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**BEFORE THE ARIZONA POWER PLANT AND
TRANSMISSION LINE SITING COMMITTEE**

IN THE MATTER OF THE APPLICATION OF SUNZIA TRANSMISSION LLC, IN CONFORMANCE WITH THE REQUIREMENTS OF ARIZONA REVISED STATUTES 40-360, ET SEQ., FOR A CERTIFICATE OF ENVIRONMENTAL COMPATIBILITY AUTHORIZING THE SUNZIA SOUTHWEST TRANSMISSION PROJECT, WHICH INCLUDES THE CONSTRUCTION OF TWO NEW 500 KV TRANSMISSION LINES AND ASSOCIATED FACILITIES ORIGINATING AT A NEW SUBSTATION (SUNZIA EAST) IN LINCOLN COUNTY, NEW MEXICO, AND TERMINATING AT THE PINAL CENTRAL SUBSTATION IN PINAL COUNTY, ARIZONA. THE ARIZONA PORTION OF THE PROJECT IS LOCATED WITHIN GRAHAM, GREENLEE, COCHISE, PINAL, AND PIMA COUNTIES.

DOCKET NO. L-00000YY-15-0318-00171

Case No. 171

**NOTICE OF LODGING EXHIBITS
NOS. RED1 THROUGH RED16
OF REDINGTON NATURAL
RESOURCE CONSERVATION
DISTRICT**

Arizona Corporation Commission
DOCKETED

OCT 13 2015

DOCKETED BY
BATU

Pursuant to R14-3-211 and paragraphs 16 and 17 of the September 11, 2015 Procedural Order, Redington Natural Resource Conservation District, by and through their counsel, Lat J. Celmins of Margrave Celmins, P.C. hereby submits Exhibits Nos. RED1 through RED16 on behalf of Redington Natural Resource Conservation District in this proceeding.

AZ CORP COMMISSION
DOCKET CONTROL

2015 OCT 13 P 4: 55

RECEIVED

1 Respectfully submitted this 13th day of October, 2015.

2 MARGRAVE CELMINS, P.C.

3 By [Signature]

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10 **CERTIFICATION OF MAILING**

11 Pursuant to A.A.C. R14-3-204, the original Exhibits Nos. RED1 through
12 RED16 filed on behalf of Redington Natural Resource Conservation District this
13 13th day of October with:

14 Utilities Division-Docket Control

15 **ARIZONA CORPORATION COMMISSION**

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18 **Copy** of the foregoing mailed this 13th day of October, 2015 to:

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20 Assistant Attorney General

21 ARIZONA POWER PLANT AND

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28 

**Redington Natural Resource Conservation District
Testimony Notebook with Filing Documents**

Arizona Power Plant & Transmission Line Siting Committee

Docket Number L-00000YY-15-0318-00171

**IN THE MATTER OF THE APPLICATION OF SUNZIA TRANSMISSION LLC, IN CONFORMANCE WITH THE
REQUIREMENTS OF ARIZONA FOR A CERTIFICATE OF ENVIRONMENTAL COMPATIBILITY AUTHORIZING
THE SUNZIA SOUTHWEST TRANSMISSION PROJECT.**

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Chris Fletcher Bio

Chris Fletcher , Supervisor, Redington Natural Resource District

Born and raised in Arizona with ties to ranching in my family.

Bachelor of Science, Arizona State University, 1990

Major Emphasis of Study: Organizational Communication

Minor Emphasis of Study: Business Management

10 years management experience with the State of Arizona primarily in personnel management and process improvement.

9 years superintendent experience in residential and commercial construction with a focus in site work, infrastructure, structural concrete, grading and drainage, and fugitive dust and storm water pollution prevention.

10 years volunteer, part time compensated , and herd manager for a family owned cattle operation on the BLM Auga Fria National Monument , EZ Ranch Allotment and US FS Rice Peak Allotment.

Responsible for all Annual Operating Instruction Reports, range grazing durations, and documents with respect to Upper Water Conservation Area for endangered species protection. This position also required accurate records of use and interaction with the AZ Game and Fish Department to coordinate and monitor Antelope wildlife habitat corridor projects.

2 years management experience, owner Bar JF Agriculture DbA, Saguaro Ridge Ranch, San Manuel , AZ as a cattle producer.

As a supervisor for the Redington NRCD I volunteered, and was approved, to testify on behalf of our District with respect to the SunZia CEC Application.

Stefanie A. Smallhouse - Bio

Stefanie Smallhouse owns property within the Redington Natural Resource Conservation District and served as a Supervisor for several years. Stefanie and Andrew Smallhouse own and operate the Carlink Ranch, a 130 year old farming and ranching operation located along the San Pedro River. Stefanie attended New Mexico State University, graduating with honors and receiving a Bachelor of Science in Agriculture degree with studies focused in Wildlife Science and Range Management. She worked for the Bureau of Land Management (BLM) as a biologist in Utah before moving to Arizona in 1999. She was the Executive Director for the Arizona Natural Resource Conservation Districts State Association from 2008-2013, and now manages a statewide competitive grant program which provides funding to landowners, local governments, and tribes for measures that maintain or enhance water quality and quantity in riparian systems.

Stefanie Smallhouse assisted on the Sunzia Project from 2009- 2013 as an advisor to the Redington Natural Resource Conservation District in their coordinated planning effort with the BLM.

Districts as Political Subdivisions

Irrigation and other districts as political subdivisions

Irrigation, power, electrical, agricultural improvement, drainage, and flood control districts, and tax levying public improvement districts, now or hereafter organized pursuant to law, shall be political subdivisions of the state, and vested with all the rights, privileges and benefits, and entitled to the immunities and exemptions granted municipalities and political subdivisions under this constitution or any law of the state or of the United States; but all such districts shall be exempt from the provisions of sections 7 and 8 of article IX of this constitution.

Statutory Responsibilities regarding conservation of lands, soils, water, wild life and habitat areas, and dealing with State agencies regarding development, coordination relating to resource conservation programs and utilization of lands.

A.R.S. §37-1001. Declaration of policy

It is declared the policy of the legislature to provide for the restoration and conservation of lands and soil resources of the state, the preservation of water rights and the control and prevention of soil erosion, and thereby to conserve natural resources, conserve wildlife, protect the tax base, protect public lands and protect and restore this state's rivers and streams and associated riparian habitats, including fish and wildlife resources that are dependent on those habitats, and in such manner to protect and promote the public health, safety and general welfare of the people.

A.R.S. §37-1053. Powers and duties of supervisors

A. The supervisors shall:

1. Provide for the keeping of a record of all proceedings, resolutions, regulations and orders issued or adopted.
2. Furnish to the commissioner copies of such ordinances, rules, regulations, orders, contracts, forms or other documents adopted or employed, audits of the district or education center and such information concerning their activities as the commissioner requests.

B. The supervisors may appoint additional advisory members to the district governing body and delegate to the chairman or any member, or to any agent or employee, such powers and duties as they deem proper.

C. District supervisors shall require and provide for the execution of a corporate surety bond in suitable penal sum for, and to cover, any person entrusted with the care or disposition of district funds or property.

D. The compensation of the district supervisors shall be determined by the supervisors meeting as the governing body of the district but shall not exceed the compensation prescribed by section 38611, plus actual and necessary expenses of attending district meetings, and a per diem subsistence allowance and actual and necessary expenses while engaged in official business by order of the supervisors.

A.R.S. §37-1054 Powers of district

A. This state recognizes the special expertise of the districts in the fields of land, soil, water and natural resources management within the boundaries of the district. A district is empowered to:

1. Conduct surveys, investigations and research relating to the character of the soil, soil erosion prevention within a farm or ranch, methods of cultivation, farm and range practices, seeding, eradication of noxious growths and any other measures that will aid farm and range operations, disseminate information pertaining thereto, and carry on research programs with or without the cooperation of this state or its agencies or the United States or its agencies.

2. Conduct demonstration projects within the district on lands owned or controlled by the state or any of its agencies with the consent and cooperation of the agency having jurisdiction of the land, and on any other lands within the district on obtaining the consent of the landowner or the necessary rights or interests in the land, in order to demonstrate by example the means, methods and measures by which water, soil and soil resources may be conserved and soil erosion and soil washing may be prevented and controlled.

3. Cooperate and enter into agreements with a landowner, an operator or any agency or subdivision of the state or federal government to carry on programs of watershed improvement, soil erosion prevention, methods of cultivation, cropping practices, land leveling and improvement on agricultural lands, and programs limited to methods of proper range use, reseeding and the eradication of noxious growth on grazing lands, all within the limits of an individual farm or ranch and subject to the conditions the supervisors deem necessary.

4. Acquire, by purchase, exchange, lease or otherwise, any property, real or personal, or rights or interest in any property, maintain, administer and improve any properties acquired, receive income from any property or right or interest in property and expend it in carrying out the purposes of this chapter, and sell, lease or otherwise dispose of any property or interest in property in furtherance of the purposes of this chapter.

5. Make available, on the terms it prescribes to landowners within the district, agricultural and engineering machinery and equipment, fertilizer, seed and other material or equipment as will assist the landowners to carry on operations on their lands for the purposes and programs authorized by this chapter.

6. Develop, publish and bring to the attention of landowners within the district comprehensive plans for the conservation of soil and water resources within the district that specify in such detail as may be feasible the acts, procedures, performances and avoidances necessary or desirable for the effectuation of the plans.

7. Apply for, receive and spend monies from the Arizona water protection fund pursuant to title 45, chapter 12 to be used in individual districts or in cooperation with other districts, persons, cities, towns, counties, special districts and Indian communities for projects consistent with title 45, chapter 12.

8. Employ agents, engineers, attorneys or other employees not readily available from existing state agencies.

9. Sue and be sued in the name of the district, have a seal, which shall be judicially noticed, have perpetual succession unless terminated as provided in this chapter, may make and execute contracts and other instruments necessary or convenient to the exercise of its powers and make, amend and repeal rules not inconsistent with this chapter to carry into effect its purposes and powers.

10. Accept donations, gifts and contributions in money, services, materials or otherwise, and use or expend them in carrying on its operations.

11. Organize and establish an education center.

B. No provision of law with respect to the acquisition, operation or disposition of property by other public bodies shall be applicable to a district organized under this chapter unless specifically stated therein.

C. After the formation of any district under this chapter, all participation there under shall be voluntary, notwithstanding any provision of this chapter to the contrary.

D. A district may send to the Arizona water protection fund commission established by title 45, chapter 12 written recommendations for geographic areas to be emphasized, issues of concern and measures to implement title 45, chapter 12. A district that sends written recommendations to the commission shall request information from at least the following:

1. The director of the department of water resources and the state land commissioner.
2. The federal and state fish, wildlife, recreation and natural resource agencies.
3. County and municipal entities.
4. The public.

E. The district shall develop procedures to ensure adequate participation in the public involvement process prescribed by subsection D of this section.

A.R.S. §37-1056 Cooperation between districts

The supervisors of any two or more districts organized under the provisions of this chapter may cooperate in the exercise of any power conferred in this chapter.

A.R.S. §37-1057 Cooperation by state agencies

Agencies of this state which have jurisdiction over or are charged with the administration of any state owned lands, and of any county or other governmental subdivision of the state which have jurisdiction over, or are charged with the administration of, any county owned or other publicly owned lands lying within the boundaries of any natural resource conservation district, may cooperate fully with the supervisors of such districts in the effectuation of programs and operations undertaken by the supervisors under the provisions of this chapter. The supervisors of any district organized under the provisions of this chapter may cooperate with any municipality within the boundaries of the district on matters relating to soil conservation or land use planning.

**Long Range
Natural Resource Conservation
Plan
Redington Natural Resource Conservation District
2010-2016**



Governing Board of Supervisors:

- Charles Kent – Chairman
- Andrew Smallhouse – Vice Chair
- Charlie Ffolliott – Member
- Stefanie Smallhouse – Member
- Susan Newman – Member

Approved By:
The Redington Natural Resource Conservation District

Prepared By:
District Board of Supervisors
And
Associates

I. Introduction

The Redington Natural Resource Conservation District (NRCD) was organized June 19, 1947. In 1954 the State Conservation District law was amended to allow rangeland to be added to districts. In 1956 the District extended its boundaries to include all rangeland and petitioned in all of the land within its boundaries.

Title 37-1001. Declaration of policy

It is declared the policy of the legislature to provide for the restoration and conservation of lands and soil resources of the state, the preservation of water rights and the control and prevention of soil erosion, and thereby to conserve natural resources, conserve wildlife, protect the tax base, protect public lands and protect and restore this state's rivers and streams and associated riparian habitats, including fish and wildlife resources

II. Description of Planning Area

The Redington NRCD boundaries overlap portions of four counties: Cochise, Pima, Pinal, and Graham. It is accessible on unimproved dirt roads from San Manuel, Willcox, Benson, and Tucson. There are no incorporated towns but one school district designated as a transportation district for the residents within the general area of Redington. There are a variety of cooperators (members of the NRCD) within the District, and a diverse spectrum of land use.

The Redington NRCD encompasses approximately 290,381 acres in the San Pedro River valley of southeastern Arizona. It includes approximately 31 miles of the San Pedro River, which runs north-northwest through the middle of the district and is the area's most defining geographical, ecological and social-historical feature.

The district's southern boundary lies just north (downstream) of the Narrows, a bedrock intrusion that divides the upper and lower San Pedro basins. The western boundary runs along the crest of the Rincon and Santa Catalina mountains, which separate the San Pedro and Santa Cruz watersheds. The northern boundary lies along Alder Wash and Kielberg Canyon. The eastern district boundary is an irregular north-south line through Range 20 East of the Gila-Salt River Meridian. It begins just northeast of the Narrows and ends on the southwestern flank of the Galiuro Mountains.

Elevations in the study area range from 2650 feet above sea level at the north end of the river corridor to over 8600 feet at the top of the Rincon Mountains. Average annual precipitation increases with elevation from roughly 10 inches to more than 24 inches. The terrain is extremely rugged, characterized by deep tributary canyons and washes cut into the foothills slopes on either side of the river. Vegetation communities include cottonwood-willow riparian forests and mesquite bosque terraces along the San Pedro River, mixed broadleaf forest in tributary canyons and washes, Upper Sonoran desert scrub on lower elevation uplands, Sonoran and Chihuahuan semi desert grasslands at intermediate elevations and madrean oak woodlands in the surrounding mountain ranges. Conifer forests occur at the very highest elevations. This largely un-fragmented watershed includes the Chihuahuan Desert, Sonoran Desert,

Southern Arizona Semi-desert Grassland, and Mexican Oak-Pine Woodland and Oak Savannah, all of which join together in the Lower San Pedro River valley.

Development is very limited. It is estimated that there are approximately 175 year round residents, less than was found in the area early in the 20th century, and probably less than occurred during some prehistoric periods. Crop agriculture and livestock production have been the dominant land uses since the arrival of Spanish missionaries in the region over 300 years ago. State lands are leased to private ranchers for grazing, as are most national forest lands. Land ownership is a patchwork of public agencies, private individuals, and private non-profit groups. Private lands are a minority of the area, concentrated along the river and around other naturally occurring water sources. The largest single land owner in the area is the Arizona State Land Department, holding lands in trust for Arizona public schools and various other trustees.

Land Ownership:

| | |
|-------------|---------------|
| Federal | 77,065 acres |
| State Trust | 168,167 acres |
| Private | 45,149 acres |

For a more complete description of the district please refer to the Lower San Pedro River Watershed Assessment Project WPF-#00-109 (LSP). This assessment was completed as a result of the Redington NRCDC applying for and receiving a Water Protection Fund Grant in 2002. The assessment was completed and presented for approval in 2006 and therein adopted by the Redington NRCDC to be incorporated where applicable into the District's Long Range Natural Resource Conservation Plan and short term annual plan of operations.

III. General Policies and Procedures

The meeting schedule of the Redington NRCDC varies based upon the amount of business at hand, but generally meets every other month (January, March, May, July, September, November). In general, meetings are held at the Cascabel Community Center located in Cascabel, but can be moved to other locations depending upon the business at hand. All meeting notices and agendas are posted according to AZ Open Meeting Law. Special meetings will be called as needed to handle urgent business.

State funding is used for board member expenses, employee/consultant salaries, educational efforts, and other expenses.

Arizona statutes mandate that an election will be held every two years for one of the three elected supervisors. Each elected supervisor serves for a period of six years and can succeed him or herself. After each election, the three elected supervisors submit recommendations to the State Land Commissioner for two supervisors who (to be approved for appointment by the Secretary of State) will serve until the next election if approved for appointment by the Secretary of State.

The District Board of Supervisors is responsible for informing the general public of available assistance and progress being made on local issues of public concern. The district develops an annual plan of work which sets forth the high priority issues and conservation projects/educational

workshops in the coming year. Board members should make themselves available to district landowners to address concerns and questions.

Minutes of the RNRC board meetings are held by the district manager and are also available on file with the AZ State Land Department (1616 W. Adams St, Phoenix). Annual reports, financial reports, and funding requests are also on file with the AZ State Land Dept.

The Redington NRCD has several Memorandum of Understanding agreements with federal, state, and local agencies for addressing natural resource issues and land/water management efforts.

IV. Purpose, Duties, and Responsibilities

The purpose for the Natural Resource Conservation Districts is mandated in Arizona statute as stated above. The objective of the Redington NRCD is to provide leadership in promoting the conservation of all natural resources within the district. We are not and have never been a regulatory body which enforces comprehensive land use planning such as does a county government, but are instead a local governing body of elected officials tasked with educating local landowners about conservation in land and water use management, while facilitating on the ground conservation planning through program funding and technical assistance. Conservation districts are also responsible for prioritizing natural resource concerns for federal program funding through the Food, Conservation, and Energy Act of 2008.

The fact that we are non-regulatory does not diminish our importance in local land use planning, but makes our efforts that much more successful in that landowners follow our leadership and develop conservation planning on a voluntary basis. The Redington NRCD is the only organized form of local government for the two local communities of Cascabel and Redington. For this reason we are solely responsible to coordinate land use actions and planning with federal, state, and local government planners for our area. The district keeps in close communication and at times surveys community members, landowners, and community organizations as to the goals and conservation issues of importance that the district should plan for.

We recognize that conservation plays a vital role in sustainable agriculture, rural community planning, the stewardship of the environment, and the general economy of the area. Our objective is to help bring about the use of each acre of agriculture and other lands within the limits of its capability and treatment of each acre in accordance with its needs for protection and improvement. Our responsibilities include continuous monitoring of all our resources to insure quality as well as quantity for future generations.

V. Land Use and Physical Characteristics of the District

Farming and ranching have existed as a major land use since at least re-settlement in the late 1800's (Sayre, 2004). Farming has been in practice for both subsistence and commercial/trading purposes dating back to pre-historic periods. Farmland occurs along the narrow benches adjacent to the San Pedro River and is subject to considerable damage from bank cutting in the main channel and in the tributary side drainages. Ranching occurs on rangelands/pastures occurring from the valley bottom up to the highest foothills at the base of the mountain ranges that surround the lower watershed. Farmland is used for crop/hay production as well as irrigated

pasture. Using farm fields for irrigated pasture allows for rest/rotation of rangelands throughout the growing season for best management practices.

The primary source of irrigation water is groundwater pumped to the surface through wells. There is some remaining, but very little, diversion of river water from grandfathered pre-statehood surface water rights. Depth to the water table is shallow and despite persistent years of drought the water table remains stable overall.

It has been well documented that mesquite occurs in much greater density along the valley bottom than at the time of re-settlement in the late 19th century. The invasion is likely due to uncontrolled grazing during that time and resulted in sacaton grasslands being choked out by woody species. Mesquite trees are known for their ability to maximize all available water sources and in general use more water than other native vegetation and cultivated crops. Farmland creates a mosaic along the river mimicking to some extent the once present sacaton grasslands and is benefiting wildlife species dependent upon that habitat type.

Livestock numbers have fluctuated since re-settlement. In the early 20th century livestock numbers were for the most part uncontrolled and un-managed. Fencing was illegal and too expensive. Managing the resources for conservation was not prevalent because the number of cattle per rancher determined the swath of that rancher's control. During that time over-grazing did lasting damage to the vegetation and soils within the district. Today much of this damage (erosion, brush invasion, etc.) has been reversed or is steadily recovering. Recurrent droughts continue to affect forage production, but conservation planning has led to better management on what large ranches remain. Conservation practices placed on the ground such as fencing, water pipelines, and vegetation treatments are common now and have improved grazing management. Man-made water sources also benefit wildlife in drought years and provide water in areas of habitat that may have been underused prior to placement.

At least one ranch in the district is actively managing mesquite forests along the valley bottom for lumber production and firewood cutting. Firewood cutting also occurs in other areas of the district but generally for private use and not commercial purposes.

There are several areas along the river with bee boxes. This has proven to be important for local agricultural operations and the general function of the various ecological processes in the area.

Recreation, hunting, and off-road use has increased within the district in the last twenty years due to the increased population pressure of nearby metropolitan areas, decreased access to state and federal lands in other districts, and the general increase in off-road vehicle recreation.

Virtually all subdivision has occurred in the southern half of the district as a result of large ranches going out of production and being sold for residential purposes. This has affected a large area of land, principally along the San Pedro River Corridor, but it has not reached the high densities and small lot sizes typically associated with the term subdivision. County zoning permits lots as small as 4.13 acres, but the average subdivided parcel in the study area is 68 acres (Sayre, 2004).

Conservation/preservation lands have steadily increased in the LSP. The Bureau of Land Management, The Bureau of Reclamation, The AZ Dept. of Game and Fish, Pima County, The Nature Conservancy, Salt River Project, and private landowners have protected close to 40,000 acres and invested over 25 million in acquisitions of conservation/preservation lands and water rights (Baker, 2010).

Further land use descriptions and historical conditions are available within the LSP Watershed report (WPF-#00-109).

VI. Major District Concerns and Objectives

During the analysis period of the LSP Watershed Assessment the residents/landowners within the district were surveyed to determine particular resource concerns. This was done through public meetings and mailed questionnaires. Additional public meetings were held at the close of the assessment in 2006 when the findings of the analysis were presented. The following is a summary of those concerns. For a more detailed listing of concerns please see the LSP Watershed Assessment report.

Upland Vegetation: Improve water infiltration on rangelands, control invasive shrubs and exotic plants, implement the use of prescribed burning.

Upland Erosion: Erosion control watershed wide, and address soil stability. Improvement of rangeland condition.

Fire: Prescribed burning to control invasive woody species, improve rangeland condition.

Riparian Vegetation: Control of fuel loads on federal lands and river banks, treatment of woody invasion in riparian areas, control of noxious and invasive species.

Bank and Gully Erosion: Address bank and gully erosion watershed wide, install rock dams to curb arroyo cutting.

Roads: Attention to road engineering and maintenance, erosion effects of side roads and off road vehicle effects.

Water: Consistent water supply, low water use crops, water recharge on uplands, water availability/developments for livestock and wildlife, flood control.

Noxious and Invasive Plants: Treatment and control.

Wildlife and Fish: Maintain corridors and un-fragmented habitat, predator control, habitat improvement, consistent monitoring.

Social Issues: Protection of private property rights, encourage purchase of development rights, maintain traditional agriculture, encourage local food production.

Educational Programs: Improved communication, education of new landowners, studies of cultural land use.

The major issues in the above list were considered in the data collection for the LSP Watershed Assessment. This long range natural resource conservation plan combines those issues from above with those that have been persistent concerns of the last twenty years.

1. **Soil Erosion and Sedimentation** – Sediment pollution of streams and erosion of rangeland is a major problem in the district. Two objectives to correct the problem are to affect

physical changes in the watershed to reduce erosion and to improve range management techniques to prevent erosion.

Erosion was a topic of considerable concern in the LSP Assessment. Soil conservation is a basic objective for all natural resource management. Soil erosion on uplands can reduce soil depth and therefore reduce soil moisture holding capacity and rooting depth. Soil erosion can result in the loss of nutrients from the watershed especially since these nutrients are most abundant in the surface soil. In addition, soil erosion contributes to sediment accumulation and lower water quality in drainages and reservoirs. Soil compaction can also reduce infiltration rates and soil moisture holding capacity, thus increasing runoff and erosion hazard. The LSP Assessment indicated that roads associated with recreation and utility construction/maintenance were the major source of erosion in the district and the number one cause of human-related gully erosion. Un-improved roads tend to intercept surface runoff and cause it to run down the road. This water builds up depth and erosive power and eventually starts to cut a gully in the tracks down the road. When these tracks develop into a deep rut or gully, the road is usually moved over to get out of the rut. Once started these gullies often tend to continue to erode, even if the road is moved. The severities of the problems relate to the slope of the road and the type of soil involved. Roads along ridges may have little problem because there is no source of water above them. Roads running down slopes act as channels for water (Smith, 2006). The Natural Resource Conservation Service describes the erosion hazard for the Stagecoach, Sonoran and Pinaleno soils, which make up 85% of the area, as severe which indicates that significant erosion is expected. The numerical rating is .95 where 1.00 has the greatest negative impact. Excessive erosion from roads can overwhelm a river's capacity to process sediment. Cross-country road construction increases unauthorized access to off-road vehicles. The clearing of vegetation and associated soil compaction from these roads counter the re-vegetation and rangeland improvement efforts currently taking place in the district (Baker, 2010).

Management: (LSP Adopted Recommendations)

Mitigating upland erosion depends mainly on maintaining a good vegetation and litter cover on the watershed and managing for the type of vegetation that will provide the most effective cover, i.e. perennial grasses instead of shrubs. The district will prioritize efforts that address reducing soil erosion through management of vegetation by way of mechanical methods, and vegetation management in areas existing in zones 41-3, 41-1, 41-2, and 40-1 (Smith, 2006). The deeper soil areas have been identified as priority areas for treatment, either to correct existing problems or to prevent future problems. The highest priority for vegetative treatment should be all sites with deep soils and heavier soil texture either in the A or B soil horizons. These areas tend to have relatively low infiltration rates and high soil erodibility. Figure 9 in the LSP Assessment Report delineates priority areas for treatment.

Mitigating bank and gully erosion involves improving general watershed condition by increasing soil-stabilizing vegetation, engineering structure or mechanical treatments, avoiding road construction with steep access and traveling across drainages. Gabions and diversion dams can also be of use. The district will continue to seek technical advice on engineering structural erosion reduction devices and prioritize projects that address

this issue. The district will discourage road construction that will increase this type of erosion which already exists as a problem along utility and gas lines. The district will encourage road construction based upon sound construction design to allow for water movement that does not increase erosion. The district will continue to promote sound road design, maintenance, and construction of the Cascabel/San Pedro River Road in order to address erosion and sedimentation issues.

The Redington NRCDC supports the 1991 Safford Resource Management Plan statements and planning with regard to soil erosion and the overall goal to minimize soil erosion and rehabilitate eroded areas to maintain and enhance watershed condition. The 1991 RMP specifically states that any future major cross-District utility rights-of-way proposals will be encouraged to use existing corridors.

2. Upland Vegetation – Grassland has declined from approximately 33% of the area to only 2%, i.e. it has been converted to shrub/grassland or shrubland. Likewise, shrub/grassland has declined from 43% of the area to 22%. Shrubland increased from 11% to 64%. Future objectives regarding this assessment are dependent upon what is possible on the ecological site, resource concerns, or desired uses. Desired results of the district are reducing shrubs, increasing perennial grasses, increasing cool season grasses, reducing non-native species, and increasing ground cover. Increasing the vegetative cover of perennial grasses in the upland areas will help slow runoff and also address concerns of sedimentation in waterways.

Management: (LSP Adopted Recommendations)

Proper livestock grazing should be employed wherever livestock are grazed to maintain or improve the range and increase livestock performance. Prescribed burning should be used to increase the presence of desert grasslands and various means of mechanical control of shrubs should be used where possible and economically feasible. Mechanical control should be followed with reseeding of native/perennial grass seed. Chemical control should be considered for shrub removal and is more economical/efficient than mechanical treatments. Biological control on the uplands should be considered through intensive goat grazing. Reseeding should only be considered in areas that have been pre-treated, and feasible for that location (i.e. soils, slope). The timing for this is critical; the seed is expensive and non-native species are likely to be more successful in this area. Reseeding should be considered in very specific situations and carefully planned.

3. Water Availability/Quantity- Providing water for wildlife and livestock was an issue raised by a number of people. Concerns about overdraft were also voiced. Good livestock grazing management is the key to achieving and maintaining good watershed condition in the LSP. An integral part of grazing management is water availability and location. Wildlife use and benefit from water developments created for livestock, especially during prolonged times of drought. According to mapping done for the LSP Assessment there are adequate watering sites available, however not all of them may be functional or provide water on a year round basis. Wildlife would benefit from water made available during the driest and hottest times of the year; however, livestock grazing is managed during this time of year to protect the seed base of grasses. This means that waters may not be in use

during this time for much of the area. Natural springs are generally subsurface during this time as well.

There is no evidence that the San Pedro River (SPR) was ever perennial throughout. The hydrographic survey report created by the Arizona Dept. of Water Resources (ADWR) states that in the Redington Sub-watershed there are about 4 miles of perennial flow, about 29 miles of formerly perennial flow that is now intermittent, and about 21 miles of intermittent flow that was historically intermittent. The SPR does not have perennial surface flow at the Narrows where it enters the LSP basin and there is no evidence of sub flow near the surface. According to ADWR only a small amount of sub flow enters the lower basin across the Narrows from the upper basin. The main water source coming from the upper basin is ephemeral flow. It appears that all or most of the surface flow in the river originates within the LSP watershed (Smith, 2006).

It appears that present water uses are in balance with the supply of groundwater. There is lack of evidence that perennial flow in the SPR has decreased or that well levels have decreased. During the drought some well levels reported drops, but they were likely dependent upon tributary ground water. Agricultural use has declined in recent years and probably will not increase. Riparian vegetation use has probably increased substantially over the past 50 years, but that increase will likely stabilize as banks stabilize and cottonwood/willow forests decline and revert to grass banks. This change is likely to take a considerable amount of time. Saltcedar and mesquite invasion is contributing to an increase in the use of groundwater. Residential use is low at this time, but could increase in the future.

Management: (LSP Adopted Recommendations)

Not all species of wildlife require the availability of water year round or in close proximity. Bat species and ungulates are the exception. Water surface areas with little obstruction that are readily available are important for bats for foraging purposes and hydration. Ungulates and avian species are not constrained by fences and land ownership and can likely find water if available, especially with the coverage currently available. The district will encourage and possibly consider a funding program to compensate ranchers for maintaining water sources for mid-summer availability for the benefit of wildlife. The district will continue to prioritize water availability projects if those projects are integral in livestock management, but it appears that most areas are sufficiently covered.

Exotic and invasive species are present and increasing in some areas of the river channel and immediate terraces and should be treated either chemically or mechanically in order to ensure that surface flow in some areas is not threatened by these species. Areas with such little overall precipitation, as the lower uplands, do not benefit enough relative to the expense of treating for water infiltration. Only removal of trees in the upper most watershed that receives more precipitation would yield any increase in water that would reach the river. For this result a practical clear-cutting would be required and that would be counter to all other efforts by the district to address erosion and wildlife habitat

continuity. The district will encourage the most efficient water use in irrigation methods and prioritize projects that involve conversion to efficient irrigation methods.

4. **Water Quality** – The quantity and quality of water available in desert environments is a common concern. At present there does not seem to be any significant water quality problems associated with human causes. It would not be advisable to drink surface water within the LSP due to possible *Giardia* or *Cryptosporidium* contamination.

The AZ Department of Environmental Quality has found that sediment load is high when flows are high.

Management: (LSP Adopted Recommendations)

The NRCDC will provide educational programs regarding the possibilities of surface water contamination in waste disposal, farming and livestock management practices and encourage the use of “best management practices”. Sediment loads during peak flows will be addressed with actions specific to addressing erosion issues within the LSP.

