CLEARING THE WATERS

Newsletter

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This newsletter is published quarterly by the Watershed Protection Section of the New Mexico Environment Department's Surface Water Quality Bureau. Funding provided by a CWA §319(h) grant from EPA.



Identifying the Stressors and Creating Solutions for Embudo Creek By Mike Matush, Watershed Protection Section

Embudo Creek near the community of Dixon, New Mexico is listed as impaired for turbidity and stream bottom deposits. The impaired reach is approximately 7.8 miles long and drains 29.4 square miles. The source of impairment is believed to be valley development combined with arroyos that have been graded as roads to provide access to homes in the watershed. The increased disturbance of soils causes erosion which increases the sediment load to Embudo Creek.

The goal of this project is to produce an updated Watershed-Based Plan with a focus on providing quantitative information on sediment. Arid Lands Institute, based out of Woodbury University in Burbank, California will be measuring turbidity or suspended sediment for two years establishing a regression tying suspended sediment concentrations to temporal turbidity at a measured stream stage. This will produce a temporal sediment concentration



Winter 2014



Upstream (Background) turbidity monitoring station.

to sediment loading curve reactant to localized climate and watershed stressors.

Two in-stream monitoring stations have been established. To collect background water quality data, one is located above the area impacted by development, and the other is downstream of the impacted area to collect sediment loading data. The methods used to determine sediment loading

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from arroyo and road features will be the Revised Universal Soil Loss Equation and the Unit-Stream Power-based Erosion Deposition Equation. These two methods will provide spatial information on the location of areas with high erosion risk and the location of those areas that experience deposition. Relative erosion and deposition rates will then be estimated for different land use alternatives and conservation strategies. The follow-up method that determines the best management measure or best management practice that reduces sediment delivery will be the Spreadsheet

Tool for Estimating Pollutant Load.

Within the project boundary, quantification of in-stream suspended sediment loading will be accomplished using two approaches, a direct automated field sampling measurement approach and an indirect, automated estimation approach. While collecting water samples and estimating suspended sediment loads, the automated sampling station also measures turbidity coupled with ultrasonic-sensed stream stage information. Developed by the USDA Forest Service, the system continuously measures turbidity values triggered by changes in stage height or flow velocity resulting in a practical means of estimating suspended sediment concentrations and suspended sediment loading. The indirect method utilizes an auto-logging in-stream optically-sensed turbidity meter. This approach



Volunteer training session at the automated sampling station.

relies on the assumption that a clear and unique relationship between measured turbidity and sediment concentration exisits. Both monitoring/sampling stations are equipped with an Axiom datalogger with a built-in Geostationary Satellite Server transmitter (GOES). The GOES communication system is operated by the National Oceanic and Atmospheric Administration providing real time data on in-stream optically based turbidity, water temperature, stream stage height and precipitation enabling users to download information from their home or office desktop.

The public outreach program has mobilized local residents for ongoing monitoring which includes training on the sampling equipment. A technically proficient team has been trained and organized providing support that ensures the proper functioning of the equipment, water sampling placement, recalibration of sensors, retrieval of auto-logging data, data entry and data management.

For more information on the project *An Updated Watershed-Based Plan for the Lower Embudo Creek* contact Mike Matush at <u>mike.matush@state.nm.us</u>, 505 827-0505, or Peter Arnold at <u>peter.arnold@</u> <u>aridlands.org</u>, <u>peter.arnold@woodbury.edu</u>, and <u>www.aridlands.org</u>.

Public Comment Opportunity

You can help craft New Mexico's Nonpoint Source Management Program!

Through April 7, the New Mexico Environment Department is requesting input from the public and cooperating agencies on the draft Nonpoint Source Management Plan, available at

www.nmenv.state.nm.us/swqb/wps/Plan.

Information on the revision will also be presented at two public meetings, listed on the events page. Thank you for your interest and participation in this important public process!

