

Pleasanton Eastside Ditch Improvement Project Assessment of Potential Environmental Impacts

Background

The proposed Pleasanton Eastside Ditch Improvement Project is located within Pleasanton, New Mexico, in Catron County, about 3 miles (mi) south of Glenwood, New Mexico. The existing ditch begins approximately 1 mi upstream of Pleasanton and extends through town and beyond, and includes approximately 3.5 mi of open ditch. Water is diverted from the San Francisco River and delivered to approximately 280 acres of irrigated cropland, including a commercial, organic farming operation, and 24 water rights holders within the valley between the river and Highway 180.

The open ditches in current operation are creating long-term concerns with maintenance (particularly in heavy vegetation), stability on slopes, sediment capture in areas below steep slopes, and loss of water due to infiltration, evaporation, and plant root uptake. The ditch owners desire to improve the system's performance and decrease these concerns. Factors thought to contribute to the decline in performance include:

- The current concrete ditch liner is reaching the end of its service life; the liner is deteriorating and leaking through joints and cracks.
- Overflow structures, which return excess water and flush sediments from the upper ditch, appear to be in working order; but access to the pipes is limited and much of the pipe is covered by several feet of recent flood deposits.

The current infrastructure includes a river diversion dam and headgate, a metering gage, a 34-inch steel pipe conveying water for approximately 6,300 feet at the upper end of the system, two cleanout vaults, approximately 12,500 feet of open ditch, 260 feet of 36-inch corrugated metal pipe, culverts under crossings, and multiple outlets. The irrigation ditch diversion includes a concrete weir across the main river channel and a pipe inlet structure with a trash rack and overflow.

Proposed Action and Alternatives

The proposed action (PA) is to install a water transmission pipeline with new outlets and improve other associated infrastructure. The transmission pipe would be buried 2 feet below ground level (Portage 2014). In addition to the pipeline, the ditch owner/operators may choose to install concrete-lined ditch through a portion of the project.

Various combinations of pipe materials and sizes along the project's extent would result in a multitude of alternatives that could meet system rehabilitation and the owner's/operator's budget needs. From an environmental impacts perspective, the action alternatives to the PA would be use of two different pipeline sizes the owners/operators are considering (30-in. and 36-in diameter), which also could be made

of various combinations of pipe materials (e.g., steel corrugated metal, high-density polyethylene, polyvinyl chloride).

The activities needed to rehabilitate/improve the ditch, which are a direct contributor to environmental impacts under any action alternative, would be the same regardless as to the size of pipe or materials chosen (since materials being considered offer equivalent performance). As such, the PA appropriately bounds other possible action alternatives by assuming the action uses the larger pipe size along the entire ditch extent. In addition, the PA also includes concrete repairs at the river diversion, cleanout of concrete structures, site preparation, trenching, stockpiling materials, backfilling, compaction, and site reclamation activities. The PA would likely include removal/replacement of the existing concrete liner, or sections of it.

The no action alternative (NAA) is to leave the existing system in place.

Affected Environment

The affected environment considered for the PA and alternatives included the following resource areas and uses: land use; geologic environment/soils resource; water and ecological resources; historical and cultural resources; air quality; noise; aesthetics; and socioeconomics.

Evaluation of Impacts – Assumptions and Methods

Environmental impacts were assumed to primarily result from operations activities associated with improving/rehabilitating the system. For analysis, the PA project area was defined as the ditch/piping infrastructure and a 100-ft buffer area, which is considered conservative, on either side of the ditch/pipe. The buffer area was chosen as an approximation of where project activities (e.g., pipe removal/installation, equipment/vehicle travel, materials staging) would likely take place and where impacts would have the highest likelihood of occurring. The PA project area is shown on Figure 1.

When determining impacts, the analysts assumed that industry standard design features and best management practices (BMPs) typically associated with ditch rehabilitation/improvement work, such as storm water and sediment management, would be implemented with the chosen alternative. Other assumptions made, as needed, are noted in the impact determination discussions in the next section.

Impact Determinations

The impact determination discussions that follow include: brief descriptions of the affected resource/environment, criterion/criteria used to evaluate impacts, impact discussions for the PA and NAA, with impact determination statements for both the PA and the NAA.