5. **Noxious and Invasive Plants** – This issue encompasses a broad spectrum of concerns brought about by district residents. Invasive and Noxious plants do occur in the LSP. Methods for controlling most of them are limited.

Management: (LSP Adopted Recommendations)

Control and treatment of salt cedar and mesquite are the only realistic efforts, and both are expensive. New Mexico has successfully treated salt cedar with herbicide in the Rio Grande, and some work has been done with regard to this in the upper reaches of the SPR. The district will investigate the cost to benefit ratio of such treatments. The district will stay informed of the best chemical and mechanical treatments available to farms to reduce noxious and invasive weed species. This information is a result of our partnership and working relationship with the Natural Resource Conservation Service.

6. **Wildlife and Fish** – There is very little information available as to fish and wildlife trend data specific to the LSP. We do know that habitat composition has changed in the last 100 years to the detriment of grassland dependent species and the benefit of others, such as migratory neo-tropical avian species. This has surely had an impact on the population dynamics of those species. This largely un-fragmented watershed includes the Chihuahuan Desert, Sonoran Desert, Southern Arizona Semi-desert Grassland, and Mexican Oak-Pine Woodland and Oak Savannah, all of which come together in the Lower San Pedro River valley. This results in a high diversity of species present in the watershed, to include some species that exist only in areas of the overlap. Maintaining wildlife corridors are of high concern within the district. Corridors are used by wildlife for three principle reasons: dispersal, migration, and home range movements. Natural corridors enable movement in response to environmental changes, genetic interchange, and re-colonization. In general, habitat fragmentation is inversely related to species success. As fragmentation increases, the likelihood of species survival decreases. Un-fragmented landscapes are key indicators developed by biologists in assessing the conservation value of regions and sites and the imminence of the threat they face (Baker, 2010). Large blocks of habitat have the potential to sustain viable species populations and they permit a broader range of species and ecosystem dynamics to persist. Studies have shown that even specialized species such

as neo-tropical migrants are using the entire watershed, not just the "green ribbon" created by the SPR (LSPRWA, 2006). Prime habitat and rare native fish populations are found throughout the Middle SPRV, both in the eastern and western valley tributaries (Baker, 2010).

Generally habitat fragmentation occurs because of development, which is not currently a threat in the LSP. Linear corridors such as utility lines are a form of habitat fragmentation and create a negative edge effect. As fragmentation increases the interior habitat for specialist species becomes smaller and generalist species dominate the habitat and species diversity decreases. Presently a utility and gas line already transect the district. These lines are minimal, but have caused issue with habitat degradation through vegetation removal, introduction of noxious plant species, increased gully erosion, and increased access to OHV use. The impact from off-road vehicles can be very significant in desert areas due to destruction of vegetation, compaction of soils, increased sediment load into streams, increased illegal dumping, and trespass (Baker, 2010). There has been some subdivision of ranches into "40 acre PARCELS" and 10-65 acre residential properties. This can affect the movement of wildlife and result in resource issues related to highly variable management practices that result in negative impacts. There are still livestock management issues to address among smaller acreage operations as related to fisheries and wildlife as well as all other concerns.

Management: (LSP Adopted Recommendations)

The district will consider maintaining or improving habitat diversity and therein species diversity through land treatments that encourage a mosaic of vegetative structures and biodiversity. The district will investigate and promote studies in the area that further the knowledge of existing species diversity and population trends. The district will discourage habitat fragmentation and stream sedimentation created by utility or major transportation corridors. The district will sponsor and promote education opportunities for small acreage landowners to learn about natural resource conservation practices suited for their operations. The district will continue to promote proper grazing management techniques for "newcomers" and small acreage landowners. Large scale housing development is not a concern at this time.

7. Conservation Planning/Conservation Education – Conservation planning is important for the watershed as a whole no matter the size (acreage) of land ownership. Proper planning can address many concerns at the same time. The NRCD currently sponsors a Conservation Education Center that promotes and educates local cooperators, students, and landowners about conservation practices etc.

The Redington NRCD works in partnership with various federal, state, and local government agencies, local government bodies, and private landowners. The NRCD is the only existing form of local government within the district boundaries. For this reason and because the district focuses its efforts and mission according to natural resource conservation, protection of the tax base and water rights, the district will invoke *coordination* with any federal or local agency and or federal/local government body connected with the Federal Land Policy and Management Act in order to coordinate future

actions within the district. Those actions and management plans should coordinate and be consistent with this long range plan.

43 USC Section 1712 (c)(9) provides that the Secretary of Interior "shall" "coordinate the land use inventory, planning and management activities of or for [the public lands] with the land use planning and management programs of other Federal departments and agencies and of the State and local governments within which the lands are located..."

Congress expanded upon this mandate of coordination by specifying that coordination would include a minimum of the following:

Keep apprised of our local plans;

Consider our plans in your planning;

Assist in resolving inconsistencies between your plans and our local plans;

Provide "meaningful" involvement of our local government officials in the "development" of your "land use programs, land use regulations and land use decisions."

Management:

Coordinated Resource Management Plans/Ranch Management Plans will be encouraged for agricultural operations and education workshops will be sponsored by the district to address small acreage conservation planning.

The district will continue to sponsor the Redington Conservation Education Center.

The District will invoke *coordination* with any federal or local agency and or federal/local government body connected with the Federal Land Policy and Management Act in order to coordinate future actions within the district. Those actions and management plans should coordinate and be consistent with this long range plan.

VII. Provision for Revision

The Plan shall be amended from time to time as conditions indicate and the need for modification occurs. The Board of Supervisors will review this Plan once a year for this purpose.

VIII. Resolution for Adoption

This Long Range Natural Resource Conservation Plan was adopted by the Redington Natural Resource Conservation District Board of Supervisors, on this twenty-fourth day of August, 2010.

Charles Kent, Chairman

Andrew Smallhouse, Vice Chairman

Susan Newman, Member

Stefanie Smallhouse, Member

Charles Ffolliott, Member

Cited Material

Baker, D., R. Evans, et al. (2010). Draft Environmental Impact Statement Contributions. Bureau of Land Management – Request for Comments Proposed SunZia Transmission Line.

Sayer, N. (2004). A History of Land Use and Natural Resources in the Cascabel-Redington Area of the San Pedro Valley. Lower San Pedro Watershed Assessment Project, Task 3 WPF # 00-109.

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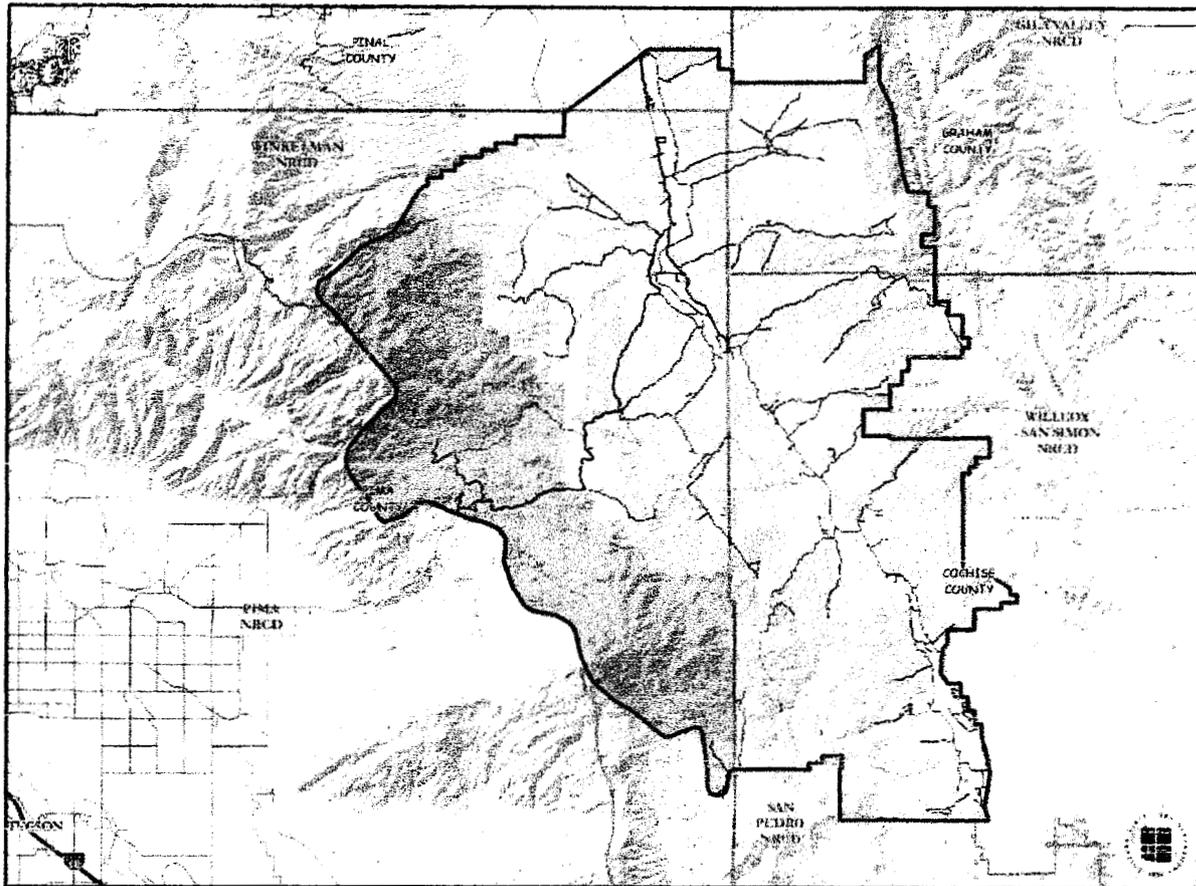
Redington Natural Resource Conservation District

Conservation Implementation Strategy

Soil Stability and Water Conservation in the

Lower San Pedro River Watershed

REDINGTON NRC



I. Area Description:

The Redington Natural Resource Conservation District (RNRCD) boundaries overlap portions of four counties: Cochise, Pima, Pinal, and Graham. The District encompasses approximately 290,381 acres in the San Pedro River valley of southeastern Arizona. It includes approximately 31 miles of the San Pedro River (SPR), which runs north-northwest through the middle of the district and is the area's most defining geographical, ecological and social-historical feature.

The district's southern boundary lies just north (downstream) of the Narrows, a bedrock intrusion that divides the upper and lower San Pedro basins. The western boundary runs along the crest of the Rincon and Santa Catalina mountains, which separate the San Pedro and Santa Cruz watersheds. The northern boundary lies along Alder Wash and Kielberg Canyon. The eastern district boundary is an irregular north-south line through Range 20 East of the Gila-Salt River Meridian. It begins just northeast of the Narrows and ends on the southwestern flank of the Galiuro Mountains.

Average annual precipitation increases with elevation from roughly 10 inches to more than 24 inches; however, since 2000 precipitation has been well below this average. The terrain is extremely rugged, characterized by deep tributary canyons and washes cut into the foothills slopes on either side of the river. Vegetation communities include cottonwood-willow riparian forests and mesquite bosque terraces along the San Pedro River, mixed broadleaf forest in tributary canyons and washes, Upper Sonoran desert scrub on lower elevation uplands, Sonoran and Chihuahuan semi desert grasslands at intermediate elevations and madrean oak woodlands in the surrounding mountain ranges. Conifer forests occur at the very highest elevations. This largely un-fragmented watershed includes the Chihuahuan Desert, Sonoran Desert, Southern Arizona Semi-desert Grassland, and Mexican Oak-Pine Woodland and Oak Savannah, all of which join together in the Lower San Pedro River valley. The San Pedro River is generally entrenched 20-30 feet below a pre-1880 floodplain.

Major Land Resource Areas (MLRA) are broad areas based on climate, geology, and soil patterns. There are two major land resource areas in the focus area: Sonoran Basin and Range -40 (Upper Sonoran Desert Scrub 40-1), and SE Arizona Basin and Range - 41 (Mexican Oak-Pine Woodland and Oak Savannah 41-1, Chihuahuan-Sonoran Desert Shrub Mix 41-2, Southern AZ Semidesert Grassland 41-3).

Ecological sites within the District have been identified. Ecological site descriptions classify land within an MLRA based upon its ability to produce a distinctive type and amount of vegetation due to significant difference in parent material, soil characteristics, topographic position, or other factors. This system was developed by the NRCS and has been widely used in resource management and planning.

Crop agriculture and livestock production have been the dominant land uses since the arrival of Spanish missionaries in the region over 300 years ago. State lands are leased to private ranchers for grazing, as are most national forest lands. Land ownership is a patchwork of public agencies, private individuals, and private non-profit groups. Private lands are minority acreage of the area, concentrated along the river and around other naturally occurring water sources. The largest single land owner in the area is the Arizona State Land Department, holding lands in trust for Arizona public schools and various other trustees.

Land Ownership:

| | |
|-------------|---------------|
| Federal | 77,065 acres |
| State Trust | 168,167 acres |
| Private | 45,149 acres |

II. Background:

In 2003, the RNRCD initiated a district wide resource assessment which was completed in 2006 and titled: The Lower San Pedro River Watershed Assessment Project (LSPWAP). In the early stages of the LSPWAP, a series of public meetings were held and the following major issues and concerns were identified among several others: Upland Vegetation – shrub control, increased vegetative cover, improvement of range condition, native plant and grass restoration, invasive shrub control, improvement of water infiltration on rangelands; Upland Erosion – soil stability, erosion control; Riparian Vegetation – control of fuel loads, noxious weed control, overpopulation of woody species; Bank and Gully Erosion – bank stability and erosion; Flood Control; Surface Water and Stream Flow – water recharge, water supply; Groundwater Supply – water use and recharge, water infiltration of uplands; Wildlife and Fish – habitat improvement to include water availability. Each of these major issues was included in the LSPWAP report of 2006.

In general, water reserves, in the form of ground water supplies, are an essential element of land use planning throughout Arizona and have always been a component of District planning. In a recent report from the Arizona Dept. of Water Resources, "Arizona's Next Century: A Strategic Vision for Water Supply Sustainability", the Lower San Pedro River Valley was not identified for any primary effort to address ground or surface water issues. Analysis of current and projected uses did not identify any threat of overdraft. Limited natural recharge and water capture related to weather patterns and the composition of soils and upland vegetation will justify continued focus on water conservation in production agriculture and domestic use into the future.

The LSPWAP concluded grassland has declined by approximately 31% having been converted to shrub/grassland or shrubland. Shrub/grassland has declined from 43% of the area to 22%, while shrubland has increased overall by over 50% (Smith et al. 2006).

A number of studies have documented changes in upland vegetation in southern Arizona, and particularly in the desert grassland area (Smith et al. 2006). As reflected in the LSPWAP, the most dramatic change within this planning area has taken place within the

desert grassland zone - MLRA 41-3, with substantial changes occurring in the historically dominated shrub grassland and grassland areas within the District. These areas are now either dominated by shrubs or the amount of shrub cover has increased significantly. It is likely these changes were initiated by uncontrolled grazing and fire suppression during the late 19th century and early 20th century. Most of the rangeland was unfenced and water was not readily available throughout; resulting in overstocked cattle concentrating in areas and eventually prompting the spread of shrubs as grasses were over utilized and became less dominate.

Land managers of the last half century have implemented grazing management programs which have countered the rate of shrub invasion in grassland areas, but the severe droughty conditions of the last twenty years have made conditions more favorable to invasive shrub species over perennial grasses despite these efforts and therefore a more aggressive approach is needed.

Conversion from grassland and grass/shrubland mix to shrubland dominated areas has resulted in several resource concerns. The purpose for this conservation implementation strategy is to identify possible actions which could be taken to reverse this trend and therefore address associated resource concerns.

Also of major concern as identified during the LSPWAP, is vegetation and water availability along the riparian corridor of the San Pedro River. This area provides valuable wildlife habitat, specifically of note a major migratory flyway for neo-tropical migratory bird species.

Prior to the initiation of arroyo cutting along the banks of the river in the late 1800's, the river flowed in a fairly shallow and narrow channel in most places, inundated frequently and sub-irrigated from the high water table in many areas. The main vegetation on the floodplain appears to have been sacaton, with a limited amount of cottonwood, willow, or other woody species. There is little evidence of extensive stands of mesquite woodland along the river (Smith et. al. 2006). There are several possible reasons for the entrenchment of the river banks in the late 19th century, but the resulting drop in the water table along the banks became more favorable to mesquite and woody species over sacaton, which requires periodic flooding within its root zone. After several decades of flooding and further erosion of the banks, a new more stable floodplain has developed over time at a lower level between these banks to the point when aggradation will occur and bank cutting will diminish.

III. Problem Statement:

Uplands- A greater than 50% decline in grassland and shrub/grassland area has occurred within the study area of the Lower San Pedro River Watershed in the last 140 years. Please see Appendices: Appendix A – Map of Historic Vegetation (pre-settlement), based upon NRCS ecological site descriptions; Appendix B – Map of Present Vegetation, based upon field data; Appendix C – Map of Priority for Vegetation Management to Prevent/Reduce Upland Soil Erosion.

Approx. acres of historic and present vegetation in the Lower San Pedro watershed project area.

(Table 5. Smith et.al., 2006)

| LSP Watershed Resource Type | Historic Vegetation Acreage | Present Vegetation Acreage |
|-----------------------------|-----------------------------|----------------------------|
| Woodland | 48,178 | 48,178 |
| Grassland | 152,410 | 8,653 |
| Shrub/Grassland | 201,607 | 99,967 |
| Shrubland | 53,129 | 298,526 |
| Mesquite Woodland | * | 4,147 |
| Cultivated Fields | * | 3462 |
| San Pedro Channel/Riparian | * | 2,525 |
| Total Acreage | 455,324 | 465,458 |

*No acreages were assigned to these areas because their relative extent in "historic times" is unknown.

The annual precipitation within the focus area had been generally between 10-24 inches; however, the U.S. Drought Monitor has consistently rated this area of SE Arizona to be in extreme drought. This has been favorable to an increase in shrub species, and a decline in perennial grasses and forbs. It is important to maximize moisture absorption in areas where and when possible, given the following factors: soil texture, soil structure, surface roughness, depth to soils restricting infiltration, rainfall intensity and duration, slope, and ground cover. It is not uncommon for precipitation events to result in > 1" of water in a very short amount of time. Historically this water would have been slower to run off with a greater presence of grasses, but in recent years the increase in shrub species means this water travels more quickly downstream and takes more soil with it.

Erosion is a natural process to some extent and there are areas within the District which are pre-disposed for shrub dominated vegetation. The goal for these areas is to prevent the rate of erosion from increasing significantly due to land use or management. Educational efforts will be made to inform land managers of the production potential of these sites to encourage management decisions which correlate to site potential and avoid over utilization of soil and vegetation resources.

The rate of erosion increases as ground cover decreases. The rate of water infiltration decreases as ground cover decreases. Soil surface protection on sites with the greatest potential for grass production can be improved by vegetation manipulation. In general, perennial grass cover is better at protecting the soil surface than shrubs. Surface protection will result in greater water infiltration rates and a decreased rate of soil erosion during average precipitation events. According to the LSPWAP, the highest erosion rates were seen in the shrublands at lower elevations with lower vegetative cover, and especially on steeper slopes. Of these areas, the best opportunity to achieve better soil protection and thereby increased water infiltration exists on sites with deeper soils, gentler slopes, and greater grass potential. Areas where shrubs have not completely taken over should be priority over those areas where grass cover has severely declined.

Continuing with applied grazing management techniques and practices is an essential component of upland resource planning. Proper grazing rotation aids in the management of plant composition and vigor – an important aspect of soil management and water infiltration.

Priority Classes for Vegetation Treatment (Smith et.al. 2006)

| Low Priority | Medium Priority (87,770 ac.) | High Priority (114,744 ac.) |
|---|--------------------------------------|------------------------------------|
| Bedrock | Limy Slopes 41-2, 41-3 | Loamy Upland |
| Forest/Woodland 41-1 | Limy Fan 41-2, 41-3 | Loamy Hills |
| Volcanic Hills | Sandy Bottom 41-2, 41-3 | Clay loam Upland |
| Granitic Hills | Sandy Upland 41-2, 41-3 | Clay Hills |
| Limestone Hills | Sandy Loam Deep Upland 41-2, 41-3 | Clay Upland |
| Limy Upland | Sandy Loam Shallow Upland 41-2, 41-3 | Sandy Loam Upland |
| All of 40-1 except Loamy Upland/Loamy Hills | | |

Invasive woodlands along the floodplain -

Dense mesquite woodland growth is fairly recent (early 1900's), having replaced large areas of sacaton grass along the floodplain of the lower San Pedro River for most of its length (Smith et. al. 2006). The banks of the River are severely down cut along extensive stretches and although the cause of the river bank incision is not agreed upon, it has resulted in a more habitable environment for shrub encroachment.

Mesquite is a phreatophyte and able to take advantage of any water available, both near the surface and at depths of up to 200' due to very long taproots; their rate of evapotranspiration is significantly higher than any other plant in this area, including irrigated crops. The encroachment of mesquite bosques along the River has created bird habitat, but conversely; it is likely this has had an effect on surface water availability in the channel, habitat diversity, soil nutrients, and bank stability.

There are areas along the river channel which have become wide enough that flood waters are not causing bank sloughing to previous extents and the banks are gradually sloping down. In these areas, a new floodplain is being created where grasses are re-establishing and the mesquites are dying back.

As has happened along many Southwestern water ways, saltcedar (tamarix) trees have also become established along many stretches of the lower San Pedro River and becoming denser. Saltcedar is an aggressive riparian tree species, which can "out compete" other more desirable native riparian species, creating a monotypic environment. Tamarix have a high evapotranspiration rate as well, and it's been observed that dense "clumps" of these trees cause blockages during high flow events, furthering bank sloughing in those areas as the water is forced around these islands and into the banks.

Whether SE Arizona has transitioned into a drier climate cycle long term, or the current drought continues into the next few years, there is a need to continue to implement water conservation measures within the valley.

IV. Goals/Objectives:

The Redington NRCB, along with its conservation partners, would like to prioritize those projects which focus on the management of upland vegetation and the control of invasive vegetation along the river floodplain.

Goal: Upland – Improved water infiltration rates, decreased erosion rates, greater perennial grass presence.

Objective 1: Identify the characteristics for high priority areas.

Objective 2: Treat those areas with mechanical, chemical, and grazing management methods so as to encourage perennial grass seed production and discourage the further establishment of shrub species.

Objective 3: Provide education to land managers as to site potential and effective management tools.

Goal: Mesquite Woodlands – Decrease the velocity and quantity of runoff into the river channel, maintaining the current progression of the river bottom from deeply cut and erosive banks back to the narrower meandering channel of historic record.

Objective 1: Identify the characteristics for high priority areas.

Objective 2: Begin mesquite removal treatments in limited areas of highest potential.

Objective 3: Implement monitoring of treatment areas to aid in future expanded efforts of treatment.

Goal: Water Conservation – Utilize ground water sources efficiently.

Objective 1: Improve irrigation efficiencies through applied technologies.

V. Alternatives:

- No Action
- Strategic Approach with implementation of conservation practices and tools to accomplish the following: brush management, riparian invasive management, grazing management, applied irrigation efficiencies, and education.

Upland -

Under the current drought conditions, a "No Action" approach will result in the continued decline in overall grass and grass/shrubland environments in the watershed, which will affect overall soil nutrients and stability, wildlife habitat availability, and production capabilities for historical and efficient land uses.

A strategic approach to upland vegetation management will maintain what grass and grass/shrub sites remain. This is beneficial for erosion control, water infiltration, and forage control. Some vegetation monitoring in the District has shown a decline in shrubs and increase in annual and perennial grass frequencies. This may be due to the drought affecting the shrubs to such a point when the grasses can once again be competitive but not yet thrive. This would be a good time to take advantage of this weakness and focus attention on brush management projects and grazing intensity, duration, and timing.

Woodland Invasion of the Floodplain -

Under a "No Action" alternative, it is possible that the floodplain of the river will continue to widen and the banks will aggrade to eventually re-establish a narrower, meandering channel without any action. This will likely take a significant amount of time and with the continued presence of invasives such as mesquite and saltcedar the system is very vulnerable to high flow events and re-incision.

A strategic approach to encouraging the re-establishment of native grasses in areas of the river floodplain, where currently achievable, would ensure that those stretches of the river are not contributing to sedimentation, using less water, and providing diversified habitat.

Water Conservation -

Under a "No Action" alternative, there would be no further water savings where room for conservation still exists. This would mean loss of water to evaporation, and less crop uptake efficiencies.

A strategic approach to encouraging the implementation of improved irrigation efficiencies through applied technologies and education would be a pro-active approach to ensuring stable ground water supplies well into the future.

VI. Proposed Solutions and Actions:

Mapping will be referenced and field site visits will take place in order to determine areas of priority with the highest potential for improvement. The District will promote this effort and encourage the involvement of land managers in conservation programs and partnerships which will further this effort.

Possible Conservation Practices:

Brush Management – 314

Prescribed Grazing – 528

Upland Wildlife Habitat – 645

Range Planting – 550

Grazing Land Mechanical Treatment – 548

Fence – 382

Livestock Pipeline – 516

Irrigation water conveyance – 430

Irrigation pipeline - 430

VII. Partnerships and other Funding Sources

In order to ensure a successful effort in implementing the objectives for our conservation goals, several partners will need to come together, bringing different resources to the effort. The primary participatory roles for this effort are private land owners within the planning area. The Redington Natural Resource Conservation District's involvement will be focused on educational efforts, program promotion, and technical assistance. The Natural Resource Conservation Service is a great presence in the valley and longtime partner for land owners wanting to participate. The agency will provide technical assistance and Environmental Quality Incentive Program administration and cost share.

There is very little federal land within the planning area which relates to the above stated goals. To date there has not been enough federal involvement in this planning effort to assume assistance from the Bureau of Land Management towards these goals on public land acreage.

The AZ State Land Department is the largest land manager in the valley and will continue to work with grazing permittees and the Conservation District to provide oversight on projects proposed for implementation on state lands.

VIII. Implementation

This strategy is intended to be the focus of the District’s efforts for program prioritization and educational efforts from FY 2015-2020. Any funding opportunities which become available for use within the District will first be considered for these resource concerns and then other projects thereafter. At this time the financial assistance needed and the acreage goal is purely an estimate given that these efforts are voluntary and it is difficult to anticipate which landowners are willing and able to pursue such projects in the next five years. This strategy will aid conservation partners in prioritizing monies made available through both federal and private funding sources and assist landowners in determining the potential of project sites. An extensive watershed assessment was completed in 2006 and this information along with more recent field visits to potential sites will aid in determining those areas with the greatest potential for improvement.

Priority Classes for Vegetation Treatment (Smith et.al. 2006)

| Low Priority | Medium Priority (87,770 ac.) | High Priority (114,744 ac.) |
|---|--------------------------------------|------------------------------------|
| Bedrock | Limy Slopes 41-2, 41-3 | Loamy Upland |
| Forest/Woodland 41-1 | Limy Fan 41-2, 41-3 | Loamy Hills |
| Volcanic Hills | Sandy Bottom 41-2, 41-3 | Clay loam Upland |
| Granitic Hills | Sandy Upland 41-2, 41-3 | Clay Hills |
| Limestone Hills | Sandy Loam Deep Upland 41-2, 41-3 | Clay Upland |
| Limy Upland | Sandy Loam Shallow Upland 41-2, 41-3 | Sandy Loam Upland |
| All of 40-1 except Loamy Upland/Loamy Hills | | |

| Resource Concern 2015-2020 | Treatment | Specific Goals | Funding (NRCS Conservation Program) | Funding (Landowner - Cost share) |
|--|---|-----------------------|--|---|
| Degraded plant condition- undesirable plant productivity and health, inadequate structure and composition. | Brush Management - 314 | 20,000 acres | See Below | |
| | Prescribed Grazing - 528A | 30,000 acres | See Below | |
| | Range Planting - 550 | 20,000 acres | See Below | |
| | Livestock Pipeline - 516 | 25 miles | See Below | |
| | Upland Wildlife Habitat - 645 | 20,000 acres | \$462,000.00 | \$115,500.00 |
| | Grazing Land Mechanical Treatment - 548 | 20,000 acres | \$4,400,000.00 | \$1,100,000.00 |
| | Fence - 382 | 25 miles | See Below | |
| Severe bank erosion - soil erosion- concentrated flow | Prescribed Grazing - 528A | 30,000 acres | See water quality | |
| | Grazing Land Mechanical Treatment - 548 | 20,000 acres | \$231,000.00 | \$57,750.00 |
| Soil erosion- sheet/rill | Fence - 382 | 25 miles | \$5,200,000.00 | 1,300,000.00 |
| | Range Planting - 550 | 20,000 acres | | |
| Water quality degradation - excessive sediment in surface waters | Brush Management - 314 | 20,000 acres | \$2,500,000.00 | \$625,000.00 |
| | Prescribed Grazing - 528A | 30,000 acres | \$660,000.00 | \$165,000.00 |
| | Grazing Land Mechanical Treatment - 548 | 20,000 acres | \$700,000.00 | \$175,000.00 |
| Water Conservation - irrigation efficiencies | Irrigation water conveyance - 430 | 79,200 ft | \$158,400.00 | \$39,600.00 |
| | Irrigation System - Sprinkler-442 | 1600 ft | \$99,200.00 | \$24,800.00 |
| Total: | Total Treatment Area encompasses Approx. | 31,000 acres | \$14,410,600.00 | 3,602,650.00 |

IX. Progress Evaluation and Monitoring

The NRCS will track Environmental Quality Incentives Program work completed within the District and report to the District as to number of acres treated in high priority areas. Landowners participating in these projects will be encouraged to set up monitoring sites within the project area so as to determine the effectiveness of the treatment. This information will be reported annually and used for planning purposes during the Local Work Group process.

The individual landowners participating in this effort will choose who will do the implementation of on the ground work and follow up monitoring efforts. Given that each project will have different dynamics, monitoring will have to be designed on a case by case basis.

The Conservation District may choose to volunteer its services in follow up monitoring on certain treatment projects which serve as important education examples and learning experiences for other landowners within the planning area.

Redington Natural Resource Conservation District

Policy: Major Utility/Transportation/Communication Corridors

2010
2015 (a)

Background

The lands within the Redington Natural Resource Conservation District include valuable agricultural production acres as well as lands that are historically and culturally significant. The Lower San Pedro River valley is well known as an important migratory flyway and unfragmented wildlife corridor between the Galiuro, Catalina, and Rincon Mountain ranges. Agricultural production supports the local tax base and helps to ensure continued open space.

Current utility lines and access roads have created environmental concerns in the form of soil erosion, water quality degradation, and increased off road vehicle damage to the watershed.

There is a minimum of private land still withheld in the District; that which provides the tax base supporting local school districts and county services, maintains undeveloped riparian areas and associated state/federal grazing leases providing active management of the natural resources upon them and further support for educational institutions. There are properties within the District considered to be mitigation lands purchased with the specific intention of providing habitat for specific species in order to mitigate land use actions in other areas. Negating this mitigation action would result in the need for further land purchases leading to more acres taken out of production, affecting the local economy.

Any new major utility/transportation construction would adversely affect the above mentioned resources by promoting further land fragmentation, loss of private ownership, the possible destruction of valued cultural and historic resources, disturbance of soil and degradation of water quality as well as affect the ability of landowners to steward their properties and produce essential products for the benefit of the people of the District, the State of Arizona, and the Country.

The Lower San Pedro River Watershed Assessment funded through the AZ Water Protection Fund found roads to be a major issue of concern with area landowners as related to problems of erosion and other resource impacts. Roads associated with existing utilities were included in the determination that roads were considered to be the number one cause of human related gully erosion. These roads interrupt surface runoff and cause it to run down the road eventually leading to gully cuts along tracks in the road. Also reflected in this assessment was that 34-54% of the watershed falls within a low to moderate soil stability rating, meaning that these soils are more vulnerable to soil instability.

