



NORTH COAST RESOURCE PARTNERSHIP

2014 IRWM Drought Project Grant Application

ATTACHMENT 7: Program Preferences

**Integrated Regional Water Management Program
Applicant: Humboldt County**

North Coast Resource Partnership 2014 IRWM Drought Project Grant

Attachment 7. Program Preferences

The projects advanced in this Proposal collectively meet all applicable Program Preferences and Statewide Priorities and several 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 supply reliability exacerbated by the current drought. The North Coast Resources Partnership 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 priorities.

Disadvantaged Communities (DACs) disproportionately bear the health and financial impacts of inadequate access to safe water. In this Proposal, we have identified over 20 Seriously Disadvantaged or DAC communities facing water supply challenges and have prioritized the projects that assist them to secure access to affordable clean water. A description of how each project meets relevant preferences/priorities is provided below.

ID #	Project	Program Preferences					Statewide Priorities								
		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
1	City of Rio Dell		•		•		•		•		•		•	•	
2	City of Ukiah	•	•	•	•	•	•		•		•		•	•	
4	Sonoma County Water Agency	•	•	•	•		•	•	•	•	•	•	•	•	
5	Lewiston Park Mutual			•	•		•	•	•	•			•	•	
7	City of Fort Bragg			•	•		•		•	•	•		•	•	
8	Gualala River Watershed Council		•	•	•		•	•	•	•	•		•	•	
9	Sanctuary Forest			•	•		•	•	•	•	•		•	•	
12	Yurok Tribe			•	•		•		•		•	•	•	•	
13	Westhaven CSD				•		•		•				•	•	
20	California Land Stewardship Institute	•	•	•	•	•	•	•	•	•	•		•	•	
21	City of Crescent City				•		•						•	•	

City of Rio Dell

Program Preferences

The City of Rio Dell Emergency Intertie project meets the Program Preference *Integrate Water Management Programs or Projects* through the linkage of Rio Dell's water system with Scotia's water system. By integrating the two systems, this project ensures water supply reliability for Rio Dell and Scotia because both communities are better prepared for emergencies and are more resilient to climate change. Additionally, this project brings the City of Rio Dell, Scotia CSD, and CDPH to actively participate in project implementation, strengthening existing relationships and adding to the integration of North Coast water and wastewater suppliers with regional and state agency representatives. These connections smooth the way for future integration and collaborations. This project also addresses a *Critical Water Supply* issue for a Disadvantaged Community (DAC) – a reliable water supply is critical to the economic vitality of the community and the health and safety of its residents.

This project also meets several Statewide Priorities. It assists both Rio Dell and Scotia with *Drought Preparedness* by linking the two water systems – if one system (as is the case at present) has a limited supply, water from the other system is available to supplement. This aspect of the project lends resiliency to *Climate Change Response* by enabling the two communities to cooperate to manage water supply resources on a larger scale than arbitrary community boundaries. By providing an immediate source of high quality drinking water for Rio Dell, this project also *Protects Surface Water Quality* by reducing the need to rush repairs for Rio Dell's infiltration gallery. Since the community will have a reliable source of water, repairs to the gallery can be completed without haste, minimizing the potential for increased turbidity in the Eel River. This project improves water supply reliability in a DAC, thus it *Ensures Equitable Distribution of Benefits* by funding a necessary infrastructure improvement project for a community that is in need.

Certainty, Breadth, and Magnitude

There is strong certainty that this project will meet these Program Preferences and that the benefits will reach a wide range of consumers. The City of Rio Dell has implemented numerous water and wastewater system improvement projects similar in size and scope to the proposed intertie project including a Water Infrastructure Rehabilitation Feasibility Project (\$5 million, funded in part by DWR) and a wastewater system improvement project (partially funded by SWRCB). The wastewater system improvement project included directional drilling under the river similar to the proposed installation of this intertie. The project will affect all residents of both Rio Dell and Scotia and contribute to North Coast resiliency and autonomy by providing water supply reliability for this DAC.

Human Right to Water

The Emergency Intertie project helps to ensure that people in the City of Rio Dell have access to clean, affordable and accessible water for human consumption, cooking and sanitation. In the absence of this project, community access to clean water for basic needs will be severely diminished. Additionally, because it provides both Rio Dell and Scotia with emergency water in the long term, it addresses climate change resiliency and future threats to the Human Right to Water.

