

Organization Name	Humboldt Bay Harbor Recreation and Conservation District
Director/CEO-First	Larry
Director/CEO-Last	Oetker
Contact Person Name and Title-First	Larry
Contact Person Name and Title-Last	Oetker
Contact Phone	707-443-3401
Contact Email	loetker@humboldtbay.org
Contact Address-Street Address	601 Startare Drive
Contact Address-City	Eureka
Contact Address-State	California
Contact Address-Postal / Zip Code	95501
Contact Address-Country	United States
Total current year organizational budget (\$) -Dollars	\$ 3,871,777.00
# FTE Employees	12
Summarize the organization's mission (in the space provided)	Humboldt County tidelands, bays, and estuaries have unique and diverse management needs. The Humboldt Bay Harbor, Recreation and Conservation District was created in 1973 to address these needs. The District oversees planned development of the harbors and ports within the District, as well as protection of the natural resources located here. It is a countywide agency with permit jurisdiction over all tide, submerged and other lands granted to the District, including all of Humboldt Bay. District operations focus on three primary areas: commercial port uses, recreational uses, and conservation. These operations are managed by a staff of employees and are governed by an elected board of commissioners consisting of five members. Utilization of port resources is a critical part of the Districts mission.
Program / Project Title	Redwood Marine Terminal Predevelopment of a New Multipurpose Dock to Primarily Support the Proposed West Coast Offshore Wind Industry
250 Word Maximum	The Harbor District continues to prepare Redwood Marine Terminals (RMT) and adjacent areas on the Samoa Peninsula for construction of a multi-purpose dock and associated upland support facilities, with offshore wind energy as the anchor tenant. Several Federal, State, and private industry studies have identified Humboldt Bay and the RMTs specifically as the preferred west coast port to develop an offshore wind economic cluster. However, the port itself will need extensive rebuilding and upgrading to allow heavy cranes to assemble the floating platforms. Continued Headwaters Grant support is needed now to further refine the concept site plan and preliminary project description currently being developed and build upon offshore wind energy related work that was recently completed by Schatz Energy Research Center and others. Headwaters funding will be used to refine site plans, prepare an opportunities and constraints report, and conduct additional outreach (industry, regulatory agency, public). This work will be used to leverage additional public and private investments. Offshore wind energy use will initially create jobs with the construction and rebuilding of the dock and will create long-term jobs by attracting a new industry to the area. Offshore wind energy generation is the first industry that has potential to fully utilize coastal dependent industrial lands since the decline of the forest products industry. Developing a new modern terminal will also benefit other docks around Humboldt Bay, tug boats, bar pilots, longshoreman and the larger regional maritime industry as the increase shipping is anticipated to increase demand for Humboldt Bay commerce.
Requested Amount (\$) -	\$ 65,000.00

Total Project Cost (\$)-	\$130,000.00
Grant Timeline - From:	06/01/2021
To	06/30/2022
Total Match Amount (\$)-	\$65,000.00
Match as % of of Total Project Budget	0.5
Cash Match Amount (\$)-	\$50,000.00
Cash Match as % of of Total Project Budget	0.38
In-Kind Cash Match Amount (\$)-	\$15,000.00
In-Kind Match as % of of Total Project Budget	0.11
Number of new FTE jobs created, if funded:	
Number of FTE jobs retained, if funded (jobs that would otherwise be eliminated)	
Number of permanent, long term, private sector jobs to be created:	
Please provide a brief explanation of how job creation/retention numbers were calculated	See grant narrative. It is estimated that if California were to install 18 GW of offshore wind capacity by 2045, the state could support over 17,500 jobs in the offshore wind and related industries. With the development of a new multipurpose terminal in Humboldt Bay, Humboldt County can position itself to get a large portion of those jobs during the 1) terminal construction phase; 2) wind platform and turbine assembly/deployment phase and 3) ongoing operation and maintenance phase once the offshore wind farm(s) are deployed.
Type of project-Planning	Yes
Type of project-Implementation	No
Geographic focus of project	Humboldt Bay
If you receive less funding than you have requested will you still be able to move forwards w	Yes
*Which Industry is your project working with (check all that apply):	
Diversified Health Care	No
Specialty Food, Flowers and Beverages	No
Building and Systems Construction	Yes
Investment Support Services	No
Management and Innovation Services	Yes
Niche Manufacturing	Yes
Tourism	No
Forest Products	No
Arts and Culture	No
Alternative Agriculture	No
Strategy being employed to promote economic development (check off all that apply):	
Supporting development of pre-permitted commercial space	Yes
Reducing regulatory bottlenecks for business retention or creation	No
Supporting economic development infrastructure	Yes
Developing new strategies for economic development	No
Providing access to external markets or plugs the economic leaks	Yes

Retaining and growing existing businesses	No
Providing workforce training	Yes
Increasing the number of new businesses	No
Leveraging future funding or projects	Yes
Reducing poverty by helping people to develop business skills	No
Other (describe):	No
Desription of "Other" Strategies	
Are Any of the Following Required, and if so are they already in place?	
Building Permits	
Market Review	Yes
Legal Review	
Regulatory Approval	
Consultants hired	Yes
Staff hired	

Humboldt County Headwaters Grant Application: NARRATIVE RESPONSES
HBHRCD – Redwood Marine Terminal Predevelopment of a New Multipurpose Dock to
Primarily Support the Proposed West Coast Offshore Wind Industry

1) The Harbor District continues to prepare the Redwood Marine Terminals (RMT) and adjacent areas on the Samoa Peninsula for construction of a multi-purpose dock and associated upland support facilities, with offshore wind energy as the anchor tenant. Several Federal, State, and private industry studies have identified Humboldt Bay and the RMTs specifically as the preferred west coast port to develop an offshore wind economic cluster. However, the port itself will need extensive rebuilding and upgrading to allow heavy cranes to assemble the floating platforms. The RMT multipurpose marine terminal is envisioned as a flexible maritime transportation facility with marine cargo and floating offshore wind component assembly on site, and long-term operation and maintenance services.

Humboldt Bay is ideally positioned as the closest offshore wind turbine assembly facility and deployment port to the proposed Bureau of Ocean Energy Management (BOEM) north coast lease areas. Once developed, the facilities on Humboldt Bay can be utilized to construct/assemble offshore wind turbines and associated components to tow them to other offshore locations on the west coast. Coastal Humboldt County has world-class offshore wind resources and the Samoa Peninsula has under-utilized Coastal Dependent Industrial (CDI) lands that are perfectly situated to support the operations necessary to assemble, deploy, repair and maintain wind energy turbines. In addition, Humboldt Bay has deep draft shipping channels that can accommodate the large marine vessels carrying wind turbine components. According to a federal BOEM report and many industry experts, California's most viable site for final assembly of offshore turbines is the Port of Humboldt Bay. This port has deep water access with no bridge restrictions and hundreds of acres of empty, available quayside land at the site of pulp and lumber mills that were abandoned when the region's forest industry collapsed in the 1990s. However, the port itself will need extensive rebuilding and upgrading, as well as dredging of shipping lanes to allow heavy cranes to assemble the floating platforms. RMT redevelopment is vital for the offshore wind energy industry and could turn Humboldt County into a West Coast Energy Hub.

