registration
- 8:15 Welcome & Introductions  
Rudy Herrmann, OWRB Chairman  
Lt. Gov. Jari Askins
- 8:45 America's Water Crisis  
Robert Glennon, Law Professor, Author
- 10:00 Break/Book Signing (Robert Glennon)
- 10:30 Oklahoma's Water Resources: Past, Present, and Future  
Duane Smith, OWRB Executive Director
- 10:50 National Water Policy  
Steve Stockton, Director of Civil Works, USACE
- 11:10 Regional Water Issues  
Col. Anthony Funkhouser, Tulsa District Engineer, USACE
- 11:30 Reclamation Activities  
Mike Ryan, Regional Director, Bureau of Reclamation
- Noon Luncheon  
Oklahoma Water Pioneer Awards  
Rudy Herrmann  
Duane Smith  
Water Outlook from Washington DC  
Congresswoman Mary Fallin  
Rural Development Stimulus Funding  
Ryan McMullen, State Director, USDA Rural Development
- 2:00 Legal Update  
Drew Edmondson, OK Attorney General
- 2:20 Planning for Oklahoma's Water Quality  
Derek Smithee, Chief, OWRB Water Quality Division
- 2:40 ODEQ/OWRB Stimulus Funding  
Steve Thompson, ODEQ Executive Director
- 3:00 Break
- 3:30 Legislative Water Perspective  
Susan Paddack, OK State Senate
- 3:50 Arbuckle-Simpson Hydrology Study  
Duane Smith
- 4:10 Garber-Wellington Aquifer Study  
Scott Christenson, USGS
- 4:30 OCWP Tribal Issues  
Lindsay Robertson, Professor, OU College of Law
- 4:50 Adjourn to Reception  
(5:00-7:00 p.m., Joyner Room)

### Wednesday, November 4

- 7:45 Registration & Poster Viewing
- 8:15 Welcome & Introductions  
Duane Smith
- 8:30 Panel: OK Comprehensive Water Plan  
OCWP Overview & Update  
Kyle Arthur, OWRB Director of Planning  
OCWP Technical Studies Update  
John Rehning, Engineer, CDM  
OCWP Public Participation Process Update  
Will Focht, OWRRI Director
- 10:00 Break
- 10:30 Oklahoma Water: Leading the Way  
Glenn Coffee, President ProTempore, OK State Senate  
Chris Bengt, Speaker, OK House of Representatives
- 11:00 GRDA Water Planning  
Kevin Easley, CEO, Grand River Dam Authority
- 11:20 Interstate Stream Compacts  
Chuck Dumars, Attorney, Law & Resource Planning Associates
- 11:40 OCS Water Planning Research  
Renee McPherson, Acting Director, OK Climatological Survey
- Noon Luncheon  
J.D. Strong, Secretary of the Environment  
4-H Club Speech Contest Winners

### Thursday, November 5

- 7:45 Registration & Poster Viewing
- 8:15 Welcome & Introductions
- 8:30 Session 3: Surface Water  
Chair: Kim Winton, District Chief, USGS
  - Volunteers and Their Data: What We Know About Blue Thumb Streams, Jean Lemmon, OK Conservation Commission
  - Assessment of Environmental Flows in Oklahoma, Don Turton, NREM, OSU
  - Changes in Selected Metals Concentrations from the Mid-1980s to the Mid-2000s in a Stream Draining the Picher Mining District of Oklahoma, William Andrews, USGS
  - Concentrations of Selected Metals in Bottom Sediments from Grand Lake o' the Cherokees, Oklahoma, Mark Becker, USGS
- 10:00 Break & Poster Viewing
- 10:30 Session 4: Evaporation, ET, and Soil Water  
Chair: Dave Engle, Water Research & Education Center, OSU
  - Quantifying Evapotranspiration Across Varying Seasonal and Within-Season Climatic Signals Across Oklahoma, Jeffrey Basara, OK Climatological Survey
  - Oklahoma's White Water, Tyson Ochsner, Plant & Soil Sciences, OSU
  - Remote Sensing of Evapotranspiration, Yang Hong/Baxter Vieux, Civil Engineering & Environmental Science, OU
  - Soil Water in Oklahoma No-Till, Jason Warren, Plant & Soil Sciences, OSU
- 12:00 Luncheon  
The Nabataeans: An Ancient Hydraulic Society  
Dr. Mac McKee, Univ. of Utah  
Announcement of Poster Contest Winner
- 1:30 Session 5: Field Techniques in Water Research  
Chair: Baxter Vieux, Professor, OU
  - Using Helicopter Electro-Magnetic Survey Maps and Cross-Sections and Aerial Photos to Locate and Differentiate Salinity Pollution Sources, Patricia Billingsley, OK Corporation Commission
  - Three-Dimensional Electrical Resistivity Imaging in the El Reno Well Field, Canadian County, Oklahoma, John Harrington, Association of Central OK Governments
  - Implementation Monitoring: Use of Automated Samplers to Effectively Document Water Quality Improvements, Brooks Trammell, OK Conservation Commission
  - Climate Impacts on Sediment Production at Fort Cobb Reservoir, Jürgen Garbrecht, USDA
- 3:00 Break
- 3:30 Session 6: Monitoring and Modeling Nutrient Transport Processes  
Chair: Mike Smolen, Biosystems & Agricultural Engineering, OSU
  - Distributing Phosphorus Load for a TMDL, Mike Smolen
  - Estimates of Nutrient Concentrations in the Eucha-Spavnavn Basin Using Real-Time Continuous Water Quality Monitoring, Rachel Esralew, USGS
  - Subsurface Transport of Phosphorus in Alluvial Floodplains, Garey Fox, Biosystems & Agricultural Engineering, OSU
  - Demonstrating Success: Oklahoma's Beaty Creek Watershed Implementation Project, Greg Kloxin, OK Conservation Commission
- 5:00 Adjournment

## OWRRI Water Research Symposium

### Wednesday, November 4

- 1:00 Poster Viewing  
Poster Session Chair: Michael Holmes, Assistant Professor, OSU
- 1:30 Session 1: Updates and New Developments  
Chair: Glenn Brown, Professor, OSU
  - Development of a Model for Evaluating Future Supply Needs of Rural Water Districts and Small Communities, Arthur Stocker, Agricultural Economics, OSU
  - Arkansas River Low Water Dams, Gaylon Pinc, Program Mgmt. Group
  - Bioremediation Cells/LID Project in Grove, OK, Glenn Brown
  - Using Geologic Data and GIS to Make Base of Treatable Water Maps that Protect Fresh Water Aquifers, Charles Lord, OK Corporation Commission
  - 3-D Booth Introduction, Tim Sickbert, Boone Pickens School of Geology, OSU
- 3:05 Break & Poster Viewing
- 3:30 Session 2: Garber-Wellington Aquifer in Central Oklahoma  
Chair: Noel Osborn, Geologist, OWRB
  - Using Outcrops to Describe Aquifer Properties: A Garber-Wellington Example, Stan Paxton, USGS
  - Water Levels in the Garber-Wellington (Central Oklahoma) Aquifer, 1986-87 to 2009, Shana Mashum, USGS
  - Removing Arsenic from the Garber-Wellington Aquifer with Granular Ferric Oxide, Mary Elizabeth Mach, Garver Engineers
  - Potential for Arsenic Remediation by Well Modification, Norman, Oklahoma, 2003-2006, Jerrod Smith, USGS
- 5:00 Adjourn/Poster Viewing

