

OKLAHOMA CONSERVATION CONVERSATION

Information for and about Oklahoma's Conservation Districts

Volume 56, Issue No. 9 September 2010

The True Cost of Unrestrained Development

Cottonwood Creek Sites 15 & 54

The upstream flood control dam Cottonwood Creek Site No. 15 in Kingfisher County, known locally as Simmons Lake, is scheduled to be decommissioned. That means the dam will be removed and water will no longer be impounded. The landscape will be shaped, graded and replanted to return to as close to original condition as possible. The irony is that there is nothing wrong with the dam or the lake. It is in good condition, well maintained and functioning just as it should.



Development downstream has changed Cottonwood Creek Site No. 15 to high hazard status.

Local landowners there will miss the lake, but understand the reasons behind this action. When the dam was built in 1967, the location was rural and in the unlikely event that it happened to breach, no loss of life was likely. Therefore, it was built to low hazard dam specifications. In the intervening years, development downstream and placement of homes in the breach inundation area has required, by state law, that the dam be reclassified as a high hazard dam. Modification of the dam is now required to minimize the risk of dam failure.

In a typical rehab design, the principal spillway tower and outlet pipe through the dam might be replaced and the height and depth of the dam increased to hold more water of a longer period frequency flood event than the original design. An average cost for rehabilitation as stated is estimated at about \$1 million per dam in Oklahoma.

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Oklahoma AML Program Wins Reclamation Award

OCC's Abandoned Mine Land Reclamation Program (AML) is one of five state agencies in the nation to win an Abandoned Mine Land Reclamation Award from the U.S. Office of Surface Mining. The awards were presented at the National Association of Abandoned Mine Land Programs' annual conference. This year's NAAML program conference was held in Scranton, Pa., Sept. 19-22, 2010, with the awards banquet on Sept. 20.

The Office of Surface Mining (OSM), an agency within the U.S. Department of Interior, presents the Abandoned Mine Reclamation Awards to recognize outstanding abandoned mine land reclamation in the United States and showcase exemplary reclamation techniques. Past award winners have encompassed all types of reclamation, including coal, non-coal, and emergency projects.

The Oklahoma AML Program won the OSM award for its 61st Street North SW Abandoned Mine Land Reclamation Project in Broken Arrow. The abandoned strip pit coal mine with a highwall and spoil piles was located just one mile east of Broken Arrow High School in one of the fastest growing areas of the state. Large boulders placed strategically north of 61st Street failed to deter the temptation to use the area for unauthorized recreation including all-terrain vehicles and gun target practice. With the paving of 61st Street and the completion of several new houses, traffic in the area increased and so did the number of unauthorized "fun seekers."

The 61st Street North SW AML Project was one phase of the original 61st Street North AML site, which totaled 155 acres. As a Minimum Program State with limited AML funding, the site was phased by using Adams Creek to divide it into two phases. This site was one of Oklahoma's high priorities, but with minimal funding it had not been reclaimed.

When the Oklahoma Conservation Commission's AML staff received a call from one of the new homeowners across from the site, the situation changed. The landowner reported that he had heard shots fired across 61st Street from the AML site. He became very concerned when he discovered a 22-caliber slug lodged in the door frame of his front porch. With a 20-foot dangerous highwall extending approximately 1,950 feet along the west side of the project site, accompanied by a 20-foot deep hazardous water body, spoil piles, and now a "non-permitted firing range," it was time to move the 61st Street North SW AML site to the top of the AML selection list.

Work began at the site in May 2008. The contractor used an air curtain burner to burn small timber and brush at the site. The air curtain burner creates a high pressure wall of air blowing directly into the top of the burn pit to force smoke back into the

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Our vision:
Responsible care for Oklahoma's natural resources.

Our mission:
To conserve, protect and restore Oklahoma's natural resources, working in collaboration with the conservation districts and other partners, on behalf of the citizens of Oklahoma.

www.conservation.ok.gov

Conservation Calendar

For more events and information, click on
“Calendar of Events” at
www.conservation.ok.gov

Conservation Commission Meeting, Oct. 4, Oklahoma City

Women in Ag & Small Business State Conference, Oct. 14-15, Oklahoma City

Governor’s Water Conference, Oct. 26-27, Norman

Renewable Energy Funding Workshop, Oct. 27, Oklahoma City

OACD Area III Meeting, Oct. 27, Claremore

Conservation Commission Meeting, Nov. 1, Oklahoma City

OACD Area I Meeting, Nov. 4, Beaver

OACD Area IV Meeting, Nov. 9, Chickasha

Veterans Day Holiday, Nov. 11

OACD Area II Meeting, Nov. 16, Oklahoma City

OACD Area V Meeting, Nov. 18, Wilburton

Thanksgiving Holiday, Nov. 25-26

Conservation Commission Meeting, Dec. 6, Oklahoma City

Tulsa Farm Show, Dec. 9-11, Tulsa

Christmas Holiday, Dec. 24

New Year’s Day Holiday, Dec. 31 2011

NACD Annual Meeting, Jan. 30 - Feb. 2, Nashville, Tenn.

