PART A – COVER PAGE

STATE WATER RESOURCES CONTROL BOARD
SFY 2002 Costa-Machado Water Act of 2000
CALFED Watershed Program

Application No. 408

PROJECT TITLE: Stewards of the Arroyo Pasajero: Sharing our Success

Project Region X Indicate RWQCB #: 5

Multi-regional Project _____ Indicate RWQCB #s: _____

Statewide Project _____

PROJECT DIRECTOR (one name only) (Ms., Mr., Dr.): Mr. Morris A. Martin 6/5/02
PRINT DATE

LEAD APPLICANT OR ORGANIZATION: (one name only) Westside Resource Conservation District

TYPE OF AGENCY:

Municipality _____ Local Agency XX *Nonprofit (non-landowner) _____

Nonprofit (landowner) _____ Local Public Agency _____

STREET ADDRESS: 3763 E. Robinson
CITY: Fresno Zip Code: 93726-5917
P.O. BOX: _____ Zip Code: _____
COUNTY Fresno
STATE: California

PHONE NO.: (559) 227-2489 FAX NO.: (559) 227-0215

E-MAIL _____ FEDERAL _____

ADDRESS: _____ TAX ID. NO.: 77-0409494

PROJECT TYPE: Development of a regional watershed plan to reduce erosion and sedimentation

LEGISLATIVE INFORMATION

Senate District 15 Assembly District 30

United States Congressional District 20

CALFED, RWQCB, or SWRCB STAFF CONTACTED REGARDING THIS PROPOSAL:

Contact:	Pam Buford	Contact:	Sam Harader
Phone No.:	(559) 445-5576	Phone No.:	(916) 651-6170
Dates contacted:	5/9, 5/17;	Dates contacted:	5/29

PRIMARY COOPERATING ENTITIES:

Entity Name:	The Stewards of the Arroyo Pasajero CRMP		
Role/Contribution to Project:	Management		
Contact Person:	Linda Ballentine	Phone No.:	(925) 855-7185
E-mail address:	lindabtsa@cs.com		

Entity Name:	CA Dept. Fish & Game		
Role/Contribution to Project:	Advisory, Permitting		
Contact Person:	Tim Kroeker	Phone No.:	(559) 332-2021
E-mail address:	tkroeker@dfg.ca.gov		

WATERBODY/WATERSHED (Include Catalog Number in Section 18 of the ARD): Upper Los Gatos – Avenal #18030011

GPS COORDINATES FOR PROJECT LOCATION, IF AVAILABLE: _____

FISCAL SUMMARY:

Proposition 13 Funds Requested	$ 55,000.00
Other Project Funds	$ 10,550.00
Total Project Budget	$ 65,550.00

CERTIFICATION

Please read before signing.

I certify under penalty of perjury that the information I have entered on this application is true and complete to the best of my knowledge and that I am entitled to submit the application on behalf of the applicant (if the applicant is an entity/organization). I further understand that any false, incomplete, or incorrect statements may result in the disqualification of this application. By signing this application, I waive any and all rights to privacy and confidentiality of the proposal on behalf of the applicant, to the extent provided in this RFP.

_____

Applicant Signature Date

Morris A. Martin

_____

Printed Name of Applicant

PART B – PROJECT NARRATIVE (not to exceed 10 pages)

Describe your project and its context in your watershed. Include what you intend to do, where and with whom you intend to do it, why you have chosen to do it, and what result(s) you expect from implementation. Include also a summary description of the following:

The 14 square mile Domengine watershed is substantially impaired due to natural geologic erosion, which is accelerated by the decline of rangeland and lack of riparian vegetation. Significant rainfall creates major floods that move massive amounts of sediment to the valley floor. Floodwaters, containing sediment and salts, end up in agricultural fields and in retention levees near the California Aqueduct. This reduces the ability to manage floods and increases the frequency of flood flow into the California Aqueduct. This flooding threatens the integrity of the aqueduct and reduces the water quality of aqueduct deliveries to millions of downstream water users in the southern San Joaquin Valley and the Los Angeles Basin.

In April 2001, landowners in the Domengine watershed asked to be included in the Stewards of the Arroyo Pasajero Coordinated Resource Management and Planning program. Their goals and objectives of improving the Domengine watershed were consistent with the approach of the CRMP. Instead of wasting time and money developing a new CRMP, and duplicating existing processes that are already in place, the watershed landowners and the CRMP decided to coordinate their efforts with state and local agencies for maximum effect.

