

Narrative Proposal for RMT II Debris Cleanup Grant Application, US EPA Brownfields Cleanup Grants FY17

1. Community Need

1.a. Target Community and Brownfields

Community and Target Area Descriptions

The target community is everyone residing within the Humboldt Bay Harbor and Resource Conservation District (District) and Humboldt County, and the target area is the town of Samoa and Humboldt Bay. The cleanup site is in Samoa. In pre-European settlement times, the Wiyot Tribe lived in the Humboldt Bay area. In 1860, white settlers forcibly removed and killed many as an economy based on redwood logging and forest products developed. Industrial development along the bay included mills, piers, shipyards, railroads, tanneries, fuel depots, and residential and agricultural development. As old growth logs became scarce, the timber industry and the local economy adjusted to smaller logs and two pulp mills were built on the Samoa peninsula in the 1960s. As the timber industry continued to contract and environmental activism grew, Humboldt's cultural history again became violent; Redwood Summer "direct action" included protests, tree sits, and forcible removals resulting in death of a tree-sitter in 1998¹. The pulp mills operated until the first one closed in 1991; the second one laid off most workers in 2008 and formally closed in 2010. This last pulp mill property was purchased by the District for \$1 in 2013, who renamed it Redwood Marine Terminal II (RMT II). Its price reflected the degree of contamination onsite.

Recent cultural and industrial developments along the Bay have tended to bring the community together again. In 2004, the Eureka City Council unanimously voted to return 45 acres of Indian Island back to the Wiyot Tribe. In 2013, the cleanup of the Indian Island site was completed and the tribe's first World Renewal Ceremony since the 1860 massacre was held in March 2014.² At RMT II, the District's vision is to repurpose the area into a National Marine Research and Innovation Park. In 2015, 3 million gallons of caustics, 20,000 gallons of sulfuric and hydrochloric acids, and 10,000 tons of caustic sludge were removed from the site. In July 2016, the Humboldt County Board of Supervisors showed support for the District's vision by voting to ease zoning restrictions along Humboldt Bay, allowing commercial opportunities such as aquaculture, biomass conversion, and renewable (solar) energy.³ Currently, contaminated debris remains at RMT II, limiting use on about one third of the site, but two tenants are making use of a portion of the site, raising oyster seed. The District and the County intend to continue developing the aquaculture industry in Humboldt Bay, and maintaining its high water quality is critical to that industry.

The target area is the town of Samoa and Humboldt Bay. Historically, the town was a hub of sawmill activity and in the 1890s, meals for as many as 500 men were served at the Samoa Cookhouse.⁴ In 2001, much of the town was purchased for private development; the developers plan to build a town square, artist studios, pedestrian trails, single and multi-family homes, and a light industrial park. Presently however, the town remains very much in the planning stages. RMT II occupies the southern portion of the town, on the Humboldt Bay side of the Samoa peninsula. Humboldt Bay is home to a thriving aquaculture industry, providing local employment and income from outside the County; the Bay currently provides 70% of oysters consumed in California.

Demographic Information and Indicators of Need

Table 1 illustrates that the target area of Samoa and the target community of Humboldt County are generally poorer, with high percentages of people unemployed and living below the poverty level, compared to State and Federal data. A much higher percentage of people in the target area and community do not have health insurance, and this fact holds for children under 18 years. Lack of health insurance and access to health care may contribute to the target community’s high cancer mortality rates, which are significantly higher than State rates. Racial demographic data support a higher-than-Statewide percentage of Native Americans in the target community, but also a general lack of racial diversity.

Table 1. Target area and community demographics in context of State and U.S

	Target area Samoa CDP ^a	Target community Humboldt County	California	National
Population	305	134,623	38,066,920	314,107,084
Percent 14 years and younger	9.9	16.3	19.9	19.5
Percent 65 years and older	6.9	14.1	12.1	13.8
Unemployment, percent not in labor force	12.4	11.3	11.0	9.2
Percent individuals below poverty level	23.0	20.8	16.4	15.6
Percent no health insurance coverage all people	26.2	18.8	16.7	14.2
Percent no health insurance coverage under 18 years	10.9	10.8	7.5	7.1
Cancer mortality rates, deaths per 100,000 ^b	NA	177.4	152.6	168.5
Percent White	90.5	82	62.1	73.8
Percent Black	1.0	1.3	5.9	12.6
Percent Native American	1.3	5.6	0.8	0.8
Percent Latino or Hispanic	9.8	10.3	38.2	16.9
Percent Asian	0	2.3	13.5	5.0
^a 2010-2014 American Community Survey 5-Year Estimates. CDP is census designated place. http://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?src=CF ^b National Cancer Institute. https://statecancerprofiles.cancer.gov/index.html				

Brownfields and their Impacts

The brownfield to be cleaned up is the area at the RMT II site containing three demolition debris piles that resulted from demolition of former pulp mill structures. The debris is from demolition of recovery boilers, a digester, and numerous aboveground storage tanks. The debris is characterized as block, crushed, and disaggregated concrete; metal; brick; wood; sand and gravel; and ceramic tile. The three piles’ total volume is about 2,400 cubic yards. The piles have been sampled and analyzed. The presence of cadmium, chromium, lead, nickel, zinc, 1,2-

dichloroethane, toluene, and total petroleum hydrocarbons as diesel and as motor oil was confirmed. In high concentrations, heavy metals are toxic to fish and people who ingest them; see Cumulative Environmental Issues section below.

