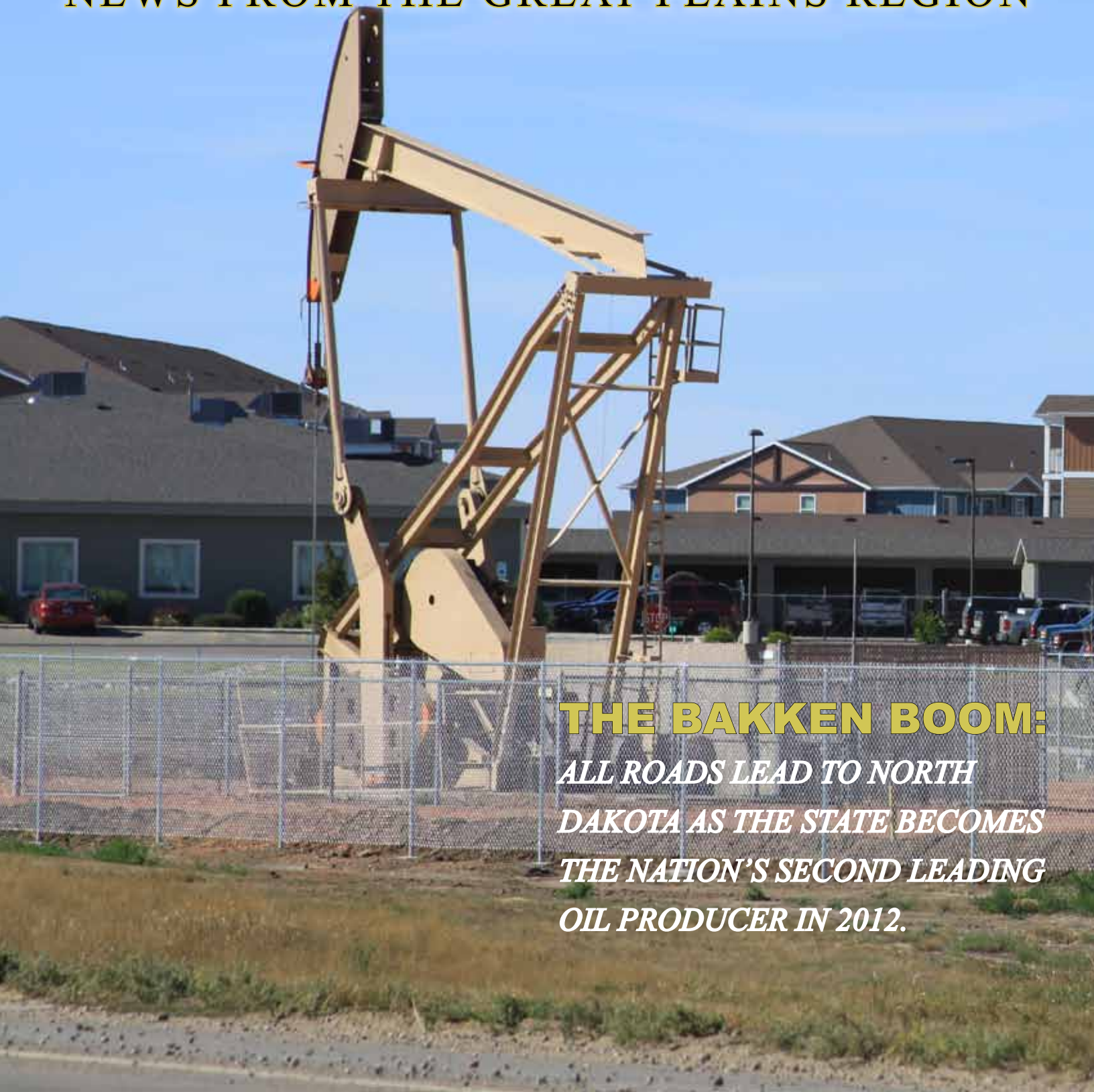
RECLAMATION
Managing Water in the West

Winter 2012-2013

Plains Talk

NEWS FROM THE GREAT PLAINS REGION



THE BAKKEN BOOM:

ALL ROADS LEAD TO NORTH DAKOTA AS THE STATE BECOMES THE NATION'S SECOND LEADING OIL PRODUCER IN 2012.

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Cover: Oil pumping unit in a housing area near Dickinson, N.D.

Back Cover: Dave Tordonato, Materials Engineer from TSC, inspects the trunnion at Angostura Dam, S.D.

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Reclamation Dams Save 2012 Irrigation Season

A dead garpike in Lake Corpus Christi near Mathis, Texas. The lake continues to shrink due to drought. Photo: Todd Yates, Corpus Christi Caller-Times.

By Sterling Rech,
Public Affairs Specialist, GPRO

"A lack of precipitation defines the West," said Great Plains Regional Director, Mike Ryan. "Droughts and wildfires are a unique part of the culture that we've grown accustomed to."

According to the National Oceanic and Atmospheric Administration, 56 percent of the continental U.S. was in some form of drought at the end of June.

"Sometimes you wonder what homesteaders were thinking when they settled the West," said Ryan. "Between lack of rainfall and often inhospitable living conditions, there has never been a shortage of challenges facing life in the West."

In 2012, the Great Plains played host to a series of immense environmental challenges in the form of drought and fire.

"Between the drought in Texas and Oklahoma, wildland fires in Colorado, Wyoming and Montana, and one of the hottest summers on record, the Great Plains Region has experienced a rough year," said Ryan.

The Waldo Canyon Fire, near Colorado Springs, was the most destructive ever recorded in Colorado's history. According to the U.S. Forest Service, nearly 20 percent of the more than 18,000 acres consumed by the blaze was sterilized. That is, the blaze burned so hot that no living vegetation was left on the surface, nor root systems left below the surface, to a depth of about four inches.

"It's one thing to have extreme fires or extreme droughts," said Ryan, "but having them simultaneously is catastrophic."

The drought across Texas and Oklahoma, the worst since 1956, is estimated to cost the U.S. economy $50 billion, according to NOAA.

Droughts can occur in any climate, arid or humid, but in the United States, droughts have significant impacts on agriculture, recreation, tourism, water supply, forest and wildland fires, energy production, and transportation.

Since the 1970s, the percentage of Earth's land area affected by severe drought has more than doubled, according to NASA.

In spite of these conditions, life in the West continues to forge ahead, and thrive.

"Despite the severity of the dryness this year, Reclamation was able to continue delivering clean water and reliable power to hundreds of thousands of people," said Ryan. "Reclamation facilities are doing exactly what they're designed to do."

Reclamation was created to overcome water supply issues in the West, forming a critical building block for economic growth, and sustaining a way of life for future generations.

With wide variations in temperature, and low and inconsistent levels of rainfall, drought curves can be extreme, depending on the year.

"Reclamation's projects, along with wastewater reuse programs like Title XVI, help smooth out those drought curves," said Ryan. "Because water availability fluctuates constantly, our dams and reservoirs ensure a steady, consistent supply of water for drinking, irrigation, and recreation."

Through the Title XVI program, Reclamation provides financial and technical assistance for appraisal studies, feasibility studies, research and demonstration projects, and construction projects that reclaim, reuse, or recycle water.

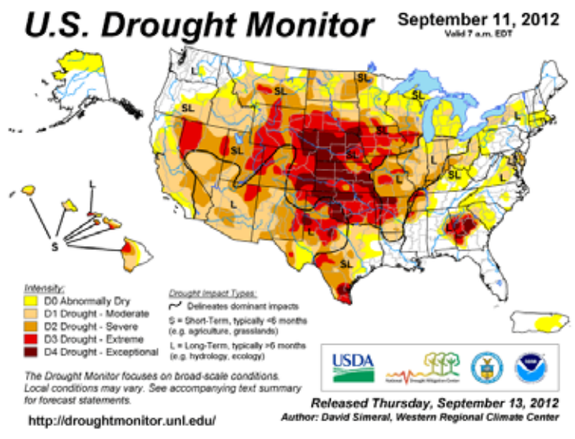
Reclamation currently has seven active Title XVI projects in Texas, three of which are owned by the Federal government: Canadian Rivers (Sanford Dam), San Angelo (Twin Buttes Dam), Nueces River (Choke Canyon Dam).

The Williamson County Reuse Project (Round Rock, Texas), designed to reuse about 10,000 acre-feet per year of treated effluent for landscape irrigation and other non-potable uses, was bolstered by $1.2 million in American Recovery and Reinvestment Act funds.

Reclamation established a drought program after public law 102-250 was enacted in 1991. The Act authorizes emergency response and planning assistance helping minimize and mitigate losses and damages resulting from drought conditions.

The growth of Reclamation in the 20th century equated to the growth of the West. Reclamation will continue to address challenges in the 21st century by using the tools they have always relied on, innovation and hard work.

"Although Reclamation is a multi-faceted 21st century agency supporting water delivery, renewable power production, irrigation, recreation, environmental stewardship and tribal relations, our main focus, and the thing that will challenge us into the future, is continuing to meet growing demands for clean water and affordable power," said Ryan. "That is why we exist, and that is how we serve the public."



(Above, left) The University of Nebraska-Lincoln's Drought Monitor reveals the varying degrees of drought experienced across the U.S. as of Sept. 2012. (Above, right) A satellite image of the burn scar left by the Waldo Canyon Fire in Northern, Colo.