The CRMP, whose mission statement is to improve the Arroyo Pasajero watershed through erosion and sediment control, by implementing improved land management practices that will sustain and promote the aesthetics, environmental quality, and economic viability of the watershed, was established in 1997 through Westside Resource Conservation District, as a result of a major storm event in 1997 that washed out a bridge on I-5 and killed motorists. It takes a "low tech" approach to relieving flooding and erosion problems, as opposed to building dams or other unnatural structures.

In developing its ranch plans, the CRMP identifies and integrates the ecological, economic, and social factors of the land and prescribes best management practices that will result in properly functioning conditions throughout the watershed such as:

- Dissipation of stream energy in flood events,
- Reduced bank erosion,
- Developing root masses that stabilize streambanks,
- Development of appropriate floodplain conditions,
- Improved floodwater retention and groundwater recharge, and
- Filter sediment

As the majority of the land is used for agricultural purposes: primarily for grazing cattle. Therefore, the CRMP applies management measures for agricultural purposes as well as for Riparian habitat.

Agriculture –

Erosion and Sediment Control – Removal of tamarisk and planting of native vegetation along streambanks and in stream channels will help to provide adequate vegetation so as to dissipate stream energy during flood events, reduce bank erosion, develop root masses that stabilize streambanks, aid floodplain development, improve floodwater retention and groundwater recharge and filter sediment. In some areas, particularly the lower watershed where acres of land have eroded into the creek during storm events, revetment fencing is installed in front of cottonwood trees to help dissipate stream energy during flood events. After major flood events, these features have shown evidence of dissipating stream energy and filtering sediment that was carried down the stream as large amounts of sediment were deposited between the revetment fencing and the cottonwoods and did not endanger the California Aqueduct.

Facility Wastewater and Runoff from Confined Animal Facilities – To date, there have been no wastewater storage facilities or areas where animals are confined in areas, i.e. corrals, which would cause significant wastewater or runoff incidents.

Nutrient Management – As it pertains to pastureland, the installation of fencing and water distribution in upland areas allows for nutritious plants to recover from seasonal grazing and improve residual dry matter conditions. The CRMP also has programs in place that support the removal of noxious weeds such as yellow star thistle, medusa head, and others. This ensures that grasses that contain the most nutrients are allowed to develop properly.

Pesticide Management – This measure applies to the removal of noxious weeds as mentioned above. Pesticides are not used frequently in the pastures, however, every effort is made to contain outbreaks and spreading of noxious weeds.

Grazing Management – The installation of fencing, repair of stockponds, installation of storage tanks and watering troughs and other water distribution practices help landowners to improve their grazing rotation practices. They allow pastures in the upper watershed to be used more frequently, which relieves the grazing pressure on the pastures in the lower elevations and riparian corridors. Riparian areas are better protected, resulting in reduced bank erosion, better development of riparian plant root masses, and improved floodwater retention and groundwater recharge. In addition, the removal of heavy water-consuming weeds such as tamarisk helps to conserve water and recharge groundwater.

Irrigation Water Management – In the case of pastureland, water management is improved by the development and installation of water tanks, and troughs and by the repair of stockponds. These not only assist with improved cattle distribution, but also by retaining rainwater in the upper watershed, they also help to improve floodwater retention and groundwater recharge there.

Education / Outreach – The Westside Resource Conservation District strives to inform and educate as many people as possible about water and land conservation measures. They publish a quarterly newsletter, "The Westside Resource", that informs landowners, agencies, and others about conservation efforts throughout the district and about the activities of the Stewards of the Arroyo Pasajero CRMP. In turn, the Stewards of the Arroyo Pasajero CRMP host a monitoring workshop and/or a watershed tour twice a year whereby individuals can learn more about conservation and can view projects that have been implemented. Recently, the CRMP hosted a Watershed Assessment Workshop that educated individuals about how to analyze Proper Functioning Conditions (PFC) in

riparian areas. The workshop was well attended by agencies, landowners, and college students.

Wetlands, Riparian Areas and Vegetated Treatment Systems –

Protection of Wetlands and Riparian Areas – The best management practices prescribed in the Farm and Ranch Plans focus largely on protecting riparian areas and helping them to develop and maintain floodplain through the presence of adequate vegetation. This is done through the practices of water distribution in the upper watershed to capture stormwater in tanks and troughs and in stockponds to help relieve the force of floodwaters. Fencing is installed to relieve grazing pressure in riparian areas to allow preferred vegetation to develop, which will create filter strips and will provide greater resilience to withstand significant flood events, and improved water quality as erosion is reduced. In addition, planting of native vegetation, such as cottonwoods and willows, and the removal of weeds, such as tamarisk, is an important part of the program, as it helps to conserve water and contributes to greater channel stability and streambank stability.

