

# 2003 Annual Report

## THE STATE OF NEW MEXICO NONPOINT SOURCE MANAGEMENT PROGRAM

## 2003 ANNUAL REPORT

The 2003 New Mexico Nonpoint Source Management Program Annual Report is published and distributed by the New Mexico Environment Department Surface Water Quality Bureau Watershed Protection Section

Photograph on cover is of San Juan River, NM.



BILL RICHARDSON GOVERNOR

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January 28, 2004

Brad Lamb Regional Watershed/Nonpoint Source Program Coordinator U.S. Environmental Protection Agency Region 6 (6WQ-EW) 1445 Ross Ave. Dallas, Texas 75202

Dear Mr. Lamb,

The New Mexico Nonpoint Source Management Program ended 2003 with a commitment to total maximum daily loads (TMDLs). The Clean Water Act (CWA) section 319(h) Request for Proposals in New Mexico was refined to include TMDL implementation essential to receiving a CWA §319(h) grant. The change was warranted because there are now more TMDLs (82) written for New Mexico's watersheds than ever before, making it possible to better utilize the TMDL documents for watershed restoration efforts.

The Surface Water Quality Bureau (SWQB) worked to improve New Mexico's water quality during 2003 through successful completion of CWA §319(h) projects and ongoing cooperative partnerships. This report summarizes the accomplishments and lessons learned during the last year.

The SWQB continues to promote strong partnerships with various agencies that can positively affect nonpoint source pollution control. This report includes 2003 activities by those agencies. The partnerships that the SWQB has established with watershed groups and environmental organizations are also essential to abating nonpoint source pollution. A list of these groups and organizations is provided.

All the agencies and organizations in New Mexico who are cooperatively tackling the state's NPS issues appreciate the support of the Environmental Protection Agency in this effort and look forward to continuing success and cooperation in protecting our water quality.

Sincerely,

Marcy Leavitt Bureau Chief Blank Page

## New Mexico Nonpoint Source Management Program 2003 Annual Report

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## NM NONPOINT SOURCE MANAGEMENT PROGRAM

In January 2004, the United States Environmental Protection Agency (USEPA) Region 6 officially approved New Mexico's Nonpoint Source (NPS) Management Program. It describes a dynamic program and progressive actions necessary to reduce pollutants from NPS entering New Mexico's surface and ground water. Implementation of this program will help New Mexico succeed in attaining surface water quality that will fully protect designated uses (described in the State's water quality standards), and meet the goals of the Federal Water Pollution Control Act, commonly referred to as the Clean Water Act (CWA), to ensure adequate ground water quality for municipal, domestic and agricultural uses.

The Management Program involves many voluntary watershed groups, environmental organizations, and government agencies through the CWA §319(h) grant program and the NPS Task Force. The NPS Task Force meets annually to encourage interagency and inter-organization communication and collaboration. Government agencies are also involved in abating NPS pollution with projects funded in-house.

The Management Program is in the process of an update. In the past, watersheds were categorized based on the severity of restoration necessary. The watersheds needing a large amount of restoration were selected for intensive outreach, total maximum daily load (TMDL) development, and watershed restoration projects. This plan was created before any watersheds had TMDLs.

A TMDL can be best described as a watershed budget for pollutant inputs to a watercourse. The TMDLs are established for individual stream segments for each pollutant. The SWQB develops TMDLs from waters listed on the State's §303(d) list. The TMDL documents are planning documents that provide pollution reduction targets and guidance on how to reduce pollutant loads. All TMDLs in a particular watershed should be considered collectively when developing restoration strategies.

Presently, eight watersheds have completed TMDLs. The focus of the Management Program has changed from categories of needed restoration based on the State's §303(d) list) to two categories: watersheds with TMDLs and watersheds without TMDLs. The watersheds with TMDLs receive CWA §319(h) funding for "on-the-ground" restoration work, and those without TMDLs will be targeted for watershed group formation, leading to project implementation if and when a TMDL is developed for that watershed.

The outcome of the NPS Management Program is to ensure that water quality standards and beneficial uses of ground and surface water are met. In order to achieve the desired outcome, the following three goals must be accomplished:

- 1. Implement progressive watershed-based restoration and protection programs;
- 2. Gain active assistance of all stakeholders; and
- 3. Address all watersheds in New Mexico.

# Goal 1: Implement progressive watershed-based restoration and protection programs.

Throughout the state, agencies and organizations are working to implement projects utilizing best management practices (BMP) that abate nonpoint source pollution.

In New Mexico, eight categories of land management activities have been identified as potential threats to water quality resulting from nonpoint sources. Principal sources of surface water NPS pollution in New Mexico include erosion from rangelands, agricultural activities, construction, silviculture, resource extraction, land disposal, unsurfaced roads, and recreation. Hydromodification may affect attainment of designated uses by diverting water out of stream channels, by impounding waters, and through channelization and dredge-and-fill activities. Principal sources of NPS ground water pollution in rural and suburban areas include household septic tanks, cesspools and agricultural activities.

The Nonpoint Source Management Program is implemented throughout the state by various organizations and agencies. Yearly, the Watershed Protection Section (WPS) of the SWQB awards funds to various organizations via the Clean Water Act section 319(h). Projects that were completed in 2003 are described below.

#### **<u>Clean Water Act Nonpoint Source Grant Program Projects</u>**

#### **Upper Pecos Watershed Project (1998H)**

The project, implemented by the Tierra y Montes Soil and Water Conservation District (the District), addressed the impairments of stream bottom deposits, conductivity and turbidity to the Upper Pecos River. The District proposed to address these issues through demonstration projects showing best management practices (BMPs) that would decrease erosion and through school and public education programs.

Approximately 35 property owners cooperated with the District to develop BMPs on their property that reduced erosion on streambanks and in the watershed. The District also partnered with the Pecos National Historic District, who restored sinuosity to Glorieta Creek and constructed wetlands in an area that had been used for gravel mining. The District conducted annual region-wide outdoor classrooms for the public schools to teach 4<sup>th</sup> and 5<sup>th</sup> grade students about ecology and water quality. They also gave presentations to public and private schools addressing water quality and water conservation. A middle school science class participated in a watershed restoration treatment, implementing many of the BMPs learned in their school.

#### Nonpoint Source Pollution Prevention Project on the Santa Fe River (1999L)

The State Land Office (SLO) implemented best management practices in the Santa Fe River to reduce erosion. The Santa Fe River is listed in the Clean Water Act §303(d) list for stream bottom deposits below the Santa Fe Waste Water Treatment Plant (WWTP), where the river becomes a perennial stream. Urbanization, gravel mining, and a non-functioning riparian system above the WWTP impair the Santa Fe River. The SLO owns property that had been used for gravel mining upstream from the WWTP.

The gravel operations were closed down and the river was studied both for channel stability and groundwater depth. The river has a shallow subsurface flow for most of the year. The SLO's one-mile stretch was modified to increase sinuosity and slow down the flow during storm events. The banks were vegetated with native plants, including woody species such as cottonwood, willows and locusts, as well as forbs and grasses. This project partnered with the City of Santa Fe to increase the riparian vegetation on the river at Frenchy's Park.

The SLO also had a strong educational component with this project. Three Santa Fe Public Schools attended outdoor workshops with "on-the-ground" activities. Many other schools attended presentations at the site.

The SLO is continuing to work on these efforts through a second grant, increasing riparian habitat along another mile stretch of river.

