

RECLAMATION

Managing Water in the West

Great Plains Region Year in Review 2010

About Reclamation

The Bureau of Reclamation was created in 1902 to provide water projects for developing the American West. The climate in the West consisted of heavy snowmelt and spring rains resulting in flooding followed by hot summers with too little moisture for successful farming or domestic needs.

Reclamation began as the federal effort to store the surplus moisture to prevent flooding and to provide water for use during the dry months.



In 1902, President Teddy Roosevelt signed legislation creating the Reclamation Service (later renamed the Bureau of Reclamation).

Reclamation manages, develops and protects water and related resources in an environmentally and economically sound manner in the interest of the American public and;

- Is the second largest producer of hydropower in the United States and the nation's largest wholesale water supplier;
- Provides one out of five Western farmers with irrigation water for 10 million farmland acres producing 60 percent of the nation's vegetables and 25 percent of its fruits and nuts;
- Operates 58 hydroelectric powerplants averaging 42 billion kilowatt-hours annually;
- Delivers 10 trillion gallons of water to more than 31 million people each year;
- Manages in partnership 308 recreation sites visited by 90 million people a year.

Reclamation manages 348 reservoirs in the 17 Western States with a total storage capacity of 245 million acre-feet (an acre-foot, 325,851 gallons of water, supplies enough water for a family of four for one year).



Reclamation States and Regions



U. S. Department of the Interior
Bureau of Reclamation

The Great Plains

The Great Plains Region is vast. It covers most of nine states and encompasses a wide range of ecosystems from alpine tundra to the gulf coast. Facilities in the region face challenges unique to their location and demands upon their operation. The region usually has different projects impacted by drought and flood at the same time.



Many of the first projects built by Reclamation were in what is now the Great Plains Region. These early projects were often called "single purpose" because their primary function was to store water for irrigation. Flood control, hydropower, recreation, fish and wildlife enhancement and municipal water evolved as the West was settled and demands on water supplies grew.

In the Great Plains Region there are 80 Reclamation reservoirs with a total capacity of 22.9 million acre-feet of water. The reservoirs collectively irrigate more than two million acres of cropland, about one-fourth of the land area served by all Reclamation reservoirs in the West. The farmland served by Reclamation water produces nearly \$1 billion worth of crops each year in the Great Plains Region.

The existing Reclamation projects in the Great Plains Region also provide drinking water to a rural and urban population of about 2.2 million people. In addition, the region has responsibility for rural water systems authorized by Congress.

These systems will serve an additional half a million people, many of whom are on the Indian reservations of North Dakota, South Dakota and Montana.

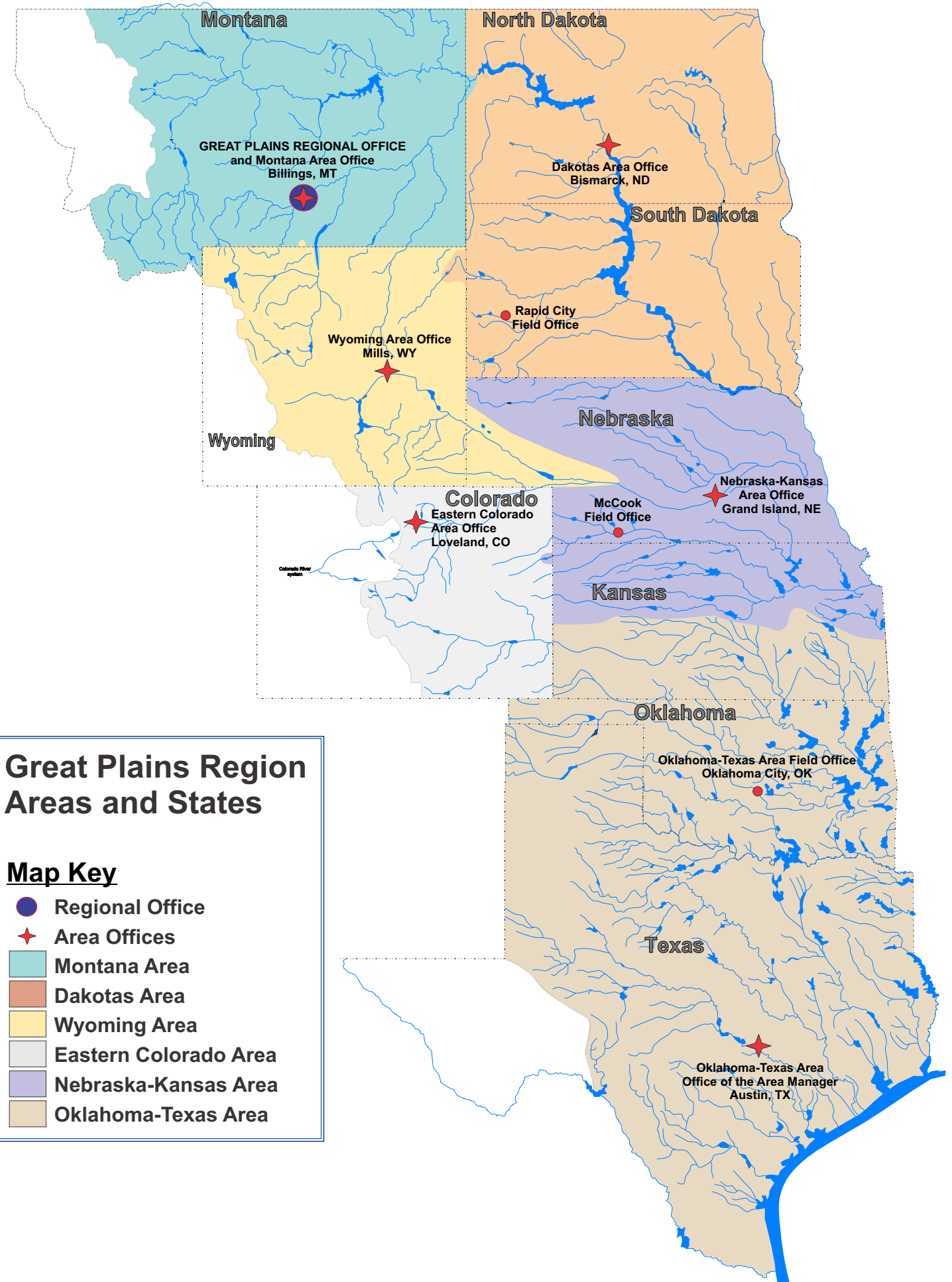
There are 21 powerplants in the Great Plains Region, 36 percent of the Reclamation's total. The plants have a total of 44 generating units (three of which are pumped-storage generators) with a total generating capacity of 1,003 megawatts of power which represents about seven percent of Reclamation's total power generating capacity. The powerplants in the region can produce enough electricity to meet the needs of a quarter-million households.