The deployment of offshore wind turbine is possible only with port infrastructure and land-based operations. During the last year substantial progress has been made towards understanding local offshore wind energy and port related infrastructure needs. Humboldt State University's Schatz Energy Research Center (SERC) is nearing completion of \$750,000 of grant funded studies which included a feasibility assessment of the project area to be used as a wind energy port. The research studies were funded by the California Ocean Protection Council, the Governor's Office of Planning and Research, and the Bureau of Ocean Energy Management. SERC has committed an additional \$15,000 to assist with the technical reports for port infrastructure. The Harbor District is focused on the port infrastructure development and will keep momentum going by taking port and land-based concept layouts developed as part of the SERC project to the next phase of refinement and review. The SERC project conducted in-depth studies and analysis of the electrical, environmental, coastal infrastructure, stakeholder, and policy issues and needs associated with offshore wind development in the Humboldt Bay region. In addition, they utilize best scientific and engineering practices and recognized experts to identify issues and propose paths forward to utilize an immense renewable energy resource while protecting the marine and

coastal environments. A total of 23 reports have been or will be completed by mid-2021 (see Attachment E for a complete list with links to the reports).

Offshore wind energy and port development will require significant public and private investment and involves early and ongoing consultation and coordination with stakeholders including fisherman and the tribes. While conversations with local fishermen, tribes, environmentalists, labor unions and government partners are ongoing, the community's overall response has been supportive. Several Board of Supervisors and public members have commented that offshore wind is where the County should be putting its efforts. The revitalization of RMT will allow the community to realize benefits from this unique industrial site with marine access. Offshore wind energy generation is the first industry that has the capacity to fully utilize the Coastal Dependent Industrial (CDI) lands on the Samoa Peninsula since the decline of the forest products industry. This project is identified in Prosperity! 2018 and we believe continued funding will help fulfill the Headwaters Fund mission to improve our local economy.

2) The Headwaters Grant Funds will allow the District to continue the critical initial predevelopment planning for transforming RMT into a multipurpose marine terminal, with offshore wind energy as the anchor tenant. The existing wood piling 7-acre dock will need to be removed and a new modern heavy weight dock permitted and constructed. Funds will be used to build on and refine preliminary project description and conceptual layouts that are currently being developed. Continued investment in readying RMT for redevelopment and construction to accommodate offshore wind is crucial to the future success of this project and will facilitate capital investments through anticipated public-private partnerships.

Renewable wind energy offers one of the most promising employment opportunities for Humboldt County in decades. Offshore wind energy use will initially create jobs with the construction and rebuilding of the dock and will create long-term jobs by attracting a new industry to the area. There are also co-benefits linked to state and local actions and investments supporting offshore wind farm development based in Humboldt Bay. Co-benefits refer to the positive effects that a policy or measure aimed at one objective might have on other objectives; another term for co-benefits is ancillary benefits.¹ Samoa Peninsula has enough CDI lands available to accommodate and become the West Coast wind energy hub with assembly, metal fabrication/welding, anchor construction, and other industries expanding or locating in our area to support this new industry. Once deployed the offshore wind structures will need to be maintained and repaired by a highly skilled workforce.

In addition to grid reliability, offshore wind offers several other benefits, including the opportunity to develop a new industry from the ground up. A recent report estimated that if California were to install 18 GW of offshore wind capacity by 2045, the state could support over 17,500 jobs in the offshore wind industry, related downstream industries, and surrounding economy in that year.² With the development of a new multipurpose terminal in Humboldt Bay, Humboldt County can position itself to get a large portion of those jobs during the 1) terminal construction phase; 2) wind platform and turbine assembly/deployment phase and 3) ongoing operation and maintenance phase once the offshore wind farm(s) are deployed.

¹ Hackett, Steven. Co-Benefits Linked to State and Local Actions and Investments Supporting Offshore Wind Farm Development. Draft Dec. 13, 2019

² The California Offshore Wind Project: A Vision for Industry Growth. American Jobs Project. <http://americanjobsproject.us/>

Local and state agencies can guide industry growth with a cluster-based approach: creating market certainty, training workers, and facilitating connections, among other strategies. Offshore wind is projected to bring a new surge in investment and employment to many of the country's working harbors. For example, every dollar invested in the construction of a 352 MW wind farm off the coast of New Jersey is expected to generate \$1.83, resulting in a total in-state economic benefit of over \$700 million.³

The California North Coast Offshore Wind Studies, Economic Development and Impacts report prepared by Steve Hackett of the Humboldt State University's Economics Department and Julia Anderson of the Schatz Energy Research Center, September 2020 assess the economic impact to the State of California from offshore wind farm and associated port and transmission infrastructure (the "offshore wind industry complex") development on the California north coast. Economic impacts reflect the "ripple effect" of new jobs and economic output that occurs when direct investments in the offshore wind industry complex lead to expansion in the production of upstream supply-chain inputs, and induced spending as new employee households increase local spending (e.g., grocery stores, auto dealerships, and restaurants).

A customized cost model was developed by SERC project staff for various wind farm and transmission scenarios. These costs include wind farm construction and operations, as well as port and transmission infrastructure investments. Scenarios include three dimensions – wind farm scale in megawatts (MWs); wind farm site; and transmission infrastructure pathways for delivering energy to load centers. Estimated job and economic output impacts from wind farm development are substantial.

- Construction-phase impacts on California economic output range from about \$330 million (smallest farm scale) to over \$2.5 billion for the largest wind farm scale; this economic activity is associated with creating between about 1,600 (smallest farm scale) to over 13,000 (largest farm scale) new construction jobs in California.
- Annual operations-phase impacts on California economic output range from about \$3.2 million to about \$117 million, and the creation of roughly 26 to 960 new jobs.

3) Progress towards readying the RMT site for development is on-going and will be measured by continuing to move forward concept level site planning. Attachments C and D describes Headwaters funded project deliverables for 2021-22 and 2020-21.

4) Grant funds will be used to complement the extensive work already underway by SERC, Redwood Coast Energy Authority (RCEA), and private companies to advance the development of offshore wind power generation. RCEA with support from a consortium of private companies submitted a lease application to BOEM and have been working with members of the community since 2017 to explore and develop the offshore wind potential of Humboldt County. As mentioned above, the SERC project conducted in-depth studies and analysis of the electrical, environmental, coastal infrastructure, stakeholder, and policy issues and needs associated with offshore wind development in the Humboldt Bay region. A total of 23 reports have been or will be completed by mid-2021 (see Attachment E for a complete list with links to the reports).

The District is focused on the port infrastructure development and will keep momentum going by taking port and land-based concept layouts developed as part of the SERC project to the next

³ Ibid.

phase of planning and review. See Attachment D for summary of Headwaters 2020-21 work currently being prepared.

5) Offshore wind energy development will initially create jobs with the construction and rebuilding of the dock and will create long-term jobs by attracting a new industry to the area. According to one study, the four phases of offshore wind development offer a variety of job opportunities that cater to different education and experience levels. The phases of offshore wind development include: development & project management, manufacturing & construction, installation & commissioning, operations & maintenance. As noted above, it is estimated that if California were to install 18 GW of offshore wind capacity by 2045, the state could support over 17,500 jobs in the offshore wind and related industries. With the development of a new multipurpose terminal in Humboldt Bay, Humboldt County can position itself to get a large portion of those jobs during the 1) terminal construction phase; 2) wind platform and turbine assembly/deployment phase and 3) ongoing operation and maintenance phase once the offshore wind farm(s) are deployed.

The offshore wind industry offers a diverse array of employment opportunities that caters to different education and experience levels at every phase of development. For example, the industry could employ lawyers to negotiate legal contracts and bids, metal workers to manufacture foundation components, sales representatives to facilitate the sale of manufactured parts, environmental specialists to ensure that project development is minimally invasive towards coastal ecosystems, and engineers to conduct regular operations and maintenance. In addition to supporting a wide array of jobs, offshore wind represents an excellent opportunity for California to build an inclusive economy that offers accessible, fair-wage jobs to its residents. Offshore wind could bring much-needed economic benefits to local communities across California, including Humboldt County. However, investments in critical infrastructure (e.g., ports and roads) will be required.