Land Use

Affected Environment: The PA project area, which includes the buffer area, lies on 12 acres of Forest Service-managed public land and 104 acres of privately-owned land. The project area lies in a largely rural area. Activities on the land in the project area are primarily related to agriculture operations (i.e., croplands/orchards). The *Catron County Comprehensive Land Plan* (National Federal Lands Conference

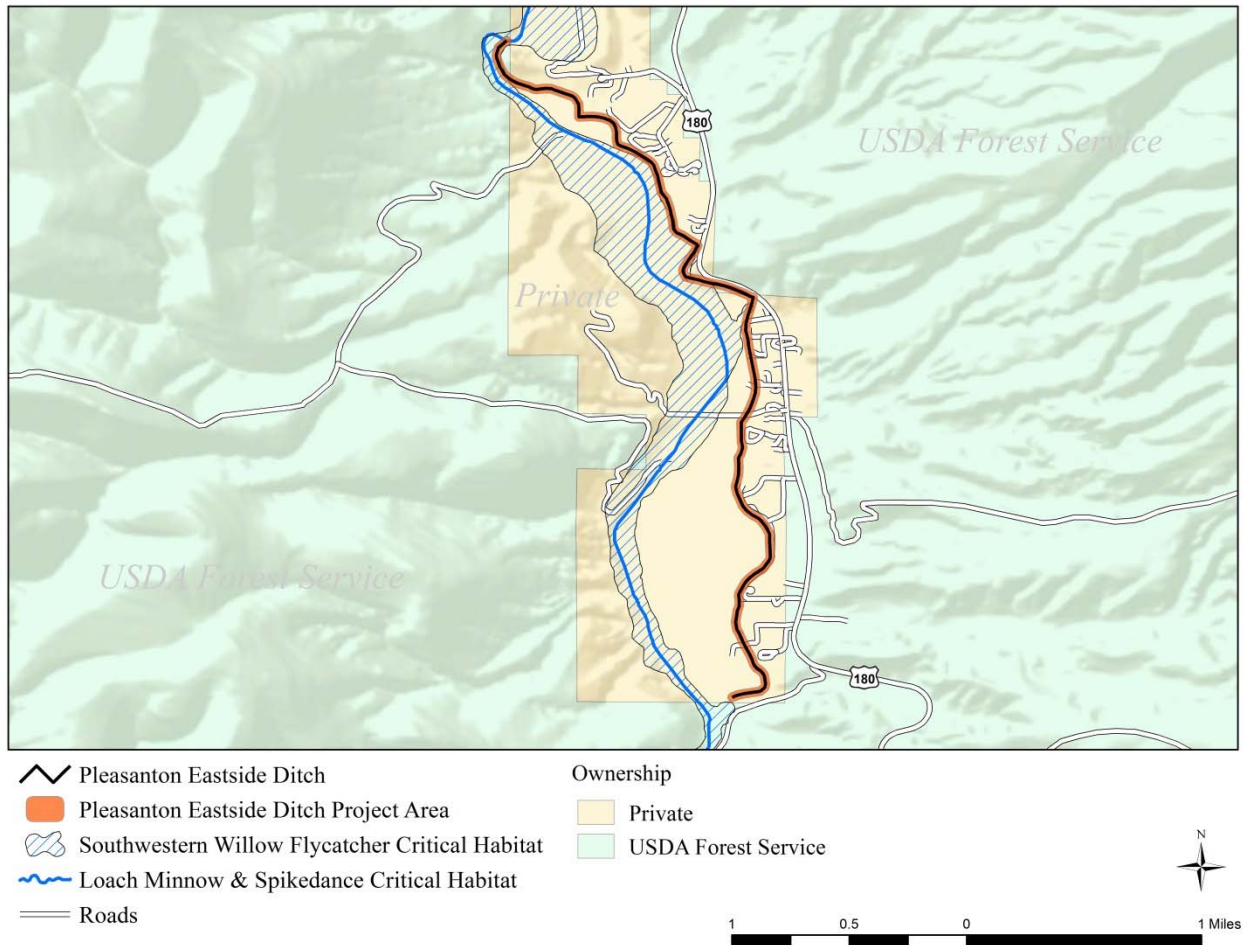


Figure 1. Pleasanton Eastside Ditch Improvement Project Area.

2012^a), the *Catron County Capital Improvement Plan/ Comprehensive Plan* (Consensus Planning Inc. 2007), and various county ordinances guide land use and growth within the County.

Evaluation Criterion: The PA and NAA would be considered to have potentially significant impacts if implementing either would be inconsistent with land use plans and ordinances.

Impacts: After review of applicable plans and ordinances available via Catron County’s website (<http://www.catroncounty.us/files.html>), for the PA, replacing an existing owner/operator’s ditch infrastructure with a similar system, does not require or result in property acquisition, change in ownership/management, or change how the land is currently used. Water collected by the system would continue to be conveyed to current users. If structures need to be placed, or other work performed, on public land managed by the Forest Service, approvals may be required.

Under the NAA, the ditch infrastructure would not be replaced.

^a The Catron County Comprehensive Land Plan was published in 1992. The online version shows updates to the plan up to 2012.

Because no changes to land use are needed or being made under either alternative, and because the PA and NAA would not be inconsistent with Catron County’s land plan and ordinances, **no impacts** to land use would be anticipated under either the PA or NAA.

Geologic Environment/Soils Resource

Affected Environment: Aridic ustochrepts and typic ustochrepts are the soil types associated with the project area (USDA 2006). Geotechnical information (complete surveying/mapping) regarding the soil, subsurface conditions, and groundwater in the collection areas is currently not known.