# Understanding Oklahoma Water

November 3-5, 2009

Sheraton-Reed Conference Center  
Midwest City, Oklahoma

Oklahoma Comprehensive Water Plan

# OCWP

## 2009 Oklahoma Water Pioneers



JAMES BARNETT



JON CRAIG



STEVEN MOORE



GENE WHATLEY

# 31st Annual Oklahoma Governor's Water Conference and 8th Annual OWRRI Water Research Symposium



October 26-27, 2010

Embassy Suites Hotel and Conference Center  
Norman, Oklahoma

## 8:00 AM October 26

Welcome

Rudy Herrmann, OWRB Chairman

Cindy Rosenthal, Mayor, City of Norman

Address: Jari Askins, Lt. Governor, State of Oklahoma

Keynote: Scott Huler, Author, *On the Grid*

State of the State's Water

J.D. Strong, OK Sec. of Environment, OWRB Exec. Director

## 10:00 AM OCWP Municipal/Public Water Supply Panel

Moderator: Steve Thompson, Executive Director, ODEQ

Bill Sims, President, Oklahoma Rural Water Association

Jerry Johnston, Mayor, Braman, Oklahoma

Rodney Ray, City Manager, Owasso, Oklahoma

Marsha Slaughter, Director, OKC Water Utilities Trust

## 11:30 AM Luncheon Program

Federal Update

Congressman Tom Cole

Laura Furgione, Deputy Director, National Weather Service

Oklahoma Water Pioneer Awards

## 1:30 PM OCWP Agriculture Panel

Moderator: Terry Peach, OK Sec. of Agriculture

Dr. Larry Sanders, Professor & Extension Economist, OSU

Tom Buchanan, Director, Lugert-Altus Irrigation District

Mike Armitage, Owner/CEO, A Bar Ranch/Armitage Livestock

## 3:30 PM OCWP Tribal Panel

Moderator: Bill Anoatubby, Chickasaw Nation Governor

Chris Tweeten, Chairman, MT Reserved Rights Compact Commission

Chris Kenney, Director, USBR Office of Native American Affairs

Stephen Greetham, Special Counsel for the Chickasaw Nation

## 5:00 Adjourn to Reception

## 8:00 AM October 27

Welcome

Rudy Herrmann, OWRB Chairman

Federal Update

Congresswoman Mary Fallin

Colonel Michael Teague, Tulsa District Engineer, USACE

Water Plan Update

Kyle Arthur, Director of Planning, OWRB

John Rehring, CDM

Ken Senour, C H Guernsey

Will Focht, OWRRI

## 10:00 AM OCWP Environment Panel

Moderator: Richard Hatcher, Director, OK Dept. of Wildlife Conservation

Mike Fuhr, The Nature Conservancy

Barney Austin, INTERA

Tracy Boyer, Associate Professor of Agricultural Economics, OSU

Shannon Brewer, OK Cooperative Fish and Wildlife Research Unit

## 11:30 AM Luncheon Program

Inca Water Engineering—Machu Picchu, Tison, & Moray

Kenneth R. Wright and Ruth Wright

Poster Contest Winners

4H Speech Contest Winners

## 1:30 PM OCWP Commerce and Industry Panel

David Myers, Ponca City Development Authority

David Braddock, Altus Economic Development Corporation

Brent Kislung, Enid Regional Development Alliance

## 3:30 PM OCWP Energy Panel

Bud Ground, Public Service Company of Oklahoma

Richard Luedecke, Devon Energy Corporation

Trish Horn, OGE Energy Corporation

## 5:00 PM Adjourn

## 2010 Oklahoma Water Pioneers



Drew Edmondson



Mike Melton



Diane Pedicord

# A Shared Resource, A Shared Responsibility

OKLAHOMA COMPREHENSIVE WATER PLAN:  
**THE FOUNDATION FOR  
 OKLAHOMA'S  
 WATER  
 FUTURE**

OCTOBER 18-19, 2011

# 32nd Annual Governor's Water Conference & 9th Annual OWRRI Water Research Symposium

EMBASSY SUITES HOTEL AND CONFERENCE CENTER • NORMAN, OKLAHOMA



## Tuesday, October 18

8:00 AM	OKLAHOMA BALLROOM		
	<b>WELCOME:</b> Linda Lambert, OWRB Chairman Todd Lamb, Oklahoma Lieutenant Governor	<b>Keynote:</b> Charles Fishman, Author, <i>The Big Thirst</i>	<b>2012 Update of the Oklahoma Comprehensive Water Plan:</b> J.D. Strong, OWRB Executive Director Kyle Arthur, OWRB Director of Planning
9:30	BREAK		
10:00	UNIVERSITY BALLROOM	ROOM G-H	ROOM I-J
	<b>OCWP Panel 1:          THE VALUE OF WATER</b> <i>Agriculture:</i> Mark Nichols <i>Public Supply:</i> Bill Sims, ORWA <i>Energy Production:</i> Patricia Horn, OG&E <i>Navigation:</i> Bob Portiss, Port of Catoosa <i>Fish &amp; Wildlife:</i> Richard Hatcher, ODWC	<b>Water Research Symposium Session 1:          UPDATES AND NEW DEVELOPMENTS</b> <b>Welcome:</b> Bob Whitson, OSU <i>Session Chair:</i> Caryn Vaughn, OU <i>The Oklahoma Water Survey:</i> Paul Risser, OU <i>Future Changes in Stormwater Program Requirements:</i> Richard Smith, INCOG <i>Harmful Algae in Oklahoma:</i> David Hambright, OU <i>Mosquitoes as Bioindicators of Inefficient Wastewater Disposal:</i> Valerie O'Brien, OSU	<b>Oklahoma Association of          Reclamation Projects Meeting</b>
11:30	OKLAHOMA BALLROOM		
	<b>LUNCHEON          Oklahoma Water Pioneer Awards</b> R. Thomas Lay & Rick A. Smith	<b>Water Outlook from Washington DC:</b> Congressman James Lankford	
1:00	BREAK		
1:30	UNIVERSITY BALLROOM	ROOM G-H	ROOM I-J
	<b>OCWP Panel 2:          WATER SUPPLY LIMITATIONS, OPTIONS, &amp; SOLUTIONS</b> <i>OCWP Water Demand/Hot Spots:</i> Jessica Fritsche, CDM <i>OCWP Water Supply Options:</i> Dan Reisinger, CDM <i>Regional Water Supply:</i> Karl Stickle, C H Guernsey <i>Maximizing Existing Storage:</i> Robert Toole, OCC	<b>Water Research Symposium Session 2:          EFFECTS OF DROUGHT IN OKLAHOMA</b> <i>Session Chair:</i> Stan Paxton, USGS <i>Incorporating Climate Change Science into Water Supply Planning:</i> Tim Cox, CDM <i>Drought Effects on Mussels in SE Oklahoma Rivers:</i> Caryn Vaughn, OU <i>Drought Monitoring: A System for Tracking Plant Available Water Based on the Oklahoma Mesonet:</i> Al Sutherland, OSU <i>Measuring Drought Impacts:</i> Dave Shideler, OSU	<b>Hydrologic Studies &amp; Tools I</b> <i>ABRFC, CoCoRAHS, and You:</i> James Paul, Arkansas-Red Basin River Forecast Center <i>Groundwater Levels in Oklahoma:</i> Chris Neel, OWRB <i>Future OWRB Hydrologic Investigations:</i> Chris Neel, OWRB <i>Rush Springs Aquifer in Caddo County:</i> Mark Becker, USGS
3:00	BREAK		
3:30	UNIVERSITY BALLROOM	ROOM G-H	ROOM I-J
	<b>OCWP Panel 3:          INNOVATIONS IN CONSERVATION, RECYCLING, &amp; REUSE</b> <i>OCWP Conservation Assessment:</i> Jessica Fritsche, CDM <i>Agricultural Water Efficiency:</i> Jason Hiltz, Hitch Enterprises <i>Energy Water Conservation:</i> Richard Luedecke, Devon <i>Marginal Quality Water Use:</i> Mike Irbeck, Abengoa Water <i>Municipal Water Reuse:</i> Phil Spitzer, Alan Plummer Associates.	<b>Water Research Symposium Session 3:          APPLICATIONS IN ENVIRONMENTAL ENGINEERING</b> <i>Session Chair:</i> Jason Vogel, OSU <i>A Fluvial Geomorphic and Sediment Transport Study of the Little River:</i> Russell Duttineil, OU <i>Garnett Regional Detention Facility: Balancing Development, Flood Mitigation and Environmental Restoration:</i> Brandon Claborn, Meshek & Associates <i>Passive Flow Regulated Chemical Injection System for Sediment Removal from Runoff:</i> Karl Gartrecht, OSU <i>The Use of Sterol Distributions to Determine the Origin of Fecal Contamination:</i> Coralie Blache, OU	<b>Hydrologic Studies &amp; Tools II</b> <i>Stream Water Allocation:</i> Bob Fabian & Maria Moreno, OWRB <i>Garber-Wellington Hydrologic Investigation:</i> Shana Mashburn, USGS, & Chris Neel, OWRB
5:00	RECEPTION		

## Wednesday, October 19

8:00 AM	OKLAHOMA BALLROOM		
	<b>WELCOME:</b> Linda Lambert, OWRB Chairman Gary Sherrer, Oklahoma Secretary of Environment	<b>Joint Legislative Water Committee:</b> Kris Steele, House Speaker Brian Bingman, Senate President Pro Tempore	<b>Federal Update:</b> Col. Michael Teague, Tulsa District Engineer, USACE
9:30	BREAK		
10:00	UNIVERSITY BALLROOM	ROOM G-H	ROOM I-J
	<b>OCWP Panel 4:          REGIONAL PLANNING EXPERIENCES IN OTHER STATES</b> <b>Texas Regional Water Planning Groups:</b> Carolyn Brittin, Texas Water Development Board <b>Kansas Basin Advisory Committees:</b> Tracy Streeter, Kansas Water Office <b>Colorado Basin Roundtables &amp; Georgia Regional Water Planning Councils:</b> Rick Brown, CDM	<b>Water Research Symposium Session 4:          SOCIAL &amp; ECONOMIC STUDIES OF WATER RESOURCES</b> <i>Session Chair:</i> Guy Sewell, ECU <i>Building Partnerships for a Coordinated Flood Vulnerability Assessment and Readiness Plan:</i> William Smiley, USACE <i>Household Perspectives of Pico and Non-price Water Conservation Tools:</i> Tracy Boyer, OSU <i>A Water Rights Comparison of AR, TX, OK, NM, GA, AL, &amp; FL:</i> Rebecca Harjo & Jeri Fleming, OSU <i>Beyond OCWP 2012: Future Allocation Strategies for Oklahoma's Water Resources:</i> Guy Sewell, ECU	<b>Oklahoma Association of          Reclamation Projects Meeting</b>
11:30	OKLAHOMA BALLROOM		
	<b>LUNCHEON          Poster Contest Winners</b>	<b>4-H Speech Contest Winners</b> Maddi Shires, Galera Jenna Murray Fletcher	<b>Ancient Israeli Water Systems:</b> Dr. Dan Warner
1:00	BREAK		
1:30	UNIVERSITY BALLROOM	ROOM G-H	ROOM I-J
	<b>OCWP Panel 5:          INSTREAM/ENVIRONMENTAL FLOWS</b> <b>OKLAHOMA:</b> Derek Smith, OWRB <b>TEXAS:</b> Mark Wentzel, Texas Water Development Board <b>NEBRASKA:</b> Rick Eades, Nebraska Game and Parks Commission <b>KANSAS:</b> Tracy Streeter, Kansas Water Office	<b>OWRRI Water Research Symposium Session 5:          WATER QUALITY MANAGEMENT SUCCESS STORIES</b> <i>Session Chair:</i> Phillip Moershel, OWRB <i>Nutrient TMDLs for Sensitive Water Supply Lakes:</i> Andrew Fang, ODEQ <i>Passive Treatment Opportunities in a Drastically Disturbed Watershed:</i> Robert Naim, OU <i>Solving Water Quality Problems through Voluntary Programs:</i> Shannon Phillips, OCC <i>Detecting Water Quality Improvements through Trend Analyses:</i> Monty Potter, OWRB	<b>OCWP Panel 6:          WATER PROJECT &amp; INFRASTRUCTURE FUNDING</b> Amber Wooten, CDM Anne Burger, FirstSouthwest Chris Cochran, BOSC, Inc. Joe Freeman, OWRB
3:00	BREAK		
3:30	UNIVERSITY BALLROOM	ROOM G-H	ROOM I-J
	<b>Joint Legislative Water Committee Open Meeting</b> Senator Brian Crain & Representative Phil Richardson	<b>OWRRI Water Research Symposium Session 6:          STREAM WATER-GROUNDWATER INTERACTION</b> <i>Session Chair:</i> Kim Winton, USGS <i>One Water:</i> Chris Harich, USGS <i>The Importance of Understanding Groundwater - Surface Water Interaction for Integrated Water Management in Nebraska:</i> James Carnis, USGS NE Water Science Center <i>GW/SW Interaction in the Arbuckle-Simpson Aquifer:</i> Noel Osborn, USGS <i>Quantification &amp; Heterogeneity of Phosphorus Leaching in Ozark Floodplains:</i> Derek Heeren, OSU	
5:00	ADJOURN		