Restoration of Wetlands and Riparian Areas – During flood events in 1995 and 1998, severe damage was done to many of the streambanks in the watershed, as vegetation was stripped from the banks. By implementing the practices described above, many of these riparian areas are being naturally restored to properly functioning areas that support diverse wildlife habitats and thus improved biodiversity.

Vegetated Treatment Systems – In the case of this watershed, this is done by the installation of revetment fencing and planting of native vegetation in areas that have significant erosion damage that help to dissipate the energy of the stream and filter out and deposit sediment carried in the rushing streamwaters, and assist with channel stability. The placement of revetment fencing with cottonwoods behind it helps to break the crushing forces of the floodwaters as they come down the stream and trap the sediment from being carried downstream. This is a "low tech" method that has proved to be effective, yet maintains the natural conditions of the stream and stabilizes receding streambank erosion.

Education/Outreach – The above comments for Agricultural Education and Outreach can be stated for the management measures for Riparian Areas, however, the monitoring component was not addressed above. Monitoring ensures physical, tangible evidence of conditions (RDM, water turbidity and quality, etc.) that document reduced potential for NPS pollution over time.Under the supervision of the CRMP and participating agencies, (DWR, NRCS, BLM, CDFG, etc.) landowners perform project appropriate monitoring activities to further document the conditions of the watershed. They have strong photo monitoring practices, which have documented many improvements to the watershed that might otherwise have gone unnoticed. Landowners also participate in weed mapping for yellow star thistle and other weeds, water testing for water quality readings, and rainfall documentation. The CRMP is exploring additional areas of monitoring which include additional mapping and site documentation via GPS, and analysis of grass clippings to accompany the photo monitoring.

Since the first Ranch Plan was developed for the Arroyo Pasajero CRMP in 1998, the following measures have been prescribed throughout the Arroyo Pasajero and watershed:

- Over 53 miles of livestock / wildlife water pipe
- Over 66 water storage tanks
- 125 troughs
- 7 springs restored for livestock / wildlife water
- 11 water wells/pumps
- over 20 stockponds repaired
- Over 80 miles of riparian / upland fencing
- over 1000 cottonwoods and 300 willows planted
- one mile of drip irrigation
- over 1,200 feet revetment fencing
- tamarisk removal in riparian corridors

With the addition of the Domengine Watershed to the CRMP, this list will grow considerably.

- CALFED Program objectives: how your proposal will further specific objectives of the overall CALFED Program, and the CALFED Watershed Program initial implementation priorities.

The CRMP's program is scheduled to be fully implemented in about ten years over the entire 14-square mile watershed area above the California Aqueduct. There will be ongoing coordination of planning, implementation and monitoring activities for this time period, and monitoring will document water quality, and erosion and sedimentation improvements for sustaining water quality benefits during this time. This better ensures that the California Aqueduct will experience reduced damage from flood events as uncontrolled runoff during flood events will be slowed, channel and retention basin siltation reduced, and streambank erosion reduced by increased infiltration in the upper watershed. This will also provide protection for downstream property owners in conjunction with any other flood control measures in place. This will better ensure uninterrupted and uncompromised delivery of water to millions of consumers and industry in Southern California via the Aqueduct.

The nature of the projects implemented enhance and improve the ecosystem quality by restoring and improving many of the riparian habitats, and by removing noxious plants, such as yellow star thistle, medusa head, and tamarisk, which divert water from desirable plants and hinder feed sources for livestock and wildlife. In addition, they contribute to ground fuel buildup, which, should a wildfire start up, would destroy wildlife habitats. By improving the streambank channels, repairing riparian habitats, implementing best management practices, and other activities, the landowners are, at the same time improving the quality of the ecosystems.

This proposal addresses the initial implementation priorities in the following ways:

Building local community capacity to assess and effectively manage watersheds that affect the Bay-Delta system – This project involves the cooperation of landowners throughout the watershed taking action to benefit the California Aqueduct and Interstate 5 by reducing flooding incidents, improving the quality of the water that flows down the streams, and enhancing environmental education. The I-5 and the Aqueduct are the ultimate beneficiaries of these projects implemented by the landowners.

