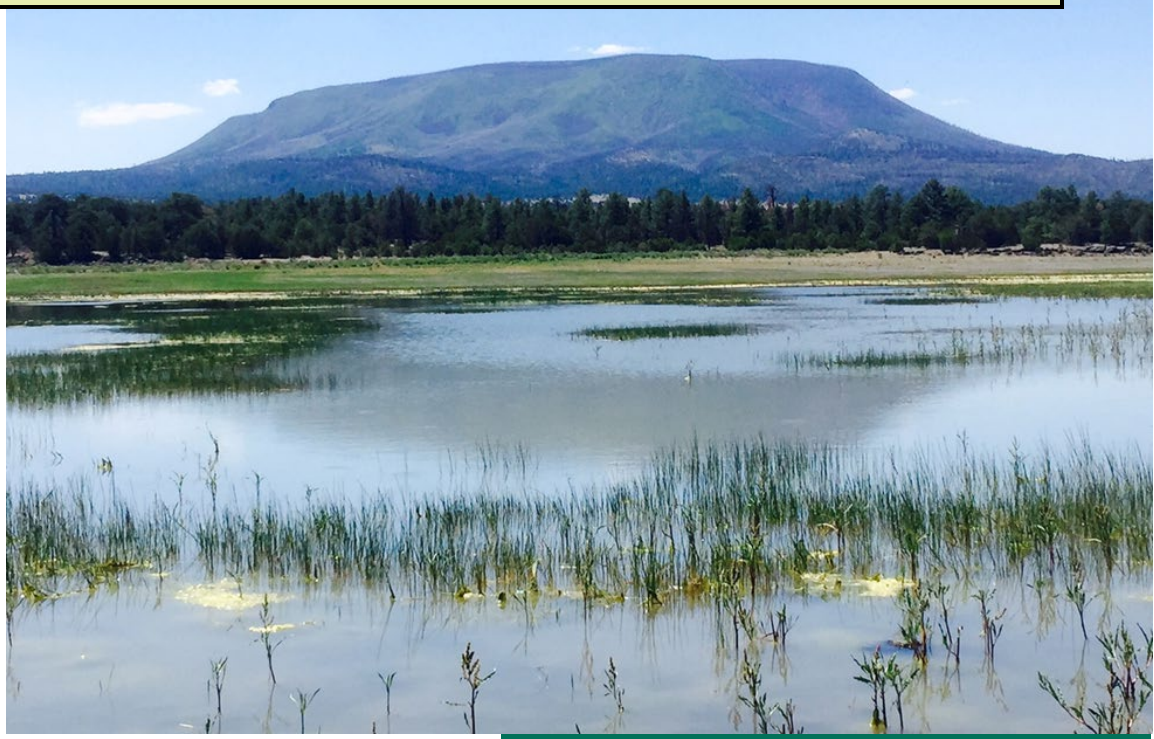
2026

Escudilla Landscape Watershed Restoration Action Plan & Watershed Based Plan Addendum



New Mexico Environment Department
United States Forest Service
2/14/2026

Addendum Contents

Introduction

The purpose of this Addendum is to edit and update the Escudilla Watershed Restoration Action Plan (WRAP) to address the nine key criteria for a Watershed Based Plan (WBP) required by the United States Environmental Protection Agency (U.S. EPA).

In addition to WBP general edits, updates have been made to the Watershed Condition and Water Quality Summary sections to reflect the most current NMED water quality data and USFS watershed scoring for the assessed watersheds addressed in the WBP. Essential and complementary project descriptions, cost tables and milestone timelines have also been updated to reflect and estimate current project costs.

This addendum was composed by the New Mexico Environment Department (NMED) Watershed Protection Section (WPS) in collaboration with the Gila National Forest (GNF) and in communication with EPA Region 6. The WRAP is a U.S. Forest Service planning document, and the WBP is a U.S. EPA and state planning document. Integrating WRAPs and WBPs improves coordination and streamlines the planning process. The Escudilla WRAP was published in 2018 and has been actively used by the GNF. The Escudilla WBP addresses non-point source pollution within the San Francisco River Basin for the temperature and sediment impaired reaches of the San Francisco River that have a TMDL. Once accepted by EPA, projects described in the Escudilla WBP will be eligible for on-the-ground CWA Section 319 funding.

Whitewater Creek is mentioned in the Escudilla WRAP; however, as there are no projects recommended in this watershed, Whitewater Creek is being removed from the text in the addended WBP. The Dry Blue Creek is also included in the WBP portion of the Escudilla WRAP. As the Dry Blue Creek is not listed on New Mexico's CWA Section 303(d) list of impaired waters and does not have a TMDL, the New Mexico portion of Dry Blue Creek is not eligible for CWA Section 319 funding from New Mexico's 319 program and will be omitted from the WBP in this addendum.

Addendum Table of Issue Areas, Changes and Activities

(Page numbers refer to the original document)

Page	Issue Area, Key Change, and Activities
3	**Issue Area: Executive Summary**
3	**Key Change for the Executive Summary Paragraph 4**: Add text to clarify the sections of the WRAP which will fufill the requirements of the WBP and the nine key criteria required by the United States Environmental Protection Agency (USEPA, 2008) for the Watershed Based Plan (WBP).
	Activities: Update Paragraph 4 with clarifying text. Removal of text identifying Whitewater Creek and Dry Blue Creek from WBP priority areas.
91	**Issue Area: Detailed Description of San Francisco River Basin Watersheds**
91	clarify that the section is fufilling the requirements of the WBP and the nine key criteria required by the United States Environmental Protection Agency (USEPA,2008) for the WBP.
	Activities: Add text to indicate that this section serves as the Watershed Based Plan linked to exec. Summary
103	**Issue Area: Watershed Condition**
103-122	**Key Change for Watershed Condition:** Updating Descriptive Text, Watershed Tables and sections to reflect the most current Watershed Condition Classification and NMED Water Quality Data, Water Quality Summary Updates and added Table of Watershed Impairments
	Activities: Update text in paragraph 4 to indicate the newest watershed assesement dates and results. Update Table 39: Watershed Score and Watershed Functionality Rating for San Francisco Watersheds.Updating the sections Trout Creek,: Stone Creek- San Francisco River, Big Canyon-San Francisco River, Headwaters Centerfire Creek, Outlet Centerfire Creek, Spur Draw, SA Creek, Dry Blue Creek as well as Tables 40-47. Update Water Quality Summary on page 115 adding a section for Sedimentation and Turbidity Impairments following the Temperature Impairment Section on Page 118. Table 1, Addendum 1 added.
123	Issue Area: San Francisco River Basin Restoration Goals, Objectives and Opportunities
123-125	**Key Change for Objectives:**Updating text to include reference to potential partnerships for projects within the watershed based plan.
	Activities: Add a sentence in paragraph two describing the location of Potential Partnerships within the document.
	Key Change for Opportunities: Updating text under partnership involvement
	Activities: Update text in bullet point two updating funding opportunities at NMED. Update text in bullet point three adding other potential partners. Update text in bullet point four to reference other potential partners in the document text. Update text in bullet point five to address partnerships and future revisions of the WBP.
127	**Issue Area: Essential Projects-San Francisco River Basin:**
127-188	**Key Change for Essential Projects- San Francisso River Basin**: Update tables to reflect current USFS cost estimates for project activities.
	Identifying critical areas for restoration. Updating Project Descriptions, cost tables and Ttimelines and Project Scheduling Tables forTrout Creek,: Stone Creek- San Francisco River, Big Canyon-San Francisco River, Headwaters Centerfire Creek, Outlet Centerfire Creek, Spur Draw, SA Creek Updating Tables 49-
201	**Issue Area:Evaluation Cirteria**
201	**Key Change for Evaluation Criteria:** Update text to identify Watershed Based Planning specific criteria
	Activities: Update paragraph 1 with Watershed Based Plan referrence. Add Criteria to Assess the progress of individual components of the WBP Process
202	**Issue Area: Restoration Project Monitoring and Evaluations**
202-203	**Key Change for Restoration Project Monitoring and Evaluations:** update sections internal monitoring, external monitoring and add a section titles Quality Assurance.
	Activities: Add bullet point under internal monitoring to address incremental evaluation of restoration projects. Add text under external monitoring to identify participating agencies. Add a section to address Quality Assurance.Add a section to address Data Gaps.
203	**Issue Area: Public Outreach**
203-204	**Key Change for Public Outreach**: Add text to indicate preliminary public outreach, Watershed Based Planning activities and to describe past and future community outreach and invovlement
	Activities: Add title "Preliminary Public Outreach". Add "WBP" in paragraph one under Preliminary Public Outreach. Add bullet point one to address this addendum and revise text in bullet points six and seven under additional activities identified as part of an integrated Outreach Program.
204	**Issue Area: Escudilla Landscape WRAP Milestones**
204-205	**Key Change for Public Outreach:** Add text to indicate WBP
	Activities: Add WBP to the title of the section as well as to the first paragraph. Add WBP to the heading of table 75.

Key Changes in the WRAP/WBP

Issue Area: Executive Summary

p.3, par.4

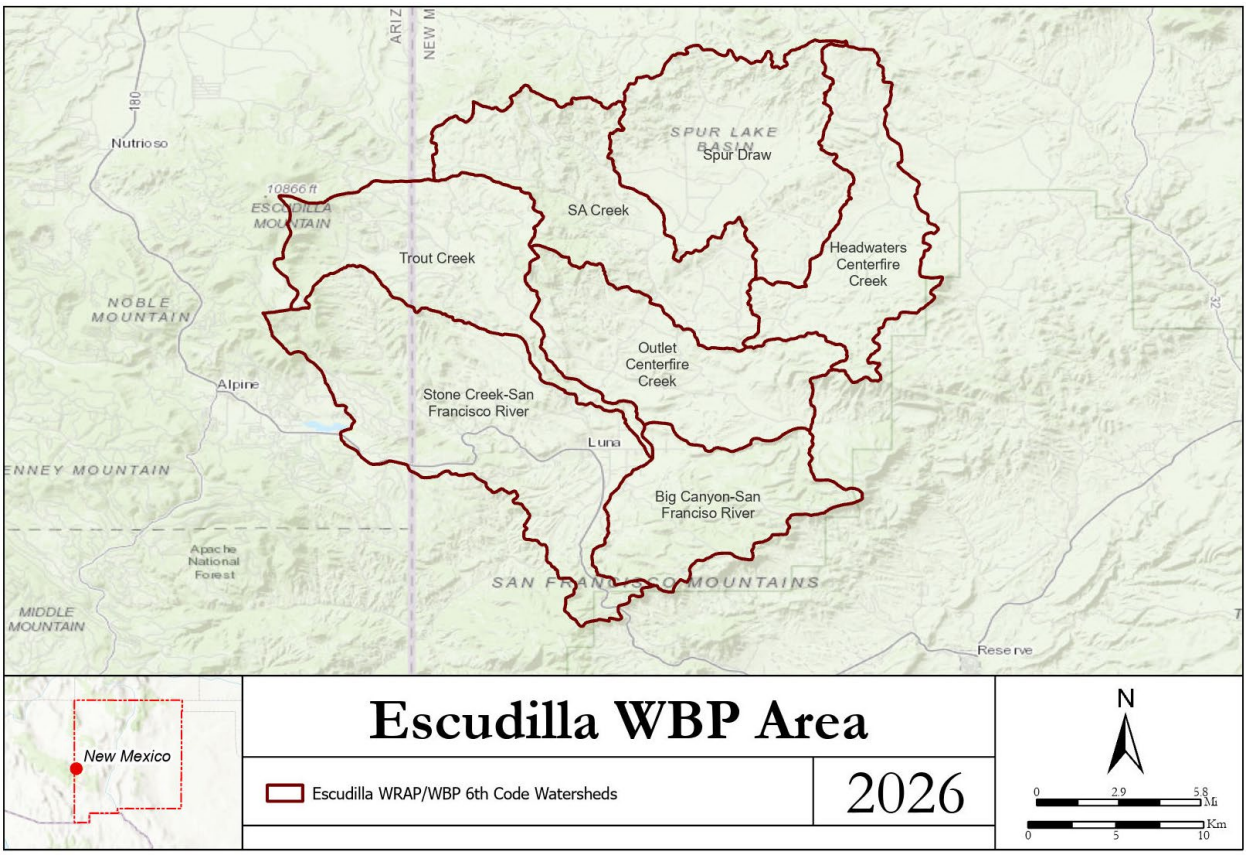
This Escudilla Landscape WRAP will also, in part, serve as a Watershed Based Plan (WBP) to address non-point source (NPS) water pollution in New Mexico, within the San Francisco River Basin, for the impaired reaches of San Francisco River (Beginning on Page 91). It will address nine key criteria as required by the United States Environmental Protection Agency (USEPA, 2008). These criteria include:

Issue Area: Detailed Description of San Francisco River Basin Watersheds

p.91, Title

DETAILED DESCRIPTION OF SAN FRANCISCO RIVER BASIN WATERSHEDS

The Escudilla Watershed Based Plan



Issue Area: Watershed Condition

p. 103, par.4

Table 39 summarizes the watershed functionality ratings of the San Francisco River Basin sixth code watersheds included in this WRAP. Six watersheds were rated “Functioning at Risk”, one watershed was given a watershed override class of “Functioning Properly” resulting from the completion of the Essential and Complementary Restoration Projects Identified in this WBP, and one watershed was rated as “Impaired”. The following watershed condition indicator datasheets provide useful data and important

indicator/attribute information, which helps determine the actions necessary to restore watershed functionality in the Escudilla Landscape 6th code watersheds. The datasheets also play an important role in prioritizing the 6th code watersheds for treatment by identifying key watershed issues. Watersheds found on the ASNF were rated in 2011, while the watersheds on the GNF were rated initially in 2015 and recently re-evaluated in 2020.

Table 39: Watershed Score and Watershed Functionality Rating for San Francisco Watersheds

Table 39. Watershed Score and Watershed Functionality Rating for San Francisco River Watersheds		
Watershed Score by 4th Code Watershed (River Basin)		
San Francisco River Basin		
6th Code Watersheds	**Watershed Score**	**Watershed Functionality Rating**
Trout Creek	1.8	Functioning at Risk
Stone Creek-San Francisco River	2.2	Functioning at Risk
Big Canyon-San Francisco River	1.7	Functioning Properly
Headwaters Centerfire Creek	1.7	Functioning at Risk
Outlet Centerfire Creek	2.3	Impaired
Spur Draw	1.9	Functioning at Risk
SA Creek	2	Functioning at Risk
Dry Blue Creek	2	Functioning at Risk

Table 40: Trout Creek watershed condition sheet
2015 TROUT CREEK WATERSHED CONDITION INDICATORS
(no Change/ not assessed in 2020)

Table 41: Stone Creek watershed condition sheet
2015 STONE CREEK-SAN FRANCISCO RIVER WATERSHED CONDITION INDICATORS
(no Change/ not assessed in 2020)

Table 42: Big Canyon – San Francisco River watershed condition datasheet

Table 42. Big Canyon - San Francisco River watershed condition datasheet					
2020 BIG CANYON - SAN FRANCISCO RIVER WATERSHED CONDITION INDICATORS					
INDICATOR	**ATTRIBUTE**	**ATTRIBUTE SCORE**	**INDICATOR SCORE**	**WEIGHT**	**RATING RATIONALE**
Aquatic Physical					
1 Water Quality	Impaired Waters (303) d Listed	3	2	10%	San Francisco River listed in 2024-2026 305b report for benthic macroinvertebrate community, sedimentation/siltation and temperature
	Water Quality Problems (Not Listed)	1			
2 Water Quantity	Flow Characteristics	3	3	10%	Tanks and irrigation diversions

	Habitat Fragmentation	2	1.5	10%	Diversions on San Francisco
	Large Woody Debris	n/a			
3 Aquatic Habitat	Channel Shape and Function	1			
Aquatic Biota					
4 Aquatic Biota	Life Form Presence	2	1.7	15%	Crayfish on San Francisco
	Native Species	1			
	Exotic and/or Invasive Species	2			
5 Riparian/Wetland Vegetation	Vegetative Condition	1	1		Repeated trespass of livestock have caused localized impacts
Terrestrial Physical					
6 Roads and Trails	Open Road Density	2	1.7	15%	Mostly level 2 roads
	Road Maintenance	2			
	Proximity to Water	1			
	Mass wasting	n/a			
7 Soils	Soil Productivity	1	1.3	15%	Soil production condition from GNF GES and ASNF TES
	Soil Erosion	2			
	Soil Contamination	1			
Terrestrial Biological					
8 Fire Regime or Wildfire	Fire Regime Condition and Class	3	3	2%	2015 FRCC rating
	Wildfire	n/a			
9 Forest Cover	Loss of Forest Cover	1	1	2%	
10 Rangeland Vegetation	Vegetation Condition	2	2	2%	3 allotments
11 Terrestrial Invasive Species	Extent and Rate of Spread	1	1	2%	Small amount of salt cedar on San Francisco
12 Forest Health	Insects and Disease	1	1	2%	
	Ozone	1			
Watershed Score		**1.7**			

Table 43: Headwaters Centerfire Creek watershed condition datasheet
2015 HEADWATERS CENTERFIRE CREEK WATERSHED CONDITION INDICATORS
(no Change/ not assessed in 2020)

Table 44: Outlet Centerfire Creek watershed condition datasheet
2015 OUTLET CENTERFIRE CREEK WATERSHED CONDITION INDICATORS
(no Change/ not assessed in 2020)

Table 45: Spur Draw watershed condition datasheet
2015 SPUR DRAW WATERSHED CONDITION INDICATORS

(no Change/ used weighted averages/ not assessed in 2020)

Table 46: SA Creek watershed condition datasheet
2015 SA CREEK WATERSHED CONDITION INDICATORS
(no Change/ not assessed in 2020)

p.115 Water Quality Summary
Water Quality Summary

In addition to the above Watershed Scores and Watershed Functionality Ratings for the 6th code watersheds that are located within the San Francisco River headwaters, the New Mexico Environment Department (NMED) has in place the 2024-2026 State of New Mexico Clean Water Act §303(d)/§305(b) Integrated Report and List. Also, Arizona Department of Environmental Quality's (ADEQ) Integrated 305(b) Assessment and 303(d) Listing Report was consulted for the portions of the above listed San Francisco 6th code watersheds that are in Arizona.

NMED has found water quality not supporting designated uses in Centerfire Creek (from the San Francisco River to its headwaters), in the San Francisco River (from Centerfire Creek to the Arizona border), in Trout Creek (from perennial portion San Francisco River to its headwaters) and in Stone Creek (San Francisco R to AZ border).

Portions of the San Francisco River are listed as not supporting Marginal Coldwater Aquatic Life, Coldwater Aquatic Life, and Primary Contact with probable causes named as benthic macroinvertebrate community (listed in 2012), sedimentation/siltation (listed in 2022), turbidity (listed in 2014), E.coli (listed in 2014), and temperature (first listed prior to 1996). Probable sources for the temperature impairment are noted in the TMDLs as removal of riparian vegetation, hydromodification, water diversions, irrigated crop production, recreational activities, dam/impoundments, riparian grazing, rangeland grazing, roads, low water crossings, silviculture, natural sources (e.g. drought), and forest fire. Climate change is expected to increase air temperature and decrease streamflow in New Mexico which will further increase surface water temperature. TMDLs have been completed for portions of the San Francisco River for temperature, turbidity, sedimentation, E. coli, and plant nutrients, with nutrients delisted in 2010. Table "Addendum 1", below, shows the current listing status and TMDL status for this watershed-based plan which focuses on temperature and sediment for the San Francisco River from the Arizona border downstream to NM 12 at Reserve, New Mexico that have a TMDL. Future updates to this WBP should address additional impairments and reaches of the San Francisco River. Upstream improvements in water quality will benefit downstream water quality.