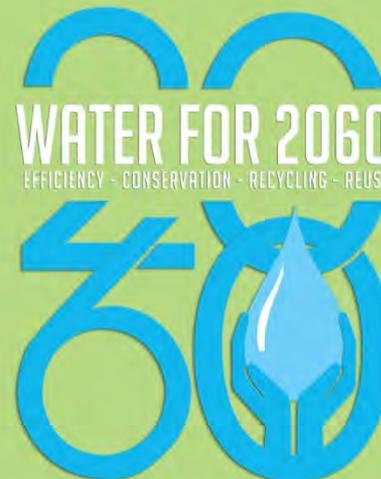
2011 Oklahoma Water Pioneers

R. Thomas Lay  
 Rick A. Smith

# 33RD ANNUAL GOVERNOR'S WATER CONFERENCE 10TH ANNUAL OWRRI WATER RESEARCH SYMPOSIUM

## NOVEMBER 13-14, 2012

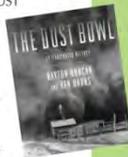
### TULSA MARRIOTT SOUTHERN HILLS



**DAYTON DUNCAN**  
Keynote Speaker

Dayton Duncan is an award-winning writer and documentary filmmaker. He served as principal writer for THE DUST BOWL, a

two-part series airing November 18 and 19 on PBS. The series chronicles the worst man-made ecological disaster in American history, in which the frenzied wheat boom of the "Great Plow-Up," followed by a decade-long drought during the 1930s nearly swept away the breadbasket of the nation. Vivid interviews with twenty-six survivors of those hard times, combined with dramatic photographs and seldom seen movie footage, bring to life stories of incredible human suffering and equally incredible human perseverance. It is also a morality tale about our relationship to the land that sustains us—a lesson we ignore at our peril.



#### 2012 OKLAHOMA WATER PIONEERS

The Oklahoma Water Pioneer Award was initiated in 1985 to honor the individuals who have made significant contributions in the planning, development, management, and conservation of Oklahoma's water resources.



Ed Brocksmith



Roman Cripp



Phil Richardson

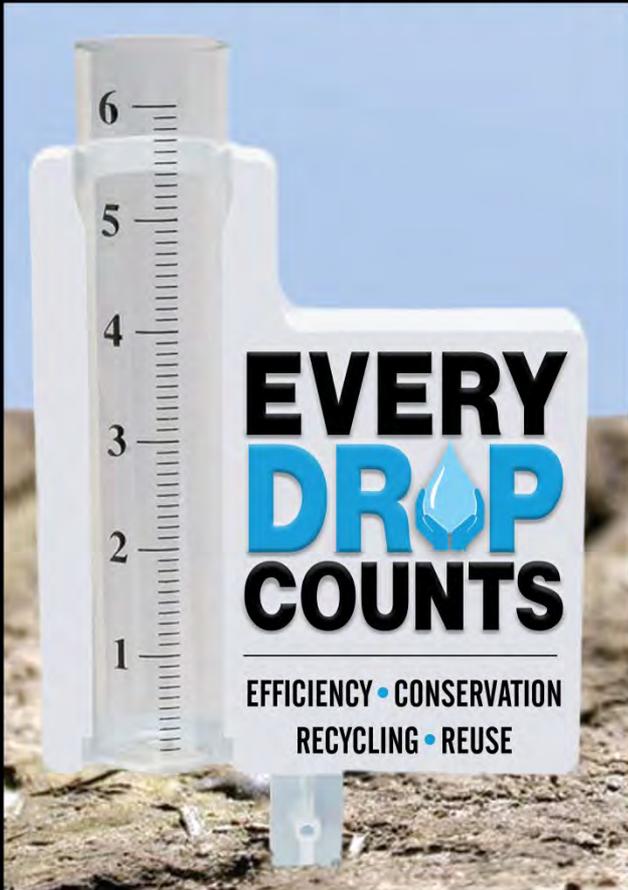
Tuesday, November 13	
8:00	Registration & OWRRI Poster Viewing
8:30	PLENARY SESSION
<b>Welcome</b> Ford Drummond, OWRB Chairman & Dewey Bartlett, Jr., Mayor of Tulsa <b>Keynote: The Dust Bowl, Lessons from the Land</b> Dayton Duncan, Writer/Producer/Filmmaker <b>Water for 2060 &amp; Beyond</b> J.D. Strong, OWRB Executive Director	
10:00	Break & OWRRI Poster Viewing
10:20	<b>INNOVATIONS IN WATER CONSERVATION, EFFICIENCY, &amp; REUSE</b>
Salon A-E First Floor	The San Antonio Example Karen Guz, Director of Conservation, San Antonio Water System <b>Water Supply and Uses: The Reality in 2012</b> Karl Stickle, P.E., Guernsey Engineering Kevin Alexander, P.E., Separation Processes, Inc. <b>Conserving Water at a Dairy Farm</b> Anita Van der Laan, Frederix, OK
10:20	<b>SESSION 1: UPDATES AND NEW DEVELOPMENTS</b>
Salon B-D First Floor	Session Chair: Derek Smithers, OWRB <b>Mitigated Creek Tumpike Wetlands: Twenty Years Later; Success or Succession?</b> Hal Reed, ORU <b>Riparian Songbirds as Indicators of Watershed Condition</b> Timothy O'Connell, OSU <b>Hydrologic Investigation of the Rush Springs Aquifer</b> Chris Neal, OWRB <b>Introducing the New South Central Climate Science Center</b> Kim Winton, USGS-SCCSC
10:20	<b>SESSION 2: EFFECTS OF RED CEDAR ENCRoACHMENT ON WATER QUANTITY</b>
Salon B-D First Floor	Session Chair: Mike Fuhr, The Nature Conservancy <b>Introduction and Throughfall, Interception, and Stemflow Results</b> Don Turton, OSU <b>Watershed Infiltration, Soil Water Dynamics, and Stream Flow</b> Chris Zeig, OSU <b>Water Use of Individual Red Cedar Trees</b> Rodney VIII, OSU <b>Invasive Species Public Policy: Eastern Red Cedar Management, Options &amp; Consequences</b> Larry Sanders, OSU
10:20	<b>SESSION 3: THE 2010-2012 OKLAHOMA DROUGHT</b>
Salon B-D First Floor	Session Chair: Jason Lewis, USGS-WSC <b>Evolution and Persistence of the 2010-2012 Drought in Oklahoma</b> Gary McManus, OU <b>Hydrologic Drought of Water Year 2011 Compared to Four Major Drought Periods of the 20th Century in Oklahoma</b> Bill Andrews, USGS-Water Science Center <b>Soil Moisture-Based Drought Monitoring in Oklahoma</b> Tyson Ochsner, OSU <b>Impacts and Responses to the Drought</b> Dave Shideler, OSU
11:00	Break, Rainfall Simulator Demonstration (Greg Scott, NRCS), & OWRRI Poster Viewing
12:00	LUNCHEON
Salon B-D First Floor	State & Federal Partnerships for a Shared Water Future Bill Werkheiser, Associate Director for Water, US Geological Survey <b>Oklahoma Water Pioneer Awards</b> Presented by Ford Drummond & J.D. Strong
1:30	<b>INNOVATIONS IN WATER CONSERVATION, EFFICIENCY, &amp; REUSE</b>
Salon B-D First Floor	<b>Water as a Crop</b> Ken Klavness, Executive Director, Trinity Waters <b>Energy Water Conservation &amp; Recycling</b> Richard Luedtke, Devon Energy <b>Conserving Water through No-Till Farming</b> Jay Franklin, Vinita, OK
1:30	<b>SESSION 4: WATER QUALITY AND NUTRIENT MANAGEMENT</b>
Salon B-D First Floor	Session Chair: Claude Bess, OK Cooperative Extension Service <b>Phosphorus Concentrations Have Been Declining in the Illinois River: Was it Point Sources, Farm-Level Nutrient Management, or What?</b> Brian Haggard, Univ. of Arkansas <b>Within-River Phosphorus Retention in the Illinois River: A Missing Piece in the Watershed Phosphorus Puzzle?</b> Helen Jarvis, Centre for Ecology & Hydrology, United Kingdom <b>Investigating Algal Response to Changing Phosphorus Concentrations in British Rivers Using Flume Mesocosms</b> Mike Bowes, Centre for Ecology & Hydrology, United Kingdom <b>Oklahoma's Poultry Waste Management Education Program</b> Josh Payne, OK Cooperative Extension Service
3:00	Break, Rainfall Simulator Demonstration (Greg Scott, NRCS), & OWRRI Poster Viewing
3:20	<b>ROUNDTABLE DISCUSSION: REGIONAL WATER PLANNING</b>
Salon B-D First Floor	Moderator: J.D. Strong, OWRB Fred Fischer, Oklahoma Panhandle Water Planning Group Carolyn Britton, Texas Water Development Board Brian Woodard, Oklahoma Independent Petroleum Association Amy Ford, Citizens for the Protection of the Arbuckle-Simpson Aquifer
3:20	<b>SESSION 5: WATER USE AND MANAGEMENT FOR ENERGY PRODUCTION</b>
Salon B-D First Floor	Moderator: J.D. Strong, OWRB Charlette Heame, Oklahomans for Responsible Water Policy Mike Fuhr, The Nature Conservancy Drew Kershner, OU College of Law Maria Peck, Oklahoma Farm Bureau
5:00	Reception & OWRRI Poster Viewing
<b>CONTINUING LEGAL EDUCATION (CLE) SESSIONS, OGA ENVIRONMENTAL LAW SECTION</b>	
Salon A First Floor	10:30 Cool Water: Texas, Tribes, and Comprehensive Plans—Implications of Three Current Water Disputes, Drew Kershner 12:00 Luncheon (Sequoia Room) 1:30 Current Issues from the Perspective: Oklahoma Municipalities, Ken Williams 2:30 Section 404 of the Clean Water Act: Permitting Requirements and Authority, Shane Charleston and Jeri Fleming 3:30 Section 401 Water Quality Certification, Mark Derschwiler and Jeri Fleming 4:30 In-Stream Flows and Non-Consumptive Uses of Water in Oklahoma, Deann Couch 5:00 Adjourn