Development or refinement of watershed assessments and plans – This program provides for the development and implementation of a Watershed Management Plan, a Watershed Monitoring Plan, and farm and ranch plans for the land throughout the watershed.

Design, development and implementation of specific watershed conservation, maintenance and restoration actions – This is the crux of what the current goals and objectives of the Arroyo Pasajero CRMP are. Reducing erosion and sedimentation, removing tamarisk and weeds, and restoring the functionality of riparian corridors and habitats are the main focus of the group.

- Community involvement: the breadth, depth and amount of community interaction and support throughout the project

A partnership between the local communities and the CALFED Bay Delta Program was first established in spring of 1995 when a major flood destroyed the Arroyo Pasajero Bridge at Interstate Highway 5, resulting in the deaths of seven motorists. In addition, runoff flooding during major storm events causes problems at local drinking water treatment plants and adds sediment to the aqueduct, which delivers over half of the state water to the Metropolitan Water District in Southern California. Nobody wants these experiences to reoccur. Therefore, by incorporating these restoration practices, landowners and the local community are continuing a partnership with the common goal of reducing flooding of the aqueduct and the local communities.

Before 1995, study after study had been conducted on causes and effects in these watersheds. The Arroyo Pasajero CRMP was formed to put an end to the repetitious, and costly, studies and to put their efforts toward implementing projects that will improve watershed conditions. The CRMP program is rich in community support. Local and surrounding communities are supportive of the Arroyo Pasajero CRMP's activities. Representatives from communities and agencies are welcome to, and often attend, CRMP meetings. Everyone has the common goal of reducing flooding in the valley and in the California Aqueduct, and reducing sedimentation in the streams throughout the watershed. These common interests have unified landowners, city officials, and state and federal agencies in the quest for implementing restoration projects that will reduce flooding and sedimentation. The Westside Resource Conservation District, through the Stewards of the Arroyo Pasajero CRMP, has received strong support in the form of letters of support, partnerships on projects and services volunteered from the City of Huron, the City of Coalinga, the Pleasant Valley State Prison (weed removal), Fresno County Economic Opportunities Commission (Fresno Local Conservation Corps) (fence building, brush removal), Coalinga High School (growing and planting trees in watersheds), West Hills College (growing trees, weed management project with GPS class, Monitoring Workshop), California Department of Fish and Game, State Water Contractors, CA Department of Water Resources, Westside Cattlemen's Association and from the landowners in the Arroyo Pasajero and Domengine watersheds who have committed to implementing best management practices on their land to reduce erosion and sedimentation.

- Watershed context: how your project is related to other significant watershed management activities that may be taking place in your watershed, or that have taken place in the past. This includes watershed plans, local government initiatives, non-government organization endeavors, etc., whether or not you are (or were) a participant.

To date, there have been no known concerted watershed management activities for the Domengine Watershed. The fact that the Domengine landowners identified the Stewards of the Arroyo Pasajero CRMP as the appropriate vehicle for restoring their watershed relates their program to the existing watershed program for the Arroyo Pasajero which lies directly south. The Domengine Watershed problem analysis, like that for the Arroyo Pasajero, will be based on the compilation and review of previous studies of the adjacent Arroyo Pasajero watershed, discussions with CRMP members, a review of historical and aerial photographs, review of technical data and unpublished soils information, reconnaissance-level field assessments, and site specific field studies of pilot project areas. Physical characteristics, biological processes and traditional land use practices have been assessed in order to determine how the interplay of these factors influence surface runoff / flooding, erosion, and sedimentation in the watershed. No single factor is responsible for, or by itself, capable of ameliorating the sedimentation problems in the lower Domengine watershed. A complex interaction among these factors is evident. Only some factors can be mediated by human intervention – agricultural, mining, road and stream crossing maintenance, natural resource management - are examples, in contrast to soils, terrain and climatic variability. It is apparent that there are just a few choices available to shift this complex interaction toward better long-term land conservation and resource management, improved economic viability of agriculture, and protection of down-stream resources and facilities such as I-5, and the California Aqueduct.

Previous studies have assessed "high-infrastructure" solutions to the erosion and sedimentation, such as dams, large retention basins, and major stream channel stabilization structures. This program involves implementing "low-infrastructure" solutions to the Watershed's erosion and sedimentation problems in order to continue the traditional land use and enhance the current economic base of the area. Through this program, incremental improvements can be achieved throughout the watershed by the systematic implementation of changes in agricultural management practices. Improvements can be documented through citizen and DWR monitoring activities that record what activities have taken place in the watershed along with water quality and flooding conditions. Incremental reduction in surface runoff by increasing surface infiltration can lead to improved rangeland residual dry matter, improved riparian corridor functionality, reduced erosion, reduced sedimentation and reduced flooding on a watershed-wide basis.