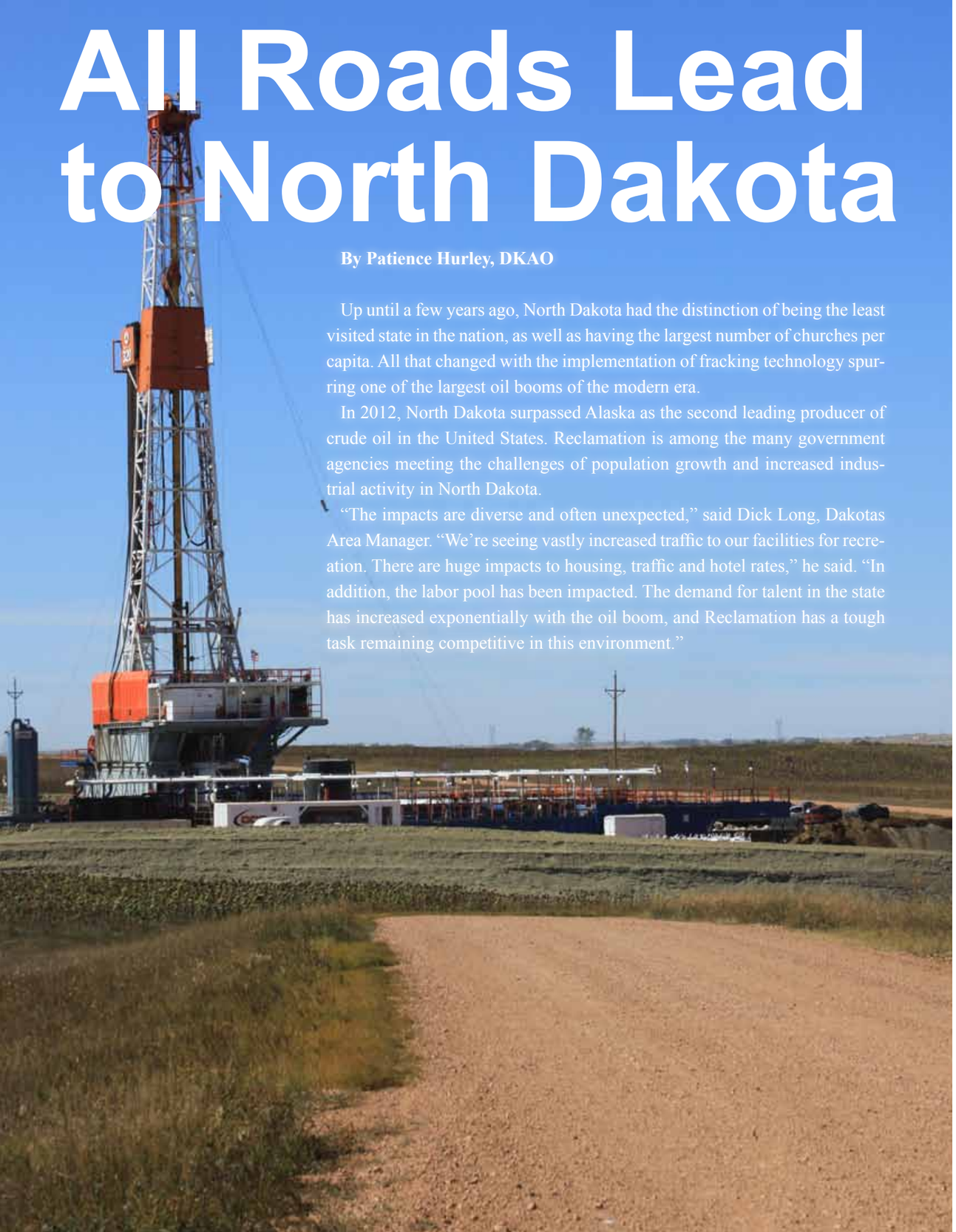
All Roads Lead to North Dakota

By Patience Hurley, DKAO

Up until a few years ago, North Dakota had the distinction of being the least visited state in the nation, as well as having the largest number of churches per capita. All that changed with the implementation of fracking technology spurring one of the largest oil booms of the modern era.

In 2012, North Dakota surpassed Alaska as the second leading producer of crude oil in the United States. Reclamation is among the many government agencies meeting the challenges of population growth and increased industrial activity in North Dakota.

"The impacts are diverse and often unexpected," said Dick Long, Dakotas Area Manager. "We're seeing vastly increased traffic to our facilities for recreation. There are huge impacts to housing, traffic and hotel rates," he said. "In addition, the labor pool has been impacted. The demand for talent in the state has increased exponentially with the oil boom, and Reclamation has a tough task remaining competitive in this environment."



Of the 15 counties in the U.S. with the lowest unemployment rates, 11 are in North Dakota - some with rates below one percent.

The increase in oil production in the state has been dramatic. Less than six years ago, in 2006, North Dakota was behind seven other states in oil production, generating about 109,441 barrels-per-day.

Production has steadily escalated since that time, primarily due to the application of fracking technology in the Bakken Formation.

North Dakota's ascent has exceeded even the most optimistic projections.

In March 2011, state legislators created a two-year budget forecasting that daily production would hit 425,000 barrels by June 2013. It surpassed that level by Aug. 2011. By March 2012, North Dakota was producing 558,255 barrels-per-day.

The changes in the state related to the oil boom have been dramatic.

Williston – an epicenter of oil development activity – is the fastest-growing small city in the U.S., according to census data. Construction is booming to keep up with the demand. In 2011, the city issued $358 million worth of building permits, up from just $45 million in 2009.

According to Joe Hall, Division Chief Environmental Management and Technical Studies, "We are also looking into proactive ways to address unauthorized uses of our lands and water and are working with our security and law enforcement folks to address issues as they arise."

Hall points to ongoing reviews of long term camping on Reclamation lands and recreation facilities.

"We and our managing partners are collecting demographic data on use of our facilities so that we can estimate how much of the current use is coming from oil development related activities," Hall said.

"Hopefully we can use this information to forecast future demand relative to oil development trends and adjust our management of facilities appropriately to meet the demand."

In addition, the impacts of the thriving oil industry are affecting hiring. According to Jeff Nettleton, Chief of Facility Operation and Maintenance and Engineering Services for Reclamation's Dakotas Area Office, "Oil development is definitely already affecting our hiring due to the salaries/wages we can pay compared to the oil work and due to the increased cost of living in areas proximate to the oil development.

"This issue played a role in our recruitment for the Snake Creek Pumping Plant operator vacancy. We had to re-advertise the position to find a qualified candidate due to

(Above) Help Wanted signs dot the landscape. Of the 15 counties in the U.S. with the lowest unemployment rates, 11 are in North Dakota - some with rates below one percent.

(Above) A law enforcement officer surveys an unauthorized camping spot on the banks of Dickinson Reservoir/ Patterson Lake. Incidents of squatters have increased on Reclamation lands in North Dakota, as the oil boom has created a tight housing market in the state.

the cost of living in that area," said Nettleton.

The effects from the oil boom are far reaching, ranging from roads clogged with traffic, increased crime rates and increased housing and lodging costs.

According to Julie Geidel, Rapid City Office Secretary, other agencies are taking precautions to ensure the safety of their personnel. "My youngest works for the Fish & Wildlife Service in Bismarck," Geidel said. "When they go over in that area now to do work, they have initiated a new policy that no one goes alone. The employees have to go out in teams, due to the influx of crime I guess. He's told me about some interesting happenings!" said Geidel.

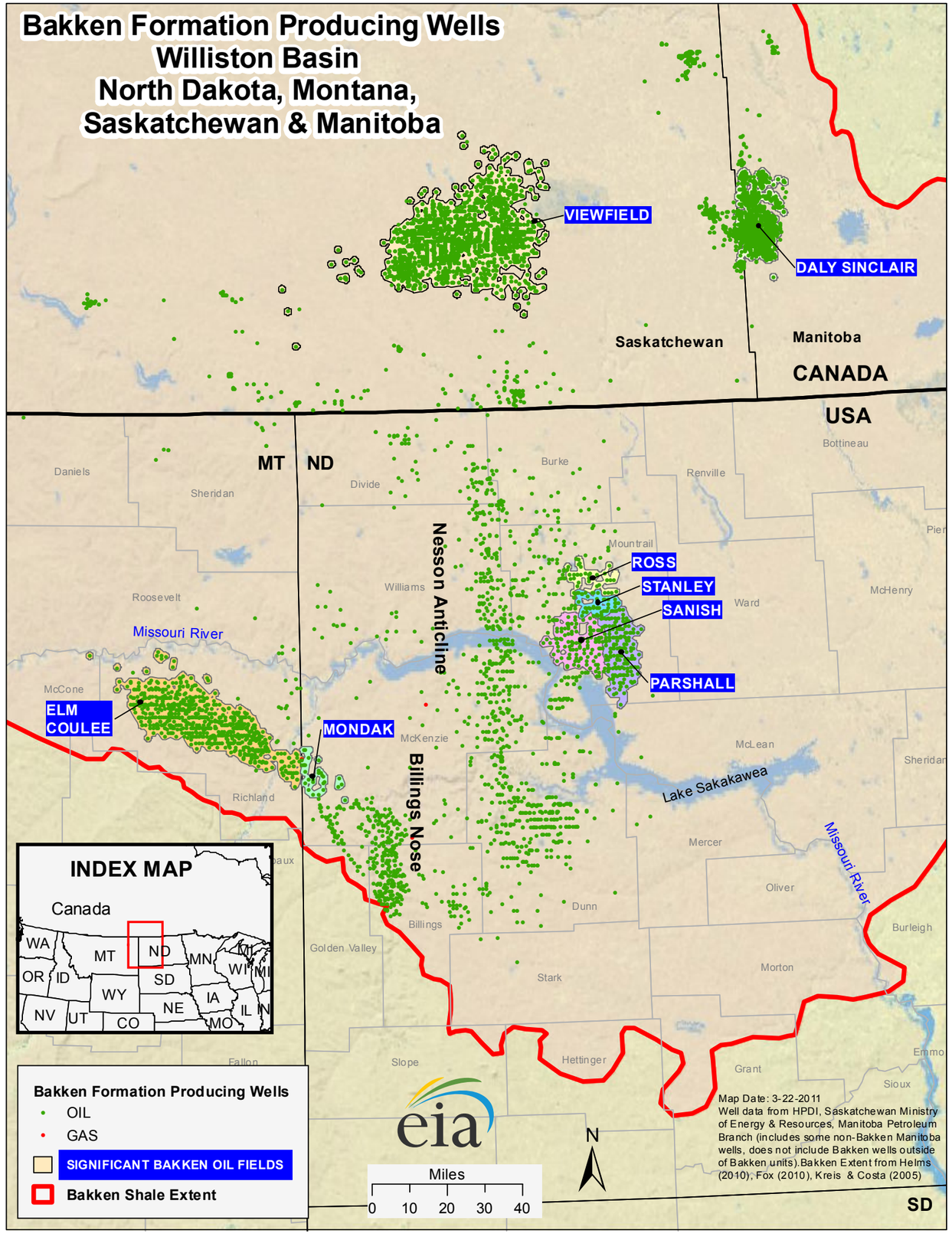
Housing is in high demand with the influx of oil workers. "Homes for sale in the $100,000 - 250,000 range get snapped up rapidly and finding apartments to rent is possible but difficult," said Diane Lehman Turck, DKAO Archaeologist. "Everyone is staying in the Bakken and filling available hotel rooms. Even when my son Andrew was a senior four years ago, when there were athletic games meeting at Williston you had to reserve rooms months ahead to go to your child's game. Now I would guess it is impossible," Lehman Turck said.