City of Ukiah

Program Preferences

This project was coordinated with the Sonoma County Water Agency and CLSI proposals to collectively address urban, rural residential and agricultural water conservation needs for the DACs in the Upper Russian River

Attachment 7. Program Preferences

watershed, *Integrating Water Management Programs* into a *Regional Project*. Additionally, the Ukiah Valley – Redwood Valley Water Supply Reliability Intertie and Well Development Project is a *Regional Project* that *Integrates Water Management Programs* for the Ukiah and Redwood Valleys in the Upper Russian River watershed. It consists of the City of Ukiah and five other water agencies – the Redwood Valley County Water District (RVCWD), Calpella County Water District (CCWD), Millview County Water District (MCWD), Willow County Water District (WCWD), and Rogina Water Company (Rogina) collaborating to ensure reliable drinking water supply throughout the Ukiah region. These seven agencies share a vision of a network of interties that allow for water supply reliability for all, especially during drought and other emergencies. The project also *Resolves Water-related Conflicts* by increasing water supply reliability for each water district and by bringing parties together who have historically been at odds over water resources. In addition to implementing this project, these entities are meeting regularly about the drought with the County of Mendocino and coordinating with both the county Offices of Emergency Services and state Office of Emergency Services. These meetings and project implementation build a social network among the participants, paving the way for future planning and implementation projects to ensure water quality and supply reliability for the region and reducing occurrence of future conflicts. The California Department of Public Health supports this project in its efforts to provide a reliable source of clean drinking water for all residents of the area.

The City of Ukiah is a DAC and portions of the RVCWD, CCWD, MCWD, Rogina and WCWD contain DACs, thus this project *Addresses Critical Water Supply Needs of DACs* by ensuring water supply reliability to all communities in the project area. If potable water sources are diminished in some districts, the interties will provide enough water for every customer for basic health and human consumption and lessen the cost of customers purchasing bottled water or hauling water from systems outside of the valleys.

This project provides *Drought Preparedness* by linking systems; if one or more districts' water supplies are reduced, districts with larger supplies can provide supplementary water. Since some of the water suppliers have groundwater wells while others do not, this supplementation may be vital to avoid loss of service to one or more communities if the drought continues. This project also provides *Climate Change Response* capabilities to the communities involved – by diversifying and increasing sources of water supply, each community is more resilient to the effects of climate change. Additionally, inasmuch as improvements to supply reliability reduce the amount of potable water trucked into the area, this project also reduces GHG emissions, thereby contributing towards reducing GHGs.

Through the installation of new groundwater wells, this project reduces diversion of surface water from the Russian River, which is 303(d) listed for temperature and supports listed salmonid species. By reducing surface diversions, the project *Protects Surface Water Quality*; more water instream contributes to cooler temperatures. This can be critical for salmonid survival, particularly during the summer months.

Finally, this project *Ensures Equitable Distribution of Benefits* by improving water supply reliability in DACs and partial DACs.

Certainty, Breadth, and Magnitude

It is certain that project implementation will yield these Preferences; the City of Ukiah and its five water supply collaborators have extensive experience with similar projects and this project is a part of a regional drought contingency plan in development by the six water purveyors, so technical capacity is high. Magnitude and breadth of the project is large – it will assist in providing drought relief throughout the Ukiah and Redwood Valleys for at least 50 years. It also contributes toward the regional resiliency and autonomy of the North Coast.

Attachment 7. Program Preferences

Human Right to Water

This project implements the Human Right to Water Policy by ensuring that the DACs and partial DACs participating in this proposal have access to clean, safe, and affordable water for basic needs. This is a long-term solution that will increase resiliency to climate change, thus addressing potential future threats to the Human Right to Water.

Sonoma County Water Agency - Sonoma-Mendocino Immediate Drought Relief Project

Program Preferences

This project was coordinated with the CLSI and City of Ukiah proposals to collectively address urban, rural residential and agricultural water conservation needs for the DACs in the Upper Russian River watershed, *Integrating Water Management Programs into a Regional Project*. Additionally, this is a *Regional Project* that *Integrates Water Management Projects* by drawing on local knowledge for planning, project development, and implementation to help lessen the severity of the effects of the drought on consumers in the region. This framework provides for inclusive, regional, and accountable project implementation by engaging with residential and commercial water customers in the most vulnerable communities to implement water conservation. It also contributes to *Resolving Water-related Conflicts* between municipalities and agriculture, which have historically disagreed over water use in the basin. It *Addresses Critical Water Supply needs of DACs* by providing technical information and fixtures necessary to implement conservation practices on an individual level to communities that have historically been precluded from such programs. The project provides residents in historically underserved communities with water conservation measures to help them save money on their monthly water bills while conserving water for the greater good. These water efficiency measures have not previously been available to residents of Mendocino County or unincorporated areas of Sonoma County.