Water Quality Standards Update

Triennial Review:

The NMED Surface Water Quality Bureau announced a 30-day scoping period for the Triennial Review during this past spring which ended on May 15, 2013. A public discussion draft is expected to be posted on the website in January 2014 to be followed by opportunities for the public and interested parties to provide comments. The hearing schedule for the Triennial Review is expected to be announced during the spring of 2014, with hearings tentatively scheduled for the end of summer in 2014 (August/September). This schedule is subject to change, so please refer to the Surface Water Quality Bureau's webpage for updates: www.nmenv.state.nm.us/swqb for updates. You may also register to subscribe to the NMED SWQB Updates & Notices Newsletter; the web address is:

http://nmenv-it.nmenv.state.nm.us/Listserv/RPD/?p=subscribe&id=4

Other Water Quality Standards

The EPA has approved the designation of perennial streams and lakes, and also identified wetlands, on U.S. Forest Service wilderness areas in New Mexico as Outstanding National Resource Waters (ONRW). The new ONRW designations came with significant revisions to the Antidegradation Policy and Plan, and new Antidegradation Implementation Procedures in the Water Quality Management Plan (WQMP). The rules and procedures are applicable to point source discharges, and provide guidance for nonpoint source discharges in ONRWs. These revisions, adopted by the Water Quality Control Commision on November 30, 2010, were approved by EPA on April 11, 2013. A strikeout-underline version showing approved revisions to the Definitions (20.6.4.7 NMAC), the Antidegradation Policy and Plan (20.6.4.8 NMAC), and the new ONRW listings (20.6.4.9 NMAC) can



Rio Nambe, an Outstanding National Resource Water (ONRW) in the Pecos Wilderness.

be viewed at: <u>www.nmenv.state.nm.us/swqb/documents/swqbdocs/Standards/2010/20.6.4NMAC-Amendments7,8+9-2010-12-15.pdf</u>

Please see <u>www.nmenv.state.nm.us/swqb/Standards/#ONRW</u> for more information about ONRWs and about the antidegradation procedures for ONRWs.

All antidegradation procedures outlined in the WQMP are available at: www.nmenv.state.nm.us/swqb/Planning/WQMP-CPP.

Visit the NMED Surface Water Quality Bureau Water Quality Standards website for updates (including recent EPA approvals) at: www.nmenv.state.nm.us/swqb/Standards.

There's still time to respond to the Clearing the Waters reader survey!

Please weigh in, at <u>www.surveymonkey.com/s/DYBTNNZ</u>!

So far, we only have 35 responses to the survey!

Clearing the Waters

Winter 2014

Watershed Monitoring Strategies

Bacteria Impairment in the Lower Rio Grande in New Mexico: Monitoring Strategies for Source Identification. By Chris Canavan

In 2004, NMED conducted an intensive water quality survey in the El Paso-Las Cruces Watershed (USGS HUC 13030102) which documented an exceedance of the New Mexico Water Quality Standards for *Escherichia coli* (*E. coli*). As a result of this and prior data collected by other entities, a TMDL was calculated for the main stem of the Rio Grande in New Mexico below Elephant Butte Dam. The resulting document,

Total Maximum Daily Load (TMDL) for the Main Stem of the Lower Rio Grande (from The International Boundary with Mexico to Elephant Butte Dam) was completed in 2007.

In July 2006, the Paso del Norte Watershed Council (Council) received a CWA 319(h) grant to develop a watershed-based plan (WBP) for the Paso del Norte watershed. The accomplishments of this planning effort included



a surface water quality data review, an extensive a n a l y s i s of existing biological data and

stakeholder outreach. The stakeholders determined the available information was insufficient to identify the sources of the *E. coli* impairment and complete a WBP.