#### **Gallinas Watershed Riparian Enhancement Project (1999M)**

The objective of this grant was to implement measures identified in the 1994 Gallinas River Watershed Plan (GRW Plan) to maintain and improve the water quality and quantity for the municipality of Las Vegas and to restore Gallinas River as a high quality cold water fishery. Some of the impairments included stream bottom deposits and turbidity. The U.S. Forest Service Pecos, Las Vegas Ranger District manages the headwaters and the upper watershed of the Gallinas River. They addressed the impairments by implementing the GRW Plan. This included

paving a Forest Service Road



**United States Forest Service Planting Willows** 

adjacent to the Gallinas River to limit sedimentation, increasing and enhancing riparian buffer zones between roads and streams, closing and rehabilitating roads as necessary to reduce sedimentation and resultant turbidity of the Gallinas River, stabilizing stream banks where needed, protecting springs in grazing allotment areas and reducing the risk of fires in the watershed by thinning and prescribed burning.

This was an ambitious goal and problems encountered included drought, which made watershed thinning and prescribed burns difficult. Riparian vegetation had to be taken care of to ensure survival. Overall, this project met its goals in treating three out of five areas designated for thinning and burning. Spring development benefited both the need to protect the spring from cattle while continuing to allow the allotments access to water. The most successful aspect of the project was increasing the buffer area in campgrounds. A barricade consisting of poles and cable was installed to protect riparian growth and to increase the buffer between parking areas and the river. This action was well received by the public.

#### Caja del Rio/Santa Fe River Water Improvement Project (1999N)

The U.S. Forest Service, Española Ranger District in cooperation with the permitees on the Caja del Rio allotment and Santa Fe County proposed to remove cattle from the Santa Fe River by running a pipeline from the Santa Fe Waste Water Treatment Plant to tanks at strategic watering sites in the watershed. They implemented BMPs in the watershed by increasing the diversity of vegetation and thinning pinon, juniper and sage.

The Española Ranger District built 21 miles of pipeline, with the permitees providing the labor, and installed approximately 10 tanks which provide water for wildlife and cattle. Approximately 500 acres have been treated with prescribed burning. Roughly 100 acres of woodland were thinned by mechanical means because of restrictions imposed by drought. A total of 900 acres were mechanically thinned in this area during the project lifetime, but were paid with other funds. The thinning treatment was unique in that staff concentrated on leaving seed bearing piñon trees. This project has built a strong relationship between the permitees and the range staff, both mutually agreeing to protect the watershed.

#### Plugging of Abandoned Groundwater Wells in Dairy Row (2002P)

This project, implemented by the New Mexico Environment Department Ground Water Quality Bureau, was to protect the shallow aquifer in "Dairy Row", south of Las Cruces, in Dona Ana County. The Department conducted a study of the impacts of the dairies on groundwater in the early 1980's. Of the 39 wells that were constructed, many had been abandoned and were potential conduits for contaminants to get into the aquifer.

Only 15 wells were located and five of these were used as monitoring wells under the permitting process. Closure of the remaining 10 wells was completed in August 2003, following NMED Monitoring Well Construction and Abandonment Guidelines.

#### **<u>Rio Puerco Riparian Demonstration (1998I)</u>**

This project addressed a lack of native riparian vegetation which has led to significant erosion and sedimentation problems in this segment of the Rio Puerco.



#### **Rio Puerco, August 1998**

**Rio Puerco, August 2003** 

Forest Guardians implemented this project by removing livestock, preventing cattle trespass, and planting more than 3,000 cottonwoods and over 10,000 willows on less than a 1-mile stretch of the river with the help of a number of New Mexico residents. These hands-on restoration efforts, combined with favorable print media coverage about the efforts, have educated state and local residents about the need to protect and restore native riparian and wetland communities.

In the spring of 2001, hundreds of cottonwood poles previously thought to be dead due to drought conditions began sprouting at their base. In addition, subtle indicators of ecological health, namely the establishment of coyote willow, streambank sedges and rushes, have slowly but steadily improved. The planting of so many trees is significant for the Rio Puerco watershed because the wind will carry the seeds from the trees planted, acting as a nursery for other sites on the river.

Forest Guardians recognized how an inability to conduct more rigorous, scientifically quantifiable monitoring was a shortcoming of this project, largely a result of a lack of expertise and planning, or simply due to unanticipated conditions encountered at the site. They could have focused on soliciting active involvement of NMED's technical staff to monitor and assess the changes in channel shape and form, relating stream conditions and improvements to the amount of sediment being contained within the site.

#### The Upper Gila Fluvial Geomorphology Study (1998K)

The goal of this study was to diagnose the fluvial geomorphological attributes of the upper Gila River, while increasing awareness of these processes and enabling improved local, state and federal management of the stream corridor. The study included background information gathering, field data collection, photographic analysis, and a variety of topographic, geomorphic, hydraulic, and hydrologic analyses.

This project arose out of Gila Watershed stakeholders' concern regarding the physical processes at work in their watershed.

Specifically, many stakeholders were interested in determining whether or not historic land management practices in the uplands had changed the stream runoff and sediment transport characteristics. The study was successful in determining that physical change in terms of major stream aggradation or degradation was not occurring now or in the recent past. The study identified the principal causes of physical stream instability as surface water diversions, bridges and levees. This was a comprehensive study generating significant data including new aerial photographic maps of the stream corridor from the New Mexico/Arizona border upstream to the Gila Wilderness.

#### Pleasanton Community/San Francisco River Restoration and Outreach Project (1999U)

The San Francisco River Association (SFRA) headed this project and addressed all identified sources of nonpoint source pollution for this reach of the San Francisco River. These are incompatible agricultural practices, removal of riparian vegetation, and streambank modification/destabilization. Native perennials were returned to the system in groupings of natural community types. Cottonwoods, willows, sycamores, and riparian-obligate shrubs and grasses were restored to the riparian zone through pole, tree, grass plug and seed planting. Streambanks were stabilized in sustainable fashion through a bioengineering approach that emphasizes establishment of native trees, shrubs and grasses. The floodplains behind existing berms and dikes were re-vegetated with native plantings as well, understanding that floodwaters and sedimentation are separate issues. The project reach extended from the Pleasanton Eastside Ditch Company's spillway four miles south to the end of Pleasanton, including all of the private and forestland along the stretch of river. More than 90% of the inhabitants in this subwatershed were partners in this project. Volunteer help to restore the health and vitality to the river and the wildlife included use of member equipment and supplies, including pole plantings, trees, grass wads, seeds, and labor.

This project demonstrates the value of identifying and enlisting a "Sparkplug" within the watershed to manage on-the-ground projects. Although NMED choose not to fund Phase II of this project, it appears that the local watershed group (SFRA) has secured other funding for Phase II through the Water Trust Board. Additional non-CWA §319(h) grant funding for watershed work was obtained from the NM Department of Agriculture for start up of a grass bank project and from US Fish and Wildlife Service for local stakeholder conservation easements.

#### **School Canyon Riparian Restoration (1999J)**

This project focused on creation and hydration of a riparian zone in School Canyon by building several small in-channel grade control structures and skirting a previously constructed culvert road crossing near Snow Lake in the Gila National Forest. The project reduced erosion of a valuable soil resource while maintaining the proper dimension, pattern and profile of the tributaries and drainages, and increased subsurface flow that helps to filter out pollutants and recharges the water table. The Reserve Ranger District was instrumental in accomplishing this as a continuing effort toward reducing sediment load from entering the lake. Due to the remoteness of the site it was difficult to logistically coordinate all the activities. It required camping out in primitive conditions to successfully complete all the activities. Also it is difficult

to have a public outreach activity for the same reasons. All expectations of reducing erosion were realized in this project.

#### Picacho Bosque Wetland Restoration (1999B)

This project, completed by the Southwest Environment Center, focused on creating several "pot hole" ponds integral to the return flow irrigation system at Picacho Bosque prior to entering the Rio Grande. Additionally, native vegetation was reestablished and tamarisk was controlled.