Being a rural agricultural area, the county and its residents value the integrity of their soils. As an example, the *Catron County Comprehensive Land Plan*, states, “...protection of soils from wind and water erosion and maintaining its fertility is critical to sustaining a viable agricultural economy and maintaining high levels of air and water quality” (National Federal Lands Conference 2012).

Evaluation Criteria: *The PA and NAA would be considered to have potentially significant impacts if either would result in changes to the geologic landscape, and/or diminish/deplete area soils, and/or be inconsistent with county values regarding its soils.*

Impacts: The PA would be conducted during the irrigation off-season, when surface water and groundwater levels are low and the chance of a flood event is minimal. Under the PA, there would be excavation, displacement, and compaction of soils, and cleanout and structure placement/replacement activities, which would all generate dust within the project area. Activities involving concrete liner removal/replacement, and use of concrete for structure placement, could also generate dust. These impacts are local and temporary in nature, and reducible through application of BMPs. Historically, the area has been subject to similar activities with placement of the original system. After the infrastructure is replaced, the site would be reclaimed.

Construction of a temporary holding/dewatering area may be necessary to perform work near the diversion point. When this work is completed, water flow berming/barriers would be removed. Because the San Francisco River is critical habitat for the Loach minnow (See Ecological Resources section), and because in-stream work could result in temporary sediment discharge/disruption, turbidity, and thermal changes to the water, an informal Section 7 consultation, as outlined by the USFWS, would be recommended (USFWS 2013).

Concrete liner removal/replacement activities would necessitate recycling/disposal of concrete to a local recycling facility or landfill. Dust would be generated removing, and transporting the concrete. If not recycled, concrete would be added to the local landfill inventory or otherwise placed in a construction fill if permitted by the local solid waste authority.

Overall, the soils in the area are not expected to be reduced, depleted, or significantly impacted by these activities. Replacing the ditch/pipe system and reclaiming the site is not inconsistent with county policy on soils. Because there will be minimal impacts to soils during implementation of the PA, primarily dust generation, a **less-than-significant** impact determination was made for the geologic environment/soils resource.

Under the NAA, the piping system is progressively declining, water is being lost, and pipe access is hindered in the overflow structure areas because of several feet of recent flood debris. In spite of continual maintenance by the owners/users, further decline of the system could result in disturbance of the soils resource in the immediate area and sediment/soils buildup and deposition further around the pipeline and throughout lined sections of the system.

While the current situation is not an immediate threat, it would be expected to trend toward increasingly significant changes to the existing soil and geologic landscape. At present, a **less-than-significant** impact determination was concluded for the NAA.

Water Resources

Affected Environment: The ditch system diverts water from the San Francisco River and conveys it for agriculture uses to 24 water rights holders. The ditch system currently experiences diminished water flow through leaks and sediment accumulation along its extent. Lost water is used by vegetation that grows alongside, and within leaking joints/cracks.

The *Catron County Comprehensive Land Plan*, and ordinances such as Ordinance 011-92, “An Ordinance Providing for the Protection of Rights to and Uses of Water,” and Ordinance 009-92, “An Ordinance Providing for Water Allocation and Riparian Management,” are examples of the county’s policies and rules concerning water rights and water allocation affecting the project area.

Evaluation Criteria: *The PA and NAA would be considered to have potentially significant impacts if either would be inconsistent with county plans or ordinances, result in impacts to uses of the water, or results in changes to water that make it unavailable for use.*

Impacts: The PA would be conducted during the irrigation off-season, when surface water and groundwater levels are low and the chance of a flood event is minimal. Under the PA, the improved ditch system would recoup water loss. The PA would result in improved performance of the diversion system and reduce maintenance needs.

Construction of a temporary holding/dewatering pond area may be necessary to perform work near the diversion point. When this work is completed, water flow berms/barriers would be removed and water flow restored. Because the San Francisco River is critical habitat for the Loach minnow (See Ecological Resources section) at the diversion point, and because in-stream work could result in temporary sediment discharge/disruption, turbidity, and thermal changes to the water, an informal Section 7 consultation, as outlined by the USFWS, would be recommended (USFWS 2013).

Implementing the PA would not result in depositing any foreign material or discharging any substance into a waterway such that land or water is degraded or made unavailable for habitat and downstream uses. Replacing the ditch system would not be inconsistent with county plans and ordinances. Thus, implementation of the PA is anticipated to result in **less-than-significant** impacts to water resources.

Under the NAA, water that has been lost from the pipe to the surrounding environment has been used by vegetation or seeped into the soils/groundwater. With reduced performance of the current system, less water has been collected, delivered and available to the users. No critical shortages have been reported. However, continued decline of the system would be expected to result in continual and increasing impacts to the water users, particularly if a ditch component completely failed in the near term. Thus, implementation of the NAA was concluded to result in **potentially significant** impacts to water resources.