Cottonwood, continued from page 1 Due to a new housing development in close proximity to the auxiliary spillway, rehab design for Cottonwood 15 requires a complex concrete spillway running up the cost estimate to over \$9 million. An analysis of the benefits to cost ratio, considering the cost of property and structures protected compared to the construction cost, does not justify rebuilding the dam. The most cost effective plan to help protect human life is to remove the dam.

There are more than 2,100 upstream flood control dams in Oklahoma, many of them reaching the end of their design life expectancy. Of those, 229 are classified as high hazard. The USDA Natural Resources Conservation Service has a program to rehabilitate the dams provided federal funding is available as well as state matching funds. Funds are limited from both sources.

“We can’t rehabilitate the dams as fast as developers can build homes and businesses downstream,” said Mike Thralls, executive director of the Oklahoma Conservation Commission. “The result is a situation where new homes and businesses are unnecessarily placed in harm’s way because of unrestrained development,” he said.

A “sister” dam to Cottonwood 15 is Cottonwood Creek Site No. 54, about 15 miles to the east in Logan County. Also originally built as a low hazard rural dam, Cottonwood 54 is in a similarly-problematic situation but with its own unique ramifications. There, also, development downstream gives the dam a high hazard classification requiring modification. But in this case, homes are built around the water’s edge, some with boat docks in the water. Inhabited buildings in that close proximity precludes raising the height of the dam, according to Chris Stoner, NRCS state conservation engineer. Instead, the rehab design calls for the permanent pool level to be lowered 4.3 feet by lowering the opening at which water will start to enter the principal spillway tower and run out the pipe to flow downstream. That will provide the needed flood storage to meet current dam safety criteria. The sponsors anticipate that this plan will not be popular with the landowners around the lake, but it is the best and most cost-efficient compromise the designers have come up with to protect the landowners around the lake and downstream and still meet dam safety requirements.

Of the 229 high hazard dams in the state, 88 of them were either originally designed as high hazard, have already been assessed or rehabilitated or are in rehabilitation process. In 2010 the Oklahoma Legislature passed House Bill 1884 directing the Conservation Commission, with help from the USDA Natural Resources Conservation Service and local conservation districts, to perform assessments on the remaining 141 high hazard dams and to map the breach inundation areas. That effort is underway and is expected to be completed in September 2011. To perform the same assessment on the remaining nearly 1,900 flood control dams in the state would require approximately \$14 million in funding according to OCC and NRCS estimates.

“One goal of identifying all the breach inundation areas of the state’s flood control dams would be to support action at the state Legislature that would prevent developers from building homes or business in those areas,” Thralls said. “Or possibly to pay a fee for a permit to build in those areas, with the funds, hopefully, used to offset the cost of dam rehabilitation,” Thralls said..

AML Award, continued from page 1 flame where it is consumed. The result is a greatly reduced impact to air quality from smoke in the area. Large timber was separated and transported to Henryetta and used to construct wooden pallets.

Final inspection was held in June 2009. A change order added 47 additional days for a total of 374 calendar days. Fifty acres were reclaimed and approximately 2,000 feet of dangerous highwall and one hazardous waterbody were eliminated. The contractor was successful in returning the site to its original contours. Not only were the 5.96 acres of original wetlands maintained, but 4.28 acres of new wetlands were added. Nearby Adams Creek was protected with the creation of buffer zone along its south bank and final grading of the site directed water runoff away from the creek. Students from Oklahoma State University helped plant vegetation in wetland areas. Members of the Oklahoma State University Student Chapter of the Society of American Foresters planted 2,000 bare-root trees at the site. The city of Broken Arrow was pleased that the reclamation work provided an overall increase in floodplain storage.

“There are \$100 million worth of these abandoned mine land projects in the state, posing hazards to public safety,” said Mike Kastl, OCC’s AML Program director. “With our current federal funding of \$2.4 million a year, we can only address the projects that pose the very greatest and most immediate threat to public safety. Obviously, with more funding we could address a lot more of these potentially dangerous abandoned mine projects,” Kastl said.

In our thoughts...

Iona Hunter, retired Dewey CCD secretary, had bypass surgery following a heart attack on Aug. 10.

Coleta Bratten, Dewey County CD secretary, is undergoing therapy following knee replacement surgery on Aug. 17.