A second 319(h) grant was awarded in 2009 to determine the sources of impairment and complete the WBP. One of the primary components of the project was a multi-year *E. coli* monitoring program. Seven routine river sampling sites



Figure 1: Water Quality Sampling Sites July 2008-December 2011.

were co-located at stream gaging stations (Figure 1) to assist in differentiating stormwater flow from base flow and the subsequent relationship to *E. coli* concentration. Sampling of agricultural drains was also conducted. During the course of the study, sampling of the drains was modified to focus on specific drains where elevated *E. coli* concentrations were identified. In addition, some opportunistic sampling of arroyos during stormwater runoff events was also conducted.

The goal of the monitoring effort was to identify the primary sources of *E. coli* impairment and estimate the associated pollutant loading from the sources identified. To identify the sub-basins or areas within the watershed that may be contributing to the water quality impairment of *E. coli* there were four primary objectives:

- Determine the primary sub-watersheds where *E. coli* loading is likely to originate (spatial).
- Determine the seasonal conditions when increased *E. coli* loading occurs (temporal).
- Determine the percent contribution of *E. coli* loading from both spatial and temporal sources.
- Identify the host sources of *E. coli* from the spatial and temporal sources.



Samples were collected by the hydrology staff at the Elephant Butte Irrigation District (EBID) in conjunction with their ongoing water quality monitoring program. A swing sampler mounted on a 12

foot extension pole was used for sample collection from the channel away from near bank flow eddies. Other parameters were measured in the field including temperature, pH, turbidity, conductivity and dissolved oxygen (Figure 2:).



Figure 2: EBID staff member collects a sample for E. coli analysis with the swing sampler.

From July 2008-December 2011 only 7% of the samples exceeded the 410 cfu/100mL criterion for *E. coli* (Table 21). Out of those 15 samples, 7 were directly related to stormwater runoff events and 6 of those occurred during a single thunderstorm event on July 26, 2010. With the exception of the July 26, 2010 event, elevated *E. coli* concentrations at Anthony were unrelated to stormwater runoff. The drains in the upper part of the watershed had several instances of elevated *E. coli* concentrations in the early stages of the

monitoring program, but no clear pattern developed. The drains at the bottom of the watershed continued to show elevated concentrations of *E. coli*. Mesquite Drain and East Drain were identified as problem areas. None of the exceedances in the drains were associated with stormwater runoff events. As a result of these efforts, a

Station	n	CFU/100 mL>410	Percent	Average, CFU/100 mL
Cabalo	32	a	.	25
Haynor	30	2	7%	111
Leasburg	33	1	3%	105
Picacho	29	1	3%	77
Mesila.	29	1	3%	75
Anthony	30	5	17%	200
Sunland Park	32	5	16%	346
Total	215	15	7%	135

Table 1: Summary statistics for routine E.coli sampling on the RioGrande.

"hotspot" in the vicinity of Anthony NM was identified.

To further deliniate the sources of *E. coli* in the Anthony area, three of the river sampling sites and one drain site were chosen for source tracking analysis which further analyzes samples with high *E. coli* concentration by examining genetic markers that identify the organism from which the *E. coli* originates. The Leasburg station above Las Cruces was chosen to provide background information upstream of the hotspot area, two sites were chosen at the bottom of the watershed at Anthony and Sunland Park, and the fourth site was located in East Drain in Anthony.

Over the two year study, 376 E. coli were source tracked from all the sites. The largest percentage of isolates from the river was tracked to birds (Figure 3), which are typically waterfowl in the absence of commercial chicken operations. Livestock was composed of cattle (12%) horse (8%), and the remaining 4% distributed between pig, sheep and goat. All of the natural sources (avian+wildlife) summed together at all four sites accounted for 49% of the E. *coli* typed while the anthropogenic sources (livestock+pets+sewage) accounted for 38%, and the rest of the *E. coli* (13%) being unidentified.

Sources of *E. coli*had similar percentages at the Leasburg and Sunland Park sites, with natural sources comprising 53% of the total at both sites (Figure 4). Anthropogenic sources (livestock+pets+sewage) were also similar, with Leasburg at 27.3% and



Figure 3. Summary of E. coli sources averaged at all four sites. The top three sources were bird, livestock and wildlife.