Examples of co-benefits from local or state actions and investments linked to offshore wind farm development are briefly discussed below. Regular and timely use of the Port of Humboldt Bay by vessels transporting wind farm components for in-port assembly, as well as for ongoing wind farm operations, maintenance, and repair, may depend upon maintaining design depths and widths for the bay entrance and federal channels, additional dredging for terminal access and anchoring sites, and repairing and maintaining the north and south entrance jetties. Such investments would generate co-benefits to other vessel operators utilizing the Port of Humboldt Bay, including commercial and recreational fishermen, charter operators, recreational boaters, transient vessels, cruise ship operators, freight-hauling vessels, and the Coast Guard. These co-benefits may take the form of safer entry, a lower frequency of entrance channel closure due to shoaling and hazardous sea states, and accommodation of deeper-draft vessels such as freighters and cruise ships over the bar and through transit channels within Humboldt Bay.

6) Offshore wind energy presents enormous potential to help meet California's 100% clean electricity target. The wind resource beyond Humboldt Bay is among the best in the nation. Coastal communities have the most to lose from climate change induced sea level rise and hosting offshore wind installations is one way these communities can take action to help mitigate climate change impacts and add resiliency to their electricity supply. Furthermore, offshore wind offers a higher plant capacity factor than other renewable energy sources being developed in the state, including solar and onshore wind. High-capacity factor wind sites like Humboldt can

complement solar by providing more consistent power flow to the grid while providing added resiliency through diversification of the state's renewable energy generation portfolio.

7) This project directly addresses a central solution to Humboldt's economic stagnation and community decline – facilitating the transfer of the County's economy from a resource extraction-based economy to an economy based on a more diverse and sustainable set of industry clusters that include elements of an emerging alternative energy economy. This matches community values with economic development. It is crucial that this transformation can occur while maintaining the timber, fishing, and agricultural industries. The intentional planned reuse of underutilized properties allows for an economic transformation within our existing community, giving us the potential to keep jobs here and attract more jobs, increasing local wealth and our overall economic health and stability. The utilization of Humboldt County's offshore wind energy resource is crucial to the future health of our local economy and improving quality of life for Humboldt County residents. This project will lead to the production of local energy that will allow the County to realize energy independence. This project will also help the State achieve its greenhouse gas emission reduction goals.

8) Harbor District staff have extensive grant and project management experience. The District currently owns and operates RMT I and RMT II and continually works to improve and expand facilities and services that support the District's mission. The ability of the District to accommodate the offshore wind industry is key to investment from multi-national offshore wind power companies. This project requires extensive support from multiple agencies from the Federal to the local level, but a strong team with multi-faceted experience and stakeholder support will allow for project success. Project partners for the overall offshore wind development project include SERC and RCEA who have formed a public-private partnership to explore developing offshore wind energy.

9) Grant funds will be used to hire technical expertise, as necessary. In addition, the District has in-house staff that will write-up reports and compile relevant information. Planwest Partners serves as the District Planner and has provided contract planning services to the Harbor District since 2014. Planwest staff have prepared and processed permits for Harbor infrastructure improvements and dredging projects; participated in Harbor District grant funded projects; and supported District staff and Commission meetings.

10) Headwaters Grant funding will be acknowledged throughout the project and will be specifically listed on every report that is prepared with Headwaters fund assistance. All project partners will be informed of the generosity and support from the Headwaters fund.

ATTACHMENTS

Humboldt County Headwaters Grant Application:

HBHRCD – Redwood Marine Terminal Predevelopment of a New Multipurpose Dock to Primarily Support the Proposed West Coast Offshore Wind Industry

PROJECT BUDGET:

Redwood Marine Terminal Predevelopment of a New Multipurpose Dock to Primarily Support the Proposed West Coast Offshore Wind Industry

Project Expense Item	Total cost	Amount requested from Headwaters Grant Fund	Amount from Matching Funds	Source of Matching Funds
Consultant & Professional Fees (technical studies/ environmental consultants)	\$130,000	\$65,000	\$ 65,000*	- HBHRCD funds, Other federal, state, and/ or private sources (Cash and In-kind)
Total Project Cost	\$130,000	\$65,000	\$ 65,000	See above

*\$50,000 cash and \$15,000 in kind match

The District is actively pursuing both public and private additional funding needed to revitalize RMT port facilities. In October 2020, the Harbor District applied for \$200,000 of grant funding from the USEPA Brownfields program to complete Phase I and Phase II environmental contamination site Assessments/Sampling as needed on the 10 parcels located within the entire project area. The grant application has made it past the initial screening and a decision on grant award is anticipated in the 2nd quarter of 2021.

HBHRCD Board of Commissioners:

Larry Doss - District 1

Greg Dale - District 2

Stephen Kullmann - District 3

Richard Marks - District 4

Patrick Higgins - District 5

IRS tax status:

HBHRCD is a California Special District and as such IRS tax status certification is not required.

Support Letters:

- SSA Marine
- Norton Lilly International
- Principle Power
- Aker Offshore Wind

HBHRCD FY 2020-2021 Operating Budget:

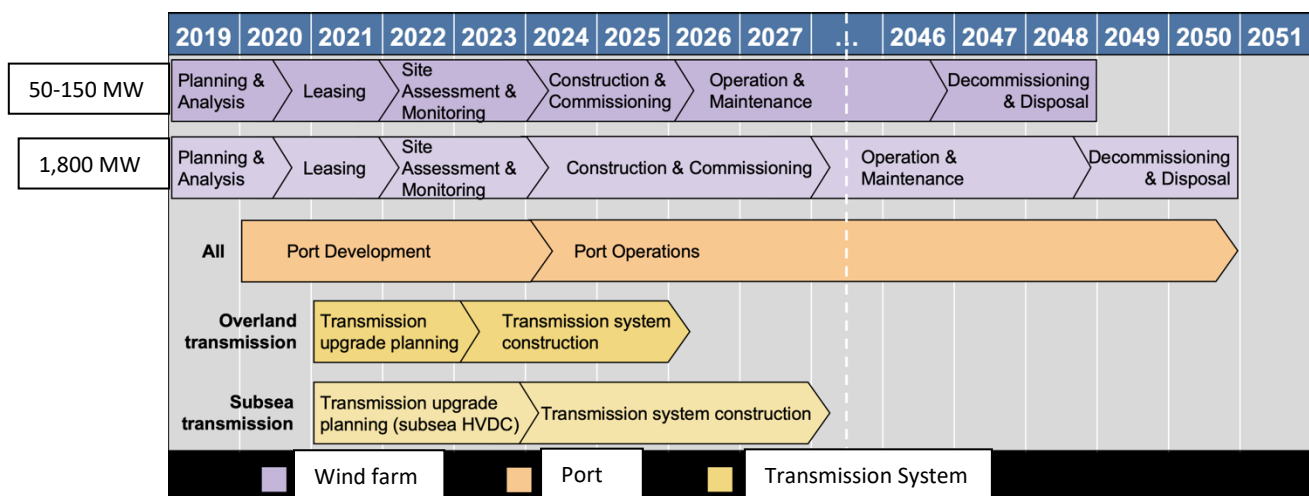
- See Attachment F for details.

PROJECT TIMELINE:

The timeline below lays out the work to be completed under this grant, as is described in Attachment C.

Timeframe	Milestone
June 2021 – Dec. 2021	<ul style="list-style-type: none"> • Industry Outreach & Consultation • Plot Plan - Property Survey, Ownership, Easements
June 2021 – June 2022	<ul style="list-style-type: none"> • Prepare Opportunities and Constraints Report • Agency, Tribal, & Public, Scoping

The table below shows how the port development fits into the overall offshore wind energy project timeline. The timeline for development of offshore wind off Humboldt Bay will depend on the actual speed of leasing, permitting, development, and construction.