#### **Bosque Tierra Mojada Wetland Restoration (1999P)**

This project, completed by Harold Bergsma, focused on creation of a pond system at the end of a return flow irrigation drain to settle sediments, pesticides and debris prior to entering the Rio Grande. Additionally, with the involvement of the Gadsden School District and others, an educational center was established along with a trail system around the project area.

Many federal and state land management agencies are involved in CWA section 319(h) projects. However, they also do other nonpoint source pollution control activities on their own. Below is a list of activities completed this year by agency.



#### **Bureau of Land Management Nonpoint Source Pollution Control Activities**

#### **Rio Puerco Watershed Management**

The Bureau of Land Management (BLM) has been working on its own and with the Rio Puerco Management Committee for several years to further watershed and sustainability projects to improve Rio Puerco watershed conditions. Some of the projects are: two major sediment dams reconstructed on the Torreon drainage-Pipeline Bend and West Cornfield Wash; backfilled and repaired more than one mile of unauthorized new channel in the Rio Puerco that interrupted three meanders; funded publication of the booklet, "An Introduction to Induced Meandering: A Method for Restoring Stability to Incised Stream Channels"; and moved stream channel back to original location and rehabilitated main access road in Starveout Canyon.

#### Northern New Mexico Watershed Restoration

Approximately 6,300 acres dominated by sagebrush, were treated with Tebuthiuron to improve grass cover and reduce soil erosion and sedimentation.

The Tebuthiuron was applied at a rate that thins the sage, thus leaving some sagebrush for those species that are sagebrush obligates. Buffer strips (fifty foot or more) are left along tree lines to provide additional sagebrush for deer browse and other wildlife use.

#### **Devils Canyon Tree Thinning & Burn**

Approximately 400 acres of piñon-juniper encroachment were thinned to maintain and/or improve shrub, grass and forb components for wildlife habitat and improve watershed Some of the downed trees were function. placed in gullies to serve as sediment traps, erosion and promote reduce healing. Prescribed fire was applied in mid April 2003, and was followed with reseeding in the ash of the burned slash in the fall of 2003 in areas of inadequate residual vegetation.

#### **Carrizo Sediment Retention Fence**

Carrizo Canyon was once a healthy and vibrant riparian area but over time it has gradually become a non-functional riparian



#### Devils Canyon tree thinning and burning

zone. In an effort to help restore and move this drainage toward a functioning riparian system, sediment retention fences were constructed in the bottom of Carrizo Wash. Floodwater will drop out the sediment on the backside (downstream) and create a suitable seedbed for cottonwood and willow establishment. In addition to the establishment of the riparian vegetation these structures help to protect the streambank from erosion.



Previous attempts to improve riparian areas through the planting of whips or poles have resulted in poor success. Planting would seem to do well the first year then would die back with very few (less than 5 percent) survivors the following year. It was also learned that livestock grazing must be controlled in the riparian areas during the growing season to protect establishment and recruitment of riparian species. After completion of projects in adjacent drainages, the establishment of cottonwood seedlings and other riparian vegetation were observed the following year.

Carrizo Canyon sediment fence.

#### Wildcat Canyon Mechanical Tree and Vegetation Thinning

Wildcat Canvon was quickly becoming encroached and overgrown by piñon-juniper and sagebrush that was impacting watershed function and wildlife forage habitat. A Timber Axe was used mechanically to and selectively thin piñon-juniper trees and dense sagebrush encroachment areas on 65 acres. Prior to using the Timber Axe the area was broadcast seeded. The mulch created from the operation of the Timber Axe provides a protective cover that traps moisture, adds organic matter and protects the seeds from birds and rodent



Timber Axe creating protective mulch that aids in prior reseeding success.

This particular technique appears

to show promise when seeding is done prior to project startup. The mulch created by using the Timber Axe provides a protective barrier and microenvironment for seed germination and establishment. Initial results appear to be promising.

#### Transportation and Roads – Simon Canyon

The safety of the Arkansas Loop and Simon Canyon roads has been a concern for several years. The Arkansas Loop route contained several major gas gathering lines that were exposed due to poor road design, maintenance and erosion. The Simon Canyon road is heavily used by recreational interests and was rough with extreme erosion problems. Approximately two and a half miles of the Arkansas Loop road and three miles of Simon Canyon were completely reconstructed and surfaced using crushed sandstone material that was readily available in the area. Incorporated in the reconstruction were road design features that facilitate proper drainage and minimize erosion. Reseeding of the roadside cut banks was also conducted and has successfully germinated to aid in the stabilization of the road. The Arkansas Loop portion is a continuation of the eight miles that was reconstructed last year.



#### **United States Forest Service Nonpoint Source Pollution Control Activities**

#### **Carson National Forest**

Carson National Forest (CNF) implemented many best management practices to abate nonpoint source pollution in the forest, including those mentioned below.

#### Malette Road (Forest Road 597)

Approximately one and a half miles of Forest Road 597 were restored and resurfaced. About 1,950 feet of guardrail was installed at key points to keep vehicles from leaving the road. These activities will eliminate off-road vehicle damage to about 20 acres of riparian vegetation and meadow along Malette Creek, reduce sediment to Malette Creek and Red River, and will eliminate off-road vehicle trespass onto riparian meadow.



Malette Road before reconstruction (left) and after reconstruction (right).

#### Elliot Barker Trail #1

The trail was reconstructed a half mile away from the original location and was signed and barricaded to discourage unauthorized motorized vehicle use. The trail tread was reconditioned to improve drainage. Non-system trails that are adjacent to Elliot Barker Trail were rehabilitated. This project will give long-term sustainability of the trail and promote less trail erosion near Tienditas Creek.

#### South Boundary Trail #164

Tread restoration and water bar construction was accomplished on 22 miles of trails. The Forest Service posted designated use trail signs in seeking long-term sustainability of the trail with less erosion in Rio Chiquito and Rito Bonito.

#### Comateles Trail #22

The objectives of this project were to reduce the amount of sediment and erosion on a popular trail that drains to the Rio Pueblo and to identify and sign the 'non-motorized' status of the trail to discourage unauthorized motorized use. Work included sign installation, trail clearing, waterbar construction and reconstruction, and brush removal. This project will provide long-term trail sustainability and decrease erosion near Rio Pueblo.

#### **Cibola National Forest**

Since the Cibola National Forest (CNF) manages many of the headwaters of watercourses in the central part of the state, projects undertaken on Forest land have the potential to affect water quality throughout that region. The main effect on water quality from Forest lands is due to sedimentation. The causes of sedimentation vary with vegetation management, soils, precipitation intensity and other variables. The projects listed below are intended to decrease the rate of erosion and reduce sediments entering watercourses in the short and long term. Short term projects include road reroutes away from riparian areas and improving road drainage. Long term projects include forest thinning which decreases the likelihood of catastrophic wildfires that subsequently expose soils to erosion from overland runoff. Projects completed in 2003 by Cibola National Forest are described below.

#### Proper Functioning Condition Assessment: Las Palas Canyon

This project determined the condition of riparian area in Las Palas Canyon and recommended treatment for rehabilitation. Four reaches of the creek were analyzed. Reach 1 was determined to be "functional but at risk", with the trend not apparent. Reaches 2-4 were determined to be functional but at risk with a downward trend. A restriction of cattle and thinning of encroaching upland woody species in the riparian area was recommended to reduce soil losses. Two miles, within Arroyo del Tajique Watershed, were affected

#### <u>Trail Canyon Trail</u>

The purpose of this project was to make the trail safer for foot and horse traffic, prevent and reduce accelerated erosion, and improve water quality. Portions of the trail were relocated from the Canyon de la Vereda drainage onto a higher slope segment. Waterbars were constructed to control runoff. The old trail was rehabilitated using rock dams and forest debris was scattered

#### Trail Canyon before reconstruction (left) and after reconstruction (right).



into gullies to slow runoff. Reconstruction within the original corridor and water control devices were installed in other locations on the trail.