According to Nettleton, work is also being impacted at the Dakotas Area Office. "We are working with Region on how to contract for the industrial use of our un-contracted water supplies in several of the North Dakota, South Dakota and Wyoming reservoirs. This involves planning to anticipate regulatory and clearance issues up-front so that we can move more quickly and serve the potential needs as they arise without having to start from scratch when we receive each request," said Nettleton.

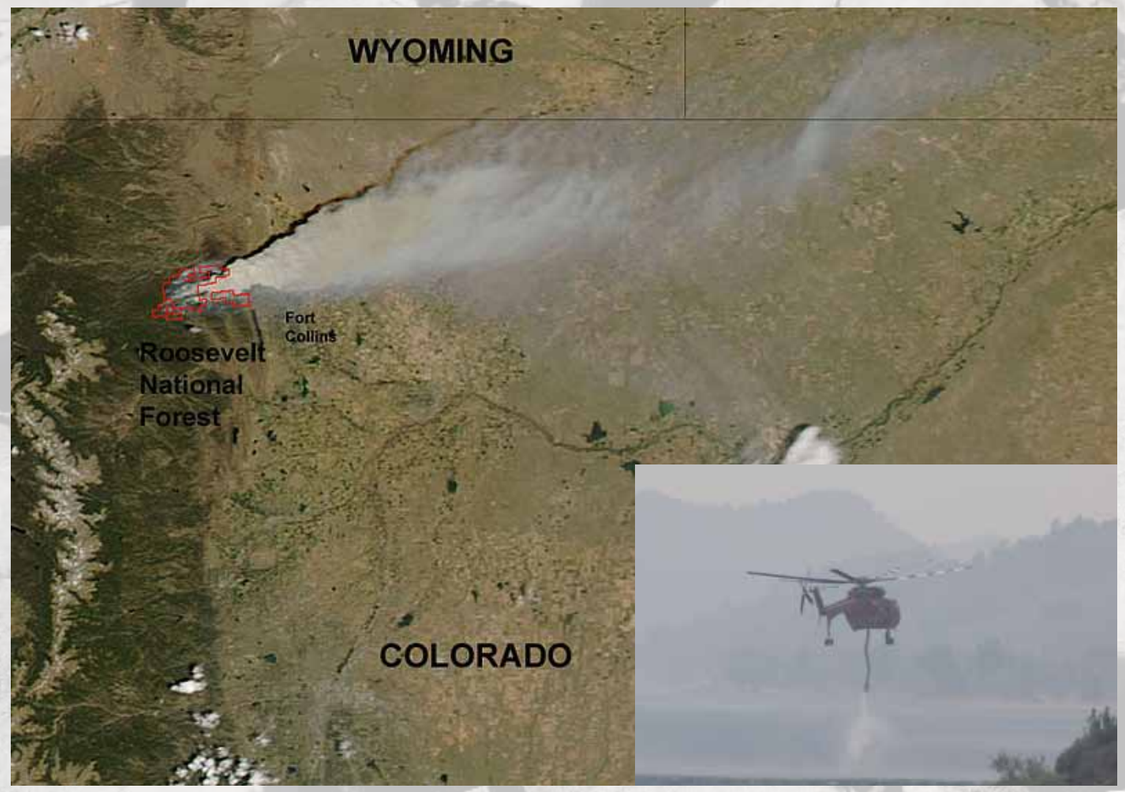
The Bakken formation, some 200,000 square miles of it, stretches across North Dakota, Montana, Native American reservations and parts of Canada's Saskatchewan province. According to most industry experts, the oil extraction is just beginning to hit its stride as companies vie for access to the estimated 4.3 billion barrels of crude believed to lie beneath the Bakken shale.

"I expect the impact area of the Bakken energy development will continue to expand," said Long.

"But whatever the future holds for our state, I am confident that the men and women of Reclamation will do what we've always done, which is work hard to adapt in order to fulfill our mission in service to people of North Dakota and of our nation."



Drought Fuels Epic 2012 Fire Season Across West



JUNE 10 - Satellite image of the High Park Fire burning in Northern Colorado. Photo courtesy: NASA. (Lower right) An air crane pulls water from Horsetooth Reservoir to help suppress the High Park Fire.

By Kara Lamb, Public Involvement Specialist, ECAO

It started as a lightning strike to a dead tree northwest of Fort Collins, Colorado.

The High Park Fire was no surprise. A low snowpack winter, drought conditions across the mountains and plains, and legions of beetle-kill pine provided the makings for a perfect fire storm.

"This is the fire we have feared," said Justin Smith, Larimer County Sheriff.

The High Park Fire burned more than 250 homes across 87,200 acres. It set a pace of 10,000 acres a day during its first three days. One person was killed. Thousands of Larimer County residents were evacuated from their homes.

High Park holds the record as Colorado's second largest fire in acreage burned (Hayman was larger). For a short time, it was also the state's most destructive, until the Waldo Canyon Fire started a week later. Waldo Canyon burned into the city limits of Colorado Springs, destroying more than 340 homes.

First spotted on June 9, the fire moved aggressively until July 1. For the first few days, features of the Colorado-Big Thompson Project were near the hot zone, which burned within a two-mile radius of Horsetooth Dam and Reservoir.

"We monitored the fire closely," said Howard Bailey, ECAO's Emergency Manager, who for a time was also a fire evacuee. "It shut down recreation at Horsetooth Reservoir over Father's Day weekend, but the nearest proximity was the top of the ridge to the west of the reservoir."

Since containment, Reclamation has supported the Northern Colorado Water Conservancy District and the Natural Resources Conservation Service in placing debris booms on Soldier Canyon Creek, which enters the reservoir northwest of Horsetooth Dam at Satanka Cove. The booms collect ash and other debris that wash down from burn areas during rain storms.

"They had a chance to prove themselves the weekend after Independence Day," said Lucy Maldonado, Natural Resource Specialist. "That was a big storm and the booms caught most of the ash and debris that came down the canyon."

Water stored in Horsetooth Reservoir has been largely unaffected by the fire. The local river system was not as lucky. Approximately a quarter of the Cache la Poudre River's watershed was burned by High Park.

Rainstorms and releases from private reservoirs upstream of the burn areas moved ash and sediment into the waterway. The additional material in the river, which local media described as "running black," posed a water treatment problem for municipalities who have water rights to access the river.

Horsetooth and the Colorado-Big Thompson Project provide a supplemental water supply to most of the communities impacted by the fire and served by the Poudre River. In response to water quality problems in the Poudre, Reclamation entered into excess capacity storage and exchanged contracts with the Tri-District that serves Fort Collins, Loveland and Greeley.

Largest Fires in Colorado History (acres burned)

1. **Hayman Fire (2002): 137,760 acres; 5 deaths; 16 injuries; 600 structures**
2. **High Park Fire (2012): 87,284 acres; 1 death; 250+ structures**
3. **Missionary Ridge Fire (2002): 71,739 acres; 1 death; 52 injuries, 56 structures**

(Below) Looking northwest across Horsetooth Reservoir towards Horsetooth Dam and Satanka Dike the afternoon of June 10.

With contracts in place, Tri-District will forgo using its Poudre River water rights, allowing irrigators to use that water instead. In exchange, the Tri-District uses the cleaner water irrigators have stored in Horsetooth.

"It's a win-win situation," said Bob Rice, contract specialist. "The extra sediment in the Poudre provides nutrients that can be useful to the farmers. Meanwhile, the municipal providers can easily treat the water from Horsetooth Reservoir, something they cannot do with the sediment in the Poudre River."

Additionally, the cities of Fort Collins and Greeley have indicated an interest to enter into additional excess capacity contracts next spring. Both cities anticipate the fire-related water quality problems on the Poudre River could continue for years.

Other work summarizing fire impacts to water supply are also underway. Reclamation received a copy of the High Park Fire Burned Area Emergency Response Report (www.larimer.org/highparkfire/bear_report.pdf) developed by the U.S. Forest Service in conjunction with an interagency Burned Area Response Assessment Team. The report identifies burn severity, models watershed response, identifies values at risk, and proposes treatments to protect those values at risk.

"This report gives us additional insight on how to mitigate fire impacts to water resources for fires like High Park and others we are likely to experience in the future," said Maldonado.

"We didn't see much impact from this fire because it moved north away from the C-BT canals instead of south," added Bailey. "We were fortunate."

Increasing workplace satisfaction and employee morale in the Great Plains Region

Take Action

2012 Survey Shows Employees Recommend Great Plains Region as a Great Place to Work

By Sterling Rech,
Public Affairs Specialist, GPRO

"Whatever affects one directly, affects all indirectly."
- Martin Luther King, Jr.

According to the 2012 Employee Viewpoint Survey results, morale and workplace satisfaction continue to improve in the Great Plains Region.

