



Wyoming Water Association

# Wyoming Water Flow

*Water Is Wyoming's Gold!*

Volume LXIX, Issue II

December 2006

## WWA Holds Successful Annual Conference In Casper

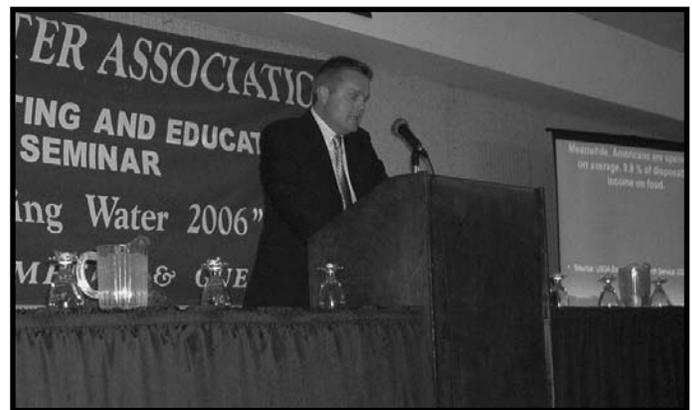
### “Wyoming’s Water ... The Road Ahead – A Look Back, Beneath and Beyond” Theme Explored in Detail

The Wyoming Water Association’s 2006 Education Seminar and Annual Meeting held on November 1st through 3rd in Casper featured many diverse presentations and panel discussions that explored many timely aspects of the conference theme: “Wyoming’s Water ... The Road Ahead – A Look Back, Beneath and Beyond.” The Association’s annual conference did not disappoint attendees as panelists and speakers addressed many of the timeliest topics currently and prospectively affecting Wyoming’s water resources management during the integrated programs for the Education Seminar and Annual Meeting.

In selecting this year’s conference theme, the Association recognized that Wyoming’s future will necessarily involve change and challenge for the management of Wyoming’s water. Accelerating coal, oil and natural gas extraction and related energy development, urbanization, population growth and attendant changes in demographics are causing, and will continue to cause, shifts in the course, rate and timing of Wyoming’s water development. Accordingly, this year’s conference considered the road we have traveled, the road we are on and the road ahead for Wyoming’s water managers and users.

As done last year, presentations made by this year’s speakers at the 2006 Annual Conference have been posted on the Wyoming Water Association’s website ([www.wyomingwater.org](http://www.wyomingwater.org)) and can be conveniently reviewed and downloaded by WWA members and others interested in reviewing the educational and interesting information shared with our conference attendees.

The keynote speaker at the Education Seminar



*Dan Keppen, Executive Director of the Family Farm Alliance speaking on “Dangerous Curves Ahead: Agriculture’s perspective on maintaining Wyoming and America’s irrigated agriculture.”*

was Dan Keppen, Executive Director of the Family Farm Alliance who spoke on “Dangerous Curves ahead: Agriculture’s perspectives on maintaining Wyoming and America’s irrigated agriculture.” Keppen described the family farm crisis “by the numbers” by noting that in the 1930s there were close to seven million farms in the U.S. Today, just over two million farms remain. Of the remaining farms, roughly 565,000 are family operations, farming just 44 percent of total farmland. Keppen stated that 330 farm operators leave their land every week. In addition to these disturbing facts, Keppen related that more than half of today’s farmers are between the ages of 45 and 64, and only six percent of our farmers are younger than 35 years of age.

Keppen described the present situation as being “scary times” for Western irrigators in view of urbanization and competition for water supplies and the facts that American food production is following other industries “off-shore” and this year our country

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### **2007 Officers of the Wyoming Water Association**

President . . . . .	Ron Cunningham
1st Vice President . . . . .	Nick Wambeke
2nd Vice President . . . . .	Tim Wilson
Treasurer . . . . .	Jack Meena
Executive Secretary . . . . .	John Shields



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## **WWA Sponsor of Upcoming Legislative Water Law Workshop**

### ***Workshop for Wyoming Legislators To Be Held January 8, 2007***

Longtime WWA members will remember that for many years a Water Law Workshop was put on at the beginning of each Wyoming Legislative General Session for the purpose of imparting knowledge about Wyoming's water laws and water administration system to members of the Wyoming Legislature. Past WWA Executive Secretary and retired Cooperative Extension Service Irrigation Engineer Don Brosz was instrumental in organizing and putting on these useful events for many years. After the demise of the Wyoming Water Resources Center, these workshops have been few and far between.

The Wyoming State Engineer's Office, Wyoming Water Development Commission and the Wyoming Water Association are pleased to announce that a **2007 Wyoming Legislative Water Law Workshop** will be held on **Monday, January 8, 2007 from 8:00 a.m. until 11:00 a.m. in Room 1699 of the Herschler Building** in Cheyenne. The Workshop is being put on for members of the Wyoming Legislature, who will convene for the 2007 General Session on the following day in the State Capitol chambers.

The Wyoming Water Association is assisting the State Engineer and Water Development Commission agencies with publicizing this event and will be directly contacting each of Wyoming's elected Legislative members, and, of course, strongly encourages each Legislator, regardless of their past Legislative experience or seniority, to attend this three-hour workshop. In addition, the WWA will be assisting with the preparation of a workshop syllabus enabling Legislators to have reference information in hand concerning Wyoming's water resources and the laws governing its use and distribution.

## **Wyoming Legislative Outlook**

### **Mandatory Well Driller Registration To Again Be Considered During 40-Day Legislative Session**

Another attempt will be made during the upcoming 2007 Wyoming Legislative Session to accomplish mandatory registration of those engaged in the well-drilling occupation. State Engineer Pat Tyrrell presented a working draft of a bill to the Joint Agriculture, Public Lands and Water Resources Interim Committee in Sundance on October 27th. The bill modifies the voluntary certification statute and would require drillers and pump installers to sign up before July 1, 2008. The bill exempts CBM drillers and pump installers from licensure at present. The bill has a grandfather clause providing that any water well drilling or pump installation contractor actively doing business for 5 years shall be exempt from testing requirements until June 30, 2008.