Ecological Resources

Affected Environment: The project area is located within the larger Madrean Lower Montane Woodlands ecoregion, which covers the slopes of the Guadalupe, Sacramento, Mimbres, Big Burro, and Mogollon mountains, generally between 5500 to 7200 feet, with densities of juniper, pinyon pine, and oak varying according to aspect. At middle elevations, dense thickets of shrubs such as desert ceanothus,

alderleaf mountain mahogany, and catclaw mimosa form chaparral communities. Other areas are grassy and park-like with scattered trees. A few small areas of ponderosa pine, Douglas-fir, or southwestern white pine occur at the highest elevations, outliers of nearby ecoregions (Griffith et al 2006). The project area lies within a section of coniferous mixed forest vegetation (Dick-Peddie 1991).

The U.S. Fish and Wildlife Service’s (USFWS’) Information, Planning, and Conservation System (IPaC) was used to identify federally-designated threatened and endangered (T&E) flora and fauna species. No T&E flora species were identified or anticipated to be found within the project area (USFWS 2014).

Four species, the Loach minnow (*Tiaroga cobitis*), Southwestern Willow flycatcher (*Empidonax traillii extimus*), Spikedace (*Meda fulgida*) and Narrow-headed garter snake (*Thamnophis rufipunctatus*), are likely to be found within the project area (USFWS 2014). Their status and habitat requirements are shown in Table 1. Both the Loach minnow and Southwestern Willow flycatcher have designated critical habitats adjacent to the Pleasanton Eastside Ditch itself and within the PA project area, as shown on Figure 1.

Evaluation Criteria: The PA and NAA would be considered to have potentially significant impacts if either would result in “take” of T&E species within federally-designated critical habitat, which includes killing, harming, harassing, pursuing, hunting, capturing, collecting or attempting to engage in any such conduct; or result in habitat reduction for T&E species.

Table 1. T&E animal species likely to be found in the project area presented in order of listing status (USFWS 2014).

Common Name	Scientific Name	Status	Habitat Requirements	Occurrence in Project Areas
Loach minnow	<i>Tiaroga cobitis</i>	Endangered	Turbulent, rocky riffles of mainstream rivers and tributaries at or less than 2,200 meters in elevations	Likely
Southwestern Willow flycatcher	<i>Empidonax traillii extimus</i>	Endangered	Dense riparian habitats with microclimatic conditions dictated by the local surroundings. Located in the US during the summer, migrates to wintering areas in Central America.	Likely
Spikedace	<i>Meda fulgida</i>	Endangered	Midwater habitats of runs and pools especially in the downstream ends of rivers	Likely
Narrow-headed garter snake	<i>Thamnophis rufipunctatus</i>	Proposed Threatened	Found near river banks or streams	Likely

Impacts: Under the PA, project activities are assumed to require a small crew of workers and a few pieces of construction equipment, over a period of one to two months, depending on weather conditions.

- **Species.** PA activities near the point of diversion within the San Francisco River would occur within Loach minnow designated-critical habitat. A dewatered area would be created to conduct the work. When work is completed, the dewatered area would be restored to its pre-existing condition. These activities could cause temporary soil, water, and vibrational disturbance within

the stream in the immediate area of activities. If nearby during operations, Loach minnow (and Spikedace) and other aquatic species would likely relocate to a nearby area in the stream away from disturbance and would return to the area when disturbance ceases. PA activities do not involve any foreign material discharge to the creek.

The Southwestern Willow flycatcher, the Narrow-headed garter snake, and other terrestrial species could be present in the project area. For these areas, construction activities would generate ground vibration and noise. Fauna species and human activity have been studied extensively in the literature. An umbrella study of the topic was conducted by Whittaker and Knight (1998) who found that species will be attracted to, habituate to, or avoid an activity and that, in most cases, wildlife habituate to an activity as long as its habitat needs (e.g., food, water, cover) are met. During operations, noise and vibration would occur during daylight hours, would be somewhat constant at low levels (e.g., idling equipment/vehicles) for longer periods and/or intermittent at more intense levels (e.g., digging, earth moving), depending on the specific activity and equipment used, and would cease at the end of each day. Terrestrial species may temporarily leave the immediate area of the noise and vibration and return to it when operations diminish or cease. They are not expected to permanently leave or abandon the area. The area's wildlife is habituated to existing rural noise of humans, farming operations, and local traffic. When the PA is completed, which is estimated to be over the course of a week, or a little more, noise levels would return to current noise and ambient background levels.