There are 81 recreation areas associated with reservoirs in the Great Plains Region, which receive an average of 14 million visits each year.

The Great Plains Region is managed from a regional office in Billings, Montana, and six area offices. The Regional Director in Billings is assisted in managing the region by two Deputy Regional Directors and six area managers. This group, along with the heads of Engineering and Infrastructure, Business Resources and Resource Services in the Regional Office, comprises the Regional Leadership Board. The board localizes policy, makes budget decisions and establishes the vision and goals for the region.



Colorado's Mount Elbert Powerplant Unit 2 overhaul.



Great Plains Region Areas and States

Map Key

- Regional Office
- ★ Area Offices
- Montana Area
- Dakotas Area
- Wyoming Area
- Eastern Colorado Area
- Nebraska-Kansas Area
- Oklahoma-Texas Area



Great Plains Region 2010

Providing water and power to the people of the American West is what we do. Providing it in an economically and environmentally sound manner is how we do it.

From Regional Director Mike Ryan

Providing water and power to the people of the American West is what we do. Providing it in an economically and environmentally sound manner is how we do it.

Along the way, Reclamation encounters many challenges and we work with our partners to provide the greatest benefits possible from the natural and fiscal resources we manage.

These might include operating our reservoirs during flood conditions to limit downstream damage while ensuring the safety of our facilities and the public as happened in a number of Great Plains Region states in 2010.

Or they might include innovative approaches to meeting critical needs while spurring conservation during drought. Water recycling efforts in Texas and completion of a municipal well in Kansas highlight these activities.

In all cases, the Great Plains Region is so large that both extremes are often simultaneously calling for our attention. Usually our projects are somewhere in between: doing what they were designed and constructed for, but prepared to meet the challenge of drought or flood.

The American Recovery and Reinvestment Act (ARRA) of 2009 placed additional opportunities as well as additional workload on staff in many of our offices in the Great Plains Region. Our goal was to put the funds to work providing accelerated construction for projects underway in the region. While doing so we still needed to continue providing water and power for the nation.

This publication provides a glimpse into our work and the broad range of issues we deal with everyday. Each page highlights a major activities and provides insight into our area offices. I hope you find it both informative and useful.

Michael J. Ryan, PE
Great Plains Regional Director



Fiscal Responsibility

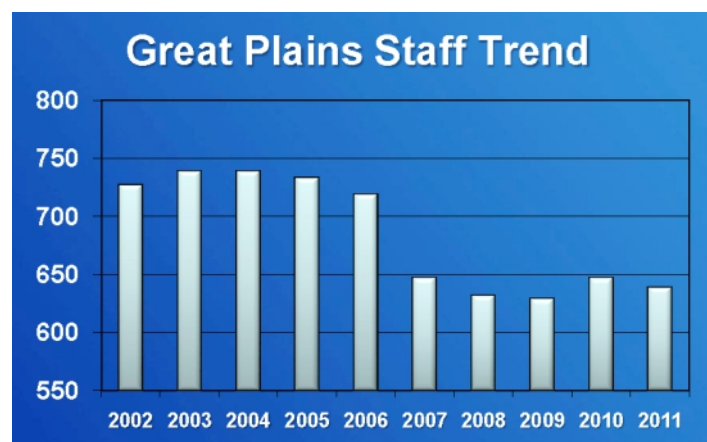
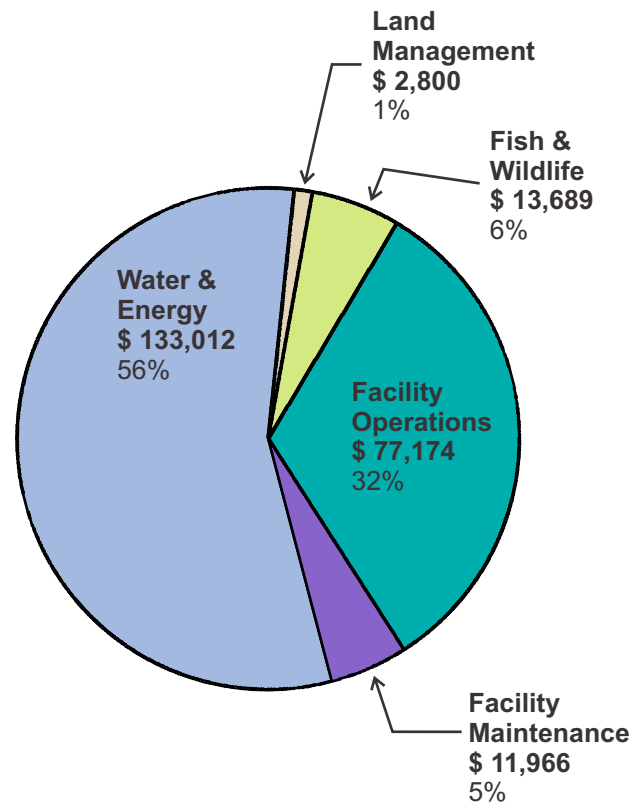
The 2010 Great Plains regional budget was about \$240 million. As in previous years, a significant amount was designated for rural water project development. More than 99 percent of the budget was obligated during the year including an additional \$2.5 million for rural water projects that was made available to the region in September.

The region also received \$10.5 million in up-front power customer funding in fiscal year 2010. These funds helped offset appropriations by sustaining activities to ensure power system reliability.

The Great Plains Region is committed to developing sound budgets and managing the workforce to maximize accomplishment. In 2010, we continued a two-pronged approach which includes continuing to build budgets from the ground-up and with input from employees, power customers, water users and other partners.