- Support for local decision makers: how your project will provide locally relevant information and/or support for decision making at the local level, and how you came to that conclusion.

Over 20 studies of the conditions in this area have been conducted by public agencies and private consultants to identify watershed characteristics and issues. Many of the studies focused on the effects of erosion, sedimentation, and flooding on the California Aqueduct. The Domengine Watershed Management Plan will incorporate information from many of the

previous studies and build upon them to provide a current, comprehensive Plan that addresses the causes of the erosion, sedimentation and flooding. It involves the integration of ecological, economic and social factors and participation of affected interests. This Plan will then be used to provide a consistent framework to begin on-the –ground identification and implementation of individual ranch and farm watershed management plans that focus on specific flood and erosion prevention.

The approach for this program is to identify existing practices affecting the watershed, and instead of building a dam or imposing other unnatural structures in the watershed, enhancing the current land uses to improve the conditions. The local landowners are the stakeholders in this program and they make decisions that not only improve their land, but also the entire watershed. Through these efforts, habitats will be improved, farming and ranching will be more viable and profitable, and water quality will improve and flooding incidents will be reduced in severity. This is a win: win program for the landowners, for the watershed, and for CALFED goals. The Domengine Watershed Management program is a viable, long term program whereby landowners commit to monitoring and maintenance of their property on a long-term basis.

Additionally, it is anticipated that most of the monitoring activities will be performed by the landowners, with local, state, and federal agencies providing technical assistance when needed. The Department of Water Resources (DWR) will also perform monitoring for their ongoing work on the Arroyo Pasajero CRMP program. To the extent possible, the work described in this plan will be performed so as to be compatible and complimentary to the DWR monitoring program. The protocol and standards used for monitoring are compatible with those of many agencies; therefore the data collected can be applied as well. As more emphasis is placed on monitoring activities, more data will be generated, and some of the information gaps throughout the watershed may be filled.

- Technology transfer: how your proposal will promote information exchange and improved watershed knowledge among CALFED agencies, local interests, and others interested in watershed management.

Ranch and farm plans will instruct landowners on how to implement best management measures including erosion and sediment control and grazing management. Specific monitoring measures include photo monitoring, watershed assessment observations in the field, residual dry matter mapping (either visual or clipping method), hydrologic monitoring for rainfall, stream flow (area velocity monitoring), water quality sampling, channel vegetation cross-section (vegetation counts), infrastructure monitoring (evaluation of field plantings, annual operation and maintenance inspections), suspended sediment sampling (DH-48 hand-held sediment sampler and Imhoff cone sampling), erosion and deposition monitoring with channel cross-sections.

Monitoring is mandatory to ensure that the funds are spent on the approved improvements in the field. Long-term monitoring contracts will be signed by the landowner to assure that rangeland and watershed conditions will show that best management practices (NRCS and California State Certified Range Manager) are being implemented.

These monitoring protocols used for training, sampling and data collection are widely accepted among the agencies that are historical or potential sources of funding. The plans, projects, and monitoring carried out through this program are done in conjunction with USDA-NRCS, DWR, Regional Water Quality Control Board, Westside RCD, City of Huron, City of Coalinga, State Water Contractors, Kern County Water Agency, Westlands Water District, Bureau of Reclamation, Bureau of Land Management, Westside Cattlemans, Department of Conservation, and other groups and organizations. Whether the contribution is technical assistance, funding or services, everyone has served a need. They incorporate in-kind services from landowners, students at Coalinga High School and West Hills College, the Fresno Local Conservation Corps and even prison crews from the Pleasant Valley Correctional Facility. This is a prime scenario of how, when people have a common interest, they can work together to achieve their goals.

The details of the specific actions you plan to take will be described in the Proposed Scope of Work (Part C). This section is about context, content, intent and expectations.

