Directory of
Water Resources Individuals
from
State and Federal Agencies
in
Wyoming

1988

Wyoming Water Research Center University of Wyoming Laramie, Wyoming 82071 307/766-2143

in cooperation with

State Water Forum

#### Contents

- A. Listing of State Agencies, Federal Agencies and University of Wyoming Departments with Water Interests.
- B. Individuals Listed with Expertise in a Particular Water Subject (Keyword).

Individuals are listed under keywords where they have indicated a knowledge and can provide specific information related to that keyword area. A list of keywords in alphabetical order is found in section D of the directory.

C. Individual Water Experts Information Directory

Individuals are listed in alphabetical order with their agency or department association along with their address and telephone number. A brief description of each individual's background and interests in the water area is given.

D. Listing of Keywords Utilized

# PARTICIPATING AGENCIES AND DEPARTMENTS

#### STATE AGENCIES

Attorney General's Office Department of Environmental Quality Water Quality Land Quality Air Quality Division of Health and Medical Services Economic Development and Stabilization Board Geological Survey of Wyoming Governor's Office State Engineer's Office State Planning Coordinator's Office Wyoming Department of Agriculture Wyoming Game and Fish Department Wyoming Highway Department Wyoming Industrial Siting Administration Wyoming State Forestry Division Wyoming State Veterinary Laboratory Wyoming Water Development Commission

#### FEDERAL AGENCIES AND OTHERS

ARS - Animal Disease Research Lab
Bureau of Land Management
Lands and Renewable Resources
Medicine Bow National Forest
Shoshone National Forest
Soil Conservation Service
U.S. Army Corps of Engineers
U.S. Fish and Wildlife Service
U.S. Geological Survey
Wyoming Cooperative Fish and Wildlife Research Unit

#### UNIVERSITY OF WYOMING DEPARTMENTS

Agricultural Engineering Animal Science Atmospheric Science Botany Chemistry Civil Engineering Economics Engineering Geology and Geophysics Law College Mathematics Molecular Biology Plant, Soil and Insect Science Range Management Science and Math Teaching Center Wyoming Water Research Center Zoology and Physiology

# **WATER TOPICS INDEX**

#### ACID RAIN

Thomas D. Crocker Bruce A. Forster Steven P. Gloss E. Gerald Meyer Frank J. Rahel Katta Jayaram Reddy William A. Reiners Robert W. Rossman William K. Smith Gabor Vali Robert W. Wiley Stephen E. Williams

#### ACTIVATED CARBON

Robert Champlin David H. Foster

#### ADSORPTION AND EXCHANGE PHENOMENA

David H. Foster Katta Jayaram Reddy William K. Smith

#### **AERATION**

Jack Bedessem

#### AGRICULTURAL WATER USE

State Engineer's Office
Donald J. Brosz
Robert D. Burman
Earl Cassidy
Beryl Churchill
Mohan Reddy Junna
Greg L. Kerr
Duane D. Klamm
Larry Pochop
Paul C. Schwieger
John W. Shields
Richard G. Stockdale

#### **ALGAE**

John C. Adams

# ANAEROBIC TREATMENT

David H. Foster

#### AQUACULTURE

Wayne A. Hubert Sally J. Wechsler

# AQUATIC BENTHOS

Matthew A. Bilodeau Dennis L. Blinkhorn Edwin A. Gooley R. Nick Schmal

# AQUATIC ECOLOGY

Thomas C. Collins Frank J. Rahel

#### AQUATIC FURBEARERS

Mark S. Boyce

#### AQUIFER CHARACTERISTICS

Earl Cassidy
Marvin A. Crist
Susan Hogg
Steve Ingle
Jaye Lunsford
Marion L. Maderak
Larry Martin
P. Stan Mitchem
Karen Spray
Richard G. Stockdale

#### AQUIFER PARAMETERS

Steve Ingle Jon Wade

#### ARID CLIMATES

Cliff Franklin Susan Hogg Ronald W. Marrs Brian Pruiett Karen Spray

# ATMOSPHERIC PROCESSES

John Marwitz William K. Smith Gabor Vali

#### BACTERIA

John C. Adams Stan C. Strom Stephen E. Williams

#### BASALT HYDROLOGY

Larry Martin

#### BASE FLOW

Allen Conder Bill Glass Richard A. Marston Philip B. McCollam

#### BENEFIT-COST ANALYSIS

William R. Bailey Robert Champlin Thomas D. Crocker G. Alan Edwards Bruce A. Forster John W. Jackson Clynn Phillips Paul C. Schwieger

#### **BENTHOS**

Allen Binns Wayne A. Hubert Richard L. Kroger Robert Pistono Howard Rhodes

# **BIODEGRADATION**

John C. Adams David H. Foster Stephen E. Williams

#### **BIOLOGICAL TREATMENT**

G. Alan Edwards Thomas S. Norman Brian Pruiett

#### **BIOMONITORING**

Brian Pruiett

# BRIDGE AND CULVERT SCOUR

William R. Bailey John E. Knopp

#### CHANNELS

John Baughman
Allen Binns
Chris Butler
Allen Conder
Bill Glass
Kevin M. Johnson
Hugh W. Lowham
Richard A. Marston
Mark Opitz
Robert Pistono

#### CHEMIGATION

Jim Bigelow

#### **CHLORINATION**

Thomas S. Norman Stan C. Strom

#### CLAY LINERS AND SLEEVE WALLS

Vince Sindt John P. Turner

# CLEAN WATER ACT - ADMINISTRATION

Matthew A. Bilodeau Edwin A. Gooley

#### CLIMATE

Greg L. Kerr Larry Pochop

#### CLOUD SEEDING

John Marwitz

#### COASTAL ZONE

Richard L. Kroger

# COMPUTER ANALYSIS

Barry B. Lawrence

#### CONFLICT MANAGEMENT

Joseph Patti, Jr. Paul C. Schwieger

#### CONJUNCTIVE USE

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#### CONSERVATION

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#### CONSTRUCTION INSPECTION

Russell Dahlgren

#### CONVEYANCE LOSSES

Greg L. Kerr

#### CONVEYANCE SYSTEMS

G. Alan Edwards Victor Hasfurther John W. Shields Frank J. Trelease

# CROP WATER USE

Donald J. Brosz Robert D. Burman Duane D. Klamm Larry Pochop John W. Shields

#### **CRUSTACEANS**

M. William Wengert, Jr.

DAIRY-WASTE MANAGEMENT

Conrad J. Kercher

DAM FAILURE

Russell Dahlgren John P. Turner

#### DAMS

State Engineer's Office
Beryl Churchill
Russell Dahlgren
Gordon W. Fassett
Duane D. Klamm
Alan R. Mauzy
P. Stan Mitchem
Mark Opitz
Paul C. Schwieger

#### DATA COLLECTION/ACQUISITION

P. Michael Brogan Chris Butler Allen Conder Larry Dolan Stanley A. Druse Bill Glass Chris M. Goertler W. Stephen Johnson Greg L. Kerr Dan Kotansky Barry B. Lawrence Philip B. McCollam Margo F. Teague

# DATA PROCESSING/EVALUATION

P. Michael Brogan Allen Conder Larry Dolan Stanley A. Druse Bill Glass W. Stephen Johnson Thomas E. Kinney Dan Kotansky Barry B. Lawrence Marion L. Maderak Ronald W. Marrs Philip B. McCollam Tim Reeves Margo F. Teague

#### **DECISION MODELS**

Thomas D. Crocker E. Gerald Meyer

# **DEMAND MANAGEMENT**

Thomas D. Crocker

#### DENITRIFICATION

John C. Adams William A. Reiners

#### **DEVELOPING COUNTRIES**

Peter W. Huntoon Mohan Reddy Junna Gabor Vali

# **DILUTION GAGING**

James F. Wilson, Jr.

#### **DISINFECTION**

David H. Foster Thomas S. Norman

#### DISTRIBUTION SYSTEMS

Robert Champlin G. Alan Edwards

# DRAINAGE

William R. Bailey Chris M. Goertler Tom Jewett John E. Knopp P. Stan Mitchem Barry C. Mountain Ghulam Yahya

#### DRILLING

Earl Cassidy

Marvin A. Crist Barry C. Mountain William F. Sherman John P. Turner Jon Wade

**DROUGHT** 

Conrad J. Kercher

DYE TRACING

James F. Wilson, Jr.

DYNAMIC PROGRAMMING

Mohan Reddy Junna

EARTH DAMS

Russell Dahlgren
P. Stan Mitchem
Mark Opitz
John P. Turner
A. Mainard Wacker

# ECONOMICS OF WATER RESOURCES

Thomas D. Crocker Bruce A. Forster John W. Jackson Lawrence Robinson Paul C. Schwieger

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**ENVIRONMENTAL LAW** 

Dennis C. Cook

EPIDEMIOLOGY OF WATERBORNE DISEASES

Stan C. Strom

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P. Michael Brogan Chris Butler Margaret C. Ewing Cliff Franklin Tom Jewett Dan Kotansky Ronald W. Marrs Richard A. Marston Paul Meyer P. Stan Mitchem Brian Pruiett Robert W. Rossman Michael A. Smith Steven Strenger John P. Turner Marc Wilcox Thomas R. Williams Bill Wilson

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#### **EVAPOTRANSPIRATION**

Robert D. Burman David H. Foster Duane D. Klamm Dennis H. Knight Larry Pochop John W. Shields William K. Smith

#### FARM ANIMAL REQUIREMENTS

Conrad J. Kercher

#### FEDERAL COAL PLANNING/COORDINATION

Joseph Patti, Jr.

#### **FERTILIZERS**

Jim Bigelow Earl Cassidy

#### FISH HABITAT IMPROVEMENT PRACTICES

Marc Wilcox

#### **FISHERIES**

Arthur Anderson Tom Annear John Baughman Allen Binns Michael A. Carnevale Allen Conder David J. Dufek Jon A. Erickson Steven P. Gloss Edwin A. Gooley Wayne A. Hubert Kevin M. Johnson Richard L. Kroger Jack L. McMillan Don D. Miller Melvin Oberholtzer Robert Pistono Frank J. Rahel Michael A. Snigg Mike Stone Sally J. Wechsler M. William Wengert, Jr. Thomas A. Wesche Bill Wichers Robert W. Wiley Steven W. Wolff

#### FLOOD-PLAIN MANAGEMENT

Arthur Anderson Tom Jewett John E. Knopp Barry C. Mountain Robert W. Rossman Michael A. Smith Thomas A. Wesche

# FLUID FLOW

Myron B. Allen III

# FLUVIAL GEOMORPHOLOGY

Richard L. Daddow

#### FOREST HYDROLOGY

Dennis H. Knight

#### FOREST MANAGEMENT

Herbert C. Cottrell Rex S. Johnson Daniel J. Perko

#### **FUNGICIDES**

Jim Bigelow

#### **GEOCHEMISTRY**

Richard L. Daddow Steve Ingle W. Stephen Johnson David Naftz Katta Jayaram Reddy

# GEOGRAPHIC INFORMATION SYSTEMS

Thomas E. Kinney Larry Martin James F. Wilson, Jr.

#### **GEOHYDROLOGY**

Thomas E. Kinney

#### GEOMORPHOLOGY

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Richard L. Daddow
Larry Dolan
Collin Fallat
Susan Hogg
John E. Knopp
Hugh W. Lowham
Ronald W. Marrs
Richard A. Marston
Paul Meyer
Robert W. Rossman
Karen Spray
A. Mainard Wacker
Thomas A. Wesche
Thomas R. Williams

#### **GEOPHYSICS**

Marion L. Maderak Ronald W. Marrs

#### **GLACIERS**

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#### GROUND-WATER CONTAMINATION EVALUATION

Marvin A. Crist

#### GROUND-WATER EXPLORATION

Peter W. Huntoon

#### **GROUNDWATER BACTERIA**

John C. Adams

#### GROUNDWATER HYDROLOGY

Myron B. Allen III Jack Bedessem William B. Borchert Earl Cassidy Marvin A. Crist Rick Engelmann Cliff Franklin Victor Hasfurther Peter W. Huntoon Steve Ingle Jaye Lunsford Marion L. Maderak Larry Martin P. Stan Mitchem William F. Sherman Karen Spray Richard G. Stockdale Frank J. Trelease Jon Wade Bill Wilson

#### GROUNDWATER MANAGEMENT

P. Michael Brogan Larry Martin Richard G. Stockdale Jon Wade

#### GROUNDWATER MODELING

Myron B. Allen III Marvin A. Crist Rick Engelmann Peter W. Huntoon Steve Ingle Mohan Reddy Junna Jaye Lunsford Larry Martin Jon Wade

#### **GROUNDWATER QUALITY**

Myron B. Allen III
Robert Champlin
LeRoy C. Feusner
Bruce A. Forster
David H. Foster
Susan Hogg
Steve Ingle
W. Stephen Johnson
Bill Locke
Robert Lucht
Marion L. Maderak
Jon Wade
Thomas R. Williams

#### GROUNDWATER RECHARGE

Victor Hasfurther Steve Ingle Jon Wade

# GROUNDWATER WELLS/DESIGN

Marvin A. Crist
LeRoy C. Feusner
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Robert Lucht
P. Stan Mitchem
William F. Sherman
Karen Spray
Richard G. Stockdale
Jon Wade
Thomas R. Williams