Wednesday, November 14	
8:00	OWRRI Poster Viewing
8:30	PLENARY SESSION
<b>Welcome</b> Ford Drummond, OWRB Chairman & Gary Sherrer, Oklahoma Secretary of Environment <b>Partnerships in Sustainability</b> Curt Brown, Bureau of Reclamation Brian Richter, The Nature Conservancy	
10:00	Break & OWRRI Poster Viewing
10:20	<b>IMPLEMENTING OCPV PRIORITIES: MONITORING &amp; INFRASTRUCTURE</b>
Salon A-E First Floor	<b>Water Monitoring &amp; Analysis</b> Derek Smithers & Julie Cunningham, OWRB <b>Water/Wastewater Financing Solutions</b> Joe Freeman, OWRB Ann Burger Entekin, FirstSouthwest Chris Cochran, BOSG, Inc.
10:20	<b>SESSION 4: WATER QUALITY AND NUTRIENT MANAGEMENT</b>
Salon B-D First Floor	Session Chair: Claude Bess, OK Cooperative Extension Service <b>Phosphorus Concentrations Have Been Declining in the Illinois River: Was it Point Sources, Farm-Level Nutrient Management, or What?</b> Brian Haggard, Univ. of Arkansas <b>Within-River Phosphorus Retention in the Illinois River: A Missing Piece in the Watershed Phosphorus Puzzle?</b> Helen Jarvis, Centre for Ecology & Hydrology, United Kingdom <b>Investigating Algal Response to Changing Phosphorus Concentrations in British Rivers Using Flume Mesocosms</b> Mike Bowes, Centre for Ecology & Hydrology, United Kingdom <b>Oklahoma's Poultry Waste Management Education Program</b> Josh Payne, OK Cooperative Extension Service
10:20	<b>SESSION 5: WATER USE AND MANAGEMENT FOR ENERGY PRODUCTION</b>
Salon B-D First Floor	Moderator: J.D. Strong, OWRB Charlette Heame, Oklahomans for Responsible Water Policy Mike Fuhr, The Nature Conservancy Drew Kershner, OU College of Law Maria Peck, Oklahoma Farm Bureau
11:00	LUNCHEON
Salon B-D First Floor	<b>The Blue Revolution</b> Cynthia Barnett, Author <b>OWRRI Poster Contest Winners</b> 4-H Speech Contest Winners Luke Chapman & Bayli Hyde
1:30	<b>ROUNDTABLE DISCUSSION: INSTREAM ENVIRONMENTAL FLOWS</b>
Salon B-D First Floor	Session Chair: Robert Puls, Oklahoma Water Survey, OU <b>Innovative Strategies for Management of Water in Unconventional Resource Projects</b> David Allemen, ALL Consulting <b>Old Oil Wells Verses New Water Wells: A Case Study</b> Patricia Billingsley, Oklahoma Corporation Commission <b>Estimating Freshwater and Saline Water Volumes Associated with Oil and Gas Production in Oklahoma, 2000 to Present</b> Kyle Murray, OU <b>Land Application of Drilling Mud</b> Chad Penn, OSU
3:00	Break
3:30	OWRRI NOVEMBER MONTHLY MEETING
Salon A First Floor	Session Chair: Jason Vogel, OSU <b>DOC Characterization for Surface Water Impoundments in Northeast Oklahoma</b> Brian Wintle, Professional Engineering Consultants <b>Mercury Exposure from Fish Consumption Among Recreational Fishers in the Grand Lake Watershed</b> Robert Lynch, ODHSC <b>Polycyclic Aromatic Hydrocarbons (PAHs) in Harvested Rainwater</b> Jisoon Vogel, OSU <b>Relation Between pH and Occurrence of Trace Elements and Radionuclides in Water from Private Wells, Central OK, 2011</b> Carol Becker, USGS-WSC
5:00	Adjourn



35<sup>th</sup> Annual

# Oklahoma Governor's Water Conference & Research Symposium



**October 22-23, 2014**

Cox Convention Center, Oklahoma City

## October 22, 2014

7:30 Registration

8:30 Plenary Session *Great Hall C*

### Welcome and Introductions

Rudy Herrmann, Chairman, Oklahoma Water Resources Board  
Oklahoma Lieutenant Governor Todd Lamb

### Keynote: The Las Vegas Story: Adapting to a New Normal

Pat Mulroy, Senior Fellow, Climate Adaptation & Environmental Policy, Brookings Mountain West; Maki Distinguished Faculty Associate, Desert Research Institute

### State of the State's Water

J.D. Strong, Executive Director, Oklahoma Water Resources Board

10:00 Break and Exhibits *Great Hall D & E*



Lt. Gov. Todd Lamb

Oklahoma Lieutenant Governor Todd Lamb was elected to office in November of 2010. Prior to his election, he served for six years in the Oklahoma Senate, and in 2009 became the state's first Republican Majority Floor Leader. In addition to serving as Chairman of the state's Tourism and Recreation Commission, he serves as Past Chairman of the National Lieutenant Governor's Association Executive Committee, Vice Chair of the Republican Lieutenant Governor's Association (RLGA), and Vice Chair of the Aerospace States Association.



Pat Mulroy

Pat Mulroy served as general manager of the Las Vegas Valley Water District from 1989 until retirement in 2014. From 1993 until retirement she also served as general manager of the Southern Nevada Water Authority (SNWA), where she was responsible for acquiring, treating, and delivering water to the region. Mulroy was a principal architect of the Authority, which allowed Southern Nevada not only to weather the stresses of growth, but also to thrive during one of the worst droughts of record in the Colorado River basin.

10:30 Regional/Local Planning for Future Droughts *Meeting Rooms 16-18*

Kim Meek, City Manager, City of Guymon  
Ken Komiske, Director of Utilities, City of Norman  
Will Archer, Manager, Mountain Park Master Conservancy District  
Robert Moore, General Manager, Marshall County Water Corporation  
Brent Kislung, Executive Director, Enid Regional Development Alliance

12:00 Lunch *Great Hall C*

### Oklahoma Water Pioneer Awards

Jack W. Keeley  
Mike Thralls

### U.S. Congressional Update

Rep. James Lankford  
Rep. Frank D. Lucas  
Rep. Markwayne Mullin



Rep. Lankford Rep. Lucas Rep. Mullin

1:30 Oklahoma Drought Update *Meeting Rooms 16-18*

Gary McManus, Oklahoma State Climatologist  
Kevin Kloesel, Director, Oklahoma Climatological Survey

2:15 Meeting Water Reuse Challenges *Meeting Rooms 16-18*

### Developing an Effective PR Campaign

Patricia Tennyson, Katz & Associates

### Legal and Regulatory Hurdles for Wichita Falls, TX

Brad Castleberry, Lloyd Gosselink

3:00 Break and Exhibits *Great Hall D & E*

3:30 Oklahomans Solving Global Water Crises *Meeting Rooms 16-18*

David Sabatini, Director  
OU Water Technologies for Emerging Regions (WaTER) Center  
Ken Surritte, President  
WATERisLIFE  
Richard Greenly, Board Chair  
Water4

5:00 Reception *Great Hall D & E Foyer*

## October 23, 2014

7:30 Registration

8:30 Plenary Session *Great Hall C*

### Welcome and Introductions

Rudy Herrmann, Chairman, Oklahoma Water Resources Board  
Michael Teague, Oklahoma Secretary of Energy & Environment

### Keynote: Governor Mary Fallin

#### Federal Updates

James Allard, Deputy Area Manager  
United States Bureau of Reclamation, Oklahoma-Texas Area Office  
Colonel Richard Pratt, Commander & District Engineer  
United States Army Corps of Engineers, Tulsa District  
Sam Coleman, Deputy Regional Administrator  
United States Environmental Protection Agency, Region 6

10:00 Break and Exhibits *Great Hall D & E*



Governor Mary Fallin

Oklahoma elected Mary Fallin as its first female governor in 2010. Prior to her election, she served two terms in the U.S. House of Representatives. She also served two terms as an Oklahoma state representative before her election in 1995 as Oklahoma's first Republican and first female lieutenant governor.

Governor Fallin demonstrated her dedication to the stewardship of Oklahoma's invaluable water resources by signing the Water for 2060 Act into law and more recently by pledging \$1.5 million in drought grants for projects highlighting responsible use of water.



James Allard



Col. Richard Pratt



Sam Coleman

10:30 Water Fuels Oklahoma's Economy *Meeting Rooms 16-18*

Larry Parman, Oklahoma Secretary of Commerce  
Michael Teague, Oklahoma Secretary of Energy & Environment  
Blayne Arthur, Deputy Commissioner  
Oklahoma Department of Agriculture, Food & Forestry  
Scott Robinson, Port Director, Port of Muskogee  
Kris Marek, State Parks Director  
Oklahoma Tourism and Recreation Department  
Ken Cunningham, Assistant Chief of Fisheries  
Oklahoma Department of Wildlife Conservation

12:00 Lunch *Great Hall C*

### 4-H Speech Contest Winners

Hadley Griffith, Pottawatomie County  
Bayli Hyde, Alfalfa County

### Poster Contest Winners

High frequency water quality data: is this really necessary?  
Dr. François Birgand, Associate Professor, North Carolina State University

1:30 Water Rights Administration in Oklahoma: Broken or Just Right?