- **Habitat.** Activities to improve the ditch system require moving soil and may consequently impact native vegetation in the area immediately around ditch infrastructure. Vegetation in this area may be untouched, disturbed, or removed during the course of construction activities. When improvement activities cease, areas that require re-vegetation would be reclaimed. Until vegetation regrows, reclaimed areas may appear barren. Some vegetation impacted may be within Southwestern Willow flycatcher designated-critical habitat. Installing piping reduces any water that had been previously leaking from the ditch, which some vegetation species had been using. In these areas, less vegetation may recover, which may temporarily affect habitat for Southwestern Willow flycatcher. However, as shown on Figure 1, very few areas critical habitat areas intersect with project activities. The vast majority of flycatcher habitat would be unaffected and any affected areas would be expected to recover in the short-term and not permanently reduced. Because flycatcher habitat may be temporarily affected, Section 7 informal consultation is advised. No aquatic habitat/aquatic vegetation, including critical habitat, is expected to be permanently reduced as a result of implementing the PA.

Under the PA, no take of T&E species is anticipated and no permanent reduction in terrestrial or aquatic habitats is expected. Because project activities occur within both Loach minnow and Southwestern Willow flycatcher designated-critical habitats, authorizations from appropriate public-land/water management agencies may be required. Because noise and vibration would be generated under the PA, but would be temporary, and because vegetation may be removed in the short-term, but recover, a **less-than-significant** determination was concluded for ecological resources.

Under the NAA, because the ditch infrastructure would not be replaced, **no impacts** to ecological resources are anticipated.

Historical and Cultural Resources

Affected Environment: Section 106 of the National Historic Preservation Act (NHPA) requires government agencies to take into account the effects of their actions on historic properties. These properties are listed on the National Register of Historic Places. New Mexico's Cultural Properties Act

(Sections 18-6 through 18-6-23, NMSA 1978), among other things, requires that state agencies provide the state historic preservation office (SHPO) with an opportunity to participate in planning for activities that will affect properties that are on the State Register of Cultural Properties or the National Register of Historic Places.

The Prehistoric and Historic Sites Preservation Act of 1989 (Sections 18-8-1 through 18-8-8, New Mexico Statutes Annotated 1978), among other things, prohibits the use of state funds for projects or programs that would adversely affect sites on the State or National Registers unless the state agency or local government demonstrates that there is no feasible and prudent alternative and that all possible planning has been done to minimize the harm to the register site.

The National Register shows 11 properties within Catron County; none of which are within the project area. The New Mexico Historic Preservation Division State Register of Cultural Properties shows no properties near to Pleasanton or the project area (State of New Mexico 2012). The state register lists three properties near to Glenwood, within the Mogollon Mountain area (State of New Mexico 2012). These properties, shown in Table 2, are well outside the project area.

Table 2. Historic properties near Glenwood, New Mexico.

Historic Preservation Division No.	County	City	Name of Property	National Register Date
1438	Catron	Glenwood	Mogollon Baldy Lookout Cabin	1/28/1988
306	Catron	Glenwood	Mogollon Village Site	11/30/1979
581	Catron	Glenwood	Whitewater Canyon Pipeline	12/9/1977

The *Catron County Comprehensive Land Plan* (National Federal Lands Conference 2012) shows the County's value of its culture and customs in its policies. As examples, "Remnants of early life forms, geological history and cultures have evolved as an important segment of a local economy and has become the signature of the local tourism trade"; "To support agriculture on private and public lands as part of our custom, culture, heritage, and as an important segment of our local economy, as well as providing for a secure national food supply"; "Many sites represent a unique culture and are closely related to early religious settlement of the area. They continue to have historical significance that are held by many residents as reverent or consecrated sites, and are the essence of their entity. These sites must remain accessible and be preserved" (National Federal Lands Conference 2012).

Evaluation Criteria: *The PA and NAA would be considered to have potentially significant impacts if either would result in violations to the NHPA or be inconsistent with Catron County's values for its culture and customs.*

Impacts: Under the PA, replacing ditch infrastructure that serves agricultural uses is consistent with the county's culture and customs. Because no national or state historic properties or religious sites are located within or near to the project area, there would be no impacts to historical and cultural resources, or subsequent violation to the NHPA. Under the PA, **no impacts** to historical and cultural resources would be anticipated.

Under the NAA, the ditch infrastructure would not be replaced and **no impacts** to historical and cultural resources would be anticipated.

Air Quality

Affected Environment: The U.S. Environmental Protection Agency (EPA) has established national ambient air quality standards (NAAQS) for criteria pollutants (ozone, nitrogen dioxide, carbon monoxide, sulfur dioxide, suspended particulate matter, and lead). New Mexico also has standards that are more stringent than federal standards. Both sets of standards are shown in Table 3. The EPA lists only one area in the entire state that is not in attainment with criteria pollutants: Anthony, located in Dona Ana County approximately 197 miles southeast of Pleasanton, is in non-compliance for PM-10. *Catron County Comprehensive Land Plan* policy statements place a priority on high air quality and protection of the area’s air from degradation to protect its residents’ health and well-being (National Federal Lands Conference 2012).