#### **Center Well Wildlife Thinning**

A project was developed to enhance wildlife foraging areas. Slash will be lopped and scattered to help establish ground cover and reduce erosion. Fifteen acres of piñon -juniper woodland were thinned.

#### **Sherwood II Fuelbreak**

In order to reduce hazardous fuels in the urban interface, approximately 82 acres of piñon - juniper woodland were treated in this project area.

#### **Torreon Allotment Management Plan**

This project seeks to develop an Allotment Management Plan that is consistent with the standards and guideline of the Cibola Land Management Plan for livestock grazing. Approximately 6,059 acres of ponderosa forest were treated.

#### Osborne Allotment Management Plan

Here too, the CNF is developing an Allotment Management Plan that is consistent with the standards and guideline of the Cibola Land Management Plan for livestock grazing. Approximately 1,619 acres of piñon -juniper woodland were treated.

#### **Riley Flats Meadow Restoration**

A project was initiated to maintain natural meadows and enhance wildlife forage areas. Slash was lopped and scattered to enhance establishment of forage and reduce erosion. Approximately 40 acres of piñon -juniper woodland were restored.

#### Wildlife Openings

This project focuses on removal of overstory species to promote wildlife foraging areas. Most of the wood is being removed as fuelwood. Some large diameter material will be left to provide cover for prey species. Approximately 22 acres of ponderosa woodland were opened.

#### **Cienegita Meadow Restoration**

This project will maintain natural meadows and enhance wildlife forage areas. Slash was lopped and scattered to enhance establishment of forage and reduce erosion. Approximately 83 acres of ponderosa woodland were restored.

#### **Forest Boundary Fuelbreak**

Reduction of hazardous fuel accumulations in the urban interface provide a defensible space. Approximately 118 acres of Ponderosa woodland were treated by this project.

#### FR 275 Fuelbreak

Reduce hazardous fuel accumulations in the urban interface and provide a defensible space. Approximately 36 acres of ponderosa woodland were treated.

#### **Inlow Prescribed Burn**

This project involves the prescribed burn of hazardous fuels resulting from the construction of the Inlow Fuelbreak. Large material had been removed as fuelwood prior to burning. Approxiamtely 88 acres of ponderosa forest were burned.

#### **Bluewater Creek Riparian Restoration Project**



Bluewater Canyon, one of three exclosures.

The CNF constructed three fenced and gated exclosures in the summer of 2003. built Exclosures were to exclude cattle from bank areas Bluewater along Creek. allowing revegetation of the banks. Monitoring wells (49) were installed adjacent to the creek to monitor groundwater levels. Two weather stations precipitation monitor (including snow levels), temperature, and wind speed. Both weather stations include real time satellite uplink. Approximately 320 acres of riparian area was restored.

#### Spud Patch

This project constructed two wildlife habitat exclosure fences to protect 3 acres from livestock grazing. Encroaching conifers were removed from 17 acres of aspen habitat adjacent to the exclosures. Three acres of spruce/fir were enclosed with 2 fences within the 17 acres of tree removal. This project was paid with Knutson-Vandenburg funds.

#### Basgal 2

To implement this project, the CNF ripped existing roads and planted 20 acres of forage seed mix to benefit turkey/wildlife. This project was paid with Knutson-Vandenburg funds.

#### Spud Patch/Willow Springs Timber Stand Improvement

In dealing with pre-commercial thinning within a previous timber sale area, waste material was lopped and scattered. The project was completed with Hot Shot fire crews. Approximately 196 acres of ponderosa forest were thinned.

#### Antelope Flats Thinning

The project seeks to maintain an old piñon-juniper push area in a meadow condition through removal of encroaching conifers. Both range and wildlife will benefit. Waste material was lopped and scattered. Approximately 512 acres of piñon-juniper woodland were thinned.

#### <u>Tietjen WUI Fuelbreak</u>

This project reduce tree density to create a defensible space for wildland firefighters. Waste material was lopped and scattered. Approximately 68 acres of piñon-juniper/ponderosa woodland were reduced.

#### <u>La Jara WUI Fuelbreak</u>

This area also saw a reduction of tree density to create a defensible space for wildland firefighters. Waste material was lopped and scattered. Approximately 528 acres of piñon-juniper/ponderosa woodland were reduced.

#### **Coal Mine WUI Fuelbreak**

Like the Tietjen and La Jara areas, this project reduced tree density to create a defensible space for wildland firefighters. Material was lopped and scattered. Approximately 155 acres of piñon-juniper/ponderosa woodland were reduced.

#### Forest Road 483 Reroute

This road was routed around a private inholding. The reroute will reduce traffic on an eroded access road. The newly constructed road is graveled in sensitive sections to reduce sediment runoff into Cottonwood Creek and surrounding drainages. Five miles of road were rerouted. This project affected ephemeral drainages and riparian areas of Cottonwood Creek.

#### **Ranch Supply Spring Redevelopment**

Under this project, the CNF redevelops springs to provide a source of water away from spring site for wildlife and livestock. Fencing livestock away from spring site protects the source from trampling. This project affected two acres of meadow and was completed in cooperation with Dona Ana County Associated Sportsmen and Las Cruces Wild Turkey Association.

#### Sargent Canyon Prescribed Burn

The project to improve habitat conditions for wild turkeys, elk and mule deer includes restoration of wet meadow habitats by reducing the density of encroaching trees into meadow habitats. It reduces fuel loadings to protect the watershed from catastrophic wildfire effects. Approximately 3,500 acres of ponderosa pine forest were treated. Funding came from Rocky Mountain Elk Foundation and the New Mexico Habitat Stamp Program with labor contributed by the Fire Use Training Academy and the New Mexico BLM Socorro Field Office.

#### FR 235 Road Reconstruction for Magdalena Ridge Observatory

The project will improve Water Canyon Road between the Water Canyon campground and the proposed observatory site at the crest of South Baldy for low clearance and construction vehicle use. Improvements include resurfacing along the roads entire length creating a graveled surface.

Specific actions at certain places include water crossings, recontouring of roadbed slopes, leveling and gravelling of rocky road segments, removal of obstructions, widening of tight bends and shoulders, additions of culverts, drainage features and widening where needed to allow for safe vehicle passage. Improvement of FR 235 will reduce sedimentation of Water Canyon creek since the previous dirt surface has been covered and drainage improved. Approximately 7 miles of road were affected.

#### **Proper Functioning Condition Assessment: Las Huertas Creek**

For this project, the CNF conducted a proper functioning condition assessment on Las Huertas Creek in the Sandia Mountains, from the private land boundary upstream from the campground to the Forest / private land boundary at the lower end of the canyon. Condition of the riparian habitat along the stream was determined to be "functioning at risk" with a trend not determined. This was due to heavy sedimentation from State Highway 165. Improved drainage along the road, graveling the road or rerouting the road were suggested to improve conditions along the stream. Three and a half miles of the riparian area of Las Huertas creek were affected.

#### **Proper Functioning Condition Assessment: Cedro Creek**

The CNF conducted a proper functioning condition assessment on Cedro Creek in the Manzanita Mountains from the private land boundary downstream from Cedro Village to the Forest / private land boundary at the lower end of the canyon near the Ranger Station. Four and a half acres of the riparian area near Cedro Creek were affected.

#### **Troncon Negro Riparian Exclosure Fence**

This project will restore riparian habitat in Troncon Negro Canyon through the construction of a fence to exclude livestock. Twenty cottonwood poles were planted in suitable habitat. About 15 acres of ponderosa pine and grassland riparian area were affected.

#### Crest Aspen Regeneration IV

This project sought to restore aspen stands in the Sandia Mountains. In addition, approximately 30 acres of spruce fir/aspen were restored. The New Mexico Habitat Stamp Program assisted this project.