*Meeting Rooms 16-18*

Dean A. Couch, Esq., GableGotwals  
James R. Barnett, Esq., Doerner, Saunders, Daniel & Anderson  
Mike Fuhr, State Director, The Nature Conservancy, Oklahoma Chapter  
Mike Mathis, Regulatory Affairs Adviser, Continental Resources  
Will Archer, Manager, Mountain Park Master Conservancy District

2:45 Conference Wrap-Up *Meeting Rooms 16-18*

Rudy Herrmann, Chairman, Oklahoma Water Resources Board

3:00 Adjournment

3:30 Monthly OWRB Meeting *Meeting Rooms 14-15*

# 36th Annual Oklahoma Governor's Water Conference and Research Symposium



**December 1-2, 2015**  
Embassy Suites Hotel & Conference Center  
Norman, Oklahoma

## Tuesday, December 1

**7:30 Registration**

**8:30 Joint Session**

Welcome  
**Linda Lambert, OWRB Chairman**

Keynote  
**Dr. Peter Gleick, President and Co-Founder of the Pacific Institute Water for 2060 Overview**  
**J.D. Strong, OWRB Executive Director**



**Dr. Peter Gleick**

*Dr. Peter Gleick is a world renowned expert, innovator, and communicator on water and climate issues. In 1987 he co-founded the Pacific Institute, a global water think tank that provides science-based thought leadership with active outreach to influence local, national, and international efforts in developing sustainable water policies.*

**10:15 Break**

**10:30 Regional Water Planning**

Northwest Oklahoma Water Action Plan  
**Brent Kislring, Executive Director, Enid Regional Development Alliance**

Southwest Oklahoma Water Supply Action Plan  
**Brian Bush, President and CEO, Altus Chamber of Commerce**

**Regionalization**

South Delaware County Regional Water Authority  
**Jay Updike, President, Holloway, Updike and Bellen, Inc.**

Gore & Sequoyah County Rural Water District #5  
**Horace Lindley, Public Works Administrator, City of Gore**

**10:30 Café Style Poster Session**

Moderator: Dr. Garey Fox, Director, Oklahoma Water Resources Center

Somala Amir	Saraj Yasochi	Andrea Parrington
Caillier Barnes	Ashah Khalid	Joseph Patton
Nicole Colston	Kate Klovan	Heather Rubin
Jon Daniels	Whitney Lisenbey	Sulaima Ibrahimideh Ghazwanji
Carl Dilkes	Dustin Livingston	Reuben Reyes
Jingmei Dong	Bradley Newberry	Blanca Sharma Ahuyra
Holly Enlow	Alan McLemore	Ben Tang
Paul Hanigan	John McMaine	Briana Wyatt
Riley Jones	Michelle Melione	Yan Zhou

Go to [www.owrb.ok.gov/GWC/mobile/posters.html](http://www.owrb.ok.gov/GWC/mobile/posters.html) to view poster titles.

**12:00 Luncheon**

Legislative Update  
**Mike Schulz, Majority Floor Leader, Oklahoma State Senate**

Oklahoma Water Pioneer Awards  
**Richard C. Seybolt**  
**Bill Sims**

Honorary Oklahoma Water Pioneer Awards  
**Bob Chipman and Trudy Rigney, In Memoriam**





**Senator Mike Schulz**      **Richard Seybolt**      **Bill Sims**

**1:30 Conservation in Other States**

Advancing Conservation Goals: The San Antonio Example  
**Karen Guz, Conservation Director, San Antonio Water System (SAWS)**

Innovative Conservation Approaches in Southern Nevada  
**Doug Bennett, Conservation Manager, Southern Nevada Water Authority**

Vision for the Future of Water in Kansas  
**Tracy Streetz, Director, Kansas Water Office**

**1:30 Drought and Climate Change**

Moderator: Al Sutherland, Mesonet Agricultural Coordinator, Oklahoma State University (OSU)

New Insights into Drought Evolution and Recovery in the Great Plains  
**Jeffrey Bensen, University of Oklahoma (OU), Co-Authors: Jordan Christian & Katarina Christian**

Drought-Influenced Low-Flow Non-Exceedance Plots for Selected US Geological Survey (USGS) Gauges in Oklahoma  
**Ron Miles, OSU, Co-Author: Garey Fox**

Hydrogeology and Simulated Effects of Future Water Use and Drought for the North Fork Red River Alluvial Aquifer, Southwest Oklahoma  
**Janet Smith, US Geological Survey (USGS)**

Threats to the Luper-Altus Irrigation District: Untangling the Effects of Drought, Land Use Change, and Groundwater Development  
**Tyson Ochsner, OSU, Co-Authors: Erik S. Fyfe & Shannon Badcoe Wynn**

Projecting Hydrologic Impacts on the Canadian River Ecosystem under Future Climate Change Scenarios  
**Baatar Venk, OLI, Co-Authors: William Andrews, Shannon Brewer, Thomas Worthington, Jonathan Kimmer, & Jennifer Lopez**

**3:00 Break**

**3:15 Joint Session**

Gubernatorial Welcome and Address  
**Governor Mary Fallin**

Education and Outreach Campaigns for Water Conservation and Reuse  
**Ken Kamiske, Utilities Department Director, City of Norman**

**Melissa Meeker, Executive Director, WaterReuse Association**

**Justin Moss, Associate Professor, Oklahoma State University**

**Bret Weingart, Assistant Director, Oklahoma City Utilities**

Poster Contest Winners  
**Dr. Garey Fox, Director, Oklahoma Water Resources Center**



**Governor Mary Fallin**

*Oklahoma elected Mary Fallin as its first female governor in 2010. She was reelected in 2014 to her second term by a 15-point margin, carrying 71 out of 77 Oklahoma counties. Prior to her election, she served two terms in the U.S. House of Representatives. She also served two terms as an Oklahoma state representative before her election in 1995 as Oklahoma's first Republican and first female lieutenant governor.*

**5:00 Reception**  
Hosted by the Oklahoma Rural Water Association and sponsored by Bank of America/Merrill Lynch and Mustang Brewing Company

## Wednesday, December 2

**8:00 Registration**

**8:30 Joint Session**

Welcome  
**Michael Teague, Oklahoma Secretary of Energy and Environment**

Federal Partnerships  
**Col. Richard Pratt, Tulsa District Engineer, U.S. Army Corps of Engineers**

**Ron Curry, Region 6 Administrator, U.S. Environmental Protection Agency**

Drought Reports and Forecast  
**Courtney Black, National Integrated Drought Information System (NIDIS)**

**Gary McManus, Oklahoma State Climatologist**





**Sec. Michael Teague**      **Col. Richard Pratt**      **Ron Curry**

**10:15 Break**

**10:30 Drought-Proofing Gazette**

Water Loss Audits and Leak Detection  
**Brandon Bowman, Oklahoma Department of Environmental Quality**

**Richard Desha, Oklahoma Rural Water Association**

Fort Sill Nonpotable Reuse Project  
**Ronnie Graves, General Manager, American Water**

Energy Water Initiative Report: Recycling Flowback and Produced Water  
**Michael Dunkel, Vice President, CH2M**

**10:30 Water Availability, Demand, and Use**

Moderator: Dr. Saleh Taghvaeian, OSU

Is the demand for recreation at Grand Lake affected by swim warnings and do visitors value improvements in water conditions?  
**Max Melstrom, OLI, Co-Authors: Tracy Boyer, Susan Brand, & Art Stover**

Water Reservoir Data Visualization Tool  
**Shawn Brown, OLI**

Hydrologic Investigation and Numerical Groundwater-Flow Model of the Canadian River Alluvial Aquifer  
**Shawn Melstrom, USGS, Co-Author: John Elio**

Proximity of Private Domestic Wells and Underground Storage Tank Sites in Oklahoma  
**Jim Weaver, US Environmental Protection Agency (EPA), Co-Authors: Andrew Murray & Fran Kraviec**

Using Public Data to Quantify Oil and Gas Impact to Oklahoma's Water Resources  
**Shawn Brown, OSU, Co-Author: Nelly Ruiz**

**12:00 Luncheon**

4-H Speech Contest Winners  
**Bayli Hyde and Tyler Zwick**

Assessing the Future of the High Plains Aquifer  
**James Butler, Jr., Kansas Geological Survey**

**1:30 Aquifer Storage and Recovery (ASR)**

Wichita's Equus Beds ASR Experience  
**Brian Meier, Associate Environmental Engineer, Burns & McDonnell**

A Texas Regulator's Perspective  
**Dr. Robert Mace, Deputy Executive Administrator, Texas Water Development Board**

ASR Challenges in Oklahoma  
**Dan Yates, Associate Executive Director, Groundwater Protection Council**

A National Perspective on ASR  
**David Pyle, President, ASR Systems**

**1:30 Research Funding and Partnership Opportunities**

Moderator: Dr. Garey Fox, OWRB

Bureau of Reclamation (USBR) Research Funding and Partnership Opportunities  
**Collins Colcombe, USBOR**

USGS Research Needs in Oklahoma  
**William Andrews, USGS**

Oklahoma Water Resources Board (OWRB) Research Needs  
**Derek Smolles, OWRB**

EPA's Safe & Sustainable Water Resources Research Program  
**Joe Williams, EPA**

USGS 104b and 104g Funding Opportunities  
**Garey Fox, OWRB**

**Research Funding Highlight in Oklahoma**

Moderator: Dr. Garey Fox, OWRB

The Influence of Crop Row Configuration on Yield using Subsurface Drip Irrigation  
**Jason Warren, OSU**

Maximizing the Value of Remaining Groundwater  
**Art Stover, OSU**

**3:00 Break**

**3:30 OWRB Regular Monthly Meeting (Sooner Meeting Room)**

**3:30 Featured Session on NSF EPSCoR Project**

Moderator: Erinna Kuster, Program Coordinator, OK EPSCoR

Integrating Socio-Cultural Community-Level Research into Water and Climate Research in Oklahoma's 2013-18 NSF EPSCoR Research

**Jack Friedman, OLI, Co-Authors: Michael Stanton, Tony Vantynke, & Allison Layton**

Groundwater Shortage as a Result of Drought in Oklahoma and Potential Socio-Economic Implications  
**Paul Zwickhamer, OLI, Co-Author: Shanon Hayes**

Water Policy and Governance Networks in OK: A Pathway to Enhance Resilience to Climate Change  
**Beth Caniglia, OLI, Co-Authors: Beatrice Friml, Bridget Kerner, & Tammy Mck**

Demand for Water-based Recreation: The Impact of Water Levels and Climate Variation in Oklahoma  
**Tracy Boyer, OSU, Co-Authors: Max Melstrom, Larry Sanders, & Brandon Daniels**

Dynamic Maps of Open Surface Water Bodies in Oklahoma at 30-m Spatial Resolution during 1984-2014  
**Xiangping Xiao, OLI, Co-Authors: Michael Almaraz, Binwei Dong, & Zhensuo Zou**

# Weathering Oklahoma's Extremes

October 11-12, 2016

## Keynote Speakers



Robert Glennon is one of the nation's preeminent experts on water policy and law. The recipient of two National Science Foundation grants, Glennon serves as an advisor to governments, corporations, think tanks, law firms, and NGOs looking to solve serious challenges around water sustainability and planning.

