NORTH COAST RESOURCE PARTNERSHIP

2015 IRWM Project Grant Application

ATTACHMENT 6:
Program Preferences

Integrated Regional Water Management Program
Applicant: Humboldt Count

Attachment 6. Program Preferences

The projects advanced in this Proposal collectively meet all applicable Program Preferences and Statewide Priorities and most implement the Human Right to Water Policy signed into law by Governor Jerry Brown in September 2012 (see Table 1). Additionally, the entire suite of projects contained within this Proposal is a *Regional Program* in that it consists of locally identified projects that address the most serious regional threats to water security in the North Coast Region. They provide solutions to some of the most pressing challenges facing the North Coast and upon implementation are expected to act synergistically to help achieve multiple goals of the North Coast Resource Partnership (NCRP). The NCRP Technical Peer Review Committee and Policy Review Panel have prioritized these projects based on technical merit, expected benefits, and regional equity as well as State preferences and Statewide Priorities.

Disadvantaged Communities (DACs) disproportionately bear the health and financial impacts of inadequate access to safe water. In this Proposal, we have identified over 25 Seriously Disadvantaged or DAC communities facing water supply and/or water quality challenges and have prioritized the projects that assist them to secure access to affordable clean water. Thirteen of these projects ensure the Human Right to Water. A description of how each project meets relevant preferences/priorities is provided below.

Table 1. Program Preferences and Statewide Priorities by Project															
		Program Preferences					Statewide Priorities								
Project Proponent	Project	Regional Projects or Programs	Integrate Water Management Programs or Projects	Resolve water-related conflicts	Address critical water supply or water quality needs of DACs	Effectively integrate water management with land use planning	Drought Preparedness	Efficient Use/Reuse of Water	Climate Change Response	Environmental Stewardship	Integrated Flood Management	Protect Surface and Groundwater Quality	Improve Tribal Water and Natural Resources	Ensure Equitable Distribution of Benefits	Implements Human Right to Water Policy
Bear River Band of the Rohnerville Rancheria	Reclaimed Water Project	•			•		•	•	•	•			•	•	
City of Weed	Boles Fire Water System Rehabilitation/Water System Restoration	•			•		•	•	•					•	•
Del Norte County CSA #1 and Crescent City	Lift Station Rehabilitation	•			•				•	•		•		•	
Gold Ridge RCD	Working Landscapes Drought Resiliency Project	•	•			•	•	•	•	•		•		•	•
Gualala River Watershed Council	Flow Bank Program - Phase II	•	•				•		•	•		•	•	•	•
Happy Camp CSD	Happy Camp Water Supply Upgrade - Phase I	•											•	•	•
Hoopa Valley Tribe	Hoopa Valley Public Utility District Conservation Project	•								•		•	•	•	•
Hoopa Valley Tribe	Lower Supply Flood Risk Reduction and Fisheries Habitat Improvement Project	•	•						•	•	•	•	•	•	
Hopland Band of Pomo Indians	Hopland Band of Pomo Indians Test Well and Community Water Security	•		•	•		•		•				•	•	•
Humboldt County RCD	Restoring Stream Flow and Fish Passage on the Eel River Delta	•	•						•	•	•	•		•	

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Lewiston Mutual Water Company	Lewiston Valley Drinking Water Intertie Pipeline	•			•		•		•	•				•	•
Mattole Restoration Council	Lower Mattole River and Estuary Enhancement and Drought Resiliency Project	•	•				•		•	•				•	•
Mendocino County RCD	Implementing On-Farm Water Conservation Projects in the Navarro to Address Critical Low Flows	•		•		•	•		•	•				•	
Mendocino County RCD	Water Conservation Technical Assistance to Mendocino County Tribes	•					•	•	•	•			•	•	
Montague Water Conservation District	Instream Flow Enhancement Through Water Conservation	•		•			•	•	•	•		•		•	
Northwest CA Resource Conservation & Development Council	Trinity River Water Reliability and Drought Resiliency Project	•					•		•	•		•		•	•
Sanctuary Forest	Mattole Flow Program: Mainstem & Tributary Storage and Forbearance	•	•				•		•	•		•		•	•
Shasta Valley RCD	Shasta River Drought Response and Irrigation Efficiency Project	•		•			•	•	•	•		•		•	
Resort Improvement District #1	Shelter Cove Water Recycling Project	•					•	•	•	•		•		•	

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Sonoma County Water Agency	Northern Sonoma County Water Conservation Program	•					•	•	•	•		•		•	
Sonoma RCD	Russian River Coho Drought Resiliency Planning and Implementation Program	•	•			•	•	□	•	•		•		•	
Watershed Research and Training Center	South Fork Trinity River - Spring Run Chinook Salmon Restoration Project	•					•		•	•		•		•	
Weott CSD	Additional Water Storage	•					•		•					•	•
Westhaven CSD	Water Storage Tank and Roof Replacement Project	•			•		•		•					•	•
Yurok Tribe	Yurok Watershed Restoration and Drinking Water Security	•					•		•	•		•	•	•	•

Bear River Band of the Rohnerville Rancheria
Reclaimed Water Project

Critical Water Quality Need of DAC: The current wastewater treatment plant discharges to a failing leach system, resulting in surface contamination; the presence of contamination at the surface in the leach field creates health concerns and has resulted in restricted access.

Drought Preparedness: This project provides community resiliency against drought by decreasing groundwater withdrawals for winter wetlands irrigation by providing reclaimed water for the irrigation. This leaves water in the groundwater basin for potable uses when needed.

Efficient Reuse of Water: This project distributes reclaimed water to wetlands to replace the use of potable water.

Climate Change Response: By reducing the demand on groundwater basins during the summer months and recharging to a groundwater basin during the wet season, this project is bolstering community resiliency in the face of expected hotter, drier weather with longer drought cycles.

Environmental Stewardship: This project will enhance wetlands habitat by providing ample water to allow the wetland plants to flourish year-round. Currently, they only receive enough water during summer months to keep them alive until winter rains arrive.

Improve Tribal Water and Natural Resources: This project protects Tribal groundwater and enhances Tribal stormwater wetlands, which will also be used as an educational tool.

Ensure Equitable Distribution of Benefits: This project includes a DAC Tribal community in the North Coast IRWM process and improves Tribal water supply and climate resiliency.

Certainty, breadth, and magnitude

It is very certain that the project, when implemented, will provide the benefits claimed. The project is already planned and designed, however, funding fell through for the reclaimed water for irrigating wetlands phase of the project, so this project is simply a completion of existing plans that, when implemented, will provide the full suite of benefits originally intended. The breadth of the benefits is localized, affecting those who live in or visit the area. Magnitude will extend beyond the life of the project through the educational trail and outreach efforts.

City of Weed
Boles Fire Water System Rehabilitation/ Water System Restoration

Critical Water Supply Need of DAC: Repairing failing infrastructure in the City of Weed will assure continued reliability of the minimum quality and quantity of water and augment supply pressure to maintain adequate fire protection flows.

Drought Preparedness: By repairing the leaking infrastructure, water currently lost to leaks will be conserved – an amount of approximately 140 AFY. This puts less stress on water supply sources and frees up water for future use.