Source: *California North Coast Offshore Wind Studies*. Humboldt, CA: Schatz Energy Research Center. 2020
schatzcenter.org/pubs/2020-OSW-R1.pdf.

Attachments:

- Attachment A - Multipurpose Dock Project Description Overview
- Attachment B - Offshore Wind Energy Port Development Presentation Slides
- Attachment C - Headwaters Year 2 (2021-2022) Scope
- Attachment D - Headwaters Year 1 (2020-2021) Progress Summary
- Attachment E - SERC North Coast Offshore Wind Feasibility Analysis Project Summary
- Attachment F - HBHRCD FY 2020-2021 Budget



SSAMarine
A Carrix Enterprise

1131 SW Klickitat Way
Seattle Washington
98134

800/422-3505 tel
206/623-0179 fax

January 11, 2021

Humboldt Bay Harbor, Recreation, & Conservation District
Attention Larry Oetker, Executive Director
601 Startare Drive
Eureka, CA 95502-1030

Re: Support for Humboldt Bay Harbor, Recreation, and Conservation District's Grant Application

I am writing in support of the Humboldt Bay Harbor, Recreation and Conservation District Headwaters Fund grant application to partially fund the predevelopment planning and environmental review of a new multipurpose marine terminal to support the future offshore wind industry. This work is required for the permits to construct an offshore wind energy port on Humboldt Bay. It will also allow the District to attract an anchor tenant and ancillary businesses with significant job generation potential.

Humboldt Bay is ideally positioned as the closest offshore wind turbine assembly facility and deployment port to the Bureau of Ocean Energy Management (BOEM) Northern California Offshore Wind Call Area. Coastal Humboldt County has world-class offshore wind resources, and the Samoa Peninsula has under-utilized Coastal Dependent Industrial lands ideally located for the operations and infrastructure necessary to assemble, deploy, repair and maintain floating wind energy turbines. In addition, Humboldt Bay deep draft shipping channels can accommodate the large marine vessels delivering wind turbine components.

With marine terminal and rail yard operations in more than 250 strategic locations around the world, SSA Marine is unmatched in skill, experience and productivity. SSA Marine believes in making intentional investments in our people, places, and practices that optimize customer service at every handling point. We are a premier operator with respect to terminal management, efficiency and throughput, with long term container terminal concessions in key strategic ports in the U.S. West Coast in Los Angeles/Long Beach, Oakland, and Seattle/Tacoma, in Latin American gateway countries Panama, Mexico, Chile, Columbia and overseas in New Zealand and Vietnam.

SSA Marine has been operating in Humboldt Bay for many years and has worked with the Harbor District, longshoremen, and local maritime industry to provide excellent service for Humboldt Bay. We are very interested in the opportunities that are associated with developing Humboldt Bay as the West Coast hub for the offshore wind industry and we strongly encourage the Headwaters fund to provide funding to support this exciting opportunity.

It is our understanding that the Headwaters grant funding will complement existing local, State, and Federal efforts to develop alternative energy sources on the West Coast. Humboldt Bay is perfectly situated to support a modern multipurpose marine terminal for marine cargo and floating offshore wind component assembly, and long-term operation and maintenance services. Please approve the funding for this project in the early stages of development so that the work can be utilized to attract additional federal, State and private funding towards this important project.

Sincerely,

Mark D. Knudsen, President
Conventional Division, SSA Marine



2417 Mariner Square Loop, STE 145, Alameda, CA 94501

Tel: 510-834-2203 Fax: 510-834-2208

Email: sfo-ops@nortonlilly.com

DATE: January 12, 2021

SUBJECT: Support for the Humboldt Bay Harbor, Recreation, and Conservation District's grant application to partially fund the predevelopment planning and environmental review of a new multipurpose Marine Terminal to support the future offshore wind industry.

I am writing in support of the Humboldt Bay Harbor, Recreation and Conservation District Headwaters Fund grant application to fund partially fund the predevelopment planning and environmental review of a new multipurpose Marine Terminal to support the future offshore wind industry. This work is required for the permits to construct an offshore wind energy port on Humboldt Bay. It will also allow the District to attract an anchor tenant and ancillary businesses with significant job generation potential.

Humboldt Bay is ideally positioned as the closest offshore wind turbine assembly facility and deployment port to the Bureau of Ocean Energy Management (BOEM) Northern California Offshore Wind Call Area. Coastal Humboldt County has world-class offshore wind resources, and the Samoa Peninsula has under-utilized Coastal Dependent Industrial lands ideally located for the operations and infrastructure necessary to assemble, deploy, repair and maintain floating wind energy turbines. In addition, Humboldt Bay deep draft shipping channels can accommodate the large marine vessels delivering wind turbine components.

Norton Lilly International sees Humboldt Bay as the only viable option for wind turbine assembly and deployment on the United States West Coast. This is due in part to the deep-water channel as well as lack of air-draft restrictions for vessels and floating wind turbines. Norton Lilly has been involved in East coast offshore wind projects for years, starting with Block Island Wind Farm (off the coast of Rhode Island). We are looking forward to the opportunities and much needed clean energy jobs the off shore wind industry will bring to the Humboldt Bay Region.

It is our understanding that the Headwaters grant funding will complement existing local, State, and Federal efforts to develop alternative energy sources on the West Coast. Humboldt Bay is perfectly situated to support a modern multipurpose marine terminal for marine cargo and floating offshore wind component assembly, and long-term operation and maintenance services. Please approve the funding for this project in the early stages of development so that the work can be utilized to attract additional federal, State and private funding towards this important project.

Sincerely,

Christopher Mourgos
Port Manager - Northern California
Norton Lilly International

**NORTON LILLY
INTERNATIONAL
AS AGENTS ONLY**

To: Mr. Larry Oetker
Executive Director
Humboldt Bay Harbor, Recreation, and Conservation District

14 January 2020

Ref: Support for the Humboldt Bay Harbor, Recreation, and Conservation District's grant application to partially fund the predevelopment planning and environmental review of a new multipurpose Marine Terminal to support the future offshore wind industry.

I am writing in support of the Humboldt Bay Harbor, Recreation and Conservation District Headwaters Fund grant application to fund partially fund the predevelopment planning and environmental review of a new multipurpose Marine Terminal to support the future offshore wind industry. This work is required for the permits to construct an offshore wind energy port on Humboldt Bay. It will also allow the District to attract an anchor tenant and ancillary businesses with significant job generation potential.

Humboldt Bay is ideally positioned as the closest offshore wind turbine assembly facility and deployment port to the Bureau of Ocean Energy Management (BOEM) Northern California Offshore Wind Call Area. Coastal Humboldt County has world-class offshore wind resources, and the Samoa Peninsula has under-utilized Coastal Dependent Industrial lands ideally located for the operations and infrastructure necessary to assemble, deploy, repair and maintain floating wind energy turbines. In addition, Humboldt Bay deep draft shipping channels can accommodate the large marine vessels delivering wind turbine components.

Principle Power is an innovative technology and services provider for the offshore deep water wind energy market and its proprietary WindFloat technology is the market leader with 25 MW installed and 80 MW under construction. We are building new partnerships and engaging in site development around the globe to harness the energy and potential of offshore wind. We aim to equip our partners for success in this exciting and high potential new industry by helping to review and define requirements.

Since initiating development in Humboldt County in partnership with RCEA, Ocean Winds, and Aker Solutions, PPI has conducted feasibility analysis, met with stakeholders and identified prospective sites for leasing and has moved things forward with the submission of a renewable energy commercial lease application to the Bureau of Ocean Energy Management (BOEM) through BOEM's unsolicited lease request process for the development of an offshore wind energy project off Humboldt County.