Policy

It is the policy of the Redington Natural Resource Conservation District to oppose the construction of any new major energy, transportation, or communication corridors through the Redington NRC. When corridor placement is unavoidable and to minimize impacts of such actions, all future construction of such corridors should be along existing corridors of similar

capabilities that would only require an upgrade from what currently exists. Where no corridor disturbance currently exists the conservation district will advise project managers of necessary mitigation measures to be taken in order to minimize the impact to ecological resources and rapidly implement post-construction restoration and monitoring.

Coordinated Planning

Federal and state statutes require administrative agencies to work coordinately with local government in developing and implementing plans, policies and management actions.

Federal Land Policy and Management Act (1976)

Congress defined coordination in 1976 when it passed FLPMA 43 USC 1712 (ACT)

43 USC 1712 (c) (9) States that *the Secretary Shall (9) to the extent consistent with the laws governing the administration of the public lands, coordinate the land use inventory, planning, and management activities of or for such lands.....*

43 CFR 1610.3-1 (FLPMA Regulations) Coordination of Planning Efforts

- (a) *In addition to public involvement prescribed by 1610.2 the following coordination is to be accomplished with other Federal agencies, state, and local governments, and federally recognized Indian tribes. The objectives of the coordination are for the State Directors and Field Managers to:*
- a. *Keep apprised of state, local, and tribal land use plans,*
 - b. *Assure that consideration is given to those plans,*
 - c. *Assist in resolving inconsistencies between federal and non-federal Govt. plans,*
 - d. *Provide meaningful involvement of local governments including early notice,*
 - e. *Make federal plans consistent with local plans. (ACT) "to the maximum extent he finds consistent with Federal Law and the purpose of this Act." (Doing this would be consistent with the NEPA process)*

Cooperation and Coordination are referred to separately. In 1610.3-1 (a) Coordination, in 1610.3-1(b) Cooperating Agencies, in (1610.3-1 (c) coordination with the Governor/State agencies and in (d).....

(d) in developing guidance to Field Manager, in compliance with section 1611 of this title, the State Director Shall:

- (1) Ensure that it is as consistent as possible with existing officially adopted and approved resource related plans, policies or programs of other Federal agencies, State agencies, Indian tribes and local governments that may be affected as prescribed by 1610.3-2 of this title;*
- (2) Identify areas where the proposed guidance is inconsistent with such policies, plans or programs and provide reasons why the inconsistencies exist and cannot be remedied; and*
- (3) Notify the other Federal agencies, State agencies, Indian tribes or local governments with whom consistency is not achieved and indicate any appropriate methods, procedures, actions*

and/or programs which the State Director believes may lead to resolution of such inconsistencies.

National Environmental Policy Act (1969)

42 USC 4321 (ACT)

Title 1 Section 4332 – Cooperation of Agencies; Reports; Availability of Information; Recommendations; International and National Coordination of Efforts.

CEQ "Section 102"

(c) include in every recommendation/report.....major federal actions significantly affecting the quality of the human environment.....

- i. The environmental impact of the proposed action
- ii. Any adverse environmental effects which cannot be avoided should the proposed be implemented.
- iii. Alternatives to the proposed action
- iv. The relationship between local short term uses of man's environment and the maintenance and enhancement of long term productivity.
- v. Any irreversible and irretrievable commitments of resources which would be involved in the proposed action should it be implemented.

NEPA Regulations – 40 CFR 1500 Purpose, Policy and Mandate (Part 1500)

(Title 40: Protection of Environment PART 1502: Environmental Impact Statement)

Section 1502.16 Environmental Consequences (Note that NEPA requires coordination for any action under an EIS)

(c) Possible conflicts between the proposed action and the objectives of Federal, regional, State, and local (and in the case of a reservation, Indian tribe) land use plans, policies and controls for the area concerned.

Section 1506.2 Elimination of duplication with State and local procedures.

(d) To better integrate environmental impact statements into State or local planning processes, statements shall discuss any inconsistency of a proposed action with any approved State or local plan and laws (whether or not locally sanctioned). Where an inconsistency exists, the statement should describe the extent to which the agency would reconcile its proposed action with the plan or law.

****THE COURTS HAVE DEFINED THE MEANING OF THE TERM COORDINATION TO MEAN: OF EQUAL IMPORTANCE, RANK OR DEGREE, NOT SUBORDINATE.**

DEPARTMENT OF INTERIOR - DEPARTMENTAL MANUAL PART 516 (NEPA):

Chapter 1

Purpose. This Chapter establishes the Department's policies complying with Title 1 of the NEPA

1.2 Policy. It is the policy of the Department:

B. To use all practicable means, consistent with other essential considerations of national policy to improve, coordinate, and direct its polices, plans, functions, programs, and resources in furtherance of national environmental goals;

E. To consult, coordinate, and cooperate with other Federal agencies, and State local and Indian tribal governments in the development and implementation of the Department's plans and programs affecting environmental quality and, in turn, to provide to the fullest extent practicable, these entities with information concerning the environmental impacts of their own plans and programs;

1.5 Consultation, Coordination, and Cooperation with Other Agencies and Organizations.

A. Departmental Plans and Programs.

(1) Officials responsible for planning or implementing Departmental plans and programs will develop and utilize procedures to consult, coordinate and cooperate with relevant State, local and Indian tribal governments;

(2) Bureaus and offices will utilize, to the maximum extent possible, existing notification, coordination and review mechanisms established by the OMB, the Water Resources Council, and CEQ. However, use of these mechanisms must not be a substitute for early and positive consultation, coordination and cooperation with others, especially State, local, and Indian tribal governments.

C. Plans and Programs of Other Agencies and Organizations

(1) Officials responsible for protecting, conserving, developing, or managing resources under the Department's jurisdiction shall coordinate and cooperate with State, Local, and Indian tribal governments, other bureaus and Federal agencies...

1.7 Mandate

B. The Department hereby adopts the regulations of the CEQ implementing the procedural provisions of NEPA (Sec. 102) except where compliance would be inconsistent with other statutory requirements.

Chapter 2 Initiating the NEPA Process

2.2 Apply NEPA Early (1501.2)

A. Bureaus will initiate early consultation and coordination with other bureaus and any Federal agency which has jurisdiction by law or special expertise with respect to any environmental impact involved, and with appropriate Federal, State, local and Indian tribal agencies authorize to develop and enforce environmental standards.

USDA-NRCS
440 CONSERVATION PROGRAMS MANUAL

Part 500 - Locally Led Conservation

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- 500.10 NACD Guidance Document, "Locally Led Conservation: An Overview for Conservation Districts"
- 500.11 NACD Guidance Document, " Conservation District Board Member Recruitment"

Subpart A - Locally Led Conservation Defined

500.0 Executive Summary

Locally led conservation consists of a series of phases that involve community stakeholders in natural resource planning, implementation of solutions, and evaluation of results. Locally led conservation begins with the community itself, working through the local conservation district. It is based on the principle that community stakeholders are best suited to deal with local resource problems. Generally, the locally led process will involve the phases listed in figure 500-A1.

Figure 500-A1

| Phase | Activity | Further Information |
|---|---|---------------------|
| 1. Public Involvement and the Conservation Needs Assessment | The conservation district leads the effort to gather public input from a broad range of agencies, organizations, businesses, and individuals in the local area who have an interest in natural resource conditions and needs. These | Section 500.3. |

| | | |
|---|--|----------------|
| | community stakeholders evaluate natural resource conditions in a conservation needs assessment and establish broad conservation goals to meet those needs. | |
| 2. Conservation Action Plan | The conservation district involves community stakeholders developing and agreeing on a conservation action plan that documents decisions and time schedules, identifies priorities, sets goals, and identifies Government and nongovernment programs to meet those needs. Community stakeholders, under conservation district leadership, identify which Government and nongovernment programs are needed to address specific natural resource concerns. Note: USDA conservation programs are just some of the many programs that can be used to satisfy the community's goals and needs. | Section 500.4. |
| 3. Implementation of the Conservation Action Plan | Community stakeholders, under conservation district leadership, obtain Government and nongovernment program resources and assist in implementing the programs that can satisfy the community's goals and needs, as identified in the action plan. | Section 500.5. |
| 4. Evaluation of the Conservation Action Plan | The effectiveness of plan implementation should be evaluated to ensure that the community stakeholders' planned goals and objectives are achieved. An evaluation should be made to determine where the actual results differ from those anticipated. The difference may result in retracing one or more of the steps in the locally led conservation effort. | Section 500.6. |

500.1 Locally Led Conservation Defined

A. Definition of Locally Led Conservation

- (1) Essentially, "locally led conservation" is community stakeholders performing all of the following:
 - (i) Assessing their natural resource conservation needs
 - (ii) Setting community conservation goals
 - (iii) Developing an action plan
 - (iv) Obtaining resources to carry out the plan
 - (v) Implementing solutions
 - (vi) Measuring their success
- (2) These actions have been grouped into four major activities for the purpose of this guidance:
 - (i) Conservation needs assessment
 - (ii) Conservation action plan
 - (iii) Action plan implementation
 - (iv) Evaluation of results

B. The Locally Led Principle

Locally led conservation is based on the principle that community stakeholders are best suited to identify and resolve local natural resource problems. Thus, community stakeholders are keys to successfully managing and protecting their natural resources. It challenges neighbors, both urban and rural, to work together and take responsibility for addressing local resource needs.

C. Definition of the Word "Local"

The word "local" can mean a county, a portion of a county, a watershed, a multicounty region, or whatever geographic area is best suited to address the resource conservation needs identified. Local may also include specific sectors of a county, watershed, region, or community with common resource concerns. This may include but is not limited to groups based on operational type (organic, specialty crop, etc.), groups based on operator type (limited-resource, family-owned farms, retirees, etc.), or groups based on other mutual resource concerns.

D. Primary Focus: Resource Concerns

(1) It is important to keep in mind that locally led conservation must be driven by natural resource conservation needs rather than by programs. Its primary focus should be to identify natural resource concerns, along with related economic and social concerns. Once the natural resource concerns are identified, appropriate Federal, State, local, and nongovernmental program tools can be used, both individually and in combination, to address these resource concerns and attempt to meet the established goals of the community stakeholders.

500.2 Locally Led Leadership and Public Involvement

A. Locally Led Leadership

(1) While there is a wide range of groups that may be in a position to lead a local conservation effort, conservation districts, under State or Tribal law, are charged with facilitating cooperation and agreements between agencies, landowners, and others; developing comprehensive conservation plans; and bringing those plans to the attention of landowners and others in their district. Thus, conservation districts are experienced in assessing resource needs, determining priorities, and coordinating programs to meet those needs and priorities.

(2) Conservation districts are the logical group to coordinate locally led conservation due to their connections to Federal, State, Tribal, and local governments; private resources; and the public. Therefore, further discussion of the locally led effort presumes that districts will provide primary leadership; however, leadership can come from any willing and interested group.

(3) Refer to section 500.10 for the National Association of Conservation Districts (NACD) guidance document, "Locally Led Conservation: An Overview for Conservation Districts."

B. Public Involvement

(1) Input from a broad range of agencies, organizations, businesses, and individuals in the local area that have an interest in natural resource management and are familiar with local resource needs and conditions is an essential element of locally led conservation. These representatives should reflect the diversity of the residents, landowners, and land operators in the local area.

(2) The NACD documents "Locally Led Conservation: An Overview for Conservation Districts" and "Conservation District Board Member Recruitment and Community Outreach Guide" provide suggested guidelines for public outreach efforts and ways to reach out to underserved communities.

C. NRCS Role and Responsibilities

NRCS will support the locally led conservation effort by—

- (i) Providing assistance in identifying conservation needs.
- (ii) Providing technical and program advice to the community stakeholders throughout the effort.
- (iii) Assisting in developing and implementing strategies to include socially and economically disadvantaged groups in the locally led effort.

Note: It is not the responsibility of the designated conservationist to lead the locally led effort. NRCS's task is to support the process and provide technical information upon request.

500.3 The Conservation Needs Assessment

A. Introduction

A conservation needs assessment is the first step and a critical element of locally led conservation. With input and resource data from all interested parties, this assessment should provide a comprehensive evaluation of the condition of the area's natural resource base and will be the platform for making decisions about local priorities and policies for conservation programs delivered at the local level.

B. Definition of a Conservation Needs Assessment

(1) The conservation needs assessment is a comprehensive analysis of the work that needs to be done to achieve broad conservation goals set by community stakeholders and to solve natural resource problems. This assessment should be based on public input and science-based information. It should include a detailed analysis of natural resource concerns within the area. To ensure versatility in all program areas, it is important that this needs assessment be resource-based, not program-based.

(2) The conservation action plan that results from the conservation needs assessment will identify the tools that can be used to satisfy the needs.

C. Purpose of the Conservation Needs Assessment

(1) The purpose of the conservation needs assessment is to ensure that conservation efforts address the most important local resource needs. The assessment will be the basis for selecting the type and extent of needed conservation systems and practices. It will also be the basis for making recommendations on funding priorities and priority areas to be addressed by the various conservation programs available.

(2) The conservation needs assessment is the foundation for carrying out Federal programs such as the USDA Environmental Quality Incentives Program (EQIP). From a resource concern identification standpoint, this conservation needs assessment may also be used to assist localities in implementing the Clean Water Act, the Safe Drinking Water Act, the Endangered Species Act, as well as many State, Tribal, and local programs that provide assistance to private land owners and managers.

D. NRCS Roles and Responsibilities

(1) The NRCS designated conservationist will support, where requested, the development of the conservation needs assessment by—

- (i) Providing assistance in assembling natural resource inventories and data.
- (ii) Assisting in analyzing the data and other information.
- (iii) Providing information on socioeconomic factors involved in determining the conservation needs.

(2) For specific guidance on resource assessment, consult steps one through four of the areawide planning process in the National Planning Procedures Handbook (NPPH).

500.4 The Conservation Action Plan

A. Introduction and Identification of Leadership

Using the conservation needs assessment, the conservation district involves community stakeholders to develop and agree on an action plan, generally referred to as a "conservation action plan."

B. The Conservation Action Plan

This plan will—

- (i) Identify natural resource conservation priorities.
- (ii) Set measurable conservation goals and objectives.
- (iii) Identify conservation technology needed to achieve these goals and objectives.
- (iv) Identify responsibility for action and create a time schedule for completion of elements.
- (v) Identify Federal, State, Tribal, local, and nongovernment programs and services needed to address specific conservation needs.
- (vi) Identify a need to develop new programs or processes to address those problems not covered by existing programs.

C. NRCS Roles and Responsibilities

(1) The NRCS designated conservationist will support the development of the conservation action plan by—

- (i) Providing overall planning assistance.
- (ii) Identifying non-USDA programs that may be of assistance.
- (iii) Explaining appropriate USDA conservation programs and services.

(2) For specific guidance on planning assistance, consult steps five through seven of the areawide planning process in the NPPH.

500.5 Implementing the Conservation Action Plan

A. Introduction

- (1) Implementation of the conservation action plan means that the community stakeholders, with the leadership of the conservation district, obtain the needed programs and services to address the problems identified by their conservation needs assessment.
- (2) In this step, they coordinate existing assistance, available through private organizations, Federal, State, Tribal, and local agencies, including USDA; ensure that appropriate program application processes are followed; develop detailed proposals for new programs; and seek financial, educational, and technical assistance as necessary.

B. NRCS Roles and Responsibilities

- (1) The NRCS designated conservationist will support the implementation of the conservation action plan by—
 - (i) Explaining, interpreting, and clarifying USDA rules, regulations, and procedures.
 - (ii) Providing input on other potential sources of assistance from Federal, State, Tribal, and local government or private sources.
 - (iii) Implementing designated roles and responsibilities as defined in Part 502, "USDA Conservation Program Delivery."
- (2) For specific guidance, see step eight of the areawide planning process in the NPPH.

500.6 Evaluating Results

A. Introduction

Locally led conservation does not end when the conservation action plan has been implemented. The effectiveness of plan implementation should be evaluated to ensure that the community stakeholders' planned goals and objectives are achieved. An evaluation should be made to determine where the actual results differ from those anticipated. This difference may result in retracing one or more of the steps in the locally led conservation effort.

B. NRCS Roles and Responsibilities

- (1) The NRCS designated conservationist will support the conservation district and the community stakeholders in evaluating the results of their locally led conservation efforts by—
 - (i) Assisting in the evaluation process.
 - (ii) Providing updated natural resources information and assessments.
 - (iii) Keeping them aware of changes in the USDA programs and the program delivery process.
 - (iv) Assisting in interpreting the impact of conservation action plan implementation on the condition of the natural resources.
- (2) Refer to step nine of the areawide planning process in the NPPH for specific guidance.

Part 501 - USDA Conservation Program Delivery

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Subpart A - USDA Conservation Program Delivery

501.0 Introduction

A. The products of the locally led process specified in Title 440, Conservation Programs Manual, Part 500 provide USDA with conservation needs, resource concerns, priorities, and recommendations regarding program administration and implementation. USDA seeks input from State Technical Committees and local working groups on State and local conservation program delivery.

B. Although State Technical Committees and local working groups are advisory in nature and have no implementation or enforcement authority, USDA gives strong consideration to their recommendations.

C. Each State Technical Committee and local working group may provide information, analysis, and recommendations for the following activities and programs, as needed and where applicable:

- (1) Agricultural Water Enhancement Program
- (2) Chesapeake Bay Watershed Program
- (3) Conservation compliance
- (4) Conservation Innovation Grants
- (5) Conservation Reserve Program
- (6) Conservation Security Program
- (7) Conservation Stewardship Program
- (8) Conservation of private grazing land
- (9) Cooperative Conservation Partnership Initiative
- (10) Environmental Quality Incentives Program
- (11) Farm and Ranch Lands Protection Program
- (12) Grassland Reserve Program
- (13) Grassroots Source Water Protection Program
- (14) Grazing Lands Conservation Initiative
- (15) Great Lakes Basin Program
- (16) Technical service providers
- (17) Voluntary Public Access and Habitat Incentive Program
- (18) Wetlands Reserve Program
- (19) Wildlife Habitat Incentive Program
- (20) Other programs and issues as requested by the State Conservationist or other USDA agency heads at the State level

D. According to 16 U.S.C. Section 3862(d), these State Technical Committees and local working groups are exempt from the provisions of the Federal Advisory Committee Act (5 U.S.C. App. 2).

501.1 Conservation Program Delivery Process

- A. The conservation needs assessment and the conservation action plan developed during the locally led conservation effort form the basis for collaboration in carrying out the community stakeholder's priorities and identified programs, including USDA's conservation programs.
- B. When community stakeholders, working through conservation districts, have identified USDA programs as a tool to meet their conservation needs, USDA personnel and others, in the form of a USDA local working group, will review and submit recommendations on local and State conservation program delivery priorities and criteria. Examples of recommendations that may be submitted are found in Figure 501-A1.

Figure 501-A1

| Examples of Local Working Group Recommendations Submitted to the Local Designated Conservationist | Examples of Local Working Group Recommendations Submitted to the State Technical Committee |
|---|--|
| Locally identified natural resource concerns, priorities, and opportunities | State or regional identified natural resource concerns, priorities, and opportunities |
| Local conservation program priorities | State or regional conservation program priorities |
| Local program application screening and ranking criteria | State and national program policy changes |
| Local conservation practices offered in specific programs to address locally identified resource concerns (conservation practices must be included in the Field Office Technical Guide) | Revision or new interim conservation practices in the Field Office Technical Guide |
| Program payment percentages documented in practice payment schedules and/or maximum payment on conservation practices | Program payment percentages documented in practice payment schedules and maximum payment on conservation practices |
| | Levels of financial and technical support from available programs needed to address identified resource concerns |
| | Need for special initiatives focusing on priority resource concerns or areas |

- C. Recommendations for local program delivery should be submitted to the local designated conservationist. The local designated conservationist considers the recommendations from the local working group, along with technical expertise and national and State program policies, to develop the local NRCS conservation program available in the assigned geographic area.
- D. Recommendation for State program delivery should be submitted to the State Technical Committee. The State Technical Committee considers the recommendations from the local working group to develop State conservation priorities and program delivery recommendations to the State Conservationist.
- E. The State Conservationist considers the recommendations from the State Technical Committee, along with technical expertise and national program policies, to develop the NRCS conservation program available in the State.

Subpart B - Local Working Groups

501.10 Purpose

In accordance with 7 CFR Part 610, Subpart C, local working groups are subcommittees of the State Technical Committee and provide recommendations to USDA on local and state natural resource priorities and criteria for conservation activities and programs.

501.11 Responsibilities of the Local Working Group

It is the responsibility of the local working group to -

- (1) Ensure that a conservation needs assessment is developed using community stakeholder input.
- (2) Utilize the conservation needs assessment to help identify program funding needs and conservation practices.
- (3) Identify priority resource concerns and identify, as appropriate, high-priority areas needing assistance.
- (4) Recommend USDA conservation program application and funding criteria, eligible practices (including limits on practice payments or units), and payment rates.
- (5) Participate in multicounty coordination where program funding and priority area proposals cross county boundaries.
- (6) Assist NRCS and the conservation district with public outreach and information efforts and identify educational and producers' training needs.
- (7) Recommend State and national program policy to the State Technical Committee based on resource data.
- (8) Utilize the conservation needs assessment to identify priority resource concerns that can be addressed by USDA programs.
- (9) Forward recommendations to the NRCS designated conservationist or Farm Service Agency (FSA) County Executive Director, as appropriate.
- (10) Adhere to standard operating procedures identified in Title 440, Conservation Programs Manual (CPM), Part 501, Subpart B, Section 501.14.

501.12 Local Working Group Membership

A. Local working group membership should be diverse and focus on agricultural interests and natural resource issues existing in the local community. Membership should include agricultural producers representing the variety of crops, livestock, and poultry raised within the local area; owners of nonindustrial private forest land, as appropriate; representatives of agricultural and environmental organizations; and representatives of governmental agencies carrying out agricultural and natural resource conservation programs and activities.

B. Membership of the USDA local working group may include but is not limited to Federal, State, county, Tribal, or local government representatives. Examples of potential members include—

- (1) NRCS designated conservationist.
- (2) Members of conservation district boards or equivalent.
- (3) Members of the county FSA committee.
- (4) FSA county executive director or designee.
- (5) Cooperative extension (board members or manager).
- (6) State or local elected or appointed officials.
- (7) Other Federal and State government representatives.
- (8) Representatives of American Indian and Alaskan Native governments.

C. To ensure that recommendations of the local working group take into account the needs of diverse groups served by USDA, membership must include, to the extent practicable, individuals with demonstrated ability to represent the conservation and related technical concerns of particular historically underserved groups and individuals including but not limited to women, persons with disabilities, socially disadvantaged and limited resource groups.

D. Individuals or groups wanting to become members of a local working group may submit a request that explains their interest and outlines their credentials for becoming a member of the local working group to the

local working group chairperson and the NRCS district conservationist (or designated conservationist). The district conservationist (or designated conservationist) will assist the soil and water conservation district in making decisions concerning membership of the group.

501.13 Responsibilities of Conservation Districts and NRCS

A. Conservation District

It is the responsibility of the conservation district to—

- (i) Develop the conservation needs assessment as outlined in 440-CPM, Part 500, Subpart A.
- (ii) Assemble the USDA local working group.
- (iii) Set the agenda.
- (iv) Conduct the USDA local working group meetings.
- (v) Transmit the USDA local working group's priority area and funding requests to the NRCS designated conservationist or the State Technical Committee, as appropriate.

Note: Where a conservation district is not present or chooses not to fulfill the responsibilities outlined in 440-CPM, Part 501, Subpart A, Section 501.13, the NRCS designated conservationist will have these responsibilities.

B. NRCS Designated Conservationist

It is the NRCS designated conservationist's responsibility to participate in the USDA local working group and to—

- (i) Encourage and assist other USDA agencies to participate in the locally led conservation and working group efforts, as feasible.
- (ii) Assist with identifying members for the local working group.
- (iii) Help identify program priorities and resources available.
- (iv) Assist in the development of program priority area proposals.
- (v) Comply with the National Environmental Policy Act, nondiscrimination statement, and other environmental, civil rights, and cultural resource requirements.
- (vi) Support and advise the local working group concerning technical issues, program policies and procedures, and other matters relating to conservation program delivery.
- (vii) Ensure that populations are—
 - Provided the opportunity to comment before decisions are rendered.
 - Allowed to share the benefits of, not excluded from, and not affected in a disproportionately high and adverse manner by Government programs and activities affecting human health or the environment.
- (viii) Analyze performance indicators and reports.
- (ix) Report the conservation programs' impacts on resources.
- (x) Perform the responsibilities of the conservation district where a conservation district is not present or chooses not to fulfill the responsibilities outlined in 440-CPM, Part 501, Subpart A, Section 501.6A.
- (xi) Give strong consideration to the local working group's recommendations on NRCS programs, initiatives, and activities.
- (xii) Ensure that recommendations, when adopted, address natural resource concerns.

501.14 Standard Operating Procedures for Local Working Groups

A. Organization and Function

Local working groups provide recommendations on local natural resource priorities and criteria for USDA conservation activities and programs. Local working groups are normally chaired by the appropriate soil and water conservation district (SWCD). In the event the SWCD is unable or unwilling to chair the local working group, NRCS district conservationist (or designated conservationist) is responsible for those duties.

B. Meeting Scheduling

The local working group should meet at least once each year at a time and place designated by the chairperson, unless otherwise agreed to by the members of the local working group. Other meetings may be held at the discretion of the chairperson. Meetings will be called by the chairperson whenever there is business that should be brought before the local working group.

C. Public Notification

- (1) Local working group meetings are open to the public and notification must be published in one or more newspapers, including recommended Tribal publications, to attain the appropriate circulation.
- (2) Public notice of local working group meetings should be provided at least 14 calendar days prior to the meeting. Notification will need to exceed the 14-calendar-day minimum where State open meeting laws require a longer notification period. The minimum 14-calendar-day notice requirement may be waived in the case of exceptional conditions, as determined by the chairperson or NRCS district conservationist (or designated conservationist).
- (3) The public notice of local working group meetings will include the time, place, and agenda items for the meeting.

D. Meeting Information

Agendas and information must be provided to the local working group members at least 14 calendar days prior to the scheduled meeting. The district conservationist (or designated conservationist) will assist the local working group chairperson, as requested, in preparing meeting agendas and necessary background information for meetings. The minimum 14-calendar-day notice requirement may be waived in the case of exceptional conditions, as determined by the chairperson or NRCS district conservationist (or designated conservationist).

E. Public Participation

Individuals attending the local working group meetings will be given the opportunity to address the local working group. Opportunity to address nonagenda items will be provided if time allows at the end of the meeting. Presenters are encouraged to provide written records of their comments to the chairperson at the time of the presentation, but are not required to do so. Written comments may be accepted if provided to the chairperson no later than 14 calendar days after a meeting.

F. Conducting Business

- (1) The meetings will be conducted as an open discussion among members. Discussion will focus on identifying local natural resource concerns that can be treated using programs and activities identified in 440-CPM, Part 501, Subpart A, Section 501.0C. All recommendations will be considered.
- (2) The following guidelines will govern meeting discussions:
 - (i) The chairperson will lead the discussion.
 - (ii) Only one person may speak at a time. Every participant should have an opportunity to speak. The chairperson or his or her designee is responsible for recognizing speakers.
 - (iii) The chairperson, in consultation with those members present, may establish time limits for discussion on individual agenda items.
 - (iv) State Technical Committees are advisory in nature and all recommendations are considered.
 - (v) Members may be polled, but voting on issues is not appropriate.
 - (vi) The chairperson will defer those agenda items not covered because of time limits to the next meeting.

G. Record of Meetings

Summaries for all local working group meetings will be available within 30 calendar days of the meeting and will be filed at the appropriate local NRCS office.

H. Input to State Technical Committee

Local working group recommendations are to be submitted to State Technical Committee chairperson, the district conservationist (or designated conservationist), or both (as appropriate) within 14 calendar days after a meeting.

I. Response to Local Working Group Recommendations

The designated conservationist will inform the local working group as to the decisions made in response to all local working group recommendations within 90 days. This notification will be made in writing to all local working groups members and made available for the public at the appropriate local NRCS office.

Subpart C - State Technical Committees

501.20 Purpose

In accordance with 7 CFR Part 610, Subpart C, NRCS has established a technical committee in each State to assist in making recommendations relating to the implementation and technical aspects of natural resource conservation activities and programs.

501.21 Responsibilities of State Technical Committees

It is the responsibility of the State Technical Committee to –

- (1) Provide information, analysis, and recommendations to USDA on conservation priorities and criteria for natural resources conservation activities and programs, including application and funding criteria, recommended practices, and program payment percentages.
- (2) Identify emerging natural resource concerns and program needs.
- (3) Recommend conservation practice standards and specifications.
- (4) Recommend State and national program policy based on resource data.
- (5) Review activities of the local working groups to ensure State priorities are being addressed locally.
- (6) Make recommendations to the State Conservationist on requests and recommendations from local working groups.
- (7) Assist NRCS with public outreach and information efforts and identify educational and producers' training needs.

501.22 State Technical Committee Membership

A. Each State Technical Committee will be composed of agricultural producers, owners and operators of nonindustrial private forest land, and other professionals who represent a variety of interests and disciplines in the soil, water, wetlands, plant, and wildlife sciences.

B. Each State Technical Committee must include representatives from all of the following:

- (1) NRCS
- (2) Farm Service Agency (FSA)
- (3) FSA State Committee
- (4) U.S. Forest Service
- (5) National Institute of Food and Agriculture (formerly the Cooperative State Research Education and Extension Service)
- (6) Each of the federally recognized American Indian Tribal governments and Alaskan Native Corporations encompassing 100,000 acres or more in the State
- (7) Association of Soil and Water Conservation Districts
- (8) State departments and agencies within the State, including the following:
 - (i) Agricultural agency
 - (ii) Fish and wildlife agency
 - (iii) Forestry agency
 - (iv) Soil and water conservation agency
 - (v) Water resources agency
- (9) Agricultural producers representing the variety of crops and livestock or poultry raised within the State
- (10) Owners of nonindustrial private forest land
- (11) Nonprofit organizations (as defined under section 501(c)(3) of the Internal Revenue Code of 1986) that demonstrate conservation expertise and experience working with agricultural producers in the State
- (12) Agribusiness
- (13) Other Federal agencies and persons knowledgeable about economic and environmental impacts of conservation techniques and programs as determined by the State Conservationist.

C. To ensure that recommendations of the State Technical Committee take into account the needs of diverse groups served by USDA, membership will include, to the extent practicable, individuals with demonstrated ability to represent the conservation and related technical concerns of particular historically underserved groups and individuals including but not limited to women, persons with disabilities, and socially disadvantaged and limited-resource groups.

D. Individuals or groups wanting to become members of a State Technical Committee within a specific State may submit a request that explains their interest and outlines their credentials for becoming a member to the State Conservationist. The State Conservationist will respond to requests for State Technical Committee membership in writing within a reasonable period of time, not to exceed 60 days. Decisions of the State Conservationist concerning membership on the committee are final and not appealable. State Technical Committee membership will be posted on the NRCS State Web site.

501.23 Responsibilities of the State Conservationist

The State Conservationist will—

- (1) Chair the committee.
- (2) Ensure representation of all interests, to the extent practicable.
- (3) Give strong consideration to the committee's advice on NRCS programs, initiatives, and activities.
- (4) Call and provide notice of public meetings.
- (5) Follow the standard operating procedures.
- (6) Provide other USDA agencies with recommendations from the State Technical Committee for programs under their purview.
- (7) Ensure that recommendations, when adopted, address natural resource concerns.
- (8) Extend membership to any agency or persons knowledgeable about economic and environmental impacts of conservation techniques and programs.
- (9) Respond to requests for membership at outlined in Title 440, Conservation Programs Manual (CPM), Part 501, Subpart C, Section 501.22D.