This project assists with *Drought Preparedness* by implementing conservation measures and educating individuals about ways to conserve water. Conserving water helps with drought preparedness by decreasing water use, which makes more water available for other purposes, such as agriculture or environmental beneficial uses. By implementing conservation practices, the project promulgates the *Efficient Use of Water*, and it increases the region's *Climate Change Response* capabilities by decreasing demand for potable water, which translates to less energy used for water treatment and delivery, thus decreasing GHG emissions. It also increases the region's resiliency to climate change by empowering the citizenry to use less water, thus decreasing demand on the water supply infrastructure as well as the watershed. By decreasing overall demand for potable water in the watershed, this project demonstrates *Environmental Stewardship*; more water is left instream for environmental beneficial uses, a critical Beneficial Use in the Russian River watershed, which supports listed salmonid species. More water instream can contribute towards attainment of TMDLs for temperature in the Russian River, thus the project also *Protects Surface Water Quality*.

This project also *Improves Tribal Water and Natural Resources*. Two Native American Tribes – the Coyote Valley Band of Pomo Indians and the Redwood Valley Rancheria – receive water from a RVCWD partner and one Tribe – the Hopland Band of Pomo Indians – is located within the project area. All three Tribes will benefit indirectly through increased instream flow, which protects environmental beneficial uses and supports traditional cultural activities. Additionally, by implementing the project within 7 DACs or partial DACs (Guerneville, Rio Nido, Villa Grande, Monte Rio, Redwood Valley, Ukiah, and Hopland), this projects helps to *Ensure Equitable Distribution of Benefits*.

Certainty, Breadth, and Magnitude

The certainty of this project providing these Program Preferences is very high. The Sonoma County Water Agency is a recognized leader in water resources management throughout both the North Coast and Bay Area regions. It has implemented several other water use efficiency and conservation programs with proven success since 2009. The scope of the benefits will be large – this project will focus on underserved communities in traditionally underserved areas and covers a broad geographic area within the Russian River watershed. Additionally, through education and technical support that lead to behavioral changes associated with water conservation, the impacts of the project are very likely to extend beyond the project’s time frame. As with all other projects in this Proposal, this project enhances the resiliency of the North Coast to changes in weather patterns and contributes to regional autonomy.

Human Right to Water

This project supports the state’s Human Right to Water Policy by providing conservation tools and technical individual to historically underserved communities. It helps these communities achieve water supply reliability and increases climate change resilience by providing the necessary fixtures and information to prompt long-term behavioral change in end users. Thus, it helps to ensure that these communities’ Human Right to Water is sustained long-term.

Lewiston Park Mutual – Meter Installation

Program Preferences

This project *Resolves Water-related Conflicts* among current users and the Lewiston Park Mutual Water Company (LPMWC) by providing quantitative data regarding water use. At present, there is conflict with users who feel entitled to as much water as they can use because they pay a flat rate and there is no incentive to conserve. The project also *Addresses Critical Water Supply Needs of DACs* through installation of water meters for Lewiston Park, which is economically disadvantaged. This will promote water conservation, which will enable the LPMWC to produce enough potable water to supply the community. LPMWC runs 5 wells and a river pump for surface water; the wells have begun to go dry with greater frequency and Trinity Lake, the reservoir which supplies the Trinity River, is at 40% of normal. LPMWC may not be able to continue to meet customer demand, which is estimated at three times the national average of 100 gallons per day, an unsustainable amount given the current drought and future weather predictions associated with climate change. Thus, the project addresses *Drought Preparedness* and *Climate Change Response* by promoting the *Efficient Use of Water* through metering and setting rates that encourage conservation. With less demand, more water will be left instream for environmental beneficial uses in the Trinity River, thus this project promotes *Environmental Stewardship*. Finally, Lewiston Park is a DAC, so this project ensures *Equitable Distribution of Benefits* by ensuring greater water supply reliability and by decreasing the demand on the aging water supply system until such time that it can be upgraded.