#### **Ox Canyon Riparian Treatment**

This project involved removal of the overgrown riparian species overstory to enhance restoration of undergrowth. Approximately 15 acres of riparian area were removed.

#### **David Canyon Fuels Reduction and Forest Health Treatment**

Via this effort, the CNF will restore mountain meadow habitat types, protect large diameter trees by thinning from below, reduce canopy closure to reduce chances of catastrophic wildfire and provide fuelwood to the public. Approximately 250 acres of mountain and meadow area were affected.

#### **Cienegita Wet Meadow Enhancement**

This project will restore wet meadow habitat by cutting encroaching piñon pine, juniper and small diameter ponderosa pine out of wet meadow areas. Unmortared one-rock dams and log structures were constructed in gulleys to raise water levels even with the surrounding terrain. Approximately 82 acres of mountain meadow and piñon-juniper woodland were affected. The New Mexico Riparian Council, Albuquerque Wildlife Federation, UNM students, Range Betterment Funds and the New Mexico Habitat Stamp Program were cooperators in this project.

#### Heatherland Hills Fuel Break

This project involves hazardous fuels reduction, forest health and wildlife habitat improvement. Approximately 60 acres of piñon -juniper woodland were treated.

#### Santa Fe National Forest

In the Santa Fe National Forest (SFNF), BMPs were implemented on 2,611 acres. These BMPs included upland stockwater developments, contour felling, stock pasture or exclosure fencing, piñon-juniper control, and riparian woody debris. Other nonpoint source control projects are described below.

#### Forest Road 376

The purpose of this project was to reduce the direct road-derived water quality impacts to the Rio Cebolla and to improve fish passage problems caused by existing pipe culverts. In addition, runoff from the recent Lakes fire caused new damage to the existing road drainage features and this project will rehabilitate those features. This project included installation of two prefabricated arch bridges and a low water crossing on Forest Road 376 that parallels the Rio Cebolla. Fire-damage related work included new and replacement culverts as well as repair of a roadside ditch for two and a half miles. This project will reduce the direct road-derived water quality impacts to the Rio Cebolla during high flow events. It will provide improved watershed, riparian and aquatic conditions for the maintenance of the Rio Grande cuthroat trout population, primarily establishing fish passage and reducing channel erosion.

#### Forest Road 144

This project was to reconstruct two miles of existing roadway to improve drainage and reduce sediment and erosion. The SFNF installed cross drains and water control structures. They also improved the roadway subbase and surface. This project will reduce the direct road-derived water quality impacts to the Rio Cebolla. The project will also benefit aquatic habitat for Rio Grande cutthroat trout, reduce sediment, decrease fire access concerns to the Fenton Lake area and improve downward riparian trend.

#### **Gila National Forest**

The Gila National Forest (GNF) conducted many nonpoint source pollution control activities on the land, which included road maintenance, fire activities and livestock management activities.

#### <u>Roads</u>

Currently there are 5,299 miles of system roads on the GNF. In 2003, 10% of those roads were maintained. A total of 31 miles of roads were decommissioned. There were no new miles of road constructed and 18 miles of existing road reconstructed. In January 2003, a Forest Level Roads Analysis Process (RAP) was completed for all level three to five roads. This RAP provides an atlas of these road levels in reference to their values and risks for many factors, including water quality and quantity.

#### **Fire Activity**

The GNF continues to utilize fire as a tool to improve watershed condition. Implementation of the National Fire Plan has provided resources to conduct more managed fire and mechanical fuel treatments. The purpose of these treatments is fuel reduction, fire proofing, watershed improvement, and forest health improvement. Thus, prescribed burns were limited in 2003 due to the high fire danger throughout the Southwest. Acres on the GNF treated by category during 2003 are as follows:

Wildland Fire Use for Resource Benefit	167,807 acres
Wildland Urban Interface Projects	1,258 acres
Non-Wildland Urban Interface Projects	3,630 acres
Confinement Fires (for economic prudence)	48,723 acres
Wildland Fires	27,730 acres

#### **Livestock Management Activities**

The GNF made decisions on six allotments as a result of analysis conducted the last few years. Analysis on approximately eight more allotments was initiated in 2003 with decisions expected in 2004. All decisions involving livestock grazing on the GNF have been appealed and many have entered into litigation. The GNF continues to expend a major amount of resources towards bringing livestock grazing into compliance with federal law. Data was collected for future analysis on several allotments. Due to extreme drought conditions in 2003, the GNF made additional efforts in working with permittees to reduce numbers and vary management practices, thus avoiding adverse impacts. Many allotments, forest-wide, were held in non-use status, rested, or had a reduced season of use to protect resource integrity.

At the present time there are no permitted livestock on GNF system lands on the Gila and San Francisco Rivers and major tributaries. There continues to be significant impacts associated with unsatisfactory upland watershed condition, roads and other land use impacts on public and private lands. Stream improvement and stability will continue with improved management.

#### **Lincoln National Forest**

Smokey Bear (District 1):

- Fourteen miles (on-going) of perennial streams surveyed in the White Mountain Wilderness for perennial stream classification and verification.
- Ski Apache watershed improvement for the reduction of silt and soil movements into stream channels. Channel stabilization, seeding, and stream bank protection on going.
- Five acres of riparian improvement done in Philadelphia Canyon built livestock exclosure fence around a natural pond.
- Thirty-seven acres of thinning completed near Gum Springs.
- West Mountain thinning occurred on 300 acres.
- Patos vegetation treatment occurred on 57 acres.
- Baca grubbing occurred on 147 acres.
- VI Push occurred on 280 acres.
- Allison Canyon push occurred on 121 acres.
- TSI occurred on 189 acres.

Sacramento District (District 2):

- Implemented 400 acres of wildlife openings in the Caclico Peak area (100 acres savannah and 300 acres wildlife) and the Bible Canyon area.
- Reconstructed Sacramento Lake fence on 15 acres of riparian lands on the Sacramento River.
- Implemented eight structures (rock header dams) improvement for riparian enhancement on the Aqua Chiquita.
- National Forest System Road 239 as part of the Scott Able Burned Area Road Maintenance Project, received treatment on 5.3 miles involving 115 rolling grade dips and 4.2 miles of compaction of an aggregate base.
- Installation of riparian fence exclosures:
  - 8 miles on the Aqua Chiquita
  - 8 miles on Sacramento River
  - 4 acres on the Mauldin Springs riparian area
  - o 10 acres on the Hubble Springs riparian area
  - 20 acres on the Silver Springs riparian area
  - 4 acres on the Western riparian area
- Walker Fire BAER
  - o 1650 acres seeding
  - 5 acres log erosion barriers
  - 7 acres straw mulching
  - 4 trash racks
  - o 14 check dams



#### <u>Natural Resource Conservation Service</u> <u>Nonpoint Source Pollution Control Activities</u>



Natural Resources Conservation Service (NRCS) assists people, including groups and units of government, through local conservation districts to achieve objectives for sustained use of soil, water. and related This resources. assistance includes technical advice to landowners and land with the users installation of resource

management systems (including soil and water conservation practices); training people to plan, install, maintain, and assess resource management systems; and cost sharing funds to help install conservation practices and systems.

Each conservation plan addresses soil, water, air, plant, and animal resources. Nutrient, pest, and waste management components, which address proper source, rate, timing and method of application, are developed as part of the plan where applicable. Conservation practices are selected to control or reduce identified potential and nutrient. sediment, animal waste, salt, pesticide pollution. and Emphasis is placed on both on



and off site effects of the pollution source and control method. Planning assistance is not only provided on a field or farm level but also on a watershed level with the collaboration of all conservation partners.