Efficient Use of Water: Repairing leaking pipes allows for the more efficient use of water by eliminating waste.

Climate Change Response: With the leaking infrastructure repaired, the City of Weed won't need to pump as much water and less pump use will reduce GHG. Additionally, by improving water supply reliability and fire protection, this project adds to community resiliency and improves capacity to respond to catastrophic emergencies or extended drought.

Ensure Equitable Distribution of Benefits: The City of Weed is a severely disadvantaged community (43% of State MHI); its participating in the IRWM process helps to ensure that benefits are distributed equitably throughout the region.

Human Right to Water Policy: This project helps to ensure that the disadvantaged residents of the City of Weed have access to safe, clean, and affordable water adequate for human consumption, cooking, and sanitary purposes by eliminating system waste.

Certainty, breadth, and magnitude

It is very likely that this project will provide the stated benefits when implemented. The City of Weed has previously successfully implemented water supply projects and the technical basis for this project is sound. Breadth of benefits will go beyond the physical limits of the project to boost regional water supply security and the magnitude of the benefits is likely to last as long as the infrastructure is usable.

Del Norte County CSA #1 and Crescent City
Lift Station Rehabilitation

Critical Water Quality Need of DAC: Repair of the failing lift stations will prevent future Sanitary Sewer Overflows in wetlands, waterways, Crescent City Harbor, and the Pacific Ocean.

Climate Change Response: This project mitigates climate change through reduced energy use and associated GHG emissions due to replacement of old pumps/controllers with energy efficient modern technology. The new pumps are estimated to be 20-30% more efficient; this efficiency combined with fewer maintenance trips for service (reduced VMT) will result in GHG reductions.

Environmental Stewardship: Rehabilitated lift stations will reduce the environmental impacts of SSOs from lift station failures to wetlands, harbors, waterways, and their sensitive habitats,

Protect Surface Water Quality: Reducing the number of lift station failures will protect surface water quality from the impacts of SSOs.

Ensure Equitable Distribution of Benefits: The Del Norte County/Crescent City wastewater service area consists entirely of economically disadvantaged communities. The inclusion of this project ensures that benefits are equitably distributed in the North Coast region.

Certainty, breadth, and magnitude

It is highly certain that this project will meet the described Program Preferences. The City of Crescent has implemented many similar projects in the past ten years including sewer rehabilitation and water pollution control facilities. The breadth and magnitude of the benefits are large – this project helps to protect communities in the area who are historically underserved and they are expected to protect the economically important habitats of Crescent City harbor for at least 50 years.

Gold Ridge RCD
Working Landscapes Drought Resiliency Project

Integrate Water Management Programs or Projects: In 2007, the Gold Ridge RCD prepared the Estero Americano Watershed Management Plan, designed primarily to address the watershed's significant nutrient and sediment impairments through the development of conservation plans and implementation of dairy and ranch operation improvements and fine sediment reduction measures. In 2010, the RCD worked in partnership with Prunuske Chatham, Inc., to prepare the Salmon Creek Integrated Coastal Watershed Management Plan, which addressed diverse resource issues including water insecurity, agricultural sustainability, and health of its coho-bearing stream system. Since the development of these two plans, GRRCD and its partners have implemented plan recommendations through multiple funding sources. Previous IRWM funding is allowing the RCD to implement numerous projects throughout the two watersheds, including large-scale rainwater catchment systems for both remaining dairies within the Salmon Creek watershed (with construction scheduled for summer 2015 and summer 2016), a large water security project for the community of Bodega, and widespread sediment reduction throughout both watersheds. This proposal represents GRRCD's fifth phase through IRWM funding, further expanding these activities designed to implement the priority recommendations of the planning efforts while also responding to the most pressing drought adaptation needs.

Effectively Integrate Water Management & Land Use Planning: By providing offstream storage and enhancing soil holding capacity for agricultural operations, this project is integrating land use planning and water management. Additionally, the project completes comprehensive property plans to assess water storage potential, develop conservation measures, and address soil moisture. Furthermore, the Valley Ford Wool Mill serves as an excellent example of integration of water management into facility planning – water recycled through its greywater system from wool processing will be used to irrigate plants grown for use in dyes.

Drought Preparedness: The project will work to both provide agricultural operations and the BWC with large-scale rainwater catchment systems, a sustainable and reliable source even in the face of increasingly sporadic and severe weather patterns, capturing water from major storm events that occur even in the most dire drought years. Binding landowner agreements will ensure the water replaces, rather than augments, stream or groundwater withdrawals. Additionally, the project will work to enhance soil health on rangeland to both better tolerate longer dry periods and better absorb and retain rainfall, providing agricultural resiliency and local food sustainability.

Efficient Reuse of Water: The Valley Ford Wool Mill project is a greywater system for irrigation of plants used to dye wool.

Climate Change Response: The project mitigates climate change by reducing GHG emissions from importing feed and water and provides climate change adaptation through development of new water sources, greatly increasing the community's water supply reliability in the face of uncertain precipitation patterns.

Environmental Stewardship: Binding landowner agreements will ensure the water replaces, rather than augments, stream or groundwater withdrawals, which will leave water instream for coho and other aquatic wildlife during critical summer months.

Protect Surface Water Quality: Increased instream flow will help to decrease instream water temperatures and increase Dissolved Oxygen, important water quality parameters for listed salmonids.

Ensure Equitable Distribution of Benefits: The project will enhance drought resiliency and water security for the farm operations that compose the DAC surrounding Valley Ford. Many of these operators have struggled to maintain economic viability through the drought. Their inclusion in this Proposal ensures that benefits are equitably distributed throughout the North Coast.

Human Right to Water Policy: This project helps to ensure that the disadvantaged residents of the Valley Ford area have access to safe, clean, and affordable water adequate for human consumption, cooking, and sanitary purposes by providing offstream storage to capture water when it is plentiful for use in times of limited water supply.

Certainty, breadth, and magnitude

It is highly certain that this project will meet the claimed preferences; the Gold Ridge RCD has a proven track record implementing both IRWM projects and projects that benefit the Salmon Creek and Estero Americano watersheds. The breadth of the project covers both watersheds and also contributes to regional water and food security, while the magnitude extends beyond the life of the project components because of the behavioral changes induced. The educational and behavioral components of the project are likewise expected to extend beyond the watershed into other watersheds in which the RCD has a presence and beyond, as partners and others become aware of this work.

Gualala River Watershed Council
Flow Bank Program - Phase II

Integrate Water Management Programs or Projects: The Gualala River Watershed Council (GRWC) has managed over $2,500,000 in watershed projects and monitoring programs in the Gualala River watershed. The GRWC worked with Gualala Redwoods, Inc. to install tanks throughout its 30,000 acre property and is currently implementing The Flow Bank Program 2014, which provides rainwater catchment systems and increased offstream storage to the agricultural and residential community in exchange for withdrawal forbearance. This project builds on previous projects in the watershed.