501.24 Specialized Subcommittees of State Technical Committees

A. Introduction

In some situations, specialized subcommittees composed of State Technical Committee members may be needed to analyze and refine specific issues. The State Conservationist may assemble certain committee members, including members of local working groups and other experts to discuss, examine, and focus on a particular technical or programmatic topic, or combination of such.

B. Public Involvement

Specialized subcommittees are open to the public and may seek public participation, but they are not required to do so. Recommendations of specialized subcommittees will be presented in general sessions of State Technical Committees, where the public is notified and invited to attend.

C. Examples of Specialized Subcommittees

Figure 501-C1 provides examples of specialized subcommittees.
Figure 501-C1

| Examples of Specialized Subcommittees | Program or Topic | Task |
|--|--|---|
| Environmental Quality Incentives Program Ranking Criteria Subcommittee | Environmental Quality Incentives Program | Provide input to develop State ranking criteria and make recommendations to the State Technical Committee. |
| State Forestry Subcommittee | All programs | Provide recommendations to the State Technical Committee on forestry conservation practices and payment rates to be supported in conservation programs. |
| Conservation Easement Geographic Rate Subcommittee | Wetlands Reserve Program and Grassland Reserve Program | Develop recommendations for the geographic area rate cap and present it to the State Technical Committee. |

| | | |
|---------------------------------|---|--|
| Payment Schedule Subcommittee | Financial assistance programs | Provide recommendations for practices and program payment percentages for conservation programs that support program objectives and State and local priorities. |
| State Wildlife Subcommittee | Wildlife Habitat Incentive Program (WHIP) | Provide recommendations (to the State Technical Committee) for the State WHIP plan that incorporates priorities of the State comprehensive wildlife action plan and similar plans and initiatives. |
| Priority Watershed Subcommittee | Chesapeake Bay Watershed Program | Recommend priority watersheds for focusing funding for effective use of available resources. |

501.25 Standard Operating Procedures for State Technical Committees

A. Organization and Function

The State Conservationist chairs the State Technical Committee. State Technical Committees are used to provide information, analysis, and recommendations to NRCS and other USDA agencies responsible for natural resource conservation activities and programs under title XII of the Food and Security Act of 1985, as amended.

B. Meeting Scheduling

The State Technical Committee should meet at least twice a year at a time and place designated by the State Conservationist. Other meetings may be held at the discretion of the State Conservationist. The State Conservationist will call a meeting whenever he or she believes that there is business that should be brought before the committee for action. However, any USDA agency may make a request of the State Conservationist for a meeting.

C. Public Notification

- (1) State Technical Committee and subcommittee meetings are open to the public. The State Conservationist must provide public notice of and allow public attendance at all State Technical Committee meetings.
- (2) The State Conservationist must publish a meeting notice at least 14 calendar days prior to the meeting. Notification may exceed the 14-calendar-day minimum where State open meeting laws exist and require a longer notification period. The minimum 14-calendar-day notice requirement may be waived in the case of exceptional conditions, as determined by the State Conservationist.
- (3) The State Conservationist will publish this meeting notice in one or more widely available newspapers, including recommended Tribal publications, to achieve statewide and Tribal notification. The meeting notice will also be posted to the NRCS State Web site.
- (4) The meeting notice will include meeting time, location, agenda items, and point of contact.

D. Meeting Information

- (1) The State Conservationist must prepare a meeting agenda and provide it to the committee members at least 14 calendar days prior to a scheduled meeting. Additional background materials may be provided before the meeting at the discretion of the State Conservationist. The minimum 14-calendar-day requirement may be waived in the case of exceptional conditions, as determined by the State Conservationist. Additional agenda items will be considered if submitted in writing to the State Conservationist at least 5 working days prior to the meeting.
- (2) The State Conservationist may amend the agenda prior to the meeting without notice to the State Technical Committee or at the meeting based on suggestions from participating members. The agenda will be posted to the NRCS State Web site.

E. Public Participation

- (1) Individuals attending State Technical Committee meetings will be given the opportunity to address the committee and present their opinions and recommendations. While presenters are encouraged to provide written copies of their comments, they are not required to do so. State Conservationists are encouraged to request written comments on agenda items from all members of the State Technical Committee whether they are in attendance at the meeting or not.
- (2) Subsequent to the meeting, if the State Conservationist determines that additional comments and recommendations are needed on specific topics, the State Conservationist will mail a request for written comments to all members of the State Technical Committee within 7 calendar days of the meeting. The letter will fully explain the nature of the request for information and provide at least 14 calendar days for a response.
- (3) Comments received will be summarized and presented at the next State Technical Committee meeting and will be directly posted on the NRCS State Web site.
- (4) If time allows, opportunity to discuss nonagenda items will be provided at the end of the meeting.

F. Conducting Business

- (1) The meetings will be conducted as an open discussion among members. Discussion will focus on the programs and activities identified in 440-CPM, Part 501, Subpart A, Section 501.0C. All recommendations will be considered.
- (2) The following guidelines will govern meeting discussions:
 - (i) The State Conservationist or his or her designee will lead the discussion.
 - (ii) Only one person may speak at a time. Every participant should have an opportunity to speak.
 - (iii) The State Conservationist or his or her designee is responsible for recognizing speakers.
 - (iv) State Technical Committees are advisory in nature and all recommendations are considered.
 - (v) Members may be polled, but voting on issues is not appropriate.
 - (vi) The State Conservationist, in consultation with those members present, may establish time limits for discussion on individual agenda items.
 - (vii) The State Conservationist will defer those agenda items not covered because of time limits to the next meeting.

G. Record of Meetings

Summaries for all State Technical Committee meetings must be available within 30 calendar days of the committee meeting and distributed to committee members. The summaries must be filed at the appropriate NRCS State office and posted to the NRCS State Web site.

H. Response to State Technical Committee Recommendations

The State Conservationist must inform the State Technical Committee as to the decisions made in response to all State Technical Committee recommendations within 90 days. This notification must be made in writing to all State Technical Committee members and posted to the NRCS State Web site.



Redington
Natural
Resource
Conservation
District

P.O. Box 585
San Manuel, AZ 85631

Application for Assistance and Conservation Agreement between _____

whose land is located in Section _____; Township _____; Range _____; and the Supervisors of the Redington Natural Resource Conservation District (NRCD). Number of acres of cultivated

land _____; number of acres of rangeland _____; number of acres other land _____

Remarks or description of property

Conservation Agreement

We, The District Supervisors, agree to assist you with your conservation planning according to the rules and within the resources of the District.

I, as cooperator, am eligible to receive the assistance of conservation technicians in planning and applying the needed conservation practices on my land. I request assistance from the District. I accept the District objectives and will use the analysis prepared jointly by me and the District as a guide in the application and maintenance of a complete conservation program on my land. My conservation plan will include using my land according to its capabilities.

This agreement will remain in effect for a period of five years and will be automatically renewed on December 31 of each year thereafter. It may be terminated at any time by mutual consent, by me, or the District on 60 days written notice to the other party. A change of ownership of the property automatically cancels the agreement.

| | | |
|---|---------------|-------------------------|
| Cooperator | Address | Telephone Number |
| _____ Signature | _____ Date | _____ e-mail address |
| Cooperator | Address | Telephone Number |
| _____ Signature | _____ Date | _____ e-mail address |
| Land Manager (if other than cooperator) | Address | Telephone Number |
| _____ | _____ | _____ |

What is the Redington Natural Resource Conservation District (NRCD)?

The Redington Natural Resource Conservation District is one of 39 Natural Resource Conservation Districts (NRCDs) in Arizona. NRCDs are independent subdivisions of State government, organized under State Law and administered by the State Land Department.

Thy NRCD is a form of self-government whose purpose is to promote, coordinate and carry out activities that conserve soil, water and other natural resources. It is governed by five supervisors (local landowners), three elected by the cooperators, and two appointed by the State Land Commissioner, who serve without pay. The District Board of Supervisors has the responsibility of determining the natural resource conservation needs, and for developing and coordinating an annual plan of operations, and a long-range program addressing those needs. Membership of the District is comprised of landowners who sign up as cooperators. Participation is strictly voluntary.

The Natural Resources Conservation Service (part of the USDA) provides technical assistance in planning and carrying out conservation practices on private and State Trust Land. The District also cooperates with other public and private entities: such as county governments, Arizona Game and Fish Dept., U.S. Forest Service, State Land Department, Bureau of Land Management, The Nature Conservancy, and the University of Arizona.

Sign-up contribution \$15.00

A "one-time", tax deductible contribution of **\$15.00** for farms and rangeland of any size, is requested with this application. Make checks payable to: Redington NRCD, and mail to Post Office Box 585 San Manuel, AZ 85631 .

None of the monies paid to the NRCD are to be construed as compensation for services received from any Federal, state, or local government employees, and that contributions cannot be accepted by any of these employees in our behalf Furthermore, these contributions are not a condition to the receiving of personnel services, materials, or cost -sharing assistance from the Federal Government.

This agreement is signed on this day, _____, at the Redington NRCD

meeting by

:

District representative signature

Title

**MEMORANDUM OF UNDERSTANDING
FOR COORDINATED RESOURCE MANAGEMENT IN ARIZONA**

AMONG
BUREAU OF LAND MANAGEMENT (BLM)
FOREST SERVICE (USES)
COOPERATIVE EXTENSION (CE)
FARM SERVICE AGENCY (FSA)
BUREAU OF INDIAN AFFAIRS (BIA)
NATURAL RESOURCES CONSERVATION SERVICE (NRCS)
ENVIRONMENTAL PROTECTION AGENCY (EPA)
FISH AND WILDLIFE SERVICE (USFWS)
BUREAU OF RECLAMATION (BOR)
DEPARTMENT OF DEFENSE (DOD)
NATIONAL PARK SERVICE (NPS)
U.S. GEOLOGICAL SURVEY (USGS)
AGRICULTURAL RESEARCH SERVICE (ARS)
ARIZONA STATE LAND DEPARTMENT (SLD)
ARIZONA GAME AND FISH DEPARTMENT (AGFD)
ARIZONA ASSOCIATION OF CONSERVATION DISTRICTS (AACD)
ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY (ADEQ)
ARIZONA DEPARTMENT OF WATER RESOURCES (ADWR)
ARIZONA DEPARTMENT OF AGRICULTURE (ADA)
ARIZONA STATE PARKS (ASP)

A. PURPOSE

This Arizona Memorandum of Understanding for Coordinated Resource Management provides the mechanism for private land owners, Native American Tribes, land users, Conservation Districts and state and federal resource management agencies and their cooperators, permittees and leasees to develop coordinated resource management plans for farms, ranches, wildlife habitat, watersheds, or similar resource management units. It also provides the mechanism for agencies with resource management responsibilities in Arizona to work together, share resource information, and develop complimentary policies, procedures, and methodologies where possible. It is intended to foster cooperation and coordination in development and implementation of sound resource management and conservation programs where objectives are of mutual concern.

This Memorandum of Understanding is intended to supplement existing Memorandum of Understanding between and among agencies, tribes, conservation districts, and local governments for coordination of resource management in Arizona.

This Memorandum of Understanding supersedes the February 1991 Arizona Supplemental Memorandum of Understanding for coordinated resource management between the Bureau of Land Management, US Forest Service, Arizona Cooperative Extension, Soil Conservation Service, Arizona State Land Department, Arizona Game and Fish Department, and the Arizona Association of Conservation Districts.

B.

ROLES AND RESPONSIBILITIES

1. The Bureau of Land Management administers public lands within a framework of numerous laws. It is the mission of the Bureau of Land Management to sustain the health, diversity and productivity of the public lands for the use and enjoyment of present and future generations.
2. The U.S. Department of Agriculture Forest Service manages public lands in national forests and grasslands. The Forest Service also conducts forestry research, and provides technical and financial assistance to state and private forestry agencies.
3. The Cooperative Extension Service works to enhance agriculture, the environment, the natural resource base, family and youth well-being and the development of local communities. They accomplish this mission by the integration, dissemination, and application of knowledge in agricultural and life sciences.
4. The Natural Resources Conservation Service is a federal agency that works in partnership with the American people to conserve natural resources on private lands, and other non-federal lands, through scientific and technical expertise, and partnerships with Conservation Districts and others.
5. The Farm Service Agency mission is to stabilize farm income, help farmers conserve land and water resources, provide credit to new or disadvantaged farmers and ranchers, and help farm operations recover from the effects of disaster.
6. The US Fish and Wildlife Service is responsible for migratory birds, endangered species, freshwater and anadromous fish, the National Wildlife Refuge System, wetlands, conserving habitat, and environmental contaminants.
7. The Bureau of Indian Affairs has a trust responsibility emanating from treaties and other agreements with federally recognized Indian tribes to enhance the quality of life, to promote economic opportunity, and to carry out the responsibility to protect and improve the trust assets of Indian tribes.
8. The Environmental Protection Agency mission is to protect human health and to safeguard the natural environment. Their purpose is to ensure clean air, clean water, safe food, pollution prevention, and better waste management.
9. The Bureau of Reclamation manages water related resources west of the Mississippi River. Their mission is to manage, develop, and protect water and related resources in an environmentally and economically sound manner in the interest of the American public.
10. The National Park Service promotes and regulates the use of the national parks, whose purpose is to conserve the scenery and the natural and historic objects and the wild life therein, and to provide for the enjoyment of the same in such a manner and by such means as will leave them unimpaired for the enjoyment of future generations.
11. The Department of Defense mission is to support the military readiness of the United States armed forces, improve the quality of life for military personnel, and comply with environmental laws to protect human health and the environment.
12. The US Geological Survey provides the Nation with reliable, impartial information to describe and understand the earth, to minimize loss of life and

property, manage water, biological, energy, and mineral resources, enhance and protect the quality of life, and contribute to wise economic and physical development.

13. The Agricultural Research Service is the research arm of the United States Department of Agriculture. The Service provides access to agricultural information and develops new knowledge and technology needed to solve technical agricultural problems of broad scope and high national priority to ensure adequate availability of high quality, safe food, a viable and a competitive food and agricultural economy.
14. The Arizona State Land Department is responsible for administering the use and management of Arizona's State Trust lands and for coordinating the Natural Resource Conservation District program in Arizona.
15. The Arizona Game and Fish Department, acting pursuant to and under the authority of the Arizona game and Fish Commission, is responsible for the use and management of Arizona's wildlife resources. The mission of the AGFD is to conserve, enhance and restore Arizona's diverse wildlife resources and habitats through aggressive protection and management programs, and to provide wildlife resources and safe water craft recreation for the enjoyment, appreciation and use of present and future generations.
16. The Arizona Association of Conservation Districts represents the Conservation Districts in Arizona, which are legal subdivisions of State or Tribal government. Conservation Districts provide locally led leadership and assist agencies in determining priorities for conservation work.
17. The Arizona Department of Environmental Quality mission is preserving, protecting and enhancing Arizona's environment, as well as safeguarding the public health. ADEQ is responsible for air quality, water quality, and waste management in Arizona.
18. The Arizona Department of Water Resources administers state water laws (except those related to water quality), explores methods of augmenting water supplies to meet future demands, and develops policies that promote conservation and equitable distribution of water. The Department also oversees the use of surface and groundwater resources in Arizona. Other responsibilities include management of flood plains and non-federal dams to reduce loss of life and damage to property.
19. The Arizona Department of Agriculture is responsible for controlling dangerous plant infestations, ensuring the quality of fresh fruits and vegetables, and for protecting Arizona's native plants. The Department is also responsible for protecting the public from contagious and infectious diseases in animals. The Department enforces laws concerning the movement, sale, importation, transport, slaughter, and theft of livestock, and administers feed, fertilizer, and pesticide registration, licensing and compliance.
20. Arizona State Parks manages and conserves Arizona's natural, cultural and recreational resources for the benefit of the people in Arizona's parks, and through cooperation with their partners.

C. OBJECTIVES

1. To recognize that the lands and natural resources administered by the participants of this agreement are part of larger ecosystems that cross administrative and ownership lines.
2. To recognize that effective management of Arizona's lands, natural resources and ecosystems requires cooperation between many federal and state agencies, Conservation Districts, Native American Tribes, local governments, private land owners, and land users.
3. To acknowledge the significance of local objectives and resource concerns in the management and use of resources.
4. To promote coordinated resource management planning where land ownership, resource management responsibilities, and technical assistance responsibilities are intermingled or where coordination is essential to develop and implement a sound resource management plan.
5. To recognize that land owners, land users or agencies are entitled to request that agencies work together on resource planning and management where land ownership, resource management responsibilities, and technical assistance responsibilities overlap.
6. To encourage coordinated collection and use of resource information and monitoring data for making scientifically based resource management decisions, and to promote complimentary policies, procedures, and methodologies where possible.
7. To insure that consultation between agencies and land owners occurs before decisions are made which may affect the use and management of other lands and resources.
8. To provide for a framework for communication and scheduling of coordinated resource management planning, implementation, and monitoring activities on a case-by-case basis, and for a periodic review of planning progress and updating of coordinated resource management plans to insure goals and objectives are being met.

D. SCOPE

1. This Memorandum of Understanding provides the mechanism for agencies, landowners, and land users in Arizona to develop coordinated resource management plans. It also provides the mechanism for resource management agencies in Arizona to work together, share resource information, and develop complimentary policies, procedures, and methodologies where possible.
2. Coordinated resource management plans are developed on a case by case basis by appropriate members of local working groups, and are signed by the participants to document agreement on common goals and objectives for use and management of the resources within a management unit. Coordinated resource management plans represent agreement on a plan of action to achieve common goals and objectives for a specific management unit, and agreement on methods that will be used to evaluate progress toward the goals and objectives.

3. Coordinated resource management plans do not hinder agencies, private land owners, or land users from making necessary decisions to protect the lands or resources they own or administer or to comply with local, state, or federal laws or agency policy. Rather, coordinated resource management plans constitute a mutual agreement on a plan of action, and a willingness of agencies to consult, whenever possible, with all involved participants before making decisions, to insure that all resource and human concerns are adequately considered before decisions are made.

E. COORDINATED PLANNING GROUPS

The following groups are established to implement coordinated resource management in Arizona:

1. EXECUTIVE GROUP

- a. The Executive Group is made up of the state or regional executives of the participating agencies to this agreement, who are responsible for administering the resource management activities for their agency in Arizona.
- b. The Executive Group is responsible for insuring that cooperation among agencies and other groups exists for the benefit Arizona's natural resources. They are responsible for directing personnel at all levels of the organizations to be knowledgeable of, and adhere to the purpose, objectives, and scope of this agreement. They will develop, review and adopt uniform policy and procedures and supplemental agreements for coordination and cooperation in Arizona.

2. STATE TASK GROUP

- a. The State Task Group is an extension of the Executive Group. Membership of the Task Group will include state or regional level resource specialists appointed by the Executive Group. The State Task Group will meet at least annually, and other times during the year as appropriate.
- b. The purpose of the State Task Group is to assist the Executive Group in planning, implementation and monitoring coordinated resource management program in Arizona; to exchange information on policies, programs, methodologies and procedures, and issues; and to provide training, technical advice and assistance to the field groups and special working groups.
- c. This group will convey the status of statewide coordinated planning to the Executive Group. They will establish the work areas for each Field Group and maintain the current personnel lists for each Field Group. They will

review local planning progress and assist in building goal oriented consensus, help establish priorities for planning, and provide assistance in conflict resolution.

- d. The State Task Group will identify and work on opportunities, issues and problems in coordinated resource management planning and inter-agency training. They will also develop and maintain Arizona Coordinated Resource Management Handbook and Guidelines, and exchange and distribute resource data mutually beneficial to each agency.

3. FIELD GROUPS

- a. The Field Groups are made up of field staff from appropriate agencies and conservation districts within an Field Group Area designated by the State Task Group. The agencies involved in each field group will vary, depending on the land ownership and administrative responsibilities within each Field Group Work Area. The Field Groups will normally only include those agencies who will be directly involved in prioritizing, developing, implementing, and/or monitoring coordinated resource management planning activities.
- b. Field groups will formally meet at least once each year to exchange information and update, prioritize, schedule and assign agency roles for coordinated resource management activities.
- c. The State Task Group will maintain a working list of management units with planned or existing coordinated resource management activity in each Field Group Area. At the annual meeting the Field Groups will update the status of these management units, make additions or deletions to the list, and prioritize the workload as needed. Problems and areas of conflict should be brought up, discussed, and resolved by the group whenever possible. A member of the State Task Group will keep minutes of these meetings and to provide copies to Field Group participants and to the Executive Group.

4. SPECIAL WORKING GROUPS

- a. The Executive Group may establish, and appoint representatives of their respective agencies to a Special Working Group. The Executive Group may invite other agencies, local governments, universities, publics, producer groups or environmental organizations to participate in the Special Working Group as appropriate.
- b. The Special Working Group will address resource related issues and problems involving the need for a process of conflict resolution and public involvement at the field level which are beyond the traditional scope of the

field groups. The Executive group may form a Special Working Group by its own action, or at the request of anyone with valid issues or problems which are presented to the Executive Group.

- c. The Special Working Group will define the issue or problem, establish operational guidelines, and develop a goal-oriented process for addressing the issue or problem through the building of group consensus.
- d. The Special Working Group may call upon the State Task Group for assistance as necessary and will keep the Executive Group informed of progress and recommendations as they are developed.

F. MEETINGS

1. The State Task Group is responsible for scheduling, organizing, and facilitating the meetings of Executive Group, the State Task Group, and the Field Groups. The State Task Group will designate one person to organize the time and location for each meeting, a member to send out notification of the meeting to all participants, a member to solicit agenda items, and develop the agenda for each meeting, a member to facilitate each meeting, and a member to keep and send out minutes following each meeting. The State Task Group will call special meetings when requested by any party to this agreement with 15 days notice.

G. COORDINATED RESOURCE MANAGEMENT PLANNING PROCEDURE

1. A request for a coordinated resource management plan can be initiated at any time by a resource management agency, a Conservation District, a private land owner, a Native American Tribe, a land user or other appropriate party. The requests will be communicated to the appropriate members of the Field Group and arrangements will be made to hold an initial planning meeting. If a Field Group does not exist in the area, the State Task Group will establish the group.
2. At the initial planning meeting the involved parties will make arrangements to organize and execute the planning and implementation process. The development and implementation of a coordinated resource management Plan normally includes the following steps.
 - a. Determine the area involved, agree on the lead agency, and identify all other parties that should be invited to participate on a case-by-case basis.
 - b. Develop time schedules and responsibilities for completion of inventory, plan development, and monitoring activities.
 - c. Conduct necessary resource inventories. Inventory and monitoring methods, proposed improvements and land treatment, and responsibilities for implementation, will be agreed upon during the coordinated planning process. Coordinated resource management planning is accomplished

through a team approach, involving all appropriate agency representatives, land owners, and/or the land user.

- d. Develop the coordinated resource management plan. Record inventory data, decisions and other appropriate information on appropriate mosaics, maps, sketches, forms, or other documents. Responsibility for funding and the schedule of implementation, as appropriate, will be shown. It is recognized that funding as recorded indicates intent, but performance depends on yearly finances of the responsible party.
- e. All participants sign the coordinated resource management plan. Each group or agency will designate the appropriate representative who will sign coordinated resource management plans. The signed plan represents a mutual agreement on the plan of action that will be taken for the management unit. A copy of the inventory data and coordinated resource management Plan will be provided to all participants involved.
- f. Implement the coordinated resource management plan. All participants will normally agree to participate in planned monitoring to determine if the objectives of the coordinated resource management plan are being achieved. Management adjustments or changes should be based on monitoring data. Copies of all monitoring data will be provided to all participants.

H. MODIFICATIONS TO THIS AGREEMENT

1. This agreement can be modified in writing upon the consent of the parties at any time. It is re-negotiable at the discretion of any one of the parties.

I. DURATION OF THIS AGREEMENT

1. The Executive Group will formally review this agreement five years after its execution, and each two years thereafter. The continued participation of any party to this agreement is subject to cancellation at any time, upon written notification.

J. FINANCING

1. This agreement is a Memorandum of Understanding of the parties responsible. Any work under this MOU and any amendment pursuant thereof will be regulated by the laws, policies and funding provisions governing the activities of the parties.
2. Nothing herein shall be construed as obligating the parties to expend funds or be involved in any contract to other obligation for the future payment of money in excess of legal appropriations which are authorized and allocated for this planning and work.

K. GENERAL POLICIES AND REQUIREMENTS

1. Federal parties to this agreement, except those exempted agencies, are required by the policies of the National Environmental Policy Act (NEPA) to ensure that environmental impacts receive full consideration during the planning process. Procedures for environmental assessment and preparation of environmental documents required for compliance with NEPA, where applicable have been developed by each agency.
2. Pursuant to A.R.S. Section 35-214 all parties shall retain all books, accounts, reports, files and other records pertaining to this agreement for five (5) years after completion of a project and shall make them available to the State for inspection and audit at reasonable times.
3. This Agreement is subject to cancellation by the Governor of Arizona pursuant to A.R.S. Section 38-511, the provisions of which are incorporated herein.
4. All parties to this Agreement shall comply with State of Arizona Executive Order No. 75-5 "Prohibition of discrimination in State contracts--Nondiscrimination in employment by government contractors and subcontractors", which is made a part of this Agreement.
5. The program conducted will be in compliance with the nondiscrimination provisions as contained in the Titles VI and VII of the Civil Rights Act of 1964, as amended, the Civil Rights Restoration Act of 1987 (Public Law 100-259) and other nondiscrimination statutes, namely, Section 504 of the Rehabilitation Act of 1973, Title IX of the Education Amendments of 1972, the Age Discrimination Act of 1975, and in accordance with regulations of the Secretary of Agriculture (7 CFR-15, Subparts A & B) which provide that no person in the United States shall, on the grounds of race, color, national origin, age, sex, religion, marital status, or handicap be excluded from participation in, be denied the benefits of, or be otherwise subjected to discrimination under any program or activity, receiving federal financial assistance from the Department of Agriculture or any agency thereof.
6. To the extent permitted by federal law, parties shall use arbitration, after exhausting applicable administrative review, to solve disputes arising out of this Agreement as required by A.R.S. Section 12-1518.

MEMORANDUM OF UNDERSTANDING FOR COORDINATED RESOURCE MANAGEMENT IN ARIZONA

| APPROVED BY | TITLE | DATE |
|---|---|-------------------|
| <i>Denise P. Meridith</i> FOR DENISE P. MERIDITH BUREAU OF LAND MANAGEMENT (BLM) | STATE DIRECTOR | 12/18/97 |
| <i>[Signature]</i> FOREST SERVICE (USFS) | Acting (Conservation) Deputy Regional Forester | 3-31-98 |
| <i>[Signature]</i> COOPERATIVE EXTENSION (CE) | Director, Cooperative Extension | 6-18-98 |
| <i>[Signature]</i> FARM SERVICE AGENCY (FSA) | State Executive Director | 12/14/97 |
| <i>[Signature]</i> BUREAU OF INDIAN AFFAIRS (BIA) | AREA DIRECTOR | 4/13/98 |
| <i>[Signature]</i> NATURAL RESOURCES CONSERVATION SERVICE (NRCS) | STATE Conservationist | 11/21/97 |
| <i>[Signature]</i> ENVIRONMENTAL PROTECTION AGENCY (EPA) | Administrative, Wtr Div | 23 June 98 |
| <i>[Signature]</i> FISH AND WILDLIFE SERVICES (USFWS) | Regional Director | 3/10/96 |
| <i>[Signature]</i> BUREAU OF RECLAMATION (BOR) | Regional Director | 5/29/99 |
| DEPARTMENT OF DEFENSE (DOD) | | |
| <i>[Signature]</i> NATIONAL PARK SERVICE (NPS) | Regional Director | 6/6/98 |
| <i>[Signature]</i> U.S. GEOLOGICAL SURVEY (USGS) | State Director Representative Authorized Departmental Officer | 6/2/99 11/6/98 |
| <i>[Signature]</i> AGRICULTURAL RESEARCH SERVICE (ARS) | | |
| <i>[Signature]</i> ARIZONA STATE LAND DEPARTMENT (SLD) | State Land Commissioner | 12/11/97 |
| <i>[Signature]</i> ARIZONA GAME AND FISH DEPARTMENT (AGFD) | AZ Game & Fish Director | 1/20/98 |
| <i>[Signature]</i> ARIZONA ASSOCIATION OF CONSERVATION DISTRICTS (AACD) | Executive Director | 11/28/99 |
| <i>[Signature]</i> ARIZONA DEPARTMENT OF WATER RESOURCES (ADWR) | Director | 6/10/98 |
| <i>[Signature]</i> ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY (ADEQ) | Director | 1/12/98 |
| <i>[Signature]</i> ARIZONA DEPARTMENT OF AGRICULTURE (ADA) | DIRECTOR | 12/24/97 |
| <i>[Signature]</i> for <i>[Signature]</i> ARIZONA STATE PARKS (ASP) | EXECUTIVE DIRECTOR | 12-22-97 |

COOPERATIVE WORKING AGREEMENT

Between the

REDINGTON NATURAL RESOURCE CONSERVATION DISTRICT

and the

UNITED STATES DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

For their Cooperation in the
Conservation of Natural Resources

THIS AGREEMENT is made and entered into this 2nd day of *November*, 2009 by and between the Redington NRCD, hereinafter referred to as the District and the Natural Resources Conservation Service (NRCS), hereinafter referred to as the NRCS, to define clearly the roles and responsibilities of the parties.

AUTHORITIES, STATUTES, LAWS

NRCS is authorized to cooperate and furnish assistance to the parties in the conservation of natural resources as referenced in the Soil Conservation and Domestic Allotment Act, 16 U.S.C. 590; the Department of Agriculture Reorganization Act of 1994, Public Law 103-354; and Secretary's Memorandum No. 1 01 0-1, Reorganization of the Department of Agriculture, dated October 20, 1994. NRCS staff will direct and implement conservation initiatives and programs as guided by local NRCD and SWCD priorities, and NRCS state and national policy.

The Natural Resource Conservation Districts of Arizona are authorized for participation as defined in Arizona Revised Statutes, § 37-102 and § 37-1001, ET. SEQ.

The Soil and Water Conservation Districts of Arizona are authorized for participation under various Tribal Codes.

The purpose of this agreement is to supplement the Mutual Agreement between the United States Department of Agriculture, Tribal Governments and the various Natural Resource Conservation Districts and Soil and Water Conservation Districts signed in 1996. This cooperative working agreement documents those areas of common interest of the state, tribal, federal and local partnership in natural resources conservation.

The customers of the parties to this agreement are individual landowners/land users, Federal and state land management agencies, other individuals, groups, and units of government. The parties mutually agree to provide leadership in resource conservation. To accomplish this we share a commitment to listen, anticipate and respond to our customers' needs; anticipate, identify, and address issues; maintain decision-making at the lowest level by promoting locally lead conservation; advocate comprehensive resource management planning, maintain and improve our grass-roots delivery system; build new alliances to expand our partnership; foster economically viable environmental policies; improve the quality of life for future generations; and conserve and enhance our natural resources.

The parties pledge to work together by advancing and practicing teamwork; including input in the decision making process; communicating, coordinating, and cooperating; sharing training opportunities; promoting mutual respect, support, trust, and honesty; and sharing the leadership and ownership, the credit and the responsibility. A mutual goal is to improve our efficiency and effectiveness by putting quality first; empowering people to make decisions; demonstrating professionalism and dedication and striving for continuous improvement.

This agreement will help the parties define expectations and clarify roles and responsibilities in the delivery of technical and financial assistance in order to improve efficiency by complementing each party's program and avoiding duplication of efforts.