#### HABITAT MODIFICATION

R. Nick Schmal

#### HAZARDOUS WASTE

David H. Foster Cliff Franklin Paul Meyer Tim Reeves John P. Turner Thomas R. Williams

#### HEALTH AND SAFETY ISSUES OF HAZARDOUS WASTE

LeRoy C. Feusner

#### **HEAVY METALS**

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#### HERBICIDES

Jim Bigelow Cliff Franklin Steve Miller

#### **HISTORY**

Beryl Churchill

#### HYDRAULIC STRUCTURES

William R. Bailey Russell Dahlgren Rick Engelmann Mohan Reddy Junna John E. Knopp Mark Opitz A. Mainard Wacker Ghulam Yahya

#### **HYDRAULICS**

Russell Dahlgren
Stanley A. Druse
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Bill Glass
Victor Hasfurther
Duane D. Klamm
Bill Locke
Hugh W. Lowham
Rebecca L. Mathisen
Alan R. Mauzy
Mark Opitz
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William B. Borchert James C. Case Earl Cassidy Peter W. Huntoon Larry Martin
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Karen Spray
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Jon Wade
Thomas R. Williams

HYDROLOGIC DATABASES

Barry B. Lawrence

HYDROLOGIC MODELS

William R. Bailey Richard L. Daddow Ted Gilbert Victor Hasfurther Susan Hogg Dan Kotansky Alan R. Mauzy Steven Strenger A. Mainard Wacker Bill Wilson Ghulam Yahya

**HYDROLOGY** 

Rebecca L. Mathisen

**HYDROPOWER** 

Alan R. Mauzy

ICE

Bill Glass Gabor Vali

**IMPACT ANALYSIS** 

Thomas C. Collins

INDUSTRIAL WASTE WATER

Edward J. Fanning LeRoy C. Feusner

**INFILTRATION** 

George W. Hartman Susan Hogg Dan Kotansky James G. Rankl Tim Reeves

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Jim Bigelow

#### INSECTS

Allen Binns
Herbert C. Cottrell
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Robert Pistono
Howard Rhodes
Everett W. Spackman

#### INSTITUTIONAL RELATIONSHIPS

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# INSTREAM FLOW

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Greg L. Kerr

#### INTER-AGENCY/GOVERNMENT COOPERATIVE RELATIONS

Joseph Patti, Jr.

# INTERSTATE COMPACTS AND COURT DECREES

Gordon W. Fassett John W. Shields

#### **INVERTEBRATES**

Wayne A. Hubert Kevin M. Johnson M. William Wengert, Jr.

# **ION EXCHANGE**

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State Engineer's Office Donald J. Brosz Beryl Churchill Tom Jewett Duane D. Klamm Mark Opitz Paul C. Schwieger Frank J. Trelease

#### IRRIGATION SCHEDULING

Donald J. Brosz Robert D. Burman Larry Pochop

#### **IRRIGATION STRUCTURES**

Donald J. Brosz Francis A. Carr Duane D. Klamm Mark Opitz

# **IRRIGATION SYSTEMS**

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David Naftz

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Don D. Miller
Melvin Oberholtzer
Michael A. Snigg
Mike Stone
M. William Wengert, Jr.
Robert W. Wiley

LAND APPLICATION OF WASTES

Edward J. Fanning

LAND USE

Ronald W. Marrs Barry C. Mountain Joseph Patti, Jr. Clynn Phillips Lawrence Robinson Steven Strenger

LAND USE PLANNING

Collin Fallat

LANDSLIDES

John P. Turner

LEACHING

Earl Cassidy Dennis H. Knight

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John Baughman
David J. Dufek
Jon A. Erickson
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Mike Stone
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#### MARINE RESOURCES

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# **MARKETING**

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#### MICROCLIMATOLOGY

Paul Meyer Larry Pochop William K. Smith

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Steve Ingle
Robert Lucht
Larry Martin
Rebecca L. Mathisen
David Naftz
Brian Pruiett
Karen Spray
Mark Squillace
Stephen E. Williams

# MOUNTAIN LAKES/STREAMS

John C. Adams

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#### MULTIPLE-OBJECTIVE PLANNING

John Baughman
Margaret C. Ewing
John W. Jackson
Tom Jewett
Joseph Patti, Jr.
Clynn Phillips
Steven Strenger

#### MUNICIPAL WATER TREATMENT

G. Alan Edwards Bill Locke Stan C. Strom

#### **NEGOTIATING PROCESS**

Beryl Churchill

#### **NITROGEN**

Dennis H. Knight William A. Reiners Stephen E. Williams

# NUCLEAR WASTE DISPOSAL

Peter W. Huntoon

**NUMERICAL ANALYSIS** 

Myron B. Allen III

**NUTRIENTS** 

Conrad J. Kercher Dennis H. Knight William A. Reiners

OIL-WATER INTERFACES

Myron B. Allen III

OIL/HAZARDOUS SUBSTANCE SPILL CLEAN-UP

Jack Bedessem

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Chris Butler
Allen Conder
Stanley A. Druse
Rick Engelmann
Bill Glass
Victor Hasfurther
John E. Knopp
Rebecca L. Mathisen
Alan R. Mauzy
Philip B. McCollam
Mark Opitz
A. Mainard Wacker
Ghulam Yahya

**OPERATION RESEARCH** 

Mohan Reddy Junna

**OPTIMIZATION** 

Thomas D. Crocker

ORGANIC COMPOUNDS

Stephen E. Williams

OXIDATION

Robert Champlin

**OZONATION** 

Jack Bedessem David H. Foster

#### **PHREATOPHYTES**

Dennis H. Knight William K. Smith

#### PHYSICAL CHEMISTRY

E. Gerald Meyer

#### PIPELINE HYDRAULICS

Rebecca L. Mathisen

# **PLANNING**

John W. Jackson Richard H. Miller Lawrence Robinson R. Nick Schmal

#### PLANT GROWTH

Rollin H. Abernethy Margaret C. Ewing Dennis H. Knight Steve Miller Michael A. Smith

# PLANT-WATER RELATIONSHIPS

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#### POLICY ANALYSIS

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E. Gerald Meyer
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Rod S. Miller
Lawrence Robinson

# POLLUTION CONTROL

LeRoy C. Feusner

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William R. Bailey
David J. Dufek
Jon A. Erickson
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Richard L. Kroger
Thomas S. Norman
Mark Opitz
Mike Stone
Bill Wichers

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Steven P. Gloss E. Gerald Meyer

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Thomas D. Crocker Stan C. Strom

# PUBLICATIONS/DISTRIBUTION

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#### RAINFALL SIMULATION

Larry Dolan

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#### RAINFALL-RUNOFF PROCESSES

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Margaret C. Ewing
Susan Hogg
Dan Kotansky
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Marion L. Maderak
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Bill Wilson

#### RANGE MANAGEMENT

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# RECREATION

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# **REGIONAL PLANNING**

Collin Fallat

#### REMOTE SENSING

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Collin Fallat
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Ronald W. Marrs
Tim Reeves

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Gordon W. Fassett
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Wayne A. Hubert
Michael A. Snigg
M. William Wengert, Jr.
Robert W. Wiley
Bill Wilson

#### RESERVOIR MODELING

Ted Gilbert Alan R. Mauzy Frank J. Trelease

#### REVERSE OSMOSIS

Susan Hogg

#### RIPARIAN HABITAT REHABILITATION

Thomas C. Collins

# RIPARIAN HABITATS IN FORESTED WATERSHEDS

R. Nick Schmal

#### RIPARIAN VEGETATION/MANAGEMENT

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#### RISK MANAGEMENT/ANALYSIS

Thomas D. Crocker LeRoy C. Feusner E. Gerald Meyer
A. Mainard Wacker

# RIVER BEDS

Richard A. Marston

#### RIVER-BASIN DEVELOPMENT

James C. Case John W. Jackson Tom Jewett Richard A. Marston Frank J. Trelease

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State Engineer's Office Tom Annear Matthew A. Bilodeau Allen Binns Dennis L. Blinkhorn Allen Conder Richard L. Daddow David J. Dufek Jon A. Erickson Edwin A. Gooley Wayne A. Hubert James E. Kircher Hugh W. Lowham Richard A. Marston Robert Pistono Paul C. Schwieger Karen Spray Mike Stone M. William Wengert, Jr. Robert W. Wiley Steven W. Wolff

#### RUNOFF

State Engineer's Office Ted Gilbert Greg L. Kerr Dan Kotansky Hugh W. Lowham Rebecca L. Mathisen James G. Rankl Steven W. Wolff

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Paul Meyer

Steven Strenger

#### SALINE-FRESHWATER INTERFACES

Dan Kotansky

SALINITY

Tom Jewett Lawrence Robinson John W. Shields

SANITARY LANDFILLS

Chris Butler Cliff Franklin

SATURATED FLOW

Myron B. Allen III Tim Reeves

SCOUR AND EROSION

A. Mainard Wacker

SEDIMENT TRANSPORT

Marc Wilcox

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P. Michael Brogan Richard L. Daddow Larry Dolan Wayne A. Hubert James E. Kircher Marion L. Maderak P. Stan Mitchem Robert W. Rossman Thomas A. Wesche Bill Wilson

SEED GERMINATION

Rollin H. Abernethy

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James C. Case

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SEWER SYSTEMS

G. Alan Edwards Thomas S. Norman Lawrence Robinson Ghulam Yahya

SLOPE STABILITY

James C. Case

SLUDGE

Edward J. Fanning

SNOW, ICE, AND FROST

Ted Gilbert
William A. Laycock
Ronald W. Marrs
Daniel J. Perko
William A. Reiners
William K. Smith

SOIL CHEMISTRY

Earl Cassidy George W. Hartman Katta Jayaram Reddy William A. Reiners

SOIL CONSERVATION

Collin Fallat

SOIL ENGINEERING

Russell Dahlgren

SOIL MICROBIOLOGY

George W. Hartman Stephen E. Williams

SOIL PHYSICS

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SOIL SURVEY

Steven Strenger

#### SOIL-WATER RELATIONSHIPS

Earl Cassidy
Edward J. Fanning
George W. Hartman
Duane D. Klamm
Paul Meyer
Katta Jayaram Reddy
Tim Reeves
William K. Smith
John P. Turner
Stephen E. Williams

#### SOLUTE TRANSPORT

Myron B. Allen III James F. Wilson, Jr.

#### STATISTICS

Mark S. Boyce W. Stephen Johnson Thomas E. Kinney Hugh W. Lowham Tim Reeves M. William Wengert, Jr.

# STOCHASTIC HYDROLOGY

William R. Bailey W. Stephen Johnson John E. Knopp

#### STOCHASTIC PROCESSES

Hugh W. Lowham

# STREAM CLASSIFICATION

Richard L. Daddow R. Nick Schmal Marc Wilcox

# STREAM HABITAT ECOLOGY

R. Nick Schmal

#### STREAM HABITAT IMPROVEMENT

Allen Binns Robert Pistono

#### STREAMBANK STABILIZATION TECHNIQUES

Allen Binns Robert Pistono

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Tom Annear John Baughman Allen Binns P. Michael Brogan Larry Dolan Stanley A. Druse Jon A. Erickson Ted Gilbert Bill Glass Chris M. Goertler Victor Hasfurther Kevin M. Johnson Greg L. Kerr Hugh W. Lowham Marion L. Maderak Richard A. Marston Rebecca L. Mathisen Philip B. McCollam Don D. Miller Robert Pistono James G. Rankl Robert W. Rossman Paul C. Schwieger Michael A. Snigg Karen Spray Thomas A. Wesche Robert W. Wiley Bill Wilson James F. Wilson, Jr. Steven W. Wolff

#### SUBSIDENCE

James C. Case John P. Turner

#### SUBSURFACE DRAINAGE

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SURFACE DRAINAGE

Chris M. Goertler Barry C. Mountain Ghulam Yahya

SURFACE GEOLOGY

George W. Hartman

SURFACE WATER/GROUND WATER INTERRELATIONSHIPS

Karen Spray

SURFACE-WATER HYDROLOGY

James F. Wilson, Jr.

SUSPENDED SEDIMENTS

P. Michael Brogan Chris Butler Larry Dolan Rick Engelmann James E. Kircher

SYNTHETIC HYDROLOGY

A. Mainard Wacker

SYSTEMS ENGINEERING

Mohan Reddy Junna

**TIDELANDS** 

Richard L. Kroger

TIME OF TRAVEL AND DISPERSION

James F. Wilson, Jr.