Drought Preparedness: By providing the necessary infrastructure to decrease withdrawals when instream water is most needed by coho, this project increases capacity of the community to withstand long-term drought as well as periodic water shortages as well as buffering coho against the effects of continued drought conditions.

Climate Change Response: Climate mitigation will be accomplished through a reuse component to recycle backwash water at the NGWC. Additionally, commitment to a sound mitigation strategy to reduce GHG emissions includes hiring of local contractors and the use of a gravity fed water supply system. Climate adaptation is accomplished through increased community resilience due to the offstream storage and rainwater harvest. The project also contributes to disaster preparedness by providing storage for fire suppression and firefighting practice in an area expected to experience greater wildfire frequency.

Environmental Stewardship: By providing the necessary infrastructure to decrease withdrawals when instream water is most needed by coho, this project protects aquatic habitat for all watershed wildlife.

Protect Surface Water Quality: Increased instream flow will help to decrease instream water temperatures and increase Dissolved Oxygen, important water quality parameters for listed salmonids and other aquatic wildlife.

Improve Tribal Water and Natural Resources: The Kashaya storage tanks will increase untreated water storage from 5,000 to 25,000 gallons, allowing the Tribe to adjust withdrawals to maximize instream flow. This tank will increase Tribal water security for a recognized Disadvantaged Community and will also provide water for fire suppression.

Ensure Equitable Distribution of Benefits: The inclusion of a Tribal DAC in this project ensures that benefits are equitably distributed throughout the North Coast.

Implements Human Right to Water Policy: This project helps to ensure that the disadvantaged residents of the Kashaya Tribe have access to safe, clean, and affordable water adequate for human consumption, cooking, and sanitary purposes by providing offstream storage to capture water when it is plentiful for use in times of limited water supply.

Certainty, breadth, and magnitude

The certainty that this project will provide these Program Preferences is extremely high; the Gualala River Watershed Council has 17 years of experience implementing restoration and monitoring programs within the watershed using sound science and a collaborative approach that includes landowners, conservationists, industry (timber harvest) and agencies. Partner contractors are highly experienced in the installation of rain water harvesting tanks and property owners within the watershed are motivated to participate in the program through outreach and peer pressure. The extent of this project is large – both in terms of geographic extent, which encompasses the entire Gualala River watershed, and in terms of impact, which will leave significant instream flow during periods of high environmental and human demand. Finally, this project contributes toward regional autonomy and resiliency to climate change by diversifying sources of drinking water.

Happy Camp CSD
Happy Camp Water Supply Upgrade - Phase I

Improve Tribal Water and Natural Resources: The improved reliability and reduced uncertainty regarding proper drinking water quality treatment allows all community members, 27% of which are of Karuk descent, to use their drinking water without fear of illness. The additional benefit of having the water quality equipment integrated with the existing treatment plant alarm system means that if there is a problem, operators will be alerted to the problem sooner than under the current without-project conditions.

Ensure Equitable Distribution of Benefits: The project provides more reliable water quality monitoring for this Disadvantaged Community's drinking water system, ensuring that benefits are distributed equitably in the North Coast Region.

Implements Human Right to Water Policy: Through installation of water quality monitoring equipment that will provide alarms if water quality is insufficient helps to ensure that the disadvantaged residents of Happy Camp have access to safe, clean, and affordable water adequate for human consumption, cooking, and sanitary purposes.

Certainty, breadth, and magnitude

It is highly certain that this project will provide the Program Preferences identified. The Happy Camp CSD has successfully implemented several other water infrastructure projects and this project has sound technical justification. The breadth of the physical benefits is local; however, with this CSD's participation in the NCIRWMP, it is possible that it may extend to other small water purveyors through the NCRP Water & Wastewater Support Program. The magnitude of the benefit is large in that it ensures the Human Right to Water for members of a historically underserved community.

Hoopa Valley Tribe
Hoopa Valley Public Utility District Conservation Project

Environmental Stewardship: Water left instream because of reduced demand, locating and repairing leaks, and conservation measures will improve habitat quality, which is currently considered a medium to high stress for all life stages of coho in the Lower Trinity basin.

Protect Surface Water Quality: Increased instream flows will contribute to decreased water temperatures and increased Dissolved Oxygen levels, which are limiting in the Lower Trinity basin.

Improve Tribal Water and Natural Resources: Removal of fixtures that are contaminating the water supply with lead helps the PUD meet the Human Right to Water and improving instream habitat for coho salmon will help ensure the sustainability of Tribal culture and subsistence practices.

Ensure Equitable Distribution of Benefits: The direct benefits to this DAC include: improving infrastructure and management capacity necessary to address drought preparedness, enhance public health and safety, and promote water conservation awareness and education. The Hoopa Valley Tribe's participation in the IRWM process contributes to regional equity.

Implements Human Right to Water Policy: Through replacement of failing water meters that will not contribute lead to the water supply, this project helps to ensure that the disadvantaged residents of the Hoopa Valley Tribe have access to safe, clean, and affordable water adequate for human consumption, cooking, and sanitary purposes.

Certainty, breadth, and magnitude

This project is certain to provide the specified Preferences; installation of monitoring equipment that allows for remote access is a relatively simple undertaking that will yield large results through instigating changes in consumer behavior that lead to reduced demand for potable water. The breadth of the effects will be localized to the Hoopa Valley PUD, but the behavioral changes will travel with consumers, providing benefits beyond the Hoopa Valley. Magnitude is about 15 – 20 years for the meters, but the behavioral changes are likely to last beyond that time period.

Hoopa Valley Tribe
Lower Supply Flood Risk Reduction and Fisheries Habitat Improvement Project

Integrate Water Management Programs: Project implementation to restore fisheries habitat and improve drought resiliency for the upstream portion of Supply Creek and Mill Creek is underway as a result of funding from the California Department of Fish and Wildlife and Natural Resources Conservation Service; this project will continue downstream to optimize benefits. This project also complements and integrates with the Trinity River Restoration Program.

Climate Change Response: establishing riparian trees and habitat will sequester CO2, mitigating climate change. Reduced flood risk and improved instream and riparian habitat will increase Hoopa resiliency to effects of climate change, protecting important cultural and subsistence fishery resources in the face of expected hotter, drier conditions and more severe storm events.

Environmental Stewardship: Habitat restoration and enhancement are acts of environmental stewardship.

Integrated Flood Management: The project provides increased channel capacity and construction of off-channel flood retention basins in the amount of 3.54 acres.

Protect Surface Water Quality: The restoration of 5.37 acres of riparian and 3.54 acres of channel adjacent floodplain will improve ecosystem water filtration capacity, improving water quality. When the riparian habitat matures, it will improve water quality by decreasing water temperatures due to shading from canopy cover.

Improve Tribal Water and Natural Resources: This project will help to restore the cultural relationship between the Hoopa Valley Tribe and Supply Creek. The berms have isolated the creek from public access and all manners of use. The project will physically reconnect tribal members to this major stream in the Hoopa Valley, supporting future use for recreational, educational, and ceremonial purposes.

Ensure Equitable Distribution of Benefits: Inclusion of this Tribal DAC in the IRWM process ensures equitable distribution of benefits throughout the North Coast.