Development of a budget is an extensive process which progresses for years from planning by Reclamation to an actual appropriation. When Congress passes a budget, target figures are made available to Reclamation and it becomes our responsibility to accomplish the work identified in the wisest manner possible.

Great Plains 2010 Budget in thousands



Successfully completing tasks identified in our budget requires staff and expertise. Each manager/supervisor is responsible for staffing their organization and accomplishing work while staying within their budget. A manager/supervisor is also tasked with ensuring they will not get in a position where negative personnel actions must occur due to declining budgets. As a result, more care is being exercised in planning and executing work activities at all levels within the region.



The Bigger Picture

The region's 21 powerplants produced more than 3 billion megawatt hours of electricity in 2010 - enough power for about 270 thousand households.

The region achieved all of its Government Performance and Results Act (GPRA) goals for 2010.

Implementation of the American Recovery and Reinvestment Act (ARRA) within the region required extraordinary effort. Great Plains had awarded 100 percent of assigned projects three months before the deadline. For more on ARRA see page six.

The Regional Office provided construction management services for 27 contracts with a total value of over \$63 million. These activities were provided to four area offices and included more than \$18 million in ARRA construction projects.

The region continued to assist partners with water conservation efforts. WaterSMART program grants were provided for efficiency improvements, system optimization and basin studies.

Great Plains Region analyzed potential sites for small scale hydropower systems. Reclamation dams and canals provide opportunities for the installation of new generation capacity to meet the needs of the nation.



(Left) Tiber LLC's 7.5 Mw generator installed at Tiber Dam in Montana.

(Below) The lower drop of the Spring Valley Canal on the Sun River Project in Montana is shown before development. Two drops will be capable of generating 14 Mw in 2011.



Background Image: The historic Shoshone Powerplant has a modern generator replacing three original units that are no longer in service.

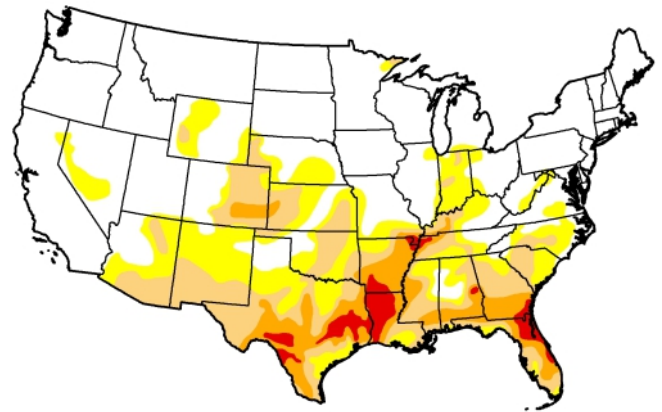
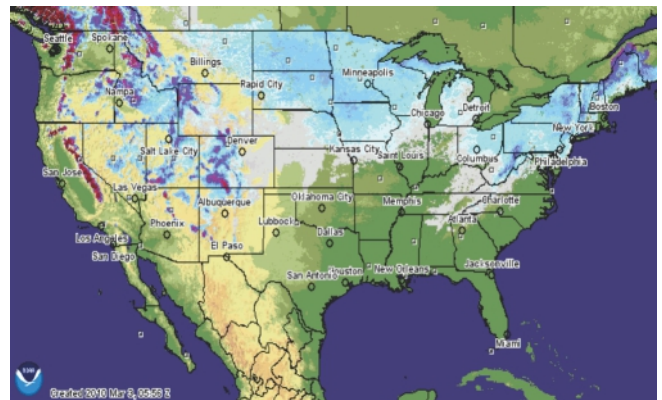


Changing States of Extremes

The Great Plains Region presents a wide range of challenges. The map upper right shows snowpack in May 2010. Blues indicate increasing amounts as the color deepens. Significant snow in North Dakota and South Dakota added to water management challenges. The deep blue shown in Colorado was the source of snowmelt flows for the state and the North Platte River in Wyoming.

The December 2010 map to the right shows increasing drought as the color deepens. Great Plains Region often manages floods and drought at the same time. Drought assistance projects were being completed while reservoirs in other states were under flood management.

Weather extremes affect our operations in more direct ways as well. In 2010, a tornado inflicted significant damage to recreation facilities at Lake Thunderbird in Oklahoma. A microburst also delayed construction of the Lewis and Clark Rural Water System in South Dakota (see page 7 for images).



Oklahoma's Norman Project was hit by a tornado in May, 2010, just as the recreation season was beginning. Shown are the remains of a comfort station at Fisherman's Point Campground.



(Above) Completed Drought Assistance well for Stockville, Nebraska.

(Right) Pathfinder Dam in Wyoming spills for the first time in more than 20 years.



Facility Safety and Reliability



Engineers with special training use climbing gear to inspect dams and other facilities.

The region's offices performed emergency management coordination for major flood events in the spring of 2010. Great Plains Region facilities averted nearly \$107 million in flood damages during 2010. The regional total since 1950 as computed by the Corps of Engineers is over \$3.1 billion in flood control benefits.