## **Frontier Refining Donates \$500 to WWA Scholarship Fund A.V.I., P.C. Also Donates \$100 to Scholarship Fund**

The Wyoming Water Association is very pleased to acknowledge and announce that Frontier Refining Inc. of Cheyenne made a donation of \$500 in October 2006 to the Association's Student Scholarship Fund.

The Association's Board initiated a discussion about increasing the number of scholarship awards at its July 2006 Board meeting (see article elsewhere in this edition) and thereafter Tim Wilson, WWA Board Member, approached Mel Wilkenfeld, Manager of Government Relations and Special Projects of Frontier Refining seeking that firm's support of the WWA's efforts and the following letter was received by Tim on October 23rd:

"Dear Tim:

Frontier Refining Inc. takes great pleasure in making a donation in the amount of \$500 to the Wyoming Water Association to be applied to the WWA scholarship awards program. Frontier recognizes the importance of WWA's objectives of promoting the development, conservation and utilization of Wyoming's water resources for the benefit of the people of Wyoming.

Frontier is glad to be a part of WWA's effort to expand their scholarship program to help educate Wyoming's next generation of leaders to assure the continued emphasis on the wise management of Wyoming's most valuable resource. I look forward to my participation in your organization."

Frontier Refining Inc. is the fourth-largest private-sector employer in Cheyenne, and the largest publicly traded company in Wyoming, employing approximately 260 people responsible for the

production of gasoline, diesel fuel and asphalt.

According to the Energy Information Association, the Frontier Refining Inc. refinery in Cheyenne is the 101st largest refinery in the country, with a permitted crude capacity of 52,000 barrels per day. Frontier markets its refined products in the eastern slope Rocky Mountain region, including eastern Wyoming.

The Cheyenne refinery has a coking unit, allowing the refinery to process up to 100% heavy crude oil for use as a feedstock. The ability to process heavy crude oil lowers crude supply costs because heavy crude oil is generally less expensive than other types of crude oil. Historically heavy crude oil has accounted for 85% or more of the Cheyenne refinery's crude oil charge and Frontier's refinery product mix has included gasoline (41%), diesel fuel (30%), and asphalt and other refined petroleum products (29%). Crude oil is purchased from local producers and also imported via the Express Pipeline from Canada.

More recently, since the 2006 WWA Conference, A.V.I., P.C. made a \$100 donation to the Association's scholarship fund. AVI is a full services engineering firm located at 2035 Westland Road in Cheyenne, Wyoming. WWA Board Member Tim Wilson contacted Jim Murphy of A.V.I., P.C. and inquired whether their firm to the Association's scholarship fund.

The WWA is very grateful to Frontier Refinery and A.V.I., P.C. for their generous gifts and wonderful support for the Association's scholarship program.

## **WWA Elects New Officers and Board Members WWA Annual Business Meeting Includes Officer Elections and Approval of 2007 WWA Resolutions**

During its November 2nd Annual Membership Business Meeting held in Casper as a part of the 2006 Annual Meeting, the membership of the Wyoming Water Association elected officers and Board members for calendar year 2007. Ron Cunningham was elected President of our state-wide water resources organization, succeeding Alan Dugan. The WWA thanks Alan for his fine service as President of our statewide water resources organization – as he led the Association forward and has been a tireless promoter and champion of the Association. WWA continued to grow and prosper during his tenure as the President.

Tim Wilson was elected 2nd Vice President of the WWA. In addition, Jeremy Grimm, City Planner for the City of Buffalo was elected to the Board of Directors as a representative of the Local Government sector. John Maier, former WWA President was elected to replace Scott Schmidt, who has left the employment of the City of Rawlins and taken a job with BP Amoco in Wamsutter. We wish Scott the best and thank him for his service to the Wyoming Water Association.

The complete roster of Board members and officers of the WWA can be found on page 9 of this issue of the *Wyoming Water Flow*.

## WWA Conference Held *(continued from page 1)*

will become a net importer of food.

Keppen asked and addressed the critical questions about whether there are opportunities to develop new water through conservation and ag-to-urban transfers and whether demand-side water management is sufficiently reliable to meet growing water demands. In view of the current situation, Keppen described the Family Farm Alliance's strongly held belief about the importance of, and their current west-wide organizational emphasis on, enhancing western water supplies. Keppen highlighted the four approaches through which the Alliance is delivering the message that western water supply enhancement is essential: the Western Water Supply Initiative, regulatory streamlining, working with the United States Congress and engaging the Administration.

A panel discussion on re-operation of storage reservoirs and managing water for Endangered Species Act-related recovery programs covering both the ongoing Upper Colorado Recovery Program and the soon to be initiated Platte River Recovery Program proved very informative. Panel members offered perspectives about how the eighteen-year old Upper Colorado recovery program has balanced water management and endangered species habitat needs and how participants believe the Platte River Recovery Program will begin to address the difficult balancing of upstream versus downstream needs and consumptive as compared to environmental water uses. Tom Pitts, the Water Users' representative (and who formally represents the interests of the Wyoming Water Association within the Upper Colorado River Endangered Fish Recovery Program) provided an excellent overview of the Program's approaches and accomplishments.

Importantly, the Program is providing ESA compliance (the US Fish and Wildlife Service (USFWS) has used the Program for project ESA compliance in every case) for existing water projects and future depletions in Wyoming's portion of the Colorado River Basin. Larry Crist of the USFWS described how Flaming Gorge Reservoir's operations are directly benefiting the downstream endangered fish species and their habitat.