Table 1, Addendum 1: Impairment, TMDL, and WBP status for segments of the San Francisco River in New Mexico from upstream to downstream

Assessment Unit (AU) Name	AU ID	Surface Water Quality Impairments	Designated Uses NOT supported	TMDL	Focus for this WBP
San Francisco River (Centerfire Creek to AZ border)	NM-2602_20	Sedimentation/ Siltation Benthic Macro-invertebrates	Coldwater Aquatic Life	Sedimentation (2024) Plant Nutrients (2001)	Sediment

		Temperature		Temperature (2001)	Temperature
San Francisco River (NM 12 at Reserve to Centerfire Creek)	NM-2602_10	Turbidity Temperature Benthic Macro-invertebrates	Coldwater Aquatic Life	Turbidity (2014) Temperature (2024) E. coli (2014)	Turbidity Temperature

Trout Creek, a tributary of the San Francisco River, is listed as not supporting High Quality Coldwater Aquatic Life with probable cause named as benthic macroinvertebrate community and temperature. A TMDL has not yet been established for Trout Creek, so probable sources of impairment are unknown at this time. Trout Creek was first listed as impaired in 2014. Romero Creek originates from the east side of Escudilla mountain and is a main tributary to Trout Creek.

Stone Creek (San Francisco R to AZ border), a tributary of the San Francisco River, is listed as not supporting High Quality Coldwater Aquatic Life with probable cause named as temperature. A TMDL has not yet been established for Stone Creek, so probable sources are unknown at this time. Stone Creek was first listed as impaired in 2022.

Centerfire Creek (San Francisco River to Headwaters), another tributary to the San Francisco River, is listed as not supporting High Quality Coldwater Aquatic Life and Primary Contract with probable causes named as temperature, turbidity, specific conductance, nutrients and E. coli.

Review of Arizona's 2024 Integrated 305(b) Assessment, and 303(d) Listing Report showed no listings for the Blue River (tributary to the San Francisco River in Arizona from the New Mexico border to KP Creek) or the San Francisco River (from its headwaters to the New Mexico border). The Arizona reach of the Blue River has had two biocriteria violations that indicate pervasive stressors on benthic macroinvertebrate (BMI) communities. The headwater reach of the San Francisco River in Arizona has had exceedances of dissolved oxygen and e. coli; however, according to ADEQ, more samples are needed to determine if water quality is supporting the designated uses for aquatic and wildlife for cold (AWC) and full body contact (FBC). Little Creek, a tributary in Arizona to the San Francisco River below Luna Lake, does not have sufficient information to determine if water quality standards are being met.

As of 2024, ADEQ has also determined that the water quality of Luna Lake (on-channel storage reservoir on San Francisco River) does not support multiple designated uses for agriculture livestock, aquatic wildlife cold, and full body contact. Water quality impairment listings include high pH, low dissolved oxygen, nutrients, and ammonia-nitrogen – there is not enough information for E. coli. While Luna Lake is above all of the San Francisco 6th code watersheds addressed in this WRAP and WBP, water from the lake flows through the Stone Creek-San Francisco River and Big Canyon-San Francisco River 6th code watersheds. Water discharged from Luna Lake may influence water quality approximately 2-miles downstream in New Mexico. Although the management of Luna Lake is currently outside the scope of this WBP, management measures that would benefit water quality for temperature and sedimentation for

the San Francisco River could be considered in a future WBP revision. After flowing into New Mexico, the San Francisco River flows back into Arizona west of Pleasanton, New Mexico.

Temperature Impairment

The 2001 temperature TMDL for the San Francisco River (Arizona border to Centerfire Creek), estimated that an approximate 4-degree Celsius decrease in stream temperature from the maximum of 29-degrees Celsius recorded in 1998 down to the water quality standard of 25-dgrees Celsius is needed to meet water quality standards. The 2001 TMDL uses SSTEMP to estimate the water quality standard for temperature could be met by increasing total shaded water from 4 percent to 23 percent with enhanced riparian vegetation. During the 2015-2016 water quality survey, the maximum temperature for the San Francisco River (AZ border to Centerfire Creek) was 30.93 degrees Celsius while the maximum temperature during the 2019-2020 water quality survey was 30.04 degrees Celsius. The 2024 TMDL for the San Francisco River (Center Fire Creek to NM 12 at Reserve) uses SSTEMP to estimate the water quality standard for temperature for this portion of the San Francisco River could be met by increasing vegetative shaded water from 13.6 percent to 52 percent. Additional strategies for decreasing stream temperatures include restoring channels that have become overly wide and are exposed to more solar radiation, reducing accelerated erosion which can raise the channel bed and contribute to channel widening, increasing baseflows by increasing water use efficiency or other means such as increasing soil moisture retention, infiltration, and groundwater connection particularly in riparian areas with shallow water tables, and decreasing direct runoff from heated surfaces such as roads and bare ground.

In the San Francisco River (from the Arizona border to Centerfire Creek) there is only one perennial tributary, Stone Creek, which flows from Escudilla Mountain in Arizona into New Mexico. Stone Creek is a perennial tributary to the San Francisco River above the NMED monitoring station near Head of Ditch campground just west of Luna, NM. Water temperature dataloggers deployed in 2016 demonstrated that the average maximum daily high temperature in Stone Creek was 5.4 degrees Celsius warmer than the temperature where the San Francisco River enters New Mexico, and 1.3 degree Celsius warmer than the temperature measured at Head of Ditch Campground. Based on modeling using SSTEMP (USGS Stream Segment Temperature Model), it appears that there is the potential to lower the water temperature inputs from Stone Creek by as much as 6 degrees by increasing the streamside shading from the current <10% to an attainable 60% through the proposed actions of planting and exclusionary fencing (see “essential projects” section below). While Stone Creek is, by volume, a considerably smaller stream, discharging 1- 2 cubic feet per second to the San Francisco River’s 3- 6 cubic feet per second, a 6-degree reduction in Stone Creek water temperature could potentially reduce the stream temperature measured at Head of Ditch by as much as 2 degrees Celsius.

Sediment and Turbidity Impairments

The San Francisco River (Centerfire Creek to AZ Border) was first listed in 2022 for a Sedimentation/Siltation Impairment and was assesses as not supporting High-Quality Cold-Water Aquatic Life. Since 2024 this assessment unit has had an EPA approved Sedimentation/Siltation TMDL and requires an approximate 11.4 % decrease in Sand and Fines to meet water quality standards. Probable

sources of this impairment are listed as Forest Fire; Grazing in the riparian zone; Highway/ Road/Bridge runoff; Low water crossing; Other recreation (campground); Rangeland grazing; Rural residential area; Silviculture and water diversions. Reducing sediment inputs and minimizing turbidity can be achieved through stream channel stabilization, road decommissioning and improvement projects, stream crossing improvement projects, campground improvement project and watershed restoration that includes grazing management and the reestablishment of riparian vegetation.

In this assessed reach of the San Franciso River there are three assessed perennial tributaries, Stone Creek, Trout Creek, and Centerfire Creek.

The Stone Creek (San Francisco R to AZ border) AU has a first monitoring and listing action recorded in 2022 resulting from the monitoring during the Gils/Mimbres/San Fran survey from 2019-2020. There is no recorded turbidity or physical habitat sampling from this monitoring cycle. It is recorded in the 2019-2020 Water Quality Survey that Major reductions in implementation because of dry conditions, resource limitations, and COVID-19 Restrictions. Stone Creek was however observed as being a highly unstable and eroding stream for the 6 total miles it flows though Arizona and New Mexico. Pebble counts conducted in 2016 as part of the SWQB Silver City Field Office temperature monitoring on the San Francisco River both above and below the confluence with Stone Creek demonstrated a tremendous sediment input from Stone Creek (see section: Benthic Macroinvertebrates).

Issue Area: San Francisco River Basin Restoration Goals, Objectives and Opportunities

p.125, Sec. Objectives, Opportunities a. Partnership Involvement

- New Mexico Game and Fish Department will assist in planning, funding, and implementation of activities impacting wildlife and aquatic species in the Escudilla Landscape.
- New Mexico Environment Department (NMED) will assist in planning, funding, and monitoring of activities to improve water quality throughout the watersheds. The NMED Surface Water Quality Bureau (SWQB) Nonpoint Source program (NPS) has funding opportunities annually through both the Federal Clean Water Act (CWA) Section 319 grant and the River Stewardship Program (RSP).
- Other partners such as Trout Unlimited, Mesilla Valley Flyfishers, Rocky Mountain Elk Foundation, Wild Earth Guardians, Upper Gila Watershed Association, National Wild Turkey Federation, Native Desert Fish Society, New Mexico State Forestry Division, Office of Surface Mining and AmeriCorps VISTA (OSM/VISTA), Natural Resource Conservation Service (NRCS), and others will be used where opportunities arise.
- Anticipated involvement of assisting agencies, watershed groups and volunteers are mentioned as “potential partnerships” under the specific projects listed in section c. individual project descriptions.
- Further technical assistance and partnerships may be required to address data gaps existing for future revisions of the plan.

Issue Area: Essential Projects-San Franciso River Basin

p.127, par.1

Prioritizing and identifying critical areas for restoration of the impaired reaches of the San Francisco River

The combined watersheds of 6th code Trout Creek, Stone Creek-San Francisco River, Big Canyon-San Francisco River, Headwaters Centerfire Creek, Outlet Centerfire Creek, Spur Draw, and SA Creek in the 5th Code Centerfire Creek-San Francisco River, together with the watersheds of the 6th Code Dry Blue in the 5th code Upper Blue River, collectively comprise the headwater watersheds of the east and south sides of Escudilla Mountain. All the water originating from these 6th code watersheds collects in the mainstem drainage of the San Francisco River.

These 6th code Watersheds were assessed in 2012 and 2011 for the ASNF and the GNF for their Watershed Condition using the USDA three Class system (USDA Forest Service 2004, FSM 2521.1) which encompasses the geomorphic, hydrologic, and biologic components to assess watershed integrity and health (See Table 39).

Additionally, the Water Quality data from New Mexico Environment Department (NMED) 2024-2026 State of New Mexico Clean Water Act §303(d)/§305(b) Integrated report as well as the Arizona Department of Environmental Quality's (ADEQ) Integrated 305(b) Assessment and 303(d) Listing Report were used to identify water quality impairments within the above-mentioned watersheds. Portions of the San Francisco River are listed as not supporting Coldwater Aquatic Life and a Total Maximum Daily Load (TMDL) has been completed for temperature. Centerfire Creek is listed as not supporting High Quality Coldwater Aquatic Life and Primary Contact, a TMDL has been completed for plant nutrients and conductivity.

Using this data to assess watershed health and impairments provides a baseline for identifying watersheds most at risk and with specific rehabilitation potential. These identified watersheds will be essential when developing priorities and goals for addressing NPS water pollution load reductions for the impaired reaches of the San Francisco River.

In this planning document each 6th code watershed has proposed project activities which include Essential Projects as well as Complementary Restoration Projects with each project in sequential order with a respective budget. This WBP does not prioritize watersheds but rather outlines Essential Projects within a watershed that are required to move the watershed from Functioning at Risk to Properly Functioning as well as projects that achieve other important landscape restoration objectives and are complementary to the Essential Projects. By creating Essential and Complementary Projects for each watershed, projects can be implemented across multiple watersheds over a longer timeline as funding and partners are available.

p.130 Essential Projects – Trout Creek

Essential Projects

1. **<u>Essential Project #1 – Road Decommissioning</u>**
   - **a.** Attribute/ Indicator Addressed – Roads and Trails
   - **b.** Project Description: This project will focus on decommissioning roads identified in Escudilla WRAP Area. In this watershed, there are approximately 18 miles of road identified for decommissioning within the Luna Planning Area. There are approximately 4 miles of road identified for decommissioning within the West Escudilla Restoration Project. Current decommissioning costs are approximately $8,750/mile. Decommissioning of a road involves reestablishing vegetation, and if necessary, initiating restoration of ecological processes interrupted or adversely impacted by the unneeded road. Treatments include one or more of the following treatments: Reestablishing former drainage patterns, stabilizing slopes, and restoring vegetation; Blocking the entrance to a road or installing water bars; Removing culverts, reestablishing drainages, removing unstable fills, pulling back road shoulders, and scattering slash

on the roadbed; Completely eliminating the roadbed by restoring natural contours and slopes; and other methods designed to meet the specific conditions associated with the unneeded road

c. Partners Involvement: Various partners have expressed interest in partnering in this effort, including New Mexico Environment Department and Wild Earth Guardians

d. Timeline: TBD based on funding and prioritization of 12 watersheds; Decommissioning of roads without fuels treatments can be completed in one fiscal year; roads with planned fuels treatments can be decommissioned immediately following treatment.

e. Estimated costs and associated Budget Line Item: $192,500; Estimated costs include the costs of reseeding, reshaping, labor, heavy equipment transport, per diem, barrier, imported aggregate, and archaeological review (if necessary)

2. **Essential Project #2 – Road Improvement**
   - **a.** Attribute/ Indicator Addressed – Roads and Trails
   - **b.** Project Description: This project will focus on heavy road maintenance and improving best management practices for road drainage on Maintenance Level 2 and 3 roads within the watershed. BMPs will include improvement of lead out ditches, road dips, and inlet and outlet features of culverts and road/stream crossings. Heavy road maintenance may involve some level of reconstruction of existing roadbeds to reestablish a safe and last driving surface with the intent of minimizing sediment movement off of the road. Currently there are approximately 53 miles of Maintenance Level 2 and 3 roads within the watershed. This project assumes that 40% of roads in the watershed need some degree of maintenance ranging from light to heavy.
   - **c.** Partners Involvement: Catron County
   - **d.** Timeline: TBD based on funding; can be completed in one fiscal year
   - **e.** Estimated costs and associated Budget Line Item = $183,750; Based on an estimate of $8,750/mile for road maintenance. Estimated costs may include reshaping, labor, heavy equipment transport, per diem, imported aggregate, and archaeological review (if necessary).
3. **Essential Project #3 – Erosion Control Structures** (In Process)
   - **a.** Attribute/Indicator Addressed – Water Quality
   - **b.** Project Description: This project will focus on the maintenance and/or reconstruction of 24 existing erosion control structures. These structures were originally implemented in the 1980s to impede and prevent ongoing erosion and gullying across the watershed in various drainages and swales. None of these structures have received maintenance over the last several decades and are currently in various stages of disrepair. Some structures have filled completely in and no longer serve to back up sediment. Others have breaches in the dams and are experiencing active headcutting, while others have water bypassing the structure, creating new erosion issues. Work will include heavy equipment cleanout of the sediment structures where needed or reconstruction/expansion of dams to preclude current and future gullying and sediment movement. Certified weed-free seeding will be required at sites requiring reconstruction. Inventory and survey work will be necessary prior to beginning this project to establish necessary site design.
   - **c.** Partners Involvement: New Mexico Environment Department, Amigos Bravos
   - **d.** Timeline: TBD based on funding

e. Estimated Costs and associated Budget Line Item = $85,000; Costs are based on an estimate of $2,500/structure for maintenance and $5,000/structure for new construction.

4. **Essential Project #4 – Stream Restoration/Riparian Improvement** (In process)
   a. Attribute/ Indicator Addressed – Water Quality, Water Quantity, Aquatic Habitat, Aquatic Biota, Riparian/Wetland Vegetation, Soils
   b. Project Description: This project will focus on: GNF - approximately 1 mile of stream/wetland/riparian restoration on Romero Creek; and ASNF- approximately 3 miles of riparian restoration in headwater drainages on the ASNF. Current conditions include headcutting and dewatering of Romero Creek and the adjacent wet meadow system. Work would include implementation of channel and wetland restoration techniques to increase water table elevations, enhance productivity of wetland dependent species (both aquatic and vegetative), encourage deep rooted vegetation on streambanks, impede erosion processes, and restore channel stability. These techniques include placement of water control structures that reestablish macro/micro-topography and encourage natural channel form and function, streambank contouring, and re-establishment of wetland/riparian plants through natural and/or artificial means (both woody and herbaceous plants). All techniques will utilize minimum impact best management practices to control sediment movement and will follow necessary permitting requirements under the Clean Water Act.
   c. Partners Involvement: Amigos Bravos, New Mexico Environment Department
   d. Timeline: TBD based on Funding; project can be completed in one year.
   e. Estimated costs and associated Budget Line Item: $950,000; Costs are based on design, labor, equipment rental and transport, per diem, fencing supplies for both livestock and elk, imported aggregate and other materials as necessary.
5. **Essential Project #5 – Noxious Weed Removal/Inventory**
   a. Attribute/ Indicator Addressed – Terrestrial Invasive Species
   b. Project Description: This project will focus on the removal of approximately 5 acres of bull thistle located adjacent to NFS 4136B. Treatments may include grubbing out of thistle, herbicide application, or other approved techniques
   c. Partners Involvement: none
   d. Timeline: TBD based on Funding; project is a two-year project; initial treatment and follow-up the next year to treat any residual rosettes.
   e. Estimated costs and associated Budget Line Item: $52,000; Costs are based on hiring a two-person crew for 3 summers to ensure thistle population is gone, including vehicle, and monitoring on ASNF.
6. **Essential Project #6 – 4127U French Drain**
   a. Attribute/ Indicator Addressed – Soils
   b. Project Description: This project will focus on improving the crossing of a small boggy depression and NFS 4127U. This will involve pipe installation to pass water and installation of all-weather surfacing/aggregate on the road for approximately 100 yards.
   c. Partners Involvement: none
   d. Timeline: TBD based on Funding; This project can be completed in one year.

e. Estimated costs and associated Budget Line Item: $40,500; Costs are based on hauling of aggregate, pipes, and installation costs.

7. **Essential Project #7 – Trout Creek Campground Improvement**
   a. Attribute/ Indicator Addressed – Water Quality, Soils
   b. Project Description: This project proposes to improve drainage features at campground sites and roads and provide new aggregate to roads, campsites, and pullouts. Storm water runoff is currently washing out interior roads in the campground and depositing gravel and sediment into campsites and adjacent Trout Creek. Best management practices will be implemented to divert water off of roads more efficiently and effectively and into buffer zones away from campsites.
   c. Partners Involvement: none
   d. Timeline: TBD based on funding; Project can be completed in one year
   e. Estimated costs and associated Budget Line Item: $600,000
8. **Project #8– Road Improvement-Surfacing/Stabilization**
   a. Attribute/ Indicator Addressed – Water Quality, Roads and Trails
   b. Project Description: ASNF – NFSR 275 is a main route for recreation and Timber harvest for West Escudilla, the road quickly ravels and washboards immediately following maintenance activities. Road fines are lost quickly through creation of dust and washing from summer rains. The project would include placing stabilizing crushed aggregate to provide a reduction in sediment transported to water bodies.
   c. Partners Involvement: None
   d. Timeline: TBD based on Funding; project is at least a 1-year project.
   e. Estimated costs and associated Budget Line Item: looking for partnership money. Putting in for CMLG money. Three miles of road stabilization treatment x $8,750 per mile = $26,250.

Complementary Restoration Projects

9. **Project #9 – Forest Vegetation Improvement – Thinning**
   a. Attribute/ Indicator Addressed – Fire Regime
   b. Project Description: This project will focus on woodland and forest maintenance and restoration treatments were identified across the watershed. Treatment of vegetation will be accomplished by hand, mechanized, and or herbicide treatment. In forested systems, activities would include thinning and group selections (e.g. creating 1–4-acre openings) to encourage regeneration of trees. Woodland areas include pinyon juniper and pinyon pine, while forested areas refer to ponderosa pine and mixed conifer. Specific silviculture prescriptions will be written for treatment units based on desired future conditions for the unit and area. Treatment units may be planned across watershed boundaries, thus this project will be implemented over multiple years, as the treatment units are prepared. More than one watershed within the Escudilla Planning Area may receive treatment in a single year, however acreages may be limited. Thinning within this project area on the GNF includes both group select (2,479 acres) and improvement (1,947 acres) thinning. A total of 2,801 acres of thinning are planned within the West Escudilla Restoration Area.
   c. Partners Involvement: New Mexico Environment Department (State Forestry)

d. Timeline: TBD based on funding; this is a multiple year project. Budget constraints and treatment boundaries will greatly limit the amount of acres treated in a single year within a watershed.

e. Estimated costs and associated Budget Line Item = $10,840,500; Costs are based on Costs are based on 7,227 acres at $1,500/acre.