Evaluation Criteria: *The PA and NAA would be considered to have potentially significant impacts if implementing either would result in a NAAQS non-compliance violation, or be inconsistent with Catron County’s policy regarding its air quality.*

Impacts: Under the PA, activities that could affect air quality result from digging, compacting, and moving soil, all which release small particulate/dust to the atmosphere. Activities involving concrete repair could also generate dust. Construction equipment, such as small to mid-size front-end loaders, bulldozers, forklifts and electrical generators, release fuel emissions that could also affect air quality.

Implementing the PA is a short-term, temporary, small-scale construction operation that would generate dust and equipment emissions in small quantities. These impacts are reduced through implementation of BMPs. It is highly unlikely that either dust or emissions would be of sufficient quantity during operations to result in local or regional non-compliances. Most dust and emissions would be localized to the project area itself. Project dust/emissions would not contribute to air quality non-compliance in Anthony. As such, **less-than-significant** impacts to air quality are anticipated to result from implementing the PA.

Under the NAA, the ditch/piping system would not be replaced. No construction activities would be conducted, and **no impacts** to air quality would be anticipated.

Aesthetics

Affected Environment: The visual character of an area is defined in terms water, landform, vegetation, and cultural modifications. These components are characterized or perceived in terms of the design elements’ form, line, color, texture, and scale. Visual components also may be described as being distinct (unique or special), average (common or not unique), or minimal (a liability) elements of the visual field and in terms of the degree to which they are visible to surrounding viewers (e.g., foreground, middle ground, and background).

The visual quality of an area is defined in terms of the visual character and the degree to which these features combine to create a landscape that has the following qualities: vividness (memorable quality), intactness (visual integrity of environment), and unity (compositional quality). An area of high visual quality usually possesses all three of these characteristics. The visual quality of an area also is defined in terms of the visual sensitivity within the view shed of the project area. Locations of visual sensitivity are defined in general terms as areas where high concentrations of people may be present or areas that are readily accessible to large numbers of people. Visual quality is negatively impacted by atmospheric

Table 3. National and New Mexico Ambient Air Quality Standards.

Air Pollutant	Measure	National AAQS	New Mexico AAQS	PSD Increment Class I
Carbon monoxide	1-hr average	35 ppm ^a	13.1 ppm	
	8-hr average	9 ppm ^a	8.7 ppm	
Nitrogen dioxide	1-hr average	100 ppb		
	24 hr		0.10 ppm	
	Annual average	53 ppb	0.05 ppm	2.5 µg/m ³
PM ₁₀	24-hr block average	150 µg/m ^{3a}	150 µg/m ³	8 µg/m ³
	Annual average		50 µg/m ³	4 µg/m ³
PM _{2.5}	24-hr block average	35 µg/m ^{3b}		
	Annual average	12 µg/m ^{3c}		
Ozone	1-hour	0.12		
	8-hr rolling average	0.075 ppm ^d		
Sulfur dioxide	1-hr average	75 ppb		2 µg/m ³
	3-hr block average	0.50 ppm		25 µg/m ³
	24-hr block average	0.14 ppm	0.10 ppm	5 µg/m ³
	Annual average	0.03 ppm	0.02 ppm	
Lead	Rolling 3-month average	0.15 µg/m ³		
Hydrogen sulfide	1 hr		0.025 ppm	

Table Notes:

- Not to be exceeded more than once per year.
- To attain this standard, the 3-year average of the 98th percentile of 24-hour concentrations at each population-oriented monitor within an area must not exceed 35 µg/m³.
- To attain this standard, the 3-year average of the annual arithmetic mean PM_{2.5} concentrations from single or multiple community-oriented monitors must not exceed 15.0 µg/m³.
- To attain this standard, the 3-year average of the fourth-highest daily maximum 8-hour average ozone concentrations measured at each monitor within an area over each year must not exceed 0.08 ppm.

General Notes:
ppb = parts per billion, ppm = parts per million

Data Sources:
40 CFR § 50, 2013, “National Primary and Secondary Ambient Air Quality Standards,” *Code of Federal Regulations*, Office of the Federal Register, June 13, 2013.
New Mexico Administrative Code 20.2.3: Title 20, Environmental Protection, Chapter 2, Air Quality (Statewide), Part 3, Ambient Air Quality Standards, December 30, 2013.

particulate resulting from human activities (e.g., construction, prescribed fires) and natural events such as dust storms and lightning-caused wildfires.

Clean Air Act amendments protect particulate matter and sulfur dioxide emissions into federal Class I (e.g., wilderness, large national memorial parks), Class II (e.g., national monuments, national recreation areas, national wild and scenic rivers, national wildlife refuges) and III (areas less protected than Class I and II areas). There are no protected classes within or adjacent to the project area. The nearest Class I area

is the Gila Wilderness, northwest of Glenwood, and the Mount Baldy Wilderness, further to the west in Arizona.

Evaluation Criteria: The PA and NAA would be considered to have potentially significant impacts to aesthetics if implementing either would result in changes to/degradation of visual quality, views, and the aesthetic landscape.