Water quality technical assistance provided to individuals, groups and units of government is based on these plans. The conservation partnership participates actively developing in and implementing the Nonpoint Source Management Plan. Other collaborative interagency efforts in water quality include tool and technology development and transfer, data database sharing and development, policy development, training, public outreach, and project design, implementation, and evaluation.

A certification program has been established and a training course provided was on Comprehensive Nutrient Management Planning in December 2003 for NRCS employees, other agencies, private consultants, and These participants producers. be developing will comprehensive nutrient management plans for animal feeding operations in the state

in order to prevent runoff and leaching of animal manure into surface and ground water. Comprehensive Nutrient Management Plans were developed by the NRCS field offices in Bernalillo (2), Chaves (9), Lea (1), Socorro (1) and Union (2) counties. Funding has become available for manure management through the Farm Bill.

The NRCS installed conservation buffers and practiced erosion reduction, irrigation water management, nutrient management, pest management, prescribed grazing, residue management, and waste management in 2003.



#### <u>New Mexico State Land Office</u> <u>Nonpoint Source Pollution Control Activities</u>

The State Land Office (SLO) Riparian Improvement Program continues throughout the state in cooperation with multiple public and private entities. Projects active during the last year are summarized below.

#### Moon Mountain in Ruidoso

An additional 50 acres were treated to create defensible space against wildfire adjacent to homes and Ruidoso High School. Ruidoso community was identified by State Forestry Division as one of 20 communities most at risk from wildfire. The project also improved watershed/forest health by reducing tree densities. Monitoring transects to track improvement in vegetation were established. Planning for treatment of an entire section of Trust Land on Moon Mountain has been accomplished including identification of cultural and biological resource issues and prescriptions for thinning to enhance resource values. The State Forestry Division and Village of Ruidoso were cooperators with the SLO in this project.

#### **Angel Fire, Colfax County**

Contracts are in place to burn slash piles from thinning last year. The Angel Fire community was identified by State Forestry Division as one of 20 communities most at risk from wildfire. The project also improved watershed/forest health by reducing tree densities. Monitoring transects were implemented to track improvement in vegetation established. Planning for an entire section of Trust Land has been accomplished including identification of any cultural and biological resource issues and prescriptions for thinning to enhance resource values. The State Forestry Division and Village of Angel Fire were cooperators with SLO in this project.

#### **Rio Grande Bosque in Albuquerque**

An additional 80 acres of State Trust Land within the Rio Grande Bosque State Park was treated to remove non-native salt cedar and Russian olive and to remove build up of dead and down vegetation creating a severe fire hazard. This area of the Albuquerque community was identified by the State Forestry Division as one of 20 communities at risk from wildfire. The Project will reduce fire danger, improve wildlife habitat and aesthetic value, as well as reduce water use by non-native species.

Transects will be established in November to track improvement in understory vegetation. The State Forestry Division, Middle Rio Grande Conservancy District and City of Albuquerque Open Space Division were cooperators with SLO in this project.

#### Maudes Canyon, Silver City

During the year, staff and volunteer woodcutters removed upland brush. Contracts are in place to begin removal of non-natives in the riparian zone. Maudes Canyon is a tributary of the Mimbres River. Silver City is considering whether to include the Maudes Canyon area as a component of their trails and open space program. The NM Environment Department, Western NM University, City of Silver City and Native Plant Society were cooperators with SLO in this project.

#### Macho Creek

Primary emphasis of this project has been to demonstrate recovery of the riparian area with proper grazing management. Allowing only dormant season grazing has resulted in vigorous plant growth in the riparian area. Efforts during the last year included ongoing maintenance of an electric fence to prevent trespass grazing and development of a nearby spring to provide wildlife water. This latter project has been funded through the U.S. Fish and Wildlife Service Partners for Wildlife program. The Quivira Coalition, Hawks Aloft, Agricultural lessees, and U.S. Fish and Wildlife Service were cooperators with SLO in this project.

#### **Bluewater Creek**

Continued monitoring this year showed that revegetation efforts along this creek have been successful. Willows, cottonwood and herbaceous riparian plants are becoming well established and helping to stabilize the channel and reduce erosion. This year, we conducted a major trash cleanup within the riparian zone. The U.S. Forest Service, NM Environment Department, and State Parks Division were cooperators with SLO in this project.



#### <u>New Mexico Department of Transportation Nonpoint Source Pollution</u> <u>Control Activities</u>

The New Mexico Department of Transportation (NMDOT)/New Mexico Environment Department (NMED) Task Force was created to provide better communication between both departments regarding environmental concerns. The Task Force and reported that the Task Force met January 15, April 23 and October 22, 2003. Listed below are some accomplishments of the past year's meetings.

#### National Pollutant Discharge Elimination System Phase II Regulations

The National Pollutant Discharge Elimination System (NPDES) Phase II regulations that were soon to take effect were a topic of discussion at the January Task Force Meeting. Discussion included the reduction of disturbance required to trigger the need for NPDES Notice of Intent and a Storm Water Pollution Prevention Plan for construction projects (5 acres reduced to 1 acre). It was also reported that NMDOT revised NPDES Phase II Plans for MS4 cities that do not have their own management plan. The plans are due to EPA in March. The NMDOT reported that the revised NPDES manual is online at the NMDOT website

(<u>(http://NMDOT.state.nm.us/general/depts/drainage/manual.htm</u>). The NMDOT is using an oversight contract on NPDES to help implement new Phase II rules. A presentation was made by SWQB at the April Task Force meeting to answer questions and address any additional concerns of NPDES Phase II.

#### Salt Pile Containment Update

The NMDOT Research Bureau distributed handouts showing different designs for enclosing salt piles to prevent leaching. The NMDOT is developing records for all salt piles in the state.

#### **Discharge Permits for Rest Areas**

The Ground Water Quality Bureau (GWQB) of NMED requested that NMDOT take a look at all rest areas that have on-site wastewater treatment and disposal systems and make sure they have discharge permits. NMDOT had applied for discharge permits for the discharge of vehicle wash-rack wastewater to septic tank/leach fields. The GWQB will not approve this type of discharge. Alternatives for disposal will include evaporative lagoons or water recyclers with oil/water separators. Under a separate item, motor vehicle waste disposal wells were discussed. Any discharges from maintenance area floor drains, fuel storage areas, or any other source of motor vehicle fluids to a septic tank/leach field or any other Underground Injection Control well is currently banned. The GWQB previously distributed questionnaires addressing wastewater disposal at Patrol Yards. Although the questionnaire asked about on-site disposal, it did not specifically address motor vehicle waste disposal wells.

#### Amended NMDOT/NMED Memorandum of Understanding

The revised Memorandum of Understanding (MOU) between the NMDOT and NMED was adopted July 1, 2003. The revised MOU was reviewed and approved by General Counsel for both NMDOT and NMED in April 2003. The MOU did not officially take effect until July 1 when NMSHTD (Highway Department) officially changed its name to NMDOT (Department of Transportation).

#### Wastewater Treatment Facility Environmental Review

NMDOT reported that it was not included in the review of Environmental Assessment's (EA) and other environmental documents that may have implications to highway right-of-way or other road related-issues, particularly with regard to wastewater treatment facilities. NMED agreed to contact the Construction Programs Bureau to make sure that NMDOT Environmental Section is now on the mailing list for EA review.

#### Site in Santa Rosa on the I-40 Business Loop

A contamination issue concerning surface and ground water was brought to light during the reconstruction of a bridge on I-40 at Santa Rosa. The SWQB showed pictures of stain coming from weephole at the bridge site on I-40. A retention pond was built to contain the contamination and there is evidence that there is a spring behind the wall. A perched water table exists in the Santa Rosa area. The SWQB, GWQB, Petroleum Storage Tank Bureau and the New Mexico Department of Health agreed to work together to find the sources of contamination and a permanent measure to deal with the weephole discharge. More ground water sampling in the surrounding area would be needed to come up with a plan.