The debris piles are within the southern portion of the town of Samoa, and within 1,200 feet of Humboldt Bay and aquaculture development. The potential for target area exposure is from a number of pathways. Exposure potential comes from windblown contaminants and contaminated soil and groundwater. During winter storms, wind is generally from the south, which would tend to blow contaminated dust and rain north, to residents of Samoa.⁵ Another exposure or migration route is through rainfall runoff and shallow groundwater, which could then impact Humboldt Bay and its oyster industry. The debris piles impact the redevelopment of the RMT II site by occupying a large and central portion of the site, and the redevelopment of the town of Samoa.

Other brownfield sites are in the immediate vicinity. In a Humboldt State University master’s thesis, the Samoa/Fairhaven area was identified as having 39 parcels that could be considered brownfields, totaling over 500 acres.⁶ The type of potential contamination would likely be similar to that of the RMT II site, given similar past industrial uses. The perception of brownfield impacts affects the target area just as documented impacts would. Humboldt Bay water quality must be perceived as “clean” for the aquaculture industry, and Samoa air and water quality must be “clean” for industrial and residential development.

1.b. Welfare, Environmental, and Public Health Impacts

Welfare Impacts

Social welfare indicators signify that Samoa and Humboldt County are poorer than residents of the State, and the property crime rate (theft) is much higher. Poverty is indicated by the percentage of children (K-12) eligible for free meals, and by the high unemployment rate documented in the Demographics section.

Welfare Indicators	Town of Samoa	Humboldt County	California
Percent children eligible for free meals (2013)	82.4 (Peninsula School District) ^a	45 ^b	50 ^b
Property crime rate, incidents per 1,000 residents (2012) ^c	71.21 (Eureka, nearest city)	35.97	27.59
Median home value (2013) ^d	\$259,500	\$259,500	\$373,100
Median rent ^d	\$968	\$797	\$1,120
^a California Department of Education. Student Poverty FRPM Data. http://www.cde.ca.gov/ds/sd/sd/files/ssp.asp ^b Kidsdata.org. Student Eligibility to Receive Free or Reduced Price School Meals. http://www.kidsdata.org/topic/780/free-school-meals-eligible-status/ ^c Conflicting Reports. 2014. North Coast Journal. http://www.northcoastjournal.com/humboldt/conflicting-reports/Content?oid=2484222 ^d Samoa, California. City-data.com. http://www.city-data.com/city/Samoa-California.html			

Cumulative Environmental Issues

Cumulative environmental issues result from both man-made and natural conditions. In addition to RMT II, existing and past industries and businesses in Samoa present petroleum related contamination; these businesses are a recycling center, marine services, and maintenance shops. In and around Humboldt Bay, concentrations of heavy metals, dioxins, and other synthetic organics have been monitored and documented in sediment, amphipod bioassays, and fish tissue since the late 1990s.⁷ However, a more recent study of organic pollutants in Humboldt Bay commercially grown shellfish concluded that dioxin levels are low enough that shellfish meet all

standards of safe harvest and consumption.⁸ Traffic impacts on limited roadways result from all businesses; air quality is potentially impacted by a soil/fertilizer business (dust and particulates) and by DG Fairhaven, a biomass electricity generation plant. DG Fairhaven generates up to 19 megawatts of energy by the controlled combustion of wood waste from mills and timber harvest operations. Critics of biomass generation state that air quality regulations are not stringent enough, especially with respect to emissions of PM2.5 (particle emissions less than 2.5 microns) that are unregulated, and carbon dioxide, which is a greenhouse gas contributing to climate change.⁹

Natural conditions contributing to impacts on the target area are earthquakes and tsunamis, and “king tide” events that will be exacerbated by sea level rise. In the past 150 years, nearly 40 earthquakes of magnitude 6.0 or larger have occurred in Northern California.¹⁰ A Cascadia subduction zone earthquake, with a resulting tsunami, could be of magnitude 9.0 or more; they occur irregularly every 200 to 800 years, with the most recent occurring 300 years ago in 1700. Earthquake and tsunami risks are cumulative impacts on the town of Samoa even without actually occurring. Because it lies within a tsunami evacuation zone, market prices for real estate have been shown to be reduced compared to those outside the zone.¹¹

Currently, there are no obvious environmental justice issues in terms of industries locating or operating in the town of Samoa, due to low property values or under-represented residents. The two pulp mills located to the Samoa peninsula due to its proximity to sawmills, harbor and docks, and ocean for effluent outfalls. Historically however, the Wiyot tribe experienced the worst imaginable environmental injustice. In 2007, a study investigated environmental justice issues with respect to the Humboldt County’s growing Hispanic population, and found that awareness of issues the Hispanic community may face is low.¹² In 2008, the California Center for Rural Policy stated that Latinos are the fastest growing minority group in Mendocino, Humboldt, and Del Norte counties, and that meeting their health needs to be improved.¹³ Their primary health concerns are obesity and nutrition, which are not related to potential contamination from RMT2 and other brownfields, but may be indirectly related to low income and access to health care.