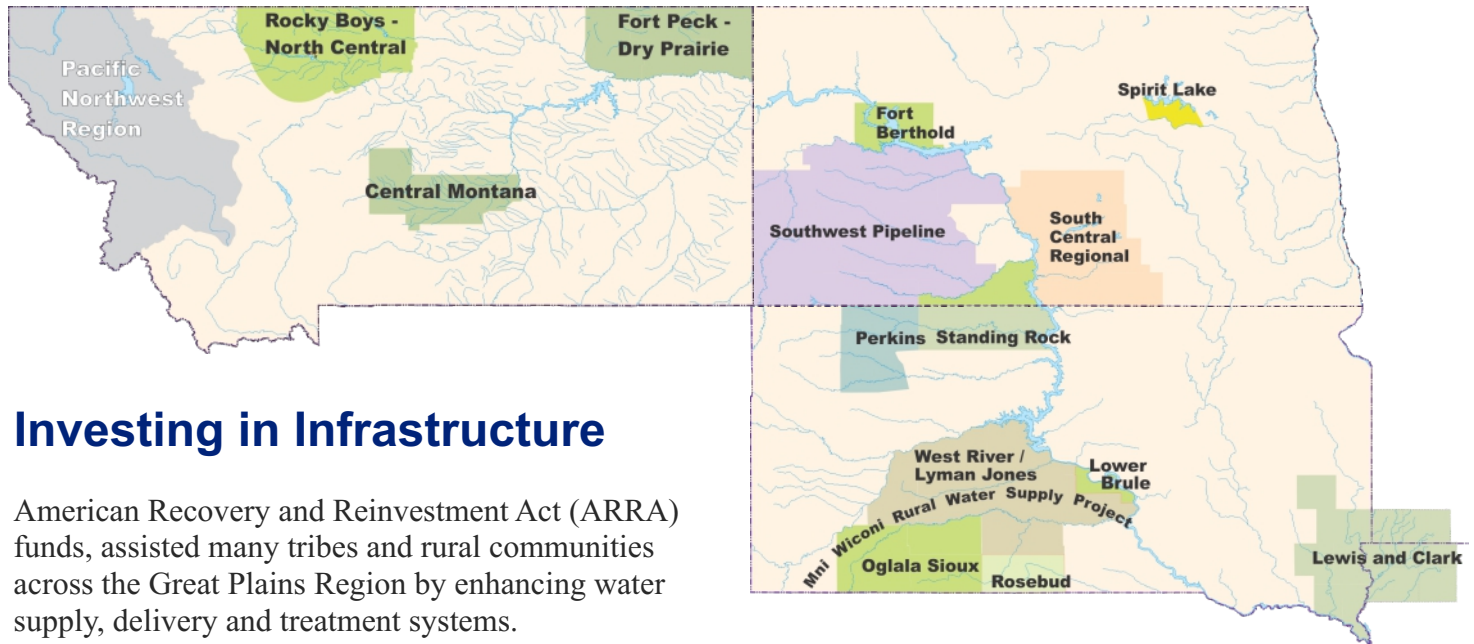
Great Plains managed Safety of Dams Program activities including nine periodic facility reviews, twenty comprehensive facility reviews and major activities at two dams:

Red Willow Dam in Nebraska - Reclamation completed a Corrective Action Study in October 2010 to identify potential actions to address cracking in the earthen embankment. The study identified two repair alternatives that involve different configurations of filters and drains in conjunction with berms and buttresses over the downstream face of the dam at an estimated cost of \$48.6 million. OMB review and Congressional approval is required before the dam is modified.

Glendo Dam in Wyoming - The work underway includes construction of an uncontrolled ogee crest auxiliary spillway and a three to six foot raise of Glendo Dam and Dikes. For more on the Glendo Modification see page 13.

Background Image: One of the Glendo Dikes to be modified as seen during the June, 2010, Platte River flood event.

Rural Water Projects Move Forward



Investing in Infrastructure

American Recovery and Reinvestment Act (ARRA) funds, assisted many tribes and rural communities across the Great Plains Region by enhancing water supply, delivery and treatment systems.

Out of the nearly \$250 million in ARRA funding the region received in 2009 and 2010, about \$200 million – 80 percent – was targeted specifically for rural water projects. This amount nearly doubled the Great Plains’ budget and accelerated construction on authorized rural water projects.

“I never imagined I'd be administering that kind of money,” said GP Regional Director Mike Ryan. “It's not very often that our problem is too much money. But the important thing was our region’s ability to get

the money obligated quickly and prudently, which we did,” Ryan said.

The map above shows the rural water projects that received ARRA funding in 2010 and the areas they serve.

Below is a table of all ARRA activities in the region including about \$50 million in projects associated with Reclamation facilities.

Rural Water Systems Under Construction in 2010 with ARRA Funding (Total \$200 million)

- Fort Peck / Dry Prairie - \$40 million
- North Central / Rocky Boys - \$20 million
- Garrison RW - \$59 million
- Lewis and Clark - 56.5 million
- Mni Wiconi - \$20 million
- Perkins County - \$4.5 million

Reclamation Project funding Summary of major items (Total \$59 Million)

- Angostura Bank Stabilization / Roads / Minimum Basic Recreation - \$3 million
- Flatiron Powerplant - \$16 million
- Title XVI - \$1 million
- Wyoming Powerplants (Life Safety) - \$3 million
- Glen Elder Spillway Repair - \$1.5 million
- Balance of projects under \$1 million each



Challenges Faced by ARRA Projects



The Standing Rock Rural Water System intake will serve tribal lands in parts of North Dakota and South Dakota.



BEFORE AND AFTER: The partially completed main water treatment plant tower on the Lewis and Clark Rural Water System in South Dakota, before and after a “microburst” storm pounded the area with hail and high winds.



Spillway structure concrete repairs at Glen Elder Dam in Kansas were the first in the region to use hydrodemolition (the use of high pressure water) for removal of deteriorated concrete.



Recoating the Flatiron Powerplant penstocks in Colorado to prevent corrosion. Cleaning and painting the interior of the penstocks presented safety concerns that needed to be addressed. Local responders are shown in a practice rescue drill.





From the desk of
Dan Jewell
Montana Area Manager

The Montana Area Office was busy with a wide range of projects during 2010 that ranged from the Yellowstone to the upper Missouri basin.

The Lower Yellowstone Finding of No Significant Impact (FONSI) was completed and signed by Regional Director Mike Ryan on April 22, 2010. It addresses alternatives for fish passage and fish entrainment issues associated with Reclamation's Lower Yellowstone Project.

Public meetings were held to seek comments on the Draft Canyon Ferry Reservoir Shoreline Management Plan during the summer. The plan, developed with stakeholder input, is to provide balanced, practical and relevant guidance for addressing public use, adjacent

landowner concerns and resource protection on the federally managed shoreline of Canyon Ferry Reservoir.

Rural water system development moved forward with cost-share funding for planning activities for the Northern Cheyenne Tribe, Central Montana Water System and the Dry Redwater Rural Water System. Construction continued on two authorized rural water projects: Rocky Boys North Central and Fort Peck Dry Prairie.

The Draft Bighorn Lake Operating Criteria Evaluation Study & Report was completed in September 2010. A series of Bighorn Issues Group meetings were conducted with interested stakeholders from both Montana and Wyoming and progress was made on a number of studies.