#### Federal Highway Administration Regional Workshop:Streamlining Environmental Process

The SWQB reported on a facilitated workshop entitled, Improving Transportation Project Development and Environmental Reviews Through collaborative Problem Solving. The purpose of the meeting was to work on issues that hinder successful environmental reviews, permitting approvals and environmentally sound development of transportation projects. The workshop focused on talking about the issues and learning ways to resolve them.



#### New Mexico State Forestry Nonpoint Source Pollution Control Activities

New Mexico State Forestry continues to promote BMPs as it pertains to forest harvesting. Water quality issues are addressed in all forest management plans, timber sale permits and timber sale inspections. In 2003 there were 27 plans for 12,229 acres and 80 timber sale units involving 50,000 acres.

Fire and bark beetle outbreaks continue to have great impacts in New Mexico. The New Mexico Forestry Division continues to strive to deal with the impacts of these events as they occur. The Division is currently gearing up to have its foresters add a wildfire rehabilitation component to their job descriptions in order to assist private and state lands with erosion control following these natural events.

Our Division continues to implement the Silviculture Water Pollution Nonpoint Source Assessment program to monitor BMP application on forest project areas. A form is filled out at the completion of every harvest unit (this has been modified from the old standard, when it was at the end of the entire sale) to identify potential issues more quickly than in the past.

Goal 2: Gain Active Assistance of All Stakeholders.

Stakeholder involvement is essential to sustainability of watershed restoration projects. Watershed groups develop watershed restoration action strategies (WRAS), plans that identify the causes and sources that need to be controlled in order to reduce nonpoint source load reductions in the watershed. These plans identify the best management practices that will be implemented to achieve load reductions and incorporate TMDL implementation plans in the group's watershed. These WRASs are a requirement to receive CWA §319(h) funding for "on-the-ground" projects that abate NPS pollution.

The WPS of the SWQB publishes a quarterly newsletter, "Clearing the Waters" to inform stakeholders about nonpoint source pollution and report on nonpoint source pollution projects occurring in their watershed. To locate the publication on the web, log onto <<u>http://www.nmenv.state.nm.us/swqb/wpstop.html</u>>. This newsletter is mailed to approximately 1000 stakeholders in New Mexico and surrounding states.

The WPS keeps a database of organizations working to restore watersheds. The database can be located on the Internet at  $<\underline{http://www.nmenv.state.nm.us/swqb/wow_grp.html}>$ . This web page allows stakeholders to know who is working on nonpoint source pollution in their watershed. It will be updated with a map in 2004.

<u>A list of watershed restoration organizations</u> that have worked to decrease NPS pollution can be found at the end of this report.

## Goal 3: Address all watersheds in New Mexico.

Various programs of the Surface Water Quality Bureau work to abate nonpoint source pollution in the 83 watersheds in New Mexico. All watersheds in New Mexico have standards and designated uses for the waters. The Monitoring and Assessment Section of the SWQB conducts sampling and surveys to collect water quality data to determine if the water quality standards are met and whether the designated uses of the surface waters are supported. Watersheds are monitored in intervals of a few watersheds per year. In 2003, the SWQB monitored for chemical, physical and biological properties in the Upper Pecos, Taiban, Gallo Arroyo, Arroyo del Macho, Upper Pecos-Long Arroyo, Rio Hondo, Rio Felix, Rio Peñasco, and Upper Pecos-Black watersheds.

Once data has been assessed for the respective watersheds TMDLs are written (if needed). TMDLs are planning documents that determine the adequacy and significance of water quality and other supporting data, reviews the effectiveness of existing water quality protection measures, evaluates existing management strategies and develops new water quality management strategies. Watershed groups then implement the management strategies to reduce nonpoint source load reductions in surface waters. This process of monitoring, data assessment, TMDL development, and TMDL implementation will occur on every watershed that has impaired waters.

#### Wetlands Program

Often natural filters of pollution are overlooked as a BMP to abate NPS. In 2003, the SWQB developed a Wetlands Program and began a wetlands project in coordination with Cibola National Forest to fill the structural BMP gap in the New Mexico Nonpoint Source Management Program. Two assistance grants through the EPA Wetlands Protection Development Grant Program, authorized by CWA Section 104(b)(3), are funding both the program and project. These grants were awarded to New Mexico in 2003.

The goals of the SWQB Wetlands Program are to protect and enhance New Mexico's remaining wetlands and riparian areas by increasing self-sustaining and naturally functioning wetlands. This program will integrate wetlands as a prevention of water quality impairments, promote wetlands through development of wetlands action plans, support efforts to increase wetland acreage and participate in wetland creation projects and wetland education.

The SWQB is also involved in a Cibola National Forest wetlands project, the Stewart Meadows Wetland Waterfowl Habitat Partnership Project. The primary objective of this project is to create and improve approximately 25-50 acres of wetland habitat for migratory waterfowl in Rio San Antonio. In the past, the land was drained and leveled to support irrigated agriculture to grow hay. The irrigation canals and level land provides excellent ground to develop a wetland area. The main purpose of the wetland is to provide another location for waterfowl use, reducing the potential hazards of disease associated with large concentrations of waterfowl in one location.

SWQB involvement in the Stewart Meadows Project will include constructing dikes for wetland development, creating approximately 25 acres of marsh habitat, constructing nesting island habitat for birds, purchasing and planting native wetland plants, organizing volunteers to participate in wetland restoration activities, and coordinating demonstration days.

#### **CWA Section 401 - Dredge and Fill Program**

During 2003, the Surface Water Quality Bureau continued to review dredge and fill projects for Water Quality Certification under Sections 404 and 401 of the federal Clean Water Act. The purpose of the Dredge and Fill Certification Program is to ensure that 404 permits issued by the US Army Corps of Engineers comply with state water quality standards. For this purpose, the state is divided approximately at Socorro into Northern and Southern jurisdictions. The Silver City office handles the southern region and the Santa Fe office handles the Northern region.

404/401 Water Quality Certifications FY 2003: State of	New Mexico
Nationwide Permits	

MAINTENANCE	5
SCIENTIFIC MEASUREMENT DEVICES	2
OUTFALL STRUCTURES	1
UTILITY LINE DISCHARGES	34
BANK STABILIZATION	11
LINEAR TRANSPORTATION CROSSINGS	43
MINOR DISCHARGES	10
SURFACE COAL MINING ACTIVITIES	1
STREAM AND WETLAND RESTORATION ACTIVITIES	9
TEMPORARY CONSTRUCTION, ACCESS AND	
DEWATERING	6
BOAT RAMPS	10
CLEANUP OF HAZARDOUS AND TOXIC WASTE	1
RESIDENTIAL, COMMERCIAL, AND INSTITUTIONAL	
DEVELOPMENTS	3
STORMWATER MANAGEMENT	5

Other Authorizations	
INDIVIDUAL PERMITS	9
SWANCC	1
EXEMPTION	5
NON-JURISDICTIONAL: ORDINARY HIGH WATER MARK	1
NON-JURISDICTIONAL : Directional Drilling	2
TULLOCH	12
VIOLATIONS	38
TOTAL	209

#### **New Mexico Mining Act**

The WPS staff working under the New Mexico Mining Act (NMMA) are responsible for review and comment on proposed mining activities as they will affect surface water standards as presented in the State of New Mexico Standards for Interstate and Intrastate Surface Waters – 20.6.4 NMAC, the Water Quality Act (Chapter 74, Article 6 New Mexico Statutes Annotated – NMSA – 1978), the Water Quality Control Commission Regulations (WQCC 82-1, as amended), and the SWQB's standing policies. In addition, the staff reviews and comments on exploration and mine permit applications, mine site closure/closeout plans and mine site discharge permits. This work insures that any exploration, mining, or mine reclamation activities do not adversely impact surface waters of the state. The staff also provides surface water oversight for the Terrero Mine Administrative Order of Consent (AOC) and the Molycorp Mine AOC. Currently, the staff provides additional surface water oversight at Molycorp Mine for the US Geologic Survey investigation of baseline and pre-mining ground water quality and the Stability Review Board investigations.