Sharon Whitmore of the USFWS' Grand Island (Nebraska) office described how the Platte River

Program will provide a similar collaborative, basin-wide approach to provide ESA compliance for water projects in the Platte River Basin portions of Wyoming, Colorado and Nebraska while improving and maintaining migrational habitat for whooping cranes and reproductive habitat for least terns and piping plovers. In addition, the Program will test the assumption that managing flow in the Central Platte River also improves habitat for the pallid sturgeon fish species in the Lower Platte River area. John Lawson, U.S. Bureau of Reclamation Wyoming Area Manager, and Mike Besson, Wyoming Water Development Commission Director, augmented Whitmore's presentation relative to the important role the Pathfinder Dam and Reservoir modification project and Wyoming's participation will serve relative to the water component of the Program.

The Association was very pleased and honored to have the Education Seminar luncheon speaker be Colorado Supreme Court Justice Gregory Hobbs, Jr. of Denver, Colorado. Hobbs provided a fascinating overview of the role of climate on water institutions in the Western Americas through a pictorial journey of water infrastructure revealed through archaeological investigations at Machu Picchu, Peru; Tipon, Peru; and Mesa Verde, Colorado.

The reliance of these ancient cultures on water project infrastructure – including reservoirs at Mesa Verde – provided context for Hobbs to then discuss the development of Colorado's intricate water administration system, water management challenges in the Colorado River Basin and the development and negotiation of the Colorado River Compact of 1922. Hobbs concluded with compelling arguments that the Colorado River Compacts continue to function as intended and have proved to be workable. He noted that **with regard to water, scarcity is the opportunity for community in the West** – and that historically has been and continues to be the case. The Association extends a well-deserved “thank-you” to Justice Hobbs for making the journey to Casper to provide his excellent luncheon address.

Members of the CBM Task Force created by the 2006 Wyoming Legislature provided a progress report on their efforts following an overview of the “State of the State's CBM water debate” offered by

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## **WWA Conference Held** *(continued from page 4)*

Harold Bergman, Director of the Ruckelshaus Institute of Environment and Natural Resources at the University of Wyoming. Bergman provided an in-depth review of the Institute's report prepared for the Governor's Office entitled "Water Production from Coalbed Methane Development in Wyoming: A Summary of Quantity, Quality and Management Options." Assuming a price of \$4.40 per mcf, the Institute's report estimated the total value of Wyoming's coalbed methane (total volume of recoverable gas estimated at 31.7 tcf) at \$140 billion. The report includes data indicating that as of the end of 2004 some 2,802 million barrel of water have been produced and that 55,475 million barrels of water will be produced during the extraction of the remaining CBM gas.

CBM Task Force Co-chairs Representative Pat Childers and Senator Chuck Townsend were joined by Don Likwartz of the Wyoming Oil and Gas Commission and Wyoming State Engineer Pat Tyrrell in explaining the process and deliberations the entire Task Force is engaged in – and would be continuing when the Task Force met the following day in Douglas for their November meeting. The Task Force will be providing their report and recommendations relative to additional CBM water management options that ought to be pursued to the Governor and Legislative Committees during the upcoming Legislative Session.

A twentieth anniversary panel discussion about accomplishments and perceived shortcomings of Wyoming's instream flow law completed the Education Seminar afternoon session. Panel participants Tom Annear, Scott Yates, Senator Gerald Geis and Jim Rogers explored many aspects of how Wyoming's instream flow law has been administered since its enactment, its public policy acceptance and what is likely to be coming up "down the road" relative to Wyoming's instream flow. Of course there were some differences of opinion expressed ...

The 2006 Annual Meeting began with two in-depth panel discussions concerning Wyoming's water planning program that offered the perspectives of personnel deeply involved with the processes. Jodie Pavlica of the Water Development Commission, Murray Schroeder of Western Water Consultants,

Jodee Pring of the Wyoming State Engineer's Office and Bern Hinckley of Hinckley Consulting discussed the preparation of Wyoming's framework water plan.

Ben Bracken, Don Brosz, John Maier and John Joyce then addressed the important aspects of next steps after completion of river basin water plans – "where do we travel to from here?" The distinction between planning and preparing for meeting projected water demands versus inventorying water resources continues to be central to discussion of whether important issues of what can and should happen once the basin water plans have been developed was a topic of discussion at last year's annual meeting as well, and will continue to be addressed at Association gatherings.

Lori Goodman of the Landowners Association of Wyoming provided a very informative overview of the difficult and divisive issues associated with split estate ownership of surface and mineral water rights. Her remarks generated considerable discussion among Annual Meeting attendees.

Steve Gray, Wyoming State Climatologist presented a "State of the State" report on Wyoming's drought and Climate 2006 situation. Gray also addressed long-term perspectives on the drought situation within his presentation, providing information about his prior analyses of Upper Colorado River Basin hydrology based on tree-ring records.

The Annual Meeting Luncheon Speaker was Harold Bergman, Director of the Ruckelshaus Institute of Environment and Natural Resources, who spoke on the WWA-selected topic: "Forging greater water resources management partnerships in Wyoming – challenges and payoffs." A synopsis of Mr. Bergman's presentation is presented elsewhere in this newsletter as a separate article.