TIME-SERIES ANALYSIS

Mark S. Boyce

TOXIC SUBSTANCES

James C. Case

LeRoy C. Feusner Cliff Franklin Steven P. Gloss Paul Meyer Stephen E. Williams

# UNSATURATED FLOW

Myron B. Allen III Tim Reeves

## URBAN HYDROLOGY

William R. Bailey
Jaye Lunsford
Marion L. Maderak
Rebecca L. Mathisen
Barry C. Mountain
James G. Rankl
Frank J. Trelease
A. Mainard Wacker
Ghulam Yahya

# URBAN PLANNING

Collin Fallat

## WASTE DISPOSAL

Jack Bedessem
Edward J. Fanning
LeRoy C. Feusner
Bill Locke
Tim Reeves

## WASTEWATER

G. Alan Edwards

## WASTEWATER IRRIGATION

Donald J. Brosz Edward J. Fanning

#### WASTEWATER TREATMENT

Jack Bedessem G. Alan Edwards Bill Locke Thomas S. Norman

# WATER AUGMENTATION

Herbert C. Cottrell

WATER BUDGET STUDIES

Jaye Lunsford

#### WATER CHEMISTRY

Steven P. Gloss David Naftz William A. Reiners

WATER EDUCATION

Vince Sindt

WATER HARVESTING

Daniel J. Perko

## WATER LAW

Dennis C. Cook Thomas J. Davidson Gordon W. Fassett Jennifer Hager John W. Shields Mark Squillace

## WATER PROJECT CONSTRUCTION CONTRACTING

Barry C. Mountain

#### WATER QUALITY

John C. Adams Chris Butler Richard L. Daddow Gordon W. Fassett LeRoy C. Feusner Cliff Franklin W. Stephen Johnson Conrad J. Kercher Robert Lucht David Naftz Thomas S. Norman Katta Jayaram Reddy Lawrence Robinson Mike Stone Steven Strenger A. Mainard Wacker Bill Wilson

## WATER RESOURCES DEVELOPMENT

Beryl Churchill Rebecca L. Mathisen Alan R. Mauzy Clynn Phillips Michael K. Purcell Paul C. Schwieger

## WATER RESOURCES PLANNING

Arthur Anderson Chris Butler Michael A. Carnevale James C. Case Beryl Churchill Ted Gilbert John W. Jackson James E. Kircher Ronald W. Marrs Alan R. Mauzy Mark Opitz Clynn Phillips Michael K. Purcell Lawrence Robinson Mike Stone Frank J. Trelease Jon Wade

## WATER RIGHTS

State Engineer's Office Donald J. Brosz Robert D. Burman Francis A. Carr Dennis C. Cook Thomas J. Davidson Gordon W. Fassett Cliff Franklin Jennifer Hager Thomas E. Kinney Robert Lucht Larry Martin Alan R. Mauzy Paul C. Schwieger John W. Shields Richard G. Stockdale Frank J. Trelease

## WATER TREATMENT

John C. Adams Jack Bedessem Robert Champlin G. Alan Edwards Rick Engelmann Bill Locke Thomas S. Norman Stan C. Strom

## WATER YIELD AUGMENTATION

Marc Wilcox

# WATER-QUALITY CONTROL

Jack Bedessem Michael A. Carnevale Robert Champlin

# WATER-QUALITY MANAGEMENT

Michael A. Carnevale Herbert C. Cottrell G. Alan Edwards Edward J. Fanning Robert W. Rossman

## WATER-QUALITY MODELING

David Naftz Katta Jayaram Reddy

# WATER-QUALITY MONITORING

P. Michael Brogan Robert Champlin Edward J. Fanning W. Stephen Johnson Bill Locke Marion L. Maderak David A. Peterson Robert W. Rossman

## WATER-QUALITY STANDARDS

Michael A. Carnevale Robert Champlin Lawrence Robinson

# WATER-TREATMENT FACILITIES

Robert Champlin Thomas S. Norman Stan C. Strom

#### WATER-USE DATA

Gordon W. Fassett John W. Shields Margo F. Teague

#### WATER-USE EFFICIENCY

Donald J. Brosz Gordon W. Fassett

#### WATER-USE MONITORING

Robert D. Burman Gordon W. Fassett

# WATERBORNE DISEASES

Stan C. Strom

## WATERBORNE PARASITES

William R. Jolley Stan C. Strom

#### WATERFOWL BIOLOGY

Mark S. Boyce

# WATERSHED IMPROVEMENT PRACTICES

Michael A. Carnevale Herbert C. Cottrell Margaret C. Ewing Edward J. Fanning Rex S. Johnson Brian Pruiett Robert W. Rossman Michael A. Smith Thomas A. Wesche Robert W. Wiley Thomas R. Williams

#### WATERSHED MANAGEMENT

Arthur Anderson
P. Michael Brogan
Chris Butler
Herbert C. Cottrell
Margaret C. Ewing
Edward J. Fanning
Chris M. Goertler
Susan Hogg
Tom Jewett
Rex S. Johnson

Dennis H. Knight
Dan Kotansky
Paul Meyer
Joseph Patti, Jr.
Brian Pruiett
Robert W. Rossman
Michael A. Smith
Steven Strenger
Thomas A. Wesche
Bill Wilson

## WEATHER MODIFICATION

Gordon W. Fassett John Marwitz Gabor Vali

# WEATHER-DATA COLLECTION

Larry Dolan Cliff Franklin Greg L. Kerr Larry Pochop

#### WEEDS

Steve Miller

# WELL HYDRAULICS

Victor Hasfurther Richard G. Stockdale

## WETLAND ECOLOGY

Matthew A. Bilodeau Dennis L. Blinkhorn Mark S. Boyce Edwin A. Gooley

# WILDLIFE MANAGEMENT

Arthur Anderson
Mark S. Boyce
Thomas C. Collins
Chris M. Goertler
Edwin A. Gooley
Richard L. Kroger
William A. Laycock
Joseph Patti, Jr.
Michael A. Smith

# **WATER EXPERTS INDEX**

Rollin H. Abernethy Associate Professor of Plant Science University of Wyoming Dept. of Plant, Soil and Insect Science P.O. Box 3354, University Station Laramie, WY 82071 (307) 766-3356

Plant biologist with emphasis on seed physiology/molecular biology. Research on seed metabolic processes during development and germination under environmental stresses, including water, salinity and temperature.

John C. Adams
Professor of Microbiology
University of Wyoming
Molecular Biology
P.O. Box 3944, University Station
Laramie, WY 82071
(307) 766-3218

The toxicity to and biodegradation by microorganisms of synfuel process waters. The microbiology of high mountain watersheds. The microbial ecology of various waters. The causes, early detection and treatment of tastes and odors in drinking water. The microbiology of drinking water particularly during distribution. The effects of the use of ozone on organics and bacteria in drinking water. The causes and control of microbial plugging of water wells.

Myron B. Allen III
Associate Professor
University of Wyoming
Department of Mathematics
P.O. Box 3036, University Station
Laramie, WY 82071
(307) 766-4221

Numerical methods for simulating underground flows, especially multi-fluid flows in groundwater aquifers or petroleum reservoirs. Physics of multiphase flows in porous media. Utilization of advanced computer architectures for large-scale numerical tasks required in subsurface flow models.

Arthur Anderson Acting State Supervisor U.S. Fish and Wildlife Service 2120 Capitol Avenue Room 7010 Cheyenne, WY 82001 (307) 772-2374

Fish and Wildlife Biologist. Expertise in environmental review, riparian ecosystems, reservoir and cold-water fisheries, wetlands, watershed management, instream flow determination and wildlife management, especially waterfowl, raptors, and migratory birds. Research interests include riparian protection and re-establishment.

Tom Annear Fisheries Biologist Wyoming Game and Fish Department 5400 Bishop Blvd Cheyenne, WY 82002 (307) 777-7686

Instream flow crew supervisor for Wyoming Game and Fish Department. Coordinate data collection and analysis to support filings for instream flow water rights. Conduct aquatic impact assessments on projects that will affect streams with fisheries. Provide minimum pool recommendations for proposed reservoirs.

William R. Bailey Principal Hydraulic Engineer Wyoming Highway Department P.O. Box 1708 Cheyenne, WY 82002-9019 (307) 777-4050

Specialization in highway drainage structures such as bridges, culverts, storm drains and irrigation drainage.

John Baughman Fisheries Management Coordinator Wyoming Game and Fish Department 5400 Bishop Boulevard Cheyenne, WY 82002 (307) 777-7686

Research capabilities in all aspects of fisheries management, sport fisheries recreation.

Jack Bedessem
Southwest District Supervisor
Department of Environmental Quality
Water Quality Division
210 Lincoln Street
Lander, WY 82520
(307) 332-3144

Review construction plans, inspect operation and maintenance of water, wastewater treatment and disposal systems for compliance with State Water Quality Regulations. Investigate and manage clean up of oil/hazardous material, pollution discharges to surface and groundwater in accordance with State and Federal regulations. Coordinate and provide technical assistance to public, local planners, municipalities and industry (i.e. mining, oil and gas, small business).

Jim Bigelow
Manager, Technical Services
Wyoming Department of Agriculture
2219 Carey Ave.
Cheyenne, WY 82002-0100
(307) 777-6590

Background specializing in use of agricultural chemicals (pesticides and fertilizers), methods of application, environmental restrictions, and leaching capability in regard to ground-water contamination. Regulatory experience in storage, transportation, distribution and use of agricultural chemicals (federal/state laws and regulations.)

Matthew A. Bilodeau Wyoming Field Office Manager U.S. Army Corps of Engineers Federal Building, Room 8007 2120 Capitol Avenue Cheyenne, WY 82001 (307) 772-2300

Administration of the Corps regulatory program in Wyoming as authorized by Section 10 of the Rivers and Harbors Act and Section 404 of the Clean Water Act. Wyoming field office manager with overall responsibility for Corps regulatory program in Wyoming. Point of contact for regulated activities in the eastern half of the state.

Allen Binns Aquatic Habitat Supervisor Wyoming Game and Fish Department P.O. Box 342 Lander, WY 82520 (307) 332-2688

In charge of stream management work for the Game and Fish Department. Enhancement of stream systems through fisheries management, bank stabilization and habitat improvement measures.

Dennis L. Blinkhorn Project Manager U.S. Army Corps of Engineers Federal Building, Room 8007 2120 Capitol Avenue Cheyenne, WY 82001 (307) 772-2300

Administration of the Corps regulatory program in Wyoming as authorized by Section 10 of the Rivers and Harbors Act and Section 404 of the Clean Water Act. Evaluates and processes permit applications in the state of Wyoming.

William B. Borchert Supervisory Hydrologist U.S. Geological Survey Water Resources Division P.O. Box 1125 Cheyenne, WY 82003 (307) 772-2734

Report specialist for the Wyoming District, WRD, assists authors with planning and preparation of reports and illustrations. Responsible for evaluation of overall quality of reports and for their preparation for publication.

Mark S. Boyce Professor of Zoology University of Wyoming Department of Zoology and Physiology P.O. Box 3166, University Station Laramie, WY 82071-3166 (307) 766-5373

Population biology, particularly of vertebrates. Experience with aquatic furbearers including beaver, muskrats and mink. Also research experience with waterfowl, cranes and other aquatic birds. General interests in population biology, wetlands ecology and management, and ecosystem modelling.

P. Michael Brogan Hydrologist Bureau of Land Management Casper District Office 1701 East "E" Street Casper, WY 82601 (307) 261-5564

Administration of water resources associated with public lands and federal natural resources actions. Areas of expertise include surface water, water quality, some groundwater, sediment, and watershed rehabilitation. Research interests in water quality (primarily dissolved and total sediment), water yield augmentation, water management, erosion/sedimentation, hydrology and impacts associated with coal mining.

Donald J. Brosz Extension Specialist-Irrigation Engineer University of Wyoming Department of Agricultural Engineering P.O. Box 3295, University Station Laramie, WY 82071 (307) 766-4398

Associate Director of the Wyoming Water Research Center and Extension Irrigation Engineer with the Wyoming Cooperative Extension Service. Conduct water resource management seminars, informational meetings and field tours for Wyoming Water Interest Groups — citizens, state and federal agencies, legislators and others. Work closely with citizen water organizations, state and federal agencies and University of Wyoming researchers in coordinating and conducting water resource education programs.

Robert D. Burman Professor of Agricultural Engineering University of Wyoming College of Agricultural Engineering P.O. Box 3295, University Station Laramie, WY 82071 (307) 766-4395

Author or co-author on many publications dealing with irrigation water requirements. Principal investigator on research projects funded by the Denver Water Board, Wyoming Water Research Center, the Wyoming Water Development Commission and the Bear River Commission regarding high altitude water consumption. Recently finished and currently active in writing chapters and books on water requirements. Have been engaged in teaching and research at Wyoming for the past 30 years. Have been active in private consulting in water supply problems. Currently active in American Society of Agricultural Engineers and American Society of Civil Engineers. Co-editor of a new manual on crop water requirements for ASCE.

Chris Butler
Hydrologist
Bureau of Land Management
Rock Springs District Office
Box 1869
Rock Springs, WY 82901
(307) 382-5350

Emphasis of work includes channel dynamics, riparian management, and water quality monitoring as they relate to grazing, forestry, and oil and gas exploration. Groundwater protection as it pertains to placement of sanitary landfills and other disposal facilities. Past experience involved research on buffer strip width, snowfall redistribution and air quality.