Certainty, breadth, and magnitude

The Hoopa Valley Tribe has developed 12 civil and 24 revegetation designs to restore salmonid habitat and reduce flood risk along the upper Trinity River in cooperation with various federal and state agencies; it is very certain that this project will be implemented. The breadth and magnitude of the project are extensive and long-lasting; this project will work synergistically with other work undertaken locally and regionally to benefit the wildlife and human communities in the Trinity River watershed.

Hopland Band of Pomo Indians
Hopland Band of Pomo Indians Test Well and Community Water Security

Resolve water-related conflicts: This project sets the groundwork for collaboration between the Hopland Band and the community of Hopland over groundwater management. By seeking out and obtaining a high quality, adequate water supply, the communities are preparing for continued drought conditions expected with climate change. Additionally, this collaboration builds capacity for future challenges;

having already successfully solved this problem, the communities are more likely to collaborate in the future.

Address critical water supply or water quality needs of DACs: Upon implementation, this project will provide Infrastructure renovations to a public water supply system necessary to assure continued reliability of the minimum quality and quantity of water for the Hopland Band of Pomo Indians by securing a reliable water source through well development and legal agreement with the Hopland Water District.

Drought Preparedness: This project will support water supply reliability for the Hopland Tribe and Hopland community by researching feasible areas for drilling back-up wells to provide backup for the current functioning well.

Climate Change Response: This project mitigates climate change because a reliable water supply will result in avoided GHG emissions because the Hopland Tribe will not need to import water. It contributes to climate adaptation through increasing sources of water to enable both communities to better withstand expected hotter, drier conditions expected with climate change. Additionally, the social capital developed during this collaboration will enhance community capacity to respond to other challenges associated with climate change.

Improve Tribal Water Resources: This project will help to ensure a reliable drinking water supply for the Hopland Band of Pomo Indians.

Ensure Equitable Distribution of Benefits: Inclusion of this Tribal DAC in the IRWM process ensures equitable distribution of benefits throughout the North Coast.

Implements Human Right to Water Policy: This project supports the Hopland Band of Pomo Indians' right to safe, clean affordable, and accessible water adequate for human consumption, cooking, and sanitary purposes by locating a groundwater basin with sufficient quality and quantity to serve as a water source.

Certainty, breadth, and magnitude

The Hopland Band of Pomo Indians has been conducting test well projects on the Reservation for years; it is in a good position to successfully conduct test well studies in the Hopland Valley area, where results are much more likely to be positive. Thus, certainty of successful tests is high and based on previous investigations it's likely that a suitable groundwater basin will be located. The breadth of the project will extend to the entire Hopland community, with the magnitude potentially long reaching – providing water supply reliability as long as the groundwater basin is able to produce usable water. With the reduction in controversy reflected by this project's implementation, benefits will extend beyond the immediate vicinity and contribute to regional stability and water supply reliability.

Humboldt County RCD
Restoring Stream Flow and Fish Passage on the Eel River Delta

Integrate Water Management Programs: This project expands upon the successful Salt River Ecosystem Restoration Project, which has to date restored 330 acres of tidal estuary, and 3.7 miles of severely aggraded river channel, floodplain, wetlands, and riparian habitat.

Climate Change Response: This project greatly improves climate change resiliency for the community of Ferndale by enhancing flood control, restoring hydrologic connectivity and function to Francis Creek, and restoring instream, wetland, and riparian habitat.

Environmental Stewardship: Habitat restoration and species protection, which will occur through project implementation, are forms of environmental stewardship.

Integrated Flood Management: An approximate 5-acre Sediment Management Area at the confluence of Francis Creek and Salt River will conduct and slow flows to allow significant amounts of suspended sediments to drop out. There will be an associated reduction in flooding on Port Kenyon Road which is currently closed due to flooding and sediment deposition for about 6 months per year.

Protect Surface Water Quality: The restoration of riparian habitat and the Sediment Management Area will improve ecosystem water filtration capacity, improving water quality. When the riparian habitat matures, it will improve water quality by decreasing water temperatures due to shading from canopy cover.

Ensure Equitable Distribution of Benefits: The City of Ferndale, a DAC, will directly benefit from the flood reduction benefits of this project as well as the habitat and water quality improvement activities. The inclusion of this DAC in the IRWM process helps to ensure regional equity.

Certainty, breadth, and magnitude

This project is very certain to meet stated Program Preferences; the Humboldt County RCD has a long history of successful work on the Salt River Ecosystem Restoration Project. Additionally it has completed over 65 restoration projects in the Van Duzen and South Fork Eel River watersheds. The breadth of the project is large, as it contributes to and works synergistically with previous projects, and its magnitude huge, for properly completed restoration projects' benefits increase over time as ecosystems mature.

Lewiston Mutual Water Company
Lewiston Valley Drinking Water Intertie Pipeline

Address critical water supply or water quality needs of DACs: The Lewiston Park Mutual Water Company (LPMWC) serves the DAC of Lewiston. It can deliver quality drinking water when not using river water but the demands are greater than the capacity of current well production during the summer months. Because the surface water treatment plant is so old, a Boil Water Notice is required to be issued whenever river water is pumped into the system. An intertie will alleviate the need to pump water from the Trinity River.

Drought Preparedness: When an intertie is installed between the two small drinking water systems, Lewiston Park Mutual WD and Lewiston CSD would be able to support one another in times of water shortage and emergency. Together they would have increased source water supply and treated water storage to prevent water outages and fight fires.

Climate Change Response: The intertie will enable the two water systems to be better prepared for extreme climatic conditions expected with climate change. The intertie will allow water to be shared between the two systems for emergency needs, such as fighting structure and vegetation fires by

allowing localized fire hydrants to be charged, and provide safe drinking water in times of severe drought conditions or other natural disasters.

Environmental Stewardship: Because LPMWC will not need to withdraw from the Trinity River during periods of greater demand (summer), there will be more water left in the Trinity to support aquatic habitat. Coho salmon will benefit from increased instream flows during the critical summer months.

Ensure Equitable Distribution of Benefits: By including a DAC in the IRWM process, this project helps to ensure equitable distribution of benefits in the North Coast.

Implements the Human Right to Water Policy: Customers of LPMWC will not need to boil water before they use it anymore, thus, project implementation will ensure that they are able to obtain safe, clean, affordable water for human consumption, cooking, and sanitary purposes.

Certainty, breadth, and magnitude

It is certain that this project will provide the specified Preferences. The LMWC has successfully implemented other drinking water quality projects and the Lewiston Park Mutual WD is just completing construction of a new water tank. The breadth of the project is the community of Lewiston and the surrounding area, which will benefit from the increased water supply reliability and fire suppression capacity. The magnitude of the project infrastructure's impact is about 20 years, but the social capital obtained by community members cooperating to assist one another during these challenging times is likely to extend well into the future.

Mattole Restoration Council
Lower Mattole River and Estuary Enhancement and Drought Resiliency Project

Integrate Water Management Programs or Projects: The proposed project is a collaborative effort with the BLM to increase habitat potential and drought resiliency of the Mattole Estuary, as part of a 5 Year Plan.