Figure 4. Sources of E. coli from Leasburg and Sunland Park representing the upper and lower reaches of the study area.

Sunland Park at 31.5%. However, Sunland Park had 2.9 times more sewage sources. There were also relatively few horse sources at Sunland Park (3.1%) compared to Leasburg (8%).

Compared to Leasburg and Sunland Park, the samples collected at Anthony and in the nearby East Drain showed significantly higher anthropogenic sources (Figure 5). The highest percentage of cattle *E. coli* was isolated from Anthony (15%) and East Drain (14%). Similarly, the highest sources of horse-derived *E. coli* were found at East Drain (12%). Compared to the three river sites, the average percentage of sewage-originated *E. coli* at East Drain was significantly greater at 13.3%.

From this limited study it appears that East Drain is a significant source of humanderived *E. coli* (which, by definition, is an indicator of human pathogens, ie. microbes which cause human disease). Compared to the sewage-derived *E. coli* in the river at Anthony (5.4%), when the East Drain (13.3% sewage *E. coli*) discharges into the Rio Grande it would more than double the amount of pathogen-indicating microbes.

The NMED-SWQB conducted a water quality survey in 2011 examining a wide variety of potential pollutants as part of its regular monitoring program. Samples were collected from all the river stations in the EBID monitoring program and from all the wastewater treatment facilities (WWTF) from Truth or Consequences, N.M to the international boundary with



Figure 5. Sources of E. coli identified at the Anthony (river) and East Drain sites.

Mexico. There was only one exceedence of *E. coli* in the main stem of the Rio Grande and that occurred at Courchesne Bridge on August 18, 2011. However, the South Central Regional WWTF exceeded the criterion of 410 cfu/100mL on three out of six of the sampling dates, while the Sunland Park WWTF exceeded the criterion four out of six of the sampling dates. These results corroborate with earlier studies suggesting that some of the *E. coli* impairment at the lower end of the watershed may be attributed to point source discharges from WWTFs.

This monitoring effort determined that the *E. coli* exceedences in the upper watershed above Mesilla primarily correlate with stormwater runoff, while exceedences in the lower watershed may occur from stormwater runoff, but primarily correlate with non-stormwater flows. The data clearly identify a trend of exceedence of the 410 cfu/100mL criterion for *E. coli* at the bottom of the watershed. The source tracking study further identified specific areas of concern, and the percent attributable to anthropogenic activities. The 2010-2012 survey conducted by NMED identified problems at two WWTFs at the bottom of the watershed. As a result, the following conclusions were made:

- The *E. coli* exceedence in the reach above Mesilla is primarily related to stormwater runoff.
- The *E. coli* exceedence in the reach from Anthony to the international boundary with Mexico is primarily related to non-stormwater flows.
- Mesquite Drain and East Drain contain high levels of *E. coli* and may be a significant source of *E. coli* to the lower watershed.
- Two WTTFs in the lower watershed may be a significant source of *E. coli* to the bottom of the watershed.

Based on these results targeted management measures were recommended for both the Mesquite Drain and East Drain as well as the South Central and Sunland Park WWTFs. For a more detailed discussion on the monitoring results and information on proposed management measures see the draft WBP at:

http://smiley.nmsu.edu/pdnwc/docs/2013/pasodelnorte_watershed%20based%20plan.pdf.