Michael A. Carnevale
Planning & Nonpoint Pollution Ctrl Supervisor
Department of Environmental Quality
Water Quality Division, Herschler Bldg
4th Floor, West Wing
Cheyenne, WY 82002
(307) 777-7781

Supervise the planning and non-pollution control section of the Water Quality Division of the Wyoming Department of Environmental Quality. The section is responsible for coordinating EIS reviews, providing water quality certification for 404 permits, planning activities under Section 208 and 319 of the Federal Clean Water Act, assessment of waste load capacities, land application of wastewaters, and preparation of inter-governmental agreements.

Francis A. Carr Adjudication Officer State Engineer's Office Board of Control Herschler Building, 4th Floor East Cheyenne, WY 82002 (307) 777-6177

Water rights and water right research. Board of Control procedures. Change of use. Adjudication of water rights.

James C. Case
Head of Geologic Hazards Division
Geological Survey of Wyoming
Box 3008
University Station
Laramie, WY 82071
(307) 766-2286

Research on naturally occurring toxic elements in bedrock with data on occurrence in water (selenium, radon, etc.). Primary expertise in geologic hazards to include slope stability, active faults—earthquakes, mine subsidence, shrinking—swelling clays, and toxic elements. Manage Geological Survey of Wyoming hydrogeologic data base, remote sensing lab, and Geologic Hazards Division. Past experience includes developing river resource management plans for the upper Mississippi River.

Earl Cassidy Hydrologist U.S. Geological Survey 2120 Capitol Avenue Cheyenne, WY 82001 (307) 772-2720

Groundwater exploration, hydrogeology, and water-resources management in developing countries. Center pivot irrigation and water use in arid environments including the management and reclamation of saline and sodic soils. Soil chemistry, soil physics, and soil-water-crop interactions, water chemistry and water quality.

Robert Champlin Professor of Civil Engineering University of Wyoming Department of Civil Engineering P.O. Box 3295, University Station Laramie, WY 82071 (307) 766-4116

Research on water quality parameters, methods of water treatment for meeting various uses (municipal drinking water, industrial process water, etc.). Educational consultant for management, design and operations in the drinking water field and industrial process water area.

Beryl Churchill Commissioner Wyoming Water Development Commission Rt. 3, 848 Rd 10 Powell, WY 82435 (307) 754-4865

Actively involved in the management of an 850-acre family farm near Powell. She is Division III commissioner for the Wyoming Water Development Commission. She was a member of the Governor's negotiating team on the Buffalo Bill Dam modification agreement which was the nation's first state-federal government, cost/revenue sharing agreement. She is author of three books on the history of the Shoshone Reclamation Project. Her most recent effort "The Dam Book", deals with the construction history of Buffalo Bill, Corbett and Willwood Dams.

Thomas C. Collins
Project/Staff Manager
Wyoming Industrial Siting Administration
Third Floor, Barrett Building
2301 Central Avenue
Cheyenne, WY 82002
(307) 777-7156

Former assistant professor, Penn State University, where developed/taught courses in wildlife management and floodplain ecology. Five years National Park Service research on Snake River floodplain (Wyoming), research contracts for vegetation typing of Salmon River floodplain (Salmon National Forest, Idaho). Developed riparian management plan for special management area, Salmon River, Idaho. Numerous riparian habitat improvement projects (design and administration) in Wyoming and Idaho. Particular specialization in beaver ecology and evaluation of effects of industrial developments on riparian habitats. Research interests, impact analysis/mitigation, aquatic mammals, riparian rehabilitation.

Allen Conder Fishery Biologist Wyoming Game and Fish Department 2800 Pheasant Drive Casper, WY 82601 (307) 234-9185

Conducted various aquatic impact analyses for water development. Analyses included analysis of fish habitat gains and/or losses, mitigation for losses, development of instream flow recommendation based on hydraulic, hydrologic and fisheries data, and recommendation for minimum pools in reservoirs.

Dennis C. Cook Senior Assistant Attorney General Attorney General's Office 123 Capitol Building Cheyenne, WY 82002 (307) 777-7824

Senior Assistant Attorney General for the State of Wyoming specializing in water law and related matters that include water development, interstate water disputes, federal/state relations, etc. Currently, counsel of record for the State of Wyoming in the dispute over the meaning of the "North Platte Decree" between Wyoming and Nebraska now pending before the Supreme Court of the United States.

Herbert C. Cottrell
Assistant State Forester-Forest Mgmt
Wyoming State Forestry Division
1100 West 22nd Street
Cheyenne, WY 82002
(307) 777-7586

Water quantity and quality as they relate to forest management.

Marvin A. Crist Hydrologist U.S. Geological Survey P.O. Box 1125 Cheyenne, WY 82003 (307) 772-2721

Studied the ground-water systems in Goshen, Laramie, Natrona and Niobrara counties and in the Wheatland Flats area in Platte County including ground-water models in all these areas except Natrona County.

Thomas D. Crocker Professor of Economics University of Wyoming Department of Economics P.O. Box 3985, University Station Laramie, WY 82071 (307) 766-6423

Economic valuation of ecosystems, reciprocities between economies and ecosystems, benefit-cost analysis.

Richard L. Daddow Forest Hydrologist Shoshone National Forest 225 W. Yellowstone Ave Cody, WY 82414 (307) 527-6241

Watershed management specialist for the Shoshone National Forest. Have overall technical responsibility for the hydrology and soils management programs on the forest. Expertise and technical interests include hydrology and soils-related best management practices applied to timber harvesting, range management, and road construction projects, evaluation and quantification of channel maintenance (instream) flow requirements, water quality monitoring of wildland hydrologic systems, rehabilitation plan development for exploratory oil and gas well sites and access roads, and sediment transport processes, fluvial geomorphology, and stream classification of wildland stream channels.

Russell Dahlgren Assistant Safety of Dams Engineer State Engineer's Office Herschler Building 4th Floor East Cheyenne, WY 82002 (307) 777-6154

Evaluate for the State Engineer's Office the many aspects associated with Dam Safety including foundation, embankment, outlet works, spillway capacity, etc. Inspection of dams and related construction activities associated with dam construction and safety of the dam.

Thomas J. Davidson Assistant Attorney General Attorney General's Office 123 Capitol Building Cheyenne, WY 82002 (307) 777-7841

Assistant Wyoming Attorney General specializing in water law and related matters. Principally responsible for representation of the Wyoming Water Development Commission.

Larry Dolan Research Associate University of Wyoming Wyoming Water Research Center P.O. Box 3067, University Station Laramie, WY 82071 (307) 766-2143

Geomorphology and surface water hydrology as applied to erosion, and sediment transport and deposition. Expertise in field data collection and data analysis.

Stanley A. Druse
Hydrologist
U.S. Geological Survey
Water Resources Division
P.O. Box 1125
Cheyenne, WY 82003
(307) 772-2712

Specialization in surface water hydrology and hydraulics, particularly in the operation of streamflow monitoring stations and indirect determinations of flood discharge and water-surface profiles.

David J. Dufek Area Fisheries Supervisor Wyoming Game and Fish Department 260 Buena Vista Lander, WY 82520 (307) 875-3223

The primary area of expertise and interest is Fisheries Management. Most of the work has involved a large reservoir and river. Work includes population studies, habitat evaluation, water quality monitoring and harvest studies. Also involved with the protection of fisheries habitat from man associated impacts. This involves working with several federal, state and local governmental groups.

G. Alan Edwards
Natural Resource Analyst
State Planning Coordinator's Office
Herschler Building, 2nd Floor East
122 West 25th Street
Cheyenne, WY 82002
(307) 777-7574

Experience in policy issues associated with natural resource management and analysis.

Rick Engelmann
Technical Support Group Supervisor
Department of Environmental Quality
3rd Floor West
Herschler Building
Cheyenne, WY 82002
(307) 777-7066

Technical Support Supervisor for the Land Quality Division, Wyoming DEQ. Manage permitting and technical analysis of major mining projects in the state. Such work includes analysis of water related issues (surface and subsurface water quality and quantity, water treatment, erosion, sedimentation), as well as soils, vegetation, and ground stability issues. Professional background and interests include groundwater hydrology, surface water structures, water treatment, and geotechnical engineering.

Jon A. Erickson Area Fisheries Supervisor Wyoming Game and Fish Department P.O. Box 1054 Jackson, WY 83001 (307) 733-2321

Supervise a variety of activities in fisheries and fish resource management and research in the Snake River Drainage. Emphasis is toward maintenance of wild populations of Snake River cutthroat trout. Special interest in stream habitat restoration involving rejuvenation of natural spawning gravels, placement of commercial gravels for spawning, improving habitat types related to increased numbers of juvenile and adult trout.

Margaret C. Ewing Forester/Soil Scientist Shoshone National Forest Wind River Ranger District P.O. Box 186 Dubois, WY 82513 (307) 455-2466

Watershed Management of Forested Ecosystems-planning, administration and application of watershed improvement practices. Minimization of non-point source pollution. Management of riparian ecosystem components for perpetuation of vegetation, wildlife and water quality. Best management practices in Forested Ecosystems. Revegetation of high altitude areas.

Collin Fallat
Natural Resources Specialist
Wyoming Department of Agriculture
2219 Carey Avenue
Cheyenne, WY 82002
(307) 777-7321

Background in environmental analysis and land use planning. Special interests in natural resource relationships to land use planning. Experience in siting analysis, remote sensing and 201 and 208 water quality programs.

Edward J. Fanning
Water Quality Soil Specialist
Department of Environmental Quality
Water Quality Division
Herschler Building, 4th Floor, West Wing
Cheyenne, WY 82002
(307) 777-7074

Assists the Water Quality Division of the Wyoming Department of Environmental Quality with range watershed improvement evaluation and management, land application of sludge and wastewaters, non-point sources of pollution evaluation and control and related aspects of water quality associated with land treatment.

Gordon W. Fassett State Engineer State Engineer's Office Herschler Building 4th Floor East Cheyenne, WY 82002 (307) 777-7354

The State Engineer is the Chief administrator of Wyoming's waters. The Wyoming Constitution provided for the administration of the State's water by establishing the position of the State Engineer and the Board of Control to supervise the appropriation, distribution and diversion of waters of the state. The Board hears and decides questions relating to abandonment and other water problems. The State Engineer issues permits for the use of water and, directly and through the Superintendents and water commissioners, administers the laws of the state with respect to all uses of water. He has specific power set out in the law to decide various questions and matters concerning unadjudicated water rights. The State Engineer is Wyoming's member on interstate river compact commissions, multi-state, water-related associations and is an advisor to the Water Development Commission.

LeRoy C. Feusner
Oil & Hazardous Substances Response Sup.
Department of Environmental Quality
Water Quality Division
Herschler Building, 4 West
Cheyenne, WY 82002
(307) 777-7781

Responsible for state oil and hazardous substances spill response program. Experience includes expertise on spill containment, removal and disposal aspects, representation of state on EPA Regional Response Team concerning RCRA, CERCLA, SARA and CWA issues, reviewing of environmental risk assessment documents and providing agency management with recommended toxic substances control concentrations for human, aquatic, and wildlife exposures, and managing agency occupational health and safety program.

Bruce A. Forster
Professor of Economics
University of Wyoming
Economics Department
P.O. Box 3985, University Station
Laramie, WY 82071
(307) 766-4856

Member of USEPA Peer Review Panel (1982) for Acid Rain Research Program, Consultant on Acid Rain for Environment Canada, Agriculture Canada, Canada Department of Fisheries and Oceans, the Ontario Ministry of the Environment, and Work Group I of the US-Canada Memorandum of Intent on Transboundary Air Pollution. Research interest in environmental economics, mathematical modelling of interrelationships between economic and ecological/environmental systems, impact assessment of acid rain, impact assessment of groundwater contamination.

David H. Foster
Associate Professor
University of Wyoming
Department of Civil Engineering
P.O. Box 3295, University Station
Laramie, WY 82071
(307) 766-4242

Treatment of reservoir water for removal of tri-halogenated methane precursors. The removal of THMFP, geosmin, and bacteria by preozonation of algal laden waters is being studied. Pollutant release to the atmosphere by evaporation of oil shale retort waters. Also studying the biodegradation of ammonia stripped retort waters in activated carbon columns. Generally interested in biological effects occurring in sorbers (ion exchange, activated carbon).

Cliff Franklin Hydrologist Bureau of Land Management Wyoming State Office 2515 Warren Ave. Cheyenne, WY 82003 (307) 772-2079

Operational experience geared toward addressing impacts on water quality, water flow, stream dynamics, etc., from a variety of land use actions on public land in the Northwest Coastal area to the Southwest Desert Area. Groundwater quality impact assessment from existing sanitary landfills and other potential groundwater pollution sources.

Ted Gilbert
Water Supply Specialist/Hydraulic Engr
Soil Conservation Service
100 East B Street
Room 3124
Casper, WY 82601
(307) 261-5432

Familiar with all USDA-Soil Conservation Service hydrology procedures and models. Familiar with the snow survey network of both remote and manual sites in Wyoming and Western States.

Bill Glass Supervisory Hydrologist U.S. Geological Survey Water Resources Division 2020 Fairgrounds Road Casper, WY 82604 (307) 261-5486

Participation in and supervision of streamflow data-collection activities. Activities include installation and operation of equipment and subsequent computations to obtain continuous records of streamflow stage and discharge, obtaining water quality and sediment samples, and indirect determinations of flood discharge and water-surface profiles.