PART C – PROPOSED SCOPE OF WORK (Part C not to exceed 5 pages)

1. BACKGROUND AND GOALS

In April 2001, the landowners representing about one-half of the acres of the 91,000-acre Domengine Watershed requested that the watershed be added to the Stewards of the Arroyo Pasajero CRMP. The landowners were impressed with the progress taking place in the Arroyo Pasajero Watershed through the CRMP, and wanted to be involved in a program that will reduce flooding of the Aqueduct and the blocking of major roads leading to the city of Huron. Therefore, funds are needed to characterize watershed conditions, identify priority areas for management improvements and to prepare a Regional Watershed Plan. Later, the Plan can be used to develop site-specific Farm and Ranch Plans and Monitoring Plans for the landowners. Preparation of the Regional Watershed plan will take place over two years. It will result in better knowledge of the causes of the flooding, erosion, and sedimentation that has caused thousands of dollars worth of damage to valley cropland as well as the aqueduct and roads systems. Once the Regional Watershed Plan and subsequent Farm and Ranch Plans are prepared, landowners will have the opportunity to implement the plans by providing a 30% match and mandatory monitoring. The outcome will be the implementation of best management practices that will improve the economics of the land, reduce flooding and erosion and sedimentation, and provide for healthier riparian habitats. Monitoring Plans will be developed and adopted as part of each Plan to document improvements, and to highlight where any changes or mid-course corrections may be warranted in land use, grazing practices, riparian corridor enhancements, or other parts of the adopted program requirements for the individual landowner.

The Regional Watershed Plan for the Domengine Watershed will identify best management practices, that, when implemented, will result in improved ranch and farm operations: better distribution of cattle will reduce grazing impacts on the watershed, and better stream channel and bank protection will reduce erosion and flooding. Specific goals and objectives of the Stewards of the Arroyo Pasajero Coordinated Management Resources Group that administers and oversees the program are to:

- Improve the upper watershed resources, economics and riparian habitat,
- increase infiltration, decrease runoff and erosion rates,
- reduce sediment transport downstream,
- provide a longer lifetime for the downstream floodwater and sediment basins above the California Aqueduct and along Interstate Highway 5,
- rehabilitate eroded and denuded stream channels,
- enhance riparian ecosystems and their water quality,
- improve livestock grazing and management practices, especially with respect to grazing in riparian corridors,
- stabilize streambanks throughout the watershed
- involve local landowners and communities in educational programs related to watershed and water quality improvements,
- expand the monitoring of water quality and watershed health
- obtain landowner/citizen acceptance and assistance in monitoring

2. PROPOSED WORK TO BE PERFORMED (Start with Task 4)

Task 4:

Task 4.1 Preparation of the Regional Watershed Plan will be the first step in the watershed's management planning. It will result in better knowledge of the causes of the flooding, erosion, and sedimentation that has caused thousands of dollars worth of damage to valley cropland as well as the aqueduct and roads systems. The watershed analysis below identifies the following special interest factors that can influence and effect surface runoff/flooding, and erosion/sedimentation in the watershed

Factor	Problem Analysis	Which Can Influence	Which Can Effect
Climate	Temperature variability, and rainfall variability	Livestock distribution, forage availability, and residual dry matter	Rain infiltration, surface runoff, flooding, erosion and sedimentation.
Geology	Less resistant sedimentary formations are common, poorly consolidated alluvium , unstable channel banks, and earthquakes	Mass wasting of surficial earthen material, and stream bank stabilization.	Erosion and Sedimentation
Topography	Steep upland slopes and flat lying valleys, subsidence	Natural vegetation, and livestock distribution, channel down cutting.	Surface runoff / flooding, erosion and sedimentation.
Hydrology/ Drainage	Limited upland water, cut stream banks, steeper upland gradients, and flatter lowland gradients.	Livestock distribution, and land protection	Surface runoff / flooding, erosion and sedimentation.
Soils	Low water holding capacity and high erosion hazard.	Natural vegetation, livestock distribution, and stream bank stabilization.	Surface runoff / flooding, erosion and sedimentation.
Vegetation	Variable across watershed, some noxious plants, annual grassland, chaparral, and riparian vegetation.	Livestock distribution and forage utilization, and stream flow.	Surface runoff / flooding, erosion and sedimentation.
Fire	Infrequent natural burning, and limited prescribed burning.	Livestock distribution and forage utilization, and stream flow.	Surface runoff / flooding, erosion and sedimentation.
Traditional Land Uses	Limited water and fencing infrastructure, salt locations, farming and irrigation practices, farmland drainage, and California Aqueduct location. Infrastructure	Livestock distribution and forage utilization, stream flow, stream bank protection, agricultural viability and California Aqueduct longevity.	Surface runoff / flooding, erosion and sedimentation.

	and maintenance costs.		