Clearing the Waters

319 Pr0gram Update

New Projects Beginning in 2013 By Abe Franklin, WPS Program Manager

The Watershed Protection Section and cooperators are beginning three new projects to be funded under Section 319 of the Clean Water Act. These projects were identified through two Requests for Proposals (RFPs) conducted in 2013. Here is a summary of each project:

Watershed Based Plan for the Mora River – Upper Canadian Plateau

This project will develop a watershed-based plan to address the nine planning elements in EPA's *Nonpoint Source (NPS) Program and Grants Guidelines for States and Territories* for the portion of the Mora River watershed within the Upper Canadian Plateau



ecoregion. The Mora River from the USGS gage east of Shoemaker upstream to Highway 434 does not support its designated use for marginal coldwater aquatic life. Probable causes of impairment are nutrient enrichment and low dissolved oxygen. Total Maximum Daily Loads (TMDL) approved in 2007 recommend a total load reduction of 34% for nitrogen and 58% for phosphorus. This project will characterize the problem in greater detail, with an emphasis on non-point source pollutant loading, and identify solutions with quantitative estimates of nutrient load reductions that may be achieved with different management measures. Hermit's Peak Watershed Alliance (a Las Vegas-based nonprofit) will work with the Rio Mora National Wildlife Refuge, Denver Zoo, and local landowners to implement the project for a combined cost (Section 319 and match) of \$300,222.



PonilCreekRestorationProject,PhaseII:CimarronWatershed-BasedPlanImplementation

This project will implement portions of the recently completed Cimarron Watershed-Based Plan, available at <u>www.nmenv.state.nm.us/swqb/Cimarron/WBP</u>.

Middle Ponil Creek is listed as impaired and has a TMDL for temperature. Downstream, Ponil Creek is listed as impaired by temperature, turbidity (suspended sediment), and plant nutrients. This project will use a combination of active and passive restoration to lower

stream temperatures along 5.2 miles of Middle Ponil Creek, and reduce loading of suspended sediment and plant nutrients to downstream stream reaches. A short reach of the stream will be re-aligned to restore stable stream channel morphology to a currently entrenched stream reach. Approximately fifty cottonwood poles will be planted, and one dozen small elk exclosures will be built. Two low-water road crossings will be stabilized, and a section of abandoned road will be reclaimed with vegetation and proper drainage. One goal of this project is to increase canopy coverage along Middle Ponil Creek within the project area by 8%, which should result in about 6.0% of the total load reduction goal developed with the TMDL, for Middle Ponil Creek as a whole. Progress towards this goal will be evaluated with a combination of water quality monitoring and modeling. The project is being implemented by the Cimarron Watershed Alliance, for a combined cost of \$255,106.



Middle Rio de las Vacas Water Quality Improvement Project

This project is located along 3.5 miles of the Rio de las Vacas on Santa Fe National Forest land upstream of the Rancho Chaparral Girl Scout Camp, east of Cuba. This portion of the Rio de las Vacas is listed as impaired by temperature and plant nutrients, and TMDLs have been approved for these parameters. The goal of the project is to increase the shade cast by vegetation from the current estimate of 15% to approximately 30%, to meet the goal developed with the temperature TMDL, within the project area. The project is expected to reduce nutrient loading as well.

Native woody riparian vegetation will be planted throughout the project corridor, and approximately two dozen exclosures

will be constructed to protect the plantings from elk, livestock, and offhighway vehicles (OHVs). Three water tanks will be constructed outside the riparian corridor to eliminate the need for livestock to access the river as a water source, and a section of fencing will be rebuilt to prevent livestock trespass from an adjacent grazing allotment. Buck and pole fencing will be constructed to further reduce OHV and livestock access to the Rio de las Vacas and its riparian corridor. The project is being implemented by the WildEarth Guardians in cooperation with the Santa Fe National Forest, for a combined cost of \$476,160.



Request for Proposals to be Released

The Watershed Protection Section plans to release two requests for proposals (RFPs) in March. One RFP will solicit proposals to develop or update comprehensive watershed-based plans to identify and build the methods, programs, and partnerships required for eligible streams to meet their water quality standards. Each new planning project must address at least one TMDL for an impaired stream, or develop a hydrologic solution to a water quality problem in a limited category of streams without TMDLs (Category 4C streams). More information on the planning elements required for these projects is provided in the *Nonpoint Source Program and Grants Guidelines for States and Territories* available at <u>www.epa.gov/nps/319</u>.