Steven P. Gloss Director University of Wyoming Wyoming Water Research Center P.O. Box 3067, University Station Laramie, WY 82071 (307) 766-2143

Administration of research, teaching, extension, and service programs of the Wyoming Water Research Center. Facilitation of multidisciplinary approaches to water resources issues problem solving. Personal research interests in impacts of water development and man's activities on aquatic ecosystems: fisheries, water quality, habitat alteration.

Chris M. Goertler Research Associate II University of Wyoming Wyoming Water Research Center P.O. Box 3067, University Station Laramie, WY 82071 (307) 766-2546

Acquisition, organization and processing of precipitation, streamflow, temperature, humidity, wind speed and wind direction data within many Wyoming Water Research Center research project areas, including the Snowy Range Observatory. Sediment sampling and fish habitat modeling. Primary research involves the identification and quantification of impacts to water, wildlife and vegetation due to industrial activity and consequently the derivation of mitigation methods which help minimize or alleviate all negative impacts.

Edwin A. Gooley Environmental Resource Specialist U.S. Army Corps of Engineers P.O. Box 809 Riverton, WY 82501 (307) 856-5283

Administration of the Corps regulatory program in Wyoming as authorized by Section 10 of the Rivers and Harbors Act and Section 404 of the Clean Water Act. Point of initial contact for regulated activities in the western half of the state.

Jennifer Hager Assistant Attorney General Attorney General's Office 123 Capitol Building Cheyenne, WY 82002 (307) 777-7824

Assistant Attorney General representing the State Engineer's Office. Primary responsibility and interest in water law.

George W. Hartman State Soil Scientist Soil Conservation Service 100 East B Street Room 3124 Casper, WY 82601 (307) 261-5208

Familiar with all USDA-Soil Conservation Service programs in the field of soil surveys, soil classification and correlation, soil interpretations, soil salinity, soil sampling, soil erosion, soil-range site correlation, soil-geomorphic relationships, hydric soils, soil drainage, prime farmland, soil productivity, soil-plant relationships and land capability classification systems.

Victor Hasfurther Professor of Civil Engineering University of Wyoming Wyoming Water Research Center P.O. Box 3067, University Station Laramie, WY 82071 (307) 766-2143

Associate Director of Wyoming Water Research Center, review and coordinate research activities of the Center on state, regional and national projects, interact on many interdisciplinary research projects in the water resources area. Primary interests lie in the general areas of hydraulics and hydrology with main interests in surface watershed hydrology and open channel flow. Expertise in groundwater hydrology, pipe flow, earth dam analysis, ground and surface water modeling, data acquisition, evaporation and evapotranspiration, mine land reclamation, and stream channel maintenance.

Susan Hogg MOER/Chief Hydrologist Department of Environmental Quality Land Quality Division Herschler Building, 3rd Floor Cheyenne, WY 82002 (307) 777-7756

Supervise 4-5 hydrologists involved with permit review and evaluation of hydrologic control facilities associated with all types of mining operations. Coordinate mine permitting for all types of in-situ mining. Supervise review of reclamation and hydrologic restoration associated with mining. Areas of interest include groundwater restoration, reclaimed channel design, surface and subsurface hydrologic modelling, and geomorphology.

Wayne A. Hubert
Assistant Leader
University of Wyoming
Wyoming Coop. Fish & Wildlife Res. Unit
P.O. Box 3166, University Station
Laramie, WY 82071
(307) 766-5415

Research has focused on fishery habitat management in streams, rivers and reservoirs with warmwater, coolwater and coldwater fish species. Work has also been done with population dynamics, user evaluations, and aquaculture problems in fisheries management.

Peter W. Huntoon Professor University of Wyoming Department of Geology and Geophysics P.O. Box 3006, University Station Laramie, WY 82071 (307) 766-5316

Ground-water prospecting and well site selection, nuclear waste disposal, structural geologic controls for ground water circulation, aquifer mechanics digital modeling of aquifer systems, structural geology of the Colorado Plateau and Wyoming Foreland Provinces, gravity tectonics including salt structures, Karst hydrogeology, aerial photographic interpretation in geology and hydrogeology.

Steve Ingle
Hydrologist
Department of Environmental Quality
Land Quality Division
Herschler Building
Cheyenne, WY 82002
(307) 777-7064

Review of various types of pollution control or wastewater treatment facilities such as pumpback systems, sediment control facilities and groundwater restoration programs as they relate to mining activities.

John W. Jackson Water Resources Planning Manager Wyoming Water Development Commission Herschler Building 3rd Floor, East Wing Cheyenne, WY 82002 (307) 777-7626

Fourteen years of experience in water resources and water project planning acquired with the Water Planning Program of the State Engineer's Office and the Wyoming Water Development Commission.

Tom Jewett
Assistant State Conservationist
Soil Conservation Service
100 East 'B' Street
Federal Building, Room 3124
Casper, WY 82601
(307) 261-5210

Familiar with all USDA-Soil Conservation administered programs. Program leadership responsibility for the Great Plains Conservation, Small Watershed, Emergency Watershed Protection, River Basin Study, Salinity, Clean Waters Act, Resource Conservation and Development, Snow Survey, and Rural Abandoned Mine Reclamation Programs of the SCS in Wyoming.

Kevin M. Johnson Fisheries Biologist Wyoming Game and Fish Department 351 Astle Avenue Green River, WY 82935 (307) 875-3223

Primary expertise and interest is with the management of fisheries resources. This includes the study of fish populations and their associated habitat in rivers, streams, lakes and reservoirs. Included is the protection of fisheries and their habitats from impacts associated with development and other activities of man.

Rex S. Johnson Staff Forester Wyoming State Forestry Division 1100 West 22nd Street Cheyenne, WY 82002 (307) 777-7586

Watershed Management as it relates to forest management.

W. Stephen Johnson
Water Quality Hydrologist
Department of Environmental Quality
Land Quality Division
Herschler Building
Cheyenne, WY 82002
(307) 777-7756

Standard methods of collection and statistical interpretation of water-quality data for surface and ground water systems. Coauthored handbook on design of water quality monitoring plans. Special interest in evaluation of ground water contamination resulting from non-point sources.

William R. Jolley Associate Professor of Protozoology University of Wyoming Wyoming State Veterinary Laboratory 1190 Jackson Street Laramie, WY 82070 (307) 766-6143

Detection/identification of water-born protozoon (Giardia, Acanthamoeba, Naegleria) and helminth parasites.

Mohan Reddy Junna
Asst. Professor of Irrigation
University of Wyoming
Department of Agricultural Engineering
P.O. Box 3295, University Station
Laramie, WY 82071
(307) 766-4882

Design of border, furrow, basin, sprinkle, trickle (drip) irrigation systems. Design of irrigation canals and pipelines. Irrigation scheduling: optimization techniques as applied to irrigation and drainage. Automation of irrigation systems. Groundwater modeling. Irrigation water management.

Conrad J. Kercher Professor of Animal Nutrition University of Wyoming Department of Animal Science P.O Box 3684, University Station Laramie, WY 82071 (307) 766-2224

Knowledge of water quality for farm animals including toxic elements and contaminants. Knowledge of water requirements of farm animals.

Greg L. Kerr Research Associate III University of Wyoming Wyoming Water Research Center P.O. Box 3067, University Station Laramie, WY 82071 (307) 766-2143

Research in the areas of surface and ground water hydrology. Identification of conveyance losses associated with the delivery and transfer of water. Hydrological and climatological instrumentation. Automated weather data networks and their application in various field research areas.

Thomas E. Kinney Supervisor State Engineer's Office Water Division III-General Adjudication Herschler Building, 4th Floor East Cheyenne, WY 82002 (307) 777-5958

Supervisor for settlement phase of the Big Horn River General Stream Adjudication, involved with the determination of all unadjudicated water rights within the Big Horn River and Clark's Fork River Basins. Project includes application of the ARC/INFO Geographic Information System to map federal reserve water rights, state water rights, land ownership, and actual irrigation from remote sensing data. Staff members have expertise in hydrology, geohydrology, computer systems, geographic information systems, remote sensing, statistics, water law, water quality, and water quality management.

James E. Kircher
District Chief
U.S. Geological Survey
Water Resources Division
P.O. Box 1125
Cheyenne, WY 82003
(307) 772-2728

District Chief, Wyoming District of the U.S. Geological Survey, Water Resources Division. Administer all the scientific and technical water resources investigations by USGS in the State of Wyoming covering a broad spectrum of water issues.

Duane D. Klamm State Conservation Engineer Soil Conservation Service 100 East 'B' Street Federal Building, Room 3124 Casper, WY 82601 (307) 261-5212

Technically responsible for all engineering aspects of conservation practices installed by the SCS in Wyoming. Includes conservation practices for erosion and sediment control, flooding, irrigation, salinity, drainage, wildlife and recreation developments, and agricultural waste management.

Dennis H. Knight Professor University of Wyoming Department of Botany P.O. Box 3165, University Station Laramie, WY 82071 (307) 766-3291

Forest ecology, hydrology, and nutrient cycling, ecosystem analysis, ecology of Wyoming vegetation, riparian vegetation dynamics, and the application of ecological principles to natural resource management.

John E. Knopp Principal Hydraulic Engineer Wyoming Highway Department P.O. Box 1708 Cheyenne, WY 82002-9019 (307) 777-4077

Specialization in highway and irrigation drainage hydrology and structure analyzation.

Dan Kotansky Hydrologist Bureau of Land Management Casper District Office 1701 East "E" Street Casper, WY 82601 (307) 261-5561

Surface water data collection of flow and water quality. Installation of debris checkdams, gabions, surface water gauges and shallow alluvial wells. Act as coordinator for oil and gas related problems, i.e. lined or unlined produced water pits. Field infiltration experiments have been conducted.

Richard L. Kroger Aquatic Biologist Bureau of Land Management Worland District Office Box 119 Worland, WY 82401 (307) 347-9871

Aquatic/wetland habitat biologist for the Worland District of the BLM. Special interests in stockwater reservoir and stream habitat improvement and management.

Barry B. Lawrence Programmer Analyst University of Wyoming Wyoming Water Research Center P.O. Box 3067, University Station Laramie, WY 82071 (307) 766-2143

Programmer Analyst for the Water Resources Data System (WRDS) for the State of Wyoming. In charge of updating and maintaining the six hydrological and climatological databases comprising WRDS. Areas of specialization include data acquisition from federal and state agencies, custom programming and user assistance.

William A. Laycock Head, Department of Range Management University of Wyoming Range Management Department P.O. Box 3354, University Station Laramie, WY 82071 (307) 766-2263

Head of Department of Range Management, administratively in charge of research programs including riparian and watershed research conducted. Involved in research on use of shrubs for living snow fences and ecology of areas behind snowfences where deep snow is deposited every winter.

Bill Locke
Water Quality Engineer
Department of Environmental Quality
Water Quality Division
210 Lincoln
Lander, WY 82520
(307) 332-3144

District Water Quality Engineer - monitor all water quality activities in Southwestern Wyoming. This includes reviewing plans and specifications, inspecting water and wastewater treatment facilities, responding to complaints of pollution, collecting water samples to monitor ground and surface water quality, and inspection of newly constructed facilities to determine compliance with minimum construction standards. Technical assistance is provided to all treatment plant operators and county-delegated small wastewater disposal programs.

Jeffrey A. Lockwood Assistant Professor University of Wyoming Dept. of Plant, Soil, and Insect Science P.O. Box 3354, University Station Laramie, WY 82071 (307) 766-4260

> Studying the impact of sediments on aquatic macroinvertebrates. Broad area of specialty is insect ecology and population biology.

Hugh W. Lowham Chief, Hydrologic Studies U.S. Geological Survey P.O. Box 1125 Cheyenne, WY 82003 (307) 772-2722

As Chief of the Hydrologic Investigations Section, administer the development and implementation of interpretive hydrologic projects. These projects are done in cooperation with state and local agencies, when the problem or research findings would be of interest to the Nation. Also have served as principal investigator on numerous project studies, specializing in geomorphic analysis and estimation of streamflow at ungaged sites.

Robert Lucht Groundwater Quality Supervisor Department of Environmental Quality Water Quality Division Herschler Building, 122 West 25th St. Cheyenne, WY 82002 (307) 777-7095

Experience includes operating a large mine dewatering project with several pumps, and as many as 29 large pumped wells. Responsibilities included securing Wyoming water rights for wells and surface impoundments. Manager of a uranium in-situ mining operation through the baseline data collection stage.

Jaye Lunsford Hydrologist U.S. Geological Survey P.O. Box 1125 Cheyenne, WY 82003 (307) 772-2723

Ground-water specialist, Wyoming District, USGS. Quantitative ground water hydrology, (ground water) water budget studies, use of models for predictive and analytical purposes. Secondary interest in urban rainfall-runoff models.

Marion L. Maderak Project Chief U.S. Geological Survey Water Resources Division P.O. Box 1125 Cheyenne, WY 82003 (307) 772-2419

Advisor to Kansas Oil and Gas Corporation Commission, protection of aquifers as related to oil and gas operations, urban hydrology, surface water hydrology sedimentation and sediment transport, small watershed hydrology, ground-water hydrology, ground-water quality, field conductivity monitors, salt load computations, automatic water quality samplers, oil and gas production and disposal of brines, enhanced oil and gas recovery, economic evaluations, and under-ground brine disposal. Certified American Association of Petroleum Geologists, and American Institute of Professional Geologists.