Certainty, Breadth, and Magnitude

There is strong certainty that Program Preferences will be met, because metering is a highly successful method of encouraging water conservation. Breadth and magnitude of this project is relatively small with respect to population – 167 homes will be affected – but is large with respect to impacts to natural resources. The Trinity River system is a highly contentious watershed with respect to out-of-basin transfers, sufficient instream flows, and support of fisheries and agricultural beneficial uses in the larger Klamath watershed. This project will reduce withdrawals from the Trinity, leaving more water instream to support the aquatic ecosystem and other beneficial

Attachment 7. Program Preferences

uses. Additionally, by strengthening water supply reliability for a DAC, this project contributes towards climate change resiliency throughout the North Coast and to regional autonomy.

Human Right to Water

This project implements the Human Right to Water Policy by providing water supply reliability to this DAC. With project implementation, residents will be encouraged to conserve water through tiered rates that will penalize water waste; thereby ensuring that each resident has sufficient water for basic human needs.

City of Fort Bragg – Summers Lane Reservoir Project

Program Preferences

This project will *Resolve Water-Related Conflicts* by successfully meeting minimum diversion requirements for the Noyo River during droughts or water source emergencies. Each day of conflict avoidance supports salmonid habitat and provides water supply reliability. Fort Bragg is considered a “Severely Disadvantaged” community; 20% of its residents live below poverty level, thus this project *Addresses Critical Water Supply or Water Quality Needs of DACs*. In addition to providing water supply reliability through reservoir construction, the project will also improve water quality; the current reservoir that collects surface water contains elevated tannins and lignins with an acidic pH. The new reservoir will ensure minimum drinking water standards are maintained.

Drought Preparedness will be achieved through project implementation by providing a consistent alternative source of high quality water. Construction of the reservoir will allow storage of water from Waterfall Gulch and will decrease Fort Bragg’s reliance on water pumped from the Noyo River during late summer months and periods of drought when demand peaks and flows diminish. Since the Waterfall Gulch supply is gravity fed, the reservoir will reduce pumping costs and associated greenhouse gas emissions, enhancing *Climate Change Response* capabilities. Using the stored water from the reservoir when Noyo flows are low will help to protect critical habitat for listed salmonids, and small trees and brush cleared for construction will be recycled into chips used to mulch new native plantings along the Coastal Trail, enhancing Fort Bragg’s *Environmental Stewardship and Protection of Surface Water Quality*. By implementing a water supply reliability project in a Severely Disadvantaged Community, this project also *Ensures Equitable Distribution of Benefits*.

Certainty, Breadth, and Magnitude

There is strong certainty that this project will meet the Program Preferences because it will significantly increase Fort Bragg’s water supply. The City of Fort Bragg has not yet built a reservoir, but it has successfully implemented several other water supply infrastructure projects and there is a strong technical basis for this project (see Attachment 3). Breadth and magnitude will be large; this project will affect the entire city by increasing water supply reliability for at least 50 years. Additionally, the project enhances climate change resiliency and regional autonomy for the North Coast.

Human Right to Water

The City of Fort Bragg is a Severely Disadvantaged Community and although at this time it can nominally meet current demand, it has implemented mandatory conservation measures in three of the last five years. If the current drought conditions lengthen or worsen, it will lead to usage restrictions creating regional economic hardship, reducing fire safety, and creating potential public health concerns due to the lack of sufficient water to meet basic human needs. Thus, implementation of this project will protect the Human Right to Water for the residents of Fort Bragg.

Gualala River Watershed Council – The Flow Bank – Protecting Stream Flow in the Gualala River