It is our understanding that the Headwaters grant funding will complement existing local, State, and Federal efforts to develop alternative energy sources on the West Coast. Humboldt Bay is perfectly situated to support a modern multipurpose marine terminal for marine cargo and floating offshore wind component assembly, and long-term operation and maintenance services.

Please approve the funding for this project in the early stages of development so that the work can be utilized to attract additional federal, State and private funding towards this important project.

Sincerely,



Aaron Smith
Chief Commercial Officer



Kenneth Spain
Executive Director
Headwaters Fund
520 E Street
Eureka, CA 95501

January 15, 2021

Dear Mr. Spain,

I am writing on behalf of Redwood Coast Offshore Wind LLC (the "Project") in support of the Humboldt Bay Harbor, Recreation and Conservation District ("HBHD") grant application to the Headwaters Fund. Funding this proposal will provide critical support to enable HBHD's predevelopment planning and environmental review of a new multipurpose Marine Terminal capable of hosting staging, construction, long-term operations and maintenance for California's emerging offshore wind industry.

The Project is a joint venture of two experienced global offshore wind leaders, Ocean Winds and Aker Offshore Wind, in coordination with the Redwood Coast Energy Authority ("RCEA"), to develop a commercial scale floating offshore wind farm within the Bureau of Ocean Energy Management ("BOEM") Humboldt Call Area. The Project aims to be the first offshore wind farm in California and the catalyst for Humboldt County to become a West Coast offshore wind industry hub. Since 2018 we have collaborated closely with RCEA to conduct early, frequent, and ongoing engagement, with local stakeholders to ensure that we strike a proper balance between proactively addressing climate change while also protecting the coastal environment and local economic benefits of commercial and recreational fisheries.

Access to a local, purpose-built port facility for the staging, construction, long-term operations and maintenance is both critical to the success of the Project and necessary to advancing the responsible development of Humboldt County's offshore wind resources.

With average wind speeds of more than ten meters per second, the wind resource off the Humboldt County coast is among the best in California and is comparable with some of the best performing offshore wind sites in Europe. Additionally, Humboldt Bay is a deep draft port with under-utilized Coastal Dependent Industrial lands that could be revitalized and upgraded for staging floating offshore wind projects. In addition, Humboldt Bay deep draft shipping channels can accommodate the large marine vessels delivering wind turbine components.

This work detailed in HBHD's proposal will advance critical activities needed to permit and construct a purpose-built port facility capable of supporting the staging, construction, long-term operations and maintenance of floating offshore wind projects. With this funding HBHD can advance the responsible re-development of local infrastructure and help to better position Humboldt County to derive local economic and job creation benefits associated with offshore wind.

On behalf of the Project, I am pleased to provide this letter of support for this important work.

Sincerely,

Tyler Studds
CEO, Redwood Coast Offshore Wind LLC

ATTACHMENT A

MULTIPURPOSE DOCK PROJECT DESCRIPTION OVERVIEW

Note: the following project description is a working draft that will be modified and refined.

Project Summary:

The proposed Project would construct modern port facilities on the Samoa Peninsula in the Port of Humboldt Bay. The new facilities would replace the existing approximately 7 acre, 1,800 linear foot, Redwood Marine Terminal I (RMT I) wood piling dock with a reconfigured 7 acre modern dock capable of handling up to three large heavy cargo vessels.

The existing 7 acre wooden dock at RMT I is significantly past its useful life and needs to be completely reconstructed in order to modernize the Port and to prepare for modern maritime industries. Several Federal, State, and private industry studies have identified the Port of Humboldt Bay and the RMT I terminal specifically as the preferred west coast port to develop offshore wind economic cluster. Humboldt Bay is ideally positioned as the closest offshore wind turbine assembly facility and deployment port to the proposed Bureau of Ocean Energy Management (BOEM) north coast lease areas.

Once developed, the facilities on Humboldt Bay can be utilized to construct/ assemble offshore wind turbines and associated components to tow them to other offshore locations on the west coast. Coastal Humboldt County has world-class offshore wind resources and the Samoa Peninsula has under-utilized Coastal Dependent Industrial (CDI) lands that are perfectly situated to support the operations necessary to assemble, deploy, repair and maintain wind energy turbines.

In addition, the Port of Humboldt Bay has deep draft shipping channels that can accommodate the large marine vessels carrying wind turbine components. The Port has deep water access with no bridge restrictions and hundreds of acres of empty, available quayside land at the site of pulp and lumber mills that were abandoned when the region's forest industry collapsed in the 1990s. The offshore wind industry is proposed to be the anchor tenant; however, the multi-use terminal will accommodate a variety of vessels and commercial commerce. The proposed Project includes the following:

- Construction of a new multipurpose terminal with approximately 6-7 acres of overwater wharf. The terminal, or portions of it, will be constructed with to support a load up to 6000 pounds per square foot. Piles would be installed along approximately 1,800 linear feet along these berths and an additional 200 feet of catwalks on each end.
- Re-development of approximately ____ acres of existing tarmac area owned by the Harbor District and adjacent property owners. Redevelopment will include cut and fill to a base elevation of approximately 15.5 feet to 20 feet.
- Shoreline structure development associated with the proposed sea level rise fill.
- Infrastructure to support the upland tarmac such as lighting, paving, drainage improvements, alternative maritime power (AMP) vaults and associated utility lines, poles, conduit and wires throughout wharf and tarmac area.
- Reconstruction of inbound and outbound truck access roads including: internal traffic circulation

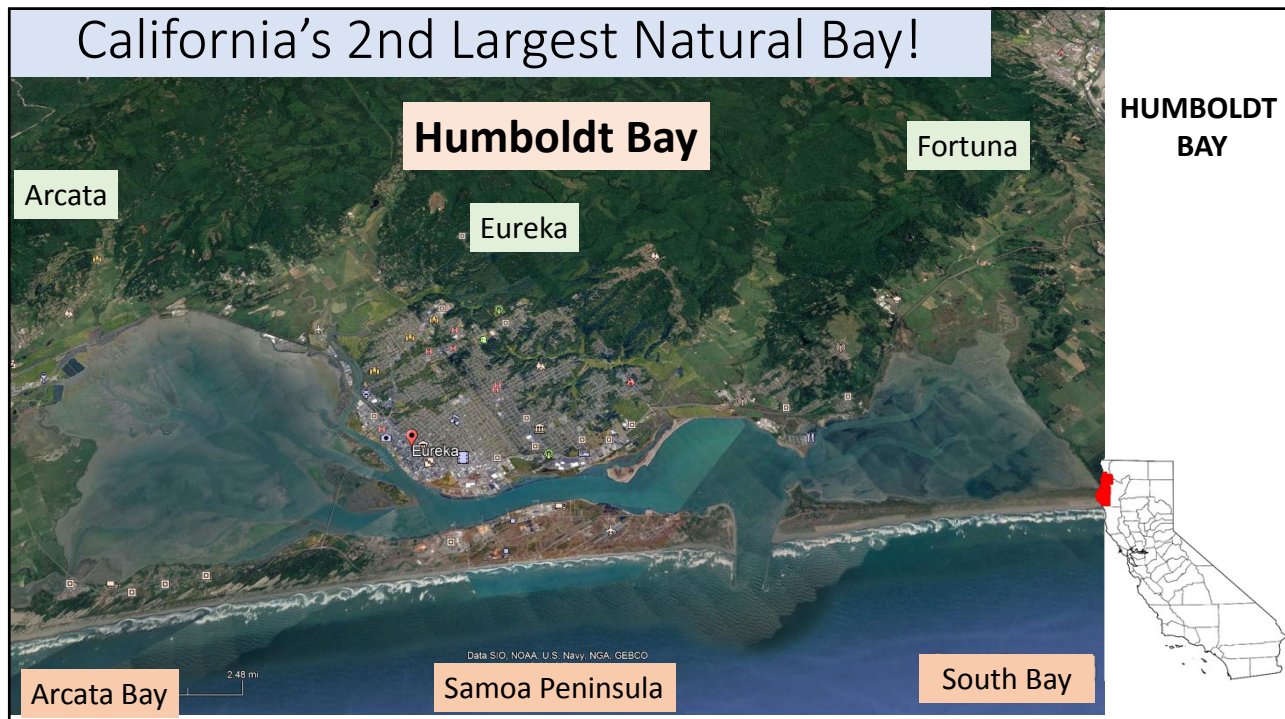
realignment, pavement improvements, street widening, striping, drainage, security fencing, gates, and other truck access and perimeter security improvements.