We also continued to support youth through Montana Civilian Conservation Corps work at Tiber Reservoir. Crews were rotated at Tiber Reservoir for a week at a time to clean and make repairs to fire rings, fencing, shelters and campgrounds.

Fishing on the Bighorn River below the Yellowtail Afterbay Dam.



Major 2010 Montana Area Accomplishments



Protective lining and rock covering is added to the dikes at Canyon Ferry.



Montana Conservation Corps worker at Tiber.

Background: Swiftcurrent Creek.

Reclamation awarded a \$2.5 million contract in November 2010 for rehabilitation of the Yellowtail Afterbay Dam. The project should be completed in 2012.

Yellowtail and Canyon Ferry facilities were the top two powerplants for net generation in the GP Region, while several maintenance and improvement projects were completed at Yellowtail Powerplant.

Repair work was performed on the dust abatement dikes at the Canyon Ferry Wildlife Management Area.

On the Milk River Project, a partnership with Malta Irrigation District made repairs to St Mary canal. In addition, the St. Mary and Milk River Basin Study continued with the Montana Department of Natural Resources and Conservation; while the Swiftcurrent Creek Stabilization Study continued in collaboration with the Blackfeet Tribe.

Canyon Ferry accessibility projects were completed at Jo Bonner, Goose Bay, Chinamen's Gulch, Silos, Hellgate, Confederate, Cottonwood and White Earth campgrounds, the Lewis and Clark Day Use Area and the Canyon Ferry Visitor Center. The work involved construction of universally accessible parking spaces, sidewalks, campsites, picnic sites and shelters

Work continued on rural water projects (see page 6 for more).

The area office achieved the annual safety goal of increasing the visibility and effectiveness of the Safety Program. The Montana Area Office Safety Committee took an active role in promoting safety within their work areas.





From the desk of
Denny Breitzman
Dakotas Area Manager

Once again DKAO employees pulled together to accomplish a very heavy workload. This was done without regard to specific job titles and position descriptions and often at the sacrifice of personal time.

Note: Denny retired in April. Richard Long assumed leadership of the Dakotas Area Office in May. For more about Richard see page 20.

2010 was another very busy year for the Dakotas Area Office.

Once again we were in flood operations at six reservoirs. While the inflows were not as high as 2009, the duration of flooding was longer and lasted well into summer.

Our rural water division was extremely busy administering approximately \$300 million in appropriations and ARRA funding while dealing with the ongoing O&M program.

Our O&M staff managed their time between flood operations and the accomplishment of significant repairs at several facilities.

The environmental management division completed all of the necessary permitting and compliance required to accomplish our work. They also provided technical assistance to the Montana Area Office, the Eastern Colorado Area Office and the Pacific Northwest Regional Office.

The land management and recreation division was busy managing issues such as the disposition of flooded trailers at Heart Butte Reservoir. At the same time, they were able to execute an agreement with a new managing partner at Heart Butte and complete repairs and upgrades to several facilities. The division also achieved 100 percent compliance with accessibility goals at all of our recreation facilities.



Inspecting construction at the Lewis and Clark Water Treatment Plant.

Burying the Redshirt Pipeline on the Pine Ridge Reservation.



Major 2010 Dakotas Area Accomplishments



Installation of water line on the Mni Wiconi Rural Water System in South Dakota.

Administered \$300 million in rural water construction and O&M funding resulting in increased reviews and approvals, coordination, easement and rights-of-way processing, permitting, and environmental and cultural resources compliance.

Provided technical assistance to Tribes by repairing flooded facilities, addressing numerous power failures and providing rights-of-way training.

Managed significant rural water system construction in both North Dakota and South Dakota including a new treatment plant for the Standing Rock Reservation, core pipeline on the Mni Wiconi project and substantial progress on the Lewis and Clark treatment plant.

Conducted flood operations at six reservoirs: Jamestown, Heart Butte, Dickinson, Angostura, Pactola and Shadehill.

Insulated the transfer deck at Snake Creek Pumping Plant resulting in significant energy savings.

Raised and armored access roads adjacent to the emergency spillway and river outlet channel below Jamestown Dam.

Repaired the bascule gate and replaced the deicing boom and pumps at Dickinson Dam.

Replaced dewatering pumps, gate motors and controls at Angostura Dam.

Repaired flood damaged riprap below Shadehill and Heart Butte dams.

Upgraded minimum basic recreation facilities at Belle Fourche Reservoir and at Chain-of-Lakes, North Dakota.

Achieved accessibility goal of 100 percent compliance at all facilities.

Signed agreement with new managing partner for Heart Butte recreation facilities.

Completed installation of video conferencing equipment in Bismarck and Rapid City.

Background: Angostura Dam.





From the desk of
John Lawson
Wyoming Area Manager

The Wyoming Area Office excelled thanks to the collaborative efforts of our staff during a difficult water operations year.

Following a winter of below average snow pack, late spring precipitation resulted in above-average inflows to the North Platte River Basin. The unexpected flows resulted in high river releases during the summer from Seminoe all the way through Guernsey Reservoir. The effort required frequent communication and coordination with the states of Wyoming and Nebraska, the Corps of Engineers, emergency management entities, our operating partners and others.

The upstream end of the North Platte River reservoir system at Seminoe recorded the second highest June inflow in the last 30 years. Total April through July inflow was 17 percent of the thirty year average. Peak daily computed inflow to Seminoe was 19,376 cfs on June 15, setting a new record.

Pathfinder Reservoir was filled and had a spillway release from June 15 until July 13. It had been more than 20 years since Pathfinder spilled.

River flows through Casper, Wyoming, were more than 5,000 cfs for several weeks in June and July, with a peak daily flow of 7,159 cfs on June 25. Some features at low lying areas along the river were sandbagged.

Glendo Reservoir was in the flood control space from May 23 until August 7. The peak reservoir elevation was 4648.83 ft on June 29, and the highest reservoir elevation since 1983.

The Little Wind River above Boysen Reservoir also experienced record inflows. Inflow to Boysen Reservoir Peaked at 16,001 cfs while the reservoir provided flood control benefits by limiting the peak outflow to 7,309 cfs.