Therefore, NRCS and the District, deem it mutually advantageous to cooperate in this undertaking, and hereby agree as follows:

The Natural Resources Conservation Service will:

1. Support the DISTRICT's goals by providing technical assistance to the land owners and land managers within areas of resource conservation and management by completing conservation plans and offering USDA cost sharing opportunities whenever possible or referral to other federal, state or local cost share opportunities where applicable.
2. Receive input from the Local Work Group and stakeholder meetings and use the information to set priorities which guide the delivery of NRCS programs.
3. Partner with the DISTRICT in coordinating with the local agriculture, agency and community groups where possible to further the DISTRICT'S conservation goals and objectives.
4. Respond to DISTRICT requests for guidance and technical assistance for DISTRICT activities regarding resources available from NRCS.
5. NRCS will implement the USDA conservation programs.
6. Keep DISTRICT apprised of NRCS activities and programs on a monthly basis and provide a yearly summary of NRCS accomplishments to the DISTRICT.
7. Bring financial opportunities, including matching funds strategies to the attention of DISTRICT.
9. Allow for district supervisors to accompany NRCS employees in NRCS vehicles to complete official NRCS business of mutual interest to both parties. Only persons having an official NRCS business need will be permitted to ride as passengers in NRCS vehicles. Passengers will not be permitted to ride as a matter of personal preference or convenience.

If available, NRCS vehicles assigned to the Willcox field office may be used by the Conservation District supervisors covered by this agreement only for purposes of official NRCS business. Such usage must be in accordance with NRCS policy as outlined in General Manual 360, part 420.150, and General Manual 120, parts 405.21 and

40S.23(m). Completing work items covered in the Field Office Business plan, and completing work on items in Contribution agreements are examples of official NRCS business. All use of the vehicles should be approved by the District Conservationist. Districts are encouraged to have personal liability insurance to protect them from any potential misuse.

(See the following attached exhibits)

- a) Exhibit 1: GM 360, part 420.150: Safety and Health Management Program
Subpart O: Safety Requirements for Incidental Motor Vehicle Operators.
- b) Exhibit 2: GM 120, part 405.21: Personal Property.
- c) Exhibit 3: GM 120, part 405.23: Vehicle Management
(m) Loan of Vehicles.

Vehicle usage for Conservation District, or other non-NRCS business is not provided under this agreement.

Vehicles can be loaned to other agencies of the Department of Agriculture, to Federal agencies outside the Department, and in some circumstances to non-Federal agencies. All loans require formal written agreements. An Agreement for Intermittent Use of Transportation Equipment must be established for use other than official NRCS business.

The DISTRICT will:

1. Provide technical and education assistance within the joint service area in the areas of resource conservation and conservation planning.
2. Provide local priorities to guide NRCS activities by producing an annual work plan and keeping an updated DISTRICT'S long range strategic plan.
3. Convene the Local Work Group and stakeholder meetings to provide local advice to NRCS programs.
4. Continue to pursue financial and technical assistance to build DISTRICT capacity and address identified conservation priorities in the joint service area.
5. Assist NRCS in promoting USDA programs by participating in education and outreach activities.
6. Advocate for a strong natural resource conservation program by keeping County Board of Supervisors, local legislators, and other key stakeholders apprised of conservation activities in the joint service area.
7. Update NRCS on activities of local and state advisory committees and community groups attended by DISTRICT Board members and staff.
8. Participate in local, state, and national opportunities for policy, program, and project development.

9. Technical practice application will follow NRCS standards and specifications or equivalent on projects / programs.

The DISTRICT and NRCS mutually agree to:

1. Coordinate activities to ensure efficiency in program delivery and good working relations toward accomplishing goals of the strategic plans.
2. Share equipment and technology to further the goals and objectives of both parties - work together to develop agreements for sharing of supplies and equipment.
3. Will coordinate information and outreach strategies to the public
 - a) definition of "sensitive information" will be determined by NRCS on a case by case basis considering the impact of the Freedom of Information Act, State Statutes and Tribal Codes.
 - b) Section 1619 of the Farm Bill prohibits the Secretary of Agriculture and its employees, contractors and cooperators from disclosing certain information that has been provided by agricultural landowners and producers to participate in the U.S. Department of Agriculture's (USDA) programs, except as necessary for delivering technical assistance.
(Please see and sign attachment)
4. Share opportunities for training.
5. Each party is responsible for the hiring, management, supervision, development and evaluation of its own personnel.
6. DISTRICT Supervisor(s) and NRCS District Conservationist will be included or courtesy copied with business communication of joint importance and/or governance using the appropriate lines of communication.
7. The parties will assume responsibility for the actions of their officials or employees acting within the scope of their employment to the extent provided by law.
8. Parties will provide project data including accomplishments to each other at least twice a year to facilitate project and program coordination.
9. Exchange and share information on funding opportunities for joint projects and activities.
10. May co-host meetings & events of mutual interest.
11. In the event of a natural disaster or other emergency, work priorities may be changed to allow appropriate response.
12. Develop disaster response plan for natural resources.
13. Meet respective parties' deadlines for joint activities and information exchange.
14. This agreement can be modified or terminated by either party by giving 60 days' notice.

The parties will be in compliance with the nondiscrimination provisions contained in Titles VI and VII of the Civil Rights Act of 1964, as amended; the Civil Rights Restoration Act; of 1987(Public Law 100-259) and other nondiscrimination statutes, namely, Section 504 of the Rehabilitation Act of 1973, Title IX of the Education Amendments of 1972, the Age Discrimination Act of 1975, Americans with Disabilities Act of 1990, and in accordance with regulations of the Secretary of Agriculture (7 CFR. - 15, Subparts A & 8) which provide that no person in the United States shall, on the grounds of race, color, national origin, age, sex, religion, marital status, or disability be excluded from participation in, be denied the benefits of, or be otherwise subjected to discrimination under any program or activity receiving Federal financial assistance from the Department of Agriculture or any agency thereof.

Redington Natural Resource Conservation District

By. Charles Kent

Date: October 28, 2009

USDA Natural Resources Conservation

By. 
STATE CONSERVATIONIST

Date: 11/02/09

Redington NRCD

Docket Number L-00000YY-15-0318-00171

Exhibit RED 11

The Arizona Conservation Partnership

Jointly provides leadership to the state on conservation issues. As partners, we have independent responsibilities and authorities, yet we are committed to one another and depend on each other for the successful delivery of conservation.

Vision

Effectively working together to achieve a healthy & productive environment through resource management

Guiding Principles

We share a commitment to:

- ◆ Listen, anticipate, and respond to our customers' needs
- ◆ Expand participation and influence in conservation work
- ◆ Develop mentoring and leadership "pipelines"
- ◆ A locally led process that anticipates, identifies, and addresses natural resource issues
- ◆ Decision-making at the lowest appropriate level

We pledge to work together by:

- ◆ Communicating, coordinating, and cooperating
- ◆ Advancing and practicing teamwork
- ◆ Involving each partner in the decision-making process that impacts the partners
- ◆ Sharing strategic timelines (calendar) on partnership priorities
- ◆ Promoting mutual respect, integrity, support, and honesty
- ◆ Sharing the leadership and ownership, the credit and the responsibility

◆ Total resource management

◆ Productive, sustainable, working landscapes

◆ Enhance the viability of our grass roots delivery system (districts & field staff)

◆ Improve the quality of life for current and future generations

◆ The significance of the cooperator agreement in the state, federal, Tribal, private partnership

◆ Value and nurture our existing alliances

◆ Build, alliances to expand our partnership

◆ Foster policies that are economically, ecologically, and socially viable

◆ Sustain and conserve our natural resources and environment

◆ Ensure that agriculture remains a viable land use in our state

◆ Influence public opinions and perceptions through conservation education, outreach, and involvement

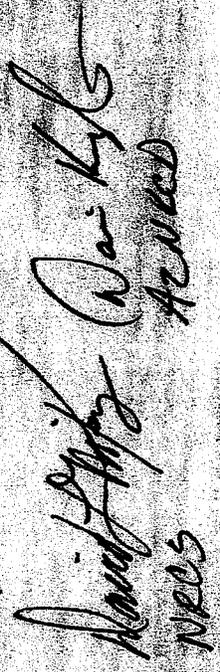
We will improve our efficiency and effectiveness by:

- ◆ Broadening our communication efforts
- ◆ Increasing our public outreach efforts
- ◆ Empowering people to make appropriate decisions
- ◆ Demonstrating professionalism and dedication
- ◆ Striving for continuous improvement
- ◆ Establishing frameworks, management controls, accountability, and quality assurance (technical & administrative)

Signatures:

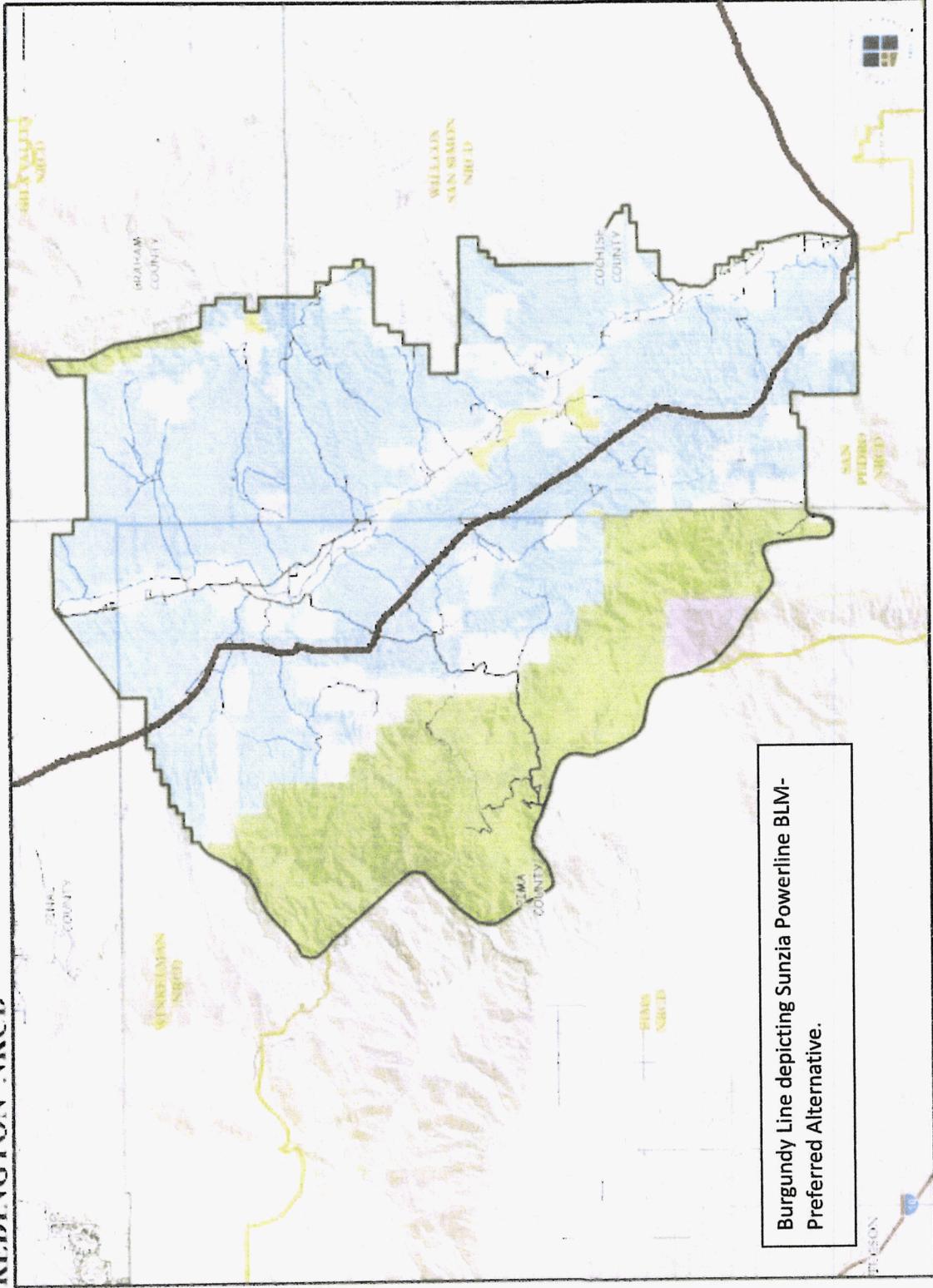


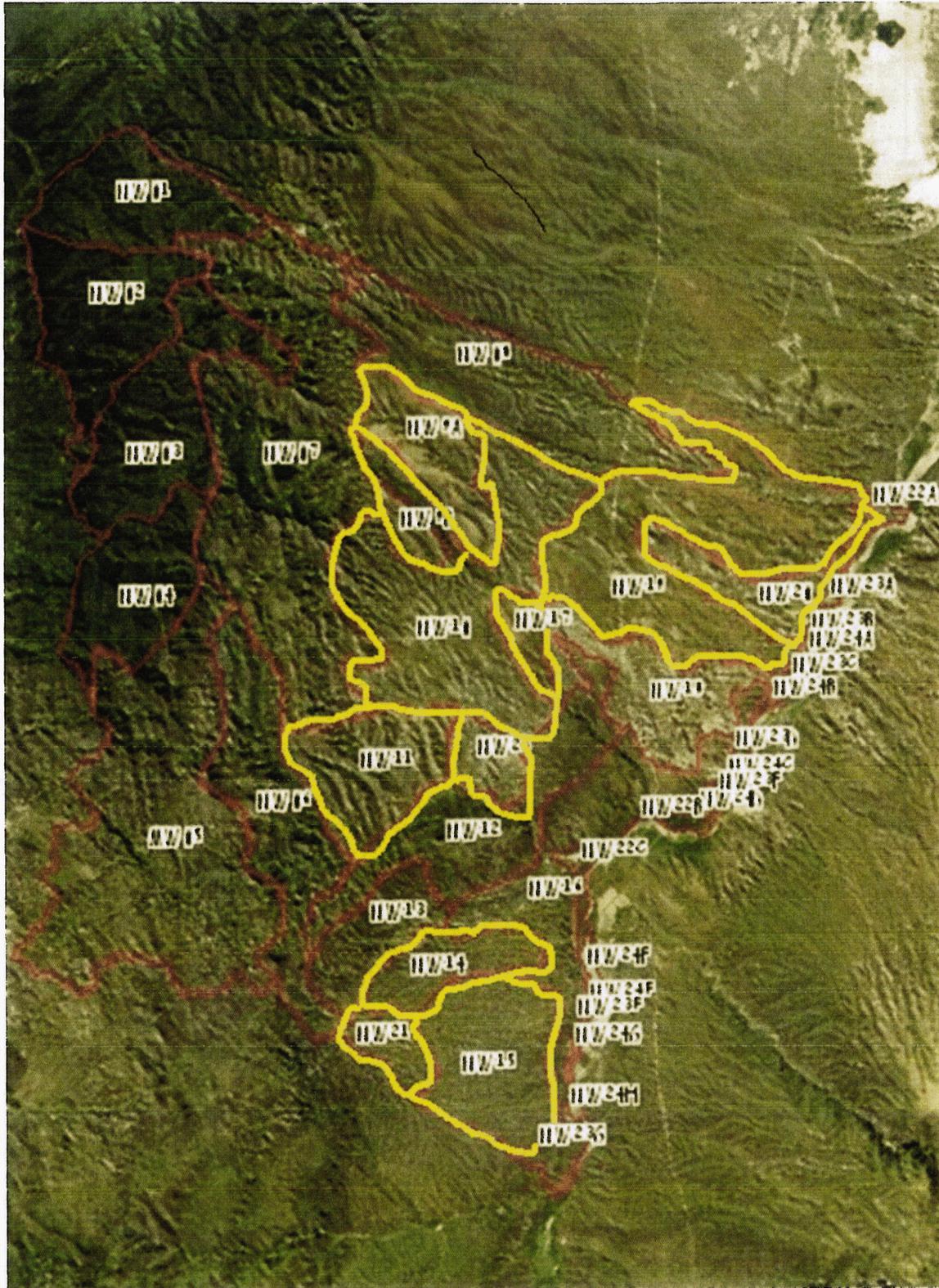
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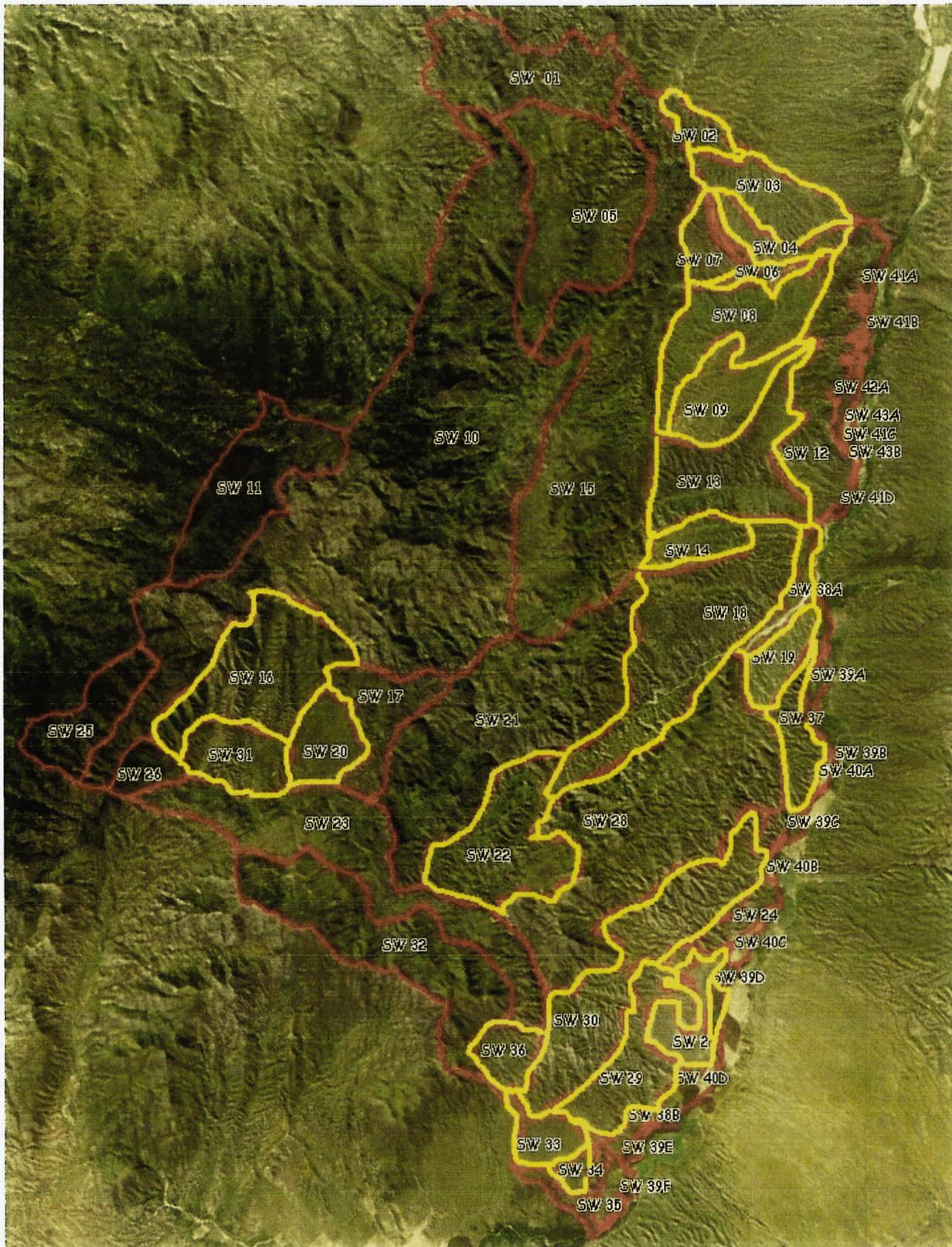
ASLD NRES

REDINGTON NRC

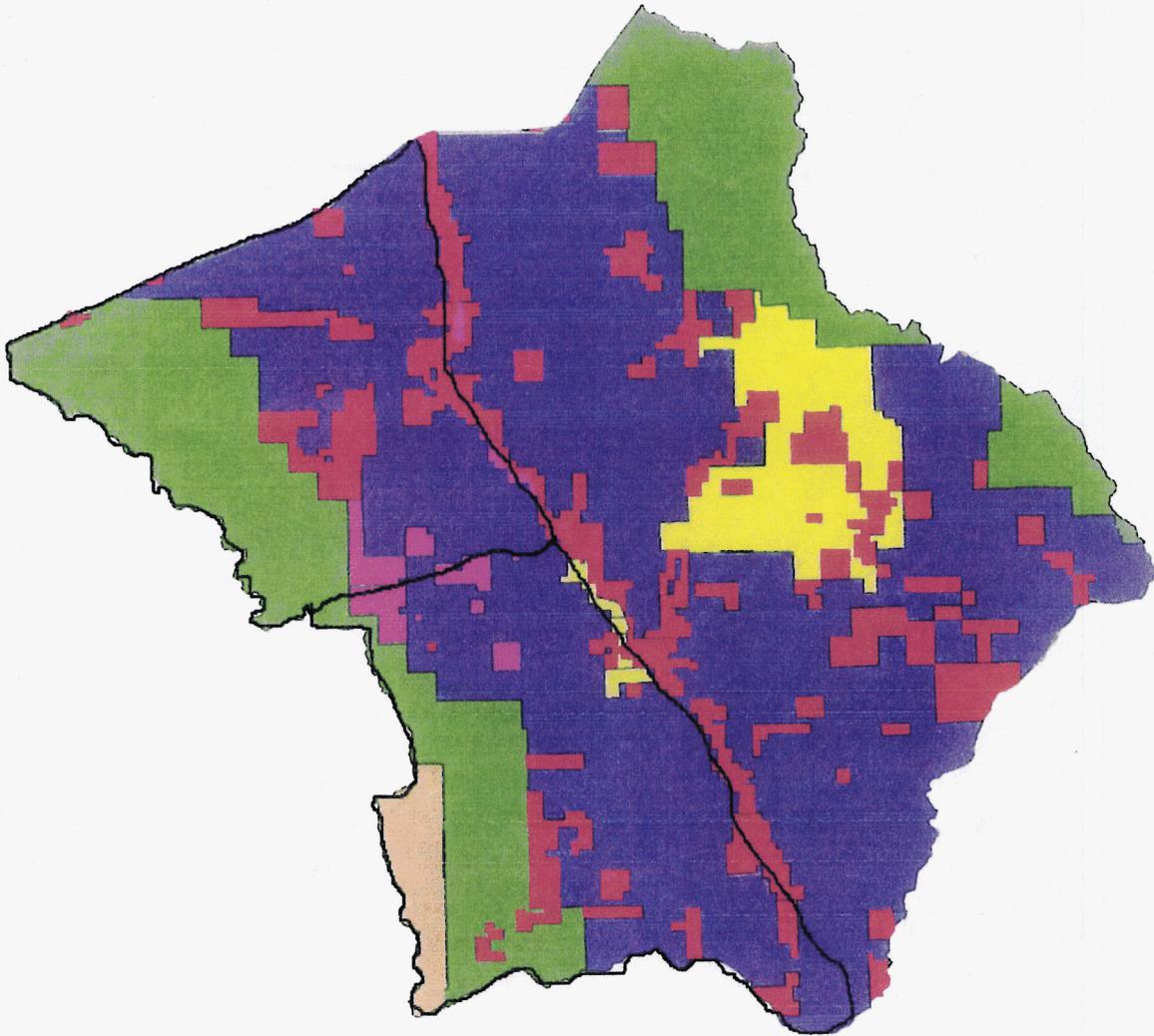




Northwest Quadrant of LSP Watershed Assessment
Medium to Highly Erodible Soils designated with bright yellow outline



Southwest Quadrant – LSP Watershed
Medium to Highly Erodible Soils designated with bright yellow outline



Legend

Purple = State
Red = Private
Green = Forest Service

Yellow = Bureau of Land Management
Orange = National Park Service
Pink = Pima County

Black Outline depicts boundaries of NW and SW Quadrants in LSP Assessment

Scale 1:300,000

District Ownership Map
Black Outline depicts NW and SW Quadrants in LSP Assessment

**TASK 5-5
COMPREHENSIVE WATERSHED ALTERNATIVES FOR ACTION PLAN
LOWER SAN PEDRO WATERSHED ASSESSMENT PROJECT
WATER PROTECTION FUND GRANT #00-109**

By

**Lamar Smith, Deborrah Smith, and Stefanie Smallhouse
Cascabel Range Consultants
August 2006**

FOREWORD

This document is a report made to the Redington Natural Resource Conservation District by Cascabel Range Consultants as Task 5-5 of Water Protection Fund Grant #00-109. The conclusions and interpretations presented in this report are those of the authors and do not represent a consensus viewpoint of the Redington Natural Resource Conservation District Board of Supervisors, local residents, or the Arizona Water Protection Fund Commission. The authors relied upon published and unpublished information, field assessment, input from local residents, and their own education and experience in arriving at the interpretations and conclusions presented here. Lamar Smith has B.S., M.S. and PhD degrees in forestry, range management and soil science from Colorado State University. His area of expertise is in range ecology and management, range inventory and monitoring, and rangeland soils. He has over 40 years of professional experience in teaching, research, and extension at Colorado State University and the University of Arizona. He has worked on special projects or consulting in Brazil, Mexico, Ecuador, Spain, and Australia and has private consulting experience in Arizona, California, Nevada, Colorado, Idaho, Oregon, South Dakota and North Dakota. He owned and operated the Banderilla Ranch and lived or worked in the Lower San Pedro (LSP) watershed from 1984 to 2005. He has served as an advisor to and supervisor of the Redington NRCD. Deborrah Smith has a B.S. degree in range management from the University of Arizona with additional graduate course work in natural resources and animal science, plus 15 years experience in research and consulting in range and animal ecology. She has served as a supervisor and as a business manager of the Redington Natural Resource Conservation District and Education Center, lived in the LSP from 1992 to 2005 and was co-owner and manager of the Banderilla Ranch. Stefanie Smallhouse has a B.S. in wildlife management from New Mexico State University. She worked for the Bureau of Land Management as a student and as a professional wildlife biologist in southern Utah for five years and has been doing part-time consulting work for six years. Stefanie has lived and worked in the LSP since 1999, and is part owner/manager of the Carlink ranch, owned and operated by the same family and located within the LSP for over 120 years. Stefanie has been involved with the Redington NRCD as a supervisor since 2000, and is heavily involved with local work groups and committees for planning open space, drought mitigation and monitoring.

Full Report Available Online

http://www.azwpf.gov/Grant_Project_Reports/documents/00-109WPFFinalReport.pdf

INTRODUCTION

The Lower San Pedro Watershed Assessment Project was begun by the Redington Natural Resource Conservation District (NRCD) in 2002. The Project was funded by the Arizona Water Protection Fund (AWPF). The purpose of the Project was to gather and analyze information on the natural resources of the Lower San Pedro River (LSP) watershed to provide a basis for the Redington Natural Resource Conservation District to carry out its conservation mandate. This mandate includes identifying and prioritizing conservation problems, programs to educate local residents about these problems, and seeking technical and financial assistance to address these problems. The information will also be useful for developing a general watershed management plan for the LSP should the Redington NRCD decide to do that.

The objective of this report is to summarize the findings relative to the entire LSP watershed area and to address issues raised by local landowners using information obtained during the Project. The report will provide a brief overview of methodology used in the Project, a general description of the watershed's resources derived from the assessment, a discussion of each major issue raised by landowners based on the information collected, suggested alternative management practices for each issue, and recommendations for future monitoring of resources in the LSP. This report ties together the four previous reports written for each quadrant of the LSP watershed, a report on the San Pedro River, and a report on agricultural lands along the River. Earlier reports should be considered as preliminary. Some of the data contained in the earlier reports have been revised slightly. The revisions were due to several factors. One was the refinement of procedures, especially the use of computer map programs to calculate distances and acreages. That change mainly affected the Southeast Quadrant. Second there were some slight changes in methods due to experience gained in the process. For example, classification of riparian vegetation types was standardized for this report and some slight adjustments in ecological site mapping was made so that mapping units would correlate in adjacent quadrants. Finally, loss of some original mapping and waypoints due to computer failure required that some of this work be redone, thus altering somewhat the results originally reported, especially in the Northeast Quadrant. Therefore, the data presented in this report are to be considered the best and final data for the project.

DESCRIPTION OF THE WATERSHED

Boundaries, Jurisdictions, and Land Ownership

For purposes of this project, the Lower San Pedro River watershed was defined as the area tributary to the San Pedro River from the Narrows (north of Benson) on the south to the mouth of Alder Wash on the north. The southern boundary coincides with the division used by the Arizona Department of Water Resources to separate the upper and lower San Pedro watersheds and groundwater basins. The north end is approximately the northern boundary of the Redington NRCD. Therefore, the LSP watershed as defined in this project does not include the entire Lower San Pedro watershed or groundwater basin as defined by the Arizona Department of Water Resources (ADWR). The LSP watershed does not coincide exactly with the boundaries of the Redington NRCD. A considerable portion of the upper reaches of tributaries on the southeast side of the watershed are outside the Redington NRCD in the Willcox-San Simon NRCD. The total area of the LSP watershed as used in this project is 465,458 acres. The total area of the Redington NRCD is 290,381 acres. Figure 1 shows a map of the LSP watershed and the Redington NRCD boundaries.

The LSP watershed and Redington NRCD lie primarily in Cochise County and Pima County, with smaller portions falling into Pinal and Graham Counties. Federal lands include Forest Service, National Park Service, and Bureau of Land Management lands. The majority of the area is composed of Arizona State Trust lands. Private lands make up a relatively small portion of the whole watershed (Figure 2). Table 1 indicates the percentages of land ownership within the Redington NRCD.

Table 1. Land ownership in the Redington Natural Resource Conservation District.

| Ownership | Acres | Percentages |
|------------------------------|----------------|----------------|
| Bureau of Land Management | 2,294 | 0.80% |
| State Land Department | 168,167 | 58.40% |
| United States Forest Service | 70,710 | 24.00% |
| Saguaro National Park | 4,061 | 1.40% |
| Private | 45,149 | 15.40% |
| TOTAL | 290,381 | 100.00% |

General Watershed Description

The San Pedro River Valley is a northwest-trending structural trough in the Mexican Highland section of the Basin and Range province. The watershed is bounded on the west by the Rincon and Catalina Mountains. The Little Rincon Mountains extend into the valley and are separated from the Rincons by a high basin called Happy Valley. The boundary to the east is the Galiuro and Winchester Mountains. The Winchester Mountains are separated from the Little Winchesters and Johnny Lyon Hills by a high alluvial basin (Allen Flat). Maximum elevation in the Rincon Mountains is 8,666 feet and the maximum in the Winchester Mountains is 7,631 feet.

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http://www.azwpcf.gov/Grant_Project_Reports/documents/00-109WPFFinalReport.pdf

The valley between the mountains is composed of a thick deposit of alluvial fill that slopes on both sides to the San Pedro River. The San Pedro flows for about 40 miles through the valley bottom, and is generally entrenched 20-30 feet below a pre-1880 floodplain. The elevation of the River where it enters the LSP is 3327 feet and the elevation at the mouth of Alder Wash is 2654 feet, a difference of 673 feet.

The bedrock geology of the watershed is complex and extensively faulted. The Galiuro and Winchester mountains are mainly composed of volcanics, with extensive outcroppings of sedimentary (limestone, sandstone, etc) rocks in the southern Galiuros and in the Teran and Kelsey watersheds. The southeast portion of the watershed near the Johnny Lyon Hills is mainly granite, and this extends across the narrows toward the Rincons. The Rincons and Catalina Mountains, and the Redington Pass area in between, are mainly composed of quartzose granitic rocks, gneiss and schist. Limestone and some volcanic rocks outcrop in the area east of the Rincons and Catalinas, e.g. in the Little Rincons, upper Soza Canyon,

Buehman Canyon and upper ends of Edgar and Alder Canyons. Hard conglomerate outcrops near the River in the vicinity of Soza Canyon and downstream.