Ronald W. Marrs
Professor
University of Wyoming
Department of Geology and Geophysics
P.O. Box 3006, University Station
Laramie, WY 82071
(307) 766-2330

Water-related work has thus far focused on applications of remote sensing techniques to geohydrologic problems. These include the following: 1) Modelling and interpretation of climate/windflow/land interactions, 2) Estimation of snowpack and expected runoff from mountain watersheds, 3) Thermal patterns, structure, and near-surface groundwater distribution, 4) Land use and land-suitability studies, 5) Soil moisture and slope stability. Currently director of University of Wyoming Remote Sensing Laboratory and teach remote sensing, image processing, and field geology.

Richard A. Marston Assistant Professor University of Wyoming Wyoming Water Research Center P.O. 3067, University Station Laramie, WY 82071 (307) 766-2143

> Fluvial geomorphology, erosion and sedimentation by running water and wind, drainage basin morphometry, rainsplash erosion, channel adjustments to streamflow and sediment load, drainage basin studies, effects of human activities on rivers.

Larry Martin Hydrogeologist U.S. Geological Survey P.O. Box 1125 Cheyenne, WY 82003 (307) 772-2714

Experience in assessing hydrologic impacts caused by surface coal mines. Water rights, both surface and groundwater. Relationship between surface and ground-water flow, and conjunctive use. Computer modeling of ground-water flow systems.

John Marwitz
Professor
University of Wyoming
Department of Atmospheric Science
P.O. Box 3038, University Station
Laramie, WY 82071
(307) 766-4947

Atmospheric Science in general including precipitation processes and air flow associated with severe thunderstorms and orographic storms.

Rebecca L. Mathisen
Water Development Project Manager
Wyoming Water Development Commission
Herschler Building
3rd Floor, East Wing
Cheyenne, WY 82002
(307) 777-7626

Environmental impacts due to mining and large industrial facilities, feasibility studies for providing instream flow for fisheries, hydraulics of open channels and pipelines, hydrology and water development planning.

Alan R. Mauzy Water Development Project Manager Wyoming Water Development Commission Herschler Building 3rd Floor, East Wing Cheyenne, WY 82002 (307) 777-7626

Water resource planning and development, open-channel flow, dam and hydropower analyses and design, irrigation system development, hydrologic model development and applications, hydraulic design.

Philip B. McCollam Riverton Field Headquarters, Chief U.S. Geological Survey Water Resources Division P.O. Box 431 Riverton, WY 82501 (307) 856-3771

Participation in and supervision of streamflow data-collection activities. Activities include installation and operation of equipment and subsequent computations to obtain continuous records of streamflow stage and discharge, obtaining water quality and sediment samples, and indirect determinations of flood discharge and water-surface profiles.

Jack L. McMillan Biologist Wyoming Game and Fish Department 2800 Pheasant Drive Casper, WY 82604 (307) 234-9185

General fishery biology and management of reservoirs including limnology and work with forage production and introduction of exotic forage species.

E. Gerald Meyer Professor Emeritus University of Wyoming Department of Chemistry P.O. Box 3825, University Station Laramie, WY 82071 (307) 766-5445

Coal conversion processes and effluents therefrom. Energy policy including supply and consumption, resource base, and forecasting, power plant fuel systems including availability, transportation, storage, combustion, cost, and emission compliance methods.

Paul Meyer Soil Scientist Bureau of Land Management Worland District Office Box 119 Worland, WY 82401 (307) 347-9871

Soil and watershed management in semi-arid climatic regimes, including rehabilitation and vegetation prescriptions. Soil survey and interpretations for erosion and sediment yield applications. Coordination of hazardous materials management program with emphasis on regulations effecting federal land managing agency (BLM) and contaminated site management. Other interests include geomorphology, landfill management and climatology.

Don D. Miller Area Fisheries Supervisor Wyoming Game and Fish Department 528 S. Adams Laramie, WY 82070 (307) 742-7611

Specializes in fisheries management of lake and river ecosystems to provide fisheries for public benefits. Maintains fisheries by sampling lakes, and rivers and then writing management plans for them. This includes fishing regulations and stocking recommendations.

Richard H. Miller State Planning Coordinator Governor's Office Herschler Building Second Floor East Cheyenne, WY 82002 (306) 777-7574

Currently serving as State Planning Coordinator. Five years experience as staff counsel to the Legislature Select Water Committee.

Rod S. Miller
Range Resource Analyst
State Planning Coordinator's Office
Herschler Building
Second Floor, East
Cheyenne, WY 82002
(307) 777-7574

Experience in policy analysis, range and riparian zone management.

Steve Miller
Professor - Weed Science
University of Wyoming
Dept. of Plant, Soil and Insect Science
P.O. Box 3354, University Station
Laramie, WY 82071
(307) 766-3112

Interaction of herbicides on weeds and other plants.

P. Stan Mitchem State Geologist Soil Conservation Service 3124 Federal Building 100 East B Street Casper, WY 82601 (307) 261-5213

As State Geologist for the Soil Conservation Service, responsible for all phases of geological studies for SCS programs in Wyoming. These studies are related primarily to water development and management for irrigation, livestock, and other purposes. Areas of specialization include locating and designing water wells, subsurface investigations for the design of earth dams, erosion and sedimentation investigations for the allocation of sediment storage in reservoirs, and subsurface investigations for control of saline seeps and other drainage problems associated with irrigation.

Barry C. Mountain Water Development Engineer Wyoming Water Development Commission 10429 Arabian Lane Cheyenne, WY 82009-9332 (307) 777-7626

Former Assistant Municipal Engineer dealing with urban street drainage, runoff collection/impoundment. Planned water detention/retention schemes in urban setting. Administrated municipal flood plain management. Authored local ordinance, permit and practice manual for urban erosion and sedimentation control. Professional services/construction contract administrator for municipal and irrigation water development projects.

David Naftz Hydrologist (Geochem) U.S. Geological Survey P.O. Box 1125 Cheyenne, WY 82003 (307) 772-2716

Use of environmental isotopes and other chemical constituents in determining ground-water flow directions and reaction progress, effects of mining on ground-water quality, transport of trace metals in surface waters during lowland runoff events, and development of predictive and mitigative techniques concerning trace metal mobility in disturbed areas. Special interest in selenium geochemistry in disturbed ground waters and rocks.

Thomas S. Norman S.E. District Engineering Supervisor Department of Environmental Quality Herschler Building 4th Floor West Cheyenne, WY 82002 (307) 777-7781

Assists the Department of Environmental Quality (Water Quality Division) with regulation of the permitting, etc. of water and wastewater systems for Wyoming communities, groups and individuals. Evaluates the design and does inspection of water and wastewater facilities utilizing appropriate state-of-the-art technology in these areas.

Melvin Oberholtzer Fisheries Biologist Wyoming Game and Fish Department 528 S. Adams Laramie, WY 82070 (307) 745-4046

Specialize in fisheries management of lakes and stream ecosystems to provide fisheries for public benefits. Maintain fisheries by sampling lakes and streams and then writing management plans for them. Includes formulating fishing regulations and fish stocking recommendations.

Mark Opitz Design Engineer Soil Conservation Service 100 East B Street Room 3124 Casper, WY 82602 (307) 261-5516

> Design Engineer for the Soil Conservation Service providing assistance for hydraulic structures used for water control in dams, channels and irrigation delivery systems.

Joseph Patti, Jr.
Planning Coordinator
Bureau of Land Management
Wyoming State Office
P.O. Box 1828
Cheyenne, WY 82003
(307) 772-2228

Planning coordinator of water and land related issues with Bureau of Land Management.

Daniel J. Perko Staff Forester Wyoming State Forestry Division 1100 West 22nd St. Cheyenne, WY 82002 (307) 777-7586

Conservation of water in tree and shrub planting with the use of drip-irrigation systems, plant-water relationships, riparian area vegetation management, use of tree and shrub plantings (Living Snow Fence) to control harvest blowing snow to utilize in vegetation establishment and possible livestock and wildlife benefits and highway safety. Research interests in drifts cast and their relationship to planting design, species selection, and row spacing to maximize snow storage.

David A. Peterson Chief, Water Quality Unit U.S. Geological Survey P.O. Box 1125 Cheyenne, WY 82003 (307) 772-2711

Coordination of state-wide water quality monitoring network, in cooperation with state, local, and other federal agencies. Project work on low-ionic strength lakes and Department of the Interior irrigation drainage studies of the Kendrick and Riverton Projects.

Clynn Phillips
Professor of Economics
University of Wyoming
Department of Economics
P.O. Box 3985, University Station
Laramie, WY 82071
(307) 766-4808

Water resources planning, cost-benefit analysis and application of other analytical techniques used to determine project feasibility. Special interests include the estimation of project related recreation and wildlife benefits.

Robert Pistono Aquatic Habitat Biologist Wyoming Game and Fish Department 260 Buena Vista Lander, WY 82520 (307) 332-2688

In charge of stream management work for the Game and Fish Department. Enhancement of stream systems through fisheries management, bank stabilization and habitat improvement measures.

Larry Pochop Professor of Agricultural Engineering University of Wyoming Agricultural Engineering Department P.O. Box 3295, University Station Laramie, WY 82071 (307) 766-3326

Research and applications in evapotranspiration and plant-water relationships. Includes mountain meadow, phreatophyte, lawn grass, and agricultural crop water use and management. Analysis and intrepretation of climatic and micro-climatic data. Utilization of weather-data collection systems.

Brian Pruiett
Range Conservationist
Lands and Renewable Resources
Buffalo Resource Area - BLM
189 N. Cedar
Buffalo, WY 82834
(307) 684-5586

Experience in mine planning and mine reclamation in arid environments, soil surface management and revegetation practices for reduction of erosional risks. Eight years practical hands-on experience in solving watershed and stream management problems on Wyoming and Montana rangelands. Development of land management plans to improve water quality and yield. Practical application of riparian management techniques.

Michael K. Purcell Administrator Wyoming Water Development Commission Herschler Building 3rd Floor, East Wing Cheyenne, WY 82002 (307) 777-7626

Administrator for the Wyoming Water Development Commission. Contract management for water projects with specialization in water planning and construction management.

Frank J. Rahel
Assistant Professor
University of Wyoming
Department of Zoology and Physiology
P.O. Box 3166, University Station
Laramie, WY 82071
(307) 766-4212

Interests include fisheries biology and aquatic ecology, especially how human perturbations (pollution, habitat alteration, over-exploitation) influence aquatic communities.

James G. Rankl Hydrologist U.S. Geological Survey P.O. Box 1125 Cheyenne, WY 82003-1125 (307) 772-2717

Surface-water hydrologist with the U.S. Geological Survey with professional expertise in runoff and sediment yield from small semiarid basins, open-channel flow, flood studies and time-of-travel/reaeration measurements. Research interests are in soil physics, infiltration, and sediment transport.

Katta Jayaram Reddy Research Associate University of Wyoming Wyoming Water Research Center P.O. Box 3067, University Station Laramie, WY 82071 (307) 766-3053

Geochemical modeling research related to the surface disposal of processed oil shale solid waste. Solubility and mobility of contaminants from fly ash, oil shale solid waste, and coal mine spoils. Areas of interest include low temperature and environmental geochemistry and chemical equilibria in soil waters. Special interest in effects of disposal of energy related solid waste on surface waters and ground waters.

Tim Reeves
Research Associate II
University of Wyoming
Civil Engineering Department
P.O. Box 3295, University Station
Laramie, WY 82071
(307) 766-6330

Research hydrologist with specific interest and experience in soil-water relationships including infiltration, unsaturated and saturated flow, contaminant transport, and hydraulic conductivity as applied to toxic/hazardous waste disposal systems. Additional experience in watershed management, mine land reclamation, remote sensing and image processing, experimental design and statistical analysis, programming, and data aquisition/processing.

William A. Reiners
Professor of Botany
University of Wyoming
Department of Botany
P.O. Box 3165, University Station
Laramie, WY 82071-3165
(307) 766-2235

General expertise lies in terrestrial biogeochemistry. Special expertise falls in two areas: 1) cloud droplet deposition to forest canopies, and 2) nutrient cycling in forest and sagebrush steppe ecosystems. Within the last area, particular experience exists in soil processes, particularly nitrogen transformations.

Howard Rhodes Biology Lab Technician ARS - Animal Disease Research Lab 5526 Pilot Peak Road Laramie, WY 82070 (307) 721-0357

Expertise in taxonomy of benthic invertebrates. Research interests include freshwater ecology of mountain streams and lakes, macroinvertebrate recolonization of channelized streams, and effects of regulated streams on benthic distributions.

Lawrence Robinson
Engineering Supervisor
Department of Environmental Quality
Water Quality Division, Herschler Bldg
3rd Floor, East Wing
Cheyenne, WY 82002
(307) 777-7781

Supervisor State Programs Section, Water Quality Division, Department of Environmental Quality. Administer certain engineering aspects of Wyoming Environmental Quality Act, primarily dealing with construction permits for wastewater and public water supply facilities. Enforcement of provisions of Act. Draft and adopt rules and regulations. Work with local agencies for delegation of permitting authority, primarily small wastewater systems.