- Potential reconstruction of marine railway within the project area.
- Demolition of existing structures.
- Addition of over-water gantry (wharf) cranes. These additional cranes would be installed upon new crane rails. Addition of the new cranes would require infrastructure improvements (such as cable and electrical upgrades).
- Addition of crawler cranes and a large ring crane which have an approximate height of 330 feet when stowed at a 45-degree angle (during crane maintenance activities the cranes can be placed in an 80-degree angle with a height of about 394 feet).
- Dredging (including installation of king sheet piling and approximately 1,800 linear feet of sheet piling to stabilize the wharf), between the existing federal navigation channel and the wharf, to a design depth of -38 feet mean lower low water (MLLW) plus two feet of overdepth tolerance (for a total depth of -40 feet MLLW) to accommodate larger ships (the existing design depth is -38 feet MLLW).
- Dredging (including removal of existing and installation of new “Dolphins” in the proposed Samoa Anchorage Area located immediately north of the existing Samoa federal navigation channel turning basin to a design depth of -38 feet MLLW plus two feet of overdepth tolerance (for a total depth of -40 feet MLLW) to accommodate wet anchorage of offshore wind structures and vessel anchorage outside the federal navigation channel.
- Disposal of approximately ____ cubic yards of dredged materials (____ cubic yards from RMT and ____ cubic yards from the Samoa Anchorage Area) at either 1) the Humboldt Open Ocean Disposal Site (HOODS), 2) beneficially reuse as fill within the project area, 3) an approved upland disposal facility, or a combination of the above.
- Construction of ____ acres of coastal wetland habitat to mitigate the filling of wetlands.
- To mitigate shoreline improvements; dredging activities; and in-water terminal construction: 1) Removal of ____ existing wooden piles along the shoreline, 2) removal of ____ existing wooden piles and 7 acres of existing dock; and construction of ____ acres of eel grass habitat in a mitigation bank to ensure a successful eel grass mitigation ratio.

ATTACHMENT B



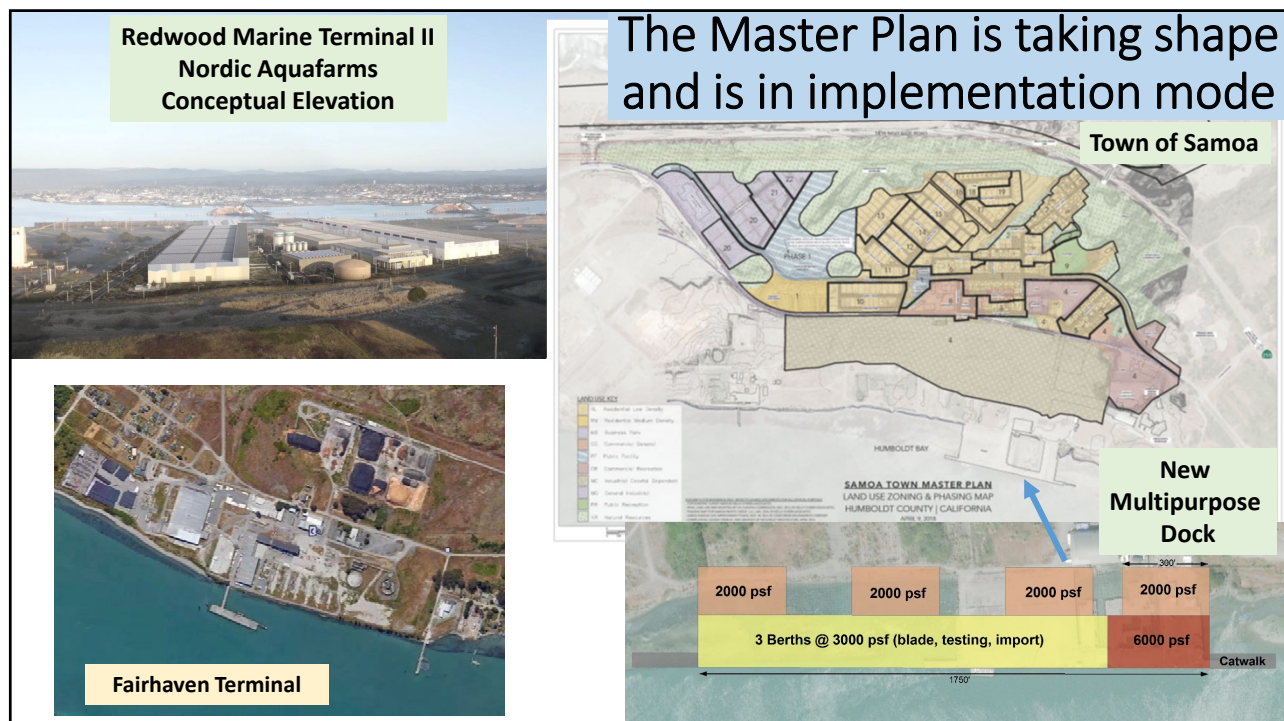
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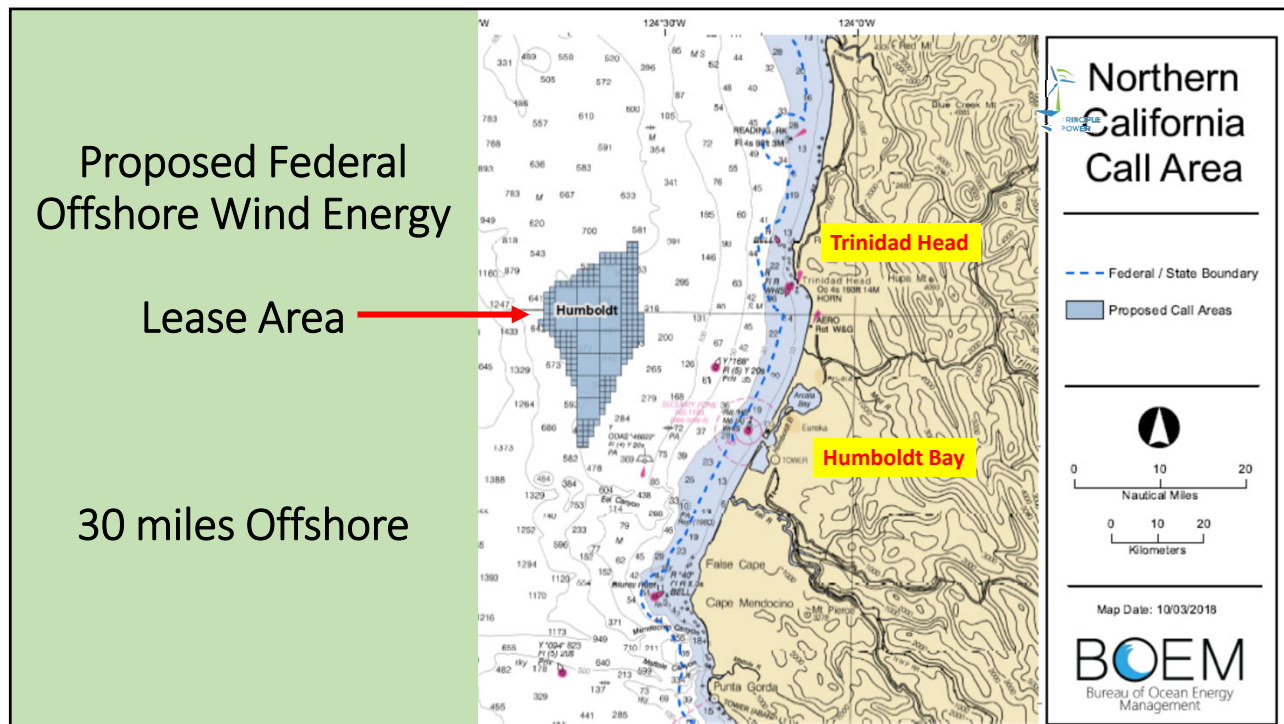
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3