The alluvial valley fill was deposited in late Tertiary to recent times. During the Pleistocene, several episodes of entrenchment separated by periods of stability occurred. These sequences resulted in several (2-4) different land surfaces being formed, then dissected as erosion and entrenchment occurred. The oldest surfaces date back to about 1-2 million years. (Ely and Baker 1985) Only remnants of these surfaces remain, with the highest surfaces being the oldest. For example, Soza and Davis Mesas probably represent the oldest surfaces along with some older surfaces on the headwaters of Hot Springs Wash and Allen Flat. Soil development (e.g. clay content, caliche layers, and red color) reflect the different ages of these surfaces. (Gile, Hawley et al. 1970) More recently, portions of the LSP valley were filled with a lake from about 30,000 to 12,000 years before the present. (Haynes 1968) The upper elevation of the lake appears to have been about 4100 feet elevation. Gypsum deposits found in parts of the watershed resulted from lake bed deposits. The lake was drained when through drainage to the Gila River was established. There is evidence that the valley was cut below its present level and backfilled, then eroded again prior to deposition of the current recent alluvium that comprises the pre-1880s floodplain (Heindl 1963).

Soils in the watershed largely reflect the influence of parent materials, time of weathering, and erosion/deposition. The upper watershed has soils developed on bedrock. Steep slopes and natural erosion prevent deep soil development on most of these areas. Soils developed on the older, gently sloping alluvial fill surfaces have developed fairly deep profiles often with clay accumulation in the subsoil and hard caliche layers at some depth. Where these old soils have eroded due to natural erosion, the caliche may be near the surface, thus restricting root and water penetration. On the eroded sideslopes of the alluvial surfaces, the soils generally lack much horizon development and also lack the hard caliche deposits. The youngest soils are in the washes and along the River where recent alluvial deposits occur and soil development is minimal.

Average rainfall since 1969 at the Cascabel weather station (located near mouth of Teran Wash) is 13.88 inches, with about 50% occurring in the "monsoon" period from June through September, and the remainder during the "winter" period of October through May. On average,

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July and August are the wettest months and April and May the driest. Summer rains are highly variable spatially. Winter rains tend to be more general over the watershed. Average maximum temperatures approach 100 degrees in summer and average minimums are slightly below freezing in December and January. Minimum temperatures in any given location are highly affected by cold air drainage which can produce freezing temperature in low places, e.g. along the River, while temperatures on the slopes are substantially warmer. Precipitation increases and temperatures generally decrease with altitude. There may be a general tendency to a higher percentage of winter rain in the north end of the valley and higher summer rain in the south end.

Vegetation in the valley is located in a transition zone between the Sonoran Desert and the Chihuahuan Desert. The former is warmer and has a bimodal rainfall distribution. The latter is colder in the winter and tends more to a summer maximum in rainfall. Saguaro, palo verde, and jumping cholla are characteristic Sonoran Desert species that reach more or less the eastern limit of their range within the LSP watershed. Several vegetation zones are found in the watershed depending on altitude and soils. The higher mountain areas generally support forest or woodlands of mixed conifer, pine, or live oak, with some chaparral species. Mid elevations are composed of desert grassland, much of which has been partially replaced with shrubs such as mesquite and whitethorn. Lower elevations are mainly desert shrublands dominated by creosotebush, whitethorn, and paloverde. Vegetation on the pre-1880s floodplain of the San Pedro River is mainly mesquite woodland (sometimes called bosques) where it has not been cleared for fields. The channel and present floodplain of the River supports riparian forests, riparian shrublands, or non-riparian vegetation depending on flow regimes. Vegetation will be described in more detail in later sections.

Wildlife includes deer, javelina, Gambel's and scaled quail, whitewing doves, mourning doves, and ground doves, black-tailed and antelope jackrabbits, cottontails, skunks, raccoons, ground squirrels, coatimundi, bobcats, coyotes, mountain lions, black bears, and many species of birds, including neotropical migrants. Several species of native fish occur in perennial stream reaches.

ISSUE #3 UPLAND EROSION

The Erosion Process

Soil conservation is a basic objective for all natural resource management. Soil erosion on uplands can reduce soil depth and therefore reduce soil moisture holding capacity and rooting depth. Soil erosion can result in the loss of nutrients from the watershed, especially since these nutrients are most abundant in the surface soil. And soil erosion contributes to sediment accumulation and lower water quality in drainages and reservoirs.

Upland soil erosion refers to sheet erosion and rill erosion. Sheet erosion is erosion of surface soil due to overland flow of water. Sheet erosion can also be due to wind. Wind erosion is not a major concern in the LSP watershed. There may be some redistribution of soil and litter by wind, e.g. deposition around the bases of shrubs, but it is minor in extent compared to water erosion. Rill erosion is caused by water running in shallow channels, i.e. similar to very small gullies.

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Rainwater falling on the soil surface may either soak in (infiltrate) or runoff. Runoff is what can cause soil erosion. Whether rain soaks in or runs off depends on a number of factors. One is how fast the soil will absorb moisture and how much it can take before becoming saturated. This depends on soil texture, soil structure, surface roughness that may hold moisture in place, and the depth to soil layers that restrict water movement (e.g. caliche, hardpans, or bedrock). Rainfall intensity and duration are also important. Slope is another factor that influences how fast water runs off. All of these factors are site factors that are related to the classification of ecological sites, i.e. soil differences, slope, topographic position, and climate. Thus, the ecological site has a relation to the tendency of a soil to erode and the amount of erosion that will occur on that site.

Protection of the surface soil is another factor that influences erosion rates. Soil lacking surface protection will often form crusts due to the impact of raindrops that breaks down surface structure. These crusts reduce infiltration rates, increase runoff and increase erosion hazard. Ground cover tends to protect the soil against raindrop impact and also impedes the rate of surface runoff. Ground cover may consist of litter, i.e. dead plant material on the surface. It may consist of live vegetation, either plant canopies or basal cover. Plant canopies may reduce raindrop impact if they are not too high above the ground, but they have no effect on runoff. Plant basal area has a much greater effect on both raindrop impact and speed of runoff. That is why perennial grass cover is generally better for protecting soil surface than shrubs. Gravel and rock can also protect the soil and slow runoff. Many soils, especially those formed on alluvial materials will build up an "erosion pavement" as the finer material erodes from the surface and leaves a layer of gravel on the surface. This layer of gravel can more or less stabilize these types of soil if not disturbed. Alluvial or soft material lacking gravel may have high rates of erosion, as in Bryce Canyon National Park.

Soil compaction can also reduce infiltration rates and soil moisture holding capacity, thus increasing runoff and erosion hazard. Some soils are more susceptible to soil compaction by animals or vehicles than others. Natural soil processes tend to counter soil compaction through shrinking and swelling (due to wetting and drying), freezing and thawing, plant root growth, actions of insects, worms, and small animals in the soil profile, etc. Surface soil may become compacted from raindrops during the monsoon, but regain its soft structure during the winter.

Vegetation, and litter, cover is the only factor that management can exert much control over. Grazing, fire, drought, and heavy rain can reduce or redistribute ground cover, or influence the type of vegetation growing on a site.

Erosion is a natural process and is responsible for forming the topography of the LSP watershed. The older valley fill is the product of erosion of the mountains and the younger alluvium is soil eroded from the uplands. Therefore, when we seek to control erosion, we are really trying to prevent the rate of erosion from increasing significantly due to our land use or management. Other things being equal, the rate of erosion increases as precipitation increases. On the other hand, the amount of vegetation and litter cover generally also increase as precipitation increases. Therefore, on the average, natural erosion is highest where there is sufficient rainfall to produce significant runoff but not enough rain to support adequate vegetation to protect the soil completely. In areas with rainfall of 30-40 inches or more, e.g. eastern forests and tallgrass prairie, vegetation may essentially prevent any surface soil erosion from occurring unless the vegetation is disturbed or removed to expose mineral soil. Much of

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the landscape development in such areas occurs by soil creep, solution, landslides, etc. Where rainfall is very low, i.e. below 5-10 inches, the amount of vegetative cover possible under such limited moisture does not have any appreciable effect on surface erosion. Natural erosion is limited due to limited precipitation, but can be high in response to unusual intense rain events. In the zone of about 10-25 inches of precipitation vegetation rarely is dense enough to completely protect the soil from erosion, but can be dense enough to reduce erosion considerably. This is the zone that covers most of the rangelands and most of the LSP watershed. In this zone, activities that reduce vegetation and litter cover will usually result in some increase, possibly large increases, in sheet and rill erosion. Changing vegetation from a more effective type (grass) to a less effective type (shrubs) will also increase erosion. The extent of the increase depends on soil factors, slope, rockiness, gravel cover, i.e. site factors.

Assessment of Upland Erosion in the LSP watershed

The rate of soil erosion occurring in any given spot is not possible to measure in the field at one point in time. Measuring actual soil erosion or soil movement requires elaborate and long-term research studies. A number of such studies have been conducted in Arizona. However, for on the ground assessment of erosion rate we must depend on visual indicators of erosion. Some of these are the presence of rills, movement and deposition of soil or litter, formation of plant pedestals due to soil removal around them, evidence of gullies in the drainage bottoms, patchy cover of vegetation. For this watershed assessment a "soil stability rating" index was developed based on similar rating systems used by BLM and other agencies. This SSR was based on rating 6 factors on a scale of 1-5, then adding to get a total rating. Thus, the best possible score was 30, which would indicate no evidence of erosion. This rating scale was applied at each of the observation points on the upland watershed assessment. Later, each map delineation was assigned a SSR rating to apply to the whole map delineation. This was done by considering all the write-up points and deciding a representative value. It is not an average of the write-up points in the map delineation, since they may represent different sites. If no actual observations were available in a map delineation, it was assigned a value using professional judgment based on similar conditions in other map delineations. The SSR does not make any determination of whether existing erosion is natural or accelerated; it only rates the evidence visible that indicates how much erosion may be occurring.

Figure 8 is a map showing the results of this SSR procedure for all map delineations in the watershed. The actual SSR values are given in the table describing ecological sites in Appendix B. SSRs for the map delineations ranged from about 15 to 29. These were arbitrarily divided into 3 classes: 26-30; 21-25; and 20 or less. These classes simply indicate areas with the lowest observed erosion, moderate, and highest rates. They do not imply anything regarding acceptable or sustainable rates of erosion. For the whole watershed 11% fell into the greater than 25 range, 54% in the 21-25 range, and 34% in the less than 21 range (2% were cultivated fields). For the most part the least amount of erosion was observed in the woodland types of the higher mountains where rainfall and plant cover is greatest, and in the woodland sites along the River where the ground is almost flat and surface runoff minimal. The highest erosion rates were seen in the shrublands at lower elevations with low vegetation cover, especially those on steeper slopes. The moderate zone tends to be on the sites receiving 12-16 inches of precipitation that still have a good perennial grass cover.

Alternative Management Actions

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Mitigating upland erosion depends mainly on maintaining a good vegetation and litter cover on the watershed and managing for the type of vegetation that will provide the most effective cover, i.e. perennial grasses instead of shrubs. The extent of shrublands, grasslands, and woodlands has already been discussed along with the management options for these areas, i.e. grazing management, burning, herbicides, and so on.

There are a number of direct approaches to reducing runoff or increasing infiltration that have been used in some situations. Many types of mechanical interventions designed to slow down runoff and/or increase infiltration of water have been tried. Some of these were done by machines and some by hand. Examples are brush, rock or wire contour dikes designed to catch sediment and slow runoff, contour furrows designed to catch sediment and runoff, pits dug by offset plow discs for the same purpose and soil ripping to improve infiltration. Many of these efforts were combined with seedings of perennial grasses. These practices were widely applied on watersheds throughout the West during the 1930s-1950s, notably by the Civilian Conservation Corps (CCC) and later by the Soil Conservation Service (NRCS) and others. It is not clear to what extent this was done in the LSP watershed. These practices required a lot of hand labor and/or mechanical treatments, both of which were cheap during those times. Some of the efforts had considerable positive results, others were very short-lived. More recently, the land imprinter has been touted as the solution. This is a large drum filled with water with protruding "imprinters" that can be pulled behind a crawler tractor. By creating impressions in the ground surface, it encourages infiltration of water rather than runoff, thus reducing erosion. It may have been inspired by observation of grass sprouting in the tracks left by bulldozers. There have been situations where the imprinter has produced substantial results.

However, all of these approaches depend on the availability of cheap labor and/or cheap machinery costs, neither of which are currently available. Most of these practices can only be applied in specific situations of soil type, rockiness, topography, etc. In some cases, the results have been substantial and long lasting, in others they were ineffectual or of short-term benefit. In general, this type of erosion control is probably not adaptable or economical for the LSP watershed.

So, we are left mainly with managing the vegetation to achieve better watershed stability. The question then is: What areas will likely respond best to vegetation management to reduce existing erosion or to reduce the tendency toward accelerated erosion in the future? To try to answer this question, we used the ecological site map as a basis for determining priority areas to either correct existing erosion or prevent future increases in erosion.

Woodland/forest areas generally have a low amount of erosion as long as the vegetation is relatively undisturbed. In the higher elevations this is due to high amounts of precipitation leading to good ground cover and also to rocky soils that generally do not erode excessively. Only when drastically disturbed, as happens in destructive fires, is the erosion rate greatly increased. Mesquite woodlands at lower elevations generally do not have a serious sheet erosion problem because they are flat and do not produce much surface runoff. Therefore, these areas are not priorities for upland erosion control, except in the case of intense fires.

Most of the ecological sites in the lower rainfall belts (e.g. 40-1 and 41-2) and a few in the moderate rainfall belt (41-3) are dominated by shrubs and apparently have little potential to produce grass. These sites have a fairly high natural rate of erosion (very high on breaks and moderate on those with erosion pavement), but the natural vegetation will not protect them from

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erosion to any great extent. If the shrubs that dominate are removed, there may be some increase in perennial grass cover although it may take a long time to obtain the favorable weather to allow this to happen. Even if perennial grass increases it will still not likely be enough to make a substantial reduction in erosion. If the shrubs are removed and perennial grass does not increase, then erosion will likely increase. Therefore, these areas do not seem to be good candidates for vegetation conversion given the expense and the slim chances of improvement.

Therefore, the main chance to manipulate vegetation to achieve better soil protection exists in the 41-3 (12-16 inch) zone and some areas within the 41-1 (16-20 inch), and lower precipitation zones (41-2, and 40-1). Erosion due to changes in vegetation cover from mainly grass to mainly shrubs will continue to increase on some ecological sites as shrub cover continues to increase (Martin and Cable 1974; Martin and Morton 1993). On these sites shrubs continue to increase regardless of whether they are grazed or not. Robinett (Robinett 2000; Robinett and Sayre 2000) indicates that shrubs will generally continue to increase on certain sites whether they are grazed or not. The sites he mentions are those with deeper soils such as loamy upland, sandy loam upland, etc. Other sites, such as granitic hills or limestone hills may have shrub increases but the effects on soil erosion may be less because of the protection afforded by rock cover and the relatively shallow soils. Therefore, it appears that sites with deeper soils, fairly erodible soils, gentler slopes, and good grassland potential are the main ones that are of major concern. If the perennial grass has already been taken over by shrubs, then erosion has probably increased and will continue to do so in the absence of positive action. Changing the grazing system or removing livestock will not change this scenario. If the site still has a good cover of grass and has not yet been taken over by shrubs, then preventive action may be advisable to keep that from happening. It is much easier and more effective to control the shrubs before the grass cover declines. Therefore, the deeper soil areas were identified as priority areas for treatment, either to correct existing problems or to prevent future problems.



Figure 8. Representative soil stability rating classes for map delineations. Green = SSR > 25, Yellow= SSR 21-25, Red = SSR < 21

ISSUE #8 ROADS

Roads actually came out to be the number one area of concern among local landowners. Most of the concern was for maintenance, safety, dust and other problems associated with the main county road. These are not really "conservation" issues and will not be addressed in this report. The other road issues were related to problems of erosion or other resource impacts of roads. These will be addressed.

Extent and Types of Roads in the LSP Watershed

Figure 20 is a map showing roads in the LSP watershed. The road locations were taken from maps, aerial photos, and field checking. There may be roads that are not shown on the map, i.e. some of the short power line roads or driveways into residential parcels are not shown. There may be some of the roads shown that are actually abandoned or no longer in use due to changes in land ownership, wilderness designation, etc. Nevertheless, the maps are an indication of the location and types of roads present in the watershed.

Roads were classified into several categories (Table 15). Main roads are maintained by the counties or in some areas by the Forest Service. A small amount of state highway on Mt. Lemmon is grouped with these roads. A small portion of these roads are paved, the rest are gravel. The degree of engineering of the roads, and the maintenance, varies considerably among the various responsible agencies. The main road down the river is known as Cascabel Road in the south portion of the area and River Road in the north. Various sections are maintained by Cochise, Pima, and Pinal Counties. Another category is utility roads, i.e. those built to serve the gas pipeline and electric transmission lines through the watershed. The remaining category mapped consists of largely unimproved roads on ranches, farms, private parcels, and federal and state lands. Most of these roads just happened with little or no engineering of any kind. Some have been put in for subdivisions, but provision for drainage or erosion control was minimal.

Table 15. Approximate mileage of road types in the Lower San Pedro watershed project area.

| Road Type | Miles |
|-----------------------------|-------|
| County | 73 |
| Private and/or Ranch / Dirt | 573 |
| Paved | 8 |
| Utilities | 57 |

Erosion Problems Associated with Roads

In the LSP watershed assessment, roads were considered to be the number one cause of human-related gully erosion. Most of the problems involve the unimproved roads on rangelands, but similar problems occur on the other categories as well.

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The main problem with unimproved roads is that they tend to intercept surface runoff and cause it to run down the road. This water builds up depth and erosive power and eventually starts to cut a gully in the tracks down the road. When these tracks develop into a deep rut or gully, the road is usually moved over to get out of the rut. Once started these gullies often tend to continue to erode, even if the road is moved. The severity of the problem is related to the slope of the road and the type of soil involved. Roads along ridges may have little problem because there is no source of water above them. Roads running down slopes act as channels for water. Roads running across slopes intercept water running off the slope above and may carry it down the road until it finds a place to spill off the lower side. Roads in clay or loam bottoms may develop deep ruts caused by traffic on wet soil and these may channel runoff to create gullies. Roads in sandy washes generally do not create such a problem, because the wash is naturally unstable and roads tend to be obliterated after every flood event.

Figures 21 through 24 are photos that illustrate some of the kinds of problems that exist.

Alternative Management Actions

The solution to the road problem is, of course, to provide the proper engineering to minimize erosion and flooding problems associated with roads. Locating roads with due consideration for grades, soils, and drainage crossings is the first step. Construction of water bars, turnouts, culverts, slabs, or even bridges helps to prevent water from creating gullies down the road, or where it crosses the road. In some cases, merely eliminating the berm along the sides of the road created by a bulldozer or grader could allow water to flow off the road, rather than down it. These remedies are well known and there are ample design criteria to solve the problem. The problem is that all these solutions take money.

The Redington NRCD could work with the counties, the Forest Service, and the utility companies to encourage them to improve drainage and erosion control on the roads for which they are responsible. Roads on private lands and subdivisions are the responsibility of the landowners they serve. The District could seek cooperation from those landowners and offer technical assistance to improve road problems, but the final responsibility and cost should be to those using the road. Roads on federal lands (FS and BLM) are the responsibility of those agencies. However, the District could identify where problems exist and work with those agencies to try to achieve some improvement.

The majority of the unimproved roads are on state land. These roads are used by grazing lessees, hunters and many other people. Off road vehicles often create new roads, although off road travel is forbidden on state land except for specific purposes. Although these roads were mostly originally established to serve the needs of grazing lessees to check waters, fences, distribute salt, etc. their use and the wear and tear associated with it has greatly increased with the popularity of 4 wheel drive vehicles and ATVs. However, if there is any maintenance on these roads, it is usually the grazing lessee that does it. The state land department does not maintain these roads. To correct the erosion problems on these roads would be quite expensive. The District could work with grazing lessees, off road vehicle clubs, hunters' organizations and the State Land Department to seek solutions to these problems. Some roads could be closed or re-routed. Some roads could be designated for restricted use, e.g. by State land personnel and lessees, to minimize impacts. There may be sources of public funding to help address these problems.

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Figure 21.



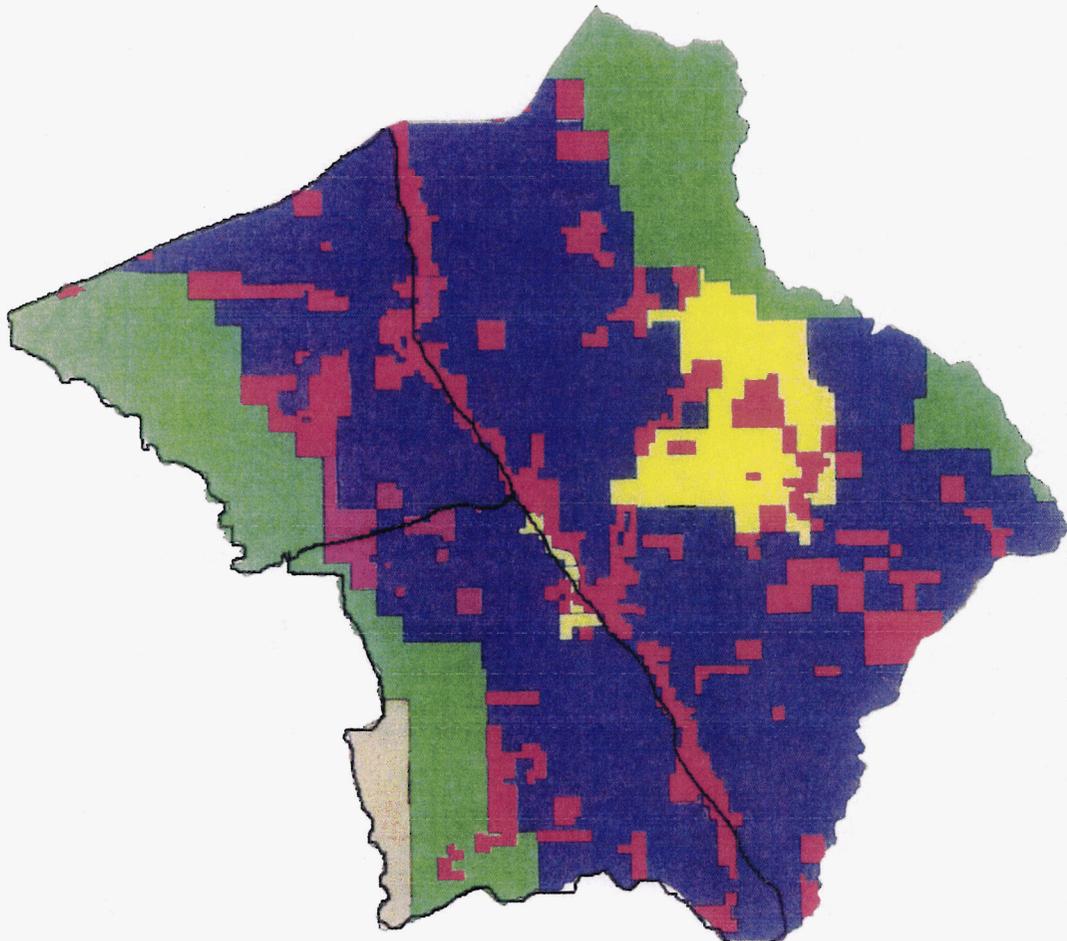
Figure 22.



Figure 23.



Figure 24.



Legend

Purple = State
Red = Private
Green = Forest Service

Yellow = Bureau of Land Management
Orange = National Park Service
Pink = Pima County

Scale 1:300,000

Figure 2. Land ownership in the Lower San Pedro Watershed project area. NW and SW Quadrants of Study Area Outlined in Black.

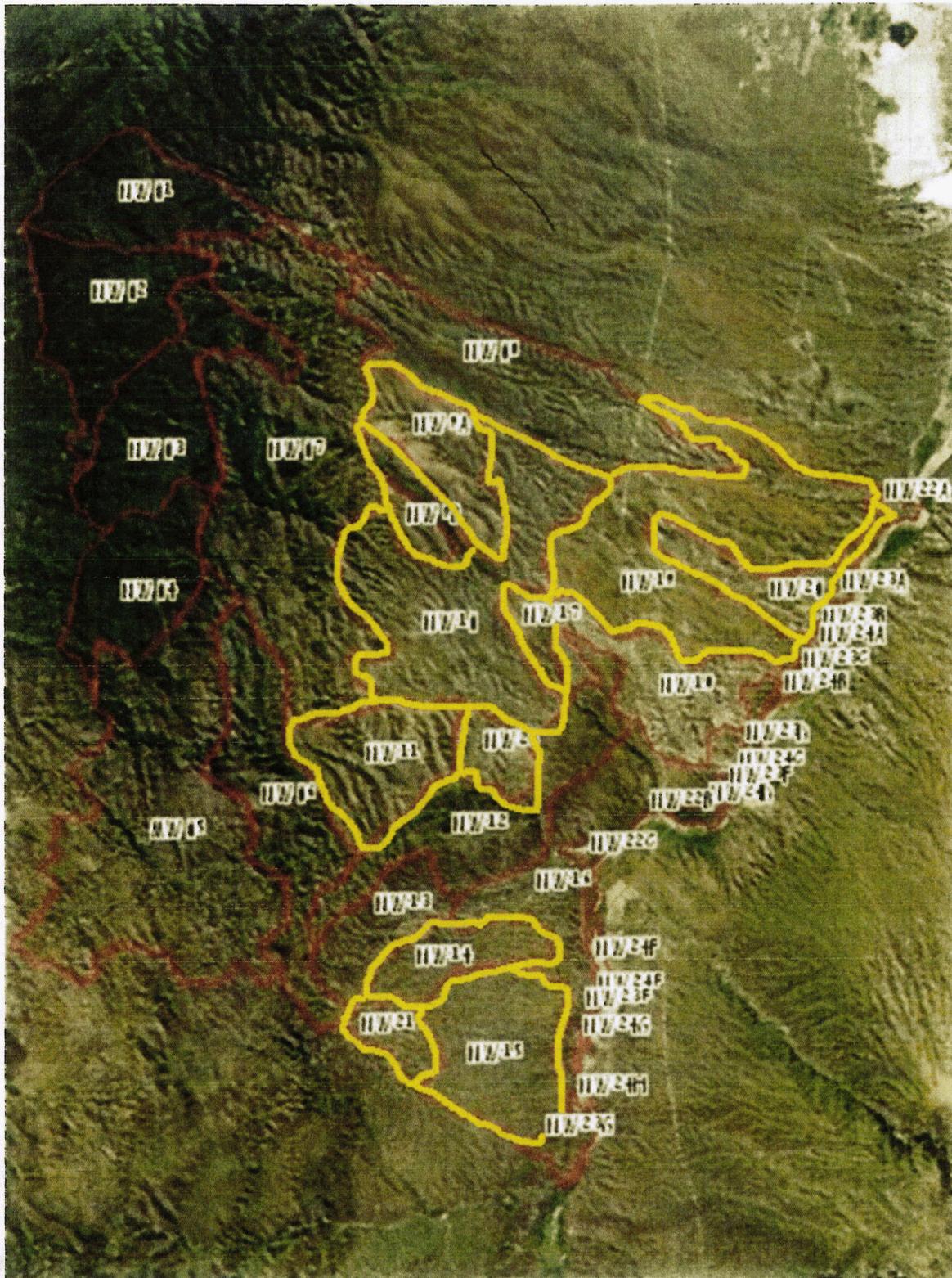
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Redington NRCD
Docket Number L-00000YY-15-0318-00171

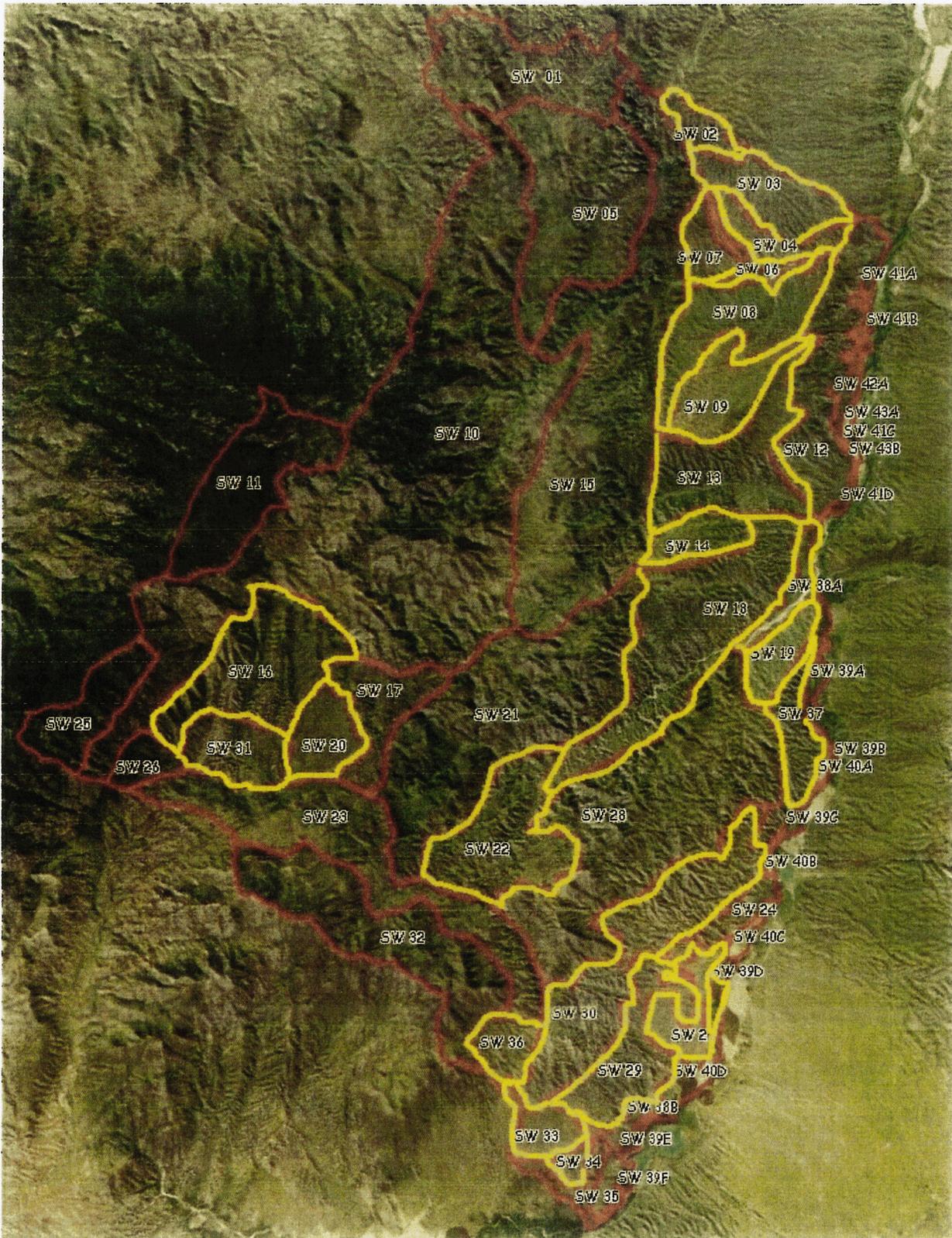
Exhibit RED 13

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Northwest Quadrant
Medium to Highly Erodible Soils designated with bright yellow outline



Southwest Quadrant
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Medium to Highly Erodible Soils designated with bright yellow outline



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August 20, 2012

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Re: *COMMENTS ON DRAFT ENVIRONMENTAL IMPACT STATEMENT AND RESOURCES
MANAGEMENT PLAN FOR SUNZIA SOUTHWEST TRANSMISSION PROJECT (MAY 2012, DES-
12-26 AMENDMENTS) BY WINKELMAN NRCD and REDINGTON NRCD*

Gentlemen:

We are hereby transmitting to you the comments of Winkelman NRCD and Redington NRCD on the Draft Environmental Impact Statement and Resources Management Plan, May 2012, DES-12-26 for the proposed SunZia Transmission Project ("DEIS").