Task 4.2 Development of a Regional Monitoring Plan that identifies the most practical yet effective means to measure the effects of the implementation of activities as documented in the Regional Watershed Plan. The monitoring plan uses protocols for training, sampling and data collection that are widely accepted among the agencies that are historical or potential sources of funding. The plans, projects, and monitoring carried out through this program are done in conjunction with USDA-NRCS, DWR, Regional Water Quality Control Board, Westside RCD, City of Huron, City of Coalinga, State Water Contractors, Kern County Water Agency, Westlands Water District, Bureau of Reclamation, Bureau of Land Management, Westside Cattlemans, Department of Conservation, and other groups and organizations. Whether the contribution is technical assistance, funding or services, everyone has served a need. They incorporate in-kind services from landowners, students at Coalinga High School and West Hills College, the Fresno Local Conservation Corps and even prison crews from the Pleasant Valley Correctional Facility. This is a prime scenario of how, when people have a common interest, they can work together to achieve their goals.

Task 5:
Task 5.1 - Individual Farm and Ranch Plans are to be prepared. These will identify specific practices that landowners will have the opportunity to implement by providing a 30% match and mandatory monitoring. The outcome will be the implementation of best management practices that will improve the economics of the land, reduce flooding, erosion and sedimentation, and provide for healthier riparian habitats. Best management practices identified will fall under the following categories:

PROPOSED PRACTICES AND ASSUMPTIONS
Water Development: Includes tanks, troughs, pipelines and springs on about 100,000 acres to improve existing facilities and livestock water.
Water Wells: For low-lying areas without adequate water.
Stockponds: For upland areas without adequately piped water
Fencing: Includes extensive cross fencing parallel to major drainages. Five strand barbed wire with 10 foot tee post spacing
Burn Management: For prescribed burning in selected areas.
Reseeding: For streambanks, in star thistle infestation areas, and selected prescribe burn areas.
Riparian Enhancement: For cottonwood plantings.
Tamarisk Reduction: For hand, mechanical, and herbicide uses.
Yellow Star Thistle Reduction: For herbicide and mechanical control.
Streambank Stabilization: Includes berms, matting, and revegetation.
Access Roads: For culverts, erosion control best management practices.

Task 5.2 - Individual Monitoring Plans will be developed and adopted as part of each Farm / Ranch Plan to document improvements, and to highlight where any changes or mid-course corrections may be warranted in land use, grazing practices, riparian corridor enhancements, or other parts of the adopted program requirements for the individual landowner. Citizen monitoring of projects is mandatory under the "Domengine Watershed Cooperative Monitoring Agreement" that the landowner enters into with the Westside RCD and the Stewards of the Arroyo Pasajero CRMP. The CRMP has its own Monitoring Plan as well as

a Quality Assurance Plan that outlines processes and parameters for monitoring. The types of monitoring that are addressed include:

- original baseline, and subsequent annual photo monitoring,
- watershed assessment observations in the field,
- residual dry matter mapping (either visual or clipping method),
- hydrologic monitoring for rainfall, streamflow (area velocity monitoring),
- water quality sampling (TDS/EC),
- channel vegetation cross-sections (vegetation counts),
- infrastructure monitoring (evaluation of field plantings, annual operation and maintenance inspections),
- suspended sediment sampling (DH-48 hand-held sediment sampler and Imhoff cone sampling), and
- erosion and deposition monitoring with channel cross-sections.

Monitoring requirements are determined on a project-specific basis, since not every Ranch or Farm Plan requires every monitoring tool that is part of the overall Monitoring Plan for the Regional project. Monitoring activities that require professional expertise are conducted by Sage Associates and by DWR, BLM and NRCS.

Task 6: Education and Outreach

Task 6.1 Hold one educational monitoring workshop per year. The CRMP has held past workshops on GPS usage, watershed assessment, and monitoring protocols. Ideas for future projects include sessions addressing GPS mapping, a workshop with the SWRCB Stream Team, and practical usage of monitoring equipment. Needless to say, may other topics are available and are being considered.

Task 6.2 Hold one watershed tour to view projects per year. The CRMP is eager to show what a difference has made in restoring riparian areas and improving water distribution and grazing conditions to date. Tours of completed projects are conducted in the spring or in the fall. Landowners, agencies, students, and the general public are invited to attend.