10. Project #10 – Forest Vegetation Improvement – Prescribed Fire

a. Attribute/ Indicator Addressed – Fire Regime

b. Project Description: This project would use prescribed fire to maintain and/or reduce fuel loadings. Prescribed fire can be implemented prior and after proposed vegetation treatments. Treatment units may be planned across watershed boundaries, thus this project will be implemented over multiple years, as the treatment units are prepared. More than one watershed within the Escudilla Planning Area may receive treatment in a single year, however acreages may be limited. Within the Luna Planning Area, a total of 730 acres are planned for prescribed fire. Within the West Escudilla Restoration Project, a total of 1,887 acres are planned for prescribed fire.

c. Partners Involvement: New Mexico Department of Game and Fish, Rocky Mountain Elk Foundation.

d. Timeline: TBD based on funding; this is a multiple year project based on budget constraints, burning units, burning limitations, and mitigation of cumulative impacts to natural and cultural resources.

e. Estimated costs and associated Budget Line Item = $261,700; Costs are based on the following assumptions: $100/acre

p.134 Table 49

Table 49: Trout Creek Costs

Trout Creek
Good Neighbor Watershed

Funding Source	Planning and Design	# units	Cost/Unit	Implementation	Project Monitoring	Project Totals
Essential Project #1 Road Decommissioning						
FS Contribution Gila NF		18	$8,750.00	$157,500.00		$157,500.00
FS Contribution ASNF		4	$8,750.00	$35,000.00		$35,000.00
Partner Contribution (both in kind and $)		TBD				$0.00
Funding already obtained						$0.00
Total	$0.00	**22 Miles**		**$192,500.00**	$0.00	**$192,500.00**
Essential Project #2 Road Improvement						
FS Contribution Gila NF		14	$8,750.00	$122,500.00		$122,500.00
FS Contribution ASNF		7	$8,750.00	$61,250.00		$61,250.00
Partner Contribution (both in kind and $)		TBD	TBD			$0.00
Funding already obtained		TBD	TBD			$0.00
Total	$0.00	**21 Miles**		**$183,750.00**	$0.00	**$183,750.00**
Essential Project #3 Erosion Control Structures						

FS Contribution Gila NF (Maintenance)		24	$2,500.00	$60,000.00		$60,000.00
FS Contribution Gila NF (New)		5	$5,000.00	$25,000.00		$25,000.00
Partner Contribution (both in kind and $)		TBD				$0.00
Funding already obtained		TBD				$0.00
Total	$0.00	**29 Structures**		**$85,000.00**	$0.00	**$85,000.00**
Essential Project #4 Stream Restoration and Riparian Improvement						
FS Contribution Gila NF	$120,000.00	1	$175,000.00	$175,000.00	$5,000.00	$300,000.00
FS Contribution ASNF	$120,000.00	3	$175,000.00	$525,000.00	$5,000.00	$650,000.00
Partner Contribution (both in kind and $)		TBD	TBD			$0.00
Funding already obtained		TBD	TBD			$0.00
Total	$240,000.00	**4 Miles**		**$700,000.00**	$10,000.00	**$950,000.00**
Essential Project #5 Noxious Weed Removal/Inventory						
FS Contribution Gila NF		3	$12,500.00	$37,500.00	$1,000.00	$38,500.00
FS Contribution ASNF		1	$12,500.00	$12,500.00	$1,000.00	$13,500.00
Partner Contribution (both in kind and $)		TBD	TBD			$0.00
Funding already obtained		TBD	TBD			$0.00
Total	**$0.00**	**4 years**		**$50,000.00**	$2,000.00	**$52,000.00**
Essential Project # 6 4127U French Drain						
FS Contribution Gila NF	$10,000.00	1	$30,000.00	$30,000.00	$500.00	$40,500.00
FS Contribution ASNF		n/a	n/a			$0.00
Partner Contribution (both in kind and $)		TBD	TBD			$0.00
Funding already obtained		TBD	TBD			$0.00
Total	$10,000.00	**1 crossing**		**$30,000.00**	$500.00	**$40,500.00**
Essential Project #7 Trout Creek Campground Improvement						
FS Contribution Gila NF	$100,000.00	1	$500,000.00	$500,000.00		$600,000.00
FS Contribution ASNF		n/a	n/a			$0.00
Partner Contribution (both in kind and $)		TBD	TBD			$0.00
Funding already obtained		TBD	TBD			$0.00
Total	$100,000.00	**1 Year**		**$500,000.00**	$0.00	**$600,000.00**
Essential Project #8 Road Improvement Surfacing/ Stabilization						
FS Contribution Gila NF		n/a	n/a			$0.00
FS Contribution ASNF		3	$8,750.00	$26,250.00		$26,250.00
Partner Contribution (both in kind and $)		TBD	TBD			$0.00
Funding already obtained		TBD	TBD			$0.00
Total	$0.00	**3 Miles**		**$26,250.00**	$0.00	**$26,250.00**

Essential Project Totals						
Forest Service Totals	**$350,000.00**			**$1,793,750.00**	**$12,500.00**	**$2,156,250.00**
Partner Contribution Totals	$0.00			$0.00	$0.00	**$0.00**
Funding already obtained	$0.00			$0.00	$0.00	**$0.00**
Grand Total	**$350,000.00**			**$1,793,750.00**	$12,500.00	**$2,156,250.00**
Complementary Project #9 Forest Vegetation Treatments						
FS Contribution Gila NF (Group Select)		2479	$1,500.00	$3,718,500.00		$3,718,500.00
FS Contribution Gila NF (Improvement)		1947	$1,500.00	$2,920,500.00		$2,920,500.00
FS Contribution ASNF (Group Select)		2801	$1,500.00	$4,201,500.00		$4,201,500.00
Partner Contribution (both in kind and $)		TBD	TBD			$0.00
Funding already obtained		TBD	TBD			$0.00
Total	$0.00	**7,227 acres**		**$10,840,500.00**	$0.00	**$10,840,500.00**
Complementary Project #10 Forest Vegetation Improvement/ Prescribed Fire						
FS Contribution Gila NF		730	$100.00	$73,000.00		$73,000.00
FS Contribution ASNF		1887	$100.00	$188,700.00		$188,700.00
Partner Contribution (both in kind and $)		TBD	TBD			$0.00
Funding already obtained		TBD	TBD			$0.00
Total	$0.00	**2,617 acres**		**$261,700.00**	$0.00	**$261,700.00**
Complementary Project Totals						
Forest Service Totals	**$0.00**			**$11,102,200.00**	**$0.00**	$11,102,200.00
Partner Contribution Totals	$0.00			$0.00	$0.00	$0.00
Funding already obtained	$0.00			$0.00	$0.00	$0.00
Total	**$0.00**			**$11,102,200.00**	**$0.00**	**$11,102,200.00**
Essential and Complementary Projects						
Grand Total	**$350,000.00**			**$12,895,950.00**	**$12,500.00**	**$13,258,450.00**

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Table 50: Trout Creek Timelines and Project Scheduling

Trout Creek Timelines and Project Scheduling				
FY (TBD)	**Task**	**Cost GNF**	**Cost ASNF**	**Partner Cost**
Year 1	Essential Project #2 – Road Improvement	$157,500.00	$35,000.00	unknown
Year 1	Essential Project #8 – Road Improvement – Surfacing/Stabilization	TBD	$26,250.00	unknown

Year 1	Essential Project #3 – Erosion Control Structures – maintenance – Year 1 of 2	$60,000.00	n/a	unknown
Year 1	Essential Project #4 – Stream restoration and riparian improvement – Year 1 of 2	n/a	$325,000.00	unknown
Year 1	Complementary Restoration Project #10 – Forest Vegetation Improvement – Prescribed fire	$73,000.00	$188,700.00	unknown
Year 1	Complementary Restoration Project #9 – Forest Vegetation improvement – GNF 1,239 acres (group select) Year 1 of 2	$1,858,500.00	n/a	unknown
Year 1	Complementary Restoration Project #9 – Forest Vegetation improvement – GNF 486 acres (improvement) Year 1 of 4	$729,000.00	n/a	unknown
Year 2	Essential Project #3 – Erosion control structures – new – Year 2 of 2	$25,000.00	n/a	unknown
Year 2	Essential Project #4 – Stream restoration and riparian improvement – Year 2 of 2	$300,000.00	$325,000.00	unknown
Year 2	Complementary Restoration Project #9 – Forest Vegetation improvement; ASNF 1,400 acres Year 1 of 2	$2,100,000.00	$2,100,000.00	unknown
Year 2	Complementary Restoration Project #9 – Forest Vegetation improvement – GNF 1,239 acres (group select) Year 2 of 2	$1,858,500.00	n/a	unknown
Year 2	Complementary Restoration Project #9 – Forest Vegetation improvement – GNF 486 acres (improvement) Year 2 of 4	$729,000.00	n/a	unknown
Year 3	Essential Project #5 – noxious weed removal – Year 1 of 3	$12,500.00	$13,500.00	unknown
Year 3	Essential Project #6 – NFS 4127 French Drain	$40,500.00	n/a	unknown
Year 3	Essential Project #7 – Trout Creek Campground improvement	$600,000.00	n/a	unknown
Year 3	Complementary Restoration Project #9 – Forest Vegetation improvement; ASNF 1,400 acres Year 2 of 2	n/a	$2,100,000.00	unknown
Year 3	Complementary Restoration Project #9 – Forest Vegetation improvement – GNF 486 acres (improvement) Year 3 of 4	$729,000.00	n/a	unknown
Year 4	Complementary Restoration Project #5 – Noxious weed removal – Year 2 of 3	$12,500.00	n/a	unknown
Year 4	Complementary Restoration Project #9 – Forest Vegetation improvement – GNF 486 acres (improvement) Year 4 of 4	$729,000.00	n/a	unknown
Year 5	Complementary Restoration Project #5 – Noxious weed removal – Year 3 of 3	$12,500.00	n/a	unknown
Year 5	Essential Project #1 – Road Decommissioning	$157,500.00	$35,000.00	unknown

p.140 Essential Projects-Stone Creek/San Franciso

Essential Projects

1. **Essential Project #1 – Road Decommissioning**
   - **a.** Attribute/ Indicator Addressed – Roads and Trails
   - **b.** Project Description: This project will focus on decommissioning roads identified in Escudilla WRAP area. In this watershed, approximately 15 miles of road have been identified on the GNF in the Luna Planning Area and approximately 2 miles identified on the ASNF in the West Escudilla Planning Area. There are also 4 miles of unauthorized routes to be obliterated on the ASNF. Current decommissioning costs are approximately $8,750/mile. Decommissioning of a road involves reestablishing vegetation, and if necessary, initiating restoration of ecological processes interrupted or adversely impacted by the unneeded road. Treatments include one or more of the following treatments: Reestablishing former drainage patterns, stabilizing slopes, and restoring vegetation; Blocking the entrance to a road or installing water bars; Removing culverts, reestablishing drainages, removing unstable fills, pulling back road shoulders, and scattering slash on the roadbed; Completely eliminating the roadbed by restoring natural contours and slopes; and Other methods designed to meet the specific conditions associated with the unneeded road
   - **c.** Partners Involvement: Various partners have expressed interest in partnering in this effort, including New Mexico Environment Department, Arizona Department of Game and Fish, and Wild Earth Guardians
   - **d.** Timeline: TBD based on funding and prioritization of 12 watersheds; Decommissioning of roads without fuels treatments can be completed in one fiscal year; roads with planned fuels treatments can be decommissioned immediately following treatment.
   - **e.** Estimated costs and associated Budget Line Item: Estimated costs include the costs of reseeding, reshaping, labor, heavy equipment transport, per diem, barrier, imported aggregate, and archaeological review (if necessary). GNF - $131,250; ASNF - $52,500
2. **Essential Project #2 – Road Improvement**
   - **a.** Attribute/ Indicator Addressed – Roads and Trails
   - **b.** Project Description: This project will focus on heavy road maintenance and improving best management practices for road drainage on Maintenance Level 2 and 3 roads within the watershed. BMPs will include improvement of lead out ditches, road dips, and inlet and outlet features of culverts and road/stream crossings. Heavy road maintenance may involve some level of reconstruction of existing roadbeds to reestablish a safe and last driving surface with the intent of minimizing sediment movement off of the road. Currently there are approximately 67 miles of ESCUDILLA LANDSCAPE WATERSHED RESTORATION ACTION PLAN July 2018 – Gila and Apache-Sitgreaves National Forests Page 141 of 216 Maintenance Level 2 and 3 roads within the watershed. This project assumes that 40% of roads in the watershed need some degree of maintenance ranging from light to heavy.
   - **c.** Partners Involvement: Catron County and Apache County
   - **d.** Timeline: TBD based on funding; can be completed in one fiscal year

e. Estimated costs and associated Budget Line Item = GNF -$140,000; ASNF -$96,250; Based on an estimate of $8,750/mile for road maintenance, which may include reshaping, heavy equipment transport, per diem, culvert replacement, and archaeological review (if necessary).

3. **Essential Project #3 – Erosion Control Structures**
   - **a.** Attribute/Indicator Addressed – Water Quality
   - **b.** Project Description: This project will focus on the maintenance and/or reconstruction of 18 existing erosion control structures and installation of 5 new structures on the GNF and installation of 2 new erosion control structures and maintenance on one structure in Little Creek on the ASNF. These structures were originally implemented in the 1980s to impede and prevent ongoing erosion and gullying across the watershed in various drainages and swales. None of these structures have received maintenance over the last several decades and are currently in various stages of disrepair. Some structures have filled completely in and no longer serve to back up sediment. Others have breaches in the dams and are experiencing active headcutting, while others have water bypassing the structure, creating new erosion issues. Work will include heavy equipment cleanout of the sediment structures where needed or reconstruction/expansion of dams to preclude current and future gullying and sediment movement. Certified weed-free seeding will be required at sites requiring reconstruction. Inventory and survey work will be necessary prior to beginning this project to establish necessary site design. On ASNF: removal of failing rock/wire gabions in Stone Creek and replacing them with large rip rap. These structures were originally implemented to impede and prevent ongoing erosion and channel movement near NFR 275. None of these structures have received maintenance and are currently in various stages of disrepair. Some structures have filled completely in and no longer serve to back up sediment. Work will include heavy equipment to remove the rock gabion baskets and replace them with very large rip rap to prevent erosion and stabilize the channel during flood flows.
   - **c.** Partners Involvement: New Mexico Environment Department, Bat Conservation International
   - **d.** Timeline: TBD based on funding
   - **e.** Estimated Costs and associated Budget Line Item = $180,000 Costs are based on the following assumptions: $5,000/new structure construction; $2,500/existing structure maintenance. ASNF Stone Creek removal and replacement of gabions. $100,000: Costs based on the following assumptions: $45,000 for service contract excavators to complete the work; $22,500 for service contract rock hauling; $15,000 to generate or purchase large rip rap; $14,000 for contracting, COR, and oversite.
   - **f.** Estimated Costs and associated Budget Line Item = $180,000; Costs are based on an estimate of $2,500/structure for maintenance and $5,000/structure for new construction.
4. **Essential Project #4 – Head of Ditch Campground Improvement**
   - **a.** Attribute/ Indicator Addressed – Water Quality, Soils
   - **b.** Project Description: This project proposes to improve drainage features at campground sites and roads and provide new aggregate to roads, campsites, bathrooms and pullouts. Storm water runoff is currently washing out interior roads in the campground and depositing gravel and sediment into campsites and adjacent San Francisco River. Best management practices will be implemented to divert water off of roads more efficiently and effectively and into buffer zones away from

campsites. ESCUDILLA LANDSCAPE WATERSHED RESTORATION ACTION PLAN July 2018 – Gila and Apache-Sitgreaves National Forests Page 142 of 216

c. Partners Involvement: none

d. Timeline: TBD based on funding; Project can be completed in one year

e. Estimated costs and associated Budget Line Item: 50,000

5. **Essential Project #5 – Head of Ditch Diversion Improvement (Completed)**
   a. Attribute/ Indicator Addressed – Water Quality, Water Quantity, Aquatic Habitat, Aquatic Biota,
   b. Project Description: This project proposes to build a new AOP diversion in place of the current push-up dam diversion on the Head of Ditch, used by Luna Irrigators. The existing diversion consists of a push-up dirt dam that is installed seasonally by a bulldozer. At the end of the season, the diversion is removed to allow water passage. The diversion will often wash out multiple times during the rainy season, requiring the Luna Irrigators to re-install with bulldozer. This project would replace the push up dam with a permanent structure designed for Aquatic Organism Passage and to allow some water to remain in-channel during the irrigation season for aquatic habitat and water quality improvement. It would also provide for closed conduit transport of irrigation water versus the current open channel ditch.
   c. Partners Involvement: Luna Irrigation Commission, Interstate Stream Commission, Wild Earth Guardians, New Mexico Environment Department
   d. Timeline: TBD based on funding.
   e. Estimated costs and associated Budget Line Item: $175,000
6. **Essential Project #6 – Meadow Enhancement (Partially Completed)**
   a. Attribute/ Indicator Addressed – Riparian/Wetland Vegetation, Rangeland Vegetation, fire regime
   b. Project Description: This project will focus on the removal by hand thinning of 400 acres (Gila – 200 acres and ASNF – 200 acres) of conifer vegetation within the riparian corridor of Stone Creek and in the meadow adjacent to the riparian corridor.
   c. Partners Involvement: Wild Earth Guardians, New Mexico Environment Department
   d. Timeline: TBD based on funding; project can be completed in one year
   e. Estimated costs and associated Budget Line Item: Costs based on hand-thinning at $1,000/acre; $400,000, being split between the two Forests.
7. **Essential Project #7 – AOP Stream Crossing Improvements (Partially Completed)** NFS 275/Stone Creek and Bob Thomas Creek, NFS 85 Reroute/San Francisco River; NFS 8887/Little Creek; NFS LPR 9/Dillman Creek
   a. Attribute/ Indicator Addressed – Roads and Trails; Impaired Waters; Water Quality, Water Quality, Riparian/Wetland Vegetation
   b. Project Description: The ASNF project on NFS 275 will focus on redesign of two existing stream crossings: culverts on Stone Creek and a stream crossing on Bob Thomas on NFS 275. These crossings are adjacent to one another. Post-Wallow Fire flood flows have degraded Bob Thomas Creek, causing downcutting that is subsequently affecting Stone Creek, altering channel stability and the culverts. Assessment of a long-term solution to stabilize these crossings, designs, and implementation are included in the costs. The GNF project will focus on relocation and redesign of an existing water crossing on NFS 85 and the San Francisco River, hardening of NFS LPR9

crossing of Dillman Creek, and hardening of NFS 8887 crossing of Little Creek. NFS 85's current crossing is at the same location of the Head of Ditch Diversion. This crossing is not compatible with the new diversion proposal, thus would be relocated upstream of its current site. The road crossing would be hardened to protect water quality and to ensure safe ingress and egress to private landowners in event of emergency. NFS LPR 9 crossing of Dillman Creek is currently a wet crossing that is negatively impacting a wet meadow area of Dillman Creek. This short crossing would be hardened to avoid impacts to soils and wetlands. NFS 8887 crossing of Little Creek is ESCUDILLA LANDSCAPE WATERSHED RESTORATION ACTION PLAN July 2018 – Gila and Apache-Sitgreaves National Forests Page 143 of 216 currently a wet crossing that negatively impacting channel geometry. This crossing would be hardened to avoid impacts to soils and wetlands.

c. Partners Involvement: Arizona Department of Environmental Quality, New Mexico Environment Department, Federal Highways

d. Timeline: TBD based on funding; NFS 275 project requires NEPA. This project can be completed in one year.

e. Estimated costs and associated Budget Line Item: $2,050,000 and Federal Highways $; This is based on the following estimates: $250,000 per crossing structure

8. **Essential Project #8 – Stream Restoration/Riparian Improvement – Stone Creek/Little Creek (Partially Completed)**

a. Attribute/ Indicator Addressed – Water Quality, Water Quantity, Aquatic Habitat, Aquatic Biota, Riparian/Wetland Vegetation, Soils

b. Project Description: This project will focus on approximately 6 miles of stream/wetland/riparian restoration on Stone Creek and ¼ mile in Little Creek. These streams were negatively impacted following the 2011 Wallow Fire on both the ASNF and GNF. Current conditions include headcutting and dewatering of Stone Creek and the adjacent wet meadow system for most of its length and a small headcut reach of Little Creek. On the ASNF downcut side drainages that are affecting Stone Creek will be addressed first; Stone Creek itself is currently too unstable to effectively treat. If the stream channel stabilizes, then restoration in Stone Creek may occur. Work would include implementation of channel and wetland restoration techniques to increase water table elevations, enhance productivity of wetland dependent species (both aquatic and vegetative), encourage deep rooted vegetation on streambanks, impede erosion processes, and restore channel stability. These techniques include placement of water control structures that reestablish macro/micro-topography and encourage natural channel form and function, streambank contouring, and re-establishment of wetland/riparian plants through natural and/or artificial means (both woody and herbaceous plants). An ungulate exclosure would be established following restoration work on a short reach of the creek to protect riparian vegetation, that could be relocated up or downstream once vegetation became reestablished. The district will coordinate with permittee to implement additional techniques for riparian protection. All implementation methods will utilize minimum impact best management practices to control sediment movement and will follow necessary permitting requirements under the Clean Water Act.

c. Partners Involvement: Wild Earth Guardians, Arizona Department of Environmental Quality, New Mexico Environment Department, Bat Conservation International

d. Timeline: TBD based on Funding; project could be completed in 3 years.

e. Estimated costs and associated Budget Line Item: $1,300,000; Costs are based on the following assumptions: 2 miles restoration on GNF and 4 miles restoration on ASNF would require labor, supplies, aggregate, fencing material for livestock and/or elk, heavy equipment rental, per diem, design, imported aggregate and other materials as necessary. Estimate $175,000/mile over several years at 1 to 2 miles per year. This project has a lot of interest with partners and may have opportunities for matching dollars.