The second RFP will solicit proposals for on-the-ground projects that implement watershed-based plans, focusing on meeting the goals of TMDLs, or on meeting hydrologic goals for Category 4C streams. The RFP will ask for citations of either a watershed plan or equivalent documents to support the proposed work. The ultimate goal of this approach is to delist impaired streams, or move towards that goal.

Both RFPs will be open for approximately six weeks. Projects funded under either RFP will require a minimum forty percent non-federal match, which may consist of cash expenditures or in-kind contributions of labor, equipment, and materials. Both RFPs will include opportunities for potential applicants to ask questions. The RFPs will be posted at <u>www.nmenv.state.nm.us/NMED/RFP</u>. For more information, contact Abe Franklin at 505-827-2793 or <u>abraham.franklin@state.nm.us</u>.



NEW MEXICO ENVIRONMENT DEPARTMENT SURFACE WATER QUALITY BUREAU

New Mexico River Stewards

NMED requests \$1.5 million/year in capital outlay funds for New Mexico River Stewards.

The New Mexico River Stewardship Program will fund projects that enhance the health of rivers by addressing the root causes of poor water quality and stream habitat.

The New Mexico River Stewardship Program builds on the successes of past efforts, however this program has several differences that distinguish it:

- ≈ Greater consideration of economic benefits of healthy river systems, such as improved opportunities to hunt, fish, and float.
- Emphasis on restoring or maintaining hydrology of streams and rivers, where feasible, to better handle overbank flows and thus reduce flooding downstream as experienced in recently burned watersheds.
- Program aligned to directly complement match required for federal grants ensuring New Mexico continues to receive these funds.

COMBINED ECONOMIC AND ENVIRONMENTAL BENEFITS

New Mexico has set standards to ensure that surface waters are of sufficient quality to support fish and other aquatic life as well as human use for recreation, irrigation, and municipal water supplies. Approximately 35% of New Mexico's streams and rivers fail to meet these water quality standards. A recent example is the Little Bear Fire which resulted in flooding, erosion, and increased sediment yield that has impacted a major part of the City of Alamogordo's water supply. *The New Mexico River Stewardship Program* will address these types of problems and help to ensure water quality for these economically important uses.

The New Mexico River Stewardship Program will improve habitat for fish and wildlife and provide safe water for swimming and other recreational activities. This in turn supports hunting, fishing, wildlife viewing, camping, and boating. These activities are economically important to New Mexico providing millions of dollars and thousands of jobs to the state economy. In 2006, 84,000 non-residents spent 467,000 days fishing in New Mexico and contributed an estimated \$99 million to the state economy. In the communities of the Red River watershed, fishing contributes \$6.5 million per year. The *New Mexico River Stewardship Program* will enhance the part of New Mexico's economy that depends on rivers and streams.

The New Mexico River Stewardship Program will reduce flood hazard in downstream communities. A natural river system includes a channel (with a recognizable bed and banks) and adjacent floodplains. Even in steep canyons some flood water is temporarily stored in small floodplains, reducing the flow as a flood proceeds downstream. Restoring access of floods to historic floodplains, where feasible, reduces flood impacts downstream.

Project contractors and partners have leveraged past funds on a greater than 1:1 basis with federal grants, private funds or in-kind contributions. Past funding supported the work of 68 contractors of which 94% were New Mexico businesses or individuals.

NMED will be able to use the requested funds to provide match to ensure that approximately \$2.25 million per year in federal funds are awarded to New Mexico under Clean Water Act programs.

For More Information, Contact: James Hogan, (505) 476-3671, James.Hogan@state.nm.us Karen Menetrey, (505) 827-0194, Karen.Menetrey@state.nm.us







NEW MEXICO ENVIRONMENT DEPARTMENT SURFACE WATER QUALITY BUREAU



TRACK RECORD OF SUCCESS

NMED has extensive experience managing watershed restoration funds – both through the *River Ecosystem Restoration Initiative* as well as federal Clean Water Act §319(h) and wetlands programs. NMED receives many applications every year to fund projects but we are only able to fund approximately 20%.