Glennon is the author of *Unquenchable: America's Water Crisis and What To Do About It*, which has become a go-to resource for environmental policy stakeholders nationwide. *Unquenchable* received a Rachel Carson Book Award for Reporting on the Environment from the Society of Environmental Journalists. He is also the author of *Water Follies: Groundwater Pumping and the Fate of America's Fresh Waters*.

In 2014, Glennon and two co-authors collaborated with the Hamilton Project at the Brookings Institution to explore solutions to broken federal and state laws that are contributing to worsening water shortages in California and other Western states. Their groundbreaking report, "Shopping for Water: How the Market Can Mitigate Water Shortages in the American West," received widespread national attention and is viewed by many as a game-changer for water policy moving forward.



In addition to leading KOCO's weather team, Damon Lane was added as a guest meteorologist for ABC's *Good Morning America* and is a frequently featured speaker at weather conferences around the country, where he shares his experience forecasting one of the nation's most active weather regions.

In 2016, Lane was featured in the nationally televised ABC 20/20 primetime special "In An Instant" about the 2013 tornado outbreak that impacted Moore, Oklahoma. He shared his personal experiences covering the 2013 tornado outbreak that impacted his home town of Moore. The massive tornado struck his own neighborhood as he covered it live on-air. His wife rode out the storm in their shelter with the family dogs while many nearby homes were damaged or destroyed. Lane has been active in community recovery efforts ever since. His coverage of the Tornado Outbreak was nominated for an Emmy award.

Previously, Lane served as Chief Meteorologist at KTXS-TV in Abilene, TX, forecasting severe weather on the southern edge of "Tornado Alley." Lane was born and raised in Northern Virginia and was drawn to science and weather from a young age. Lane earned two bachelor degrees in college. After graduating in less than four years in Communications/Mass Media from Old Dominion University, Lane earned his Bachelor of Science in Atmospheric Sciences/Meteorology from The University of North Carolina, Asheville.

## Water Pioneers



Robert Henry has long been involved with water issues in our state. While a member of the Oklahoma state legislature (from 1976 to 1986), he worked on water law under the mentorship of well-known Oklahoma Water Law expert and OU Law Professor Joe Jarick.

Henry was elected Attorney General of Oklahoma in 1986 and served until 1991. He led efforts to create the Environmental Awareness Council, which met regularly to monitor matters of environmental concern and to educate both the public and lawmakers about the importance of environmental issues in Oklahoma.

As Attorney General, Henry officially led the fight to preserve our state's scenic rivers from degradation. The City of Fayetteville had created a ten-mile canal that would be used to discharge its treated effluent, which would eventually end up in the Illinois River in Oklahoma. The battle led to a victory in the Tenth Circuit Court of Appeals but ended up in a divided decision at the U.S. Supreme Court. While the divided Supreme Court ultimately allowed Fayetteville to discharge its wastewater into the Illinois River watershed, the decision also established the precedent that upstream states must meet downstream states' water quality standards—a critically important factor in protecting water quality on interstate streams across the nation.



Frank Keating was sworn in as Governor of Oklahoma in 1995 and served two terms. In 1997, Keating formed the "Animal Waste and Water Quality Protection Task Force"—a special task force he appointed that ultimately led to legislation to impose regulations on the state's growing commercial animal feeding operations in an effort to protect water quality. The resulting laws and regulations were recognized as the most stringent in the country at the time.

In 2000, Keating created the Tar Creek Superfund Task Force in order to gather facts and find solutions to the enormous environmental threats posed by the nation's most hazardous Superfund Site—the Tar Creek Superfund Site in northern Ottawa County. The task force's final report ultimately recommended relocation of the most impacted residents, as well as the use of constructed wetlands to expedite water quality improvement in Tar Creek and other tributaries of Grand Lake—a remediation effort that is still underway today.

In 2001, it was brought to the attention of Keating and other state leaders that the Illinois River's status as a Scenic River was seriously threatened by excess nutrients. Without intervention, the Illinois River's exceptional ecological and recreational significance was in jeopardy. In response, the Oklahoma Water Resources Board (OWRB) adopted its Water Quality Standards a total phosphorus criterion of .037 mg/L for Scenic Rivers, which was consequently approved by Gov. Keating despite some controversy. Fifteen years later, this cutting-edge standard is being implemented, and water quality improvements have been measured in the Illinois River watershed.

Tuesday, October 11	
<b>8:00 Registration</b>	
<b>8:30 Opening Session</b>	
<p><b>Welcome</b> Linda Lambert, Chairman, Oklahoma Water Resources Board</p> <p><b>State of Oklahoma, Choctaw Nation of Oklahoma, Chickasaw Nation, City of Oklahoma City Water Settlement</b> Governor Mary Fallin, State of Oklahoma Chief Gary Button, Choctaw Nation</p> <p><b>Water Settlement Roundtable</b> Michael Burrage, Attorney for the Choctaw &amp; Chickasaw Nations and former Federal District Court Judge Stephen Greetham, General Counsel to the Chickasaw Nation Department of Commerce Glenn Coffee, Special Counsel to Governor Mary Fallin and former Secretary of State Mike Hunter, First Assistant Attorney General, State of Oklahoma J.D. Strong, Executive Director, Oklahoma Water Resources Board</p>	
<b>10:00 Break</b>	
<b>10:15 Regional Water Planning Roundtable</b>	<b>10:15 Café Style Poster Session</b>
<p>David Berrong, Mayor-Elect, Clinton, OK Foss Reservoir Master Conservancy District Jed Winters, Water Task Force Co-chair Southwest Water Supply Action Plan Alan Riffei, City Manager, Woodward, OK Northwest Oklahoma Water Action Plan Cody Holcomb, City Manager, Ada, OK Arbuckle-Simpson Drought Contingency Plan</p>	<p>Moderator: Dr. Garey Fox, Director, Oklahoma Water Resources Center</p> <p>Riley Jones      Beatriz Gallucci Mazziero      Sonisa Sharma Yan Zhou      Charles Fontanier      Curt Dikes Melissa Reed      Karthik Ramaswamy      Manabendra Saharia Holly Enlow      Kathryn Wenger      Russell Doughy Joanna Quiah      Andrew Baird      Shuhao Yu Alex McLemore      Chen Xu      Lexi Freeman John McMaine      Briana Wyatt</p> <p>Visit GWC Live to view poster titles.</p>
<b>12:00 Luncheon</b>	
<p><b>Legislative and Executive Update</b> Michael Teague, Oklahoma Secretary of Energy and Environment Bryce Mariatt, Oklahoma State Senate Congressman Tom Cole</p> <p><b>Oklahoma Water Pioneer Awards</b> Robert Henry, President, Oklahoma City University Frank Keating, Governor of Oklahoma, 1995-2002</p>	
<b>2:00 Water for 2060 Magazine</b>	<b>2:00 Climate Variability and Drought</b>
<p>Overview JD Strong, OWRB</p> <p><b>Produced Water Working Group Update</b> Michael Durkin, CH2M</p> <p><b>Showcase of Other Initiatives</b> John Rehberg, Carollo</p>	<p>Moderator: Phil Alderman, Oklahoma State University (OSU) Rainfall Timing Extremes, Albert Sutherland, Oklahoma Mesonet/OSU Estimating Drought-Influenced Streamflow Exceedance Curves in Oklahoma, Ronald Miller, OSU Forests Bring Water to Oklahoma, Holden Zhang, The University of Tulsa Current State of Climate Education in the United States: Are Graduate Students Being Adequately Prepared to Address Climate Issues? Emma Kutzer, Oklahoma EPSCoR/OSU</p>
<b>3:15 Break</b>	
<b>3:30 Joint Session</b>	
<p><b>Keynote: Our Future in a Water-Stressed World</b> Dr. Robert Glennon, University of Arizona</p> <p><b>Poster Contest Winners</b></p> <p><b>4-H Speech Contest Winners</b></p>	
<b>5:00 Reception</b>	