"When it comes to pay and benefits, federal employees have been feeling the pinch," said Great Plains Regional Director Mike Ryan. "But, the results of the 2012 EVS indicate that despite these stresses, employees in the Great Plains Region feel like this is a pretty great place to work."

In spring 2012, the 640 permanent employees of the Great Plains Region where asked to provide their perspective on the organization through the Employee Viewpoint Survey (EVS).

Through a series of 84 questions, they were asked what they see working, and what needs to be fixed. The results were issued in late November.

"The Take Action Team was quite eager to see the results of the survey," said Buck Feist, leader of the region-wide Take Action Team. "The survey results not only help us to gauge the well-being and morale of the organization, but they also indicate the effectiveness of the team's efforts, and where we need to direct more focus.

"We were pleased to see the Region moved up several spots in ranking compared to other units within Reclamation," said Feist. "Since the Take Action Team was chartered by the Regional Leadership Board in 2008, the organization has made steady improvements in areas ranging from trust and confidence in supervisors, to overall job satisfaction."

In 2011, the Great Plains Region increased performance appraisal scores for the fifth year in a row.

"When you equip employees with the right tools to advance their careers, there are benefits to both employees and supervisors," said Robin Scott, who leads the Take Action Initiative for ECAO. "Our programs are designed to provide a three-fold benefit: for the employee, for the supervisor, and for the organization," she said.

"When the employee is better prepared for their annual review, then the supervisor has a better idea of what to expect going into the review and a more meaningful discussion results. That's positive for the employee and the supervisor, and it also improves the culture of the region," she said.

The Take Action Initiative focuses on changing the conversation from 'what's wrong' to 'what's right' in the Region.

The team emphasizes existing opportunities and benefits for employees, such as training programs, salary and vacation packages, and the value of providing public service to the nation.

The TAI identifies existing tools like brag sheets. A brag sheet is a simple tool allowing employees to track accomplishments throughout the year, creating a more detailed and meaningful discussion during an annual review.

"It's a challenge sometimes to keep track of every single thing we do throughout the year," said Gary Brownlee, Take Action representative for OTAO. "Having the brag sheet is a simple way to archive our work so we don't miss anything for our annual review."

2012 - 2013 Take Action Initiative Team Members:

- **Nancy Wilson, NKAO**
- **Robin Scott, ECAO**
- **Gary Brownlee, OTAO**
- **Kevin Wilkerson, MTAO**
- **Craig Meredith, GPRO**
- **Maria Jensen, DKAO**
- **Alyssa Louria, WYAO**
- **Jerry Leggate, GPRO**
- **Sterling Rech, GPRO**
- **Buck Feist, GPRO**

TAI works to highlight relevant, meaningful information for employees, without overwhelming them with messaging.

Some offices have adopted employee newsletters that provide localized information that highlights significant events.

"Our newsletter has been very enjoyable to have," said Maria Jensen, DKAO's Take Action Initiative representative. "It's nice to see detailed information, specific to our office, about new employees, training opportunities, teleworking, progress on current project and even some fun things like recipes, local rummage sales, and event calendars. Sometimes we get so focused on our work, we forget how much our office accomplishes each month, and the newsletter is a perfect reminder of that," Jensen said.

In addition to the newsletter, DKAO also instituted a health challenge in 2012. "The health challenge was great," said Jensen. "It promoted health and wellness, while also creating some friendly competition in our office. It definitely generated a positive vibe among employees," she said.

TAI works to identify areas that can generate real improvement in employees' lives, whether equipping them with the tools to develop strong Individual Development Plans, chart top-tier training, encouraging participation in the Employee Viewpoint Survey or encourage new programs at the area office level.

As Ryan puts it: "There are many things to appreciate about being a Fed … the TAI helps bring those to light."

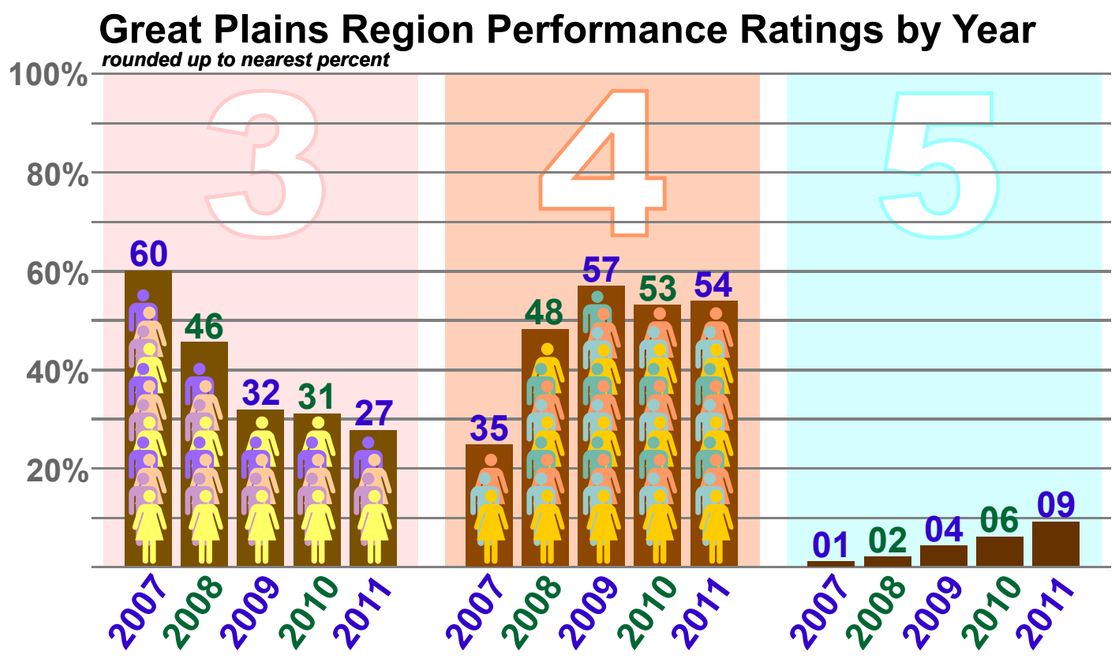
The TAI focuses improving workplace satisfaction in the Great Plains Region, and helping employees realize their full potential through the use of existing programs. The basic concept remains simple: show people what to do, give them the tools to do it, and get out of the way.

"Now, more than ever, it's important to let employees know they're appreciated for what they do," said Ryan. "As managers, we can't control everything that happens, but we can always take some time to thank someone for a job well done, and let them know that their work is making a difference in people's lives."

The complete EVS results are available on the Great Plains Regional Intranet. The survey will be used to target areas for emphasis and improvement.

For more information on TAI, please contact the representative for your office, or email Buck Feist at bfeist@usbr.gov.

One of the areas targeted by the TAI is performance appraisals, which have steadily improved over the past five years. The 2012 Employee Viewpoint Survey results show that employees regularly engage with their supervisors about performance, and that their leaders treat them with respect.



Fryingpan-Arkansas Celebrates 50 Years

By Kara Lamb, Public Involvement Specialist, ECAO

Attendees of the Fryingpan-Arkansas Project celebration release balloons into the air commemorating 50 years of project benefits, including irrigation, municipal and industrial water use, power delivery, recreation, and fish and wildlife preservation.

The weekend of August 17, Reclamation and the Southeastern Colorado Water Conservancy District hosted the 50th anniversary celebration of the Fryingpan-Arkansas Project.

Southeastern sponsored a commemorative dinner Friday night and the two agencies co-sponsored a public event day at Lake Pueblo State Park on Saturday, August 18.

Department of the Interior Assistant Secretary of Water and Science, Anne Castle, was the keynote speaker Friday evening.

In her address, Castle recalled President Kennedy's speech 50 years earlier, when he traveled to Pueblo to sign the project into law.

Anne Castle, Assistant Secretary for Water and Science, delivers the keynote speech at the FryArk celebration.

"I want to share a couple of excerpts (of that speech)," she told the crowd of approximately 300. "They are just as fresh today as they were in 1962."

Castle referenced other elements of Kennedy's speech, saying that everyone in the field of national resources has to plan during their period of office for the next generation, because no project we plan today will be beneficial to us.

She noted that Kennedy said, 'This project is an investment in the future of this country, an investment that will repay large dividends. It is an investment in the growth of the West.'

Senator Mike Bennet and Congressmen Cory Gardner and Scott Tipton joined the Assistant Secretary on stage.

Reclamation employees, Southeastern Colorado Water Conservancy District Employees and Southeastern Board of Directors outside the Lake Pueblo State Park Visitor's Center on the Fry-Ark Project's 50th Anniversary Public Event Celebration Day. Reclamation employees (L to R), Kara Lamb, Sarah Salber, Valda Terauds, Mike Collins and Linda Hopkins. Southeastern staff includes, Jim Broderick, Bill Long, Jean Van Pelt, Lee Miller, Tina White, Leann Noga, Ann Nichols, Tony Gonzales, and Christine Aborghast.

Together, they painted a picture of statesmanship and cooperation, a picture reflected by the long collaboration that brought the Fryingpan-Arkansas Project to life.

Each speaker also mentioned that the future is once again providing an opportunity for all interests to come together.

In recognition of that sentiment, Assistant Secretary Castle closed with another line from the President's speech: "I hope that today we will commit ourselves to this same kind of mutual effort, and not regard those projects which aid our cities as inimical to Colorado, or those projects which help our farmers as taking it away from our cities," she said.

"All those benefits have resulted from diverse interests working together in mutual effort. I think President Kennedy would be proud," Castle said.

The Fryingpan-Arkansas Project provides potable water for more than 720,000 people, and irrigation for 265,000 acres. The project is the largest hydro-electric powerplant in the state, and is world renowned for recreation opportunities from the Fryingpan River to the Arkansas River.