Robert W. Rossman Hydrologist U.S. Forest Service Lander Ranger District Highway 287 West Lander, WY 82520 (307) 332-5460

Primary staff on the Lander Ranger District, with supervisory responsibility for the District's acid deposition monitoring program. Have been heavily involved in land management planning with responsibility for situation assessment and analysis in soil, air, and water resources on the National Forest. Have field experience in surface hydrology measurements, water quality monitoring and watershed analysis. Have been involved to a great degree in hydrology assessments for proposed timber harvests and oil and gas related activities. Have planned and implemented a number of watershed improvement projects. Participated for the Forest Service in the Bighorn Water Adjudication, basic data collection for instream flow analysis.

R. Nick Schmal Forest Fishery Biologist Medicine Bow National Forest 605 Skyline Drive Laramie, WY 82070 (307) 745-8971

Fisheries management specialist for the Medicine Bow National Forest with responsibility for fish and riparian habitat technical input and advice for programs on the forest and Thunder Basin National Grasslands. Experienced in technical writing and aquatic habitat impact assessments for timber harvest, water development, fish habitat modifications, road construction, mine reclamation and stream channelization activities.

Paul C. Schwieger Administrator, Water Development Division Economic Development & Stabilization Bd. Herschler Buflding 3rd Floor East Wing Cheyenne, WY 82002 (307) 777-7284

Administrator of the Water Development Division of the Economic Development and Stabilization Board, responsible for irrigation projects relating to the Farm Loan Board, function as representative for Water Development, Construction projects as directed by Legislature, Water Marketing Agent for State of Wyoming and Advisor to the Water Development Commission. Additional duties include the following as appointed by the Governor: Indian Liaison Representative; Chairman, Agriculture Mediation Board; Chairman, Research, Review and Priorities Committee of Water Research Center; Rural Rehabilitation Program.

William F. Sherman Chief Engineering Geologist Wyoming Highway Department P.O. Box 1708 Cheyenne, WY 82002-9019 (307) 777-4205

Groundwater hydrology specifically as related to well design and control. Groundwater control relative to engineering structures.

John W. Shields Water Resources Engr, Interstate Streams Sec. State Engineer's Office Herschler Building, 4th Floor East Cheyenne, WY 82002 (307) 777-6151

Assists Wyoming State Engineer with administration of, and matters relating to, interstate river compacts and court decrees. Agricultural engineering education and background have resulted in particular interest in agricultural water use, evapotranspiration, irrigation systems, conveyance systems and crop water use. Job duties have led to specialization in water rights, water law and salinity.

Vince Sindt Director University of Wyoming Science and Math Teaching Center P.O. Box 3992, University Station Laramie, WY 82071 (307) 766-4384

Experience and interests are oriented to helping teachers identify meaningful and appropriate lessons to use to teach about water concepts and issues. Emphasis on placing water education in to curriculum as a part of what is now being taught instead of adding it on to an already full curriculum.

Michael A. Smith Associate Professor University of Wyoming Range Management Department P.O. Box 3354, University Station Laramie, WY 82071 (307) 766-2337

Research interests have largely been livestock grazing relationships in riparian zones, specifically cattle grazing distribution, vegetation utilization, and channel and vegetation responses. Additionally, channel and riparian zone responses to installation of instream structures has been studied.

William K. Smith Associate Professor University of Wyoming Department of Botany P.O. Box 3165, University Station Laramie, WY 82071 (307) 766-6377

Vegetation influences on water conveyance and plant growth and water relations are the major areas of water-related research. Habitats include alpine/sub-alpine, deserts, and all riparian systems, plus agro-ecosystems.

Michael A. Snigg Fisheries Biologist Wyoming Game and Fish Department 528 S. Adams Laramie, WY 82070 (307) 745-4046

Major expertise has been in field fisheries management with emphasis on large river and reservoir management. Specific experience in habitat improvement, fish species management and recreational use have been acquired. Most recently emphasis has been on beaver pond/fisheries relationships, special regulation effects on trout populations in the North Platte River, and fisheries management of subalpine and alpine lakes in the Snowy Range. Research interests include investigating existing and proposed water systems (lakes, streams, reservoirs) to optimize recreational fishing use.

Everett W. Spackman
Extension Entomologist
University of Wyoming
Dept. of Plant, Soil and Insect Science
P.O. Box 3354, University Station
Laramie, WY 82071
(307) 766-4261

Diagnosing insect damage and identification. Trouble shooting and making insecticide recommendations for insect control to assist University Extension Agents in insect problem areas.

Karen Spray
Hydrologist
Department of Environmental Quality
Land Quality Division
Herschler Building, 3 West
Cheyenne, WY 82002
(307) 777-7756

Staff Hydrologist for Wyoming Department of Environmental Quality-Land Quality Division. Expertise in surface water/ground water interactions in semi-arid/arid climates, ground water hydrogeology, river systems and hydrologic-geologic relations. Conducts large quantities of technical environmental reviews and analyses. Mark Squillace Associate Professor of Law University of Wyoming College of Law P.O. Box 3035, University Station Laramie, WY 82071 (307) 766-6107

Teach water rights course at the College of Law. Particular interest and expertise on water-related impacts from coal mining activities.

Richard G. Stockdale Chief Ground Water Geologist State Engineer's Office Herschler Building, 4th Floor East Cheyenne, WY 82002 (307) 777-7354

Groundwater hydrology, groundwater management, hydrogeology, groundwater wells and design, water rights, conjunctive use, aquifer characteristics, well hydraulics, pumps, agricultural water use.

Mike Stone
Ecological Services Manager
Wyoming Game and Fish Department
Fish Division
5400 Bishop Blvd
Cheyenne, WY 82002
(307) 777-7686

Instream flow, fisheries impact analysis and mitigation, water project planning, aquatic habitat assessment, fisheries.

Steven Strenger Soil Scientist Bureau of Land Management Rawlins District Office Divide Resource Area, Box 670 Rawlins, WY 82301 (307) 324-4841

Responsible for the Soil, Water, Air and Hazardous Materials Programs in the Divide Resource Area. Involved in monitoring, data collection and watershed management in the Muddy Creek Watershed. Extensive experience in soil survey and soil-vegetation correlation. Provide soil interpretation for various land uses including reclamation.

Stan C. Strom
Waterborne Disease Investigator
Division of Health and Medical Services
481 Hathaway Bldg - Environmental Health
Cheyenne, WY 82002
(307) 777-6951

Investigate and prepare epidemiologic reports on clusters of illness related to water use or consumption, particularly those related to community or public water systems. Survey and inspection of water treatment plants, testing and laboratory analysis of water and particulate sampling in response to increases in incidence of giardiasis, shigellosis, campylobacteriosis, hepatitas A, amoebiasis etc. in communities in Wyoming. Objective is: identification of source of epidemic, water treatment deficiencies, corrective recommendations and to prevent similar outbreaks from recurring. Includes statistical analysis of incidence data, risk factors, onset dates and other data. (Environmental Epidemiology)

State Engineer's Office Surface Water Division State Engineer's Office Herschler Building 4th Floor East Cheyenne, WY 82002 (307) 777-7354

Handles all water rights applications associated with surface waters of the State of Wyoming. Reviews applications on surface waters for the State Engineer and Board of Control, analyzes information and data associated with surface waters and assesses water needs and problems associated with Wyoming's water.

Margo F. Teague Supervisor State Engineer's Office Information, Storage and Retrieval Sec. Herschler Building, 4th Floor East Cheyenne, WY 82002 (307) 777-6176

Responsible for accurately researching and interpreting all Wyoming Water Right Records, insofar as it applies to the initial and updated information captured and input into the data base and retrieval of any requested information from said data base.

Frank J. Trelease Assistant State Engineer State Engineer's Office Herschler Building, 4th Floor East Cheyenne, WY 82002 (307) 777-7354

Water Resources Engineer with 25 years experience in surface and ground water supply analysis, irrigation, industrial, and municipal water needs analysis, water rights, interstate water allocation and river basin analysis, hydrologic analysis, urban drainage, dams and conveyance facilities, wells, reports and expert testimony.

John P. Turner Assistant Professor University of Wyoming Department of Civil Engineering P.O. Box 3295, University Station Laramie, WY 82071 (307) 766-4265

Geotechnical engineering/engineering geology, including geologic hazards related to water such as landslides, mudflows, subsidence, expansive and collapsing soils. Waste geotechnics including stability of failings dams and hazardous waste containment systems (clay liners, slurry walls, geomembranes). Siting of dams, earth dam construction, soil and rock mechanics.

Gabor Vali Professor University of Wyoming Department of Atmospheric Science P.O. Box 3038, University Station Laramie, WY 82071 (307) 766-3225

Atmospheric processes - cloud, rain and snow formation. Weather modification. Chemical processes within clouds - removal of pollutants, acid rain. Impact of pollutants on cloud and precipitation processes.

A. Mainard Wacker Hydraulic Staff Engineer Wyoming Highway Department P.O. Box 1708 Cheyenne, WY 82002-9019 (307) 777-7226

Urban and rural hydrology, hydraulics of fixed and mobil bed/bank (scour/erosion). Open Channel flows, applied probability and statistical analysis for surface waters and climatology, economic risk analyses related to floods, flood plain management and urban planning, surface water quality and environmental analysis, legal analysis of flood and drainage issues, small dam and irrigation system analysis, and computer systems related to the above.

Jon Wade Hydrogeologist Wyoming Water Development Commission Herschler Building 3rd Floor, East Wing Cheyenne, WY 82002 (307) 777-762

Groundwater development program design, planning, construction. Aquifer testing program design and implementation. Analysis of aquifer parameters. Planning and design of drilling programs. Computer modeling of aquifer systems, well field development, etc. Groundwater management programs. Artificial groundwater recharge. Hydrogeology. General water resources project planning, from conception through design.

Sally J. Wechsler Veterinary Medical Officer ARS - Animal Disease Research Lab P.O. Box 3965 University Station Laramie, WY 82071 (307) 721-0316

Diseases of cultivated fish, special interest in viral diseases of fishes of fresh and salt water.

M. William Wengert, Jr. Fisheries Biologist Wyoming Game and Fish Department Fisheries Management Crew #44 351 Astle Avenue Green River, WY 82935 (307) 875-3223

Fisheries Management Research Specialist for the Wyoming Game and Fish Department in Management Area #44. Plan and conduct research projects and management activities in fish biology for the management of the fisheries in the management area. Activities include collection of fish population dynamics data harvest and catch information, fishing pressure data, limnological data, habitat information and productivity data. Analysis and evaluation of data with statistical methods, interprets results and writes detailed reports concerning the findings of the project. Research interests in all fields of fisheries management in lakes, reservoirs, streams, and rivers with special emphasis on population dynamics and habitat improvement.

Thomas A. Wesche Research Associate III University of Wyoming Wyoming Water Research Center P.O. Box 3067, University Station Laramie, WY 82071 (307) 766-2143

Adjunct Prof., Range Management; involved with instream flow analysis, aquatic habitat evaluation and surface water hydrology. Authored numerous publications in these fields, including research and management papers involving the recommendation of maintenance and flushing flow levels for water development projects in Wyoming, the critical review of instream flow methodologies and habitat evaluation techniques, the development of models to quantify instream cover in relation to streamflow alteration, the hydraulic requirements of salmonid spawning and benthic invertebrate habitat, the effects of watershed and flow regime characteristics on fish production, the characteristics of salmonid winter habitat requirements, the development of models to predict habitat exclusion by ice cover, and the design of stream channels to maximize habitat under reduced flow conditions.

Bill Wichers Area Fisheries Supervisor Wyoming Game and Fish Department 2800 Pheasant Drive Casper, WY 82604 (307) 234-9185

Area fisheries supervisor for the North Platte River drainage from I-80 downstream to the Nebraska state line. Areas of expertise include fisheries and associated biological and physical factors that interrelate with fish.

Marc Wilcox Forest Hydrologist Medicine Bow National Forest 605 Skyline Drive Laramie, WY 82070 (307) 745-8971

Watershed management specialist for the Medicine Bow National Forest. Have responsibility for hydrology input and technical review of management programs on the Forest. Expertise and technical interests include hydrology and soils related best management practices to control erosion from timber harvesting, range management, road and water construction projects, evaluating and quantification of channel maintenance and instream flow requirements, water yield augmentation from Forest management, classification of wildland stream channels, sediment transport processes, and atmospheric deposition in mountain lakes and streams.

Robert W. Wiley Fish Research Manager Wyoming Game and Fish Department 528 S. Adams Laramie, WY 82070 (307) 745-4046

Serves as Fishery Research Manager for Wyoming Game and Fish Department with responsibility for reservoir research, stream habitat management, limnology laboratory, and fish population/biostatistics units. Through these operations stream habitat, riparian ecosystems, acid deposition, reservoir fishery management, and stream fishery research are considered. Also serve as fishery liaison with Wyoming Cooperative Fish and Wildlife Research Unit, Wyoming Water Development Commission, Wyoming Water Research Center, and other state and federal government agencies. Research interests are in stream/river fish stocks and management, resource allocation, public perception of resource, and effective techniques of administration.