Cumulative Public Health Impacts

Target community residents have dramatically worse mortality rates than California residents as a whole. In 2012, Humboldt County’s deaths from all causes was the second highest of all California counties (deaths from all causes of 865 vs. 632 per 100,000 statewide).¹⁴ Deaths from all cancers are similarly grim, with Humboldt County ranking third highest of all California counties. Other causes of death in Humboldt County and its rank among all counties are death from chronic lower respiratory issues (4th highest), strokes (highest), drug induced deaths (second highest), and suicide (third highest). There is a well documented trend in health inequity too, with non-white and Native Americans dying approximately 12 years earlier than white residents.

Sensitive populations include children and minority groups and low income populations; again public health statistics indicate cause for concern in Humboldt County. Childhood cancer diagnosis rates are increasing in Humboldt County, as they are for all of California.¹⁵ Statewide, the diagnosis rate is highest for white children (19.2 per 100,000), and lowest for Native American children (12.2). In Humboldt County, the childhood cancer diagnosis rate (16.4 cases per 100,000) is high but not as high as neighboring Mendocino County (19.6). These cancer diagnoses rates are complicated by children’s lesser access to health care in the Samoa target

area and the county target community, and by residents' higher poverty and unemployment rates (see Demographic Information above).

Poor public health results from a combination of factors, and cumulative impacts from brownfields in the vicinity and from RMT II specifically cannot be directly linked. The Humboldt County Department of Health and Human Services states, "while genetics plays a substantial role, our lifestyle choices, and the physical and social environments that influence those choices, are a much more powerful determinant" in health outcomes.¹⁶ The contaminants found within the debris piles at RMT II include cadmium, chromium, lead, nickel, zinc, 1,2-dichloroethane, toluene, and total petroleum hydrocarbons as diesel and as motor oil; these contaminants present varying symptoms and diseases based on exposure pathways and receptor sensitivity. Cadmium, chromium, and lead are priority metals based on their high toxicity, known to induce multiple organ damage even at lower levels of exposure, and they are known or probable carcinogens.¹⁷

Although toxic or carcinogenic effects from the debris piles at RMT II cannot be cumulatively quantified with respect to other brownfields in the vicinity, contamination at RMT II and past industrial uses of the site have definitely impacted property values, unemployment, and poverty in the target area and community. These social factors, along with contamination of the RMT II site, contribute to poor public health documented in the target area. Redevelopment of the town of Samoa and of RMT II, will likely alleviate social and environmental factors affecting public health.

1.c. Financial Need

Economic Conditions

The District requests and needs funding because it is unable to self-fund the cleanup of the three debris piles. Its Fiscal Year 2014/15 audit reported total expenditures of \$4,054,302 and total revenue of \$3,399,727. During the fiscal year, operating expenses increased by 10.8% but operating revenues increased by only 1.5%. Revenues in the form of grants accounted for 27% of all revenues. The District has incurred long-term debt to finance environmental cleanup costs associated with the RMT II property. Dredging costs to deepen and maintain the shipping channel have increased, and harbor charges, pilot fees and tideland leases have decreased, resulting in decreasing revenue. Expenditures will likely continue to outpace revenues as the District struggles to maintain service levels and facilities operations that have suffered from years of deferred maintenance. For these reasons, the District does not have the resources to fund a brownfield cleanup.

Other factors explaining the District's inability to self-fund a cleanup include its small population (the town of Samoa's population is 305) and relatively high unemployment (12.4%), which decreases income taxes. Property taxes are also limited due to Samoa's currently depressed property values.

Local economic conditions continue to be affected by the general decline in the timber industry, closures of the two pulp mills, the recent closure of a Samoa peninsula sawmill in January 2016, and the 2008 recession. In the height of the recession, from 2008 to 2009, Humboldt County lost 6% of its jobs, and from 2010 to 2013, we continued to lose jobs but at a slower rate (-2%).¹⁸

The District and Humboldt County have leveraged cleanup funds from the following sources: a \$1.158 million loan from the aquaculture industry for transport of liquid waste for the pulp mill cleanup, \$3.2 million from New Market Tax Credits for site cleanup and repairs, \$12 million

from the US EPA for emergency response to the liquid hazardous waste left from the pulp mill's closure, and \$2 million of the District's own funds from reserve. The District has also received funds for redevelopment of the Samoa peninsula not specific to RMT II, from a California Housing and Community Development Block Grant, and the United States Department of Commerce Economic Development Administration.