Benefits Provided by the Fryingpan-Arkansas Project

- Water for 12 counties, over 720,000 people, and 265,000 irrigated acres
- Flood control benefits
- Recreation opportunities on the east and west slopes of the Continental Divide
- Clean energy, the largest hydro-electric plant in the state of Colorado (Mt. Elbert), which produces enough power to serve 40,000 homes annually
- Two privately owned powerplants
- Option for Lease of Power Privilege currently under development at Pueblo Dam

Counting the Hours:

Great Plains Employees Contribute Generously to Leave Transfer Program

Leave Transfer Program recipient Ron Birdwell, Supply Technician, GPRO

By Tobias Taylor,
Visual Information Specialist, GPRO

"Most people do not realize the importance of the leave share program until they find themselves in a situation of needing to utilize it themselves," said Ron Birdwell, Supply Technician with the Regional Office.

"I was one of those people, and then I found myself in need of extended time off that I could not cover with the amount of leave that I currently had.

"I am extremely thankful to all who donated leave to me in my time of need and now realize how valuable this program is," Birdwell said.

"I had extreme pain in my lower cervical neck that was caused by three compressed disks. I had a spinal fusion on all three that required time to heal," he said.

"The leave share program is one of the best ways to help people in need and I will be donating leave to help others in the future and hope those who read this do the same. Thanks again to those who helped me and to whoever came up with this program, I salute you and say thanks."

The Voluntary Leave Transfer Program was established to permit employees to donate annual leave directly to another Federal employee (excluding the leave donor's immediate supervisor) who has a personal or family medical emergency, and who has exhausted his or her available paid leave.

The program is temporary in nature and intended to meet short-term needs for leave in excess of the employee's current leave balances.

"The program is very good to have in place for employees in need of leave," said one leave transfer recipient, who wished to remain anonymous. "In order to assist in my recovery of surgery it helped out a great deal, and the generosity of the donations is very kind. A big thank you to all who have donated on my behalf."

Donated leave may be used only for the purpose of the medical emergency for which the leave recipient was approved. The donated annual leave may be substituted retroactively for periods of leave without pay. It can also be used to liquidate indebtedness for advance annual or sick leave granted on or after the date the medical emergency began.

There is no maximum accumulation of donated leave and no restrictions on the amount that can be carried forward from one leave year to the next.

From January 2011 to September 2012, a total of 1,672 hours of leave were donated, which equals slightly less than 42 weeks.

Employees in the Great Plains Region are very generous with their donations to the Leave Transfer Program. From January 2011 to September 2012, a total of 1,672 hours of leave were donated. Put into days and weeks, it would equal a total of 209 days or a little less than 42 weeks.

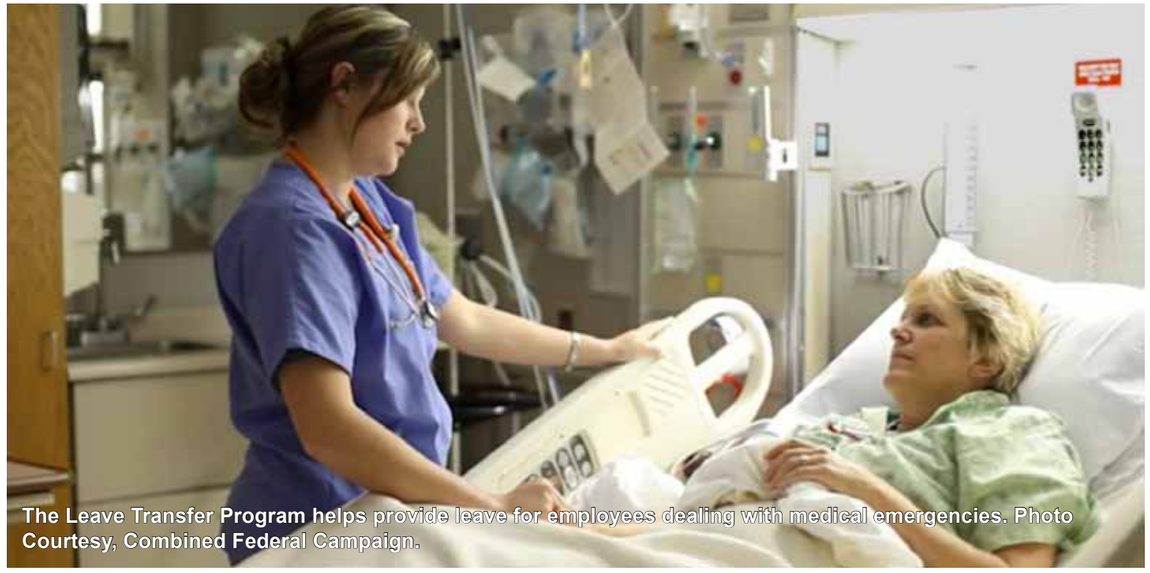
In the same time frame, a total of 1,224 hours of the donated leave have been used by Leave Transfer recipients, a total of 153 days or a little more than 30 weeks.

Any unused donated leave remaining to a leave recipient when the medical emergency ends is restored to the donors. Once transferred leave is restored to a leave donor, the leave is treated the same as other annual leave and becomes subject to the annual leave "use or lose" carryover limitation.

A leave donor can opt to have this leave restored during the current leave year or the next leave year, or can donate all or part of the leave to another leave recipient.

"The BOR Leave Share Program has been of great benefit to me in helping me to take care of my Mother in her time of need," said Steven Petry, Electrical Engineer with the Montana Area Office. Without it, I would also be facing financial hardships on top of the hardships associated with a very sick, potentially terminal, family member. It is a very valuable program and those that donate hours are silent heroes. Thanks to all for your donations and kind words."

For more information about how to donate leave or become a Leave Transfer recipient, please contact Renette Kaline 406-247-7721 or Kathy Nave 406-247-7769.

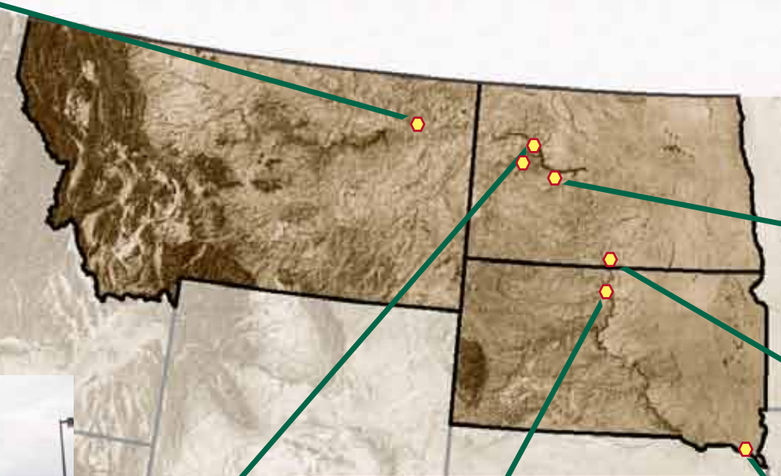


The Leave Transfer Program helps provide leave for employees dealing with medical emergencies. Photo Courtesy, Combined Federal Campaign.

Rural Water Comes of Age

By Patience Hurley, DKAO & Jerry Leggate, GPRO

Reclamation staff were on the road across three states, in summer 2012, celebrating major project milestones with the completion of water treatment plants. Funding from the American Recovery and Reinvestment Act, worth $163.9 million, played a key role in getting these projects constructed. In total, work on seven water treatment plants was completed providing water service to more than 264,000 people.



Fort Peck / Dry Prairie

The Wambdi Wahachanka Water Treatment Plant, near Poplar, Mont. serves 28,000 people in Northeastern Montana. The plant, constructed by the Fort Peck Tribe, will serve the reservation as well as other communities in the state through the Dry Prairie Rural Water Association.

Reclamation has been able to deliver a total of $47.4 million of American Recovery and Reinvestment Act (ARRA) funding for the Fort Peck/Dry Prairie Rural Water System through FY2012.

Wambdi Wahachanka Water Treatment Plant dedication held August 14.

Four Bears and Mandaree

The Four Bears and Mandaree Water Treatment Plants addressed need for increased water supplies to meet population growth and industrial demand across the Fort Berthold Indian Reservation in central North Dakota.

Concrete pad poured October 2011 for the Mandaree Water Treatment Plant expansion.

Many rural homes throughout the project service area previously relied on groundwater supplies characterized by poor water quality and limited availability. The completion of this project has allowed more than 3,000 people to be served with a reliable, high quality water supply.

The two projects received more than $8.3 million in American Recovery and Reinvestment Act funding. It allowed expansion of the existing plants and a number of upgrades including pumps, process controls, and construction of a new clearwell at Four Bears.

Construction of the 185,000 gallon Four Bears clear well.

Standing Rock

The Standing Rock Rural Water System is envisioned to ultimately serve every resident of the Standing Rock Reservation. The new water treatment plant has a design capacity of three million gallons per day which is about 50 percent more than the three previous treatment facilities combined. The design also allows future expansion of up to five million gallons per day if required.

American Recovery and Reinvestment Act funds covered more than $16 million of construction for the project including a new Lake Oahe intake, pump station and approximately 13 miles of raw water transmission pipeline connecting to the new water treatment plant.

Project Engineer Tom Thompson explains the Standing Rock filtration system during a tour.

Oliver, Mercer, North Dunn

The Oliver, Mercer, North Dunn Water Treatment Plant treats Lake Sakakawea water to serve three counties of the same name. Part of the Southwest Pipeline Project in North Dakota, it will also provide water to about 1200 rural residents in surrounding communities.

The Southwest Pipeline Project serves 12 counties in North Dakota and has been under construction since 1986. American Recovery and Reinvestment Act funded $11.9 million toward the Oliver, Mercer, North Dunn portion which is the last service area of the project under construction.

DKAO Area Manager Dick Long visits with Southwest Water Authority Manager Mary Massad in the treatment plant.

Lewis and Clark

The Lewis and Clark Regional Water System extends through five counties in southeast South Dakota, two counties of southwest Minnesota, and four counties of northwest Iowa. The completed project will address concerns regarding quality, contamination vulnerability, and insufficient supply for communities served by the project.