Drought Preparedness: By restoring hydrologic function to the Lower Mattole River and estuary, this project is contributing to groundwater recharge, a vitally important function in the face of expected hotter, drier conditions and longer drought cycles expected in the face of climate change.

Climate Change Response: GHG emissions will be reduced by this project by reducing fire risk on native prairies caused by encroaching trees that will be removed; through native bunch grass planting at regraded disturbed sites; and placement of the removed whole trees in river locations. By improving habitat quality, the system will be able to provide vital ecosystem services such as water quality improvement (filtration), flood damage reduction, and carbon sequestration through changing climatic conditions, bolstering both the wildlife and the human communities which depend upon it.

Environmental Stewardship: Habitat restoration and species protection, which will occur through project implementation, are acts of environmental stewardship.

Ensure Equitable Distribution of Benefits: This project benefits the local disadvantaged community by creating jobs in fisheries restoration in the hopes of restoring fish populations so that one day the community can once again benefit from catching fish for their food supply. This project also improves

the ecological health of the watershed, which indirectly benefits the health of the people in the community. Its inclusion in the IRWMP process contributes to equity in the North Coast region.

Certainty, breadth, and magnitude

The Mattole Restoration Council is a recognized expert in forbearance and restoration projects; the success of this project is highly likely. The project builds upon previous, ongoing, and planned efforts to improve ecological conditions in the Mattole Watershed, thus its breadth and magnitude are great due to the synergistic effects of multiple complimentary projects. This project is very likely to yield benefits beyond those claimed in this Proposal.

Mendocino County RCD
Implementing On-Farm Water Conservation Projects in the Navarro to Address Critical Low Flows

Resolve water-related conflicts: "The availability for all rural and urban water users in Mendocino County, and the Navarro River Watershed specifically, is an increasingly contentious and acute issue (McGouty et al. 2013 p. 6)" and this project will reduce conflict by enabling several Ag producers to reduce withdrawals from the Navarro and by educating others about BMPs that will save even more instream water and demonstrate to the larger community Ag commitment to sustainable water use.

Effectively integrate water management with land use planning: MCRCD will work with Ag partners to implement water conservation/water-use efficiency projects to demonstrate water saving measures, including water storage, specifically in orchards and small farms. These projects integrate agricultural land use with water management planning.

Drought Preparedness: By implementing on-farm water conservation/water-use efficiency projects in the Navarro watershed on irrigated lands, the project will increase emergency drought preparedness and build climate resiliency. Through additional storage, replacing inefficient irrigation lines, and retrofitting from rainbird sprinklers to microsprayers, this Project will decrease reliance on a finite source of available water in the late summer.

Climate Change Response: This project will increase local resiliency by providing the community with the tools and knowledge to conserve water in the face of a hotter drier climate with longer and more extreme drought cycles.

Environmental Stewardship: Increased instream flow will improve summer salmonid habitat, protecting listed species.

Ensure Equitable Distribution of Benefits: This project will benefit the entire Navarro River Watershed population including the DAC Philo, but focuses on irrigated Ag users where conservation and water-use efficiency projects will have the greatest net benefit towards increasing summer base flows during the critical June-October period. The costs associated with infrastructure upgrades can be prohibitive for family farmers.

Certainty, breadth, and magnitude

It is highly certain that this project will meet the stated Program Preferences. The Mendocino County RCD is partnered with NRCS and The Nature Conservancy on this project and it has a long history of successfully implementing similar projects. It also has landowner trust, which is very important,

especially in a watershed beset with controversy. The breadth of the project affects the Navarro watershed, which is in urgent need of water conservation/time of use solutions. It also extends beyond the watershed inasmuch as others learn from the effort or behavioral changes are induced. The magnitude of the project will last much longer than the life of the physical components due to its behavioral and educational aspects.

Mendocino County RCD
Water Conservation Technical Assistance to Mendocino County Tribes

Drought Preparedness: Providing access to auditing and leak detection services is vital to attaining water conservation needs. For Tribes with insecure water rights, water conservation is essential for the health and safety of the community, and this project empowers Tribes to expand the effort through training.

Efficient Use of Water: This project conducts water audits, trains Tribal members to conduct water audits, and installs water efficiency fixtures in Tribal communities.

Climate Change Response: Decreased water use and leak identification and repair will decrease energy used in pumping and treating that water, reducing the amount of GHGs released and saving the associated energy costs. By identifying leaks, upgrading water-wasting fixtures, identifying conservation habits, and integrating effective new technologies, the MCRCD and its Tribal partners will enable long-term water conservation and adaptively manage for climate resiliency.

Environmental Stewardship: Increased water conservation will reduce dependence on summer flows and will enhance salmonid habitat by providing connectivity and decreased stream temperatures. During the summer of 2014, the Eel River went dry with exposed substrate near Loleta and other locations.

Improve Tribal Water and Natural Resources: The installation of conservation measures will decrease Tribal reliance on limited water supply, increasing community capacity to withstand extended drought periods while protecting important cultural and subsistence fish populations. Additionally, this project provides increased technical capacity for Tribal water managers and staff to conduct water audits as needed on Tribal properties. Finally, the preliminary development of a smartphone app for Tribes has benefits that will extend beyond the life of this funding cycle by providing the potential for substantial long-term water savings.

Ensure Equitable Distribution of Benefits: This project, which has many direct benefits to Tribal DACs, contributes to regional equity in the North Coast region.

Certainty, breadth, and magnitude

The Mendocino RCD is likely to be successful meeting the specified Program Preferences because it has already completed the groundwork for this project. The MCRCD worked with Tribal and small water suppliers to improve their drought preparedness by: 1) conducting a needs assessment; 2) holding water conservation workshops; 3) creating a four-part Water Wise series on public radio; 4) providing educational materials; 5) publishing an on-line resource guide; 6) training staff to conduct residential water audits; and 7) assisting suppliers with drought contingency planning. The breadth of this project is expected to extend beyond Tribal lands in Mendocino County because of the educational component

and the magnitude likewise will extend beyond the life of the fixtures. Inasmuch as the project helps to restore culturally important fisheries, its breadth is limitless and extends throughout the region and into future generations.

Montague Water Conservation District
Instream Flow Enhancement through Water Conservation

Resolve Water-Related Conflicts: Implementation of this project will reduce conflict in the Shasta and Klamath basins – a location nationally recognized for contentious relations between agricultural and environmental interests for over a decade. MWCD has been developing its larger program of which this project is a part – the CHERP – over a number of years and the strategy of conserving water to provide increased instream flows is supported by involved interest groups, tribes, and District landowners.

Drought Preparedness: This proposal increases agricultural water delivery efficiencies, a recognized drought mitigation measure. Additionally, it will line 1.30 miles of canal, conserving 680 acre feet per year, approximately 7% of the volume of water sold to users in the district annually. This amount of water equates to 10 cfs of instream flow for 34 days. Given that Shasta River flows near Yreka Creek (located at the base of Shasta Valley) during 2014 were under 20 cfs for 80 days, the volume of water considered in this proposal is significant to alleviate drought conditions in the Shasta River.