George Fraley, Rogers CCD director, OACD Area III director and past president, and husband of Wilma Fraley, NRCS Tech Office clerk, was hospitalized following a heart attack on Sept. 2.

Ron Stone, Grant County CD director, was hospitalized for a brain aneurysm in August.

Congratulations!

Chris Best, NRCS soil conservationist, Fairview FSC, and wife Carmell had a baby boy, Christopher Dewayne Best, on Aug. 17.

Jeremy Lovekamp, NRS soil conservationist at the Chandler FSC, and wife Lindsay had a baby boy, Camden Thomas Lovekamp, on Aug. 27.

Awards & Recognition

Jim Leach, OCC/WQ cost share/finance director, was recognized at the September 2010 Commission meeting for 30 years of service to OCC and the state of Oklahoma.

Brooks Trammell, OCC/WQ monitoring coordinator, was recognized at the September 2010 Commission meeting for 15 years of service to OCC and the state of Oklahoma.

Jason Ramming, OCC/WQ specialist, was recognized at the September 2010 Commission meeting for 10 years of service to OCC and the state of Oklahoma.

Kevin Gustavson, OCC/WQ project coordinator, was recognized at the September 2010 Commission meeting for five years of service to OCC and the state of Oklahoma.

No-Till Wheat Flour Mill Open House

The Southern Plains Agricultural Resources Coalition (SPARC) in cooperation with Great Plains Resource Conservation and Development Council (RC&D) hosted an Open House event at P Bar Farms near Hydro on Sept. 7. The farm is the location of a new flour mill to produce whole wheat flour from wheat grown only by farmers practicing no-till farming. The sponsors and farmers hope this venture will be a successful marketing project that develops a premium-priced market for “identity-preserved” wheat grown using no-till techniques. By “identity-preserved” wheat, the sponsors’ intention is that it will be possible to open a bag of flour from the mill, know who the farmer was who grew the wheat, and hopefully in the future take a virtual tour of his farm via the Internet. Immediate benefits include making flour available that will qualify for the Oklahoma Farm-to-School program and that bakeries can confidently label as grown in Oklahoma.

Loren Liebscher, owner of P Bar Farms, has incorporated the flour mill, Stone Stack Mill, into the overall education and Agritourism experience at his business which is also the location of *The Maize*, an intricate pattern of twists and turns carved into a seven-acre cornfield. The mill building has a small classroom with a window allowing students to watch the mill in operation. From here they can go into his main classroom for his bread baking demonstration, except now this demonstration will be done with flour milled on site instead of store-bought flour. The flour will also be available for sale in the Country Store at the farm.

“The incentive for the wheat farmer is being paid mill price that is much higher than grain elevator price for his flour,” said Larry Wright, Great Plains RC&D coordinator. “The goal is to help encourage more farmers to practice no-till farming techniques that are more ecologically sustainable than traditional techniques and help prevent soil erosion and improve water quality,” Wright said.



Bagged whole wheat flour



The Stone Sack flour mill for no-till wheat is located at P Bar Farms, home of “The Maize” near Hydro.



The wheat flour mill machinery



SPARC and Great Plains RC&D members, co-sponsors and partners gather in front of the mill for a photo op. (Front row, from left) Jamey Allen, Oklahoma Dept. of Agriculture; Jason Young, FAPC; Ryan McMullen, state director of USDA Rural Development; (partially visible) Dale Beerwinkle, Caddo Kiowa Technology Center; David Eyster, SPARC member (his wheat was used to make flour for the Open House demonstration); Stan Rice, RC&D member; Loren Liebscher, owner of P Bar Farms; Kem Crowell, Caddo Kiowa Technology Center; Stacy Cramer, Chisholm Trail RC&D coordinator; Burke Covey, SPARC member; Chris Kirby, ODA Farm to School Director; Bryan Cauthon, Caddo Kiowa Technology Center chef; Lori Coats, ODA Agritourism; Larry Wright, Great Plains RC&D coordinator; Keith Brownback, Caddo Kiowa Technology Center.

Lt. Gov. Jari Askins keynotes Women in Ag at Muskogee “See the Market – Seize the Opportunity”

Lt. Gov. Jari Askins opened the Women in Agriculture and Small Business Conference in Muskogee on Sept. 14 with a keynote address. She emphasized the important roles women have played in state history and how vital the economic health of rural Oklahoma is to the state. She encouraged participants to explore opportunities for agritourism endeavors to augment their agricultural businesses. “Oklahoma is the number one state in the nation for entrepreneurial endeavors,” she said.

“Planning for Entrepreneurs” was one of the topics featured in concurrent sessions during the daylong conference. Other topics included small farm marketing, mineral rights for landowners, agritourism opportunities, and retirement and estate planning.