Economic Effects of Brownfields

The target area of Samoa and the target community of Humboldt County are generally poorer, with higher percentages of people unemployed and living below the poverty level, compared to State and Federal data (see Demographic Information above).¹⁹ The redevelopment of the RMT II site and the town of Samoa is key to improving the standard of living for many Samoa residents, by creating jobs and making properties more valuable. Although the toxic or carcinogenic effects from the debris piles at RMT II cannot be cumulatively quantified with respect to other brownfields in the vicinity, contamination at RMT II and past industrial uses of the site have definitely hampered development, thus impacting property values, hindering employment, and prolonging poverty in the target area and community.

In a Humboldt State University master's thesis, the Samoa/Fairhaven area was identified as having 39 parcels that could be considered brownfields, totaling over 500 acres.²⁰ The perception of brownfield impacts affects the target area just as documented impacts would. Humboldt Bay water quality must be perceived as "clean" for the aquaculture industry, and Samoa air quality must be "clean" for industrial and residential development.

In an unanticipated result of the pulp mills' closures, municipal water rates increased. When the pulp mills closed and no longer needed water, the Humboldt Bay Municipal Water District (the regional water wholesaler) no longer received the mills' substantial revenues that had supported much of the water district's industrial and residential infrastructure. Once the mills closed, costs had to be shifted to residential users. Redevelopment of the RMT II brownfield site could increase industrial water use again, which would shift some water infrastructure costs away from residential users.

2. Project Description and Feasibility of Success

2.a. Project Description

2.a.i. Existing Conditions

The site is a former pulp mill, which operated from 1964 to 2008. Plans to reopen the mill were not realized and the District purchased the site for \$1 in 2013. In August 2013, the District requested that the US EPA assess the hazardous materials remaining on site; the EPA determined that 3 million gallons of caustics were housed in deteriorating tanks. A 6.8 magnitude earthquake off the coast of Humboldt County on March 9, 2014, caused significant concern about the caustic liquor and the tanks. Additionally, 20,000 gallons of sulfuric and hydrochloric acids, and 10,000 tons of caustic sludges, and various other chemicals were on site. The EPA determined that the condition of the tanks and the proximity of Humboldt Bay necessitated an emergency response. Removal of the liquors and sludges was completed by September 2014.²¹

There are now three contaminated debris piles, approximate volume 2,400 cubic yards, remaining on site. Sampling and analyses document that the piles contain high levels of heavy metals, solvents, and "heavy" petroleum hydrocarbons. The presence of cadmium, chromium, lead, nickel, zinc, 1,2-dichloroethane, toluene, and total petroleum hydrocarbons as diesel and as motor oil was confirmed. The current climate conditions and environmental hazards that impact

the site include tsunamis, high precipitation rates, and shallow groundwater. The site is located in the tsunami evacuation zone, and groundwater monitoring of the 26 monitoring wells on-site has been conducted since 1997. Climate change conditions that could affect the site are sea level rise and changing flood zones. Sea level rise will impact a large portion of the Samoa peninsula and potentially impact the current stockpile locations. Currently, a portion of the site is located within the projected coastal flood zone, which will be inundated leading to greater environmental impacts from the contaminated debris piles on-site. About one third of the 70-acre site cannot be developed until the debris piles are removed. The current tenants are oyster and shellfish producers.

2.a.ii. Proposed Cleanup Plan

The cleanup plan is Alternative 4 of the draft Analysis of Brownfields Cleanup Alternatives (ABCA) report. This alternative involves characterizing and segregating the debris piles materials based on their hazard level. Materials within the debris piles that are characterized as non-hazardous and suitable as industrial fill material would be used on-site. The goal will be to identify and separate the material with hazardous levels of the heavy metals; these materials will be properly disposed at appropriate landfill(s). Materials with hazardous levels of organic compounds will be bioremediated on site. Once remediated to non-hazardous levels, the material will be used as industrial fill. Prior to its reuse, the material would be covered with durable sheeting and fenced to prevent access, and otherwise secured by applying Best Management Practices to limit sedimentation of storm water runoff and associated water quality impacts. Hazardous materials containing heavy metals be removed by a qualified contractor and transported and disposed of at a permitted Class I or II waste facilities. The site will continue to be under a Waste Discharge Permit from the North Coast Regional Water Quality Control Board. See Task Descriptions below for greater detail.

2.a.iii. Alignment with Revitalization Plans

The District purchased the RMT II site with the vision of revitalizing the property's dock facility, fostering economic development, and protecting the environmental quality of Humboldt Bay. Soon after it took control of the property, the District enlisted the help of the Office of Research and Sponsored Programs at Humboldt State University in nearby Arcata. The result of this early stage planning was a conceptual plan for a National Marine Research and Innovation Park (NMRI). The NMRI plans call for repurposing the site to house both commercial and research ventures in aquaculture, biomass conversion, and renewable energy. Aquaculture and renewable energy are well matched to regional strengths and resources. The District has already negotiated leases with oyster and clam seed producers. Also, the District recently approved a 1.2 MW solar energy generation system that will provide 100% of the Innovation Park's current power requirements. The development of these leases will provide income and much needed employment and economic activity to the target area and community.