Impacts: Under the PA, and as presented in the air quality and geologic environment/soils sections, it is unlikely that sufficient dust would be generated from construction activities to hinder visual quality or exceed any of the Prevention of Significant Deterioration standards in Table 3, which apply to visibility, or impact either of the two Class I wilderness areas. There may be dust that temporarily obscures localized visibility at the project site during construction activities.

The visual sensitivity associated with replacing ditch infrastructure would not be impacted, because the project area is not identified as an area of high scenic quality and not readily used by large numbers of people. Replacing an unlined/lined ditch system with a pipe that is subsequently buried, would alter a small portion of the landscape from a casual viewer's perspective as the ditch would not continue to look like a ditch. To viewers accustomed to seeing the unlined/lined ditch as a "stream" the improvement may not be positive. To viewers who see the ditch as a manmade structure, the reclaimed land could appear more natural, particularly when the area's vegetation re-establishes.

There would be temporary minor aesthetic changes to the landscape during project activities, with the presence of laborers and equipment on site for a few days. After PA implementation, some areas around the ditch-line may appear barren until vegetation re-establishes, but these are temporary aesthetic changes. Overall, impacts to visual and aesthetic resources were concluded to be **less than significant** under the PA.

Under the NAA, the ditch/pipe system would not be replaced and visual quality and sensitivity would not be changed from the current condition. **No impacts** to aesthetic resources would result from the NAA.

Noise

Affected Environment: Noise is unwanted sound. Noise-control for aircraft and airports, interstate motor carriers and railroads, workplace activities, trucks, motorcycles, and portable air compressors, etc., is regulated through various federal and state standards and local ordinances. For environmental noise, the EPA is the agency that enforces the Noise Control Act. For occupational noise, the federal Occupational Health and Safety Administration (OSHA) is the agency that enforces noise standards for workers. Towns and municipalities have local ordinances to control residential/community noise levels. BMPs exist to reduce noise levels to workers and the environment if noise is expected to reach levels of concern.

Ambient noise sources in the project area consist of birds, insects, wildlife, wind and water. Sources that generate noise above background levels are generally associated with humans in and around the area, farming operations, and vehicular traffic on nearby roads. The project area does not lie within a noise abatement area. Wildlife and noise is discussed in the Ecological Resources section; this section addresses noise and the human environment.

Evaluation Criteria: The PA and NAA would be considered to have potentially significant impacts if implementing either would degrade the existing noise landscape or impact workers.

Impacts: For the PA, a few pieces of construction equipment are required to move soils and to place pipe and other infrastructure. Noise would be generated during these operations, would occur during daylight hours, would be constant at low levels (i.e., idling equipment) for longer periods and/or intermittent at higher levels depending on the specific activity and equipment used, and would cease at the end of each day. When the PA is completed, which is estimated to be over the course of one to two months, noise levels would return to current noise and ambient background levels. Because the PA is a relatively small-scale operation, noise generated from implementing the PA is not anticipated to result in noise levels above background sufficient to interrupt or impact farming operations or other activities in the area. Operational noise may be perceived as a nuisance, initially and possibly intermittently during operations, but is not expected to change the existing soundscape.

New Mexico operates its own occupational safety and health program under a plan approved by the U.S. Department of Labor. This program provides safety and health protections to most private sector workers and state and local government employees within the state. Workers implementing the PA, because the project area is located on state land, would fall under the rules and regulation of the State Plan (New Mexico Environment Department 2014), under the construction industry standard. In general, New Mexico has adopted the federal regulations for construction workers. As such, the State Plan addresses noise (and other health and safety protections) for construction workers, and no impacts to workers are anticipated. Because noise would be generated under the PA, a **less-than-significant** impact determination was concluded.

For the NAA, because the ditch/pipe system would not be replaced, there would be no noise introduced to the existing landscape. **No impacts** would result from implementing the NAA.

Socioeconomics

Affected Environment: Catron County is New Mexico’s largest and most sparsely settled county, with more than half of its land area set aside in three National Forests: the Gila, Cibola, and Apache. Catron County’s economy is based on cattle ranching [i.e., agriculture], lumber, tourism, and recreation (National Federal Lands Conference 2012). Indicators used to describe the affected environment for socioeconomic resources typically include population size, economic health (e.g., impacts on local housing markets), employment/unemployment, and income. The PA project area lies across 12 acres of Forest Service-managed public land and 104 acres of privately-owned land, within Pleasanton. Nearby cities and towns include Buckhorn, Cliff, Glenwood, Lower Frisco and Rancho Grande. Pleasanton is a rural community with a population of 119. Making improvements to the existing ditch system is not anticipated to affect the private owner’s property value or private rights or water rights.