State and federal agency leaders were introduced at the luncheon. Those were Mike Thralls, executive director, Oklahoma Conservation Commission; Ron Hilliard, state conservationist, USDA Natural Resources Conservation Service; Ryan McMullen, state director, USDA Rural Development; Francie Tolle, state director, USDA Farm Service Agency; and Clay Pope, executive director, Oklahoma Association of Conservation Districts.

Miss Rodeo Oklahoma 2011, Jamie Virden of Pauls Valley, presented a closing address in the afternoon. “Rodeo is a family-oriented sport that is a constant reminder of a simpler way of life than the fast pace world we live in today,” she said. “It revolves around hard work, dedication and determination to be successful, and these values can be called upon to teach the youth of America strong morals and ethics,” she said.

Approximately 130 people attended the event whose theme was “See the Market – Seize the Opportunity.” Sponsors were the Muskogee County Conservation District, Okmulgee County Conservation District, Natural Resources Conservation Service, Farm Service Agency, Rural Development, Farm Credit and the Muskogee and Okmulgee County Cattlemen’s Associations.

(From left) Mike Thralls, OCC executive director; Trish Kloeckler, Muskogee CCD secretary; Jamie Virden, Miss Rodeo Oklahoma 2011; Francie Tolle, FSA state director; and Ron Hilliard, NRCS state conservationist.



(From left) Jamie Virden, Miss Rodeo Oklahoma 2011; Lt. Gov. Jari Askins; and Trish Kloeckler, Muskogee CCD secretary.



Cedar Hollow Blue Thumb Fish Collection

Blue Thumb staff performed fish collection at Cedar Hollow Creek near Tahlequah on Aug. 9, 2010. Accompanying Blue Thumb's Cheryl Cheadle, state coordinator; Kim Shaw, education coordinator; and Bill DeShazo, part time employee, were Blue Thumb monitoring volunteers Gary and Elaine Wickham who regularly monitor the stream. Nick Shepherd, Blue Thumb intern, and Mark Harrison, OCC public information officer, also participated.



Examining the contents of the seine are, from left, Elaine Wickham, Kim Shaw, Bill DeShazo, Cheryl Cheadle, and partially obscured by bush) Gary Wickham.

Fish collections are made from Blue Thumb streams in summer, usually between July and October. A 400-meter reach of the stream is seined, and fish species are both recorded and collected. Fish have different tolerance levels to pollutants and habitat changes, making them good indicators of stream health. Fish collections in monitored streams are performed once every five years.

As a fish collection is made, volunteers and staff members perform a habitat assess-

Mailing Tab Area

ment of the stream. Information such as stream depth and width is recorded at set intervals. The type of stream substrate is noted, and whether or not there exists "cover" for fish, like logs in the water, undercut banks, or rock ledges. The amount of shade over the stream and stream bank condition are documented.

The weather had been dry in the area preceding the fish collection on Aug. 9. Most of the water flowing through Cedar Hollow Creek at the time was traveling subsurface, but there was enough water flowing and pooled up in places for the sampling to proceed.

"It's pretty rare to have as little water during a fish collection as we had on the Cedar Hollow site that day," Cheadle said.

Another indication of stream health comes from the collection of benthic macroinvertebrates performed each year in summer and winter. Macroinvertebrates such as insects, snails, worms, and leeches that live in the water. Often the insects do not look familiar to



us, because most of the insect life in the stream is in larval form, meaning they are not yet adults. As adults, most will fly away and later use the stream to lay eggs and begin the life cycle over. Some need high levels of dissolved oxygen and virtually no pollutants to thrive. Others might be found in most any waters.

Darters were the most numerous fish species represented, but crawfish (left) were also present in abundance.

WORKSHOPS & TRUNKS

Project WET Workshops
Karla Beatty, 405.521.2384

Project Learning Tree
Workshops or Trunks
Christina Stallings, 405.521-3864

Project WILD Workshops
Lisa Anderson, 405.521-3857

Oklahoma Conservation Conversation
Oklahoma Conservation Commission
2800 N. Lincoln Blvd., Suite 160
Oklahoma City, Oklahoma 73105-4201
405.521.2384, FAX: 405.521.6686
<http://www.conservation.ok.gov>

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Commission Members

Area I Matt Gard
Area II Mike Rooker
Area III George Stunkard
Area IV Dan Lowrance
Area V Jim Grego

Editing and Layout — Mark Harrison
email: Mark.Harrison@conservation.ok.gov
Proofreading and Reviewing — Charlotte Stieber
and Ben Pollard

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Published by the Oklahoma Conservation Commission
2800 N. Lincoln Blvd., Suite 160, Oklahoma City, Oklahoma 73105-4201

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