2.b. Task Descriptions and Budget Table

Task Descriptions

Task 1. Prepare Final ABCA, Removal Action Plan, and On Site Remediation/Disposal Plan. Coordinate with EPA and RWQCB and County for approval and document correspondence, and obtain permits. Plans will describe methods for separating debris based on size, sampling frequency, field and analytical testing parameters, methods for securing debris piles from wind and rain during separation and sampling, and identifying appropriate disposal sites (Class I or II or on site) based on analyses. For materials containing organic compounds, bioremediation

methods will be described with the goal of using the remediated material as on site fill. District and engineering consultant unit costs are \$120/hr for 120 hours.

Task 2. Implement Removal Action Plan and On Site Remediation/Disposal Plan. Coordinate contractors to move the debris identified as non-hazardous to on site areas for bioremediation and fill. Observe work and coordinate agency staff who may also want to observe. This estimate assumes 680 cubic yards of debris can remain on site. District and engineering time, 50 hrs. General contractor 30 hrs at \$250/hr. Petroleum hydrocarbons/solvents and heavy metals analytical costs based on 25 samples each, at \$190 and \$85 per sample.

Task 3. Coordinate Off Site Disposal. Coordinate contractors to move the debris identified as hazardous to either Class I or II disposal sites. Observe work and coordinate agency staff who may also want to observe. This estimate assumes 1,720 cubic yards of debris will need to be transported. Disposal sites are assumed to be Beatty, Nevada as the Class I site, and Recology Hay Road for the Class II site. District and engineering time, 50 hrs. General contractor, 40 hrs. Transport and disposal of 550 tons at \$250/ton to Nevada, and 650 tons at \$150/ton to Recology Hay Road landfill.

Task 4. Engage Community. Write a community engagement plan, including website, social media, emails, radio, FAQ sheets, press releases and meetings. District and engineering time, 30 hrs.

Task 5. Project Management. Provide quarterly reports to EPA, write RFPs for contractors, coordinate contractors. Track cost sharing and disburse payments to contractors. District and engineering time, 30 hrs.

The primary expenses in this project are transport and disposal costs for materials containing heavy metals; materials containing petroleum hydrocarbons and organic compounds will be remediated and reused on site. Due to the funding limit of \$200,000, the District's cost share is 32%, easily meeting the 20% cost share requirement. As budgeted, the grant funds would pay for most of the disposal costs, and the District would pay for staff, engineering, and general contractor personnel, all laboratory analyses, and approximately \$35,000 in disposal costs. The District's share of the cleanup costs could come from three sources: 1) District reserves, 2) The Headwaters Fund's grant or loan, and 3) the Humboldt Bay Municipal Water District. See Ability to Leverage section below.

Budget Detail Table

Budget Categories	T1. Prepare plans	T2. Implement Plans	T3. Coordinate disposal	T4. Engage Community	T5. Manage project	Total
District personnel	4,800	1,200	2,400	1,200	1,200	
Consultant personnel	9,600	4,800	3,600	2,400	2,400	
Contractual--general contractors	0	7,500	10,000	0	0	
Contractual--analytical lab, petroleum	0	4,750	0	0	0	
Contractual--analytical lab, metals & solvents	0	2,125	0	0	0	
Contractual--transport and disposal Class I	0	0	137,500	0	0	

Budget Categories	T1. Prepare plans	T2. Implement Plans	T3. Coordinate disposal	T4. Engage Community	T5. Manage project	Total
Contractual--transport and disposal Class II	0	0	97,500	0	0	
Total Federal funding, not to exceed \$200,000	0	0	200,000	0	0	200,000
Cost share, min 20% of requested federal funds	14,400	20,375	51,000	3,600	3,600	92,975 (32%)
Total Budget						292,975

2.c. Ability to Leverage

Three additional resources have been identified to leverage US EPA grant funding. The County is also working with the District to find ways to reuse the existing water and wastewater infrastructure at RMT II. As the Certified Unified Program Agency, the County Department of Health and Human Services will regulate and manage storage and/or removal of hazardous materials or waste. The Headwaters Fund is another potential source of funding; it offers loans and grants for projects that increase “economic opportunity, prosperity, and quality of life” for citizens of Humboldt County. The District has received Headwaters Fund assistance for related projects, such as a Humboldt Bay mariculture pre-permitting program, which would streamline permit processes for new and expanded oyster farming operations. The third resource the District is leveraging is assistance from the Humboldt Bay Municipal Water District, who is looking for industries on the Samoa peninsula who can utilize water from its industrial system. When the two pulp mills closed, the HBMWD lost significant revenues; through its ongoing Water Resources Planning process, HBMWD identified local sales as one of three water use options to continue exploring. The RMT II redevelopment could provide tenants who would require significant water usage. HBMWD is supporting the RMT II cleanup project by providing community engagement opportunities on its website, and by providing meeting and public hearing space if the District should need it. Support letters from Humboldt County and the HBMWD are attached.