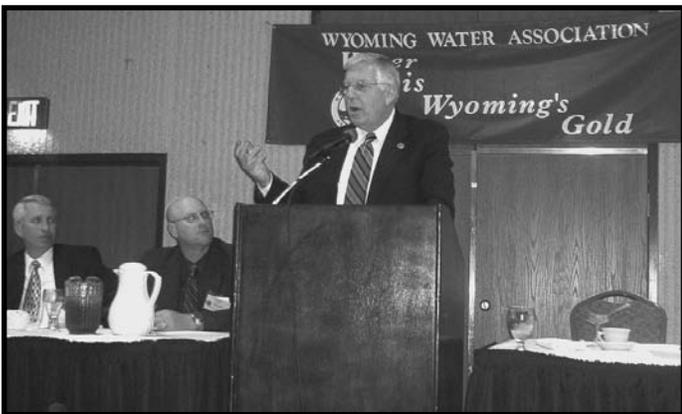
The Association was quite pleased and honored to have Jason Peltier, Deputy Assistant Secretary of the Interior for Water and Science serve as the Afternoon Keynote Speaker. Mr. Peltier, who is a University of Wyoming graduate, spoke on "Interior's role in meeting our national water challenges – are we on the right road to get where we need to be?" While there are many challenges facing our Nation, the Department of the Interior and

*(continued on page 6)*

## WWA Conference Held *(continued from page 5)*

Interior agencies are working to address the country's water supply and water infrastructure rehabilitation needs. Peltier stressed the need for active involvement and partnering with the Interior agencies to assure that the highest priority needs get the attention they need and demand.

Peltier's remarks were followed by a broad examination of the U.S. Bureau of Land Management's agency-wide water-related activities within the State of Wyoming that was provided by Marty Griffith, Assistant State Director for the Bureau of Land Management. Griffith noted that historically, the agency's "water workload" has been diverse and included such things as developing water sources; filing for water rights to support uses; conducting water quality and water quantity inventory and monitoring; preparing activity plans to protect watersheds; and participating in cooperative coordinated resource management plans and Clean Water Act Section 319 plans to address water quality impairments and threats. Griffith noted that BLM has necessarily had to change its emphasis in Wyoming on account of the tremendous oil and gas development activities that are occurring across the State of Wyoming on BLM-managed lands.



*Senator Mike Enzi addressed Banquet attendees at the 2006 Annual Meeting of the Wyoming Water Association in Casper. Scholarship Chairman Evan Simpson and outgoing Water Association President Alan Dugan listened intently to the Senator's remarks.*

A special presentation was provided following the Annual Meeting banquet by the Honorable Mike Enzi, United States Senator. Wyoming's junior Senator had been tasked with the topic of describing his daily duties as a United States Senator and provided many fascinating details about the Senate's

workings. He began by noting his main job is telling Easterners about the West. He pointed out that Yellowstone National Park is the same size as the State of Connecticut. Dealing with these sorts of factual circumstances requires that Wyoming's Senators interpret and explain facts, correct misconceptions and provide context and understanding for people who don't know about the Western United States. Senator Enzi used water law as an example. He noted people he comes in contact with from the East often don't have a grasp of the precepts of western water law, nor do they understand the nuances of dealing with a very precious resource in the arid West. Enzi explained this is due to the fact that one of the main water issues elsewhere in the country is how to remove the runoff from abundant precipitation areas. Enzi added that he is going to have to start talking to those folks about our interstate river compacts – an even more foreign concept to many Easterners!

Enzi pointed with pride to the fact that Wyoming's Congressional Delegation members meet face to face with one another on a regular basis and thus their coordinated approach on many issues provides opportunities that are not enjoyed by other States' Congressional elected members. He observed that legislation is an interesting art, and spoke to his role as Chairman of the Health, Education, Labor and Pensions (HELP) Committee of the United States Senate; a committee that has jurisdiction over 66 specific programs that he referred to as comprising from birth to death.

Enzi noted there are many "retail" aspects to crafting legislation. Part of the reason the HELP Committee has been successful in moving so many pieces of legislation is that Enzi has gotten the Committee membership to abide by what he called the 80 percent rule – the members of the Committee can usually agree on about 80 percent of draft legislation and the remaining 20 percent is where the difficulties and sharp disagreements arise. Passing out that 80 percent that can be agreed upon accomplishes much more than bogging down on the remaining 20 percent and getting no bill passed out of Committee. Enzi pointed to a recent circumstance where on a mine safety bill the labor union had sent

*(continued on page 7)*

## WWA Conference Held *(continued from page 6)*

a letter to its constituents and members of Congress advocating that not a single word in the bill be changed because its contents encompassed the 80 percent. Enzi noted that is most ironic that CSPAN television coverage tends to focus on the remaining 20 percent and what the American people often see televised is the debate about the 20 percent on which there is no consensus.

Senator Enzi noted that over the past year and a half his office had dealt with 74,000 letters coming into his office and that his office had worked on 12 bills that directly addressed Wyoming issues. Enzi spoke to his involvement with the Senate Banking Committee, work to increase markets for Wyoming products (including his sponsorship of invention and procurement conferences) and the need to broaden Wyoming's economic base to allow Wyoming young people to remain in state while earning a good wage. Directly addressing Wyoming's water, Enzi thanked the Association for the invitation to speak and stated that water is the most important thing and is the answer in so many instances. He discussed coalbed methane produced water on several instances during his remarks and noted the importance to Wyoming of



*One of the 2006-2007 Wyoming Water Association Student Scholarship Award recipients, Karinthia Harrison, daughter of WWA member, Rick Harrison and his wife Karlene attended the banquet and Karinthia read her essay. Congratulations, Karinthia!*

avoiding Federal law being enacted that is counter to Wyoming's needs and situation.

Karinthia Harrison, daughter of WWA member Rick Harrison and his wife Karlene, was recognized during the banquet as a 2006-2007 Wyoming Water Association Student Scholarship Award recipient. She read aloud her essay, submitted as part of the

scholarship competition process, concerning the information found on the State of Wyoming's water planning website. The evening banquet and social also included the opportunity for attendees to participate in the annual WWA Silent Auction. A most sincere and genuine expression of thanks is extended here to all who made auction item purchases and those who bid on auction items – all



*Wyoming State Engineer Pat Tyrrell spoke during the Colorado River Basin States' water supply augmentation plan panel discussion. Pat was joined by David Donnelly of the Southern Nevada Water Authority and Ted Way of CH2M Hill/Colorado River Water Consultants.*

the funds going to the Student Scholarship funding efforts.