Collaborative efforts with the Corps of Engineers, state and local officials, water users and the public have strengthened our relationships in a challenging water year.

These accomplishments and the resulting customer relationships are attributable to the efforts of the staff at the Wyoming Area Office.



A drill rig prepares for blasting an improved spillway channel as a part of a project to raise Pathfinder Dam and provide water storage for the Platte River Recovery Implementation Program. The program is a collaborative process that continues to receive support from water users, environmental and conservation groups, Colorado, Nebraska Wyoming; and the Fish and Wildlife Service.



Major 2010 Wyoming Area Accomplishments

Hydropower control and reliability was improved with the addition of voltage regulation and power system stabilizer status monitoring at the Casper Control Center for all WYAO powerplants.

Hydropower facilities were improved with completion of multi-year projects to replace the wicket gate greasing systems and CO2 fire suppression systems at all WYAO powerplants. Replacement of six step-up single phase transformers at Fremont Powerplant was also completed.



Spring runoff is released from Kortes Dam in June, 2010.

On June 14, 2010, a contractual agreement was entered into by the U.S. and the State of Wyoming for storage space and yield from Pathfinder Reservoir associated with the Pathfinder Modification Project.

On December 23, 2010, a contractual agreement was entered into by the U.S. and the Wyoming Water Development Office for repayment of safety of dams cost related to the Glendo Unit, Glendo Dam and North Platte Project Guernsey Dam.

Dam Safety corrective actions at Glendo Dam were initiated with the award of a contract to Johnson Wilson Constructors, Inc. to raise Glendo Dam and Dikes and construct an Auxiliary Spillway to pass the 100,000 year flood event. The contract was awarded for \$16,777,777 in September 2010.

The GPRA goal of providing Disability Act compliant recreation facilities at all WYAO reservoirs was achieved.

Facilities continued to be monitored for safety and reliability. Power Comprehensive Facility Reviews were completed for Glendo Powerplant, Guernsey Powerplant, and the Casper Control Center. Safety of Dams (SOD) annual site inspections were conducted for Seminoe, Kortes, Glendo, Guernsey, Lake Alice, Minatare, Anchor and Buffalo Bill Dams. SOD periodic facility reviews were conducted for Bull Lake, Pilot Butte and Boysen Dams and comprehensive facility reviews were conducted for Pathfinder and Alcova Dams.

Background: Buffalo Bill dam and a portion of the Shoshone Powerplant in the foreground.





From the desk of
Mike Collins
Eastern Colorado Area

The Eastern Colorado Area Office had many significant accomplishments in 2010. Our ability to meet the many diverse demands of two major water and power producing projects with a workforce that is comprised of very talented, innovative and dedicated employees made these accomplishments possible. I am very proud that this past year many of our project performance indicators showed solid improvements.

As we looked toward the water year 2010, we anticipated an average precipitation year. Indeed, we finished the year slightly below average in winter precipitation when we look across all of the basins. The challenges came in managing the runoff. Weather warmed quickly as the spring developed with some higher than anticipated rain and snow on the northern east slope. Most of the watersheds had higher than average runoff, some significantly so. We capitalized on the east slope precipitation for power generation, storage and delivery without spilling any of our northern west slope facilities. The southern basins of the state provided many of the same challenges. With some innovative collaboration with our stakeholders and regulators, we were able to prevent spills there as well. We are fortunate that the designed flexibility of both projects allowed us to fulfill deliveries during some rather demanding water supply years. Key factors to that success can be directly attributed to the knowledgeable, dedicated staff at Reclamation and to the expertise and willingness to collaborate on innovative solutions that we find in our stakeholders and water districts.

We experienced great success in filling many of our vacancies this past year with a cadre of exceptional individuals. In several areas, we are at or near full staffing again. I am anxious to see where this infusion of new talent and dedication will take our organization. I am very proud of the accomplishments of our fine staff of professionals and their dedication to our mission.

2010 Eastern Colorado Water Year by the Numbers

2010 was a particularly challenging year for water operations due to the intense runoff season. While the year was rather dry overall, high snowpack in key mountain basins combined with a relatively wet spring produced large flows from melting snow and rain the first two weeks of June.

Storage capacity across both C-BT and Fry-Ark Projects neared 100 percent, but no project water was spilled.

Project operations prevented flood damages totaling approximately \$68,000 on the C-BT and \$3 million along the Fry-Ark.

Despite near flood conditions in late spring, trans-basin imports met the 25-year average on both projects. The C-BT imported 226,820 acre-feet of water from west slope to east slope. The Fry-Ark project imported approximately 54,000 af of water.

Part of what made the 2010 water year unusual was the additional precipitation on the east slope of the Continental Divide. In the case of the Colorado-Big Thompson Project, that meant junior water rights for the east slope came into priority, enabling the capture of an additional 31,734 acre-feet of water from the Big Thompson River basin. Heavy run-off and spring rains made east slope water rights a priority for the second year in a row. Prior to 2009, however, it had been almost ten years since east slope water rights came into play on the C-BT.

These same water operations made possible the generation of 624.2 giga watt hours of power on the C-BT, 104 percent of the 30-year average.

Water approaches the top of the spillway gates at Granby Dam.



Major 2010 Eastern Colorado Area Accomplishments

With six hydropower plants and 15 major dams, the safety, security and continued performance of our facilities are top priorities. One of our largest accomplishments was the restoration to service of Unit 2 at the Mt. Elbert Power Plant. Because it is a reverse pump-back generator, the plant offers operational flexibility which in turn provides additional stability and reliability for the region.

NEPA compliance was completed for 23 excess capacity contracts out of Pueblo Reservoir, the construction of a private power plant on Carter Lake Dam #1, and the installation of 15 stream and reservoir gauging stations under a WaterSMART project on the Upper Arkansas River.

Editors Note: One of the Pueblo contracts was for the Southern Delivery System which is designed to provide water to the communities of Colorado Springs, Pueblo West, Fountain and Security. The contract was successfully negotiated and signed on May 4, 2011.



Inspection of the Unit 2 rotor at Mount Elbert Powerplant.