Efficient Use of Water: This project improves irrigation efficiency.

Climate Change Response: This project will reduce water loss in a watershed with severely limited water supply, bolstering both community and environmental resiliency to climate change. Additionally, MWCD's storage facilities can address effects of climate change and provide flood protection by capturing and holding significant precipitation events and wet periods for use later when conditions are dry through improved and efficient facilities and conjunctive management.

Environmental Stewardship: By ensuring instream flows during summer months when instream flow is limited, this project enhances aquatic habitat and protects listed salmonids.

Protect Surface Water Quality: Increased instream flows will help to reduce water temperature and increase Dissolved Oxygen, both listed as impairments for the Shasta River.

Ensure Equitable Distribution of Benefits: As a project that benefits a DAC, this effort will help to ensure equitable distribution of benefits in the North Coast.

Certainty, breadth, and magnitude

This project is highly certain to achieve state Preferences; the Montague Water Conservation District (MWCD) has lined over four miles of the main delivery canal demonstrating the proposed lining approach of using a geomembrane liner under shot-crete as an efficient method to conserve water. From an administrative and implementation standpoint, the approach is sound and MWCD has relevant experience as well as, staff, equipment, sub-contractors and technical support. The breadth and magnitude of the project extend well past the Shasta River watershed and the useful life of the infrastructure because of the example the project sets for collaboration and voluntary measures to meet regulatory goals in a highly contentious and often divisive watershed. Social capital developed during

project implementation and life will enable future solutions to move forward more smoothly than they otherwise might.

Northwest California Resource Conservation & Development Council
Trinity River Water Reliability and Drought Resiliency Project

Drought Preparedness: This project provides landowners with an alternative source of water during the warm summer months when demand is generally higher and instream flows are low.

Climate Change Response: Proposed slow flow systems are capable of sustainably diverting during wet seasons and during times of more modest flow because they can slowly fill storage tanks for later use in the dry season. With more unpredictable climate patterns, these systems are more adaptable to a host of conditions, making them more resilient to drought and long terms changes in climate.

Environmental Stewardship: Increased instream flow during the critical low flow summer months will provide species protection for coho and steelhead. Fish kills have occurred in the creek in the recent past; this project is meant to prevent such occurrences.

Protect Surface Water Quality: Increased instream flows will contribute to decreased water temperatures and increased Dissolved Oxygen levels, which are limiting in the Lower Trinity basin.

Ensure Equitable Distribution of Benefits: All areas are rural and economically or severely DAC. This project will directly benefit these communities, increasing regional equity with respect to benefit distribution.

Implements Human Right to Water Policy: The storage tanks and conservation measures will reduce or eliminate the need for landowners to truck water in during the summer months, ensuring that they have safe, clean, affordable, and accessible water adequate for human consumption, cooking and sanitary purposes.

Certainty, breadth, and magnitude

This project is likely to meet state Program Preferences because the Northwest RC &DC has implemented similar projects successfully, outreach with private landowners and previously achieved a 67% reduction in voluntary landowner water use (in 2013). Project breadth encompasses the highly contentious Trinity River basin, and so will extend beyond with success as an example of stakeholder collaboration during challenging times. The magnitude is likely to extend in perpetuity as landowners are able to meet water needs without diverting. Inasmuch as the project will assist in the recovery of listed salmonid species, the breadth and magnitude are enormous.

Sanctuary Forest
Mattole Flow Program: Mainstem & Tributary Storage and Forbearance

Integrate Water Management Programs: This project builds on the highly successful Mattole Storage and Forbearance Program that has been ongoing since 2005.

Drought Preparedness: This project increases water supply reliability through diversion of water during higher flows and storage for use during low flows. Water conservation and efficiency improvements are

also incorporated. The water storage infrastructure improvements effectively address long term drought preparedness by providing storage systems with a 40 year expected lifespan.

Climate Change Response: The project promotes community resiliency by diverting water from the wet seasons for use during the dry season and provides adequate water for extended dry seasons and drought caused by climate change. Impacts on water resources and wildlife habitat are reduced through utilization of stored water in times of water scarcity, providing ecosystem resiliency.

Environmental Stewardship: The project improves summertime streamflows by seasonally limiting diversions through storage and forbearance, thereby increasing water quantity, improving water quality, enhancing rearing requirements, and facilitating fish passage. The project also protects juvenile salmonids from injury caused by inadequately screened diversions.

Protect Surface Water Quality: Increased flows enhance water quality through oxygenation and help maintain viable pool habitat and pool connectivity for rearing and emigration.

Ensure Equitable Distribution of Benefits: This project helps provide safe reliable drinking water and water security to a DAC. It helps to ensure regional equitable distribution of benefits.

Implements Human Right to Water Policy: The project also provides water security for institutional and residential use in a rural community that is completely dependent on surface water diversions. It ensures that community members have access to safe, clean, affordable water for human consumption, cooking, and sanitary purposes.

Certainty, breadth, and magnitude

This project is highly certain to provide stated Preferences; Sanctuary Forest has worked toward the recovery of native Mattole salmonids since 1987, in collaboration with the Mattole Restoration Council, the Mattole Salmon Group and the community. Sanctuary Forest has been conducting extensive research to assess potential causes and solutions to the Mattole low flow problem since the summer of 2003 and is in a strong position to see this project successfully completed. The project will synergistically contribute to past and future projects, so the magnitude is much larger than if it were a stand-alone project. Physically, the project's breadth is restricted to the Mattole River watershed; however, as a demonstration of the effectiveness of Storage and Forbearance, the project's breadth extends to areas with similar climatic conditions.

Shasta Valley RCD
Shasta River Drought Response and Irrigation Efficiency Project

Resolve Water-Related Conflicts: This project will reduce water resource conflicts between agricultural users and other beneficial uses of water in a basin well-known for controversy between agricultural and environmental stakeholders. These projects and many more like them have been valuable for partners and irrigators in learning to work together for long term agricultural and environmental security. This benefit is expected to provide a monetary value conservatively estimated at $10,000 per year for five years in the form of reduced need for legal services.

Drought Preparedness: Combining improved water measuring with water conservation structural improvements such as pipelines will extend our ability to manage surface water for multiple benefits at

an economically viable scale. Over the next few decades, these improvements will be critical in balancing expected long-term drought cycles in the basin.

Efficient Use of Water: This project will install new irrigation measuring structures to improve control and delivery of irrigation water and designs for irrigation conveyance pipelines.

Climate Change Response: These projects in total are a package designed to improve management options and strategies by the districts that impact instream conditions in the Shasta River and provide community resiliency for expected conditions associated with climate change including hotter drier weather and droughts of increasing duration.

Environmental Stewardship: Valuable cool water in the river can be protected when irrigation is monitored more accurately, leading to improved habitat for over-summering juvenile Coho salmon.

Protect Surface Water Quality: Elevated water temperatures and low flows are the primary limiting factors for Coho abundance in the Shasta. Increased instream flows will contribute to decreased water temperatures and increased Dissolved Oxygen levels.