These comments supplement and are in addition to all prior comments and submissions by the Districts. Please consider, address and resolve these comments consistent with our request in the attached comprehensive comments on the DEIS.

The Districts are prepared to meet with responsible representatives of BLM to coordinate all of the above identified issues and resolve inconsistencies and conflicts with the Districts' plans and mission statements. We would expect that



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ATTORNEYS AT LAW

August 20, 2012
Page 2

all these matters be addressed and resolved prior to completion of the Final Environmental Impact Statement.

Very truly yours,
MARGRAVE CELMINS, P.C.

Lat J. Celmins
*Attorneys for Winkelman and Redington
National Resource Conservation Districts*

c: *Clients*

N:\WP50\Winkelman NRCD\BLM Comment Ltr.wpd

**COMMENTS ON DRAFT ENVIRONMENTAL IMPACT STATEMENT
AND RESOURCE MANAGEMENT PLAN FOR SUNZIA SOUTHWEST
TRANSMISSION PROJECT (MAY 2012, DES-12-26 AMENDMENTS)
BY WINKELMAN NRCB and REDINGTON NRCB
August 20, 2012**

To:

| | |
|--|--|
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Please accept and fully consider these comments submitted by Winkelman Natural Resource Conservation District ("Winkelman") and Redington Natural Resource Conservation District ("Redington") on the Draft Environmental Impact Statement and Resource Management Plan Amendments (May 2012, DES-12-26) for the proposed SunZia Transmission Project ("DEIS"). These comments supplement comments already submitted on October 9, 2011 by Winkelman and Redington, in meetings, and in written and oral communications with the Bureau of Land Management ("BLM") in which Winkelman and Redington expressed numerous concerns about the potential environmental impact of the SunZia Project on their Districts.

Additionally, throughout the scoping process, Winkelman and Redington submitted comments and evidence relating to the impacts on the San Pedro watershed together with requests for correction of information contained in the scoping documents including its final appeal of January 20, 2012.

These comments also supplement the Districts' specific requests for coordination of these adverse impacts with the long-range plans of Winkelman and Redington

including the written requests directed to BLM on June 28, 2012, July 12, 2012 and July 17, 2012.

ARIZONA'S NATURAL RESOURCE CONSERVATION DISTRICTS

Winkelman NRCD and Redington NRCD (collectively "Districts" or "NRCDs") are the local political subdivisions of the State of Arizona with responsibilities that include the San Pedro River watershed and Aravaipa Creek habitat areas. The Districts were established by the Arizona Constitution, Article XIII, § 7 and A.R.S. § 37-1001, *et seq.* to protect the natural resources within their jurisdictions consistent with the natural resource policy of the State of Arizona and the Districts' own long range plans.

The Districts were established in 1941 by the State of Arizona as legal subdivisions of the State. They are organized by the vote of landowners within the District and management is by a Board of Directors elected by local citizens. The Districts are a form of local government authorized to identify and address resource conservation needs within their jurisdictions. There are 41 conservation districts spanning the entire breadth of Arizona, 32 of which are established under State law and 9 established under Tribal law. The elected District Board of Supervisors has the responsibility for determining the resource conservation needs for the District, for developing and coordinating long range plans and programs for natural resource conservation and implementing them under the Districts' annual plan of operation. The Districts work with and coordinate their efforts with Federal and State government, organizations, agencies and individuals to accomplish soil and water conservation. Arizona's conservation district law is embodied in legislation and establishes the State's natural resource policy, carried out on a local level by the Districts:

It is declared the policy of the legislature to provide for the restoration and conservation of lands and soil resources of the state, preservation of water rights and the control and preservation of soil erosion, and thereby to conserve natural resources, conserve wildlife, protect the tax base, protect public lands and protect and restore the state's rivers and streams and associated riparian habitats including fish and wild life resources that are dependent on those habitats, and in such manner to protect and promote the public health, safety and general welfare of the people. (Ariz. Rev. Stat. Ann. § 37-1001)

A. Winkelman NRCD

Winkelman NRCD is located in the eastern part of Pinal County, the southwest corner of Gila County, a small portion of the southwest corner of Graham County and a small area in northeast Pima County. To the north lie the Pinal Mountains, to the east the Galiuro Mountains, to the south are the Catalina Mountains and to the west lies the desert land near Picacho Reservoir. Substantial portions of two of Arizona's major rivers, the San Pedro and the Gila, wind through the District. Winkelman NRCD includes 1.6 million acres of land of which less than 1500 acres is irrigated farmland. The remaining acres not within towns, cities or mine lands are rangeland. The land ownership is a

combination of private, State and Federal lands. Portions of the Tonto and Coronado National Forests lie within the District's boundaries. Winkelman NRCD also includes BLM lands, Arizona State Trust Lands, and private lands.

Winkelman NRCD has established conservation district land management plans which are updated from time to time to carry out the public policy of the State on a local level. Winkelman NRCD is governed by five elected supervisors who meet on a regular basis to carry out its long range plans and statutory mandates. Winkelman NRCD coordinates its resource conservation efforts with Federal and State agencies including the BLM and takes its responsibilities seriously.

B. Redington NRCD

Redington NRCD was established in 1947 and encompasses 290,000 acres of land in the San Pedro River Valley of southeastern Arizona. It includes approximately 31 miles of the San Pedro River which runs north-northwest through the middle of the District and is the area's most defining geographical, ecological and social-historic feature. Redington NRCD's southern boundary lies just north (downstream) of the Narrows, a bedrock intrusion that divides the upper and lower San Pedro basins. The western boundary runs along the crest of the Rincon and Santa Catalina Mountains which separate the San Pedro and Santa Cruz watersheds. The northern boundary lies along the Alder Wash and Kielberg Canyon. The eastern boundary is an irregular north/south line through Range 20 East of the Gila-Salt River Meridian. It begins just north of the Narrows and ends on the southwestern flank of the Galiuro Mountains.

The single largest landowner in the area is the Arizona State Land Department holding trust lands for public schools and other trustees totaling 168,000 acres. Federal lands are approximately 77,000 acres and private lands are 45,000 acres.

INTRODUCTION

The NRCD's are legally recognized governmental subdivisions of the State of Arizona. As such, they have legal status under the Governor's Consistency Review. A 60-day Governor's Consistency Review is required by 43 CFR 1610.3-2(e) for all Resource Management Plans (RMPs) and RMP Amendments. The SunZia DEIS includes proposed RMP Amendments which require compliance with the Governor's Consistency Review as well as with the National Environmental Policy Act (NEPA).

The mission of the NRCDs is to protect, restore, and conserve the land, water, and soil resources, to preserve water rights and to prevent soil erosion, and to protect the tax base of public lands within District boundaries while assisting private property owners in making viable and responsible use of their private lands and of the public lands they use. The Districts' mission is derived from, and is consistent with, the mission statement of the State of Arizona set forth for all NRCDs organized under state law and is defined in statute.

The mission of the NRCs applies to nearly two million acres which are within the NRCs' boundaries. The NRCs have practiced responsible environmental stewardship of District lands for more than 60 years. The consequences of the Districts' environmental stewardship are restored or recovering ecosystems, continuation of viable agricultural economies, and preservation of traditional rural lifestyles. Environmental stewardship on District lands is evidenced by a series of adopted management plans and policies, and by numerous implementation measures which have required investment of millions of dollars in public and private funds. The SunZia project is inconsistent with the NRCs' adopted plans and policies. It is also inconsistent with the adopted land use plans and policies of Pinal County, Arizona, and with the recommendations of the corridor location recommendations of the West-wide Energy Corridor Programmatic EIS.

Nowhere is the environmental stewardship of the Districts more evident than in the San Pedro River Valley, which would suffer significant unmitigable impacts to the human environment if the SunZia Project is approved on the Preferred Alternative route through District lands. Our detailed comments on the SunZia DEIS support the conclusion that the Preferred Alternative should not be approved by the BLM, and that the proposed RMP Amendments conflict with BLM's policy as articulated in Instruction Memorandum No. 2011-059, "National Environmental Policy Act Compliance for Utility-Scale Renewable Energy Right-of-Way Authorizations," which directs the BLM to identify "appropriate project locations that conform with federal law, regulation, and policy, and with existing land use plans, minimizing the need for land use plan amendment."

FEDERAL NOTICES AND PROCEDURAL HISTORY

In September of 2008, SunZia Transmission, LLC submitted a Right-of-Way ("ROW") Application to BLM requesting authorization to construct, operate and maintain two new single-circuit overhead 500 kilovolt transmission lines originating in Socorro County, or Lincoln County, New Mexico, and terminating at the Pinal Central Sub-Station in Pinal County, Arizona.

On May 29, 2009, BLM published a Notice of Intent ("NOI") to prepare an EIS pursuant to the National Environmental Policy Act ("NEPA"), as required by Federal regulations promulgated for the Federal Land Policy and Management Act on 1976 ("FLPMA"), found at 49 CFR Part 2800, 74 FR 25764. BLM is the lead Federal agency for the NEPA analysis and preparation of the EIS. The initial proposal was to transport electricity generated by power generating resources, including primarily renewable sources, to the western power markets and load centers. The emphasis was on renewable energy resources which included wind, solar and geothermal generation.

BLM acknowledged in its NOI that the SunZia Project may require amendment to at least four of the local Resource Management Plans. BLM affirmed that if Resource Management Plan amendments are necessary, BLM would integrate that process with the NEPA process for the SunZia Project. In disregard of the very issues that BLM identified

in its May 29, 2009 NOI, BLM simply plowed ahead with a draft EIS giving lip service to the issues, concerns and impacts raised by the Districts in the scoping and public meetings initiated by the Districts over a two-year period. These District meetings were held for the purpose of providing meaningful information to the BLM so that the agency could address matters of inconsistency between the proposed action and local government planning. BLM simply trampled over these very issues. On May 29, 2012 BLM gave notice of availability of the Draft Environmental Impact Statement (DEIS) for the SunZia Transmission Line Project and the prospective draft Resource Management Plan amendments and announced the opening of a comment period of 90 days or until August 22, 2012 (77 Fed Reg. 31637).

The Districts have actively participated in the scoping and planning process, and have repeatedly sought coordination as required in the Federal Land Management Policy Act and NEPA. Oral and written analyses which reflect inconsistencies between federal and local planning have been repeatedly submitted raising critical impacts and resource specific issues adversely affecting the Districts. These issues have been specifically identified with particularity and include (i) effects on, and alteration of the San Pedro River watershed; (ii) effects to wildlife habitat areas, plants and animal species; (iii) effects on cultural resources and archaeological sites; (iv) effects to visual resources and existing viewsheds; (v) conflicts with current land use plans and policies of the Districts; (vi) impacts on wilderness areas; (vii) effects on rural lifestyle and socio-economic conditions; and (viii) a need for avoidance of sensitive areas. The Districts have presented alternate routings and No Action Plan alternatives to the BLM and its contractor EPG.

CORRESPONDENCE AND PUBLIC MEETINGS

To that end, in addition to various communications that were made over time, the Districts sent a letter on June 28, 2012 to the BLM and responsible individuals including the Project Manager, State Directors and others requesting a follow-up meeting to the release of the DEIS so that specific inconsistencies between local planning and the now-identified Preferred Alternative could be addressed. That June 28, 2012 letter identified the statutory, contractual and factual basis requiring coordination with the Districts. Having received *no response* to that letter another meeting request was sent to the BLM and all responsible individuals on July 12, 2012. *No response* was received to that request. That letter was again followed by another on July 17, 2012 with again no response, and therefore an assumed refusal of compliance with federal requirements to coordinate local and federal planning.

Concurrently, BLM gave notice of numerous public meetings in New Mexico and Arizona soliciting comments on the DEIS. In each of these meetings, public participation and public inputs and comments were foreclosed. For instance, approximately 100 members of the public appeared at the Tucson meeting and were specifically told that *public participation was foreclosed and that there would be no public comments received at that time*. At the scheduled Benson meeting on July 12, 2012 about 50 members of the public responded to the BLM's public participation request and several of them were

prepared to present their views on the adverse impacts of the SunZia transmission line project. Public participation was again foreclosed. This had a chilling effect on public participation and sent a strong signal that the BLM is not interested in public inputs, that public comments would be ignored and that any further written comments by interested parties would be disregarded as in the past. BLM's actions have made a mockery of the entire administrative process.

There were only two people who were authorized by the BLM to speak publicly at the DEIS public meetings, BLM Project Manager Adrian Garcia and EPG representative Mickey Siegel. Their presentation at the Tucson and San Manuel meetings was approximately 45 minutes in length, and the audience was given instructions that any questions or comments regarding their presentation would be addressed on a one-on-one basis between the members of the public and various members of the BLM and EPG staff that would be available afterward. When a member of the audience slipped from this protocol and requested a clarification or posed a question or even raised their hand during the presentation, they were quickly told that all questions would be handled afterward according to the protocol that had been described.

It was very disconcerting that the main person describing the project on behalf of the BLM was Mickey Siegel, who had in April of 2001 represented one of SunZia's owners (SWPG) in their application for a Certificate of Environmental Compatibility, for the routing of a connector gas line and a connector transmission line for SWPG's Bowie Power Plant. This placed Mr. Siegel in the position of potentially protecting his former client's interest in securing additional transmission capacity for the Bowie Plant by describing the SunZia project in a way that would promote acceptance of the proposed transmission project by the public.

Indeed, Mr. Siegel spoke exclusively about renewable energy resources during his presentations at the Tucson and San Manuel meetings. When he was speaking at the San Manuel meeting about renewable energy resources in the vicinity of the Bowie Plant, a member of the small audience asked, "What about natural gas resources in this region?" Mr. Siegel responded that he was only covering renewable energy resource zones, and that any questions needed to be held until after the presentation when they would be answered by a member of the staff.

By controlling the message about the purpose of the SunZia project, by ignoring much of what was submitted in written form regarding this issue in scoping, coordination, and IQA processes, and by forbidding any questions or comments during or immediately after the presentations at the public meetings, the BLM was denying the public and stakeholders any opportunity to effectively challenge the narrative about renewable energy that was being presented by the environmental consultant, EPG, in the public meetings and in the DEIS.

BLM has failed to identify the specific issues and existing conflicts with land and resource plans of the Districts, nor has it proposed any alternatives to resolve these issues as required by Federal law and regulations.

GENERAL COMMENTS ON THE DEIS

The statement of purpose of and need for the proposed SunZia project is fundamentally flawed. The DEIS cites the mandate of the Federal Land Management Policy Act (FLPMA) to accommodate multiple uses on BLM-managed lands as the need for the project. Multiple use is a policy, not a need. Multiple use policy could be implemented by a near-infinite range of possible alternatives such as increased minerals leasing or increased developed recreation areas, in addition to the SunZia project. A general multiple use policy does not demonstrate need for the specific proposed SunZia transmission project. Consequently, the SunZia project is a purpose which does not address a defined need. Need should be restated to define a problem which the SunZia project would resolve. (We provide detailed comments on the purported need and justification for the SunZia project in our commentary on cumulative impacts.)

The DEIS analyzes only those existing conditions and environmental consequences which would occur on BLM lands. BLM lands comprise only 14.9 miles of the total 161.2 mile long Preferred Alternative Route (4C2c) through NRCD lands. The existing conditions and environmental consequences on the remaining 146.4 miles of State of Arizona and private lands are not addressed in the DEIS. The DEIS therefore presents a very limited and distorted picture of the full extent of the effects of the SunZia project. It would circumvent the spirit of NEPA to use the DEIS to support a grant of right of way on BLM lands when 90.8 percent of the route is not under BLM jurisdiction, and lands under BLM jurisdiction are randomly dispersed throughout the proposed transmission line route, so that route analysis in the DEIS is necessarily discontinuous and fragmented. A grant of ROW on isolated scraps of BLM land located along the proposed transmission line corridor would have the inappropriate consequence of putting the larger burden of fulfilling federal energy policy and project goals on state and private landowners to create a viable integrated ROW. The DEIS should be re-written to fully analyze and disclose effects to all lands—regardless of jurisdiction—which would be impacted by the SunZia project.

Throughout the DEIS, much of the discussion of environmental impacts is deferred to the Plan of Development (POD) which must be approved by the BLM. The location of access roads and housing camps, location and spacing of transmission line towers, location of intermediate substations, and many other particulars are discussed only generically in the DEIS, with details to be determined at some future date. This is an unacceptable level of analysis. Effects should be defined within the DEIS as the basis for agency decision making under NEPA, not in peripheral documents or in the future.

SPECIFIC COMMENTS ON THE DEIS

The expertise of the NRCDS applies to lands within the NRCDS' jurisdictions, so we limit our specific comments to the sections of the DEIS which discuss Route Group Four with the exception of comments on DEIS topics which affect all route alternatives.

Section 1.3 discusses the Energy Policy Act of 2005 with reference to Section 368 corridors. The discussion is misleading because the West-wide Energy Corridor Programmatic EIS (November, 2007) identified energy and multi-modal corridors in the 11 western states, but the proposed SunZia transmission corridor is not identified. None of the corridors identified within Arizona is within the southern quadrant of the state where the proposed SunZia project would be located. The SunZia project is not within a designated corridor.

Section 1.4 states that "New Mexico and Arizona are characterized as regional power exporting areas, due to the availability of power from renewable resources." This is an inaccurate and misleading statement which, as written, implies that these states have power from renewable sources to export. This section should be rewritten to note that Arizona and New Mexico are *potential* power exporting areas because of renewable energy resources, but that there is not at present a net power (developed energy) surplus available for export.

In Section 1.4 it is noted that the location of proposed power generation projects, or of interconnections, cannot be disclosed. The full environmental effects of the SunZia project cannot, therefore, be analyzed.

Section 2.2.2.2, Table 2-1 lists a data layer "Vacant/Undeveloped" and assigns this category a Low sensitivity level. This characterization and sensitivity rating reflect a pejorative urban bias that is present throughout the DEIS. It would be more accurate to rename the data layer "Open Space/Managed and Improved Rangeland" and assign sensitivity rating of "Moderate" or greater to be comparable to the sensitivity level assigned to Urban Areas. Use of the Low sensitivity rating skewed route selection.

This same table lists Cultural and Biological resources data layers, but omits other data layers like soils, hazards, and wildlife movement corridors. The GIS constraints analysis was therefore incomplete as a basis for selecting corridor route alternatives. If the constraints analysis had been unbiased and inclusive, other corridor alternatives which avoid the San Pedro River Valley would likely have emerged. The Preferred Alternative west of the San Pedro River traverses a large percentage of soils subject to Moderate water erosion. The resulting potential increase in soil erosion is a direct contradiction to one of the primary resource protection purposes of the NRCDS.

Section 2.4.9.1 states, "Access roads would be identified in the POD and approved by the BLM before construction," and that other temporary use areas will be required. The location and environmental effects of these roads and areas should be disclosed and analyzed in the DEIS. The need for this disclosure in the NEPA document

is reinforced by discussion in 2.4.10.1 which alludes to undetermined locations of access roads, and to-be-determined methods of construction which could have widely diverging ranges of effects on the environment, and on private landowners. Without inclusion of this information, the DEIS is insufficient as a basis for agency decision making. For example, there is reference to "drive and crush roads" on flat terrain within certain vegetation communities—such roads anywhere in a desert ecosystem have the potential to permanently destroy crusts on desert soils, resulting in increased erosion. The location of such roads should be part of the DEIS, not discussed generically with effects to be determined by "field testing" at the time of use.

What agency is responsible for approving access roads on state and private land? How will effects be analyzed on non-BLM lands? How will mitigation measures be monitored and enforced on non-BLM lands??

Section 2.4.11.1 has vague discussion of chemical treatment of noxious weeds with pesticides or herbicides that might or might not need to be used, and mechanical or hand cutting of woody vegetation. This is an example of the "either-or" ambiguity that is present throughout the DEIS, with analysis deferred to the POD. Will chemical applications be used on State and private lands?

Table 2-11, mitigation measure 4 notes that new access roads not needed for maintenance would be permanently closed. This measure is unlikely to be successful in preventing unwanted access in rural areas once a road has opened an area. Backcountry users are very resourceful in circumventing "closures"—the effectiveness of the Arizona/Mexico border fence is but one notorious example of the difficulty of excluding determined travelers. Public and private lands would experience increase in trespass and damage to property and the environment.

Mitigation measure 12 notes that use of helicopter placement of structures reduces impacts by decreasing ground disturbance, but implies that "loss of vegetation, soil erosion, potential damage to cultural resources, and visual impacts" will occur in areas where helicopter placement will not be used.

Mitigation measure 14 refers to "timber resources." Are there any? In a region characterized by low growing, sparse vegetation, this mitigation measure is of questionable effectiveness. In areas with riparian vegetation, any removal or thinning is conspicuous because of the limited area occupied by riparian species in the desert. Any removal is inappropriate because it introduces high visual contrast, as well as detrimental effects to biota, soils, and runoff characteristics.

Section 2.5.4 notes that route selection considered minimization of impacts to commercial and residential uses as a criterion. This is another example of the urban bias of the DEIS. Urban and commercial users in the region would get the benefits of the transmission corridor, but would automatically be protected against bearing any of the adverse impacts because of this bias. This externality is inequitable and disproportionately affects the residents of the San Pedro River Valley.

Section 2.6 discusses RMP amendments. The Safford RMP is more than 20 years old. The conditions which existed when it was adopted have very likely changed substantially. Urban growth around Tucson is one example of likely change. To amend the RMP to accommodate the SunZia corridor without a complete revision of the RMP updating it to reflect existing conditions and current policies and management objectives is inappropriate. In light of the fact that the Preferred Alternative route through the San Pedro River Valley is in a corridor avoidance area, amending the RMP without first updating the entire RMP is the equivalent of spot zoning.

Amending the RMP to allow the SunZia corridor has the potential for additional adverse impacts because of the co-location policy which encourages additional utilities to locate in existing corridors. Amendment of the RMP eliminates the present ROW avoidance area to create a new corridor zone which would open a Pandora's box of cumulative impacts from future utilities along the SunZia route. This potential adverse effect was not addressed in the cumulative impacts analysis.

Tables 3.3 through 3.7 –Climate Statistics, inexplicably omit any data on wind and insolation. Data on renewable energy development potential along the proposed SunZia route is relevant to informed decision making.

Section 3.5 does not address sustainability of water resource use in the San Pedro River Valley, nor does it discuss water rights. Water rights to the San Pedro River have been the subject of numerous lawsuits, some ongoing.

Where will water for dust suppression come from? The volume required could be very large, given the length of unpaved Redington Road and the length of the SunZia corridor itself, as well as ancillary facilities such as access roads, staging areas, and housing camps.

Water(s) of the US are not defined in discussion of 404 permits. New USACE protocols for jurisdictional determinations are not discussed.

Is the statement that Route 4C2c crosses 6.1 miles of perennial streams accurate, when there is only one crossing of the San Pedro River?

Table 3-40 Cultural Resources omits two important resource types, Historic Landscapes and Cultural Geographies.

Section 3.9 does not address visual resources on non-BLM lands. Therefore visual effects of the SunZia project on more than 90 percent of the proposed corridor cannot be evaluated.

Section 3.1.9.3 does not discuss the most recent Pinal County Comprehensive Plan, (2009) which has major sections on open space visual quality. The SunZia project should be in conformance with the Comprehensive Plan.

Section 3.10.10.1 notes the corridor restrictions of the NRCs' plans, but this information is not considered in evaluating impacts. The NRCs adopted by resolution a policy prohibiting corridors. The SunZia project would violate this adopted policy. This policy has been provided to the BLM by the Districts but has been ignored in selecting the Preferred Alternative route through District lands.

Table 3-47 needs to add the NRCs as State of Arizona land management agencies.

Page 3-229 first paragraph sixth line appears to be missing a verb between Interior to and corridors.

Page 3-233, subheading *Subroute 4C2c* mischaracterizes lands within the NRCs' jurisdictions as vacant/undeveloped. A more accurate description would be grazing leases and conservation areas. Page 3-236 repeats this mischaracterization, under *Subroute 4C2* which notes, "undeveloped areas used for ranching and grazing." There is a Department of Interior initiative to conserve "Large Landscapes"—which include ranches—because of their high value as intact blocks of habitat, among other values. To describe ranches as vacant/undeveloped conflicts with the intent of this Interior initiative. Moreover, the Sonoran Desert Conservation Plan in Pima County, immediately to the south of the SunZia project location in southern Pinal County, has acquired, and plans to continue to acquire, area ranches for conservation areas. The value of additional Pima County ranchlands for conservation is noted in the DEIS, which states that the County "proposes the Six Bar Ranch...and A7 Ranch... for preservation in the future." The DEIS is inconsistent in the acknowledgment of the conservation value of ranches on the one hand, and dismissal of their value as "vacant/undeveloped" on the other.

Page 3-263 subheading *Subroute 4C2c* states that the Preferred Alternative crosses the Arizona National Scenic Trail. After decades of volunteer work which built the trail and successfully achieved its inclusion in the National Trail system just a few years ago, this intrusion would be particularly unsuitable and degrading.

Section 3.13.8 is inadequate in its discussion of fire and medical emergency services. Construction crews are not the only possible source of demand for increase in emergency services, nor is the area of impact merely a narrow 500 mile corridor, as stated in the DEIS. A transmission corridor would introduce a new "superhighway" of access through land which previously had limited accessibility. The DEIS notes on page 4-310 that housing camps will be required for construction crews. This is the only place in the DEIS that housing camps are mentioned. These transient communities will have emergency services needs (and other impacts) that are not analyzed in the DEIS. Full discussion of the location, size and full range of environmental impacts and mitigation measures should be added to the DEIS. Construction activity will attract other economic opportunists, trespassers, and persons engaging in illegal activities which can profit from proximity to construction workers, as well as take advantage of newly created access along the entire SunZia corridor. It is interesting to note that the characterization of

demand for emergency services was so narrowly addressed in the DEIS that the Pinal County Sheriff's Office, the Department of Homeland Security, and Immigration and Customs Enforcement are not listed in the DEIS as having been contacted. This should be corrected by contacting these agencies and addressing the potential demand for additional services they foresee as a result of a new corridor close to the US-Mexico border.

In addition, fire-fighting capabilities are noted in Table 3-68. There is no discussion of response times, nor any evaluation of the capacity of the numerous volunteer fire departments listed to respond to fire emergencies, and especially their ability to respond to large wildfires. There is reference to the BLM and "other land management agencies." In a rural environment which is prone to serious wildfire events, more detail about the BLM's and other agencies' responsibilities and ability to respond to emergencies should be provided.

Section 4.1.1.1 makes reference to "*Resource quality...including the local value and importance of a resource*" as a measure of impact. Local value and importance does not appear to be used anywhere in Section 4 to evaluate impacts. The value and importance of numerous resources to the occupants and ecosystem of the rural San Pedro River Valley needs to be fully analyzed.

Table 4-5 "Criteria for Assessing Intensity of Impacts to Mineral Resources," lists "Areas with known active mines or mining claims with commercial value" as a measure of high impact. How has information provided in Section 3, which notes the Preferred Alternative crosses 16.4 miles of active mines--been used to correlate to this impact measure? Page 4-38 notes that the Preferred Alternative would restrict access to mines near San Manuel, but this restriction does not seem to be discussed elsewhere, or mitigation measures listed.

Page 4-38 has discussion of 100-year floodplains. Has the 100-year floodplain of all major washes in the Preferred Alternative corridor been mapped, or has 100 year flood plain mapping been limited to the San Pedro River? If washes have not been mapped, information is incomplete as a basis for determining impacts from geological hazards and the full extent of potential soil erosion.

Page 4-48 also has discussion of impacts to soil resources, including prime and unique farmland. Has the USDA concurred by letter with the assessment of impacts and mitigation measures on farmland conversion under the Farmland Protection Policy Act?

All impacts to soils along Subroute 4C2c have unmitigable residual impacts which result in increased erosion. This is unacceptable because of potential increase in adverse effects to water quality in the San Pedro River and other surface watercourses. It also has an incremental increase in PM10 and PM2.5 air quality degradation. Pinal County is nonattainment for PM10. Southern Arizona has experienced a prolonged

drought. How have drought conditions affected soils? Are pre-drought mitigation measures adequate in light of changes to soils and other biotic and abiotic resources?

Section 4.5.3.4 states that Subroute 4C2c has extensive sensitive water resources, yet discussion of mitigation of this potential set of impacts is scanty, despite the conclusion that this Subroute has the "highest residual impact to water resources." This level of impact merits more detailed discussion because of the unique nature of arid region water resources—their scarcity, ecological value, and role in defining a region's landscape. Why was 4C2c selected as the Preferred Alternative with this level of potential impact to water resources?

Section 4.6.2.1 has excellent discussion of the role of biological soil crusts—their vulnerability to damage, and inability to ever recover from damage. This information appears to be disregarded in assessing level of impact and corresponding mitigation measures.

Section 4.6.2.2 accurately states that "impacts of linear features on wildlife are mostly negative and may be difficult to mitigate." Proposed mitigation is not in keeping with the severity of impacts discussed. The impacts of increased recreation which would result from new access into areas used by wildlife are not addressed.

When the San Pedro River Valley is world-renowned for its biological diversity, why was the Preferred Alternative route run through this immensely valuable habitat?

Page 4-68—*Passerines and Other Birds*—needs to add breeding and before nesting in the second line.

Section 4.9.3.4 - Amendment of the RMP to accommodate the SunZia corridor to be compliant with VRM objectives is inappropriate and the equivalent of "spot zoning" to let in an otherwise unacceptable prohibited development. In addition, as noted in a previous comment, the VRM analysis was performed only for BLM lands, so that visual resource impacts on more than 90 percent of the proposed corridor through NRCD administered lands has not been analyzed.

Page 4-191, Subroute 4C2c concludes, "There are no moderate, high-moderate, or high impacts to existing or future land use." This is an erroneous and unsupported conclusion. The NRCDs have adopted land use plans and policies which do not include an industrial scale utility corridor. Impacts to existing land uses would result from increased trespassing, vandalism, and other illegal activities, degraded visual quality, degraded wildlife habitat, and degraded water quality, and increased soil erosion, among other impacts. Completed and planned conservation projects would also be adversely affected within the NRCDs' boundaries.

Future land use options would be compromised. The traditional economic base of the San Pedro River Valley and other lands within the NRCDs is mining and agriculture. Diversification will be essential to maintaining viable economies within the NRCDs.

Agritourism and specialty wood harvesting are examples of diversification which have already occurred. Both of these economic activities depend on a healthy ecosystem and a visually intact rural setting. Future opportunities which expand the nascent ecotourism activity in the region would be compromised and would be inconsistent with the vision for the region developed by the citizens of Pinal County and adopted in the 2009 Pinal County Comprehensive Plan. A balanced discussion of existing and future land use impacts which includes the adopted plans and policies of the NRCDs and of Pinal County should be included in this section.

Possible effects to the proposed new national wildlife refuge on the lower San Pedro River should also be discussed. The refuge has been proposed by the US Fish and Wildlife Service (USFWS) because of the high biodiversity values of the riverine area, which is where four major ecosystems merge. The information provided on the Lower San Pedro River Collaborative Conservation Initiative notes that "the river valley and watershed are threatened," and that "[l]arge infrastructure proposals could degrade habitat quality, increase erosion potential, and bring more water demands to compete with current users." It goes on to explain that "[n]on-native plants and animals compete with native plants and animals, degrade habitat quality, and interfere with productive land uses" ("Lower San Pedro River Collaborative Conservation Initiative: Planning Update #1," USFWS, June, 2012, p.2). The proposed refuge would be two miles wide on each side of the river, and would stretch from The Narrows to Winkelman. The proposed SunZia transmission line would violate this proposed refuge. The adverse impacts of new infrastructure projects noted by the USFWS have not been adequately addressed in the DEIS.