An Environmental Impact Statement process was begun for the proposed Arkansas Valley Conduit and Long-Term Excess Capacity Master Contract. Public scoping officially began on July 30. When it closed in September, a total of 141 comments had been received. The Public Scoping Report was published in December 2010.

ECAO is responsible for a number of water contracts which generated revenue worth \$16,458,700 in 2010.

As part of the American Recovery and Reinvestment Act we began the recoating of the mile long Flatiron penstocks. We also completed the installation of a new sludge filter press at the Leadville Mine Drainage Tunnel to increase efficiency.

The ECAO is a proud sponsor of the 14th annual Catch a Special Thrill fishing event at Horsetooth Reservoir. A total of 25 disabled children and their families participated on Saturday, June 5. Fisherman donated their boats and expertise for the day and another 40 volunteers helped with registration, safety, event set-up and food.

Background: Pueblo Dam and the downstream swimming area for the state park.





From the desk of
Aaron Thompson
Nebraska-Kansas Area Manager

Our work this year was diverse with nearly all activities requiring close coordination with our partners to ensure success.

Reclamation continued work related to structural deficiencies discovered at Red Willow Dam in October 2009, with the Frenchman Cambridge Irrigation District participating in the safety of dams process to complete the Corrective Action Study. Alternatives to address the structural deficiencies were identified on an accelerated schedule.

A longer-term activity is collaboration with Nebraska, Kansas, Colorado and other stakeholders to work on long-term solutions to ensure Republican River Compact compliance. Reclamation provided testimony at two hearings related to integrated management plans jointly developed by the Nebraska Department of Natural Resources and the Upper and Middle Republican Natural Resources Districts.

Another milestone was reached during 2010. While working with partners in Nebraska and Kansas who managed Reclamation facilities we completed upgrades at our facilities to make them accessible to a larger segment of the population through the modification of boat ramps, comfort stations, camp sites and restrooms that are compliant with the Americans with Disabilities Act.



(Above) One of the new accessible recreation facilities.

(Top) A Flume under construction on the Courtland Canal.

(Below) Assistance was provided to investigation crews working on the Red Willow Safety of Dams project including construction of access roads.



Major 2010 Nebraska-Kansas Area Accomplishments



A drought assistance well was completed for Stockville, Neb, in June 2010.



Work to recoat the Enders Dam outlet works interior was completed for \$281,470. The project was completed in 2010 and was funded by the American Recovery and Reinvestment Act of 2009.

Background: Work to replace damaged concrete on the Glen Elder Dam spillway approach.

NKAO delivered more than 331,000 acre-feet of water to 11 irrigation districts, one municipality and one rural water district. NKAO released nearly 14,000 acre-feet from Hugh Butler Lake to maintain the reservoir level near dead pool due to embankment cracking concerns. Also, 5,000 acre-feet was released from Bonny Reservoir as directed by the State of Colorado for Republican River Compact compliance.

Controlled flood releases totaling approximately 508,000 acre-feet were made from seven project reservoirs during 2010, including 297,000 acre-feet from the Solomon River Basin, 178,000 acre-feet from the Republican River Basin and 33,000 acre-feet from Calamus Reservoir in the Loup River Basin. A new historic high reservoir level was reached at Calamus Reservoir after experiencing the greatest June inflow on record. Five reservoirs received annual inflows that ranked within the top five recorded in the last 40 years.

NKAO constructed two water measurement flumes on the Courtland Canal to provide improved operations and increased water measurement accuracy on Republican River diversions flowing from Nebraska into Kansas.

NKAO completed ADA compliance activities at all of recreation facilities. ADA retrofits were completed through four contracts: Enders - Trenton, Red Willow - Medicine Creek, Merritt and Davis Creek and through a cooperative agreement with the Kansas Department of Wildlife and Parks.

Worked with the Nebraska Game and Parks Commission to extend the existing boat ramp to provide recreation access to the reservoir. The reservoir levels were drawn down as required to address the Red Willow Dam Safety of Dams Modifications.

NKAO transferred management responsibilities of the lands around Superior-Courtland Diversion Dam to the Nebraska Game and Parks Commission.

In cooperation with the Nebraska Game and Parks Commission and Twin Loups Reclamation District, NKAO completed the Calamus Reservoir Resource Management Plan.





From the desk of
Mark Treviño
Oklahoma-Texas Area Manager

Two examples of outstanding collaborative efforts highlight the 2010 accomplishments of the Oklahoma-Texas Area Office (OTAO).

First, Secretary of the Interior Ken Salazar challenged Interior agencies to engage youth in the outdoors by increasing youth employment opportunities. In response to that message, OTAO collaborated with The Corps Network and American YouthWorks of Austin, Texas, in a conservation effort to reduce invasive species while creating new fish habitat at Foss Reservoir in Oklahoma. Reclamation provided project oversight and 75 percent of the required funding, and The Corps Network provided 25 percent of the funding and completed the work through their arrangement with American YouthWorks.

The eight-member crew from American YouthWorks Environmental Corps worked tirelessly cutting invasive Eastern Red cedar from designated areas surrounding Foss Reservoir in Oklahoma. Members of the Foss Lake Association and other local volunteers assisted the crew in hauling, loading, and sinking trees in the lake to establish fish habitat at locations selected by the Oklahoma Department of Wildlife Conservation. The project was successful in reducing wildfire potential, improving scenic views, and enhancing fish and wildlife habitat.

OTAO also made significant progress toward meeting established goals for universal accessibility of recreation facilities. The most notable 2010 accomplishments include replacing 23 non-compliant courtesy/fishing docks with new accessible Atlantic-Meece docks at seven Oklahoma and

Kansas projects. In addition OTAO designed, negotiated, and awarded seven contract task orders for modification of existing and/or construction of new recreation and camping facilities at our Oklahoma, Texas, and Kansas parks. The task orders were awarded to three small businesses under indeterminate quantities contracts. Construction has been completed for three of the task orders and work is underway for the rest. Reclamation funds were matched by our operating partners who have expressed sincere appreciation for our efforts to not only cost share the necessary improvements, but take the lead in design, contracting and oversight.

OTAO is a bit different than other parts of the Great Plains Region. Much more of our time is spent in collaborative efforts for water recycling, salinity issues and aquifer studies. At the same time, our small staff continues to focus on issues all Reclamation offices hold in common: water conservation, climate change, accessibility of our facilities and wise stewardship. A sampling of our activities is presented on the facing page.