9. **Essential Project #9 – Stream Restoration/Riparian Improvement – San Francisco River**
   - **a.** Attribute/ Indicator Addressed – Water Quality, Water Quantity, Aquatic Habitat, Aquatic Biota, Riparian/Wetland Vegetation, Soils
   - **b.** Project Description: This project will focus on approximately 2 miles of stream/wetland/riparian restoration on San Francisco River. Current conditions include some sidecutting and loss of vegetation on streambanks following the 2011 Wallow Fire. Work would include implementation of channel and wetland restoration techniques to increase water table elevations, enhance productivity of wetland dependent species (both aquatic and vegetative), encourage deep rooted ESCUDILLA LANDSCAPE WATERSHED RESTORATION ACTION PLAN July 2018 – Gila and Apache-Sitgreaves National Forests Page 144 of 216 vegetation on streambanks, impede erosion processes, and restore channel stability. These techniques include placement of water control structures that reestablish macro/micro-topography and encourage natural channel form and function, streambank contouring, and re-establishment of wetland/riparian plants through natural and/or artificial means (both woody and herbaceous plants). All techniques will utilize minimum impact best management practices to control sediment movement and will follow necessary permitting requirements under the Clean Water Act.
   - **c.** Partners Involvement: Wild Earth Guardians, New Mexico Environment Department, Arizona Department of Environmental Quality
   - **d.** Timeline: TBD based on Funding; project can be completed in one year.
   - **e.** Estimated costs and associated Budget Line Item: $600,000; Costs are based on the following assumptions: plantings and exclosure fencing to restore negative impacts from Wallow Fire. This would include plants, labor, fencing supplies, per diem, equipment rental and other supplies.
10. **Essential Project #10– Road Improvement-Surfacing/Stabilization**
   - **a.** Attribute/ Indicator Addressed – Water Quality, Roads and Trails
   - **b.** Project Description: ASNF – NFSR 275 is a main route for recreation and Timber harvest for West Escudilla, the road quickly ravels and washboards immediately following maintenance activities. Road fines are lost quickly through creation of dust and washing from summer rains. The project would include placing stabilizing crushed aggregate to provide a reduction in sediment transported to water bodies.
   - **c.** Partners Involvement: None.
   - **d.** Timeline: TBD based on Funding; project is at least a 1year project.
   - **e.** Estimated costs and associated Budget Line Item: looking for partnership money. Putting in for CMLG money. Six and a half miles of road stabilization treatment x $8,750 per mile = $56,875.

Complementary Restoration Projects

11. **Complementary Restoration Project #11 – Feasibility Study – Bob Thomas Creek**
    a. Attribute/ Indicator Addressed – Water Quality, Water Quantity, Aquatic Habitat, Aquatic Biota, Riparian/Wetland Vegetation, Soils
    b. Project Description: This project will focus on a feasibility study of restoration on approximately 2 miles of Bob Thomas Creek. Current conditions include extreme channel downcutting in exceedances of 40' in the main channel following the 2011 Wallow Fire. This downcutting has resulted in tremendous loss of sediment that washes downstream into Stone Creek and ultimately the San Francisco River which is impaired in New Mexico. The feasibility study would evaluate the extent of resource damage, feasibility of restoration techniques, and costs associated with any recommendation.
    c. Partners Involvement: Wild Earth Guardians, Arizona Department of Environmental Quality
    d. Timeline: TBD based on Funding; project can be completed in one year.
    e. Estimated costs and associated Budget Line Item: Feasibility Study $35,000.
12. **Complementary Restoration Project #12 – Forest Vegetation Treatments**
    a. Attribute/ Indicator Addressed – Fire Regime
    b. Project Description: This project will focus on woodland and forest maintenance and restoration treatments where identified across the watershed. Treatment of vegetation will be accomplished by hand, mechanized, and/or herbicide treatment. In forested systems, activities would include thinning and group selections (e.g. creating 1–4-acre openings) to encourage regeneration of trees. Woodland areas include pinyon juniper and pinyon pine, while forested areas refer to ponderosa ESCUDILLA LANDSCAPE WATERSHED RESTORATION ACTION PLAN July 2018 – Gila and Apache-Sitgreaves National Forests Page 145 of 216 pine and mixed conifer. Specific silviculture prescriptions will be written for treatment units based on desired future conditions for the unit and area. Treatment units may be planned across watershed boundaries, thus this project will be implemented over multiple years, as the treatment units are prepared. More than one watershed within the Escudilla Planning Area may receive treatment in a single year, however acreages may be limited. Thinning within this project area on the GNF includes both group select (8,228 acres) and improvement (3,792 acres) thinning. In the Luna Planning Area, a total of 12,020 acres are planned for thinning. In the West Escudilla Restoration Area, a total of 3,129 acres are planned for thinning (group select).
    c. Partners Involvement: New Mexico Environment Department (State Forestry)
    d. Timeline: TBD based on funding; this is a multiple year project. Budget constraints and treatment boundaries will greatly limit the amount of acres treated in a single year within a watershed.
    e. Estimated costs and associated Budget Line Item = $22,629,00; Costs are based on Costs are based on 15,086 acres at $1,500/acre.
13. **Complementary Restoration Project #13 – Forest Vegetation Improvement – Prescribed Fire**
    a. Attribute/ Indicator Addressed – Fire Regime
    b. Project Description: This project would use prescribed fire to maintain and/or reduce fuel loadings. Prescribed fire can be implemented prior and after proposed vegetation treatments. Treatment units may be planned across watershed boundaries, thus this project will be implemented over multiple years, as the treatment units are prepared. More than one watershed within the Escudilla Planning Area may receive treatment in a single year, however acreages may

be limited. In the Luna Planning Area, a total of 1,815 acres are planned for prescribed fire. In the West Escudilla Restoration Project, a total of 2,347 acres are planned for prescribed fire.

c. Partners Involvement: New Mexico Department of Game and Fish, Rocky Mountain Elk Foundation.

d. Timeline: TBD based on funding; this is a multiple year project based on budget constraints, burning units, burning limitations, and mitigation of cumulative impacts to natural and cultural resources.

e. Estimated costs and associated Budget Line Item = $416,200; Costs are based on the following assumptions: 4,162 acres at $100/acre.

p.146 Table 53

Table 53: Stone Creek-San Francisco River Costs

Stone Creek - San Francisco River

Funding Source	Planning and Design	# units	Cost/Unit	Implementation	Project Monitoring	Project Totals
Essential Project #1 Road Decommissioning						
FS Contribution Gila NF		15	$8,750.00	$131,250.00		$131,250.00
FS Contribution ASNF		6	$8,750.00	$52,500.00		$52,500.00
Partner Contribution (both in kind and $)		TBD	TBD			$0.00
Funding already obtained		TBD	TBD			$0.00
Total	**$0.00**	**21 miles**		**$183,750.00**	**$0.00**	**$183,750.00**
Essential Project #2 Road Improvement						
FS Contribution Gila NF		16	$8,750.00	$140,000.00		$140,000.00
FS Contribution ASNF		11	$8,750.00	$96,250.00		$96,250.00
Partner Contribution (both in kind and $)		TBD	TBD			
Funding already obtained		TBD	TBD			
Total	**$0.00**	**27 Miles**		**$236,250.00**	**$0.00**	**$236,250.00**
Essential Project #3 Erosion Control Structures						
FS Contribution Gila NF (Maintenance)		18	$2,500.00	$45,000.00		$45,000.00
FS Contribution Gila NF (New)		5	$5,000.00	$25,000.00		$25,000.00
FS Contribution ASNF (Maintenance)		1 reach (stone)	$100,000.00	$100,000.00		$100,000.00
FS Contribution ASNF (New)		2	$5,000.00	$10,000.00		$10,000.00
Partner Contribution (both in kind and $)		TBD	TBD			$0.00
Funding already obtained		TBD	TBD			$0.00
Total	**$0.00**	**26 Structures**		**$180,000.00**	**$0.00**	**$180,000.00**
Essential Project #4 Head of Ditch Campground						
FS Contribution Gila NF	$100,000.00	1	$650,000.00	$650,000.00		$750,000.00

FS Contribution ASNF		0	n/a			$0.00
Partner Contribution (both in kind and $)		TBD	TBD			$0.00
Funding already obtained		TBD	TBD			$0.00
Total	**$100,000.00**	**1 Campground**		**$650,000.00**	**$0.00**	**$750,000.00**
Essential Project-#5 Head of Ditch Diversion Improvement						
FS Contribution Gila NF				$75,000.00		$75,000.00
FS Contribution ASNF						$0.00
Partner Contribution (both in kind and $)	$25,000.00	TBD	awsa	$75,000.00		$100,000.00
Funding already obtained		TBD	TBD			$0.00
Total	**$25,000.00**			**$150,000.00**	**$0.00**	**$175,000.00**
Essential Project #6 Meadow Enhancement						
FS Contribution Gila NF		200	$1,000.00	$200,000.00		$200,000.00
FS Contribution ASNF		200	$1,000.00	$200,000.00		$200,000.00
Partner Contribution (both in kind and $)		TBD	TBD			$0.00
Funding already obtained		TBD	TBD			$0.00
Total	**$0.00**	**400 Acres**		**$400,000.00**	**$0.00**	**$400,000.00**
Essential Project-#7 AOP Crossing Improvements (Partially Completed)						
FS Contribution Gila NF	$25,000.00	2	$250,000.00	$500,000.00		$525,000.00
FS Contribution ASNF	$25,000.00	3	$250,000.00	$750,000.00		$775,000.00
Partner Contribution (both in kind and $)		TBD	TBD			$0.00
Funding already obtained (ASNF)		TBD	central federal lands	$750,000.00		$750,000.00
Total	**$50,000.00**	**5 Crossing Structures**		**$2,000,000.00**	**$0.00**	**$2,050,000.00**
Essential Project-#8 Stream Restoration and Riparian Improvement Stone Creek and Little Creek						
FS Contribution Gila NF	$120,000.00	2	$175,000.00	$350,000.00	$5,000.00	$475,000.00
FS Contribution ASNF	$120,000.00	4	$175,000.00	$700,000.00	$5,000.00	$825,000.00
Partner Contribution (both in kind and $)		TBD	TBD			$0.00
Funding already obtained		TBD	TBD			$0.00
Total	**$240,000.00**	**6 Miles**		**$1,050,000.00**	**$10,000.00**	**$1,300,000.00**
Essential Project-#9 Stream Restoration/Riparian Improvement – San Francisco River						
FS Contribution Gila NF	$120,000.00	1.5	$175,000.00	$262,500.00	$5,000.00	$387,500.00
FS Contribution ASNF	$120,000.00	0.5	$175,000.00	$87,500.00	$5,000.00	$212,500.00
Partner Contribution (both in kind and $)		TBD	TBD			$0.00
Funding already obtained		TBD	TBD			$0.00
Total	**$240,000.00**	**2 Miles**		**$350,000.00**	**$10,000.00**	**$600,000.00**
Essential Project-#10 Road Improvement- Surfacing/Stabilization						

FS Contribution Gila NF						$0.00
FS Contribution ASNF		6.5	$8,750.00	$56,875.00		$56,875.00
Partner Contribution (both in kind and $)		TBD	TBD			$0.00
Funding already obtained		TBD	TBD			$0.00
Total	**$0.00**	**6.5 Miles**		**$56,875.00**	**$0.00**	**$56,875.00**
Essential Project Totals						
Forest Service Totals	$630,000.00			$4,431,875.00	$20,000.00	**$5,081,875.00**
Partner Contribution Totals	$25,000.00			$75,000.00		**$100,000.00**
Funding already obtained				$750,000.00		**$750,000.00**
Grand Total	**$655,000.00**			**$5,256,875.00**	**$20,000.00**	**$5,931,875.00**
Complementary Project-#11 Feasibility Study – Bob Thomas Creek						
FS Contribution Gila NF						$0.00
FS Contribution ASNF		1	$35,000.00	$35,000.00		$35,000.00
Partner Contribution (both in kind and $)		TBD	TBD			$0.00
Funding already obtained		TBD	TBD			$0.00
Total	**$0.00**	**1 Project**	**$35,000.00**	**$35,000.00**	**$0.00**	**$35,000.00**
Complementary Project-#12 Forest Vegetation Treatment						
FS Contribution Gila NF (Group Selection)		8228	$1,500.00	$12,342,000.00		$12,342,000.00
FS Contribution Gila NF (Improvement)		3729	$1,500.00	$5,593,500.00		$5,593,500.00
FS Contribution ASNF (Group Selection)		3129	$1,500.00	$4,693,500.00		$4,693,500.00
Partner Contribution (both in kind and $)		TBD	TBD			$0.00
Funding already obtained		TBD	TBD			$0.00
Total	**$0.00**	**15,086 acres**	**$4,500.00**	**$22,629,000.00**	**$0.00**	**$22,629,000.00**
Complementary Project-#13 Forest Vegetation Improvement/ Prescribed Fire						
FS Contribution Gila NF		1,815	$100.00	$181,500.00		$181,500.00
FS Contribution ASNF		2,347	$100.00	$234,700.00		$234,700.00
Partner Contribution (both in kind and $)		TBD	TBD			$0.00
Funding already obtained		TBD	TBD			$0.00
Total	**$0.00**	**4,162 acres**		**$416,200.00**	**$0.00**	**$416,200.00**
Complementary Project Totals						
Forest Service Totals				**$23,080,200.00**		**$23,080,200.00**
Partner Contribution Totals						
Funding already obtained						
Grand Total	**$0.00**		**$0.00**	**$23,080,200.00**	**$0.00**	**$23,080,200.00**

Essential and Complementary Projects						
Grand Total	**$655,000.00**		**$0.00**	**$28,337,075.00**	**$20,000.00**	**$29,012,075.00**

p.149 Table 54

Table 54: Stone Creek Timelines and Project Scheduling

Stone Creek-San Francisco River Timelines and Project Scheduling				
FY (TBD)	**Task**	**Cost GNF**	**Cost ASNF**	**Partner Cost**
Year 1	Essential Project #7 – AOP Crossing Improvements – Stone and Bob Thomas (Central Federal Lands $) Year 1 of 2	n/a	$750,00	unknown
Year 1	Essential Project #4 – Head of Ditch Campground Improvement	$750,000.00	n/a	unknown
Year 1	Essential Project #5 – Head of Ditch Diversion Improvement	$75,000.00	n/a	$100,000.00
Year 1	Essential Project #10 – Road Improvement-Surfacing/Stabilization	n/a	$56,875.00	unknown
Year 1	Complementary Restoration Project #13 – Forest Vegetation Improvement -Prescribed Fire	$181,500.00	$234,700.00	unknown
Year 1	Complementary Restoration Project #12 – Forest Vegetation Improvement ASNF 1,565 acres-Year 1 of 2	n/a	$2,347,500.00	unknown
Year 1	Complementary Restoration Project #12 – Forest Vegetation Improvement - GNF 1,028 acres (group select)- Year 1 of 8	$1,542,000.00	n/a	unknown
Year 1	Complementary Restoration Project #12 – Forest Vegetation Improvement - GNF 541 acres (improvement) Year 1 of 7	$811,500.00	n/a	unknown
Year 2	Essential Project #7 – AOP Crossing Improvements – SFR & Little Creek - Year 2 of 2	$525,000.00	$775,000.00	unknown
Year 2	Essential Project #2 – Road Improvement	$140,000.00	$96,250.00	unknown
Year 2	Essential Project #8 – Stream Restoration/Riparian Improvement – Stone and Little Creeks – Year 1 of 3	$142,500.00	$247,500.00	unknown
Year 2	Complementary Restoration Project #12 – Forest Vegetation Improvement ASNF 1,565 acres-Year 2 of 2	n/a	$2,347,500.00	unknown
Year 2	Complementary Restoration Project #12 – Forest Vegetation Improvement - GNF 1,028 acres (group select)- Year 2 of 8	$1,542,000.00	n/a	unknown
Year 2	Complementary Restoration Project #12 – Forest Vegetation Improvement - GNF 541 acres (improvement) Year 2 of 7	$811,500.00	n/a	unknown

Year 3	Essential Project #3 – Erosion Control Structures – maintenance – Year 1 of 2	$45,000.00	$100,000.00	unknown
Year 3	Essential Project #6 – Meadow Enhancement	$200,000.00	$200,000.00	unknown
Year 3	Essential Project #8 – Stream Restoration/Riparian Improvement – Stone and Little Creeks – Year 2 of 3	$142,500.00	$247,500.00	unknown
Year 3	Complementary Restoration Project #12 – Forest Vegetation Improvement - GNF 1,028 acres (group select) Year 3 of 8	$1,542,000.00	n/a	unknown
Year 3	Complementary Restoration Project #12 – Forest Vegetation Improvement - GNF 541 acres (improvement) Year 3 of 7	$811,500.00	n/a	unknown
Year 4	Essential Project #3 – Erosion control structures – new – Year 2 of 2	$25,000.00	$10,000.00	unknown
Year 4	Complementary Restoration Project #11 – Feasibility Study – Bob Thomas Creek	n/a	$35,000.00	unknown
Year 4	Essential Project #8 – Stream Restoration/Riparian Improvement– Stone and Little Creeks – Year 3 of 3	$142,500.00	$247,500.00	unknown
Year 4	Complementary Restoration Project #12 – Forest Vegetation Improvement - GNF 1,028 acres (group select)- Year 4 of 8	$1,542,000.00	n/a	unknown
Year 4	Complementary Restoration Project #12 – Forest Vegetation Improvement - GNF 541 acres (improvement) Year 4 of 7	$811,500.00	n/a	unknown
Year 5	Essential Project #9 – Stream Restoration/Riparian Improvement– San Francisco River	$387,500.00	$12,500.00	unknown
Year 5	Complementary Restoration Project #12 – Forest Vegetation Improvement - GNF 1,028 acres (group select)- Year 5 of 8	$1,542,000.00	n/a	unknown
Year 5	Complementary Restoration Project #12 – Forest Vegetation Improvement - GNF 541 acres (improvement) Year 5 of 7	$811,500.00	n/a	unknown
Year 6	Complementary Restoration Project #12 – Forest Vegetation Improvement - GNF 1,028 acres (group select)- Year 6 of 8	$1,542,000.00	n/a	unknown
Year 6	Complementary Restoration Project #12 – Forest Vegetation Improvement - GNF 541 acres (improvement) Year 6 of 7	$811,500.00	n/a	unknown

Year 7	Complementary Restoration Project #12 – Forest Vegetation Improvement - GNF 1,028 acres (group select)- Year 7 of 8	$1,542,000.00	n/a	unknown
Year 7	Complementary Restoration Project #12 – Forest Vegetation Improvement - GNF 541 acres (improvement) Year 7 of 7	$811,500.00	n/a	unknown
Year 8	Complementary Restoration Project #12 – Forest Vegetation Improvement - GNF 1,028 acres (group select- Year 8 of 8	$1,542,000.00	n/a	unknown
Year 9	Essential Project #1 – Road Decommissioning	$131,250.00	$52,500.00	unknown

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Essential Projects

1. **Essential Project #1 – Road Decommissioning (Completed)**
   - **a.** Attribute/ Indicator Addressed – Roads and Trails
   - **b.** Project Description: This project will focus on decommissioning roads identified in Luna Landscape Planning. In this watershed, there are approximately 5 miles of road identified. Current decommissioning costs are approximately $8,750/mile. Decommissioning of a road involves reestablishing vegetation, and if necessary, initiating restoration of ecological processes interrupted or adversely impacted by the unneeded road. Treatments include one or more of the following treatments: Reestablishing former drainage patterns, stabilizing slopes, and restoring vegetation; Blocking the entrance to a road or installing water bars; Removing culverts, reestablishing drainages, removing unstable fills, pulling back road shoulders, and scattering slash on the roadbed; Completely eliminating the roadbed by restoring natural contours and slopes; and Other methods designed to meet the specific conditions associated with the unneeded road
   - **c.** Partners Involvement: Various partners have expressed interest in partnering in this effort, including New Mexico Environment Department and Wild Earth Guardians
   - **d.** Timeline: TBD based on funding and prioritization of 12 watersheds; Decommissioning of roads without fuels treatments can be completed in one fiscal year; roads with planned fuels treatments can be decommissioned immediately following treatment.
   - **e.** Estimated costs and associated Budget Line Item: Estimated costs include the costs of reseeding, reshaping, labor, heavy equipment transport, per diem, barrier, imported aggregate, and archaeological review (if necessary). $43,750.
2. **Essential Project #2 – Road Improvement (Completed)**
   - **a.** Attribute/ Indicator Addressed – Roads and Trails
   - **b.** Project Description: This project will focus on heavy road maintenance and improving best management practices for road drainage on Maintenance Level 2 and 3 roads within the watershed. BMPs will include improvement of lead out ditches, road dips, and inlet and outlet features of culverts and road/stream crossings. Heavy road maintenance may involve some level of reconstruction of existing roadbeds to reestablish a safe and last driving surface with the intent of minimizing sediment movement off of the road. Currently there are approximately 33 miles of Maintenance Level 2 and 3 roads within the watershed. This project assumes that 40% of roads in the watershed need some degree of maintenance ranging from light to heavy.
   - **c.** Partners Involvement: Catron County

d. Timeline: TBD based on funding; can be completed in one fiscal year

e. Estimated costs and associated Budget Line Item = $113,750; Based on an estimate of $8,750/mile for road maintenance, which may include reshaping, heavy equipment transport, per diem, culvert replacement, and archaeological review (if necessary).