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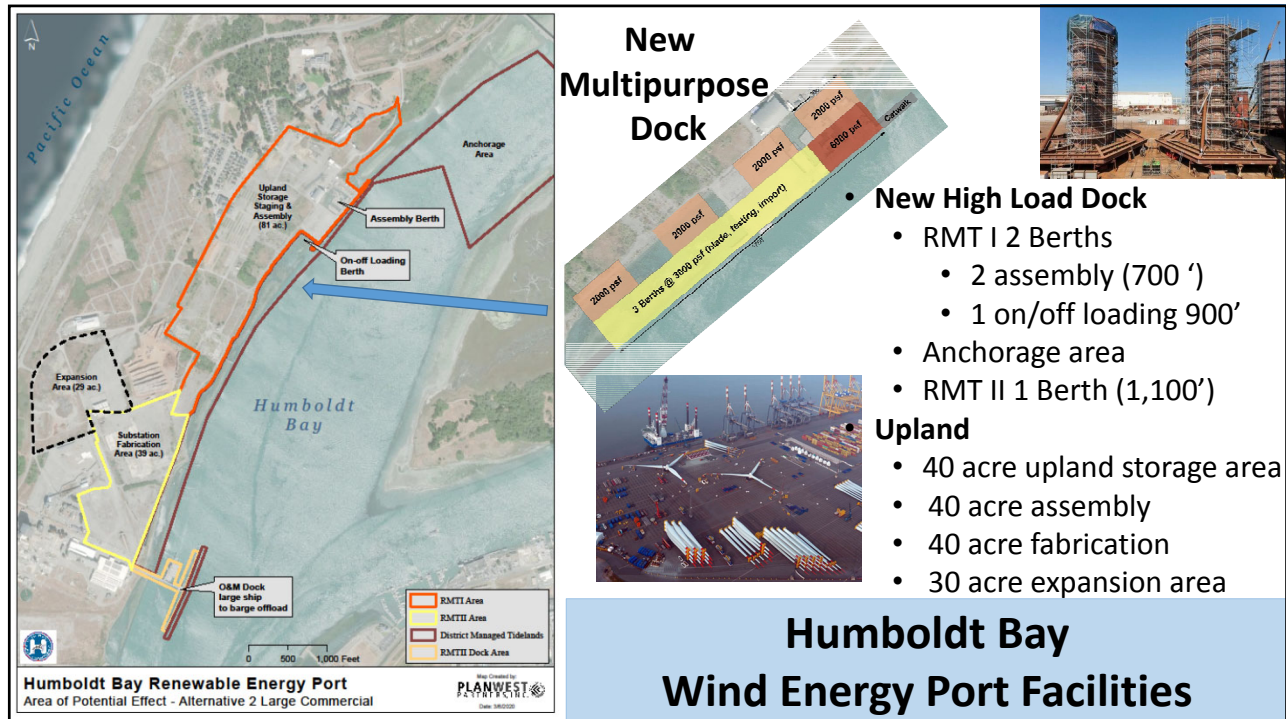
5

Offshore wind industry in California offers significant economic development potential

- 14,000+ potential direct construction and operations jobs
- \$20-50B in state GDP growth from construction, operations, and support functions.
- Shipyard infrastructure investment and ship construction can revitalize industrial port areas.



6



7

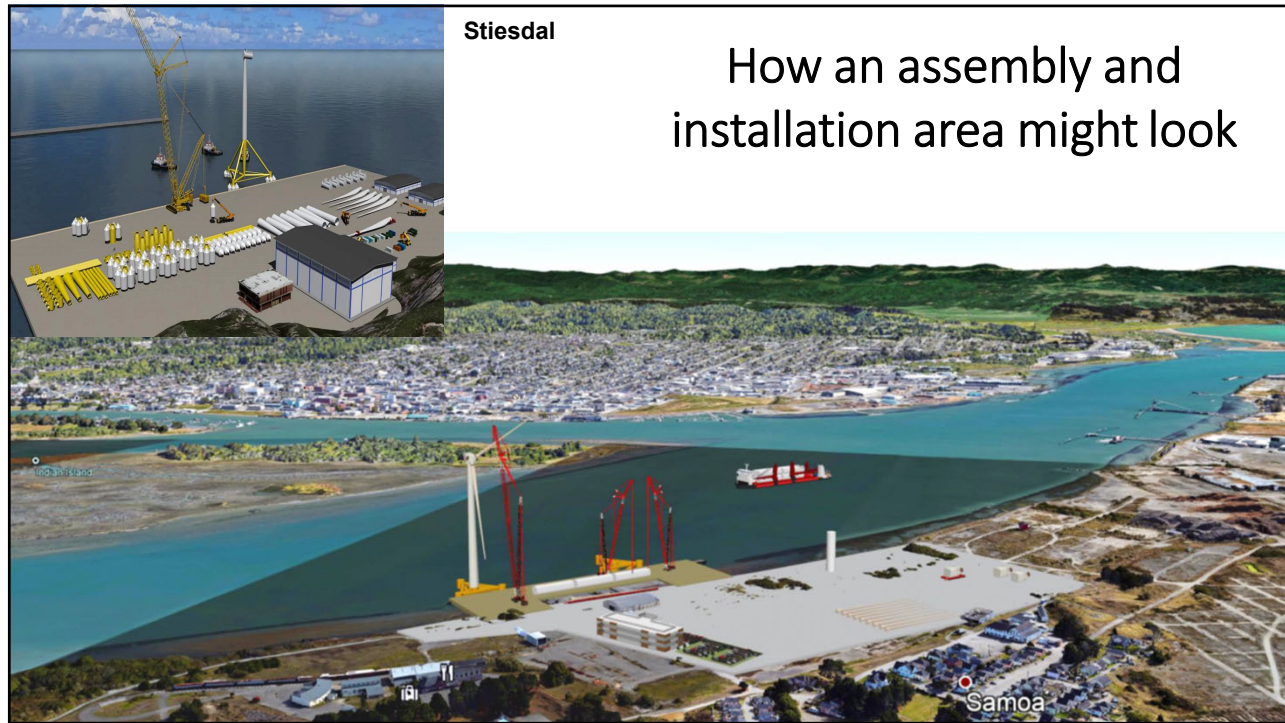
Phase II Port Facilities Pre-Permitting

- Established "Potential Area Of Impact"
- Coordinate and receive authorization from property owners
- Support from Port, County, and other local government
- Scope of Work / cost estimate
- Assemble funds
- Complete technical reports required by permitting agencies
- Coordinate development plans from Industry
- Submit consolidated Coastal Development Permit

Technical Studies

1. 15% dock engineering
2. Wetland / Biological
3. Cultural Resource
4. Geotechnical
5. Traffic
6. Greenhouse gas
7. Eel Grass
8. Phase I & II ESA
9. Environmental Impact Report