Friday morning's conference presentations began with a Colorado River Basin States' water supply augmentation plan panel discussion that provided "the view from up and down the River" as its participants were David Donnelly of the Southern Nevada Water Authority, Ted Way of the engineering firm consortium, Colorado River Water Consultants, engaged in doing water supply augmentation planning for the Basin States, and Wyoming State Engineer Pat Tyrrell. The background and substance of the seven Colorado River Basin States preliminary agreement reached in January 2006 were presented by Donnelly, along with an overview of the States' proposal submitted to the Department of the Interior for inclusion as the States' recommendation for the preferred alternative in Interior's ongoing Environmental Impact Statement (EIS) for the Development of Lower Colorado River Basin Shortage Guidelines and Coordinated Management Strategies for Lake Powell and Lake Mead. Way provided an overview of the consultant process to guide the Basin States' in their objective of

*(continued on page 8)*

## **WWA Conference Held** *(continued from page 7)*

developing additional water supplies in the Colorado River Basin. Wyoming State Engineer Pat Tyrrell provided insightful analysis of the benefits that can accrue to Wyoming and to each of the Colorado Basin States if the ongoing negotiations can bring the draft agreement's terms to finalization; including removing the specter of interstate litigation in the United States Supreme Court through 2025, the term of the agreement.

Bern Hinckley of Hinckley Consulting in Laramie provided an in-depth and technical presentation concerning Groundwater Development and Management in Wyoming. Hinckley's

presentation on reading the invisible roadmap associated with groundwater hydrology provided a most useful review of groundwater hydrology principles and practice and included thought-provoking questions and insights.

Two additional presentations on Wyoming's irrigated agriculture concluded the conference. Klodette Stroh, WWA Board Member, spoke on the effect of globalization and cultural barriers on American agriculture, and USDA Natural Resources Conservation Service's Bruce Petersen addressed his agency's role in managing Wyoming's water and provided a look ahead to the next Farm Bill. Thanks to everyone who made this a great meeting!

## **Forging Greater Partnerships for Water Management in WY Bergman Addresses Important Issue at WWA Annual Meeting Luncheon**

During the November 2nd WWA Annual Meeting luncheon, University of Wyoming Ruckelshaus Institute of Environment and Natural Resources Director Harold Bergman took on the difficult task of addressing the critical topic of "forging greater partnerships for water management in Wyoming." The editor of the *Wyoming Water Flow* newsletter has attempted in this article to provide a synopsis of the Mr. Bergman's remarks, feeling this topic merits consideration and reflection by all Association's members. It is hoped members concur that accomplishing our primary objective of promoting the wise use, development and conservation of Wyoming's water for the benefit of Wyoming's people is directly dependent on our ability to connect with and develop working relationships with other Wyomingites -- including those who share our beliefs and interests and those who do not.

One direct means to increasing the WWA's role in statewide water management is through significantly increasing our membership ranks -- and encouraging many more people to participate in our annual meeting and summer water resource tour events. While we continue to increase our membership each year, it is also true that getting everyone potentially affected to join is just not going to happen. Developing a broader constituency of people -- through partnering with other organizations of like-minded people -- who support policy development and implementation that benefits Wyoming water resources management is thus an important tool for the WWA.

But how do we go about doing this? This main question was directed to Mr. Bergman, who offered

some practical observations, advice and workable approaches to consider. Key points made during Mr. Bergman's luncheon speech are summarized below:

1. In considering partnerships, one must consider who are the partners -- and relative to water resource matters, there are many, many entities and lots of stakeholders whose interests need to be considered and factored in to the water resources dialogue.
2. In dealing with interdisciplinary, multi-faceted, multi-constituent problem-solving mechanisms (which is one of the purposes of the Ruckelshaus Institute of Environment and Natural Resources), more and more entities are turning to problem-based learning as a means to address "ill-defined problems." Problem-based learning is a teaching philosophy that embodies a team approach and is increasingly being applied to broader spectrums of issues and problems. "The "rules" of problem-based learning include:
  - A. Define the problem,
  - B. Formulate and attempt solutions,
  - C. React to results by redefining the problem,
  - D. Apply an iterative and interactive approach.
3. It is often advisable to "walk around" complex problems many times so as to figure out how to get into the problem and how to start to solve discrete portions of the problem.
4. Concerning the who, how, what and when of forging collaborative partnerships to address complex natural resources issues and concerns:

*(continued on page 9)*

## 2007 WWA Officers and Board Members

During the 2006 Annual Membership Business Meeting held on November 2nd, the Association's membership approved the roster of proposed officers and Board members presented to the members by the Board.

The members of the Board serve in a voluntary capacity and give of their time and talents freely without compensation. The Board holds at least three Board meetings per year: fall, winter and summer. In addition, the Board has several standing committees that include: Scholarship, Resolutions and Conservation and involve additional volunteer efforts. Please take the time to thank these people for all they do for Wyoming's water. For reference purposes, the Board and Officers of the Wyoming Water Association are listed below:

**President** ..... Ron Cunningham

**1st Vice-President** ..... Nick Wambeke

**2nd Vice-President** ..... Tim Wilson

**Treasurer** ..... Jack Meena

**Secretary** ..... John Shields

### Board Members

**Agriculture** ..... Neal Payne

Klodette Stroh

Bryant Startin

Lee Arrington

### Industry, Business

**& Education** ..... Wendy Hutchinson

Robert Johnson

Evan Simpson

Don Brosz

**Recreation & Conservation** .... Kathy Buchner

Scott Yates

Tom Annear

Barry Lawrence

**Labor & Civic** ..... Harriet Hageman

Mark Pepper

Bill Stafford

Frank Grimes

**Local Government** ..... Tim Wilson

Bruce Barnard

Robert Taylor

Jeremy Grimm

## Bergman Speaks (continued from page 8)

A. It is essential to define the boundaries of the problem.

B. Inclusive participation is essential to developing a meaningful and long-lasting solution.

C. Participants need to be directly involved in the definition of problems and methods to resolve the issues and concerns – as opposed to one entity trying to tell others how things are going to be.