Wednesday, October 12	
<b>8:00 Registration</b>	
<b>8:30 Opening Session</b>	
<p><b>Welcome</b> Linda Lambert, Chairman, Oklahoma Water Resources Board</p> <p><b>Keynote: Why We Don't Understand Drought</b> Damon Lane, Chief Meteorologist, KOCO's 5 First Alert Weather</p> <p><b>State and National Outlook</b> Gary McManus, State Climatologist</p> <p><b>Climate Monitoring and Prediction Tools</b> Dr. Derek Arndt, NOAA/NCEI Climate Monitoring Chief</p>	
<b>10:00 Break</b>	
<b>10:15 Partners in Drought and Flood</b>	<b>10:15 Stormwater and Streamflow</b>
<p>Col. Christopher Musin Commander/District Engineer USACE Tulsa District</p> <p>Bill Honker EPA Region 6 Water Division Director</p> <p>Collins Balcombe USBR Supervisory Program Coordinator</p>	<p>Moderator: Lucie Guertault, OSU</p> <p>No Adverse Impact: The State of the Art in Stormwater Management, Ronald Flanagan, Flanagan &amp; Associates, LLC</p> <p>Evaluation of aged, fly ash amended filter media to remove phosphorus from stormwater, Glenn Brown, OSU</p> <p>Non-contact remote sensing of streamflow, Jonathan Gourley, NOAA/National Severe Storms Laboratory</p>
<b>10:30 Break</b>	
<b>10:30 Groundwater</b>	
<p>Moderator: Ron Miller, OSU</p> <p>Petroleum Release Assessment and Impacts of Weather Extremes, James Weaver, USEPA Office of Research and Development</p> <p>Carbonate mineral dissolution drives hazardous chromium occurrence in the Central Oklahoma Aquifer, Andrew Ewood Madden, University of Oklahoma (OU)</p> <p>Groundwater and Soil Moisture: Indicators and Predictors of Long-Term Drought in Oklahoma, Jad Ziolkowska, OU</p>	
<b>12:00 Luncheon</b>	
<p><b>Oklahoma Water Resources Center Updates and Announcements</b></p> <p><b>Screening of "Thirsty Land" and Q&amp;A with Producer/Director Conrad Weaver</b></p>	
<b>2:00 Break</b>	
<b>2:30 OWRB Monthly Meeting</b>	<b>2:00 Reservoirs</b>
	<p>Moderator: Deidre Smith, Oklahoma Department of Transportation</p> <p>Application of the 3D model ELCOM-CAEDYM to estimate phosphorus load reduction needs for Lake Wister, Oklahoma, Thad Scott, Baylor University</p> <p>Assessing and mitigation source water ecosystem vulnerability, Steven D. Patterson, Bio + Design</p> <p>Relationship Between Landsat Spectral Reflectance and Water Quality at Different Depths in Grand Lake, Oklahoma, Abubakar Mansaray, OSU</p> <p>Numerical modeling of sedimentation in Fort Cobb Reservoir, Lucie Guertault, OSU</p>
<b>3:15 Break</b>	
<b>3:30 Irrigation, Recharge, and Reuse</b>	
<p>Moderator: Dave Lambert, OSU</p> <p>Algal Wastewater Remediation, Nurhan Durdan, OSU</p> <p>Regional Transfer vs. Water Reuse: A Comparison of Cost, Energy, and GHG Emissions, Jim F. Chamberlain, OU</p> <p>Western OK Irrigation Water and Energy Audits: Findings, Recommendations and Educational Materials - Preliminary Results, Robert Frazer, OSU</p> <p>Application of Soil-Water-Balance Code to Estimate Aquifer Recharge in Truckee Meadows, Nevada for Groundwater Flow Modeling, Michael Keester, LBC-Guyton Associates</p> <p>On-Farm Evaluation of Water Dynamics around Subsurface Drip Irrigation, Jason Warren, OSU</p>	



Governor Mary Fallin

**THE VALUE  
 OF WATER  
 INVESTMENT  
 IN OKLAHOMA**

OCT 31-NOV 1, 2017  
 EMBASSY SUITES, NORMAN

**LIQUID  
 ASSETS**

October 31, 2017

**7:30 Registration**

**8:30 General Session (Oklahoma Ballroom E-F)**

**Welcome and Introductions:**  
 Ford Drummond, Chairman, Oklahoma Water Resources Board (OWRB)  
 The Honorable Mary Fallin, Governor of Oklahoma  
 Video Welcome from Senator James Lankford  
**Keynote: Seth M. Siegel, Author, *Let There Be Water: Israel's Solution for a Water-Starved World***

**10:00 Break and Exhibits (University Ballroom)**

**10:30 Concurrent Sessions**

**Water Conference: Energy Panel (Oklahoma Ballroom G-J)**  
 Michael Teague, Oklahoma Secretary of Energy & Environment  
 Michael Dunkel, CH2M, Facilitator of the Produced Water Working Group  
 Nicki Fuller, Executive Director, Southwestern Power Resources Association  
 Usha-Maria Turner, Director, Environmental Affairs & Federal Public Policy, OGE Energy Corp

**Research Symposium: Poster Presentations (see pg. 4)**

**12:00 Luncheon (Oklahoma Ballroom E-F)**

**Oklahoma Water Pioneer Awards**  
**OWRB 60<sup>th</sup> Anniversary Celebration:**  
 Julie Cunningham, Executive Director, OWRB  
 Dr. Bob Blackburn, Executive Director, Oklahoma Historical Society  
**Video Welcome from Senator James Inhofe**

**2:00 Concurrent Sessions**

**Water Conference: Nonconsumptive Use Panel (Oklahoma Ballroom G-J)**  
 Video Welcome from Congressman Tom Cole  
 Scott Robinson, Director, Port of Muskogee  
 Roy Williams, CCE, President & CEO, Greater Oklahoma City Chamber  
 Dr. Dian Jordan, Sociologist

**Research Symposium: Irrigation Water Use Efficiency (see pg. 5)**

**3:00 Break and Exhibits (University Ballroom)**

**3:30 General Session (Oklahoma Ballroom E-F)**

Gary McManus, Oklahoma State Climatologist  
 Col. Christopher Hussin, Tulsa District Commander, USACE  
 Kenneth Wagner, Senior Advisor for Regional & State Affairs, US EPA  
**Poster Awards (Provided by the USGS via the Water Resources Research Act):**  
 Dr. Kevin Wagner, Director, Oklahoma Water Resources Center (OWRC)

**5:00 Reception (University Ballroom)**

November 1, 2017

**7:30 Registration**

**8:30 General Session (Oklahoma Ballroom E-F)**

**Welcome: Ford Drummond, Chairman, OWRB**  
**Keynote: Layne Carter, Systems Engineer, NASA Marshall Space Flight Center**  
**Water for 2060 Excellence Awards:**  
 Julie Cunningham, Executive Director, OWRB  
 Jim Reese, Oklahoma Secretary of Agriculture  
 Michael Teague, Oklahoma Secretary of Energy & Environment

**10:00 Break and Exhibits (University Ballroom)**

**10:30 Concurrent Sessions**

**Water Conference: Municipal & Industrial Panel (Oklahoma Ballroom G-J)**  
 Matt Newman, Tulsa Regional Water Policy Task Force  
 Robert Moore, Manager, Marshall County Water Corporation  
 Kim Peterson, Mayor, Guymon, OK  
 Marc Hoss, Plant Manager, Koch Fertilizer, Enid, OK

**Research Symposium: Role of University Water Centers & Institutes/ Federal & State Programs to Support Water Management (see pg. 6)**

**Oklahoma Bar Association CLE (Sooner Room)**

**12:00 Luncheon (Oklahoma Ballroom E-F)**

**Welcome: Kevin Wagner, Director, OWRC**  
**Keynote: Dr. Todd Halihan, Professor of Hydrogeophysics, OSU**  
**4H Speech Contest Winner**

**2:00 Concurrent Sessions**

**Water Conference: Agriculture Panel (Oklahoma Ballroom G-J)**  
 Video Welcome from Congressman Frank Lucas  
 Trey Lam, Executive Director, Oklahoma Conservation Commission  
 Tracy Streeter, Director, Kansas Water Office  
 Jimmy Emmons, President, Oklahoma Association of Conservation Districts  
 Dr. Dan Sebert, Executive Director, National Watershed Coalition

**Research Symposium: Surface Water Assessment & Management (see pg. 6)**

**3:00 Break/Adjourn Water Conference**

**3:30 Research Symposium: Groundwater Hydrologic Investigations (see pg. 7)**



Seth M. Siegel, Author

Seth M. Siegel is the author of *Let There Be Water: Israel's Solution for a Water-Starved World*. He is a businessman, activist, and writer. His essays on business, political, and cultural issues have appeared in the *New York Times*, the *Wall Street Journal*, the *Los Angeles Times*, and other publications around the world. Siegel has often appeared on television and has been widely quoted in major print media. He is a member of the Council on Foreign Relations.



Layne Carter, NASA

Layne Carter is a Systems Engineer at NASA's Marshall Space Flight Center. During his 29 years at NASA, he has worked on the development, design, delivery, and operation of the International Space Station (ISS) Water Recovery System, which includes the Water Processor Assembly and Urine Processor Assembly. In addition, he is the co-lead for NASA's Advanced Exploration Systems Wastewater Processing and Water Management team, which is responsible for developing the technologies to be used for NASA's future manned missions.