Program Preferences

The Gualala River Watershed Council is a local nonprofit organization working with the local community to restore the ecosystem services of the watershed and protect its environment. It uses a cohesive strategy of landowner outreach, state and federal agency collaboration, and scientific inquiry to *Integrate Water Management Programs* with land use in the watershed. It has followed a scientifically rigorous and state-agency approved program to improve water quality, instream habitat, land use practices, and instream flow for the past sixteen years; this project is a continuation of this program. Through the use of scientifically defensible information and proactive outreach, this project *Resolves Water-related Conflicts* between environmental advocates and residential and municipal water users. The project also *Addresses Critical Water Supply Needs of DACs* by providing residential rainwater catchment systems to harvest rainwater for summer use, leaving water instream during critical summer months. The Stewarts Point Rancheria DAC operates a direct diversion from the Wheatfield Fork of the Gualala River and limited off-site storage necessitates pumping during low flow periods; water left instream from this project will augment low flow water supplies, increasing water reliability and reducing overall water costs to Rancheria residents. Thus, the project provides *Drought Preparedness* and *Efficient Use of Water* for residents of the watershed directly through installation of residential rainwater catchment systems, conservation improvements, and leak-proofing and indirectly by increasing flows in the Wheatfield Fork, which supplies the Stewarts Point Rancheria. Increasing water supply sources enhances the communities' *Climate Change Response* capabilities as well as the watershed's resiliency to climate change impacts. This project enhances Environmental Stewardship; stream flow augmentation will enhance habitat and increase overall area and diversity of habitat types and conditions. This will provide increased habitat and openchannel migration corridors for listed salmonid species and improve habitat to withstand future climate conditions, which are expected to be warmer and more hydrologically variable. Through increased instream flow the project also *Protects Surface Water Quality*; increased localized surface water quality is expected in the summer because of the higher flows. Finally, this project *Ensures Equitable Distribution of Benefits* by enhancing water supply reliability for DACs as described above.

Certainty, Breadth, and Magnitude

The certainty that this project will provide these Program Preferences is extremely high; the Gualala River Watershed Council has 16 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.

Human Right to Water

This project indirectly supports the Human Right to Water Policy by reducing withdrawals from the Wheatfield Fork of the Gualala, which is the water supply source for the DAC Kashia Tribe at the Stewarts Point Rancheria. By helping the Rancheria improve its water supply reliability, the project contributes towards the stable provision of quality water for basic human needs.

Sanctuary Forest – Mattole Flow Program: Storage and Forbearance

Program Preferences

The Mattole River Headwaters is both the sole water source for residents and businesses and the habitat for endangered salmonids and other wildlife. This project *Resolves Water-Related Conflicts* by providing drinking water supply reliability and leaving water instream to support environmental beneficial uses during critical low flow periods. By providing for all needs in the watershed – both human and wildlife – the project reduces conflict between advocates for environmental beneficial uses and advocates for human use. The project *Addresses Critical Water Supply Needs of DACs* by providing drinking water supply reliability in the DAC of Whitethorn; diversifying water supply sources will assist with Drought Preparedness while conservation measures and leak prevention ensure *Efficient Use of Water*. The project was developed as an adaptive strategy to improve *Climate Change Response* by improving habitat protection and ecological function while addressing human water needs, security, and public health in Whitethorn. Multiple water sources are a form of climate change response to enhance water supply reliability in the face of uncertain weather patterns. The project provides *Environmental Stewardship* and *Protects Surface Water Quality* by seasonally limiting diversions through storage and forbearance, thereby increasing water quantity, improving water quality, enhancing rearing conditions, and facilitating fish passage. The project *Ensures Equitable Distribution of Benefits* by providing water security for institutional and residential use in a DAC that is completely dependent on surface water diversions.

Certainty, Breadth, and Magnitude

There is strong certainty that this project will provide these Program Preferences. Sanctuary Forest has been implementing storage and forbearance projects in the Mattole Headwaters since 2005 with a total of one million gallons of surface storage and the associated forbearances that have led to measureable improvements in instream flow. Breadth and magnitude are large; this project will ensure water supply reliability for the DAC Whitethorn for at least 50 years and also contribute significantly to provision of instream flow during critical summer months throughout the Mattole watershed. This project also contributes to the climate change resiliency and autonomy of the entire North Coast Region.

Human Right to Water

There is no municipal water system in Whitethorn; each property owner must supply their own water, which is accomplished through surface water diversions of the Mattole headwaters. In low flow years, there is not enough water to provide for basic human needs, thus, this project, which collects and stores water during the rainy season for use during low flow periods, contributes to the Human Right to Water Policy by providing supply reliability to this DAC.

Yurok Tribe – Weitchpec Water Station

Program Preferences

The Klamath River Basin is home to one of the biggest agriculture vs. fisheries conflicts in the history of the west. By providing an alternative source of water to instream diversion, this project keeps water flowing to the Klamath Basin, protecting fisheries and agricultural enterprise and thus *Resolving Water-related Conflicts* in the region. This project *Addresses Critical Water Supply Needs of DACs*; it provides an alternative water system for a Tribal DAC that currently possesses a surface water system that has poor quality, potentially severe health impacts, a seasonally limited supply, and no emergency access for fire prevention. It assists the community with *Drought Preparedness* by installing a groundwater well and water station to reliably supply high quality water and emergency access. The water station increases *Climate Change Response* through provision of a secure water