D. There needs to be a common framework for understanding the elements and parameters of the problem; comparable knowledge, understanding and expectations about methods to work on solutions are necessary for participant investment.

5. Participant ground rules need to be established, understood and abided by in order to maintain necessary balancing and sharing of power – so as to assure that there is relative equality among participants. Basic ground rules need to include at least the following:

A. Parties agree to have an open and transparent process – and will institute an appropriate communications plan sufficient to meet all parties' need.

B. Parties agree to address all parties' interests – but are not bound to entertain parties' positions at the table.

C. Parties agree on the necessity to consider and reach agreement on the path and timeline that will be following in marching toward the mutual solution.

D. Parties will commit the necessary resources necessary to accomplish the steps needed to reach the agreed-upon solution.

6. Problems ought to be "ripe" before attempts are made to solve these problems. When problems are either too ripe or are under ripe attempts to resolve them are seldom likely to be successful.

7. Focus initially on the process needed to address problems and get it lined out because focusing too much on the specifics too much too soon will likely lead to getting "bogged down."

Forming working relationships is never easy but the benefits and pay-offs can be enormous. Application of these practical principles may be found to be useful.

### NOTICE

In accordance with Title 17 United States Code Section 107, this material is distributed without profit to those who have expressed a prior interest in receiving this information for research and educational purposes.

## Break Sponsors Really Make A Difference! WWA Conference Benefits From Corporation Contributions

Putting on the Annual Conference of the Wyoming Water Association involves considerable planning and coordination and it is both humbling as well as extremely gratifying to approach people and firms who so graciously give of their time and resources to make our Education Seminar and Annual Meeting the successful events that we have gained a reputation for putting on each year. This year's event was particularly benefited by having a larger number of entities answer our request for break sponsorship donations. These donations offset the hotel charges for the delicious snacks and great hot and cold beverages that conference attendees enjoy during the morning and afternoon breaks – and allow the Wyoming Water Association to keep our registration fees reasonably inexpensive while, at the same time, putting on a very educational and enjoyable event each fall. We recognize these firms in our Conference program brochure at the conference – although two errors of omission are noted here in that WWC Engineering and States West Water Resources Corp. were unfortunately not listed in the program brochure this year.

We encourage you to take an extra moment to mention your appreciation, as a Wyoming Water Association member, of their financial support of Wyoming's only state-wide water resources association, to the principals and staff of these great companies and firms the next time you communicate with them.

The Wyoming Water Association very gratefully acknowledges the financial support of each of the following firms who contributed money to underwrite our 2006 Conference breaks:



Anderson Consulting Engineers, Inc.  
Boyle



Hageman and Brighton Law Office  
Little America Hotel  
Nelson Engineering  
States West Water Resources Corp.  
BenchMark of Torrington, P.C.  
Engineering Associates  
HDR



Hageman & Brighton  
Law Office

M & M Tank Coating Company, Inc.  
PacifiCorp Energy  
Sunrise Engineering  
WWC Engineering

**States West**  
Water Resources Corp.

**M & M Tank  
Coating  
Company, Inc.**



# WWA Adds Third Scholarship Award

At the July Board meeting in Lander, the Board of Directors of the Wyoming Water Association initiated discussion of increasing the number of scholarship awards provided by the WWA. The Board again took up this agenda item at its November 1st meeting in Casper and considered whether to increase either the number of awards or the amount of funds provided by WWA through the existing scholarship awards.

After due consideration of the Association's financial picture; annual fund-raising capability and the past and continuing generosity of our individual, municipal, district and corporate membership; and the Board's recognition that accomplishing the Association's objectives would be furthered by augmenting its scholarship program, the Board unanimously approved a motion to increase the number of scholarship awards made each year from two to three \$1,000 scholarships.

The scholarship application form is contained within this newsletter as an insert.

**The application deadline is February 16, 2007.**

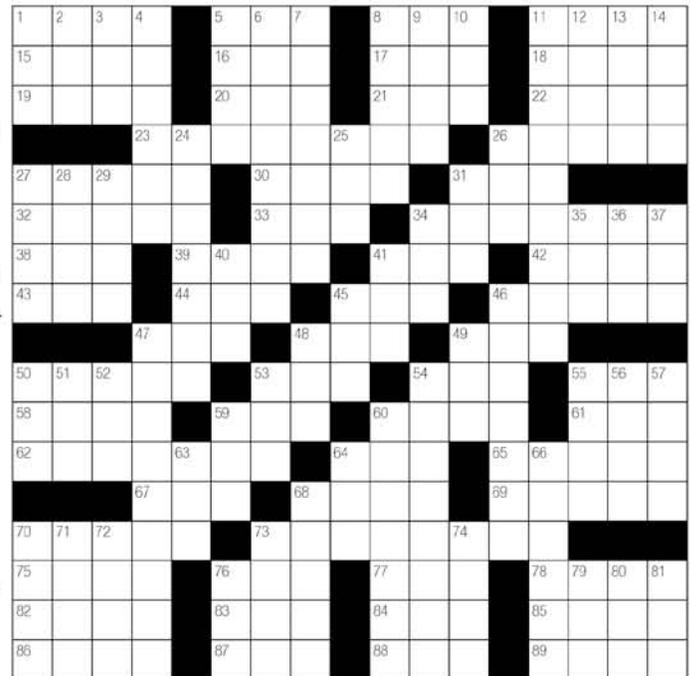
The crossword puzzle found on this page is provided courtesy of *Southwest Hydrology* magazine, published by the Sustainability of semi-Arid Hydrology and Riparian Areas program at the University of Arizona at Tucson, Arizona. The solution to this crossword puzzle can be found at: [http://www.swhydro.arizona.edu/archive/V5\\_N5/crossword\\_solution.pdf](http://www.swhydro.arizona.edu/archive/V5_N5/crossword_solution.pdf)