River Ecosystem Restoration Initiative funding has restored 34.6 river-miles and 2,394 acres of wildlife habitat.

Through these programs NMED has worked with hundreds of tribal, government agency, and non-profit partners who share the goals of clean water and healthy wildlife habitats.

The *River Ecosystem Restoration Initiative* supported over 48 projects throughout all of the major river basins in New Mexico. The success of these projects has provided a significant return on investment of the State Capital Outlay Funds.

PROJECT SELECTION

Projects will be distributed statewide in areas prioritized through state, county or local natural resource plans.

Eligible applicants will include federal, state, and local agencies (including soil and water conservation districts), for-profit and not-for-profit organizations, and Indian Nations, Pueblos, and Tribes.

Projects will be selected through a request for proposals following the state procurement process. Evaluation criteria will ensure that projects are community-based and stakeholder driven. Evaluation criteria will favor projects that improve water quality, enhance fish and wildlife habitat, support local economies, and that reduce downstream flood hazard. The proposal evaluation team will consist of representatives of state agencies that share common goals of natural resource management and protection. The projects will support jobs in New Mexico by primarily utilizing in-state contractors.

New Mexico River Stewards

Photos Courtesy of BLM



Visit us online at www.nmenv.state.nm.us/swgb

Before Restoration Gila River (1995)

After Restoration Same Location (2007)

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GET INVOLVED!

February 2-3, 2014 - National Association of Conservation Districts Annual Meeting, Anaheim Marriot, Anaheim, California. For more details see <u>www.nmacd.org/national-</u> <u>news</u>.

February 3, 2014 - Presentation of the draft New Mexico Nonpoint Source Management Plan from 4:00-6:00 PM at the City of Las Cruces City Hall, 700 North Main Street, Room 2007 – B and C. For more details see <u>www.nmenv.state.nm.us/swqb/wps/Plan</u>.

February 5, 2014 - Presentation of the draft New Mexico Nonpoint Source Management Plan from 4:00-6:00 PM in Albuquerque at the North Domingo Baca Multigenerational Center, 7521 Carmel Avenue N.E. For more details see <u>www.nmenv.state.nm.us/swqb/wps/</u> <u>Plan</u>.

February 25-27, 2014 - "Fostering Resilience in Southwestern Ecosystems: A Problem Solving Workshop, Radisson Inn & Suites, 6555 East Speedway Blvd. Tucson, Arizona. Sponsored by the Southwest Fire Science Consortium. For more information see <u>http://swfireconsortium.org/Fire%20and%20Resiliency%20Ecology%20Workshop</u>.

February 27-28, 2014 - 5th Natural History of the Gila Symposium. Western New Mexico University, Silver City. For more details, see <u>http://gilasymposium.org</u>.

March 4, 2014- Water Trust Board Grant Workshop in Las Vegas, 9:00am-12:00, Las Vegas City Council Room. For more information see- <u>www.nmacd.org/messages</u>.

March 6, 2014 - Water Trust Board Grant Workshop in Socorro, 9:00am- 12:00, New Mexico Tech. For more information see- <u>www.nmacd.org/messages</u>.

March 13, 2014 - Water Trust Board Grant Workshop in Clovis, 9:00am-12:00, NRCS Office. For more information see- <u>www.nmacd.org/messages</u>.

March 19, 2014 - New Mexico Wetlands Roundtable, highlighting the 100th anniversary of the Albuquerque Wildlife Federation. Rio Grande Room - Toney Anaya Building, 2550 Cerrillos Road, Santa Fe. 9:00 am - 4:00 pm. For more information, contact Maryann McGraw at (505) 827-0581 or <u>Maryann.McGraw@state.nm.us</u>.



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