Attachment 7. Program Preferences

source and implementation of water conservation measures. By eliminating surface water diversions, the project enhances *Environmental Stewardship* and *Protects Surface Water Quality* by increasing flow to the 303(d) listed (nutrients, temperature) Klamath River. Increased flow is expected to ameliorate high temperatures in the Klamath and dilute nutrients, improving water quality. Low water temperatures are essential to fish bearing areas of the Klamath since anadromous fish rely on cold water refugia during spawning. Finally, since the project and its economically disadvantaged recipients are located on Tribal land, this project both *Improves Tribal Water and Natural Resources* and *Ensures Equitable Distribution of Benefits*.

Certainty, Breadth, and Magnitude

The certainty that this project will meet the stated Preferences is very high. The Yurok Public Utilities District has implemented several similar projects on Tribal lands including installation of a well and pump house, construction of a Tribal water system with interconnected distribution lines and new water tank, and well rehabilitation and water storage tank. Additionally, the project has been planned by a respected consulting firm and vetted by Indian Health Services and the US EPA. The extent to which the project meets Program Preferences is broad and deep; the alternative water supply is expected to last at least 50 years, and the project positively impacts the highly contentious and ecologically important Klamath River watershed by eliminating surface withdrawal for the community of Weitchpec. Additionally, the project supports regional autonomy and resiliency to climate change.

Human Right to Water

Low flows resulting from the drought and other climate change impacts have led to decreasing flows, which, combined with illegal diversions, have created a significant health and safety concern for this DAC. When creek water flow is low, water quality suffers and water often contains increased turbidity and organics that require higher levels of carcinogenic disinfection byproducts. Water is extremely limited and a backup source for emergencies is nonexistent, leaving this community highly vulnerable to impacts of climate change and drought conditions. This project relieves these conditions by providing clean, affordable water for basic human needs as well as providing an emergency supply for fire suppression.

Westhaven Community Services District – Westhaven CSD Water Loss Reduction Project

Program Preferences

This project *Resolves Water-related Conflicts* by reducing conflicts between the California Department of Public Health (CDPH) and the community of Westhaven. When the project is completed, CDPH is expected to remove a moratorium on connections that was imposed in 2006. The project also *Addresses Critical Water Supply Needs of a DAC* by repairing water supply infrastructure to improve supply reliability in the DAC of Westhaven. Additionally, once the project has documented the reduction in water loss, Westhaven CSD (WCSD) intends to petition CDPH to remove a connection moratorium; homeowners currently using wells that have been identified as inadequate or contaminated would then have access to a secure, safe supply. High system loss poses serious concerns for adequate supply during periods of drought; repairing the leaks would increase *Drought Preparedness and Climate Change Response* capabilities for the community of Westhaven. By increasing the efficiency of the existing infrastructure, WCSD is increasing the amount of potable water available for this DAC to adapt to changing weather patterns expected as a result of climate change. The project *Ensures Equitable Distribution of Benefits* by implementing a critical drinking water supply project in a DAC, thus increasing the participation of small and disadvantaged communities in the IRWM process.

Certainty, Breadth, and Magnitude

Attachment 7. Program Preferences

It is certain that this project will meet these Preferences. WCD has implemented a similar project upgrading water mains in the past and is coordinating with the California Department of Public Health to ensure that project implementation meets Title 22 standards for drinking water. The breadth and magnitude are large – the project will provide benefits for at least twenty years and positive effects will occur throughout the community of Westhaven. This project also enhances regional autonomy and climate change response of the North Coast region - by strengthening individual communities, the entire region becomes more stable and able to respond to changes in precipitation and other weather patterns associated with climate change.

Human Right to Water

This project makes clean, affordable water for basic human needs accessible to the DAC of Westhaven, thus implementing the Human Right to Water Policy. Without project implementation, Westhaven will continue to be limited by lack of water supply reliability, and some residents will continue to lack access to sufficient clean water for basic needs.