Ensure Equitable Distribution of Benefits: Shasta River watershed agricultural landowners are under increased scrutiny to meet the targets of the TMDL, ensure no incidental take, and improve irrigation efficiency. These projects are cost prohibitive for landowners within this economically Disadvantage Community to undertake on their own, thus, this project provides environmental justice benefits as well as the quantitative benefits described.

Certainty, breadth, and magnitude

It is very certain that this project will provide the stated Preferences. The Shasta Valley RCD has a long history of implementing similar projects over the course of the last 20 years, including: the removal of irrigation impoundments, tailwater reduction and re-use projects, irrigation efficiency and water conveyance, fish passage, cattle exclusion fencing and stock-water, riparian protection and enhancement. The breadth of the project extends through the Shasta River watershed and its magnitude is likely to be large, considering lasting positive impacts to human behavior and salmonid populations. As an example of hard-won comity in a very controversial watershed, the project has effects that extend beyond the physical.

Shelter Cove Resort Improvement District #1
Shelter Cove Water Recycling Project

Drought Preparedness: By diversifying its water supply portfolio, RID is better able to meet the needs of its water users and the environment in both wet and dry periods and under other stresses.

Efficient Reuse of Water: The project, when implemented, will recycle wastewater to tertiary standards, for use in landscape and agricultural irrigation.

Climate Change Response: By increasing recycled water capacity, Shelter Cove is increasing its drought and climate resiliency. With a hotter drier climate and increased drought cycles predicted, greater availability of recycled water for non-potable needs such as irrigation and fire suppression are vital to this community's sustainability. Additionally, a reliable source of water for fire protection and

suppression during drought conditions is paramount to protect life, property and the economically important ecosystem of Shelter Cove.

Environmental Stewardship: Since a portion of Telegraph Creek withdrawals by private individuals can be replaced by water reuse, more water will be available to meet environmental needs of Telegraph Creek instream habitat and less effluent will be discharged into the fragile habitat of the "Lost Coast." The reuse of water for agricultural irrigation includes the advantage of being a constant, reliable water source and reduces the amount of water extracted from the environment and the theft of water.

Protect Surface Water Quality: Increased instream flows will contribute to decreased water temperatures and increased Dissolved Oxygen levels.

Ensure Equitable Distribution of Benefits: Participation of this DAC in the IRWM process increases equity in the North Coast region.

Certainty, breadth, and magnitude

It is very likely that this project will meet the specified Program Preferences. The Resort Improvement District has extensive experience with recycled water systems and the technical basis for the project is sound. The breadth of impact extends to the immediate watershed and community; magnitude will be large for fire protection. Additionally, the project's impacts will extend beyond the immediate area if the availability of recycled water for agricultural irrigation causes diverters to leave water instream, especially during warm summer months.

Sonoma County Water Agency
Northern Sonoma County Water Conservation Program

Drought Preparedness: The Project provides the tools for communities to address drought issues. The rebates for new fixtures will provide an incentive for water customers to adapt to the shrinking water supply that has become an annual issue. It is proven that rebates promote fixture replacement at a faster rate than if a rebate was not available.

Efficient Reuse of Water: This project involves offering rebate programs to areas traditionally underserved by such opportunities. Incentives will be provided directly to customers for the purchase and installation of high-efficiency clothes washers, toilets and urinals and for the conversion of turf to climate-appropriate low water use plants.

Climate Change Response: This project will implement BMPs in water use efficiency and water conservation, reducing GHG emissions. Additionally, the project prepares local Disadvantaged residential and commercial water consumers for anticipated conditions associated with climate change, including a drier climate with increasingly long drought events.

Environmental Stewardship: Water conservation will translate into fewer withdrawals from the Russian River, resulting in increased instream flow, which improves habitat quality. The Russian River provides wildlife habitat including warm and cold freshwater habitat for fish migration and spawning.

Protect Surface Water Quality: Increased instream flows will contribute to decreased water temperatures and increased Dissolved Oxygen levels.

Ensure Equitable Distribution of Benefits: This project targets traditionally underserved communities, increasing the equity of the distribution of benefits from the IRWM process.

Certainty, breadth, and magnitude

This project is extremely certain to provide the Program Preferences described above. The Sonoma County Water Agency (Water Agency) has implemented water use efficiency and conservation programs going back two decades. Generally the programs have been rebates for water saving fixtures, rebates for turf removal, direct install programs, or public campaigns to increase water awareness. Inasmuch as the project changes consumer behavior by reducing demand, its breadth and magnitude are very large and long-lasting.

Sonoma RCD
Russian River Coho Drought Resiliency Planning and Implementation Program

Integrate Water Management Programs: This project integrates water management and land use planning traditionally conducted by RCDs through the USDA Natural Resource Conservation Service with the SWRCB recommended Frost Protection Program and the Russian River Coho Partnership.

Effectively Integrate Water Management with Land Use Planning: Plans will include a suite of components: rainwater catchment to both replace stream withdrawals and enhance agricultural water supply reliability, off-channel storage development, use of soil and plant monitoring devices to decrease irrigation demand, irrigation efficiency upgrades, wind machines for frost protection, and stormwater management/groundwater recharge. Participating properties comprise a variety of land uses including vineyards, rangelands, orchards, crop farms, and private environmental centers/camps.

Drought Preparedness: This project will create reliable and sustainable alternatives to stream or groundwater withdrawals through planning and implementation of rainwater catchment, onsite water storage, which, in concert with conservation, will help to prepare the community for drought conditions.

Climate Change Response: GHG reduction from reduced trucking will mitigate climate change. By promoting rainwater catchment, water use efficiency, and frost protection alternatives, the project serves as an ideal strategy for adaptation to the rainfall variability predicted by regional climate change models.

Environmental Stewardship: By enhancing streamflow through the implementation of rainwater catchment, water use efficiency improvements, and frost protection alternatives in the most vital reaches of the streams, the project will address the primary limiting factor to both coho and steelhead.

Protect Surface Water Quality: Increased instream flows will contribute to decreased water temperatures and increased Dissolved Oxygen levels.

Ensure Equitable Distribution of Benefits: The project includes the severely disadvantaged river communities surrounding Monte Rio (Severely DAC) and Dutch Bill Creek (DAC) watershed's disadvantaged rural areas, whose landowners steward essential but water-limited coho stream reaches. Through the participation of these Disadvantaged Communities, the project will help to ensure equity in the North Coast.

Certainty, breadth, and magnitude

It is highly likely that the project proponents will successfully implement this project. The two partnering RCDs have numerous successful water conservation programs. The Sonoma RCD has developed several rainwater catchment projects through an existing IRWM grant and NFWF funding, and has limited existing funding for an irrigation efficiency program from Ca DWR. The Gold Ridge RCD has received four prior IRWM grants, all of which include similar large-scale rainwater catchment and water storage projects, and has implemented irrigation efficiency projects through NFWF funding. The breadth of the project covers the specified high priority watersheds for Coho recovery and the magnitude will extend beyond the life of the infrastructure by influencing participant behavior and attitudes. Indeed, with its contribution to coho recovery in the Russian River watershed, the breadth and magnitude of the project have effects that will spread throughout the North Coast and generations into the future.