3. **Essential Project #3 – Erosion Control Structures (Completed)**
   - **a.** Attribute/Indicator Addressed – Water Quality
   - **b.** Project Description: This project will focus on the maintenance and/or reconstruction of 1 existing erosion control structures. This structure was originally implemented in the 1980s to impede and prevent ongoing erosion and gullying. It has not received maintenance over the last several decades and is currently in disrepair. Work will include heavy equipment cleanout of the structure and some reconstruction to preclude current and future gullying and sediment movement. Certified weed-free seeding will be required after site work is completed. Inventory and survey work will be necessary prior to beginning this project to establish necessary site design.
   - **c.** Partners Involvement: New Mexico Environment Department
   - **d.** Timeline: TBD based on funding
   - **e.** Estimated Costs and associated Budget Line Item = $5,000; Costs are based on an estimate of $5,000/structure for new construction.
4. **Essential Project #4 – Wetland/Spring/Riparian Restoration – Adair Spring/Canyon (Completed)**
   - **a.** Attribute/ Indicator Addressed – Water Quality, Water Quantity, Aquatic Habitat, Aquatic Biota, Riparian/Wetland Vegetation, Soils
   - **b.** Project Description: This project will focus on approximately 0.5 mile/2 acres of stream/wetland/riparian restoration on Adair Spring/Adair Canyon. Current conditions include headcutting and dewatering of Adair Spring/Adair Canyon and the adjacent wet meadow system. Work would include implementation of channel and wetland restoration techniques to increase water table elevations, enhance productivity of wetland dependent species (both aquatic and vegetative), encourage deep rooted vegetation on streambanks, impede erosion processes, and restore channel stability. These techniques include placement of water control structures that reestablish macro/micro-topography and encourage natural channel form and function, streambank contouring, and re-establishment of wetland/riparian plants through natural and/or artificial means (both woody and herbaceous plants). Following treatment, Adair Spring would be fenced to exclude ungulate grazing and allow for recovery of wetland and riparian resources. All techniques will utilize minimum impact best management practices to control sediment movement and will follow necessary permitting requirements under the Clean Water Act.
   - **c.** Partners Involvement: Wild Earth Guardians, New Mexico Environment Department, Upper Gila Watershed Alliance
   - **d.** Timeline: TBD based on Funding; project can be completed in one year.
   - **e.** Estimated costs and associated Budget Line Item: $475,000; Costs are based on labor, heavy equipment rental and transport, per diem, fencing supplies for either livestock and/or elk, imported aggregate, other materials as necessary (including monitoring)

Complementary Restoration Projects

5. **Project #5 – Forest Vegetation Improvement – Thinning (Partially Completed)**
   - **a.** Attribute/ Indicator Addressed – Fire Regime
   - **b.** Project Description: This project will focus on woodland and forest maintenance and restoration treatments, where identified, across the watershed. Treatments of vegetation will be accomplished by hand, mechanized, and/or herbicide treatment. In forested systems, activities would include thinning and group selections (e.g. creating 1–4-acre openings) to encourage regeneration of trees. Woodland areas include pinyon juniper and pinyon pine, while forested areas refer to ponderosa pine and mixed conifer. Specific silviculture prescriptions will be written for treatment units based

on desired future conditions for the unit and area. Treatment units may be planned across watershed boundaries, thus this project will be implemented over multiple years, as the treatment units are prepared. More than one watershed within the Escudilla Planning Area may receive treatment in a single year, however acreages may be limited. Thinning within this project area includes both group select (3,673 acres) and improvement (1,582 acres) thinning. A total of 5,225 acres of thinning are planned in this watershed.

c. Partners Involvement: New Mexico Environment Department

d. Timeline: TBD based on funding; this is a multiple year project. Budget constraints and treatment boundaries will greatly limit the amount of acres treated in a single year within a watershed.

e. Estimated costs and associated Budget Line Item = $7,882,500; Costs are based on Costs are based on 5,255 acres at $1,500/acre.

6. <u>Project #6 – Forest Vegetation Improvement – Prescribed Fire</u>

a. Attribute/ Indicator Addressed – Fire Regime

b. Project Description: This project would use prescribed fire to maintain and/or reduce fuel loadings. Prescribed fire can be implemented prior and after proposed vegetation treatments. Treatment units may be planned across watershed boundaries, thus this project will be implemented over multiple years, as the treatment units are prepared. More than one watershed within the Escudilla Planning Area may receive treatment in a single year, however acreages may be limited. A total of 8,808 acres of prescribed fire are planned in this watershed.

c. Partners Involvement: New Mexico Department of Game and Fish, Rocky Mountain Elk Foundation.

d. Timeline: TBD based on funding; this is a multiple year project based on budget constraints, burning units, burning limitations, and mitigation of cumulative impacts to natural and cultural resources.

e. Estimated costs and associated Budget Line Item = $880,000; Costs are based on the following assumptions: $100/acre

p.157 Table 58

Table 58: Big Canyon-San Francisco River Costs

Big Canyon – San Francisco River – Gila National Forest

Funding Source	Planning and Design	# units	Cost/Unit	Implementation	Project Monitoring	Project Totals
Essential Project #1 Road Decommissioning						
FS Contribution Gila NF		5	$8,750.00	$43,750.00		$43,750.00
FS Contribution ASNF						$0.00
Partner Contribution (both in kind and $)						$0.00
Funding already obtained						$0.00
Total	**$0.00**	**5 Miles**	**$0.00**	**$43,750.00**	**$0.00**	**$43,750.00**
Essential Project #2 Road Improvement						
FS Contribution Gila NF		13	$8,750.00	$113,750.00		$113,750.00
FS Contribution ASNF						$0.00
Partner Contribution (both in kind and $)						$0.00
Funding already obtained						$0.00
Total	**$0.00**	**13 Miles**	**$0.00**	**$113,750.00**	**$0.00**	**$113,750.00**
Essential Project #3 Erosion Control Structures						

FS Contribution Gila NF		1	$5,000.00	$5,000.00		$5,000.00
FS Contribution ASNF						$0.00
Partner Contribution (both in kind and $)						$0.00
Funding already obtained						$0.00
Total	**$0.00**	**1 Structure**		**$5,000.00**	**$0.00**	**$5,000.00**
Essential Project #4 Wetland/Spring/Riparian Restoration (Adair Spring)						
FS Contribution Gila NF	$120,000.00	2	$175,000.00	$350,000.00	$5,000.00	$475,000.00
FS Contribution ASNF						$0.00
Partner Contribution (both in kind and $)						$0.00
Funding already obtained						$0.00
Total	**$120,000.00**	**2 acres**		**$350,000.00**	**$5,000.00**	**$475,000.00**
Essential Project Totals						
Forest Service Totals	$120,000.00			$512,500.00	$5,000.00	**$637,500.00**
Partner Contribution Totals	$0.00			$0.00	$0.00	**$0.00**
Funding already obtained	$0.00			$0.00	$0.00	**$0.00**
Grand Total	**$120,000.00**			**$512,500.00**	**$5,000.00**	**$637,500.00**
Complementary Project #5 Forest Vegetation Treatments						
FS Contribution Gila NF (Group Selection)		3,673	$1,500.00	$5,509,500.00		$5,509,500.00
FS Contribution Gila NF (Improvement)		1,582	$1,500.00	$2,373,000.00		$2,373,000.00
FS Contribution ASNF						$0.00
Partner Contribution (both in kind and $)						$0.00
Funding already obtained						$0.00
Total	**$0.00**	**5,255 acres**		**$7,882,500.00**	**$0.00**	**$7,882,500.00**
Complementary Project #6 Forest Vegetation Improvement/ Prescribed Fire						
FS Contribution Gila NF		8,808	$100.00	$880,800.00		$880,800.00
FS Contribution ASNF						$0.00
Partner Contribution (both in kind and $)						$0.00
Funding already obtained						$0.00
Total	**$0.00**	**8,808 acres**		**$880,800.00**	**$0.00**	**$880,800.00**
Complementary Project Totals						
Forest Service Totals	$0.00			$8,763,300.00	$0.00	$8,763,300.00
Partner Contribution Totals	$0.00			$0.00	$0.00	**$0.00**
Funding already obtained	$0.00			$0.00	$0.00	**$0.00**
Grand Total	**$0.00**			**$8,763,300.00**	**$0.00**	**$8,763,300.00**
Essential and Complementary Projects						

Grand Total	**$120,000.00**			**$9,275,800.00**	**$5,000.00**	**$9,400,800.00**

p.157 Table 59

Table 59: Big Canyon-San Francisco River-Gila National Forest Timelines and Project Scheduling

Big Canyon – San Francisco River – Gila National Forest Timelines and Project Scheduling				
FY (TBD)	**Task**	**Cost GNF**	**Cost ASNF**	**Partner Cost**
Year 1	Essential Project #2 Road Maintenance	$113,750.00	n/a	Unknown
Year 1	Essential Project #3 Erosion Control Structures	$5,000.00	n/a	Unknown
Year 1	Essential Project #4 Riparian Restoration – Adair Spring	$475,000.00	n/a	Unknown
Year 1	Complementary Restoration Project #6 Forest Vegetation Improvement – Prescribed Fire – 2,202 acres – year 1 of 4	$20,202.00	n/a	Unknown
Year 1	Complementary Restoration Project #5 Forest Vegetation Improvement – 527 acres (improvement) – Year 1 of 3	$790,500.00	n/a	Unknown
Year 1	Complementary Restoration Project #5 Forest Vegetation Improvement – 1,224 acres (group select) – Year 1 of 3	$336,001.00	n/a	Unknown
Year 2	Complementary Restoration Project #6 Forest Vegetation Improvement – Prescribed Fire – 2,202 acres – year 2 of 4	$20,202.00	n/a	Unknown
Year 2	Complementary Restoration Project #5 Forest Vegetation Improvement – 527 acres (improvement) – Year 2 of 3	$790,500.00	n/a	Unknown
Year 2	Complementary Restoration Project #5 Forest Vegetation Improvement – 1,224 acres (group select) – Year 2 of 3	$336,001.00	n/a	Unknown
Year 3	Complementary Restoration Project #6 Forest Vegetation Improvement – Prescribed Fire – 2,202 acres – year 3 of 4	$20,202.00	n/a	Unknown
Year 3	Complementary Restoration Project #5 Forest Vegetation Improvement – 527 acres (improvement) – Year 3 of 3	$790,500.00	n/a	Unknown
Year 3	Complementary Restoration Project #5 Forest Vegetation Improvement – 1,224 acres (group select) – Year 3 of 3	$336,001.00	n/a	Unknown
Year 4	Complementary Restoration Project #6 Forest Vegetation Improvement – Prescribed Fire – 2,202 acres – year 4 of 4	$20,202.00	n/a	Unknown
Year 5	Essential Project #1 Road Decommissioning	$43,750.00	n/a	Unknown

p.161 Essential Projects-Headwaters Centerfire Creek-Gila National Forest

Essential Projects

1. **Essential Project #1 – Road Decommissioning**
   - **a.** Attribute/ Indicator Addressed – Roads and Trails
   - **b.** Project Description: This project will focus on decommissioning roads identified in Luna Landscape Planning. In this watershed, there are approximately 10 miles of road identified. Current decommissioning costs are approximately $8,750/mile. Decommissioning of a road involves reestablishing vegetation, and if necessary, initiating restoration of ecological processes interrupted or adversely impacted by the unneeded road. Treatments include one or more of the following treatments: Reestablishing former drainage patterns, stabilizing slopes, and restoring vegetation; Blocking the entrance to a road or installing water bars; Removing culverts, reestablishing drainages, removing unstable fills, pulling back road shoulders, and scattering slash on the roadbed; Completely eliminating the roadbed by restoring natural contours and slopes; and Other methods designed to meet the specific conditions associated with the unneeded road
   - **c.** Partners Involvement: Various partners have expressed interest in partnering in this effort, including New Mexico Environment Department and Wild Earth Guardians
   - **d.** Timeline: TBD based on funding; can be completed in one fiscal year
   - **e.** Estimated costs and associated Budget Line Item: $87,500 with monitoring.
2. **Essential Project #2 – Road Improvement**
   - **a.** Attribute/ Indicator Addressed – Roads and Trails
   - **b.** Project Description: This project will focus on heavy road maintenance and improving best management practices for road drainage on Maintenance Level 2 and 3 roads within the watershed. BMPs will include improvement of lead out ditches, road dips, and inlet and outlet feature of culverts and road/stream crossings. Heavy road maintenance may involve some level of reconstruction of existing roadbeds to reestablish a safe and last driving surface with the intent of minimizing sediment movement off of the road. Currently there are approximately 18.5 miles of Maintenance Level 2 and 3 roads within the watershed. This project assumes that 40% of roads in the watershed need some degree of maintenance ranging from light to heavy.
   - **c.** Partners Involvement: Catron County
   - **d.** Timeline: TBD based on funding; can be completed in one fiscal year
   - **e.** Estimated costs and associated Budget Line Item = $65,625; Based on an estimate of $8,750/mile for road maintenance.
3. **Essential Project #3 – Erosion Control Structures** (Partially Completed)
   - **a.** Attribute/Indicator Addressed – Water Quality
   - **b.** Project Description: This project will focus on the maintenance and/or reconstruction of 8 existing erosion control structures. These structures were originally implemented in the 1980s to impede and prevent ongoing erosion and gullying across the watershed in various drainages and swales. None of these structures have received maintenance over the last several decades and are currently in various stages of disrepair. Some structures have filled completely in and no longer serve to back up sediment. Others have breaches in the dams and are experiencing active headcutting, while others have water bypassing the structure, creating new erosion issues. Work will include heavy equipment cleanout of the sediment structures where needed or reconstruction/expansion of dams to preclude current and future gullying and sediment movement. Certified weed-free seeding will be required at sites requiring reconstruction. Inventory and survey work will be necessary prior to beginning this project to establish necessary site design.
   - **c.** Partners Involvement: New Mexico Environment Department, Keyston Restoration Ecology
   - **d.** Timeline: TBD based on funding

e. Estimated Costs and associated Budget Line Item: $31,500 - $51,500; Costs are based on the following assumptions: $2,500/structure if utilize Forest Construction and Maintenance crew; $5,000/structure if utilize contract labor.

f. Estimated Costs and associated Budget Line Item = $50,000; Costs are based on an estimate of $5,000/structure for new construction.

4. **Essential Project #4 – Stream Restoration/Riparian Improvement** (Partially Completed)
   - **a.** Attribute/ Indicator Addressed – Water Quality, Water Quantity, Aquatic Habitat, Aquatic Biota, Riparian/Wetland Vegetation, Soils
   - **b.** Project Description: This project will focus on up to 4 miles of stream/wetland/riparian restoration on Centerfire Creek. Current conditions include headcutting and dewatering of Centerfire Creek and the adjacent wet meadow system. Work would include implementation of channel and wetland restoration techniques to increase water table elevations, enhance productivity of wetland dependent species (both aquatic and vegetative), encourage deep rooted vegetation on streambanks, impede erosion processes, and restore channel stability. These techniques include placement of water control structures that reestablish macro/micro-topography and encourage natural channel form and function, streambank contouring, and re-establishment of wetland/riparian plants through natural and/or artificial means (both woody and herbaceous plants). All techniques will utilize minimum impact best management practices to control sediment movement and will follow necessary permitting requirements under the Clean Water Act.
   - **c.** Partners Involvement: Wild Earth Guardians, NMED, Keystone Restoration Ecology
   - **d.** Timeline: TBD based on Funding; project can be completed in one year.
   - **e.** Estimated costs and associated Budget Line Item: $825,000; Costs are based on the following assumptions: $120,000 for design, $175,000 / mile implementation, $5,000 monitoring.