Evaluation Criteria: *The PA and NAA would be considered to have potentially significant impacts if implementing either could measurably change the existing socioeconomic environment.*

Impacts: Under the PA, it is estimated that a small crew of workers would conduct activities over a period of a one to two months. Workers may be locally based or relocate temporarily to perform the work. It is unlikely non-local workers would be permanently relocated to the area as a result of the PA. Project personnel would spend some income locally for food, housing, transportation, recreation/leisure activities during the project duration. However, the type of project (infrastructure) and short-term nature of its implementation make it unlikely to result in any significant, measureable longer-term change to the local economy, housing, employment, or personal income. Thus, the PA was determined to have **less-than-significant** impacts.

The ditch system provides water for irrigation. Although diminished flow has not been reported as an immediate threat to farming operations, continued decline of the diversion system would be expected to result in continual reduction of water to farmers who rely on daily availability of water during growing season.

Because implementing the NAA trends toward measurable change of the existing socioeconomic environment, a **potentially significant** determination was concluded.

Summary of Impacts and Significance

Table 4 provides a summary of the impacts identified in the analysis. For the PA, no impacts were found for land use and historical and cultural resources. Less-than-significant impacts were found for geologic environment/soils, water resources, ecological resources, air quality, aesthetics, noise, and socioeconomics. Less-than-significant impacts were generally found to be short-term, localized and directly related to project activities.

For the NAA, no impacts were found for land use, ecological resources, historical and cultural, air quality, aesthetics, and noise. Less-than-significant impacts were found for geologic environment/soils. Potentially significant impacts were found for water resources and socioeconomics. The potentially significant findings were related to trends for continual loss of water from a declining system to farming operations that over time would be expected to increase in magnitude.

Because the proposed action is to improve a system that already exists, the PA is not anticipated to contribute additional incremental impacts (i.e., cumulative impacts) to either the environmental or human landscapes.

Table 4. Summary of impacts for the Pleasanton Eastside Ditch Improvement PA.

Resource Area	No Action	Proposed Action
Land Use	NI	NI
Geologic Environment/Soils	LS	LS
Water Resources	PS	LS
Ecological Resources	NI	LS
Historical and Cultural Resources	NI	NI
Air Quality	NI	LS
Aesthetics	NI	LS
Noise	NI	LS
Socioeconomics	PS	LS
NI = No impact LS = Less than significant impact PS = Potentially significant impact		

References

Consensus Planning, Inc., 2007 Catron County Capital Improvement Plan/ Comprehensive Plan, online via http://swnmcog.org/images/Catron_County_Comprehensive_Plan_3-07_Complete_Final.pdf, accessed 1-2014, March 21, 2007, 46 pp.

- Dick-Peddie, W., 1991, General Vegetation of New Mexico, Earth Data Analysis Center, Albuquerque, NM, [digital data] online via <http://gstore.unm.edu/apps/rgis/datasets/c42a0f67-9d1b-420f-84bf-16746ab4a24b/veg1shp.original.zip>
- Griffith, G.E., Omernik, J.M., McGraw, M.M., Jacobi, G.Z., Canavan, C.M., Schrader, T.S., Mercer, D., Hill, R., and Moran, B.C., 2006, “Ecoregions of New Mexico” (color poster with map, descriptive text, summary tables, and photographs): Reston, Virginia, U.S. Geological Survey (map scale 1:1,400,000).
- National Federal Lands Conference, 2012, Catron County Comprehensive Land Plan, Multiple Use 1992, Catron County, New Mexico, online via http://yourfirstdue.com/manager/data/1316726401/File/catron_county_land_plan_final_update_d_2012.pdf, updated September 1, 2012, accessed 1-2014, 360 pp.
- New Mexico Environment Department, 2014, *State Plan*, New Mexico Occupational Health & Safety Bureau, Santa Fe, online via: http://www.nmenv.state.nm.us/Ohsb_Website/StatePlan/index.htm, accessed 1-2014.
- Portage, 2014, Draft Preliminary Engineering Assessment – Pleasanton Eastside Ditch, PI-14-005, correspondence from R. Schwaller, P.E., Idaho Falls, Idaho, to C Roepke, Deputy Director, New Mexico Interstate Stream Commission, Santa Fe, New Mexico.
- State of New Mexico, 2012, “New Mexico’s Rich Cultural Heritage,” Listed State and National Register Properties by County, online via <http://www.nmhistoricpreservation.org/programs/registers.html>, accessed 1-2014, September 21, 2012, 145pp.
- USDA, 2006, Taxonomic Classification of the Soils, Natural Resources Conservation Service, U.S. Department of Agriculture. Web Soil Survey. Available online at <http://websoilsurvey.nrcs.usda.gov/>, accessed 1/20/2014.
- USFWS, 2014, Natural Resources of Concern, Pleasanton, Information, Planning, and Conservation System (IPAC) via from the world wide web at <http://ecos.fws.gov/ipac/> on January 10, 2014.
- Whittaker, Doug, and Knight, Richard, 1998, “Understanding Wildlife Responses to Humans,” *Wildlife Society Bulletin*, 1998, 26(2):312-317.