California Land Stewardship Institute – Agricultural Water Conservation and Water Supply Reliability Program – Russian and Navarro Watersheds

Program Preferences

This project was coordinated with the Sonoma County Water Agency and City of Ukiah proposals to collectively address urban, rural residential and agricultural water conservation needs for the DACs in the Upper Russian River watershed, *Integrating Water Management Programs into a Regional Project*. Additionally this project *Integrates Water Management Projects*; it integrates wastewater disposal, agricultural water supply, and agricultural water conservation to enhance agricultural security and water supply reliability in the Russian and Navarro River watersheds. Project implementation will *Resolve Water-related Conflicts* by reducing irrigation water demand through conservation measures and provision of an alternative water source, thus leaving water instream for environmental beneficial uses. This will reduce conflicts between agricultural users and advocates for environmental protection. The project *Addresses Critical Water Supply and Quality Needs of a DAC* by eliminating the need to expand the City of Ukiah Wastewater Treatment Plant. By allowing for off-property use and storage of recycled water the City avoids the need to construct additional wastewater storage which would necessitate increased sewage rates in 2015. It also *Integrates Water Management with Land Use Planning* by providing recycled water for agricultural purposes. This helps to keep agriculture in the area viable by providing a stable source for irrigation water that does not impact the environment. Keeping agriculture viable is a strong land use driver; if agriculture is not profitable, suburban or rural residential development will often occur, which leads to increased water demand from multiple parties (making it harder to coordinate behavioral changes that improve watershed conditions) and other impacts to the watershed associated with sub/ex-urban development, including increased impermeable surfaces, increased stormwater runoff, and increased VMT and associated GHG emissions.

The project also assists with *Drought Preparedness* through implementation of agricultural conservation measures; installation of soil moisture meters on up to 100 farms is expected to significantly reduce vineyard irrigation demand, thus improving overall supply reliability. Thus, the project involves the both the *Efficient Use and Reuse of Water* – soil moisture meters ensure efficient use and provision of recycled water for agricultural irrigation supplies high-quality treated water. Through provision of recycled municipal water, which increases source diversity, and implementation of conservation measures, which decrease demand, this project enhances *Climate Change Response* capabilities for residents of the Upper Russian River and Navarro River watersheds, both identified as DACs. Additionally, by providing an alternative source to surface water for agricultural frost

protection during critical migratory periods for listed salmonid species, this project enhances *Environmental Stewardship* in the Russian River watershed. Increased instream flow during periods of high water demand and low flow also improve water quality parameters such as Dissolved Oxygen, temperature, and pollutants. Finally, this project *Ensures Equitable Distribution of Benefits* by increasing DAC participation and providing a multi-benefit project that directly benefits disadvantaged communities in both the Russian and Navarro watersheds.

Certainty, Breadth, and Magnitude

There is a high degree of certainty that this project will meet the stated Program Preferences. CLSI has completed water conservation projects with hundreds of growers in the Russian and Navarro River watersheds including the construction of over 15 off-stream storage ponds in partnership with the Natural Resource Conservation Service (NRCS) and will collaborate with NRCS and the City of Ukiah – both also experienced with such projects – to implement this project. Breadth and magnitude are large and lasting – the project provides benefits to the residents of Ukiah as well as growers in the Russian and Navarro watersheds and these benefits are expected to last for decades. The project builds social capital during a critical water shortage between entities that have historically been in conflict; it supports regional collaboration and autonomy and promotes regional climate change response capabilities.

City of Crescent City – Elevated Water Tank (EWT) Rehabilitation (Wonder Stump Road)

Program Preferences

This project *addresses a Critical Water Supply of DACs* by repairing an aging and vulnerable water tank installed in 1958 to provide the necessary pressure for Crescent City’s entire water distribution system. It benefits the DACs /“Severely Disadvantaged Communities” of Crescent City, Del Norte County, Elk Valley Rancheria and Pelican Bay State Prison by increasing local water supply reliability. It assists with *Drought Preparedness* by ensuring uninterrupted water delivery; if the tank fails due to deterioration or seismic activity, it would result in nearly complete disruption of the water distribution system. If fires were to occur in conjunction with a seismic event, the lack of water for fire suppression caused by tank failure could be catastrophic. Proactively retrofitting the tank structurally will make it resistant to seismic activity; additionally, it will be upgraded to meet all current safety standards and to prevent degradation of water quality by reducing potential for contaminants due to scale and sediment build up.

This project enhances environmental justice; it *Improves Tribal Water* by improving water supply reliability to the Elk Valley Rancheria. It also *Ensures Equitable Distribution of Benefits* by ensuring water supply reliability for DACs, increasing DAC participation in the IRWM process, and protecting access to emergency water supplies for fire safety.

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, including the Elk Valley Rancheria, a Tribal entity, from water supply loss during emergencies for at least 50 years.