Complementary Restoration Projects

5. **Project #5 – Forest Vegetation Treatments**
   - **a.** Attribute/ Indicator Addressed – Fire Regime
   - **b.** Project Description: This project will focus on woodland and forest maintenance and restoration treatments where identified across the watershed. Treatment of vegetation will be accomplished by hand, mechanized, and/or herbicide treatment. In forested systems, activities would include thinning and group selections (e.g. creating 1–4-acre openings) to encourage regeneration of trees. Woodland areas include pinyon juniper and pinyon pine, while forested areas refer to ponderosa pine and mixed conifer. Specific silviculture prescriptions will be written for treatment units based on desired future conditions for the unit and area. Treatment units may be planned across watershed boundaries, thus this project will be implemented over multiple years, as the treatment units are prepared. More than one watershed within the Escudilla Planning Area may receive treatment in a single year, however acreages may be limited. Thinning within this project area includes both group select (4,009 acres) and improvement (868 acres) thinning. A total of 4,877 acres of thinning are planned within this watershed.
   - **c.** Partners Involvement: New Mexico Environment Department
   - **d.** Timeline: TBD based on funding; this is a multiple year project. Budget constraints and treatment boundaries will greatly limit the amount of acres treated in a single year within a watershed.
   - **e.** Costs and associated Budget Line Item = $7,515,950; Costs are based on Costs are based on 4,877 acres at $1,500/acre.
6. **Project #6 – Forest Vegetation Improvement – Prescribed Fire**
   - **a.** Attribute/ Indicator Addressed – Fire Regime
   - **b.** Project Description: This project would use prescribed fire to maintain and/or reduce fuel loadings. Prescribed fire can be implemented prior and after proposed vegetation treatments. Treatment units may be planned across watershed boundaries, thus this project will be implemented over multiple years, as the treatment units are prepared. More than one watershed within the Escudilla Planning

Area may receive treatment in a single year, however acreages may be limited. A total of 1,539 acres of prescribed fire are planned within this watershed.

c. Partners Involvement: New Mexico Department of Game and Fish, Rocky Mountain Elk Foundation.

d. Timeline: TBD based on funding; this is a multiple year project based on budget constraints, burning units, burning limitations, and mitigation of cumulative impacts to natural and cultural resources.

e. Estimated costs and associated Budget Line Item =153,900; Costs are based on the following assumptions: 1,539 acres at $100/acre.

p.165 Table 61

Table 61: Headwaters Centerfire Creek Costs

Headwaters Centerfire Creek – Gila National Forest

Funding Source	Planning and Design	# units	Cost/Unit	Implementation	Project Monitoring	Project Totals
Essential Project #1 Road Decommissioning						
FS Contribution Gila NF		10	$8,750.00	$87,500.00		$87,500.00
Partner Contribution (both in kind and $)						$0.00
Funding already obtained						$0.00
Total	**$0.00**	**10 miles**		**$87,500.00**	**$0.00**	**$87,500.00**
Essential Project #2 Road Improvement						
FS Contribution Gila NF		7.5	$8,750.00	$65,625.00		$65,625.00
Partner Contribution (both in kind and $)						$0.00
Funding already obtained						$0.00
Total	**$0.00**	**7.5 Miles**		**$65,625.00**	**$0.00**	**$65,625.00**
Essential Project #3 Erosion Control Structures						
FS Contribution Gila NF	$10,000.00	8	$5,000.00	$40,000.00		$50,000.00
Partner Contribution (both in kind and $)						$0.00
Funding already obtained						$0.00
Total	**$10,000.00**	**8 Structures**		**$40,000.00**	**$0.00**	**$50,000.00**
Essential Project #4 Stream Restoration / Riparian Improvement						
FS Contribution Gila NF	$120,000.00	4	$175,000.00	$700,000.00	$5,000.00	$825,000.00
Partner Contribution (both in kind and $)						
Funding already obtained						
Total	**$120,000.00**	**4 Miles**		**$700,000.00**	**$5,000.00**	**$825,000.00**
Essential Project Totals						
Forest Service Totals	$130,000.00			$893,125.00	$5,000.00	**$1,028,125.00**
Partner Contribution Totals	$0.00			$0.00	$0.00	**$0.00**
Funding already obtained	$0.00			$0.00	$0.00	**$0.00**
Grand Total	**$130,000.00**			**$893,125.00**	**$5,000.00**	**$1,028,125.00**

Complementary Project #5 Forest Vegetation Improvement/Thinning						
FS Contribution Gila NF (Group Selection)	$200,450.00	4,009	$1,500.00	$6,013,500.00		$6,213,950.00
FS Contribution Gila NF (Improvement)		868	$1,500.00	$1,302,000.00		$1,302,000.00
Partner Contribution (both in kind and $)						$0.00
Funding already obtained						$0.00
Total	**$200,450.00**	**4,877 Acres**		**$7,315,500.00**	**$0.00**	**$7,515,950.00**
Complementary Project #6 Forest Vegetation Improvement/ Prescribed Fire						
FS Contribution Gila NF		1,539	$100.00	$153,900.00		$153,900.00
Partner Contribution (both in kind and $)						$0.00
Funding already obtained						$0.00
Total	**$0.00**	**1,539 Acres**		**$153,900.00**	**$0.00**	**$153,900.00**
Complementary Project Totals						
Forest Service Totals	$200,450.00			$7,469,400.00	$0.00	**$7,669,850.00**
Partner Contribution Totals	$0.00			$0.00	$0.00	**$0.00**
Funding already obtained	$0.00			$0.00	$0.00	**$0.00**
Grand Total	**$200,450.00**			**$7,469,400.00**	**$0.00**	**$7,669,850.00**
Essential and Complementary Projects						
Grand Total	**$330,450.00**			**$8,362,525.00**	**$0.00**	**$8,692,975.00**

Headwaters Centerfire Creek – Gila National Forest						
Funding Source	**Planning and Design**	**# units**	**Cost/Unit**	**Implementation**	**Project Monitoring**	**Project Totals**
Essential Project #1 Road Decommissioning						
FS Contribution Gila NF	$ -	10	$ 8,750.00	$ 87,500.00	$ -	$ 87,500.00
Partner Contribution (both in kind and $)	$ -			$ -	$ -	$ -
Funding already obtained	$ -			$ -	$ -	$ -
Total	$ -	**10 miles**		**$ 87,500.00**	$ -	**$ 87,500.00**
Essential Project #2 Road Improvement						
FS Contribution Gila NF	$ -	7.5	$ 8,750.00	$ 65,625.00	$ -	$ 65,625.00

Partner Contribution (both in kind and $)	$ -			$ -	$ -	$ -
Funding already obtained	$ -			$ -	$ -	$ -
Total	$ -	**7.5 Miles**	$ -	**$ 65,625.00**	$ -	**$ 65,625.00**
Essential Project #3 Erosion Control Structures						
FS Contribution Gila NF	$ 10,000.00	8	$ 5,000.00	$ 40,000.00	$ -	$ 50,000.00
Partner Contribution (both in kind and $)	$ -			$ -	$ -	$ -
Funding already obtained	$ -			$ -	$ -	$ -
Total	$ 10,000.00	**8 Structures**		**$ 40,000.00**	$ -	**$ 50,000.00**
Essential Project #4 Stream Restoration / Riparian Improvement						
FS Contribution Gila NF	$ 120,000.00	4	$ 175,000.00	$ 700,000.00	$ 5,000.00	$ 825,000.00
Partner Contribution (both in kind and $)	$ -			$ -	$ -	$ -
Funding already obtained	$ -			$ -	$ -	$ -
Total	$ 120,000.00	**4 Miles**		**$ 700,000.00**	$ 5,000.00	**$ 825,000.00**
Essential Project Totals						
Forest Service Totals	$ 130,000.00			$ 893,125.00	$ 5,000.00	**$ 1,028,125.00**
Partner Contribution Totals	$ -			$ -	$ -	**$ -**
Funding already obtained	$ -			$ -	$ -	**$ -**
Grand Total	**$ 130,000.00**			**$ 893,125.00**	**$ 5,000.00**	**$ 1,028,125.00**
Complementary Project #5 Forest Vegetation Improvement/Thinning						
FS Contribution Gila NF (Group Selection)	$ 200,450.00	4,009	$ 1,500.00	$ 6,013,500.00	$ -	$ 6,213,950.00

FS Contribution Gila NF (Improvement)		868	$ 1,500.00	$ 1,302,000.00	$ -	$ 1,302,000.00
Partner Contribution (both in kind and $)	$ -			$ -	$ -	$ -
Funding already obtained	$ -			$ -	$ -	$ -
Total	$ 200,450.00	**4,877 Acres**		**$ 7,315,500.00**	$ -	**$ 7,515,950.00**
Complementary Project #6 Forest Vegetation Improvement/ Prescribed Fire						
FS Contribution Gila NF	$ -	1,539	$ 100.00	$ 153,900.00	$ -	$ 153,900.00
Partner Contribution (both in kind and $)	$ -	0	$ -	$ -	$ -	$ -
Funding already obtained	$ -	0	$ -	$ -	$ -	$ -
Total	$ -	**1,539 Acres**		**$ 153,900.00**	$ -	**$ 153,900.00**
Complementary Project Totals						
Forest Service Totals	$ 200,450.00			$ 7,469,400.00	$ -	**$ 7,669,850.00**
Partner Contribution Totals	$ -			$ -	$ -	**$ -**
Funding already obtained	$ -			$ -	$ -	**$ -**
Grand Total	**$ 200,450.00**			**$ 7,469,400.00**	**$ -**	**$ 7,669,850.00**
Essential and Complementary Projects						
Grand Total	**$ 330,450.00**			**$ 8,362,525.00**	**$ -**	**$ 8,692,975.00**

p.167 Table 62

Table 62: Headwaters Centerfire Creek Timelines and Project Scheduling

Headwaters Centerfire Creek Timelines and Project Scheduling			
FY (TBD)	**Task**	**Cost GNF**	**Partner Cost**
Year 1	Essential Project #2 Road Maintenance	$65,625.00	Unknown
Year 1	Essential Project #3 Erosion Control Structures	$50,000.00	Unknown
Year 1	Essential Project #4 Stream Restoration / Riparian Improvement	$825,000.00	Unknown
Year 1	Complementary Restoration Project #6 Forest Vegetation Improvement – Prescribed Fire	$153,900.00	Unknown

Year 1	Complementary Restoration Project #5 Forest Vegetation Improvement – 1,002 acres – group select - Year 1 of 4	$1,503,000.00	Unknown
Year 1	Complementary Restoration Project #5 Forest Vegetation Improvement – 434 acres – improvement -Year 1 of 2	$651,000.00	Unknown
Year 2	Complementary Restoration Project #5 Forest Vegetation Improvement – 1,002 acres – group select - Year 2 of 4	$1,503,000.00	Unknown
Year 2	Complementary Restoration Project #5 Forest Vegetation Improvement – 434 acres – improvement –Year 2 of 2	$651,000.00	Unknown
Year 3	Complementary Restoration Project #5 Forest Vegetation Improvement – 1,002 acres – group select - Year 3 of 4	$1,503,000.00	Unknown
Year 4	Complementary Restoration Project #5 Forest Vegetation Improvement – 1,002 acres – group select - Year 4 of 4	$1,503,000.00	Unknown
Year 5	Essential Project #1 Road Decommissioning	$87,500.00	Unknown

p.170 Essential Projects-Outlet Centerfire Creek – Gila National Forest

Essential Projects

1. **<u>Essential Project #1 – Road Decommissioning</u>**
   - **a.** Attribute/ Indicator Addressed – Roads and Trails
   - **b.** Project Description: This project will focus on decommissioning roads identified in Luna Landscape Planning. In this watershed, there are approximately 8 miles of road identified. Current decommissioning costs are approximately $8,750/mile. Decommissioning of a road involves reestablishing vegetation, and if necessary, initiating restoration of ecological processes interrupted or adversely impacted by the unneeded road. Treatments include one or more of the following treatments: Reestablishing former drainage patterns, stabilizing slopes, and restoring vegetation; Blocking the entrance to a road or installing water bars; Removing culverts, reestablishing drainages, removing unstable fills, pulling back road shoulders, and scattering slash on the roadbed; Completely eliminating the roadbed by restoring natural contours and slopes; and other methods designed to meet the specific conditions associated with the unneeded road.
   - **c.** Partners Involvement: Various partners have expressed interest in partnering in this effort, including New Mexico Environment Department and Wild Earth Guardians
   - **d.** Timeline: TBD based on funding and prioritization of 12 watersheds; Decommissioning of roads without fuels treatments can be completed in one fiscal year; roads with planned fuels treatments can be decommissioned immediately following treatment.
   - **e.** Estimated costs and associated Budget Line Item = Estimated costs include the costs of reseeding, reshaping, labor, heavy equipment transport, per diem, barrier, imported aggregate, and archaeological review (if necessary). $70,000 with monitoring

2. **Essential Project #2 – Road Improvement**
   a. Attribute/ Indicator Addressed – Roads and Trails
   b. Project Description: This project will focus on heavy road maintenance and improving best management practices for road drainage on Maintenance Level 2 and 3 roads within the watershed. BMPs will include improvement of lead out ditches, road dips, and inlet and outlet features of culverts and road/stream crossings. Heavy road maintenance may involve some level of reconstruction of existing roadbeds to reestablish a safe and last driving surface with the intent of minimizing sediment movement off of the road. Currently there are 37 miles of Maintenance Level 2 and 3 roads within the watershed. This project assumes that 40% of roads in the watershed need some degree of maintenance ranging from light to heavy.
   c. Partners Involvement: Catron County
   d. Timeline: TBD based on funding; can be completed in one fiscal year
   e. Estimated costs and associated Budget Line Item = $131,250; Based on an estimate of $8,750/mile for road maintenance, which may include reshaping, heavy equipment transport, per diem, culvert replacement, and archaeological review (if necessary).
3. **Essential Project #3 – Erosion Control Structures**
   a. Attribute/Indicator Addressed – Water Quality
   b. Project Description: This project will focus on new construction of 12 erosion control structures. Work will include heavy equipment cleanout of the sediment structures where needed or reconstruction/expansion of dams to preclude current and future gullying and sediment movement. Certified weed-free seeding will be required at sites requiring reconstruction. Inventory and survey work will be necessary prior to beginning this project to establish necessary site design.
   c. Partners Involvement: New Mexico Environment Department
   d. Timeline: TBD based on funding.
   e. Estimated Costs and associated Budget Line Item = $85,000; Costs are based on an estimate of $5,000/structure for new construction.

Complementary Restoration Projects

4. **Project #4 – Forest Vegetation Improvement – Thinning**
   a. Attribute/ Indicator Addressed – Fire Regime
   b. Project Description: This project will focus on woodland and forest maintenance and restoration treatments where identified across the watershed. Treatments of vegetation will be accomplished by hand, mechanized, and/or herbicide treatment. In forested systems, activities would include thinning and group selections (e.g. creating 1–4-acre openings) to encourage regeneration of trees. Woodland areas include pinyon juniper and pinyon pine, while forested areas refer to ponderosa pine and mixed conifer. Specific silviculture prescriptions will be written for treatment units based on desired future conditions for the unit and area. Treatment units may be planned across watershed boundaries, thus this project will be implemented over multiple years, as the treatment units are prepared. More than one watershed within the Escudilla Planning Area may receive treatment in a single year, however acreages may be limited. Thinning within this project area includes both group select (3,727 acres) and improvement (3,652 acres) thinning. A total of 7,379 acres of thinning are planned within this watershed.
   c. Partners Involvement: New Mexico Environment Department (State Forestry)
   d. Timeline: TBD based on funding; this is a multiple year project. Budget constraints and treatment boundaries will greatly limit the amount of acres treated in a single year within a watershed.
   e. Estimated costs and associated Budget Line Item = $11,254,850; Costs are based on Costs are based on 7,379 acres at $1,500/acre.
5. **Project #5 – Forest Vegetation Improvement – Prescribed Fire**
   a. Attribute/ Indicator Addressed – Fire Regime

b. Project Description: This project would use prescribed fire to maintain and/or reduce fuel loadings. Prescribed fire can be implemented prior and after proposed vegetation treatments. Treatment units may be planned across watershed boundaries, thus this project will be implemented over multiple years, as the treatment units are prepared. More than one watershed within the Escudilla Planning Area may receive treatment in a single year, however acreages may be limited. A total of 1,173 acres are planned for prescribed fire in this watershed.

c. Partners Involvement: New Mexico Department of Game and Fish, Rocky Mountain Elk Foundation.

d. Timeline: TBD based on funding; this is a multiple year project based on budget constraints, burning units, burning limitations, and mitigation of cumulative impacts to natural and cultural resources.

e. Estimated costs and associated Budget Line Item =$117,300; Costs are based on the following assumptions: 1,173 acres at $100/acre.

p.172 Table 65

Table 65: Outlet Centerfire Creek Costs

Outlet Centerfire Creek – Gila National Forest

Funding Source	Planning and Design	# units	Cost/Unit	Implementation	Project Monitoring	Project Totals
Essential Project #1 Road Decommissioning						
FS Contribution Gila NF		8	$8,750.00	$70,000.00		$70,000.00
Partner Contribution (both in kind and $)						$0.00
Funding already obtained				$0.00		$0.00
Total	$0.00	8 Miles		$70,000.00	$0.00	$70,000.00
Essential Project #2 Road Improvement						
FS Contribution Gila NF		15	$8,750.00	$131,250.00		$131,250.00
Partner Contribution (both in kind and $)						$0.00
Funding already obtained						$0.00
Total	**$0.00**	**15 Miles**		**$131,250.00**	**$0.00**	**$131,250.00**
Essential Project #3 Erosion Control Structures						
FS Contribution Gila NF	$25,000.00	12	$5,000.00	$60,000.00		$85,000.00
Partner Contribution (both in kind and $)						$0.00
Funding already obtained						$0.00
Total	**$25,000.00**	**12 New Structures**		**$60,000.00**	**$0.00**	**$85,000.00**
Essential Project Totals						
Forest Service Totals	$25,000.00			$261,250.00	$0.00	**$286,250.00**
Partner Contribution Totals	$0.00			$0.00	$0.00	**$0.00**
Funding already obtained	$0.00			$0.00	$0.00	**$0.00**
Grand Total	**$25,000.00**			**$261,250.00**	**$0.00**	**$286,250.00**
Complementary Project #4 Forest Vegetation Improvement/Thinning						

FS Contribution Gila NF (Group Selection)	$186,350.00	3,727	$1,500.00	$5,590,500.00		$5,776,850.00
FS Contribution Gila NF (Improvement)		3,652	$1,500.00	$5,478,000.00		$5,478,000.00
Partner Contribution (both in kind and $)						$0.00
Funding already obtained						$0.00
Total	**$186,350.00**	**7379 acres**		**$11,068,500.00**	**$0.00**	**$11,254,850.00**
Complementary Project #5 Forest Vegetation Improvement/ Prescribed Fire						
FS Contribution Gila NF		1,173	$100.00	$117,300.00		$117,300.00
Partner Contribution (both in kind and $)						$0.00
Funding already obtained						$0.00
Total	**$0.00**	**1,173 acres**		**$117,300.00**	**$0.00**	**$117,300.00**
Complementary Project Totals						
Forest Service Totals	$186,350.00			$11,185,800.00	$0.00	**$11,372,150.00**
Partner Contribution Totals	$0.00			$0.00	$0.00	**$0.00**
Funding already obtained	$0.00			$0.00	$0.00	**$0.00**
Grand Total	**$186,350.00**			**$11,185,800.00**	**$0.00**	**$11,372,150.00**
Essential and Complementary Projects						
Grand Total	**$211,350.00**			**$11,447,050.00**	**$0.00**	**$11,658,400.00**

p.174 Table 66

Table 66: Outlet Centerfire Creek Timelines and Project Scheduling

Outlet Centerfire Creek Timelines and Project Scheduling			
FY (TBD)	**Task**	**Cost GNF**	**Partner Cost**
Year 1	Essential Project #2 – Road Maintenance	$131,250.00	unknown
Year 1	Essential Project #3 – Erosion Control Structures	$85,000.00	unknown
Year 1	Complementary Restoration Project #4 – Forest Vegetation Improvement – Thinning – 1,242 acres (group select) – Year 1 of 3	$1,863,000.00	unknown
Year 1	Complementary Restoration Project #4 – Forest Vegetation Improvement – Thinning – 521 acres (improvement) – Year 1 of 7	$781,500.00	unknown
Year 1	Complementary Restoration Project #5 – Forest Vegetation Improvement – Prescribed Fire	$117,300.00	unknown

Year 2	Complementary Restoration Project #4 – Forest Vegetation Improvement – Thinning – 1,242 acres (group select) – Year 2 of 3	$1,863,000.00	unknown
Year 2	Complementary Restoration Project #4 – Forest Vegetation Improvement – Thinning – 521 acres (improvement) – Year 2 of 7	$781,500.00	unknown
Year 3	Complementary Restoration Project #4 – Forest Vegetation Improvement – Thinning – 1,242 acres (group select)– Year 3 of 3	$1,863,000.00	unknown
Year 3	Complementary Restoration Project #4 – Forest Vegetation Improvement – Thinning – 521 acres (improvement) – Year 3 of 7	$781,500.00	unknown
Year 4	Complementary Restoration Project #4 – Forest Vegetation Improvement – Thinning – 521 acres (improvement)– Year 4 of 7	$781,500.00	unknown
Year 5	Complementary Restoration Project #4 – Forest Vegetation Improvement – Thinning – 521 acres (improvement)– Year 5 of 7	$781,500.00	unknown
Year 6	Complementary Restoration Project #4 – Forest Vegetation Improvement – Thinning – 521 acres (improvement) – Year 6 of 7	$781,500.00	unknown
Year 7	Complementary Restoration Project #4 – Forest Vegetation Improvement – Thinning – 521 acres (improvement) – Year 7 of 7	$781,500.00	unknown
Year 8	Essential Project #1 – Road Decommissioning	$70,000.00	unknown

p.176 Essential Projects-Spur Draw – Gila National Forest

Essential Projects

1. **<u>Essential Project #1 – Road Decommissioning</u>**
   - **a.** Attribute/ Indicator Addressed – Roads and Trails
   - **b.** Project Description: This project will focus on decommissioning roads identified in Luna Landscape Planning. In this watershed, there has been approximately 8 miles of road identified. Current decommissioning costs are approximately $8,750/mile. Decommissioning of a road involves reestablishing vegetation, and if necessary, initiating restoration of ecological processes interrupted or adversely impacted by the unneeded road. Treatments include one or more of the following treatments: Reestablishing former drainage patterns, stabilizing slopes, and restoring vegetation; Blocking the entrance to a road or installing water bars; Removing culverts, reestablishing drainages, removing unstable fills, pulling back road shoulders, and scattering slash on the roadbed; Completely eliminating the roadbed by restoring natural contours and slopes; and Other methods designed to meet the specific conditions associated with the unneeded road

c. Partners Involvement: Various partners have expressed interest in partnering in this effort, including New Mexico Environment Department and Wild Earth Guardians
d. Timeline: TBD based on funding and prioritization of 12 watersheds; Decommissioning of roads without fuels treatments can be completed in one fiscal year; roads with planned fuels treatments can be decommissioned immediately following treatment.
e. Estimated costs and associated Budget Line Item: $70,000; Estimated costs include the costs of reseeding, reshaping, labor, heavy equipment transport, per diem, barrier, imported aggregate, and archaeological review (if necessary), including monitoring.