Watershed Research and Training Center
South Fork Trinity River – Spring Run Chinook salmon Restoration Project

Drought Preparedness: The ecological benefits of the project will include increasing hyporheic exchange of surface and groundwater, improve water quality and quantity during base flow periods, and increase the amount of available habitat for juvenile and adult salmonids during low flow periods, mitigating the effects of extended drought on ecosystem services as well as listed salmonids. By protecting salmonid populations from the effects of the extended drought, this project enhances the cultural and subsistence sustainability of local Native American Tribes.

Climate Change Response: Forest restoration and placing whole trees instream will increase carbon sequestration, mitigating climate change. Restoration of hydrologic connectivity with the floodplain for groundwater recharge will promote cold water hyporheic exchange and provide drought and climate change ecosystem resiliency.

Environmental Stewardship: Planting streamside trees and increasing riparian forest resiliency will sequester significant quantities of carbon, while CWJs will facilitate increased flood retention and groundwater recharge, and help meter sediment delivery and reduce pool and thermal refugia filling events.

Protect Surface Water Quality: This project will reduce sedimentation and increase riparian forest, which provides filtration services, and helps reduce water temperature, resulting in improved water quality.

Ensure Equitable Distribution of Benefits: This project occurs in the DACs of Hayfork and Hyampom, which have historically been subsistence hunters and fishermen. All project benefits will accrue to this population, ensuring equitable distribution of benefits in the North Coast.

Certainty, breadth, and magnitude

This project is very likely to achieve stated Preferences. The Watershed Center has implemented similar projects to restore watershed health but not to this scale; however the Yurok Tribe who is the subcontractor on the project has implemented numerous restoration projects for salmonid habitats. The Yurok tribe has provided planning, design, implementation, and monitoring of large scale

restoration on the upper Trinity River Mainstem and Lower Klamath River Sub-Basin tributaries. The breadth of the project will extend throughout the South Fork Trinity and into the Klamath watershed inasmuch as it contributes to and reinforces previous and future restoration projects. The magnitude of the effects will grow with time; restoration projects provide increasing ecosystem services as they mature. The contribution of this project to continued presence and recovery of salmonids in the watershed has long-lasting, important effects on Native American culture, health, and subsistence.

Weott CSD
Additional Water Storage

Drought Preparedness: The WCSD's current storage capacity of just three days is not a sustainable or reliable amount in the event of water shortage due to emergency conditions or the extended drought conditions expected with climate change. A 500,000 gallon tank would boost the water storage supply capacity to 30 days. Additionally, the water currently diverted would be collected and stored more efficiently with increased storage capacity.

Climate Change Response: Increased water storage will allow for the more efficient use of water and buffer the community against prolonged drought and increased heat, which are expected outcomes of climate change.

Ensure Equitable Distribution of Benefits: The participation of this DAC in the IRWM process contributes to regional equity in the distribution of benefits.

Implements Human Right to Water Policy: By providing a reliable water supply, the project is ensuring reliable access to safe, clean, and affordable water that is adequate for human consumption, cooking and sanitary purposes.

Certainty, breadth, and magnitude

This project is certain to provide the claimed Preferences. The technical basis of the project is sound and its breadth will extend through the Weott community to provide increased water supply reliability and security in the event of disaster. The magnitude of the project will extend through the useful life of the infrastructure.

Westhaven CSD
Water Storage Tank and Roof Replacement Project

Critical Water Supply Need of DAC: The water system relies on a roof that is in an advance state of rot due to dampness. A CDPH inspection in 2005 listed the condition of the roof as a "system or operational defect and/or potential health hazard." This project will replace the failing tank and ensure an adequate, reliable, and sanitary drinking water supply for the community.

Drought Preparedness: This project provides additional water storage for flexibility in management and buffering the community against extended drought conditions.

Climate Change Response: A reliable source of drinking water is paramount to water supply reliability to this DAC in the face of prolonged drought conditions expected with climate change.

Ensure Equitable Distribution of Benefits: This DAC is participating in the IRWM process and receiving the benefits of project implementation, increasing regional equity in the distribution of benefits associated with the IRWM program.

Implements Human Right to Water Policy: If the roof fails, the District will be unable to provide safe, clean, affordable, and accessible water adequate for human consumption, cooking, and sanitary purposes. This project will repair the roof before it fails; ensuring the community's Human Right to Water is upheld.

Certainty, breadth, and magnitude

When implemented, this project will certainly provide the stated Program Preferences; its technical basis of the project is rigorous. The breadth of the project will extend throughout Westhaven to provide adequate water supply and quality for disadvantaged residents. The magnitude of the project will extend through the useful life of the infrastructure.

Yurok Tribe
Yurok Watershed Restoration and Drinking Water Security

Drought Preparedness: The Tribal Drinking Water Diversion Alternative directly supplies water to households that currently lack year- round water security. The water storage tanks will be a source of long-term drought and climate change preparedness by providing additional storage during times of water availability.

Climate Change Response: Whole tree materials used in this project will sequester approximately 121 tons of carbon to long term in-channel storage. The Water Storage component was designed specifically to meet the challenges of drought and climate change by increasing Tribal members' ability to store water during storm events for use during the dry season rather than relying solely on surface diversions with flows expected to become increasingly more unpredictable. Restoring watershed health and productivity is likely the most meaningful way to increase habitat and species resiliency to drought and climate change and will thus better support our communities and local economies as well as cultural and subsistence values.

Environmental Stewardship: Habitat restoration and improvement are environmental stewardship actions.

Protect Surface Water Quality: Sediment savings of about 2.5 tons of sediment prevented from entering valuable instream habitat yearly. Additionally, riparian restoration will provide filtration services and maturing forests will provide shade to mitigate high water temperatures.

Improve Tribal Water Resources: Improved instream and riparian habitat will support fisheries to sustain Yurok subsistence and cultural relationship with the Klamath River and its resources.

Ensure Equitable Distribution of Benefits: Participation of this DAC in the IRWM process helps to ensure equitable distribution of benefits in the North Coast region.

Implements Human Right to Water Policy: The households receiving storage tanks have all indicated inadequate drinking water storage and lack of drinking water supply during low flow periods; thus,

project implementation will implement the Human Right to Water Policy by providing safe, clean, affordable, and accessible water adequate for human consumption, cooking, and sanitary purposes.

Certainty, breadth, and magnitude

This project is very certain to provide the above Program Preferences. The Yurok Tribe has extensive experience with both water systems and habitat restoration; it has implemented drinking water storage tank projects at a larger scale than the proposed tank size that include the installation of three 250,000 gallon water tanks in Klamath, Kepel, and Weitchpec. Additionally, the Tribe's Fisheries Program (YTFP) and Watershed Restoration Program (YTWRP) have been conducting watershed assessments and implementing effective restoration in a prioritized manner since the late 1990s. This project will add to those successful projects, achieving a breadth and magnitude beyond what the project could accomplish on its own. Its contribution to fisheries restoration has long-lasting, positive impacts on a very large scale.