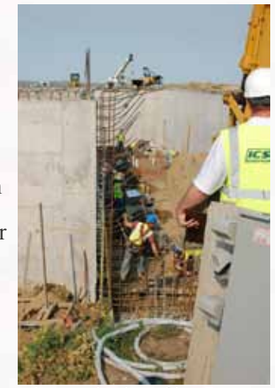
The dedication celebration marked delivery of water to 11 communities from the Missouri River. The treatment plant is expected to pump water to 300,000 people in 20 communities including an additional nine communities.

(left to right) Arden Freitag, Dick Long, Commissioner Mike Connor, Mike Ryan and Ted Hall pose in front of the project construction timeline.

Emmons County

The Emmons County Water Treatment Plant increased supply to the service area which could not be served through their existing water treatment plant near Bismarck, N.D. Previously, more than 4,500 people relied on groundwater supplies that were poor in quality and quantity.

The project received about $19.9 million in Recovery Act funding to cover costs for engineering, membrane procurement and the water treatment plant building.



Initial construction of the Emmons County WTP.

Reclamation Partners with Corps to Save Endangered Sturgeon

The pallid sturgeon is an endangered species of ray-finned fish, found in the waters of the Missouri and lower Mississippi River basins. Photo: Nebraska Game and Parks Commission.

By Paula Holwegner,
Administrative Officer, MTAO

Pallid sturgeon are one of the rarest native fish in the Missouri and Mississippi River basins.

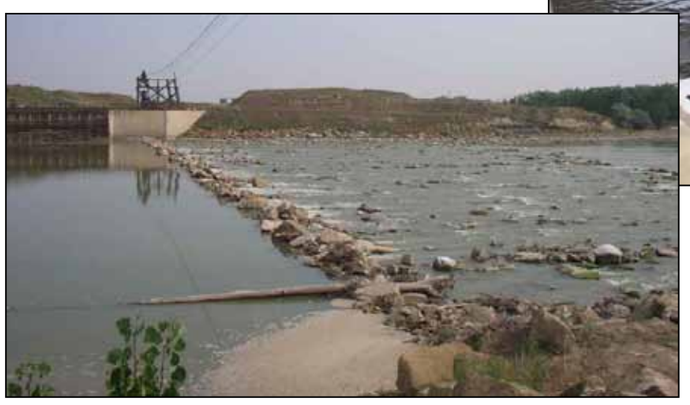
The declining native population of mature pallid sturgeon in the Yellowstone River and Missouri River between Fort Peck Dam and Lake Sakakawea is expected to be extirpated if reproduction and survival of young fish does not improve.

For this reason, Reclamation and the U.S. Army Corps of Engineers jointly constructed a new head-works with fish screens to reduce entrainment into the Lower Yellowstone Project main canal at Intake, Mont. The Corps and Reclamation continue to work cooperatively to provide passage at the diversion dam.

Prior to canal screening, an average of 500,000 fish of 36 species were annually entrained at Intake Diversion. Many of these were native fish and their death rate was high.

Installation of fish screens on the canal headworks has minimized entrainment of native fish and will protect pallid sturgeon once passage is achieved.

The project is a testament to the finest traditions of our nation, with a diverse array of agencies, interest groups and citizens pulling together to accomplish a common goal, one of our most important tasks, which is the protection of our environment for our citizens and future generations.



(Left) Intake Diversion Dam near Intake, Mont. (Above) Prior to canal screening, an average of 500,000 fish were annually entrained at Intake Diversion Dam.

Bonny Dam and Reservoir

McCook, Neb., after Republican River Flood of 1935.

By Nancy Wilson,
Administrative Officer, NKAO

It started back in 1935, when the Republican River flooded an area from eastern Colorado through southwestern Nebraska and into Kansas, causing millions of dollars in damage and killing more than a hundred people.

Because of this flood, and the potential for others, the 1944 Flood Control Act authorized the Bureau of Reclamation to construct Bonny Dam and Reservoir.

Construction of Bonny Dam began December 8, 1948, and was completed May 4, 1951.

Initially, the dam and reservoir's primary purpose was for flood control, but it became a prime recreational destination for fishing, boating, hiking, hunting, camping, and wildlife activities.

Colorado's Department of Game and Fish reached an agreement with Reclamation just after the completion of the project to manage the fish, wildlife, and recreational assets of the reservoir, as well as federal land around the lake.

In 1979, Colorado transformed the area into a State Park.

In 1982, Colorado entered into a 40-year contract with Reclamation for use of the conservation storage in Bonny Reservoir for recreation, fish and wildlife purposes.

The future of the reservoir came into question when, in 1998, the State of Kansas filed a petition with the Supreme Court.

The petition stated that Kansas was not receiving the agreed upon share of water supply according to the 1942 Republican River Compact, a tri-state compact between Colorado, Nebraska, and Kansas.

Bonny Dam and Reservoir, May 2012.

In 2003, the Supreme Court ruled that the State of Kansas was owed billions of gallons of water.

After years of negotiations, the decision was made by Colorado officials to drain the reservoir, utilizing their contract with Reclamation, in order to reduce their compact obligations.

In September 2011, draining of the reservoir began. Once a 1,900 acre lake, the water dropped an average of 2 inches per day.

By mid-November, the lake was at 5 percent of its peak size and by March 2012, the reservoir was almost completely empty.

All that remains today of the former reservoir is a sea of green and a few pools of water if it happens to rain.

Although the recreational water activities are currently limited, there are still other outdoor opportunities available.

In October 2011, the Colorado State Parks and Wildlife transitioned Bonny from a State Park into a State Wildlife Area.

Hunting, hiking, and primitive camping is available. The area is an excellent location for photography and wildlife and bird watching enthusiasts.

Currently, the Colorado State Parks and Wildlife is working with Reclamation, Yuma County Commissioners, and other organizations to determine what lies ahead for the land and existing facilities.

Dam Modifications Protect Population, Prevent Floods and Provide Jobs

Placing embankment materials for the raising of Glendo Dam and construction of concrete parapet wall on the far side.

By Jay Dallman, Natural Resource Specialist, WYAO

The Bureau of Reclamation is modifying Glendo Dam and Dikes, and Guernsey Dam and Spillways under Reclamation's Safety of Dams Program.

As the state-of-the-art has evolved for estimating extreme hydrologic events, it became evident that the potential for severe flooding is significantly greater than the estimates used for the original design and construction of the facility. The highest overall risk at Glendo Dam is associated with the possible overtopping of the earthen dam and/or dikes during a large flood event. Flood waters overtopping one or more of the earthen embankments would lead to rapid erosion and embankment failure resulting in the sudden uncontrolled release of the reservoir storage.

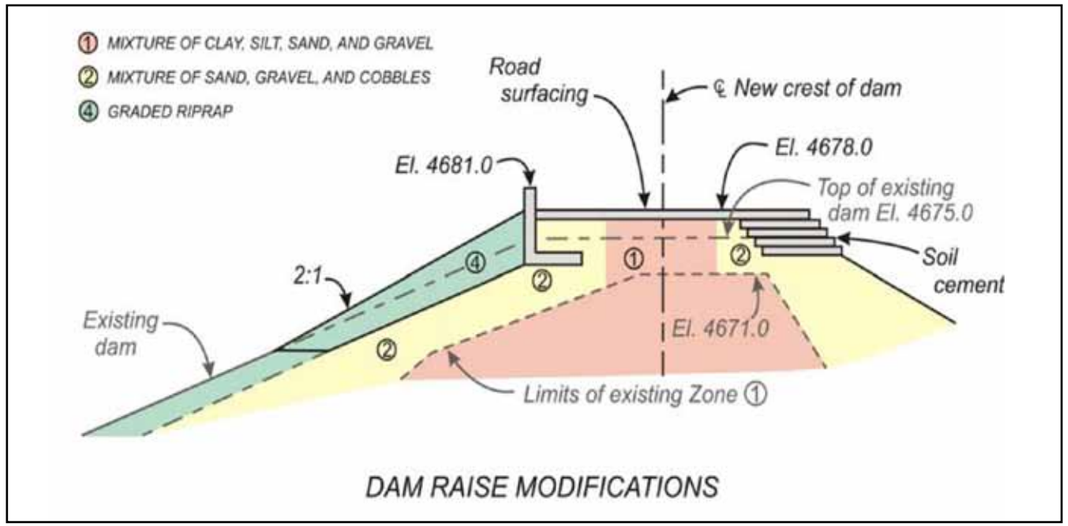
The objective of Reclamation's Safety of Dams Program is to ensure Reclamation facilities do not present unreasonable risks to the public, public safety, property, and/or the environment, while reducing and managing risks in an efficient and cost effective manner.

The need for corrective actions to address identified public risks at Glendo is based on significant changes in the state-of-the-art design and construction techniques since the dam was constructed in 1958. The original design of the dam and dikes did not adequately address the flood loading and resulting overtopping risks.

Glendo Dam was designed and constructed to accommodate the Probable Maximum Flood (PMF) estimated from data and methods available at the time of original construction of the dam.

The overtopping failure of Glendo Dam would also result in the overtopping failure of Guernsey Dam located 25 miles downstream of Glendo Dam, and

(Left) Placing roller-compacted concrete in the foundation trench for Glendo Dam's auxiliary spillway. (Right) The crest section for the auxiliary spillway constructed on the roller compacted concrete.



Kingsley Dam (owned and operated by Central Nebraska Public Power and Irrigation District) 200 miles downstream of Glendo Dam. The overtopping failure of Glendo, Guernsey and Kingsley Dams would place a population of more than 210,000 at risk, with an expected life loss between 30 and 110 individuals, and property damage in excess of $41 billion.

Such a catastrophic failure would cause not only loss of life and property damage, but also a significant loss of project benefits.

Lost project benefits include power, irrigation, recreation, Municipal and Industrial (M&I) water supply, and flood control benefits.