3. Community Engagement and Partnerships

3.a. Engaging the Community

The community continues to be involved in the development of this project. The District will hold a scoping meeting during a special meeting, to discuss the intent of this application and the project, if the funding is awarded. The December 8, 2016 meeting was publicly noticed through the local newspaper and the District’s website. The agenda, comment summary, and sign-in sheet will be attached to this application. The Draft ABCA will also be presented and discussed at the public meeting, having been noticed in the Eureka Times-Standard on December 4, 2016. The Commissioners and staff will hear from the public about their concerns, and will have a chance to ask questions from staff to inform themselves about the proposed cleanup project. After the close of the public hearing, the Commission will vote whether to support the application and authorize the District’s Executive Director to execute the Cooperative Agreement with the EPA, submit fund requests, and sign contracts to carry out grant activities. After the cooperative agreement is signed, a project kickoff meeting that will likely be part of the District’s regularly monthly meeting, will be announced community-wide through print and web media. Members of the community based-organizations listed below will be engaged for this

meeting. Progress on the cleanup will be described during “Continuing Business” at the District’s monthly meetings. Grant outcomes will be publicized on the HBHRCD’s website.

3.b. Partnerships with Government Agencies

The North Coast Regional Water Quality Control Board (RWQCB) is the state environmental authority most involved in brownfield cleanup issues in the Humboldt Bay region. The RWQCB will review and have approval authority on the Removal Action Workplan and will issue the Waste Discharge Permit for any proposed onsite disposal activities. The RWQCB’s role in the debris piles removal project is to ensure that surface water and groundwater quality is unimpaired, by reviewing plans, providing comments, and issuing any needed permits, such as Waste Discharge Requirements. A support letter is attached.

The Humboldt County Division of Environmental Health will also be involved in permitting and inspecting the on-site disposal area for non-hazardous wastes. The Division’s role in the debris piles removal project is to regulate the generation and management of any hazardous materials or waste, and it will also advise whether other agencies such as local fire departments and the air pollution control district should be involved. A support letter is attached.

The Humboldt Bay Municipal Water District (HBMWD) fully supports the District in its efforts to pursue options for reusing facilities at RMT II. The HBMWD’s goal is to support the District in finding tenants who will make as much use as possible of the facilities, including water supply and treatment infrastructure. HBMWD states they “are prepared to provide whatever assistance the Harbor District needs to make this project a success.” A support letter is attached.

The National Oceanographic Agency’s National Marine Fisheries Service (NOAA Fisheries) mission is to promote healthy marine ecosystems, and to engage in extensive interagency coordination and consultation to ensure that measures to mitigate damage, prevent adverse impact, and enhance fishery resources are scientifically sound. NOAA Fisheries’ role in the debris piles removal project is to consult with other agencies (typically the US Army Corps of Engineers and the US Fish and Wildlife Service) to determine impacts, if any, to federally listed species and their habitats. A support letter is attached.

The Wiyot Tribe is indigenous to the Humboldt Bay Region. Tribal members were historically robbed of the benefits of development of the Humboldt Bay region, but efforts are now being made to ensure the Tribe is aware and involved in the project. The Tribe’s role is to review any activities that could disturb or damage cultural resources, and to be present during activities if the risk of disturbance is appreciable. A support letter is attached.

3.c. Partnerships with Community Organizations

Community organizations supporting this cleanup project include Humboldt Baykeeper and Surfriders, two influential local environmental organizations. Humboldt Baykeeper and Surfriders support the cleanup project because it will protect human health and the environment, while supporting economic development. They are also supportive of the water and wastewater infrastructure reuse project at RMT II, because it will limit impacts to groundwater by disposing treated effluent through the ocean outfall rather than onsite disposal. Both organizations’ roles are to continue their vigilance and oversight of development around the Bay; support for the project is a signal to the environmental community. Two support letters are attached.

3.d. Partnerships with Workforce Development Programs

A search of the US EPA's brownfields grant fact sheet showed that no job training grants have been awarded in the North Coast area in 2016. The District negotiated a lease with Taylor Mariculture, a local oyster seed producer, but before they can occupy the site, the hazardous materials on the site must be contained or removed. The proposed new use of the site by Taylor Mariculture will provide 10 full time equivalent jobs for workers in the area immediately after the cleanup is completed. The cleanup itself will provide a short term increase in local employment. The District prefers to hire local firms to conduct environmental cleanup activities. Many of the workers at these firms are trained and educated locally at Humboldt State University. The District complies with procurement procedures contained in 40 CFR 31.36 and casts a wide net when procuring contractors. However local firms do well in winning these contracts because travel time from the local firm to RMT II is much shorter, which decreases costs compared to out-of-the-area firms. Additionally, local knowledge is critical to successful project implementation.