3. TARGET COMPLETION DATES

Task No. Deliverables	Target Completion Dates *
Task 1: Project Administration	
1.2 Quarterly/Monthly Progress Reports	To be submitted on the 10th of the month following the quarter that this contract is executed.
1.5 Contract Summary Form	To be submitted by June 30, 2003
1.6 List of subcontracted tasks, Good Faith Effort documents, quarterly/monthly Utilization Reports	To be submitted as needed.
1.7 Subcontractor Documentation	To be submitted as needed.
1.8 Expenditure/Invoice Projections	To be submitted as needed.
1.9 Project Survey Form	March 15, 2006

Task 2: CEQA/NEPA Documents and Permits, if applicable	(Whether or not project is funded by Proposition 13, project must comply with CEQA)
2.1 CEQA/NEPA Documentation	To be submitted as needed
2.2 Permits	To be submitted as needed
Task 3: Quality Assurance Project Plan, if applicable	The Quality Assurance Project Plan developed for the Stewards of the Arroyo Pasajero CRMP will be amended to address issues in the Domengine Watershed.
Task 4: Develop Watershed Management and Monitoring Plans	
4.1 Develop Watershed Management Plan for Domengine Watershed	December 31, 2004
4.2 Develop Watershed Monitoring Plan for Domengine Watershed	December 31, 2004
Task 5: Develop individual ranch plans and monitoring plans for landowners	
5.1 Develop Individual Farm and Ranch Plans for landowners	March 15, 2006
5.2 Develop Individual Monitoring Plans for landowners	March 15, 2006
Task 6: Education and Outreach	
6.1 One Educational Monitoring Workshop/Year	March 15, 2006
6.2 One Watershed Project Tour/Year	March 15, 2006
Task 7: Draft and Final Reports	
7.1 Draft Report	February 28, 2006
7.2 Final Report	March 15, 2006

*** Assumes contract is executed by March 31, 2003**

PART D1 - BUDGET SUMMARY SHEET – TASK BUDGET BREAKDOWN (Parts D1 and D2 combined not to exceed 2 pages)

	Proposition 13 Funds	Other Project Funds	Total Budget
1. Task 1 – Project Administration	$ 4,500.00	$ 8,550.00	$ 13,050.00
2. Task 2 – CEQA/NEPA Documents and Permits			
3. Task 3 – Quality Assurance Project Plan			
4. Task 4 – Development of Watershed Management / Monitoring Plans	$19,000.00		$19,000.00
5. Task 5 – Development of Individual Ranch and Monitoring Plans	$30,000.00		$30,000.00
6. Task 6 – Education and Outreach	1,000.00	2,000.00	$ 3,000.00
7. Task # – Description			
8. Task 7 -- Draft and Final Reports	500.00		$ 500.00
TOTAL BUDGET	$55,000.00	$10,550.00	$65,550.00

PART D2 - BUDGET SUMMARY SHEET – LINE ITEM Budget (Parts D1 and D2 combined not to exceed 2 pages)

	Proposition 13 Funds	Other Project Funds	Total Budget
1. Personnel Services	$ 4,500.00	$ 8,550.00	$13,050.00
2. Operating Expenses (For Outreach and Education)	1,000.00	2,000.00	3,000.00
3. Property Acquisitions			
a. Equipment			
b. Furniture			
c. Portable assets			
d. Electronic data software/hardware			
e. Processing equipment			
f. Miscellaneous			
4. Professional and Consultant Services	$ 49,000.00		$49,000.00
5. Contract Laboratory Services			
6. Construction Expenses			
7. General Overhead	$ 500.00		$ 500.00
8. TOTAL BUDGET	$55,000.00	$10,550.00	$65,550.00

9. Describe the source and nature of the matching funds.
   1. Personnel Services are funds contributed by Westlands Water District for Westside RCD Manager's salary.
   2. Operating Expenses are funds contributed from administrative funds from a Packard Foundation grant.

NOTES:

1) **A SUBCONTRACTOR OR CONSULTANT CANNOT BE A PROJECT DIRECTOR FOR THE APPLICANT. SHOW ONLY THE APPLICANTS STAFF COSTS.**

2) **THE SWRCB AND CALFED RESERVE THE RIGHT TO ADJUST PROJECT AWARDS. APPLICANTS MAY BE ASKED TO REDUCE THEIR PROJECT BUDGETS.**

PART E – PROJECT MAP (single 2- sided 8” x 11’, or single 1-sided 11” x 17” page maximum)

Provide a map of your project area, if appropriate. This can also be a chart or outline if your proposed project is not area specific.