Without Glendo Reservoir, approximately 20,248 acre-feet of irrigation water and 1,300 acre-feet of M&I water would not be available for annual delivery.

In addition to the loss of power generation at Glendo, it can be presumed that power generated at the upstream Fremont Canyon and Alcova Powerplants for the months of October through April would be lost as water used to generate power would be held above Alcova and delivered as needed for irrigation.

The ability to make winter releases from Gray Reef Reservoir and restore the water in Glendo Reservoir would also be lost. Consequently, associated benefits such as water quality maintenance and fishery enhancement in the North Platte River derived from the sustained winter flows would also be lost. The annual value of the lost project benefits (agriculture, hydropower, recreation, M&I water, and flood control) in 2008 dollars would be approximately $31 Million.

The overtopping and failure of Glendo Dam would result in extensive environmental damage to the ecosystem from Glendo Dam on the North Platte River to potentially the confluence of the Platte River with the Missouri River near Omaha, Neb.

Extensive turbidity, siltation, debris flow and destruction of vegetation would occur along the flood pathway. In addition to environmental damage, infrastructure damage would also occur. There would be impacts to power lines, railroad lines, roads, and bridges.

At Glendo, a number of proposed design modifications were considered. The selected alternative is a multi-faceted approach consisting of 4 key elements: (1) Constructing a new auxiliary spillway, capable of passing a 100,000 year flood, in the hillside just east of Dike No. 3 in the area between Glendo Dam and Glendo Dikes, (2) Raising the dikes 6 feet, (3) Raising the dam 3 feet and (4) Adding a 3 foot concrete parapet wall to the top of the dam. To accommodate these modifications, approximately 1.3 miles of Glendo Park Road had to be permanently relocated.

According to Larry Schoessler, Regional Construction Engineer,

the designs for the modifications at Glendo were prepared by the Technical Service Center (TSC) and construction oversight is being performed by the Construction Services Group in Reclamation's Great Plains Regional Office (GPRO), operating out of a field office established at the job site. The construction contractor is Johnson-Wilson Constructors, Inc., of Helena, Montana.

"As a result of information obtained during high reservoir elevations in 2011, the work on the dikes is being deleted from the current contract to allow a reconsideration of alternatives for repair to the dikes," said Schoessler.

"When final designs are completed, a separate contract will be issued for the work on the dikes. The original contract work is scheduled to be complete in the summer of 2013, and the dike modification contract will follow," Schoessler said.

At Guernsey, the modifications include redesigning the south spillway, installing a filter blanket type drain next to the north spillway, and adding a new, taller parapet wall to the top of the dam.

The TSC performed the design work and the GPRO Construction Services Group will oversee the construction from its Glendo Field Office. Award of a construction contract is pending and work will begin in fall 2012.

This combined approach addressing SOD deficiencies at both Glendo and Guernsey Reservoirs ensures continued structural integrity under all reasonably expected operating conditions and maintains full authorized project benefits at current levels.

(Above) Workers placing miscellaneous fill material over geocomposite barrier on upstream slope of cofferdam.

(Above) Workers installing geocomposite barrier on upstream slope of auxiliary spillway cofferdam.

The total cost for the SOD mitigation work at Glendo and Guernsey Dams is expected to be $65 million. Modifications authorized under the SOD Act require 15 percent repayment which would be $9.8 million. The reimbursable functions for Glendo Dam are irrigation and power. Irrigation will be responsible for 12 percent ($1.2 million) and power will be responsible for 88 percent ($8.6 million) of the estimated reimbursable costs. A repayment contract will be executed with the Wyoming Water Development Commission on behalf of the irrigators.

During the SOD construction period, Glendo State Park will be open year round and the marina is expected to remain open through their normal season of May through Sept. Recreation may be affected from construction traffic and noise; however, no recreation areas or boat ramps will be closed.

Guernsey State Park will also remain open during the normal May through Sept. season, but the reservoir level will be held at elevation 4400 (about 20 feet lower than normal) and the road over the embankment dam will be closed to the public from Jan. 1, 2013 through March 31, 2014 to facilitate the necessary construction activity.

Wyoming will extend their boat ramps so that boaters will be able to access the reservoir pool during the summer 2013 recreation season. It is anticipated that construction will be completed prior to the 2014 recreation season.

Youth Initiative Provides Opportunity for College Grads

(Above) Tawny Taylor, a recent graduate of Oklahoma State University, and member of the Environmental Stewards Summer Program, demonstrates seining techniques to a group of young campers while collecting exhibits for Fish Day.

By Kim Parish,
Administrative Officer, OTAO

The Bureau of Reclamation's Oklahoma-Texas Area Office (OTAO) recently hired an Environmental Stewards Summer Program (ESSP) member to assist the Oklahoma Tourism and Recreation Department (OTRD) to fill a temporary naturalist position at the Discovery Cove Nature Center, Norman Project, Okla.

When OTAO approached OTRD in early 2010 about using the Secretary's youth initiative to assist them with conservation projects, this vacancy was one of their top priorities.

After a few unsuccessful attempts to find a youth program that could fill this vacancy, we had just about given up on the idea until the ESSP became available. The new program was a perfect fit to fill this position.

The ESSP is a 10-week program administered by the Southwest Conservation Corps based in Durango, Colo. The program is designed to place members with watershed/community improvement groups and agencies across the country to participate in conservation projects.

The member receives a $2,000 living stipend and a $1,132 education award upon successful completion of the program.

The nature center had been operating on reduced hours and only five days a week due to state budget restraints.

The addition of the summer intern allowed the nature center to resume regular hours and be open seven days a week. The Norman Project hosts around one million visitors each year, so the nature center receives a lot of visitation and is an important educational component of the project.

OTAO was responsible for recruiting a member to participate in the program, and contacted local universities and professors to find qualified applicants.

Reclamation was able to recruit Tawny Taylor, a recent graduate with a major in Zoology from Oklahoma State University. Foreseeing that housing could be problematic, OTRD offered to provide a travel trailer for Taylor to use while working at the nature center.

During Taylor's 10-week tenure at the nature center she participated in multiple presentations, crafts days, informational programs, nature walks, and also was in charge of caring for the live exhibits.

The internship was a huge success for OTAO, OTRD, and most importantly Taylor.

It provided her with work experience and exposure to several potential employers, and Taylor said it best by saying, "the time I spent here has given me valuable experience that I can use to pursue my zoological career."

OTAO and OTRD are planning to utilize this program to fill this vacancy for future years if funding is available.

Great Plains 2012 Photo Contest

More than 50 images were submitted for the 2012 GP Photo Contest, and more than 210 votes were cast.

Joe Rohde, Physical Security Specialist (GPRO), wins first place with his photo of Bob Marshall Wilderness beyond the river outlet works gate hoist gears of the Sun River Diversion Dam. Brenda Landrie, Office Automation Clerk STEP (GPRO), earns second place with her scenic photo of Yellowtail Reservoir, Mont. Chan Worley, Supervisory Contracting Specialist (GPRO), takes third place with his photo of wide open Wyoming as viewed from the Bighorn Mountains.

Keep an eye out for all the photo contest images in a variety of Reclamation publications, including the 2013 GP Region Calendar, Plains Talk Magazine, presentations and in our multimedia gallery on the Intranet at www.usbr.gov/gp/multimedia. The entire gallery of images has been submitted for display on the multimedia screen in the Commissioner's Reclamation office in the Main Interior Building.

Thank you photographers for the great images! And thank you everyone who took the time to view the photos and vote for their favorite.

1st Place

Bob Marshall Wilderness beyond the river outlet works gate hoist gears of the Sun River Diversion Dam (photo by Joe Rohde).

2nd Place

Yellowtail Reservoir, Montana (photo by Brenda Landrie)

3rd Place

Wide Open Wyoming as viewed to the southwest from the Bighorn Mountains (photo by Chan Worley).

Cowboy Academy Members Expand Glendo Trail System

(Above) The first Glendo State Park trail building Volunteer Day.

(Right) Members of the Wyoming Cowboy Challenge Academy and other volunteers build a rock feature.

By Jay Dallman, Natural Resource Specialist, WYAO

In an effort to diversify use and add recreational opportunities, Wyoming State Parks, Historic Sites & Trails (SPHS&T), began building a trail system at Glendo State Park in fall 2009.

The Bureau of Reclamation's Glendo Reservoir is the heart of Glendo State Park, which is managed for recreation by SPHS&T.

When complete, the trail system will be approximately 65 miles, located mostly in the eastern part of the park, providing recreational opportunities to compliment water-based activities at Glendo State Park.

Based on the success of the recently developed trail system at Curt Gowdy State Park near Cheyenne, Wyo., SPHS&T hopes to see an extended season and a new crop of low impact users at Glendo.

Glendo State Park is fairly remote but well situated to entice recreationists who might be taking advantage of trail opportunities in Rapid City, SD; along Colorado's Front Range; or at Curt Gowdy State Park.

Glendo trails are in response to public interest. In 2009, WSPH&T conducted a survey. One of the questions was: *What facilities and services do you like to see at parks?* Hiking and biking trails came in second behind parking.

Another question was: *What activities did you participate in?* More than 64 percent of the responses said they hiked and biked. Public demand is high, yet there are currently very few trails in the Wyoming State Parks System.

As of late summer 2012, there were 17 miles of trails completed at Glendo, with another five miles planned for completion before the snow flies.

The hub of the trails system is Two Moon Campground, with 98 campsites and facilities such as water, restrooms and parking.

The longest trail, the Narrows Bluff trail, is six miles in length, stretching from Sandy Beach to the Glendo Dam overlook.

This fall, a 350-foot floating bridge was constructed over Hytrek draw, near the Sandy Beach Campground portion of the trail system.

(Below) Wyoming Challenge Academy members blazing trail.

(Above, left) The National Civilian Community Corps (NCCC) hard at work building a trail.

This area becomes inundated with water at high reservoir capacity, resulting in muddy conditions as the water recedes. After the 2012 season, trail construction efforts will shift southward to the Sand Draw area of the park.