2. **Essential Project #2 – Road Improvement**
   a. Attribute/ Indicator Addressed – Roads and Trails
   b. Project Description: This project will focus on heavy road maintenance and improving best management practices for road drainage on Maintenance Level 2 and 3 roads within the watershed. BMPs will include improvement of lead out ditches, road dips, and inlet and outlet feature of culverts and road/stream crossings. Heavy road maintenance may involve some level of reconstruction of existing roadbeds to reestablish a safe and last driving surface with the intent of minimizing sediment movement off of the road. Currently there are approximately 43.5 miles of Maintenance Level 2 and 3 roads within the watershed. This project assumes that 40% of roads in the watershed need some degree of maintenance ranging from light to heavy.
   c. Partners Involvement: Catron County
   d. Timeline: TBD based on funding; can be completed in one fiscal year
   e. Estimated costs and associated Budget Line Item = $153,125; Based on an estimate of $8,750/mile for road maintenance. Estimated costs may include reshaping, labor, heavy equipment transport, per diem, imported aggregate, and archaeological review (if necessary)
3. **Essential Project #3 – Erosion Control Structures** (Partially Completed)
   a. Attribute/Indicator Addressed – Water Quality
   b. Project Description: This project will focus on the construction of 15 new erosion control structures and the maintenance and/or reconstruction of 39 existing erosion control structures located across the watershed. These structures were originally implemented in the 1980s to impede and prevent ongoing erosion and gullying across the watershed in various drainages and swales. None of these structures have received maintenance over the last several decades and are currently in various stages of disrepair. Some structures have filled completely in and no longer serve to back up sediment. Others have breaches in the dams and are experiencing active headcutting, while others have water bypassing the structure, creating new erosion issues. Work will include heavy equipment cleanout of the sediment structures where needed or reconstruction/expansion of dams to preclude current and future gullying and sediment movement. Certified weed-free seeding will be required at sites requiring reconstruction. Inventory and survey work will be necessary prior to beginning this project to establish necessary site design.
   c. Partners Involvement: New Mexico Environment Department, Keystone Restoration Ecology
   d. Timeline: TBD based on funding
   e. Estimated Costs and associated Budget Line Item = $222,500; Costs are based on an estimate of $2,500/structure for maintenance and $5,000structure for new construction.
4. **Essential Project #4 – Spur Draw Watershed Stabilization** (Partially Completed)
   a. Attribute/ Indicator Addressed – Water Quality, Water Quantity, Riparian/Wetland Condition, Soils, Rangeland Vegetation
   b. Project Description: This project will focus on erosion control in 200 acres of severely degraded uplands immediately adjacent to an intermittent reach of Spur Draw and County Road B25. Multiple grade/erosion control structures will be constructed/reconstructed in this area, both in the uplands and in the channel bottom where necessary. Bank stabilization techniques will be employed along the intermittent reach of Spur Draw to encourage herbaceous revegetation. Rangeland seeding will be incorporated in the uplands within the 200 acres to facilitate recovery

of herbaceous ground cover. Both woody and herbaceous plants will be planted to facilitate recovery of riparian resources and to contribute to bank stabilization.

c. Partners Involvement: New Mexico Environment Department, Keystone Restoration Ecology

d. Timeline: TBD based on funding; This project can be completed in one year

e. Estimated costs and associated Budget Line Item: $670,000; These costs are based on 15 Structures at $5,000 per structure for new construction as well as $25,000 for design and planning and $5,000 for monitoring. 4 Miles at $100,000 per mile for bank stabilization as well as $124,00 for design and planning and $5,000 for monitoring. 200 acres at $180 per acre for seeding.

5. **Essential Project #5 – Spur Basin Watershed Protection Fence**

a. Attribute/ Indicator Addressed – Water Quality, Water Quantity, Riparian/Wetland Condition, Soils, Rangeland Vegetation

b. Project Description: This project will focus on fencing Essential Project #4; Fencing is planned for the 200 acres (3 miles) of watershed/riparian restoration work to protect it from ungulate grazing to facilitate recovery of upland and riparian herbaceous species and woody riparian species.

c. Partners Involvement: NMED

d. Timeline: TBD based on funding; this project can be completed in one year.

e. Estimated costs and associated Budget Line Item: $117,000.

6. **Essential Project #6 – Spur Draw/County Road B25 Crossing**

a. Attribute/ Indicator Addressed – Roads and Trails; Impaired Waters; Water Quantity, Riparian/Wetland Vegetation

b. Project Description: This project will focus on redesign of an existing water crossing on County Road B25. This road currently passes water with one undersized culvert. Design would consist of multiple raised culverts to slow the flow through the road and help restore wetland features to Spur Draw at this location. The current inadequate crossing design has resulted in headcutting in Spur Draw and dewatering of the local reach.

c. Partners Involvement: NMED

d. Timeline: TBD based on funding; this project can be completed in one year.

e. Estimated costs and associated Budget Line Item: $8,750; Costs are based on survey and evaluation, design, and implementation.

Complementary Restoration Projects

7. **Project #7 – Forest Vegetation Improvement – Thinning**

a. Attribute/ Indicator Addressed – Fire Regime

b. Project Description: This project will focus on woodland and forest maintenance and restoration treatments where identified across the watershed. Treatment of vegetation will be accomplished by hand, mechanized, and herbicide treatment. In forested systems, activities would include thinning and group selections (e.g. creating 1–4-acre openings) to encourage regeneration of trees. Woodland areas include pinyon juniper and pinyon pine, while forested areas refer to ponderosa pine and mixed conifer. Specific silviculture prescriptions will be written for treatment units based on desired future conditions for the unit and area. Treatment units may be planned across watershed boundaries, thus this project will be implemented over multiple years, as the treatment units are prepared. More than one watershed within the Escudilla Planning Area may receive treatment in a single year, however acreages may be limited. Thinning within this project area includes both group select and improvement thinning. Thinning within this project area includes both group select (2,479 acres) and improvement (1,326 acres) thinning. A total of 3,805 acres of thinning are planned within this watershed.

c. Partners Involvement: New Mexico Environment Department

d. Timeline: TBD based on funding; this is a multiple year project. Budget constraints and treatment boundaries will greatly limit the amount of acres treated in a single year within a watershed.

e. Estimated costs and associated Budget Line Item = $5,707,500; Costs are based on Costs are based on 3,805acres at $1,500/acre.

8. Project #8 – Forest Vegetation Improvement – Prescribed Fire

a. Attribute/ Indicator Addressed – Fire Regime

b. Project Description: This project would use prescribed fire to maintain and/or reduce fuel loadings. Prescribed fire can be implemented prior and after proposed vegetation treatments. Treatment units may be planned across watershed boundaries, thus this project will be implemented over multiple years, as the treatment units are prepared. More than one watershed within the Escudilla Planning Area may receive treatment in a single year, however acreages may be limited. A total of 2,801 acres of prescribed fire are planned within this watershed.

c. Partners Involvement: New Mexico Department of Game and Fish, Rocky Mountain Elk Foundation.

d. Timeline: TBD based on funding; this is a multiple year project based on budget constraints, burning units, burning limitations, and mitigation of cumulative impacts to natural and cultural resources.

e. Estimated costs and associated Budget Line Item =$280,100; Costs are based on the following assumptions: 2,801 acres at $100/acre.

p.179 Table 67

Table 67: Spur Draw Costs

Spur Draw – Gila National Forest

Funding Source	Planning and Design	# units	Cost/Unit	Implementation	Project Monitoring	Project Totals
Essential Project #1 Road Decommissioning						
FS Contribution Gila NF		8	$8,750.00	$70,000.00		$70,000.00
Partner Contribution (both in kind and $)						$0.00
Funding already obtained						$0.00
Total	**$0.00**	**8 Miles**		**$70,000.00**	**$0.00**	**$70,000.00**
Essential Project #2 Road Improvement						
FS Contribution Gila NF		17.5	$8,750.00	$153,125.00		$153,125.00
Partner Contribution (both in kind and $)						$0.00
Funding already obtained						$0.00
Total	**$0.00**	**17.5 Miles**		**$153,125.00**	**$0.00**	**$153,125.00**
Essential Project #3 Erosion Control Structures						
FS Contribution Gila NF (maintenance)	$25,000.00	39	$2,500.00	$97,500.00		$122,500.00
FS Contribution Gila NF (new)	$25,000.00	15	$5,000.00	$75,000.00		$100,000.00
Partner Contribution (both in kind and $)						$0.00
Funding already obtained						$0.00
Total	**$50,000.00**	**39 Structures**		**$172,500.00**	**$0.00**	**$222,500.00**
Essential Project #4 Spur Draw Watershed Stabilization						

FS Contribution Gila NF (new construction)	$25,000.00	15 structures	$5,000.00	$75,000.00	$5,000.00	$105,000.00
FS Contribution Gila NF (bank stabilization)	$124,000.00	4 miles	$100,000.00	$400,000.00	$5,000.00	$529,000.00
FS Contribution Gila NF (seeding)		200 Acres	$180.00	$36,000.00		$36,000.00
Partner Contribution (both in kind and $)						$0.00
Funding already obtained						$0.00
Total	**$149,000.00**	**15 Structures**		**$511,000.00**	**$10,000.00**	**$670,000.00**
Essential Project #5 Spur Basin Watershed Protection Fence						
FS Contribution Gila NF		3	$39,000.00	$117,000.00		$117,000.00
Partner Contribution (both in kind and $)						$0.00
Funding already obtained						$0.00
Total	**$0.00**	**3 Miles**		**$117,000.00**	**$0.00**	**$117,000.00**
Essential Project #6 Spur Draw/County Road B25 Crossing						
FS Contribution Gila NF		1	$8,750.00	$8,750.00		$8,750.00
Partner Contribution (both in kind and $)						$0.00
Funding already obtained						$0.00
Total	**$0.00**	**1 crossing**		**$8,750.00**	**$0.00**	**$8,750.00**
Essential Project Totals						
Forest Service Totals	$174,000.00			$957,375.00	$10,000.00	**$1,141,375.00**
Partner Contribution Totals	$0.00			$0.00	$0.00	**$0.00**
Funding already obtained	$0.00			$0.00	$0.00	**$0.00**
Grand Total	**$174,000.00**			**$957,375.00**	**$10,000.00**	**$1,141,375.00**
Complementary Project #7 Forest Vegetation Improvement/Thinning						
FS Contribution Gila NF (Group Selection)		2479	$1,500.00	$3,718,500.00		$3,718,500.00
FS Contribution Gila NF (Improvement)		1326	$1,500.00	$1,989,000.00		
Partner Contribution (both in kind and $)						$0.00
Funding already obtained						$0.00
Total	**$0.00**	**3805 acres**		**$5,707,500.00**	**$0.00**	**$5,707,500.00**
Complementary Project #8 Forest Vegetation Improvement/ Prescribed Fire						
FS Contribution Gila NF		2801	$100.00	$280,100.00		$280,100.00
Partner Contribution (both in kind and $)						$0.00
Funding already obtained						$0.00
Total	**$0.00**	**2801 acres**		**$280,100.00**	**$0.00**	**$280,100.00**
Complementary Project Totals						

Forest Service Totals	**$0.00**			**$5,987,600.00**	**$0.00**	**$5,987,600.00**
Partner Contribution Totals	$0.00			$0.00	$0.00	**$0.00**
Funding already obtained	$0.00			$0.00	$0.00	**$0.00**
Grand Total	**$0.00**			**$5,987,600.00**	**$0.00**	**$5,987,600.00**
Essential and Complementary Projects						
Grand Total	**$174,000.00**			**$6,944,975.00**		**$7,118,975.00**

p.181 Table 68

Table 68: Spur Draw Timelines and Project Scheduling

Spur Draw Timelines and Project Scheduling			
FY (TBD)	**Task**	**Cost GNF**	**Partner Cost**
Year 1	Essential Project #2 Road Improvement	$153,125.00	unknown
Year 1	Essential Project #3 Erosion control structures – Year 1 of 2	$61,250.00	unknown
Year 1	Complementary Restoration Project #8 Forest Vegetation Improvement – Prescribed Fire	$280,100.00	unknown
Year 1	Complementary Restoration Project #7 Forest Vegetation Improvement – group select – 1,239 acres – Year 1 of 2	$1,858,500.00	unknown
Year 1	Complementary Restoration Project #7 Forest Vegetation Improvement – improvement – 663 acres – Year 1 of 2	$994,500.00	unknown
Year 2	Essential Project #3 Erosion control structures – Year 2 of 2	$61,250.00	unknown
Year 2	Essential Project #5 Spur Draw Watershed Protection Fence	$117,000.00	unknown
Year 2	Complementary Restoration Project #7 Forest Vegetation Improvement – group select – 1,239 acres – Year 2 of 2	$1,858,500.00	unknown
Year 2	Complementary Restoration Project #7 Forest Vegetation Improvement – improvement – 663 acres – Year 2 of 2	$994,500.00	unknown
Year 3	Essential Project #4 Spur Draw Watershed Stabilization Year 1 of 2	$335,000.00	unknown
Year 3	Essential Project #6 Spur Draw/County Road B25 crossing	$8,750.00	unknown
Year 4	Essential Project #4 Spur Draw Watershed Stabilization – Year 2 of 2	$335,000.00	unknown
Year 5	Essential Project #1 Road Decommissioning	$70,000.00	unknown

p.176 Essential Projects-SA Creek – Gila National Forest

Essential Projects

1. **Essential Project #1 – Road Decommissioning**
   - **a.** Attribute/ Indicator Addressed – Roads and Trails
   - **b.** Project Description: This project will focus on decommissioning roads identified in Luna Landscape Planning. In this watershed, there are approximately 30 miles of road identified. Current decommissioning costs are approximately $8,750/mile. Decommissioning of a road involves reestablishing vegetation, and if necessary, initiating restoration of ecological processes interrupted or adversely impacted by the unneeded road. Treatments include one or more of the following treatments: Reestablishing former drainage patterns, stabilizing slopes, and restoring vegetation; Blocking the entrance to a road or installing water bars; Removing culverts, reestablishing drainages, removing unstable fills, pulling back road shoulders, and scattering slash on the roadbed; Completely eliminating the roadbed by restoring natural contours and slopes; and Other methods designed to meet the specific conditions associated with the unneeded road
   - **c.** Partners Involvement: Various partners have expressed interest in partnering in this effort, including New Mexico Environment Department and Wild Earth Guardians
   - **d.** Timeline: TBD based on funding and prioritization of 12 watersheds; Decommissioning of roads without fuels treatments can be completed in one fiscal year; roads with planned fuels treatments can be decommissioned immediately following treatment.
   - **e.** Estimated costs and associated Budget Line Item: Estimated costs include the costs of reseeding, reshaping, labor, heavy equipment transport, per diem, barrier, imported aggregate, and archaeological review (if necessary). $262,500 with monitoring.
2. **Essential Project #2 – Road Improvement**
   - **a.** Attribute/ Indicator Addressed – Roads and Trails
   - **b.** Project Description: This project will focus on heavy road maintenance and improving best management practices for road drainage on Maintenance Level 2 and 3 roads within the watershed. BMPs will include improvement of lead out ditches, road dips, and inlet and outlet features of culverts and road/stream crossings. Heavy road maintenance may involve some level of reconstruction of existing roadbeds to reestablish a safe and last driving surface with the intent of minimizing sediment movement off of the road. Currently there are 37 miles of Maintenance Level 2 and 3 roads within the watershed. This project assumes that 40% of roads in the watershed need some degree of maintenance ranging from light to heavy.
   - **c.** Partners Involvement: Catron County
   - **d.** Timeline: TBD based on funding and prioritization of 12 watersheds
   - **e.** Estimated costs and associated Budget Line Item = $131,250; Based on an estimate of $8,750/mile for road maintenance, which may include reshaping, heavy equipment transport, per diem, culvert replacement, and archaeological review (if necessary).
3. **Essential Project #3 – Erosion Control Structures** (Partially Completed)
   - **a.** Attribute/Indicator Addressed – Water Quality
   - **b.** Project Description: This project will focus on the maintenance and/or reconstruction of 38 existing erosion control structures. These structures were originally implemented in the 1980s to impede and prevent ongoing erosion and gullying across the watershed in various drainages and swales. None of these structures have received maintenance over the last several decades and are currently in various stages of disrepair. Some structures have filled completely in and no longer serve to back up sediment. Others have breaches in the dams and are experiencing active headcutting, while others have water bypassing the structure, creating new erosion issues. Work will include heavy

equipment cleanout of the sediment structures where needed or reconstruction/expansion of dams to preclude current and future gullying and sediment movement. Certified weed-free seeding will be required at sites requiring reconstruction. Inventory and survey work will be necessary prior to beginning this project to establish necessary site design.

c. Partners Involvement: New Mexico Environment Department, Keyston Restoration Ecology

d. Timeline: TBD based on funding

e. Estimated Costs and associated Budget Line Item = $190,000; Costs are based on an estimate of $5,000/structure.