4. Project Benefits

4.a. Welfare, Environmental, and Public Health Benefit

This project will improve the target area and community's welfare and its environmental and public health because all three are interconnected. Cleanup of the debris piles will remove and contain sources of heavy metal and petroleum hydrocarbons, thus limiting further soil, air, and surface and groundwater contamination, which is obviously an environmental benefit. As noted in the Cumulative Public Health Impacts section, the heavy metals present in the debris piles are both toxic and carcinogenic, with severity depending on exposure pathway and receptor sensitivity. As noted in the Community Need section, fewer people in the target area (especially children) carry health insurance than State-wide averages, and cancer mortality rates are much higher than California and national averages. Also as noted above, in a study specific to the target area and community, public health is dependent on numerous factors with physical and social factors being perhaps more important than genetics. This cleanup project will allow further development of the RMT II site for light manufacturing, renewable energy generation, research, and its existing mariculture industry. Such development will likely increase income for the target area and target community, which will in turn increase their welfare and health.

This cleanup project supports the Livability Principles in numerous ways: 1) the cleanup will be beneficial to the Town of Samoa redevelopment, which will increase affordable housing; 2) the cleanup will improve surface and groundwater quality, thus maintaining Humboldt Bay's excellent water quality that is essential for economic competitiveness in the Pacific Coast shellfish industry; 3) the cleanup supports the existing shellfish industry and the existing communities of Samoa, Manila, and Eureka; 4) the cleanup grant would leverage the US EPA's site investment of removing the 3+ million gallons of liquid hazardous waste that occurred in 2015; and 5) the cleanup and site redevelopment would increase livability and sustainability by decreasing the time to travel to work, thus adding value to the community.²²

4.b. Economic and Community Benefits

Outputs include the cleanup itself, numerous monthly District meetings to engage the public, the 70 acres made available for redevelopment, and the short-term employment created during the cleanup for engineers, contractors, and laboratory chemists. Positive outcomes are numerous. Economic benefits of the cleanup include removing a barrier to the RMT II plans of mariculture support, renewable energy production, and light manufacturing. Once tenants begin to fill the

space, economic benefits are employment and property value increases, which will increase the County's tax revenues. For example, Taylor Mariculture anticipates creating 10 new jobs, once operating out of the cleaned up area. Noneconomic benefits include promoting a "sense of place" (a Livability indicator) which will occur as the District is able to continue its harbor and marine-related activities, and as the Town of Samoa is able to keep its historical company town aesthetic. A further noneconomic benefit is continuing to reduce contamination that could affect Wiyot Tribal lands, such as Indian Island, which is within 1 mile of the site.

5. Programmatic Capability and Past Performance

5.a. Audit Findings

The District hires an independent accounting firm to conduct an annual financial audit, which is reviewed and approved by the District Commissioners and is made available to the public. Depending on the amount of federal grant funds received in a given year, this audit is expanded to comply with the single audit requirements in OMB Circular A-133. The District has not received any adverse audit findings related to grant compliance or any other aspect of our finances.

5.b. Programmatic Capability

The District intends to work with the County of Humboldt to complete the cleanup; the County is the Certified Unified Program Agency that regulates and manages storage and/or removal of hazardous materials or waste. The County has successfully managed three brownfield assessment grants and manages a Brownfield RLF. The County will assist the District as it completes all technical, administrative and financial requirements of the project and grant. Key members of the project team include:

Jack Crider, Harbor District Executive Director, is authorized by the District Commissioners to sign all grant paperwork, including, but not limited, to cooperative agreements. Jack has over 20 years of port management experience.

Mike Foget, Harbor District Director of Engineering, will be the lead staff-person on this grant. He has 20 years of experience working with brownfield issues in Humboldt County. He has been the lead staff person on several EPA funded grant projects. In addition to the brownfields program, he works on economic and infrastructure development projects for the Harbor District.

Patti Tyson, Harbor District Director of Administrative Services, coordinates fiscal reporting for many grant projects and specializes in grant accounting and the management of the Harbor District's grant and loan funds.

Alan Bobillot, Harbor District Director of Facility Maintenance, will be the onsite coordinator for the cleanup project and will ensure the security of the site as well as the implementation of best management practices for soil disturbing activities.

This team structure will adjust if a key staff person leaves their position, because another team member will be able to cover for the lost team member until a suitable replacement can be found, or the grant project is complete. The team will procure contracts for services, including consultant contracts, and conduct cost and price analyses, to the extent required by the procurement provisions of the regulations at 40 CFR Parts 30 or 31, as appropriate.