Section 4.12.3.3 - Views from the Rincon Mountain Wilderness Area would be adversely affected. The conclusion that the SunZia transmission corridor would be visible from 17 percent of the wilderness area is the basis for the faulty conclusion that effects would be "minimal."

Section 4.13 - This section contains no discussion of social impacts, only of economic impacts. The impacts to traditional lifeways in rural communities should be addressed, including population decline, introduction of a temporary workforce which would contribute little to the local social or economic fabric, loss of economic vitality because of industrial scale intrusion through the landscape, and other social effects.

Section 4.13.4.4 - This section overstates the likely effectiveness of an on-site Fire Marshall to respond to fire emergency. Expert input from professionals with wildland fire-fighting responsibilities in the region, such as the BLM and US Forest Service, should be solicited and their recommendations included as mitigation measures.

Section 4.13.4.5 - This section does not anticipate effects to recreation and tourism, ranching, or property values. This conclusion is not supported, and the discussion is not sufficiently inclusive. For example, grazing impacts are assessed only for BLM lands, which are a small proportion of the whole corridor on NRCD lands.

Ranching is of more than local importance; it provides essential products to residents of Arizona, and beyond.

Changes to the tourist economy would result from future degradation of the visual quality which is essential to the emerging ecotourism market.

The statement that minimal decline in property values results from transmission line location through an area is not defensible in an area which depends on high scenic quality and an intact natural landscape as the backbone of its present and future economy. The discussion should explain how this statement about property values was arrived at.

Section 4.14 - The entire discussion of Environmental Justice is flawed and permeated with an urban bias. Census tracts are not an appropriate unit of measure in a geographically dispersed but socially closely-connected rural area. A census tract does not define a rural community; a 3 mile distance from the project centerline is an arbitrary distance to determine impacts. An example of the urban bias appears in Table 4-20, which lists High impacts as those resulting in property condemnations which are more likely to occur in urban areas. While this is true, it is inappropriate to displace impacts to rural areas merely to avoid impacts to urban areas. This section places the land values of urban property owners—who are highly transient—above the values of multi-generational rural landowners.

Section 4.14.3.4 - There appears to be a calculation error in Table 4-23 in determining the total population in Pinal County. If Hispanic population is 8,253 and Other minority population is

5,183, total population should be 13,436, not 10,782. This correction would affect the percentage calculations.

Section 4.14.3.6 - The conclusion that there would be no significant impacts to environmental justice populations is unsupported because of the too-narrowly defined criteria for identifying such populations in a rural community.

Section 4.17 - The discussion of Cumulative Effects ignores past and present actions. Lands within the NRCDs have had the effects of more than a century and a half of land-altering activities that have resulted in major effects to almost all regional resources.

The Energy Development Forecast Analysis used in the DEIS bears very little relationship to the only published economic feasibility study for an EHV line in this region, and bears even less relationship with an objective analysis of the most likely generation sources. On page 4-274 are two energy development scenarios that make the assumption that 81% to 94% of the developed energy along the proposed line will be renewable, with the rest being "other existing types of generation facilities". Over a fourth of the Cumulative Effects discussion emerges from this unrealistic energy

development scenario. It is misleading to portray the project as primarily (81 to 94%) a renewable energy project, which is the justification for the SunZia project.

The High Plains Express (HPX) Project Stage 1 Feasibility Study was cited by the local NRCs in two of their Information Quality submissions to the BLM. This cited document makes the statement, "For this study, the SunZia project was considered to be an integral segment of the HPX Project." The study concluded that the benefit/cost ratios for an EHV line in this region are most favorable with a renewable/fossil resource mix of nearly equal parts, due to the highly variable output of most renewable energy resources in the region. The conclusion was: "A 'balanced' scenario consisting of near equal amounts of fossil and renewable energy performed the best under a range of circumstances."

The two facility scenarios presented by the BLM on page 4-274 bear little relationship to the optimum energy development scenario predicted by the HPX feasibility study, and thus bear very little relationship to what real investors and real regulators would accept as an economically practical energy development scenario. The BLM did not provide a feasibility study that would either support the economic feasibility of the SunZia project or contradict the conclusions of the HPX study. Thus the cumulative effects analysis has no basis in fact to support its justification of the SunZia project. The local NRCs also cited the "imminently pending" non-renewable energy resources located along the proposed route. These include the planned and permitted 1000 MW Bowie plant, as well as existing natural gas powered plants, located in southern New Mexico and southern Arizona, that cannot expand production without increased transmission capacity. One of the limitations of an EHV line is the high expense of providing "on-ramps and off-ramps" (substations) for transmission access. The proposed SunZia project only has six substations, and three of them are located in the region of the natural gas powered plants. The highest estimate for non-renewable energy development in either of the scenarios presented by the BLM is 580 MW, which is a gross misrepresentation of the probable development of non-renewable energy resources resulting from this proposed increase in transmission capacity. The Bowie plant would contribute 1000 MW on its own.

Since SunZia has not disclosed its "anchor customers", a term used in the 2011 Federal Energy Regulatory Commission (FERC) decision, and since FERC will regulate access for all other generation sources mostly on a first come/first served basis, the BLM is in no position to speculate that only 290 to 580 MW of non-renewable energy would be developed as a result of the proposed transmission project. By grossly underestimating the development of non-renewable resources, the BLM also grossly underestimated their cumulative effects, and appears to have not discussed cumulative effects of new fossil powered generation at all.

This lack of objective analysis is especially evident in the section on Global Climate Change, where the BLM makes the speculative statement that "... construction of either of the proposed options could potentially result in a net decrease in GHG [greenhouse gas] emissions relative to the No Action alternative" (page 4-280). This

assertion by the BLM totally ignores the burgeoning role that natural gas is playing in the expansion of energy resources in the Southwest. The only scenario that has any probability of reducing GHG emissions is one in which no new fossil fuel resources are built and existing ones are replaced by renewable resources. No objective observer would conclude that the SunZia project will accomplish this particular goal. The identical unsubstantiated assumptions about energy development were applied to the SunZia Economic Impact Assessment Supplement on the Impacts of Potential Renewable Generation Facilities, found in Appendix G1. This portion of the SunZia economic benefits study is 121 pages in length, all based upon the unsubstantiated claim that 81% to 94% new energy development along the proposed line would be renewable. Because of the faulty assumption, this study only serves to reinforce a "renewable energy" marketing myth for the project.

The BLM's guidance on cumulative effects analysis ("Example of Cumulative Effects Analysis") has not been followed. An appropriate boundary should be determined for each resource. Normally, this is the watershed in a rural context. It can also be a community or a culturally valued landscape such as the San Pedro River Valley. Migratory wildlife such as birds might require a hemispheric context for appropriate analysis of cumulative effects. A Census tract or an arbitrary 3 mile limit from a centerline are not boundaries consistent with BLM guidance, which suggests numerous appropriate boundaries for resource analysis with emphasis on choosing those that will give the most complete picture of the effects. In the case of the desert tortoise, for example, this could be the entire range of the species, not merely its occurrence within the project area. In the case of the NRCs, the District boundaries are appropriate because adopted plans and policies apply to all lands within the Districts.

Time frames for the duration of effects are scantily noted throughout the discussion.

Once the line is in place it will encourage further development. An adequate discussion of the cumulative effects likely to occur in the future as a result of the preferred alternative needs to be expanded to include, at the least, the effects of the power line on wildfire threats, urbanization, severe loss of riparian habitat, and groundwater overdraft.

Reasonably foreseeable actions should consider known opportunities and trends. The opportunities and trends for expanded tourism which requires intact ecosystems and high visual quality on lands administered by the NRCs has not been considered.

Table 4-31, "Present, Future, and Reasonably Foreseeable Future Renewable Energy Projects" lists projects in Arizona with a collective total of only 50 MW of solar energy production, and only one wind energy project of unknown power production. These projects are not in the vicinity of the SunZia project. With such low production foreseeable, what is the need for the SunZia pair of 500 kV transmission lines, unless undisclosed non-renewable projects will make up the bulk of energy wheeled by SunZia? If non-renewable energy is going to be developed, as it is logical to conclude given the capacity of the proposed SunZia transmission lines, this too should be discussed in the

cumulative effects. Further, the financial feasibility of the SunZia project should be addressed in the context of the renewable/non-renewable energy production which would be wheeled to give a clear picture of the cumulative effects of future and foreseeable energy development. If the proposed Southline Transmission Project is approved, what would be the effect on the number of 500kV lines the SunZia project would have?

Figure 4-3, "Qualified Resource Areas for Solar," has none in the vicinity of Subroute 4C2c. The area demarcated AZ-SO is west of Tucson and Eloy: a short transmission line from the AZ-SO QRA would be adequate to wheel power from this zone to the Pinal Central Substation, eliminating need for transmission lines through the San Pedro River Valley and other lands administered by the NRCs. This would also be compatible with the Districts' suggestion of placing the line along I-10.

4.17.4.6 - The appropriate cumulative effects area for consideration of wildlife resources should be, at the least, the watershed and not the arbitrary limit of 4 miles each side of the SunZia corridor. The middle and lower San Pedro River Valley migratory bird corridor is unnecessarily restricted as the area of effect, when cumulative impacts to migratory birds will occur throughout the Southwest and beyond. When the SunZia corridor would impact Southwest Desert Willow flycatcher habitat, why is it the Preferred Alternative? Similarly, why was the Preferred Alternative selected when it could affect the Sonoran Desert Tortoise population in the San Pedro River Valley?

The discussion under *Construction* is good and notes the potential adverse effects of ground disturbance on invasive plants and erosion. However, mitigation does not seem commensurate with the level of effects, especially residual effects.

4.17.4.9 - This section accurately predicts the conversion of natural landscapes to industrial landscapes. Nonetheless, the severity of these effects in the context of the San Pedro River Valley is not adequately discussed, nor are mitigation measures in proportion, especially considering that the analysis is only for the small percentage of BLM lands which would be impacted by the SunZia project. A suggested mitigation is co-location of facilities and shared access. This does not carry the thought to its conclusion, that co-location doubles up on the effects because the SunZia corridor would in effect be growth inducing and attract additional development with increased impacts to resources. This should be discussed in the cumulative effects section. If the SunZia project is approved, there would be an EIS to tier off of. This cost-saving tiering for NEPA compliance would be an inducement for additional utilities to co-locate in the SunZia corridor.

Page 4-312 - Discussion of agricultural impacts notes loss of permitted grazing and reduction of agricultural production. The conclusion that this would not be significant is based on a regional context. This is an inappropriate resource boundary. Impacts to local agricultural producers should be analyzed.

There is also discussion of increased roads opening new access to OHV use. The discussion under *Construction* should be expanded to include effects to existing roads

such as pavement deterioration or rutting and erosion of unpaved roads (such as Redington Road) which would be subject to increased traffic and transport of heavy loads. Effects of required road reconstruction are not addressed.

There appears to be no discussion of traffic conditions, road networks or impacts to traffic or roads. This should be added as a separate section for analysis.

Section 4.17.4.13 - There is no discussion of the cumulative effects on existing ecotourism such as birding, wilderness use, hiking, and scenic drives, or future ecotourism which is an economic goal specified in the Pinal County Comprehensive Plan. This economic opportunity would be adversely affected by degradation of local quality of life and natural resources/biodiversity at the ecosystem level.

Section 4.17.5 - The cumulative effects of proposed RMP amendments cannot accurately be assessed when the baseline conditions detailed in the RMP are more than 20 years old.

Section 4.18.1.2 - *Soil Resources* concludes that there would be direct and indirect impacts to soil resources if the RMP is amended to allow a corridor in a designated avoidance area. Why has the Preferred Alternative been located on soils which will be impacted adversely? Slope is not adequately analyzed. The Preferred Alternative is on much steeper terrain, with greater potential for erosion, than other alternatives.

Section 4.18.1.4 - The San Pedro River crossing should be discussed specifically.

Section 4.18.1.7 - This section continues the very generalized discussion of visual effects to historic landscapes. A detailed discussion of historic landscapes and culturally valued landscapes in the San Pedro River Valley should be added. Moreover, the potential ecotourism and scientific importance of the cultural resource context of the San Pedro River Valley is inadequately discussed. It has a high value because of numerous sites which provide evidence of prehistoric occupation, such as the numerous mammoth kill sites. It also has high value because it is a relatively undisturbed landscape which still conveys, in large measure, a sense of place in which prehistoric and historic human activities occurred.

Section 4.18.1.12 - Discussion of potential (temporary) job creation should be balanced by discussion of permanent loss of tourism potential through landscape and resource degradation.

Section 4.18.1.13 - Whether or not a place contains residences is not the appropriate measure of environmental justice impacts. Rural occupants can be affected by regional-scale impacts to quality of life, and from incremental additional impacts to existing conditions.

Section 1.7 Government to Government and Section 5.3 Consultation and Coordination is inadequate in describing the coordination efforts initiated by the Redington and Winkelman NRCD's. Not only are record of those coordination efforts absent from the DEIS under these sections, the Districts have record of the BLM stating a refusal to coordinate critical issues and inconsistencies.

The FLPMA mandates that BLM coordinate administration of public lands with the land use planning and management of local governments within which such lands are located. This statutory mandate is detailed and explicit. The SunZia Project must attempt consistency with the local policies and plans. The specific directive is that "land use plans must be consistent with State and local plans to the maximum extent." See 43 USC § 1712.

Pursuant to 43 CFR § 1610.3-1(a), BLM must assure coordination with local governments. That regulation requires BLM to follow a specific administrative process and BLM must:

1. Keep apprised of non-Bureau of Land Management plans;
2. Assure that BLM considers those plans that are germane in the development of resource management plans for public land;
3. Assist in resolving, to the extent practicable, inconsistencies between Federal and non-Federal government plans; and
4. Provide for meaningful public involvement of other Federal agencies, State and local government officials, both elected and appointed, and federally recognized Indian tribes, in the development of resource management plans, including early public notice of final decisions that may have a significant impact on non-Federal lands.

The Districts have advised BLM at District-initiated coordination meetings and in writing that there are specific inconsistencies with the SunZia Group 4 Alternatives, and District policies and purposes. Once having been advised of the specific inconsistencies, BLM must address those inconsistencies and wherever possible, attempt to resolve them. The DEIS must identify and resolve those inconsistencies, which it has not done. The preferred alternative was not provided as an alternative to the Districts before the release of the DEIS. The Districts have not had the opportunity to meet with the BLM for a consistency review with the agency.

43 CFR § 1610.3.2 mandates that the SunZia Project must be consistent with adopted resource related policies and programs of the Districts. Indeed, if there are any inconsistencies between the federal and local plans and policies, the Districts must be kept apprised of any such inconsistencies. In short, the responsible officer of BLM must comply with the requirement to work towards consistency of the Federal plans, mission statements and policies of the Districts through the coordination process. The administrative requirements are clear and the SunZia Project must conform to these regulations.

- (a) Guidance and resource management plans and amendments to management framework plans shall be consistent with officially approved or adopted resource related plans, and the policies and programs contained therein,

of other Federal agencies, State and local governments and Indian tribes, so long as the guidance and resource management plans are also consistent with the purposes, policies and programs of Federal laws and regulations applicable to public lands, including Federal and State pollution control laws as implemented by applicable Federal and State air, water, noise, and other pollution standards or implementation plans.

(b) In the absence of officially approved or adopted resource-related plans of other Federal agencies, State and local governments and Indian tribes, guidance and resource management plans shall, to the maximum extent practical, be consistent with officially approved and adopted resource related policies and programs of other Federal agencies, State and local governments and Indian tribes. Such consistency will be accomplished so long as the guidance and resource management plans are consistent with the policies, programs and provisions of Federal laws and regulations applicable to public lands . . . (43 CFR § 1610.3-2 Consistency Requirements).

BLM should not be able to circumvent or curtail the required coordination with the Districts. BLM is required to integrate the NEPA process into "early planning" and FLPMA reasonably requires that the EIS be submitted to the Districts for review and identification of inconsistencies before the document is released for public review. 40 CFR § 1500.5. BLM has ignored this requirement and has ignored the requirement that BLM coordinate with the state and local agencies to the fullest extent possible to reduce duplication between NEPA and comparable state and local requirements. 40 CFR § 1506.2(b)(c). This mandate of coordination has been violated by BLM. This fundamental failure and deficiency could only be remedied if BLM coordinates the local policies and plans of Winkelman NRC and Redington NRCs with the SunZia Project. Therefore, any final EIS must be held in abeyance until there is compliance with these regulatory requirements.

BLM IS CONTRACTUALLY OBLIGATED TO COORDINATE THE SUNZIA TRANSMISSION LINE PROJECT WITH THE DISTRICTS

The State of Arizona has a strong public policy to provide for the restoration and conservation of its lands and resources, and the preservation of water rights and control and prevention of soil erosion. Ariz. Rev. Stat. Ann. § 33-1001. The Districts are political subdivisions in the State of Arizona created and existing pursuant to the Arizona Constitution, Article XIII, § 7 and Ariz. Rev. Stat. Ann. § 37-1001, *et seq.* As political subdivisions of the State, the Districts have a broad mandate to provide and care for the conservation of lands and resources within their respective jurisdictions and are delegated political subdivisions and local entities which carry out the State's resource conservation policy.

The Districts have pre-existing mission statements, policies and plans for resource management to conserve natural resources, fish and wildlife and their habitat, rivers and

streams and associated riparian habitats in such a manner as to protect and promote the public health, safety and general welfare of the people. The Districts have carefully constructed and balanced principles regarding the land use, planning and resource management in their respective jurisdictions in order to carry out the overall State of Arizona policy of resource conservation and management. To the extent that BLM's NEPA process is inconsistent with or adverse to these principles, conflicts and inconsistencies arise with the Districts' local plans. Such issues must be resolved by BLM through the mandate of coordination of land and resource planning efforts with those vital interests of the Districts.

Not only is BLM obligated to coordinate the SunZia Project with the Districts mandated by federal policy, laws and regulations, but also there is a specific contractual obligation to do so. BLM is contractually obligated to coordinate the SunZia Transmission Line Project and impacts of that Project on the Districts' resources and the Districts' local plans. These contractual obligations arise under the BLM's 1997-1998 Memorandum of Understanding with the State of Arizona ("Arizona MOU, Exhibit 1") and Winkelman NRCDC's Memorandum of Understanding ("Winkelman MOU, Exhibit 2"). The obligations placed on the BLM to coordinate are concise, direct and contractually enforceable by the very terms of those MOU's. The Arizona MOU specifically authorizes the Districts to initiate this request at any time to coordinate such resource management. (Arizona MOU, § G-1). The Winkelman MOU specifically provides:

II. Policy.

It is the joint objective of all parties (BLM and Winkelman NRCDC) to develop, coordinate and initiate resource conservation programs and to promote proper utilization and development of all lands subject to the respective jurisdictions of each.

The obligation to coordinate with the Winkelman NRCDC is found throughout the Winkelman MOU. The very purpose of the Winkelman MOU is for BLM to coordinate the resource planning management and educational activities with that District.

A request for coordinated resource management plan can be initiated at any time by a resource management agency, a Conservation District . . . (Arizona MOU, § G-1)

Pursuant to that Arizona MOU, the Districts hereby request that the coordination process be undertaken in a meaningful way to deal with the multiple issues raised by the Districts prior to the issuance of a FEIS. BLM entered into the Winkelman and Arizona MOU's in order to coordinate local resource planning and management activities. This obligation is enforceable in a court of law.

BLM has wrongfully taken a contrary position and has refused to coordinate critical issues with the Districts, notwithstanding BLM's obligation to do so. At the joint June 14, 2011 meeting in San Manuel, Arizona between BLM, WNRCD and RNRCD,

Mr. James Kenna rejected the request to coordinate.

Transcript of Minutes of June 14, 2011 Meeting, pg. 7 (Exhibit 3):

B.Dunn: Well, you know under FLPMA, coordinating local government has a, a higher plane than either one of those, as far as you're responsibilities to 'em. And, and that's been our argument all along.

J.Kenna: Well, I understand that. And I did run it by the solicitors, including the national solicitor, and I think their feeling is, it's a misinterpretation of case law.

Throughout the process, BLM staff was directed *not* to coordinate inconsistencies with the Districts. The actions and decisions by BLM are reflective of that negative approach. BLM officials refused also to present to the Districts the solicitor's opinion in writing. Throughout the process, BLM only gave lip service to the interests and concerns of the Districts but chose not to even identify, address or attempt to resolve the issues and concerns.

Even though BLM gave assurances that the Districts' issues and impacts would be entered into the DEIS, it failed to do so.

Transcript of Minutes of July 12, 2011 Meeting, pg. 13 (Exhibit 4)

B.Bellew: You wouldn't, that's, I mean that's, I mean case in point, we just finished this over with Catron County, and they were cooperators throughout on the Land Use Plans for Socorro. Any what, back to where we mentioned earlier, the biggest thing is that the information that you have, that's entered into the document, and you have the assurance that it has, that's going to get entered into the document. The problem we're getting into right now is, since we, BLM doesn't recognize coordinating status within, NEPA planning, we don't, we're hit a certain point where we would be giving this body more information than our general public would be getting and that's not a good situation.

Transcript of Minutes of July 12, 2011 Meeting, pg. 16 (Exhibit 4)

G. Vinson: So you've read that. So how come in the records, they do say, in stuff that says, are you going to coordinate with us, and they say yes. But you guys keep telling us you cannot.

M. Warren: Well, I know that the State Director took it up to DC and it, and they're saying, no.

(multiple speakers) Ok.

(multiple speakers) Well

M. Warren: (multiple speakers) So I'm saying to you, I'm saying to you, in good faith, I'm saying to you.

(multiple speakers) Your boss said no.

G. Vinson: (multiple speakers, laughter) Yeah, basically yes. We know you're the messen--, well, you know . .

In the DEIS, BLM selected Subroute 4C2c (Subroute) as part of the new preferred alternative routing. That Subroute cuts through the heart of the Districts and unnecessarily parallels the San Pedro River for 45 miles adversely affecting perennial feeder streams with increased significant impacts. This Subroute was a complete surprise not contemplated by the Districts because the impacts were too far reaching and too serious. There was no purpose or realistic opportunity for the Districts to consider and analyze the impacts of the new Subroute.

Transcript of Minutes of June 14, 2011 Meeting, pg. 20: (Exhibit 3)

A. Smallhouse: Will you share that with us before it comes up in an EIS or will you share the EIS with us before, excuse me, before the plan, before it's given to the public?

J. Kenna: Yeah, we'll figure out a way to get this done, one way or another, and, that's people are chafing at you know, which option is going to get picked, but regardless of how whether you want to become a cooperating agency or not, I am going to ask these guys to come back and talk to you before we release the DEIS and at that point, we should have enough data on questions like that, about exactly how they are treated, and we can just resolve that.

While the Districts were undertaking their due diligence in providing specific inconsistencies and conflicts, these comments could only be provided based on the level of details shared by BLM which was at a minimum and non-existent with respect to the Subroute.

Not only because the law requires, but also because of the commitments made directly to the Districts by BLM, BLM should have provided draft documents and meaningful information regarding the impacts on the Districts. The Districts should have been provided substantive detail relating to the Subroute prior to the issuance of the DEIS. *This was not done.* Moreover, there was no coordination or even attempted coordination by BLM with the Districts relating to this new Subroute.

of details shared by BLM which was at a minimum and non-existent with respect to the Subroute.

Not only because the law requires, but also because of the commitments made directly to the Districts by BLM, BLM should have provided draft documents and meaningful information regarding the impacts on the Districts. The Districts should have been provided substantive detail relating to the Subroute prior to the issuance of the DEIS. *This was not done.* Moreover, there was no coordination or even attempted coordination by BLM with the Districts relating to this new Subroute.

BLM must coordinate the following specific resource management issues:

1. Effects on, and alteration of, the San Pedro River watershed and negative impacts on critical areas;
2. Effects to wildlife habitat areas, plants and animal species and to special status species;
3. Effects on cultural resources and archaeological sites and on historic landscapes;
4. Effects to visual resources and existing viewsheds;
5. Conflicts with current land use plans and policies of the Districts and other local plans;
6. Impacts on wilderness areas and other special management areas;
7. Effects on rural lifestyle and socio-economic conditions and environmental justice;
8. A need for avoidance of sensitive areas;
9. Inputs to proposed changes to the Safford and Tucson Resource Management Plans;
10. Location of the SunZia Transmission Line corridor because the Preferred Alternative route requires an amendment to BLM's own Safford and Tucson Resource Management Plans;
11. Cumulative effects on resources and environment;
12. Impacts on critical areas of concern and avoidance of other sensitive areas; and
13. Impacts to mitigation properties, resources, values, ESA species and special status species, and investments.

We note with interest that applicant's June 13, 2012 letter from Mr. Tom Wray, the SunZia Project's Manager, to Mr. Adrian Garcia, BLM Project Manager, raises many of the same concerns and impacts as the Districts do. The applicant has identified negative impacts with significant damage to the environment of the Preferred Alternative Subroute 4C2c. That letter also acknowledges what the Districts have been saying throughout this process, that the San Pedro River watershed and the Districts are within a unique riparian habitat. The applicant concludes "such damage will be difficult to mitigate," letter page 2, ¶ 1. The Districts generally concur in Mr. Wray's assessment that impacts may be impossible to mitigate.

mitigate," letter page 2, § 1. The Districts generally concur in Mr. Wray's assessment that impacts may be impossible to mitigate.

The DEIS has failed to identify the specific impacts to the Districts. Therefore, the impacts and damages have not been addressed or resolved.

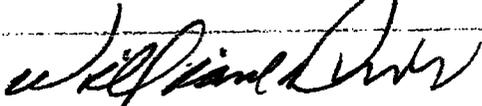
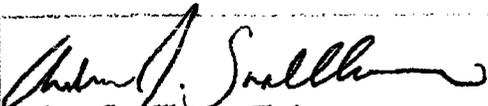
ACTIONS REQUESTED

Accordingly, the Districts hereby request that BLM undertake meaningful coordination steps to identify, discuss, resolve inconsistencies and conflicts, address those inconsistencies and conflicts and propose resolution of those issues or alternatives to resolve those issues. Specifically, the Districts demand that:

- (i) BLM must vacate the current August 22, 2012 DEIS comment period and reset it at some future date;
- (ii) BLM must coordinate all of the above-identified issues with the Districts;
- (iii) BLM must address and resolve the inconsistencies and conflicts with the Districts' plans in a Revised Draft Environmental Impact Statement ("RDEIS");
- (iv) BLM must address and resolve the issues raised by the applicant in the RDEIS; and
- (v) BLM must not issue a FEIS until there has been full coordination of all issues with the Districts and the impacts and damages are addressed and resolved.

The Districts are looking forward to hearing from BLM and its senior representatives to undertake good faith coordination issues with the Districts and suspend the current administrative process until the foregoing demands are complied with.

Thank you for your consideration of these comments,

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|  William Dunn, Chairman Winkelman Natural Resource Conservation District P.O. Box 68 Mammoth, AZ 85618 |  Andrew Smallhouse, Chairman Redington Natural Resource Conservation District P.O. Box 585 San Manuel, AZ 85631 |
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Compliance Conditions Redington NRC

1. Assurances.

a. Bonding

b. Written into Plan of Development

The Segment 3 San Pedro River crossing through the San Pedro River Valley near Oracle will be considered to be a Reclamation Zone 1- Highest Priority Area. This area has high impacts for visual, biological, and land use resources with low potential for the biotic community, particularly soils and vegetation, to substantially rehabilitate itself even with reclamation intervention.

Project Management-Roles and Responsibilities:

- 1) AZ State Land Department advisement and approval for deviations on state land portions, mitigation standards, reclamation, monitoring, and reclamation success standards.

Communication Procedures and Protocols:

- 1) The Compliance Inspection Contractor will maintain regular contact with the conservation district for site visits, notification of project deviations and community updates as to the progression of the project and to provide an opportunity for the reporting of cooperator/resident concerns.
- 2) Local school districts will be notified of increased construction traffic for bus safety.
- 3) The conservation district will receive a copy of the final summary report.

Project Construction & Maintenance:

- 1) Only aerial Construction and Maintenance along the San Pedro River (Segments C276, C201, C44, C450), will be used (Selective Mitigation Measure 13), there shall be no ground disturbance beyond the concrete bases for the towers and anchor wires.

- a. Reduces the need for heavy equipment mobilization and costs over existing inadequate roads and/or newly disturbed soils;
 - b. Reduces the time, effort and labor costs associated with mobilization and road rehabilitation;
 - c. Water sources for dust abatement are not readily available;
 - d. Substantially lower costs for post-construction mitigation and monitoring;
 - e. Will not create ease of access for future line sitings;
 - f. The Redington and San Pedro River Roads are un-improved rural access roads not engineered to withstand the magnitude of necessary equipment traffic which will be needed for construction. Roads into this valley cross multiple major washes and can be narrow with blind curves creating a safety hazard for local residents and perpetuating erosion issues. Pinal County will have invested a substantial amount of money in 2016 to improve a portion of the road's surface with chip seal to address EPA PM-10 Non-attainment compliance and it is unclear as to what affect construction traffic will have on this new surface.
- 2) Conductor will be strung using helicopters.
 - 3) All maintenance to be done using existing roads and/or overland access.
 - 4) For co-located routes in segment C450, existing utility roads with current erosion and structural issues will be rehabilitated to a "better" condition than pre-construction which does not increase ease of access, but decreases erosion.
 - 5) During periods of construction traffic to tower sites along Redington/San Pedro River Rd., dust abatement will be a priority.
 - 6) Grazing lessees will be notified by the AZ State Land Department when the final route has been determined and provided the opportunity to notify the appropriate construction personnel as to current grazing activity, water use, and fencing/gate use. Tower placement near

permanent livestock waters will be discouraged and if unavoidable, an alternate water source will be provided by the Proponent during construction and rehabilitation activities.

- 7) Project construction access for additional future facilities will not be made available.

Reclamation Success:

- 1) The Proponent is responsible for temporary enclosure of vegetation rehab in grazing allotments and blocking access to off-road vehicles and will remain responsible for continued reclamation and monitoring of these sites if it is determined that the site has not met success standards. Lessees will be compensated for loss of forage during this rest period.
- 2) Proponent and/or responsible party will meet with the Redington NRCB annually for a period of no less than 10 years post-construction to inspect access roads and restoration work for any additional mitigation measures necessary and repairs of existing work. Furthermore, we would request a bond which would sufficiently cover the costs of such secondary mitigation projects should the Proponent not fulfill this follow up obligation to the resources impacted during construction and due to powerline existence.

c. Proof of Applicant's financial capacity

2. Direct advisement capacity from the districts for site rehabilitation for disturbance which is absolutely necessary:
 - a. Keep the disturbance above 3400 ft elevation wherever possible to be above the Sonoran Desert, with greater rainfall average.
 - b. The top 4-5 inches of soil disturbed to be saved and not disturbed to protect the soil mycorrhiza, locally adapted seeds, bugs, etc for rehab. Any vegetation should be cleared into this soil as well for organic matter.
 - c. For any heavy loam to clay soils, bring in 4-6 inches of sandy loam soil for the uppermost layer.

- d. Seed mixes should include – sideoats, black grama, bush muniv, purple needlegrass, squirreltail, Arizona Cottontop, green sprangletop, plains bristlegrass etc to be applied in the fall. No less than 8 species. Drilled wherever possible, broadcast where needed at twice the seeding rate of drilled areas.
- e. Straw wattles installed on the contour to minimize any runoff and prevent the erosion. Spacing depends on the % slope.
- f. Install drift fences alongside all existing roads and washes where access roads cross to deter off road vehicle traffic. Structures checked every two weeks for the first two years of operation and timely repair of any damages.
- g. Rapid responsiveness of maintenance crews to notifications about erosion and off-road vehicle abuse for the first two years of rehabilitation.



Pipeline Road Erosion issues.