New users are already discovering the trail system at Glendo State Park, and all the benefits it provides: opportunity to spend quality time in nature with friends and family; discovering awesome views of Laramie Peak at Sunset Point; relaxation provided by an early morning or after-dinner evening walk with the dog (on leash, of course!); and physical exertion from pushing up that last hill and burning off s'mores from the night before.

According to Paul Gritten, the SPHS&T Non-Motorized Trails Coordinator, the trails have been built with the help of volunteers, interns, seasonal employees, park staff, the Wyoming Conservation Corps, Wyoming Cowboy Challenge Academy (formerly Wyoming National Guard - Youth Challenge Program), and a trail contractor.

"Our trail construction program has received ongoing support from sports shops in Casper, Wyo., and Scottsbluff, Neb. Ragged Edge Sports, and Sonny's Bike Shop sponsored lunches at volunteer events held in 2012. Some Northern Colorado bike shops have also provided considerable support for the trail construction project," Gritten said.

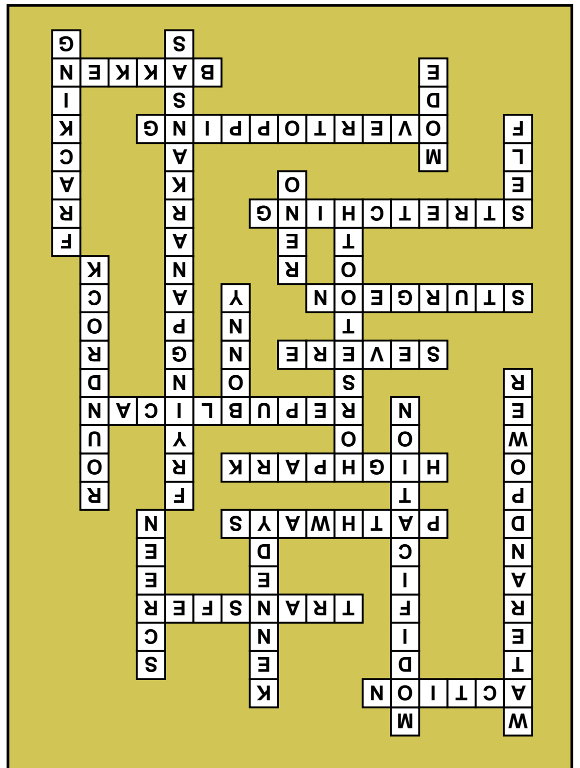
This trail construction project has provided an opportunity for the community to come together and support their state park.

In July 2012, SPHS&T introduced a large-format map of the Glendo State Park Trail System, containing both the completed and proposed trails. The map will be used in marketing and promotion of the trails system, and illustrates the range of difficulty levels and features designed into the trails.

The trail system includes basic entry level trails and trails with progressive features for cyclists looking to enhance their skills.

The full 65 miles of trails is scheduled for completion in 2015.

Members of the NCCC install a cattle guard on Narrows Bluff Trail.



ANSWERS TO THE CROSSWORD PUZZLE, PG. 32

Renewing Waters

Montana's Crow Tribe begins modernization of their 100 year old irrigation system

"You'll never forget this day," Alden Big Man Jr., told construction workers and a small crowd of onlookers during ceremonies near the headgate. "They will always remember it as a turning point in Crow history."

Dignitaries participated in a groundbreaking for the rehabilitation of the Crow Tribal Irrigation System on September 24. The rehabilitation fulfills a long-held dream of self determination for the Crow People by providing reliable water delivery for irrigated agriculture on the reservation.

The Reno Diversion (shown here) will be among the first of more than 2,300 structures to be replaced. Many of the irrigation features are more than 100 years old. The rehabilitation will be coordinated by the Crow Tribe Water Resources Office in cooperation with the Bureau of Reclamation.

The groundbreaking was part of the Crow Tribe Water Rights Settlement which brings more than $460 million to the Crow Nation to ensure safe drinking water for the reservation and rehabilitate the irrigation project. About $132 million will be spent on the irrigation system on the 2.3 million-acre reservation.

Alden Big Man Jr., Director, Crow Tribal Water Resources

Photo Tips

Three Common Mistakes in the Use of Images

Color Shift

Changing the hue of a photograph affects the perception of the scene.

The Solution: The camera's original color balance is sufficient to Reclamation's needs. Altering images in documents to correct lighting conditions is typically not necessary.

Stretching

This happens when images are moved, or sized incorrectly. The result (above) is that a clock that should be round becomes oval. These images are distracting when used in presentations - especially when human figures are grossly distorted.

The Solution: Always size images carefully to maintain the aspect ratio. In Microsoft Word always use the handles at corners not the sides. Another option is to crop an image into the general shape needed in the document instead of crushing the image as was done to the one below.

Cropping Gone Bad

Too few image pixels remain to render detail in the document.

The Solution: Use a higher resolution image if possible. Showing the full image with a frame to identify the intended detail is preferable to the fuzzy image and provides more information.

Falling for the Puzzle

All answers can be found in this edition of Plains Talk

ACROSS

3 take _____
6 leave share
7 intern program
10 Colo. second largest wildfire
12 1935 flood
14 GP drought
15 endangered fish
18 most obvious photo error in presentations
20 dramatic safety of dams concern
21 N.D. oil formation

DOWN

1 phrase - Reclamation mission
2 Glendo and Guernsey improvement
4 supported Pueblo Dam
5 avoids fish entraiment
8 two word golden project
9 two word Texas reuse city
11 reservoir used to fight Colo. wildfire
13 Colorado reservoir now empty
16 diversion first replaced by Crow Tribe
17 oil production technology
18 tribal ____ determination
19 programmed setting for digital cameras

Puzzle answers on page 29.

2012 GP Engineer of the Year

John Freetly (left) receives the Great Plains Engineer of the Year Award from Regional Director Michael Ryan. John was selected because of his engineering judgement and professional integrity.

"The American Recovery and Reinvestment Act funded life safety improvements at Wyoming facilities were the most challenging work I had this past year."

John Freetly
2012 Engineer of the Year

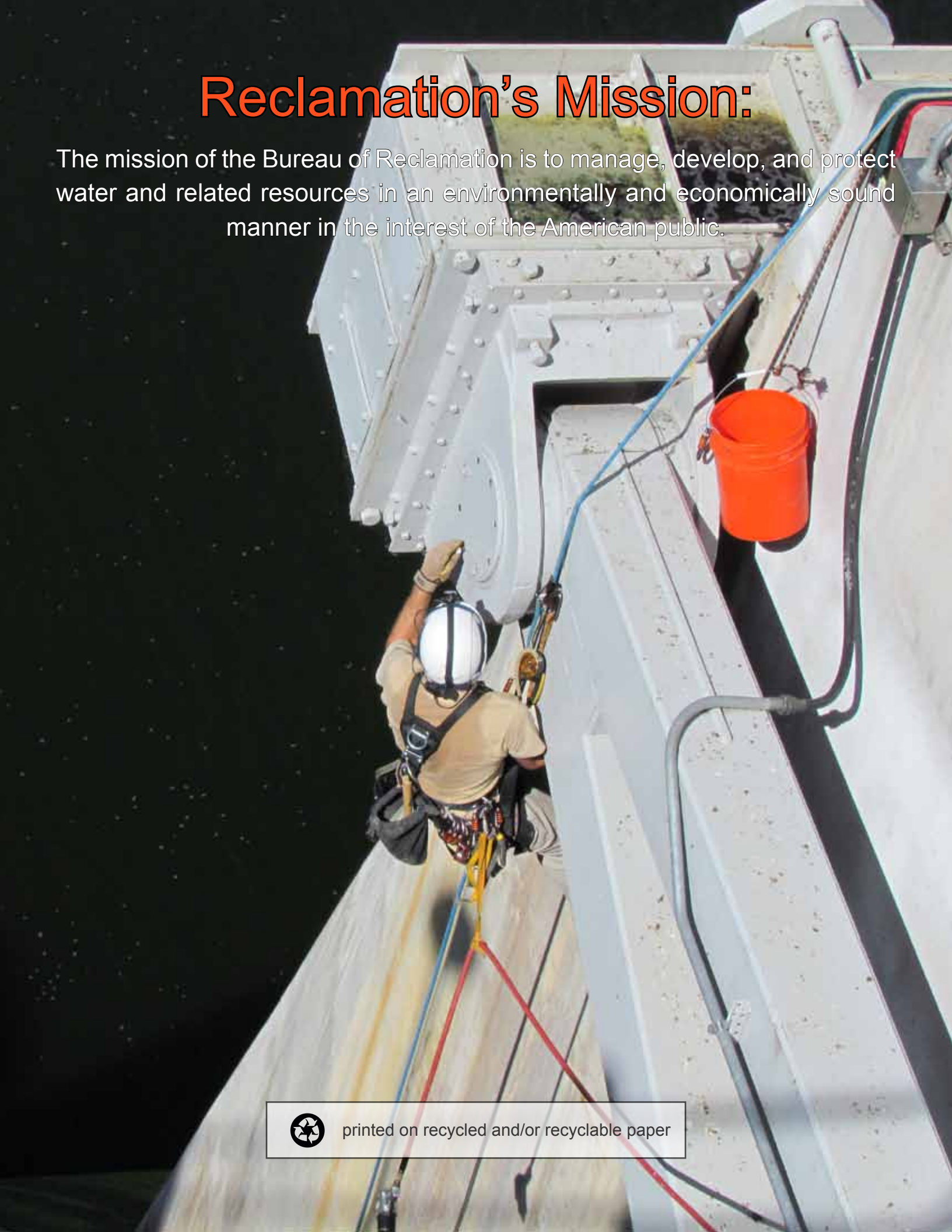
New roof hatch installed above Seminoe Powerplant Unit Number 1.

Moving a section of concrete wall removed to install an emergency exit at Kortes Powerplant.

Guernsey Powerplant

Reclamation's Mission:

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.



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