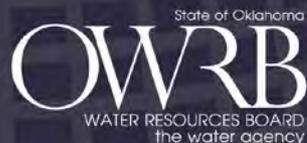
OKLAHOMA WATER PIONEERS

Glen Cheatham  
 Jim Townsend  
 Pete White

# CONNECTIONS

## 39<sup>th</sup> Annual Oklahoma Governor's Water Conference & Research Symposium

December 5-6, 2018  
[www.gwc.live](http://www.gwc.live)



December 5, 2018

7:30 Registration (First Floor)

8:30 General Session (Second Floor, Reed Ballroom)

Welcome: Jason Hitch, Chairman, Oklahoma Water Resources Board (OWRB)  
The Honorable Mary Fallin, Governor of Oklahoma  
Oklahoma Water for 2060 Excellence Award Presentations  
Michael Teague, Oklahoma Secretary of Energy & Environment  
Jim Reese, Oklahoma Secretary of Agriculture, Food & Forestry  
Fred Morgan, President & CEO, Oklahoma State Chamber  
Senator James Lankford (video welcome)

10:00 Break and Exhibits

10:30 Concurrent Sessions (First Floor)

**Water Conference: Opportunities in Marginal Quality Water Use**

Mike Nickolaus, Groundwater Protection Council  
Jason Vogel, Oklahoma Water Survey  
Andrea Croskrey, Texas Water Development Board  
Mary Elizabeth Mach, Garver

**Research Symposium: Poster Presentations\***

12:00 Luncheon (Second Floor, Reed Ballroom)

Oklahoma Water Pioneer Awards  
State Legislative Update  
Congressional Update: Senator James Inhofe (video)

1:30 Concurrent Sessions (First Floor)

**Water Conference: Innovations in Agriculture Water Use**

Congressman Frank Lucas (video welcome)  
Tom Cannon, Farmer, Blackwell, OK  
Amy Hays, Noble Research Institute  
Jason Warren, Oklahoma State University

**Research Symposium: Drought Monitoring & Management**

Jad Ziolkowska, Associate Professor, University of Oklahoma  
Jeffrey Basara, Associate Professor, University of Oklahoma  
Jordan Christian, Graduate Student, University of Oklahoma  
Ryann Wakefield, Graduate Student, University of Oklahoma  
Ali Ajaz, Graduate Student, Oklahoma State University  
Ali Mirchi, Assistant Professor, Oklahoma State University

3:00 Break and Exhibits

3:30 General Session (Second Floor, Reed Ballroom)

Grand River Dam Authority Video Presentation: *Our Borrowed Water*  
Congressman Tom Cole (video welcome)  
From Sole Source to Diversified: Challenges and Successes  
Darren Thompson, San Antonio Water System  
Poster Awards: Kevin Wagner, Oklahoma Water Resources Center

5:00 Reception (Second Floor)

\*Poster presenters/titles and symposium presentation titles and abstracts are listed on the Oklahoma Water Resources Center website at [water.okstate.edu](http://water.okstate.edu).

December 6, 2018

8:30 General Session (Second Floor, Reed Ballroom)

Welcome: Julie Cunningham, Executive Director, OWRB  
Use of Temperature Sensing Via Infrared Camera to Identify Groundwater Interactions With Streams  
Shana Mashburn, US Geological Survey

From Filing Cabinets to Tablets: Migrating Digital Workflows  
Monique Nava & Chad Holton, Trinity River Authority

The Big Data Revolution: Autonomous Systems & Simulation in Environmental Science  
Jamey Jacob, Oklahoma State University

9:45 Break and Exhibits

10:00 Concurrent Sessions (First Floor)

**Water Conference: Maximizing Water Storage Capacity**

Jimmy Bramblett, Natural Resources Conservation Service  
Dave Taylor, Waurika Lake Master Conservancy District  
Shanon Phillips, Oklahoma Conservation Commission

**Research Symposium: Irrigation Management & Soil Moisture Monitoring**

Briana Wyatt, Graduate Student, Oklahoma State University  
Mukesh Mehata, Graduate Student, Oklahoma State University  
Sumon Datta, Graduate Student, Oklahoma State University  
Karthik Ramaswamy, Graduate Student, Oklahoma State University  
Christopher Reid, Graduate Student, Oklahoma State University  
Lizbeth Pena-Zuniga, Graduate Student, Oklahoma State University

11:30 Luncheon (Second Floor, Reed Ballroom)

Chad Pregracke, Living Lands & Waters

1:00 Concurrent Sessions (First Floor)

**Water Conference: Leveraging Partnerships for Water Solutions**

Mike Brown, Walton Foundation  
Collins Balcombe, US Bureau of Reclamation  
Susan Paddock, Oka' Institute

**Research Symposium: Groundwater Availability**

Jon Sanford, OWRB  
John Ellis, US Geological Survey  
Chris Neel, OWRB  
Byron Waltman, OWRB  
Guy Sewell, Oka' Institute/East Central University  
Alexander Hess, Graduate Student, University of Tulsa

2:15 Break

2:45 Research Symposium (First Floor)/OWRB Meeting (Second Floor, Joyner)

**Research Symposium: Water Use & Management**

Robert Nairn, University of Oklahoma  
Sean Hussey, Graduate Student, University of Oklahoma  
Kyle Murray, Oklahoma Geological Survey  
Ronald Miller, Oklahoma State University  
Thomas Neeson, Geography & Environmental Sustainability at OU  
Chris Eck & Kevin Wagner, Oklahoma Water Resources Center

4:15 Adjourn

# Water Means Business

DECEMBER 4-5, 2019

Reed Conference Center  
Midwest City, OK



[www.gwc.live](http://www.gwc.live)

Hosted by the  
Oklahoma Water Resources Board  
& Oklahoma Water Resources Center

## December 4, 2019

7:30 a.m.—Registration (1st Floor)

8:30—Opening Session (2nd Floor, Reed Ballroom)

Robert L. Stallings, Jr., Chairman  
Oklahoma Water Resources Board  
Kirby Smith, Field Director  
Office of Oklahoma Lieutenant Governor Matt Pinnell  
Dean Amhaus, President & CEO  
The Water Council

9:45—Break & Exhibits

10:00—Concurrent Sessions (1st Floor)

**Water Conference: The Business Case for Building Resilient Public Water Supply**  
James Gammill, CEO  
Oklahoma Rural Water Association  
Matt Foreman, Field Operations Manager, &  
Cindy Hubbell, District Manager  
Creek County Rural Water District #2  
Chris Browning, Utilities Director  
City of Oklahoma City  
Mike Fina, Executive Director  
Oklahoma Municipal League

**Research Symposium: Poster Session\***

11:30—Luncheon (2nd Floor, Reed Ballroom)

**The Honorable Kevin Stitt, Governor of Oklahoma**  
**Oklahoma Water Pioneer Awards**  
Tom Buchanan, Ann Keeley, & Arnold Miller  
**Legislative Update**

1:15—Concurrent Sessions (1st Floor)

**Water Conference: Fueling Industry & Energy Production**  
Brent Kislung, Executive Director  
Oklahoma Department of Commerce  
Janet Smith, Manager, Economic & Business Development  
Public Service Company of Oklahoma  
Kerry Harpole, Manager, Regulatory Policy & Sustainable Practices  
Marathon Oil Company  
Mark Helm, President & CEO  
Dolese

**Research Symposium: Water Monitoring & Treatment**

Katherine Cook, Biology, OU  
Sergio Abit, Plant and Soil Sciences, OSU  
Bonheur Tumurere, Civil Engineering & Environmental Sciences, OU  
William Marsh, Microbiology & Molecular Genetics, OSU  
Diako Mahmodi, Chemical Engineering, OSU

2:45—Break & Exhibits

3:00—General Session (2nd Floor, Reed Ballroom):

**Innovating Oklahoma Agriculture Production**

Dr. Kevin Wagner, Director  
Oklahoma Water Resources Center  
Blayne Arthur, Oklahoma Secretary of Agriculture, Food & Forestry  
Russ Jackson  
2018 Leopold Conservation Award Recipient  
Dr. Jason Warren, Plant & Soil Sciences  
Oklahoma State University  
Dr. Meagan Schipanski, Soil & Crop Sciences  
Colorado State University

4:30—Reception (2nd Floor)

*\*For a complete list of presenters, visit [www.gwc.live](http://www.gwc.live).*

## December 5, 2019

7:30 a.m.—Registration (1st Floor)

8:30—General Session (2nd Floor, Reed Ballroom):  
**Water Planning for a Sustainable Future**

**Oklahoma Comprehensive Water Plan Update & Water for 2060 Excellence Award Presentations**  
Julie Cunningham, Executive Director  
Oklahoma Water Resources Board  
Kenneth Wagner, Oklahoma Secretary of Energy & Environment  
**Colorado River Basin Drought Contingency Plans**  
Kevin Moran, Senior Director, Colorado River Program  
Environmental Defense Fund

10:00—Break & Exhibits

10:30—Concurrent Sessions (1st Floor)

**Water Conference: Partners in a Water Secure Future**  
Anna Wildeman, Principal Deputy Administrator in Water  
US Environmental Protection Agency  
Bevin Ann Buchheister, Senior Policy Analyst  
National Governors Association  
Colonel Scott Preston, Commander & Tulsa District Engineer  
US Army Corps of Engineers  
Dr. Kevin Kloesel, Director  
Oklahoma Climatological Survey

**Research Symposium: Climate & Land Surface Processes**

Jeffrey Basara, Meteorology, OU  
Jordan Christian, Meteorology, OU  
Jorge Celis, Geography & Environmental Sustainability, OU  
Ryann Wakefield, Meteorology, OU  
Briana Wyatt, Plant & Soil Sciences, OSU  
Noah Brauer, Meteorology, OU

12:00—Luncheon (2nd Floor, Reed Ballroom)

**Dr. Thomas Coon, Dean of Agriculture**  
Oklahoma State University  
**Dr. Joan Rose, Homer Nowlin Chair in Water Research**  
Michigan State University

1:30—Concurrent Sessions (1st Floor)

**Water Conference: Disrupting the Economic Impacts of Flooding**

Trey Lam, Executive Director  
Oklahoma Conservation Commission  
Sam Marie Hermitte, Assistant Deputy Executive Administrator  
Water Science & Conservation, Texas Water Development Board  
Lonnie Sims, Oklahoma State Representative, District 68  
Janet Meshek, PE, CFM  
Oklahoma Floodplain Managers Association

**Research Symposium: Education, Outreach & Protecting Our Lakes**

Christopher Eck & Binod Chapagain, Oklahoma Water Resources Center  
Tiffany Legg, Oklahoma Water Survey  
Robert Knox, Civil Engineering & Environmental Sciences, OU  
Jennifer Salvo, Civil Engineering & Environmental Sciences, OU  
Ahmed Ismail, Geology, OSU  
Maxwell O'Brien, Oklahoma Water Survey

3:00—Adjourn Water Conference/Research Symposium Break

3:15—Research Symposium: Water Availability & Use

Chris Neel, Oklahoma Water Resources Board  
Walter Chandler, Oklahoma Water Survey  
Aseem Singh, Biosystems & Agricultural Engineering, OSU  
Jon Sanford, Oklahoma Water Resources Board  
Kayla Lockmiller, US Geological Survey  
Eric Fiorentino, Oklahoma Water Resources Board

3:30—OWRB Monthly Meeting (Reed Ballroom D)

5:00—Adjourn Research Symposium