# HYDRO CROSSWORD

by Mary Black

## ACROSS

1. BoR projects.
5. Flub an easy play.
8. The next step after an MS in hydrology?
11. Throw in the towel.
15. Type of exam.
16. Deep distress.
17. John D., whose ferry established a crossing of the Colorado River.
18. Org. that oversees a Boulder-based atmospheric research inst.
19. WWII battle site in France.
20. Consume.
21. A weather-related org; its annual meeting is in Jan.
22. Robert of Civil War fame.
23. Previous residents of modern-day Iran.
26. Country-western/TV star Chris.
27. You probably won't get one when you retire if you're a public servant.
30. Nickname of a Chicago newspaper.
31. Superlative suffix.
32. Gaelic.
33. Shakespearean contraction.
34. Of the continent of the Nile and the Sahara.
38. CDWR's Snow, familiarly.
39. 43,560 square feet, or 160 square rods.
41. Remain inactive.
42. Portuguese gold.
43. Fate, or a place from which rainfall can be harvested.
44. These come with the downs.
45. Show agreement or recognition.
46. Being broadcast as we speak.
47. Univ. Park campus.
48. This is mightier than the sword.
49. A tool useful in determining well location.
50. Chance to get an RBI.
53. Stitch.
54. Understand.
55. Toward the stern.
58. What you might smell on occasion.
59. Variety of reggae.
60. A Hershey's toffee bar.
61. Floral necklace.
62. I runs along the CA coast.
64. Fashion accessory common to Isadora Duncan and Alice Cooper.
65. Love to excess.
67. A venerable multi-volume language resource.
68. Agreement, such as between the CO Basin states.
69. CO<sub>2</sub> increase, for example.
70. Instrument used to monitor stream-flow.
73. An herbal beverage.
75. Celtic language.
76. Citer's abbv. for a misspelling.
77. Pioneering movie studio that produced *Citizen Kane*.
78. Wind with a speed of



- 32 to 63 MPH.
82. van Genuchten, author of a water content model.
83. It comes before dos.
84. Juan Carlos, por ejemplo.
85. Co-star, with 70 Down, of *Mr. Jones*.
86. Advanced degrees in education.
87. Lake Powell or Mead, e.g.
88. Yiddish exclamations of dismay.
89. Necessity.

## DOWN

1. Precursor of Windows.
2. It could be op or pop.
3. Evil in Hermosillo.
4. What to hit in winter, to measure SWE.
5. Pitcher.
6. Young (dead) chickens.
7. What Gayle Norton has become.
8. What to try if your first attempt fails.
9. Belonging to a USGS scientist who wrote the book on natural water chemistry.
10. \_\_\_ Moines.
11. What researchers ask and answer.
12. Home of the new WaTeR Center (*SWH*, v. 4, no. 6).
13. Intl. group based in Vienna; it has an Istotope Hydrology section.
14. Lance's bike.
24. A car's contribution to global warming, some say.
25. What's in the vadose zone, besides soil and water.
26. Leb. neighbor.
27. Very small stream, or type of erosion.
28. Nabisco snack, good with milk.
29. Endangered species are on one.
31. A young newt.

Solution at [www.swhydro.arizona.edu](http://www.swhydro.arizona.edu)

34. Assist, or a U.S. relief org.
35. Its headquarters is the "George Bush Center for Intelligence."
36. Michelson, of *Southwest Hydrology* Advisory Board fame.
37. Partner of neither.
40. "Brain" of a computer.
41. Offspring.
45. Innovative.
46. Run.
47. Disease agents, focus of *SWH*, v.3, no. 6.
48. Fog is sometimes compared to this type of soup.
49. Common prefix for hydro consulting companies.
50. Exclamation heard in the SW when the monsoon arrives.
51. \_\_\_-State Seminar, a major annual water conference in the SW.
52. Slang term for baseball base.
53. Where the hydrologic cycle begins.
54. Tool formerly used by roller skaters.
55. A therapeutic xerophyte.
56. Plant that begins life as a spore.
57. Even-steven.
59. Sorrowful.
60. Site of New Mexico Tech.
63. Tiny.
64. Extension for some backup files.
66. Komodo \_\_\_\_.
68. A tributary to the Rio Grande.
70. See 85-Across.
71. *SWH* focuses on these and semi-such lands.
72. Took advantage of.
73. Ponderosa or aleppo.
74. To some of us nerds, there's a fine line between these and tools.
76. A Big one is on the California coast.
79. Goes good with chips, mate.
80. Fabrication.
81. This is it.



## Wyoming Water Association

P.O. Box 21701

Cheyenne, WY 82003-7032

307-631-0898 Fax: 307-632-0299

Website: [www.wyomingwater.org](http://www.wyomingwater.org)

Email: [wwa@wyoming.com](mailto:wwa@wyoming.com)

*Water Is Wyoming's Gold!*



*Hope to see you there!*

## REMINDER:

Don't forget to mark your calendar for the  
**Wyoming Water Association's**  
**Winter Board Meeting and Legislative Review Session**  
at the Wyoming Water Development Commission Office  
6920 Yellowtail Road beginning at 1:00 p.m.