Accomplishment of these objectives often requires coordination between WPS and other sections within the Surface Water Quality Bureau, Ground Water Quality Bureau, Air Quality Bureau, Mining and Minerals Division, NM Department of Game and Fish, USEPA, NM State Historic Preservation Office, US Forest Service, US Bureau of Land Management and the mine operators, including their consultants.

#### Fiscal Year 2003 NMMA Staff Activities

Mine Applications	
Minimal Impact Mines	5
Exploration Projects	8
Closure/Closeout Plans	
Final Plan Approval	2
Documents (Review and Comment)	24
Mine Site Investigations/Inspections	39
Public Hearings	3
Public Meetings	7

## New Mexico Watershed Restoration Organizations - 2003

Pueblo of San Ildefonso Route 5, Box 315-A Santa Fe, NM 87501 (505) 455-2273/2274	Pueblo of Laguna PO Box 194 Laguna Pueblo, NM 87026 (505) 552-6654/6655/6598	NM State Highway and Transportation Dept. PO Box 1149 Santa Fe, NM 87504 INTERDEPT. (505) 827-5100 http://www.nmshtd.state.nm.us/
Pueblo of San Felipe PO Box 4339 San Felipe Pueblo, NM 87001 (505) 867-3381/3382	Pueblo of Santa Ana 2 Dove Road Bernalillo, NM 87004 (505) 867-3301/3302 http://www.santaana.org/	Pueblo of Santa Domingo PO Box 99 Santo Domingo Pueblo, NM 87052 (505) 465-2214/2215
Pueblo of Zia 135 Capitol Square Dr. Zia, NM 87053 (505) 867-3304/3305	Pueblo of Zuni PO Box 339 Zuni, NM 87327 (505) 782-4481	Pueblo of Nambe Route 1, Box 117-BB Santa Fe, NM 87501 (505) 455-2036
Pueblo of Isleta PO Box 1270 Isleta Pueblo, NM 87022 (505) 869-3111/6333 http://www.isletapueblo.com/	Pueblo of Pojoaque 17746 US 84/285 Santa Fe, NM 87506 (505) 455-3901	Pueblo of Jemez PO Box 100 Jemez Pueblo, NM 87024 (505) 834-7359 http://www.jemezpueblo.com/
Pueblo of San Juan PO Box 1099 San Juan Pueblo, NM 87566 (505) 852-4400/4210	Pueblo of Santa Clara PO Box 580 Espanola, NM 87532 (505) 753-7330/7326	Pueblo of Taos PO Box 1846 Taos, NM 87571 (505) 758-9593
Pueblo of Tesuque Route 42, Box 360-T Santa Fe, NM 87506 (505) 983-2667	NM Rural Water Association 3413 Carlisle Boulevard NE Albuquerque, NM 87110 (505) 884-1031 http://nmrwa.org/	Valle Vidal Grazing Association
Bureau of Land Management 226 Cruz Alta Rd. Taos, NM 87571	NM Energy, Minerals and Natural Resource Dept. 1220 S. St. Francis Drive/P.O. Box 6429 Santa Fe, NM 87505 INTERDEPT. (505) 476-3200 http://www.emnrd.state.nm.us/	Pueblo of Pircuris PO Box 127 Penasco, NM 87553 (505) 587-2519
San Juan Water Commission 7450 E Main St., Ste. B Farmington, NM 87402 505-564-8969 sjwc@cyberport.com	Las Placitas http://www.lasplacitas.org/watershed.htm	Navajo National EPA Water Quality PO Box 339 Window Rock, AZ 86515 <u>ls-nnepa@juno.com</u>
NM Farm Bureau Box 20004 Las Cruces, NM 88004 normp@zianet.com	Pueblo of Cochiti Andrew Quintana PO Box 70 Cochiti Pueblo, NM 87072 (505) 465-2244	Comm. To Save Rio Hondo Andy Romero PO Box 427 Arroyo Hondo, NM 87513

Western Mora Cty Unified Source Water	Watershed Watch	Catron County Citizens Group
Protection C	Bill Fleming	Bob Moore
Ben Sanchez	901 Trail Cross	HC 61, Box 349
PO Box 777	Santa Fe, NM 87505	Glenwood, NM 88039
Mora, NM 87732	fleming@la.unm.edu	(505) 539-2745
(505) 387-2298	http://www.riversource.net/nmww.htm	bmoore@gilanet.com
<u>bsanchez@nnmt.net</u>		
WRRI	Village of Questa	Gila Fish and Gun Club
Bobby Creel	Brent Jaramillo	Brub Stone
Box 3001, MSC 3167	PO Box 260	PO Box 981
Las Cruces, NM 88003	Questa, NM 87556	Santa Clara, NM 88026
bcreel@wrri.nmsu.edu	(505) 586-0694	(505) 538-2142
http://wrri.nmsu.edu/	<u>bpjaramillo@hotmail.com</u>	
	http://www.laplaza.org/government/questa/	
Continental Divide Trail Alliance	Cattlegrower's Foundation, Inc.	Esperanza Grazing Association
Bruce Ward	Caren Cowan	Charles Chacon
PO Box 628	PO Box 7517	PO Box 1093
Pine, CO 80470	Albuquerque, NM 87194	Espanola, NM 87532
(303) 838-3760	(505) 247-0584	-r ·····
cdnst(a)aol.com	<u>nmcga(<i>a</i>)rt66.com</u>	
<u>Sierre</u> Club Southern NM	Hamles Alast	The Origina Coelition
Chamil Dlaving	Hawks Aloll Christenher Buster	Courtney White
DO Dov 2705 LIDD	DO Dox 10029	1412 2nd St. Sto. 1
$\frac{1}{100} \frac{1}{100} \frac{1}$	Albuquerque NM 87184	1415 2110  St., Ste. 1
(505) 524.4861	(505) 828 0455	(505) 820-2544
(505) 524-4801	(303) 828-9433	(303) 820-2344
http://www.sierra.nm.org	http://www.hawksaloft.org/	http://www.guiviracoalition.org/
NMSU Extension Service	NM Wildlife Federation	Bosque Preparatory School
Craig Runvan	Dale A Jones	Dan Shaw
Box 30003 -MSC 3 AE	1191 John Road	4000 Learning Rd.
Las Cruces, NM 88003	Belen, NM 87002	Albuquerque, NM 87120
mangus@gilanet.com	dalelois@webtv.com	(505) 898-6388
http://www.cahe.nmsu.edu/ces/		dshaw@bosqueschool.org
-		http://www.bosqueprep.pvt.k12.nm.us/
Ogallala Aquifer Institute	NM Trout	Audubon New Mexico
Dana Woodbury	Dave Patton	PO Box 9314
312 Finnup Dr.	PO Box 3276	Santa Fe, NM 87504
Garden City, KS 67846	Albuquerque, NM 87109	(505) 983-4609
(620) 271-1554/(c)272-4761	<u>nmtrout@newmexicotrout.org</u>	dhenderson@audubon.org
dwoodbury@garden-city.org	http://www.newmexicotrout.org/index.htm	http://www.audubon.org/chapter/nm/nm/rd
		<u>ac/index.html</u>
Interhemispheric Resource Center (IRC)	NM Association of Conservation Districts	NM Oil and Gas Association
Deb Preusch	Debbie Hughes	Deborah Seligman
PU Box 21/8 Sileer Cite NM 880(2	163 Irail Canyon Kd	PU B0X 1864
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