I remain extremely proud of the staff we have in OTAO and look forward to greater accomplishments in the future.

American YouthWorks crew members eating lunch prepared by members of the Foss Lake Association.



Major 2010 Oklahoma-Texas Area Accomplishments



OTAO held CAST events in both Oklahoma and Texas. The Oklahoma event was held at Lake Thunderbird and was selected to be part of the First Lady's "Let's Move Outside" initiative.

The City of Round Rock, Texas was awarded \$1,228,575 under the American Recovery and Reinvestment Act for completion of Phase I of their Title XVI water recycling project. Phase I includes construction of treatment, storage, and pumping facilities and approximately two miles of pipeline to provide up to 2,500 acre-feet per year of reclaimed water to customers.

Congress appropriated \$2 million to the Lower Rio Grande Valley Water Conservation and Improvement Program. Twelve projects have executed cost-share agreements, eight of which are complete and under operation. Four projects remain under construction.

P.L. 109-299 authorized Reclamation to participate in construction of the Equus Beds Aquifer Recharge and Recovery Project. An Environmental Impact Statement was completed and a Record of Decision signed in January 2010. The City of Wichita, Kansas, is constructing the project with Reclamation providing 25 percent in construction cost up to \$30 million.

There were 12 WaterSMART projects ongoing in Oklahoma and Texas last year. Brownsville Irrigation District completed a canal conversion and gate automation project. The City of McAllen, Cameron County Irrigation District #2 and Harlingen Irrigation District conservation activities continued and eight new projects in Texas and Oklahoma received funding.

Tribes and Native American communities received a wide range of assistance with water related activities. Among them were the Seminole Nation, Pawnee Nation, Kaw Nation, Cherokee Nation, Caddo Nation, Alabama Quassarte Tribal Town, Kickapoo Nation and Chickasaw Nation.

Planning activities in Oklahoma continued with the South Central Regional Assessment, the Washita Basin Project, Fort Cobb Water Augmentation Appraisal Study and the Oklahoma Comprehensive Water Plan.

Texas planning activities included evaluation of innovative water technologies and testing the viability of a flexible desalination plant.

Background: Burying pipe on the Title XVI Williamson County Water Reuse Project.



Editor's Note:

Water Operations 2011

The combined graphic at right shows the status of Great Plains Region states for the week of June 6, 2011. Texas, Oklahoma, Kansas and portions of Colorado are experiencing drought. The upper states in the region are experiencing record events for snowpack, rainfall and resulting runoff.

Westwide SNOTEL - June 9

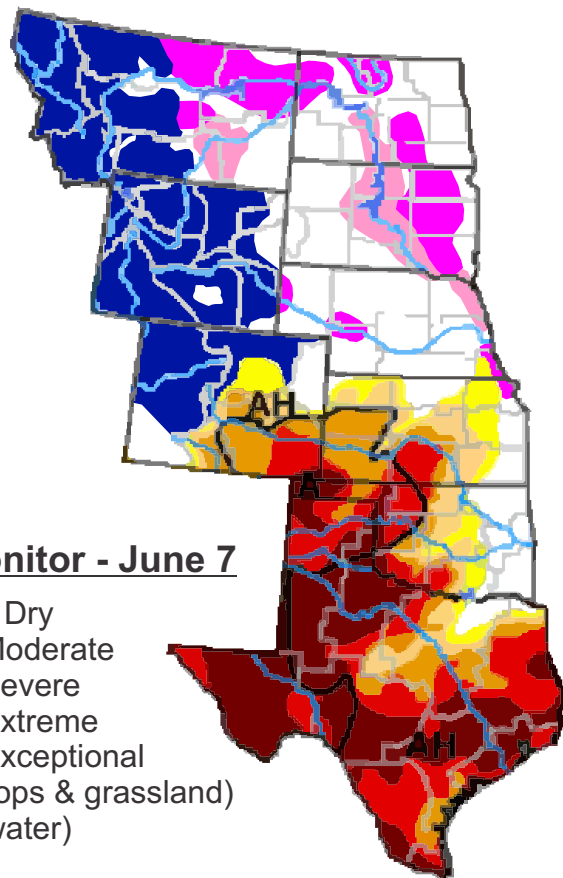
■ Snow (water equivalent) of more than 150% of average

National Weather Service Flood Outlook - June 8-13

■ Flooding occurring or imminent
■ Flooding likely

US Drought Monitor - June 7

■ D0 Abnormally Dry
■ D1 Drought - Moderate
■ D2 Drought - Severe
■ D3 Drought - Extreme
■ D5 Drought - Exceptional
A Agricultural (crops & grassland)
H Hydrological (water)



Meet the New Dakotas Area Manager



Introducing
Richard Long
Dakotas Area Manager

Richard Long became Dakotas Area Manager in May 2011. The Area is headquartered in Bismarck, North Dakota, with additional field offices in Rapid City and Pierre, South Dakota.

Long began his federal career with Reclamation as an Agricultural Engineer in McCook, Neb. in 1974. He worked in Reclamation's Great Plains Regional Office in Billings, Mont., for ten years, administering the Rehabilitation and Betterment

Program, along with facility operations and maintenance programs.

From 1987 to 1990 he was Water and Land Division Chief at the Grand Junction Projects Office in western Colorado. In 1990, he joined the Montana Area Office in Billings, as Chief, Water & Land Division, and has held various positions since that time as a supervisor responsible for water and land resource management, facility operation and maintenance and dam safety.

Before coming to Reclamation, Long worked for two years as a surveyor for a contractor on the construction the McClusky Canal in North Dakota. He received a Bachelor of Science degree in Agricultural Engineering from North Dakota State University in 1972.



MISSION STATEMENTS



The mission of the Department of the Interior is to protect and provide access to our Nation's natural and cultural heritage and honor our trust responsibilities to Indian tribes and our commitments to island communities.

The mission of the Bureau of Reclamation is to manage, develop, and protect water and related resources in an environmentally and economically sound manner in the interest of the American Public.

Learn more about us at: www.usbr.gov/gp