# January 10, 2007



**APPLICATION FORM** for the **WYOMING WATER ASSOCIATION'S**  
**SCHOLARSHIPS PROGRAM** for the **2007-2008 ACADEMIC YEAR**

P. O. Box 609 • Afton, WY 83110 • (307) 885-8500 • Fax: (307) 885-8501 • E-Mail: [wwa@wyoming.com](mailto:wwa@wyoming.com)

Please complete the form with typewriter or print neatly and legibly. Attach additional sheets as necessary. Additional copies of the application form may be downloaded from the Association's Website ([www.wyomingwater.org](http://www.wyomingwater.org)). Application Deadline: **February 16, 2007.**

**Instructions and Provisions Applying to the 2007 - 2008 Scholarship Competition and Selection Process:**

1. The Wyoming Water Association (WWA) is offering one or more scholarships to high school seniors or college students for their use while attending a Wyoming college or the University of Wyoming. The Association's Scholarship Committee shall determine the distribution of the \$3,000 allocated, with no one scholarship exceeding \$1,000.
2. The Scholarship Committee and the Executive Secretary will supply additional application forms to WWA Members upon request. As noted above, applicants can obtain additional copies of this form from the Association's website. Eligibility is and will be limited to children, grandchildren and wards of WWA members.
3. Applicants must complete the scholarship application form, the required essay and sign the form. Additional sheets may be attached as necessary to provide the required information. Completed applications must be mailed to **Chairman, Wyoming Water Association's Scholarship Committee, P.O. Box 609, Afton, Wyoming 83110 no later than February 16, 2007.**
4. On or before February 28, 2007, the Chairman will mail one copy of each application submitted to each member of the Scholarship Committee. Each member will score each application based upon the weights specified on the application form for Sections 1 and 2, with a total of 40 points being potentially awarded. At the same time, the Chairman will mail unattributed copies (to ensure blind review) of the submitted essays to the essay reviewers, who have been selected by, and who may consist of, members of the Scholarship Committee. The reviewers, without knowledge of the authors' names, shall score the essays with a total of 60 points being potentially awarded. Both the application form reviewers and the essay reviewers will report their scores to the Committee Chairman, who will compile the scores for each applicant. Those will be verified by the Association's Executive Secretary.
5. The Scholarship Committee, by majority vote, will make its selection of the recipients and will report the names of those selected to the Executive Secretary by May 1, 2007. The Scholarship Committee Chairman will also report the recipients' names to the President and Treasurer of the Wyoming Water Association. A member or members of the Scholarship Committee will offer the Committee's consolidated constructive critique to applicants who desire and request a confidential review of their essays and application forms.
6. The Treasurer of the Association will provide the award check to each recipient without delay when notified by the recipient in writing that the recipient has registered for the appropriate semester at a Wyoming college or at the University of Wyoming. Notification is best accomplished by submittal of a coursework registration form, receipt form for registration fees or copy of an official communication between the student and the educational institution.
7. Questions concerning these instructions may be addressed to the WWA's Scholarship Committee Chairman via phone or e-mail at the phone number and e-mail address listed above. **All eligible students who are qualified by virtue of their parents or grandparents' affiliation with the WWA are strongly encouraged to apply. Scholarship recipients are required to attend the Association's Annual Meeting Banquet in Casper in November in Casper to be recognized for receiving these scholarship awards and to read aloud their winning essay to the Association.**

APPLICANT'S NAME \_\_\_\_\_

First

Middle

Last

ADDRESS \_\_\_\_\_

Street/Apt./P. O. Box

City

WY \_\_\_\_\_

Zip Code

I am the child, grandchild or ward of \_\_\_\_\_, who is a current member of the Wyoming Water Association.  
I am currently or will be attending \_\_\_\_\_, a Wyoming college or university and my major is or I intend  
that it will be \_\_\_\_\_.

<b>Names of High Schools and Colleges Attended:</b>	<b>Dates of Attendance:</b>	<b>Grade Point Average:</b>

Section 1. EDUCATIONAL ACHIEVEMENTS (Scholarship application weighting of 15 Percent):

<b>Honors and Achievements:</b>	<b>One</b>	<b>Two</b>	<b>Three</b>	<b>Four</b>
<b>Honor Societies/Offices Held:</b>				
<b>Other Academic Organizations/Offices Held:</b>				

Section 2. NON-ACADEMIC ACTIVITIES AND ACHIEVEMENTS (Scholarship application weighting of 25 Percent):

<b>Type of Activity (Civic, Church, Humanitarian, Athletics, Work Experience, Music, Art, Cultural, Other) (Please describe):</b>	<b>Name of Organization or Activity:</b>	<b>Type of Participation, including positions or offices held, committee positions, duties, awards, recognitions, etc.:</b>

Section 3. REQUIRED ESSAY (Scholarship application weighting of 60 Percent):

<b>Topical Subject of Essay:</b>	<b>Essay Requirements:</b>
<b>As a headwaters state with compact-apportioned water not yet developed, Wyoming's water resources continue to be targeted for export to downstream neighboring states. How should Wyoming act to preserve our water for future generations?</b>	<b>The essay must be less than 500 words in length and must be submitted in typed or printed format.</b>

I certify that the above information and data are correct and true. I consent to their disclosure to those persons responsible for reviewing and validating this application and essay for purposes of selecting the WWA scholarship recipients. I understand that the essay I wrote for the purpose of this scholarship competition may be used and distributed by the WWA without further approval by me.

SIGNATURE OF APPLICANT \_\_\_\_\_ DATE \_\_\_\_\_