Complementary Restoration Projects

4. **Project #4 – Forest Vegetation Treatments**
   - **a.** Attribute/ Indicator Addressed – Fire Regime
   - **b.** Project Description: This project will focus on woodland and forest maintenance and restoration treatments where identified across the watershed. Treatment of vegetation will be accomplished by hand, mechanized, and/or herbicide treatment. In forested systems, activities would include thinning and group selections (e.g. creating 1–4-acre openings) to encourage regeneration of trees. Woodland areas include pinyon juniper and pinyon pine, while forested areas refer to ponderosa pine and mixed conifer. Specific silviculture prescriptions will be written for treatment units based on desired future conditions for the unit and area. Treatment units may be planned across watershed boundaries, thus this project will be implemented over multiple years, as the treatment units are prepared. More than one watershed within the Escudilla Planning Area may receive treatment in a single year, however acreages may be limited. Thinning within this project area includes both group select (5,549 acres) and improvement (4,182 acres) thinning. A total of 9,731 acres are planned for thinning in this watershed.
   - **c.** Partners Involvement: New Mexico Environment Department
   - **d.** Timeline: TBD based on funding; this is a multiple year project. Budget constraints and treatment boundaries will greatly limit the amount of acres treated in a single year within a watershed.
   - **e.** Estimated costs and associated Budget Line Item = $14,596,500; Costs are based on Costs are based on 9,731 acres at $1,500/acre.
5. **Project #5 – Forest Vegetation Improvement – Prescribed Fire**
   - **a.** Attribute/ Indicator Addressed – Fire Regime
   - **b.** Project Description: This project would use prescribed fire to maintain and/or reduce fuel loadings. Prescribed fire can be implemented prior and after proposed vegetation treatments. Treatment units may be planned across watershed boundaries, thus this project will be implemented over multiple years, as the treatment units are prepared. More than one watershed within the Escudilla Planning Area may receive treatment in a single year, however acreages may be limited. A total of 1,789 acres of prescribed fire are planned in this watershed.
   - **c.** Partners Involvement: New Mexico Department of Game and Fish, Rocky Mountain Elk Foundation.
   - **d.** Timeline: TBD based on funding; this is a multiple year project based on budget constraints, burning units, burning limitations, and mitigation of cumulative impacts to natural and cultural resources.
   - **e.** Estimated costs and associated Budget Line Item =$178,900; Costs are based on the following assumptions: 1,789 acres at $100/acre.

p.186 Table 71

Table 71: SA Creek Costs

SA Creek – Gila National Forest

Funding Source	Planning and Design	# units	Cost/Unit	Implementation	Project Monitoring	Project Totals
Essential Project #1 Road Decommissioning						
FS Contribution Gila NF		30	$8,750.00	$262,500.00		$262,500.00
Partner Contribution (both in kind and $)						$0.00
Funding already obtained						$0.00
Total	**$0.00**	**30 miles**		**$262,500.00**	**$0.00**	**$262,500.00**
Essential Project #2 Road Improvement						
FS Contribution Gila NF		15	$8,750.00	$131,250.00		$131,250.00
Partner Contribution (both in kind and $)						$0.00
Funding already obtained						$0.00
Total	**$0.00**	**15 miles**		**$131,250.00**	**$0.00**	**$131,250.00**
Essential Project #3 Erosion Control Structures						
FS Contribution Gila NF		38	$5,000.00	$190,000.00		$190,000.00
Partner Contribution (both in kind and $)						$0.00
Funding already obtained						$0.00
Total	**$0.00**	**38 structures**		**$190,000.00**	**$0.00**	**$190,000.00**
Essential Project Totals						
Forest Service Totals	**$0.00**			**$583,750.00**	**$0.00**	**$583,750.00**
Partner Contribution Totals	$0.00			$0.00	$0.00	**$0.00**
Funding already obtained	$0.00			$0.00	$0.00	**$0.00**
Grand Total	**$0.00**			**$583,750.00**	**$0.00**	**$583,750.00**
Complementary Project #4 Forest Vegetation Treatments						
FS Contribution Gila NF (Group Selection)		5549	$1,500.00	$8,323,500.00		$8,323,500.00
FS Contribution Gila NF (Improvement)		4182	$1,500.00	$6,273,000.00		$6,273,000.00
Partner Contribution (both in kind and $)						$0.00
Funding already obtained						$0.00
Total	**$0.00**	**9731 acres**		**$14,596,500.00**	**$0.00**	**$14,596,500.00**
Complementary Project #5 Forest Vegetation Improvement/ Prescribed Fire						
FS Contribution Gila NF		1789	$100.00	$178,900.00		$178,900.00
Partner Contribution (both in kind and $)						$0.00
Funding already obtained						$0.00
Total	**$0.00**	**1789 acres**		**$178,900.00**	**$0.00**	**$178,900.00**
Complementary Project Totals						
Forest Service Totals	**$0.00**			**$14,775,400.00**	**$0.00**	**$14,775,400.00**

Partner Contribution Totals	$0.00			$0.00	$0.00	**$0.00**
Funding already obtained	$0.00			$0.00	$0.00	**$0.00**
Grand Total	**$0.00**			**$14,775,400.00**	**$0.00**	**$14,775,400.00**
Essential and Complementary Projects						
Grand Total	**$0.00**			**$15,359,150.00**		**$15,359,150.00**

p.188 Table 72

Table 72: SA Creek Timelines and Project Scheduling

SA Creek Timelines and Project Scheduling			
FY (TBD)	**Task**	**Cost GNF**	**Partner Cost**
Year 1	Essential Project #2 – Road maintenance	$ 131,250.00	unknown
Year 1	Essential Project #3 – Erosional control structures	$ 190,000.00	unknown
Year 1	Complimentary Restoration Project # 5 – Prescribed fire	$ 178,900.00	unknown
Year 1	Complimentary Restoration Project #4 – Forest Vegetation Improvement – 1,110 acres (group select) – Year 1 of 5	$ 1,665,000.00	unknown
Year 1	Complimentary Restoration Project #4 – Forest Vegetation Improvement – 522 acres (improvement) – Year 1 of 8	$ 783,000.00	unknown
Year 2	Complimentary Restoration Project #4 – Forest Vegetation Improvement – 1,110 acres (group select) – Year 2 of 5	$ 1,665,000.00	unknown
Year 2	Complimentary Restoration Project #4 – Forest Vegetation Improvement – 522 acres (improvement) – Year 2 of 8	$ 783,000.00	unknown
Year 3	Complimentary Restoration Project #4 – Forest Vegetation Improvement – 1,110 acres (group select) – Year 3 of 5	$ 1,665,000.00	unknown
Year 3	Complimentary Restoration Project #4 – Forest Vegetation Improvement – 522 acres (improvement) – Year 3 of 8	$ 783,000.00	unknown
Year 4	Complimentary Restoration Project #4 – Forest Vegetation Improvement – 1,110 acres (group select) – Year 4 of 5	$ 1,665,000.00	unknown
Year 4	Complimentary Restoration Project #4 – Forest Vegetation Improvement – 522 acres (improvement) – Year 4 of 8	$ 783,000.00	unknown

Year 5	Complimentary Restoration Project #4 – Forest Vegetation Improvement – 1,110 acres (group select) – Year 5 of 5	$ 1,665,000.00	unknown
Year 5	Complimentary Restoration Project #4 – Forest Vegetation Improvement – 522 acres (improvement) – Year 5 of 8	$ 783,000.00	unknown
Year 6	Complimentary Restoration Project #4 – Forest Vegetation Improvement – 522 acres (improvement) – Year 6 of 8	$ 783,000.00	unknown
Year 7	Complimentary Restoration Project #4 – Forest Vegetation Improvement – 522 acres (improvement) – Year 7 of 8	$ 783,000.00	unknown
Year 8	Complimentary Restoration Project #4 – Forest Vegetation Improvement – 522 acres (improvement) – Year 8 of 8	$ 783,000.00	unknown
Year 9	Essential Project #1 – Road decommissioning	$ 262,500.00	unknown

SA Creek Timelines and Project Scheduling			
FY (TBD)	**Task**	**Cost GNF**	**Partner Cost**
Year 1	Essential Project #2 – Road maintenance	$131,250.00	unknown
Year 1	Essential Project #3 – Erosional control structures	$190,000.00	unknown
Year 1	Complementary Restoration Project # 5 – Prescribed fire	$178,900.00	unknown
Year 1	Complementary Restoration Project #4 – Forest Vegetation Improvement – 1,110 acres (group select) – Year 1 of 5	$1,665,000.00	unknown
Year 1	Complementary Restoration Project #4 – Forest Vegetation Improvement – 522 acres (improvement) – Year 1 of 8	$783,000.00	unknown
Year 2	Complementary Restoration Project #4 – Forest Vegetation Improvement – 1,110 acres (group select) – Year 2 of 5	$1,665,000.00	unknown
Year 2	Complementary Restoration Project #4 – Forest Vegetation Improvement – 522 acres (improvement) – Year 2 of 8	$783,000.00	unknown
Year 3	Complementary Restoration Project #4 – Forest Vegetation Improvement – 1,110 acres (group select) – Year 3 of 5	$1,665,000.00	unknown

Year 3	Complementary Restoration Project #4 – Forest Vegetation Improvement – 522 acres (improvement) – Year 3 of 8	$783,000.00	unknown
Year 4	Complementary Restoration Project #4 – Forest Vegetation Improvement – 1,110 acres (group select) – Year 4 of 5	$1,665,000.00	unknown
Year 4	Complementary Restoration Project #4 – Forest Vegetation Improvement – 522 acres (improvement) – Year 4 of 8	$783,000.00	unknown
Year 5	Complementary Restoration Project #4 – Forest Vegetation Improvement – 1,110 acres (group select) – Year 5 of 5	$1,665,000.00	unknown
Year 5	Complementary Restoration Project #4 – Forest Vegetation Improvement – 522 acres (improvement) – Year 5 of 8	$783,000.00	unknown
Year 6	Complementary Restoration Project #4 – Forest Vegetation Improvement – 522 acres (improvement) – Year 6 of 8	$783,000.00	unknown
Year 7	Complementary Restoration Project #4 – Forest Vegetation Improvement – 522 acres (improvement) – Year 7 of 8	$783,000.00	unknown
Year 8	Complementary Restoration Project #4 – Forest Vegetation Improvement – 522 acres (improvement) – Year 8 of 8	$783,000.00	unknown
Year 9	Essential Project #1 – Road decommissioning	$262,500.00	unknown

Issue Area: Evaluation Criteria

p.201, Sec. Evaluation Criteria

Evaluation criteria are important to determine if project objectives are being met for all watersheds in the Escudilla Landscape WRAP/WBP. These criteria can be both qualitative and/or quantitative based on the parameters being addressed by the project. Regardless, they need to be of sufficient resolution to detect changes and trends over time resulting from implementation of management measures that address improvement of the watershed condition indicators that are contributing to Functioning at Risk or Impaired watershed condition ratings.

Criteria to Assess the progress of individual components of the WBP process

- Assessment of Essential Projects completed or stages of completion within each 6th code watershed addressed in the WBP
- Assessment of Complementary Restoration Projects completed and stages of completion within each 6th code watershed addressed in the WBP.

- Effectiveness Monitoring will be conducted when possible and appropriate, to assess upstream/downstream, before/after data for specific BMP implementation to determine whether pollutant loading has changed between sampling points.

Issue Area: Restoration Project Monitoring and Evaluations

p.203, Sec. Restoration Project Monitoring and Evaluations
Internal Monitoring

The Forests will monitor watershed restoration success using the following methods:

a. Best management practice effectiveness – evaluate treatments once/year using U.S. Forest Service National Best Management Practices protocol
b. Watershed Condition Classification – reevaluation of watershed condition ratings within the WRAP area every 5 years. The watersheds were assessed in 2015 and will be reassessed in 2020, 2025, and 2030, and so forth.
c. Photo monitoring – establish permanent photo points in selective treatment areas to be photographed once/year.
d. Riparian monitoring - conduct Proper Functioning Condition riparian surveys every 5 years on water bodies of concern to determine trend.
e. Noxious weed surveys – evaluate areas of known noxious weed infestations to determine if treatments are succeeding in eradicating populations; once/year
f. Water quality monitoring – use monitoring equipment to evaluate dissolved oxygen, pH, conductivity, and temperature levels in water bodies of concern, once/year *or* establish long-term data logging on water bodies with other equipment.
g. Groundwater monitoring – establish piezometers in meadows and/or riparian areas slated for restoration. Pull data once per year from dataloggers.
h. Stream Temperature monitoring – establish permanent thermograph sites in waterbodies of concern; read once/year. Baseline monitoring has already begun in San Francisco River, Stone Creek, Centerfire Creek, Dry Blue Creek, and SA Creek.
i. Cross section and longitudinal profiles – establish 2 – 4 permanent monitoring sites on stream channels of concern to be read once every 5 years.
j. Establish sediment traps to measure sediment input in selective areas treated for erosion.
k. Restoration Project implementation monitoring- Essential and Supporting Projects completed in each watershed to be evaluated every 5 years. Based on monitoring it will be determine if implementation schedule updates are needed.
l. Effectiveness Monitoring will be conducted when possible and appropriate, to assess upstream/downstream, before/after data for specific BMP implementation to determine whether pollutant loading has changed between sampling points.

External Monitoring

Baseline monitoring has already occurred on San Francisco River and Centerfire Creek by NMED in accordance with the Surface Water Quality Bureau (SWQB) guidelines. Future monitoring that continues to be conducted by NMED will be processed and entered into the SWQB database in accordance with

New Mexico state protocols. Future monitoring will continue in state assessed water bodies within the project area. The New Mexico Environment Department will assist in the establishment of photo points, permanent stream temperature monitoring sites, and cross section and longitudinal profiles. All monitoring data will be shared between all agencies (USFS, NMED, ADEQ).

Data Gaps

SWQB typically uses a targeted, rotational approach to water quality monitoring and watershed surveys to identify water quality standards exceedances and associated data needs. Under this type of approach, the state is divided into 10 watersheds or groups of watersheds and two areas are intensively monitored over a 2-year period, depending on staff and financial resources. This 10-year rotational cycle identifies water bodies where water quality problems exist, serves to prioritize and redirect SWQB resources to best protect and restore water quality, and informs WPS.

HUC 1504004 San Francisco Watershed was surveyed from 2019-2020. This data was used to assess the surveyed waterbodies for impairments and their ability to attain their designated uses as defined in the State of New Mexico Standards for Interstate and Intrastate Surface Waters [20.6.4 NMAC]. The water quality assessments used to produce this Watershed Based Plan addendum are based on the State of New Mexico 2020-2022 CWA §303(d)/§305(b) Integrated Report (IR), which included the San Francisco Watershed survey in 2019-2020. None of the subsequent CWA §303(d)/§305(b) IRs include any additional water quality data to inform this Watershed Based Plan addendum and therefore were not used. The next survey scheduled for this watershed is in 2029.

The Stone Creek (San Francisco R to AZ border) is a relatively new AU and has a first monitoring and listing action recorded in 2022 resulting from the monitoring during the Gila/Mimbres/San Fran survey from 2019-2020. There is no recorded turbidity or physical habitat sampling from this monitoring cycle. It is recorded in the 2019-2020 Water Quality Survey that there were major reductions in implementation because of dry conditions, resource limitations, and COVID-19 Restrictions. Stone Creek was however observed as being a highly unstable and eroding stream for the 6 total miles it flows though Arizona and New Mexico. Pebble counts conducted in 2016 as part of the SWQB Silver City Field Office temperature monitoring on the San Francisco River both above and below the confluence with Stone Creek demonstrated a significant sediment input from Stone Creek.

The USFS likewise conducts a Watershed Condition Classification Rating based on the Watershed Condition Framework. Watersheds on the GNF were rated initially in 2011, re-evaluated in 2015 and in 2020. There is no current evaluation for 2025 available.

To address changing water quality conditions, circumstantial reductions in sampling capacity and lengthy intervals between assessments, new assessments of watershed conditions are suggested to fill data gaps and guide future projects.

Implementation projects funded with Federal Section 319 funds should include documentation of activities completed to reach specific Load Reductions necessary to meet TMDL loadings. As all projects to date have been implemented by the USFS, activities and load reductions have not been reported in this

addendum. It is recommended that future updates to the Watershed Based Plan include new calculations to account for projects implemented under this WBP as well as for any pollutant load reductions.

Cooperators

The Gila National Forest and the Apache Sitgreaves National Forests, with the assistance of Ralph Pope, Southwest Native Ecosystems Management Consultant, developed the Escudilla Landscape Watershed Restoration Action Plan. It was reviewed by New Mexico Environment Department prior to submittal for comment/additions/deletions.

Quality Assurance

EPA requires all projects and activities funded by EPA, that collect environmental data used in decision making, be supported by an EPA approved Quality Assurance Project Plan ("QAPP").

The EPA has developed the QAPP as a tool for project managers and planners to document the type and quality of data needed for environmental decisions and to describe the methods for collecting and assessing those data. The QAPP integrates all technical and quality aspects of a project, including planning, implementation, and assessment.

Issue Area: Public Outreach

p.203, Sec. Public Outreach

Public outreach takes into consideration the remoteness of the site and sparse population. As noted previously in the document, this area is located on both sides of the Arizona and New Mexico state line. U.S. Highway 180 is the main paved road within the area, with the remaining travel routes being unpaved gravel and/or dirt roads. There are several private inholdings and the local communities of Luna, NM and Alpine and Springerville, AZ.

Preliminary Public Outreach

All of the projects included in this WRAP/WBP have undergone an environmental analysis, where public scoping, public meetings, and public comment have been integral to the process. Outreach was directed at the stakeholders who have the greatest vested interest in the area and success of the project. These stakeholders include, but are not limited to:

- USFS Gila and Apache-Sitgreaves National Forests
- New Mexico Department of Game and Fish
- New Mexico Environment Department
- Arizona Department of Environment Quality
- USFS permittees
- Luna Off-Highway Vehicle Riders
- Luna Irrigation Commission
- Wild Earth Guardians
- Upper Little Colorado River Watershed Partnership
- Local Tribes

Outreach will be primarily directed at local permittees, State natural resource agencies, San Francisco Soil and Water Conservation District, non-profit conservation organizations, outdoor enthusiasts, recreational users, and local communities (including youth). The primary outreach components will consist of periodic press releases during project activities; opportunities for volunteer labor; opportunities for employment of local workforce; opportunities for funding partnerships, and youth engagement for projects located near schools. Participants will learn the significance of temperature as a water quality impairment, the nature of the water quality impairments in San Francisco River and Centerfire Creek, the need to improve water quality parameters in these streams, and the importance of a healthy watersheds and riparian areas to provide for clean, cool water and healthy ecosystems.

The following additional activities have been identified as part of an integrated Outreach Program.

- NMED will develop a public involvement plan for the Escudilla WRAP/WBP addendum for the promotion of further public involvement in this planning process.
- Support hosting of an annual fishing derby at Lake Roberts with a booth emphasizing the significance of temperature as a water quality impairment and the need to reduce temperatures to meet water quality standards.
- Forest participation in an annual 4^{th} – 6^{th} grade Water Festival
- Forest participation in the US Fish and Wildlife Service's "Trout in the Classroom" program in New Mexico.
- Develop educational brochures and/or press releases that discuss the importance of controlling NPS pollution and maintaining watershed health and water quality standards as well as information and education on Best Management Practices (BMP) and how to be involved in BMP maintenance.
- Distribute and make available brochures to local communities, schools, conservation organizations, National Forest visitors centers as well as private landowners in affected watersheds.
- Attend meetings such as the Southwest Native Trout Meeting and the AZ-NM American Fisheries Society.
- Prepare and submit articles to various conservation organization newsletters including Trout Unlimited, The Western Native Trout Initiative and the AZ-NM American Fisheries Society.

Issue Area: Escudilla Landscape WRAP/WBP Milestones

p.204, Sec. Escudilla Lanscape WRAP Milestones
Escudilla Landscape WRAP/WBP Milestones

The Escudilla WRAP/WBP encompasses a large landscape area, covering two national Forests located in both Arizona and New Mexico. Year specific milestones have not been developed for this WRAP/WBP due to the size of the landscape and the logistics involved in the number of projects developed. Timelines are based on a yearly capacity of Forests to accomplish projects, and maximum funding that might be expected for implementation from federal funding sources. Future partner dollars may assist in advancing implementation schedules. Forest leadership determines work priorities on a yearly scheduled based on national target assignments. These targets may vary from year to year in different resource areas and different watersheds. The following table provides a brief indication of where the Forests will be in achieving targets and milestones.

p.204 Table 75a.

Table 75a. Escudilla Landscape WRAP/WBP Milestones											
Milestone/Target	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**
Planning											
Forest Leadership Teams determines Program of Work for Fiscal Year and priority watershed(s)	X	X	X	X	X	X	X	X	X	X	X
Forest Leadership Teams strategize funding needs for moving priority watersheds into improved condition classification	X	X	X	X	X	X	X	X	X	X	X
Forest Leadership Teams determine design, permitting and implementation needs for yearly Essential Projects Complementary Restoration Projects	X	X	X	X	X	X	X	X	X	X	X
Implementation											
Completed Implementation of Essential Projects and Complementary Restoration Projects in priority watershed(s)	X	X	X	X	X	X	X	X	X	X	X
Monitoring											
Pre-work monitoring occurs prior to ground disturbance	X	X	X	X	X	X	X	X	X	X	X
Conduct BMP Effectiveness monitoring	X		X		X		X		X		X
Conduct water quality monitoring				X							
Conduct watershed condition reclassification	X				X					X	

Conduct riparian monitoring	X				X					X	
Conduct photo monitoring	X				X					X	
Conduct noxious weed monitoring	X				X					X	
Conduct groundwater level monitoring (as needed)	X	X	X	X	X	X	X	X	X	X	X
Conduct channel geometry measurements	X				X					X	
Establish sediment traps and estimate capture (as needed)	X		X		X		X		X		X
Outreach											
GNF participates Trout in the Classroom project	X	X	X	X	X	X	X	X	X	X	X
GNF participates in annual Water Festival (as needed)	X	X	X	X	X	X	X	X	X	X	X
GNF participates in Lake Roberts Fishing Derby	X	X	X	X	X	X	X	X	X	X	X
NMED/SWQB conduct public outreach to provide technical support and information for private landowners	X	X	X	X	X	X	X	X	X	X	X
Distribute educational brochures and/or press releases	X	X	X	X	X	X	X	X	X	X	X
Attend meetings related to fisheries	X	X	X	X	X	X	X	X	X	X	X
Prepare and submit articles to conservation newsletters		X		X		X		X		X	

Approval – Gila National Forest

Action Plan Date: February xx, 2026

Reviewing Official and Title: _____

Camille Howes, Forest Supervisor, Gila National Forest

Forest Contact Information:

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Approval – Apache-Sitgreaves National Forests

Action Plan Date: February xx, 2026

Reviewing Official and Title: _____

Josh Miller, Acting Forest Supervisor, Apache-Sitgreaves National Forests

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Approval – New Mexico Environment Department

Action Plan Date: February xx, 2026

Reviewing Official and Title: _____

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