5.c. Measuring Environmental Results: Anticipated Outputs/Outcomes

Jack Crider, the Harbor District's Executive Director, will be responsible for measuring or determining if outputs are realized (outputs are listed above). He will make these determinations

by monitoring and documenting the progress of the cleanup work. Anticipated outcomes are the economic benefits of the cleanup include removing a barrier to the RMT II plans of mariculture support, renewable energy production, and light manufacturing. Mr. Crider can track this outcome by monitoring the number of tenants who will begin to fill the space. Noneconomic outcomes are more difficult to track, but Mr. Crider can continue to solicit input from Town of Samoa developers and the Wiyot Tribe, to ensure that the cleanup is a net benefit to their interests.

5.d. Past Performance and Accomplishments

The Harbor District has not received a US EPA Brownfield Grant but has received other Federal and State grant allocations.

Award agency, purpose and funding amount	Output, outcomes, measures of success	Compliance, schedule and completion
US EPA, Emergency Response and Cleanup \$12 million	The Harbor District received US EPA assistance for removal of 3 million gallons of caustics, 20,000 gallons of sulfuric and hydrochloric acids, and 10,000 tons of caustic sludge. The emergency was due to a 6.8 Richter earthquake that endangered the tanks. The successful outcome was removal of these liquids.	The caustic liquid was reused to process wood pulp at another mill; sludges were solidified properly disposed of along with the other liquids. The project was completed in September 2014, on an accelerated schedule due to the emergency posed by the earthquake.
California Emergency Management Agency (CalEMA), Storm Damage Cleanup and Disposal for Building 14 at the Redwood Marine Terminal \$143,246.92	The Harbor District owned a warehouse building on a large dock, located approximately 3 miles north of the RMT II cleanup site; the building was damaged beyond repair. The output was the successful planning, permitting, and implementation of the demolition and proper disposal of the building. The outcome is the area is now clean and ready for new use. There were no compliance issues with the workplan or record keeping.	Schedule extensions were granted to account for the extensive permitting needed when working over a water surface, and to document the building’s historic nature. The project was completed in 2013. The Harbor District used standard RFP processes to select the demolition contractor, and all record keeping was in order to process the final payment by CalEMA.
US Fish and Wildlife Service, Cooperative Agreement for Eradication of <i>Spartina densiflora</i> in Humboldt Bay National Wildlife Refuge \$512,611.05	The Harbor District oversaw the use of these federal funds to plan and implement invasive species removal on federal refuge lands in Humboldt Bay. The output is measured by over 150 acres of land received primary treatment, with much of that receiving secondary treatment as well.	The project was completed in 2013, with no compliance issues with the agency’s terms and conditions. Minor budget and plan modifications were processed to enhance project effectiveness. The project was completed on schedule.
Department of Homeland Security, administered via CalEMA, Port Security - Catastrophic Planning for Response and Recovery \$2,569,869.00	The Harbor District oversaw the use of these federal funds to improve the security and response capabilities of the Port of Humboldt Bay. The outcomes included purchasing a Port Fire Boat and a Port Security Vessel, and improving communications planning and equipment for the District and other agencies operating on the Bay.	The project was completed on schedule in 2013, and there were no compliance issues with the agency’s terms and conditions. CalEMA performed a specific (random) audit of this grant in 2013 and was satisfied with all aspects of the District’s performance and recordkeeping.

Award agency, purpose and funding amount	Output, outcomes, measures of success	Compliance, schedule and completion
US Department Transportation, via the Intermodal Surface Transportation Efficiency Act (ISTEA), Port Access Enhancement – Federal Aid Project No. 01-6302 \$257,997	The Harbor District used this funding to develop a transportation plan for an underutilized industrial area in Samoa with numerous industrial scale port facilities which lacked adequate connection to the local, state, and federal surface transportation network. The output is the plan that was reviewed by local and state partners.	The project is currently on schedule and there have been no compliance issues with the terms and conditions of the grant agreement.
CDBG Planning Grant, Samoa Peninsula Area-wide Infrastructure Conditions and Needs. No. 14-CDBG-9890 \$100,000	The Harbor District used this funding to develop and write a report on infrastructure needs and reuse on the Samoa peninsula. A list of properties that could be developed and that would be eligible to pay for connection to a new sewer system is planned. The District is also directing a rate study for the proposed Samoa Peninsula Community Services District.	The infrastructure needs and reuse report is completed, with no compliance issues. The list of developable properties is in progress, with no compliance issues so far. The rate study is also currently in progress, with a deadline of April 2017.
EDA Award No. 07-79-07177 Former Pulp Mill Infrastructure and Site Reuse Plan \$155,000		
County of Humboldt matching funds \$5,000		

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³ “Supervisors Vote 4-1 to Loosen Restrictions on Coastal Lands.” Lost Coast Outpost. July 19, 2016. <https://lostcoastoutpost.com/2016/jul/19/supervisors-unanimously-approve-loosened-restricti/>

⁴ “History of Samoa.” Danco Property Management. 2016. http://danco-group.com/propertymanagement/history_of_samoa

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