Stephen E. Williams
Professor of Soil Science
University of Wyoming
Dept. of Plant, Soil and Insect Science
P.O. Box 3354, University Station
Laramie, WY 82071
(307) 766-2179

Head of Soils section, Department of Plant Soil and Insect Sciences plus faculty advisor for the soil testing laboratory. Areas of expertise include Soil Microbiology, specifically symbiotic associations, and soil chemistry. Special interest in mycorrhizal fungi and nitrogen fixing bacteria.

Thomas R. Williams Groundwater Engineering Evaluator Department of Environmental Quality Water Quality Division Herschler Building, 4th Floor, West Wing Cheyenne, WY 82002 (307) 777-7781

Groundwater contaminations investigations and subsurface pollution control and abatement systems. Groundwater sample collection and monitoring well network design and installation. Geomorphology, geologic hazards, watershed rehabilitation and oceanography.

Bill Wilson District Hydrologist Bureau of Land Management Worland District Office Box 119 Worland, WY 82401 (307) 347-9871

As Hydrologist for the Worland District of BLM provide surface and groundwater hydrologic investigations pertaining to other Bureau programs (i.e. range, forestry). Interests include watershed rehabilitation, erosion, control, and water quality.

James F. Wilson, Jr. Supervisory Hydrologist U.S. Geological Survey Water Resources Division P.O. Box 1125 Cheyenne, WY 82003 (307) 772-2729

Surface-water hydrology in general. Specifically, applications of dye tracing, including measurements of time of travel and dispersion in streams, generalization of tracer data, measurement of discharge in streams, canals, and pipelines by dye dilution, and path tracing. Applications of GIS (Geographic Information Systems) to hydrologic, geologic, and other earth-resources data, the locations of which can be mapped.

Steven W. Wolff Research Associate University of Wyoming Wyoming Water Research Center P.O. Box 3067, University Station Laramie, WY 82071 (307) 766-2143

Fisheries biology with emphasis on physical habitat assessment, instream flow analysis and stream hydrology. Primary interests lie with evaluation of regulated stream systems and alterations to fisheries/habitat due to water development.

Ghulam Yahya Hydraulic Design Engineer Wyoming Highway Department P.O. Box 1708 Cheyenne, WY 82002-9019 (307) 777-4077

Specialization in urban and rural drainage analysis. Highway and irrigation drainage facilities.

## **KEYWORDS**

ACID RAIN

ACTIVATED CARBON ACTIVATED SLUDGE

ADSORPTION AND EXCHANGE PHENOMENA

**AERATION** 

AGRICULTURAL WATER USE

**ALGAE** 

ALKALINE SCALE ANAEROBIC TREATMENT

AQUACULTURE AQUATIC BENTHOS AQUATIC ECOLOGY AQUATIC FURBEARERS AQUIFER CHARACTERISTICS

ARID CLIMATES ATMOSPHERIC MODELS ATMOSPHERIC PROCESSES

AQUIFER PARAMETERS

**BACTERIA** 

**BASALT HYDROLOGY** 

BASE FLOW BAYS **BEACHES** 

BENEFIT-COST ANALYSIS

**BENTHOS** 

BIODEGRADATION

**BIOLOGICAL TREATMENT** 

BIOMONITORING BRACKISH WATER

BRIDGE AND CULVERT SCOUR

BRINES CHANNELS CHEMIGATION CHLORINATION

CLAY LINERS AND SLEEVE WALLS CLEAN WATER ACT - ADMINISTRATION

CLIMATE CLOUD SEEDING COASTAL ENGINEERING COASTAL ZONE

COMPUTER ANALYSIS CONFLICT MANAGEMENT CONJUNCTIVE USE CONSERVATION

CONSTRUCTION INSPECTION

CONVEYANCE LOSSES CONVEYANCE SYSTEMS

COOLING

CROP WATER USE **CRUSTACEANS** 

DAIRY-WASTE MANAGEMENT

DAM FAILURE

DAMS

DATA COLLECTION/ACQUISITION DATA PROCESSING/EVALUATION

**DECISION MODELS DEMAND MANAGEMENT DENITRIFICATION** 

DESALINATION

**DEVELOPING COUNTRIES DILUTION GAGING** DISINFECTION

DISTRIBUTION SYSTEMS

DRAINAGE DRILLING DROUGHT DYE TRACING

DYNAMIC PROGRAMMING

EARTH DAMS

**ECONOMICS OF WATER RESOURCES** ENERGY USE & CONSERVATION

**ENVIRONMENTAL EMERGENCY RESPONSE ACTIONS** 

**ENVIRONMENTAL LAW** 

EPIDEMIOLOGY OF WATERBORNE DISEASES

EROSION, WIND OR WATER

**ESTUARIES** 

**ESTUARINE MODELING** 

**EVAPORATION** 

**EVAPOTRANSPIRATION** 

FARM ANIMAL REQUIREMENTS

FEDERAL COAL PLANNING/COORDINATION

**FERTILIZERS** 

FISH HABITAT IMPROVEMENT PRACTICES

**FISHERTES** 

FLOOD-PLAIN MANAGEMENT

FLUID FLOW

FLUVIAL GEOMORPHOLOGY FOREST HYDROLOGY FOREST MANAGEMENT

**FUNGICIDES GEOCHEMISTRY** 

GEOGRAPHIC INFORMATION SYSTEMS

GEOHYDROLOGY **GEOMORPHOLOGY GEOPHYSICS** GEOTHERMAL POWER

GLACTERS

**GROUND-WATER CONTAMINATION EVALUATION** 

**GROUND-WATER EXPLORATION GROUNDWATER BACTERIA GROUNDWATER HYDROLOGY** GROUNDWATER MANAGEMENT GROUNDWATER MODELING **GROUNDWATER QUALITY GROUNDWATER RECHARGE** GROUNDWATER WELLS/DESIGN HABITAT MODIFICATION

HAZARDOUS WASTE

HEALTH AND SAFETY ISSUES OF HAZARDOUS WASTE

**HEAVY METALS HERRICIDES HISTORY** 

HYDRAULIC STRUCTURES

**HYDRAULICS HYDROGEOLOGY** 

HYDROLOGIC DATABASES

HYDROLOGIC MODELS

HYDROLOGY HYDROPOWER

ICE

IMPACT ANALYSIS

INDUSTRIAL WASTE WATER

**INFILTRATION** 

INFORMATION RETRIEVAL/PROCESSING

INSECTICIDES

**INSECTS** 

INSTITUTIONAL RELATIONSHIPS

INSTREAM FLOW
INSTRUMENTATION

INTER-AGENCY/GOVERNMENT COOPERATIVE RELATIONS

INTERSTATE COMPACTS AND COURT DECREES

INVERTEBRATES
ION EXCHANGE
IRRIGATION

IRRIGATION SCHEDULING
IRRIGATION STRUCTURES
IRRIGATION SYSTEMS

**ISOTOPES** 

JURISDICTIONAL WETLAND DELINEATION

KARST HYDROLOGY

LAKES

LAND APPLICATION OF WASTES

LAND USE

LAND USE PLANNING

LANDSCAPING LANDSLIDES LEACHING LIMNOLOGY

MANURE DISPOSAL MARINE RESOURCES

MARKETING

MATHEMATICAL MODELS

MEMBRANES

MICROCLIMATOLOGY

MINING

MOUNTAIN LAKES/STREAMS
MULTIPLE-OBJECTIVE PLANNING
MUNICIPAL WATER TREATMENT

**NAVIGATION** 

**NEGOTIATING PROCESS** 

**NITROGEN** 

NUCLEAR WASTE DISPOSAL NUMERICAL ANALYSIS

NUTRIENTS

OIL-WATER INTERFACES

OIL/HAZARDOUS SUBSTANCE SPILL CLEAN-UP

OPEN CHANNELS

OPERATION RESEARCH

OPTIMIZATION

ORGANIC COMPOUNDS

OSMOSIS
OXIDATION
OZONATION
PERCOLATION

**PHREATOPHYTES** 

PHYSICAL CHEMISTRY PIPELINE HYDRAULICS

PLANNING

PLANT GROWTH

PLANT-WATER RELATIONSHIPS

POLICY ANALYSIS
POLLUTION CONTROL

PONDS

PORT FACILITIES
POWERPLANTS
PRECIPITATION
PUBLIC HEALTH

**PUBLICATIONS/DISTRIBUTION** 

PUMPS RAINFALL

RAINFALL SIMULATION
RAINFALL-RUNOFF MODELS
RAINFALL-RUNOFF PROCESSES

RANGE MANAGEMENT

RECREATION

REEFS

REGIONAL PLANNING REMOTE SENSING RESERVOIR MANAGEMENT

RESERVOIR MANAGEMENT RESERVOIR MODELING REVERSE OSMOSIS

RIPARIAN HABITAT REHABILITATION

RIPARIAN HABITATS IN FORESTED WATERSHEDS

RIPARIAN VEGETATION/MANAGEMENT

RISK MANAGEMENT/ANALYSIS

RIVER BEDS

RIVER-BASIN DEVELOPMENT

RIVERS RUNOFF

SALINE SOILS

SALINE-FRESHWATER INTERFACES

SALINITY

SANITARY LANDFILLS SATURATED FLOW SCOUR AND EROSION

SEAWATER

SEDIMENT TRANSPORT SEDIMENTATION SEED GERMINATION

SEISMICITY
SEPTIC TANKS
SEWER SYSTEMS
SHELLFISH

SLOPE STABILITY

SLUDGE

SNOW, ICE, AND FROST

SOIL CHEMISTRY
SOIL CONSERVATION
SOIL ENGINEERING
SOIL MICROBIOLOGY
SOIL PHYSICS
SOIL SURVEY

SOIL-WATER RELATIONSHIPS

SOLAR ENERGY

SOLUTE TRANSPORT

STATISTICS

STOCHASTIC HYDROLOGY

STOCHASTIC PROCESSES

STREAM CLASSIFICATION

STREAM HABITAT ECOLOGY

STREAM HABITAT IMPROVEMENT

STREAMBANK STABILIZATION TECHNIQUES

STREAMS AND STREAMFLOW

SUBSIDENCE

SUBSURFACE DRAINAGE

SURFACE DRAINAGE

SURFACE GEOLOGY

SURFACE WATER/GROUND WATER INTERRELATIONSHIPS

SURFACE-WATER HYDROLOGY

SUSPENDED SEDIMENTS

SYNTHETIC HYDROLOGY

SYNTHETIC ORGANICS

SYSTEMS ANALYSIS

SYSTEMS ENGINEERING

**TIDELANDS** 

TIME OF TRAVEL AND DISPERSION

TIME-SERIES ANALYSIS

TOXIC SUBSTANCES

TRACE ORGANICS

UNSATURATED FLOW

URBAN HYDROLOGY

URBAN PLANNING

URBAN WATER SYSTEMS

**VIRUSES** 

WASTE DISPOSAL

WASTEWATER

WASTEWATER IRRIGATION

WASTEWATER TREATMENT

WATER AUGMENTATION

WATER BUDGET STUDIES

WATER CHEMISTRY

WATER CURRICULUM

WATER EDUCATION

WATER HARVESTING

WATER LAW

WATER PROJECT CONSTRUCTION CONTRACTING

WATER QUALITY

WATER RESOURCES DEVELOPMENT

WATER RESOURCES PLANNING

WATER REUSE

WATER RIGHTS

WATER TREATMENT

WATER YIELD AUGMENTATION

WATER-QUALITY CONTROL

WATER-QUALITY MANAGEMENT

WATER-QUALITY MODELING

WATER-QUALITY MONITORING

WATER-QUALITY STANDARDS
WATER-TREATMENT FACILITIES

WATER-USE DATA

WATER-USE EFFICIENCY

WATER-USE MONITORING

WATERBORNE DISEASES

WATERBORNE PARASITES

WATERFOWL BIOLOGY

WATERSHED IMPROVEMENT PRACTICES

WATERSHED MANAGEMENT

WAVES

WEATHER FORECASTING

WEATHER MODIFICATION

WEATHER-DATA COLLECTION

WEEDS

WELL HYDRAULICS

WETLAND ECOLOGY

WILDLIFE MANAGEMENT

## The Directory

The Wyoming Water Research Center, in cooperation with the State Water Forum (Cooperative State-Federal Water Agency Group), has compiled this directory to identify, as well as encourage communication among, state, federal and university individuals involved with the protection, preservation, development and improvement of Wyoming's water resources. It is hoped that the directory will assist individuals in state and federal government as well as the university in directing individuals with questions concerning Wyoming's water resources to the most knowledgeable person as quickly and efficiently as possible.

The directory includes individuals from those state and federal agencies who have responsibility toward water resource administration, protection and management as well as individuals from University of Wyoming departments with water interests. Extensive efforts were made to include as many individuals as possible within these groups in the directory. However, if there are individuals or organizations within these groups who have been omitted, we encourage them to submit entries for the next edition by contacting the Wyoming Water Research Center for the proper form.

Sincerely.

Victor Hasfurther Associate Director

Wyoming Water Research Center