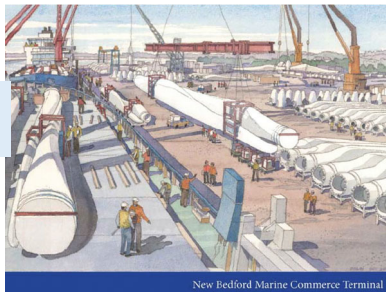
8



9

New Offshore Wind Energy Ports in last 10 years

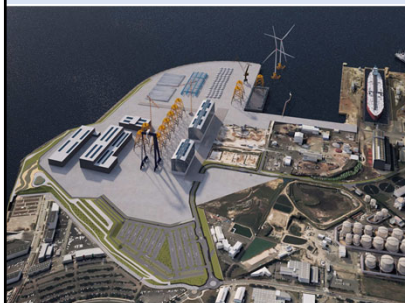
**New Bedford
Massachusetts**



Port of Virginia

"The agreement between the port and Ørsted is for an initial lease of 1.7 acres at the Portsmouth Marine Terminal through 2026, with options to expand to 40 acres. If fully executed, the agreement could be worth nearly **\$13 million in lease payments and \$20 million more in investment for cranes and other improvements.** Those investments would prepare the site for preassembly, staging and loading of wind turbines for Ørsted's projects"

Port of Brest France



Portugal



Port of Oostende Belgium



10

Growing a Wind Energy Cluster



Supply Chain Activities

- Project development and management
- Manufacturing
 - Nacelle, hub, and assembly
 - Blades
 - Tower
 - Foundation supply
 - Array cable supply
 - Export cable supply
 - Onshore and offshore substation supply
 - Operational infrastructure
- Installation
 - Turbine installation
 - Foundation installation
 - Array cable installation
 - Export cable installation
 - Other installation
- Operation, maintenance, and service
 - Wind farm operation
 - Turbine maintenance and service
 - Foundation maintenance and service
 - Subsea cable maintenance and service
 - Substation maintenance and service
- Decommissioning

11

Floating wind fabrication&assembly - overview

Onshore/inshoreactivities

Substructure
fabrication

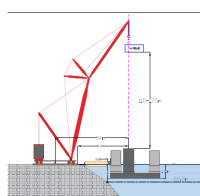


On land or in dock
Steel or concrete

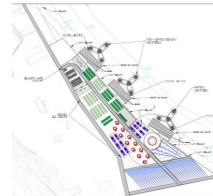
Substructure
load-out



Turbine
installation



Turbine
commissioning



Tow to site

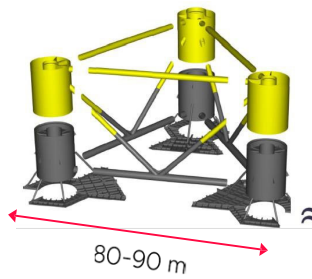


Open

12

Fabrication - steel

- Competence needed
 - Fabrication of modules (off-site)
 - Assembly/welding
 - Sandblasting
 - Painting



Source: Navantia

Open

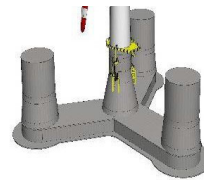
13

Fabrication - concrete

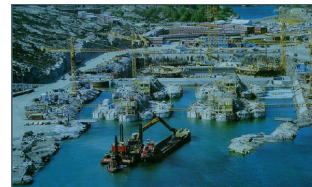
- Traditional civil construction work



Source: Esteyco



Source: Olav Olsen



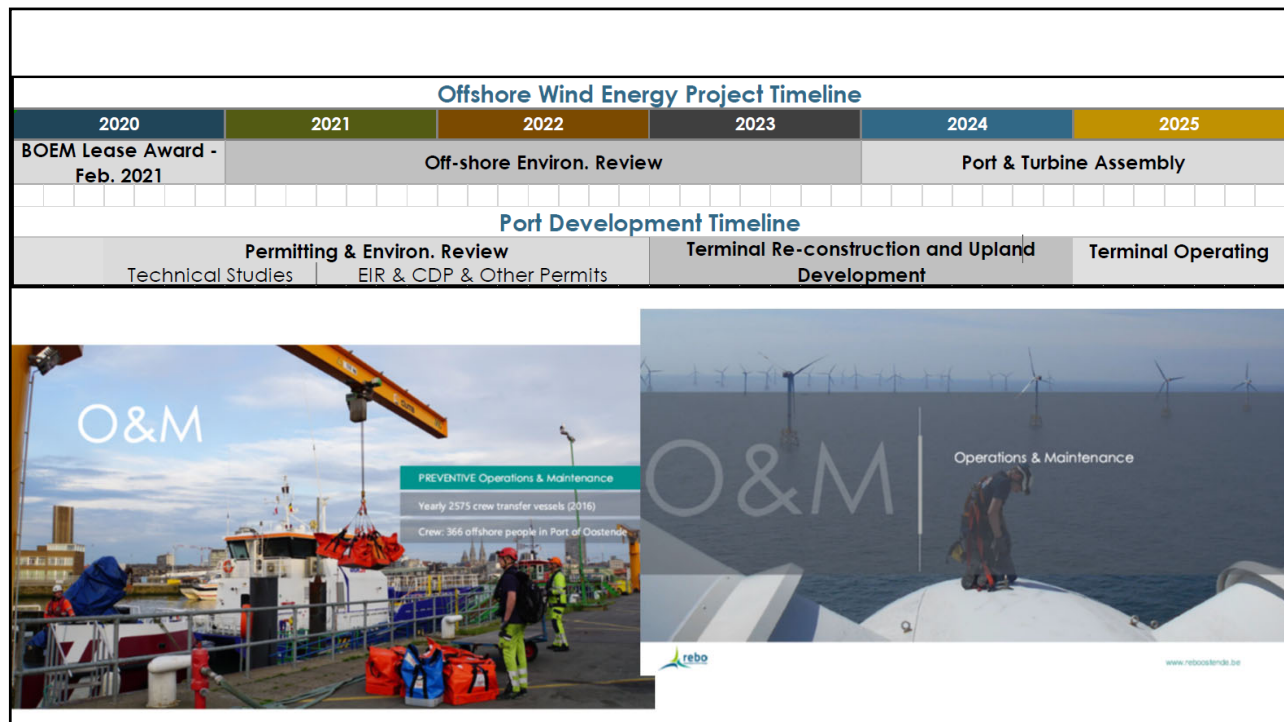
Fabrication in dry dock



Mass fabrication on land

Open

14



15

Port Opportunities

- Wood Products
- Aquaculture
- Broadband
- Offshore Wind
 - Steel Fabrication
 - Concrete anchors, platforms & other components
 - Cable array pre-assembly
 - Operation and Maintenance
 - Base Port for platform blade, turbine, and other large repairs



16

ATTACHMENT C

HEADWATERS YEAR 2 FUNDING (2021-2022) - SCOPE

- **Industry Outreach and Consultation**

The Harbor District will continue to conduct outreach to the offshore wind energy industry to assist in providing guidance to project details. The Harbor District anticipates getting industry feedback on the preliminary project description and conceptual layout that was developed during the 2020 Headwaters funding cycle. Based on comments from the offshore wind industry, the project will be modified as appropriate.

- **Plot Plan - Property Survey, Ownership, and Easements**

The concept level designs will be overlayed over property boundaries and easements to create a plot plan within the legal parcel boundaries of the project area. As the project is refined property surveys, ownership status, and easements will be researched, compiled, and obtained as necessary.

- **Opportunities and Constraints Report – Initial CEQA Scoping**

The Harbor District will synthesize and document known information specifically related to RMT port development. This effort will help refine project description and concept plans and identify additional information needs and data gaps. The opportunities and constraints report will assist with pre-development planning, California Environmental Quality Act (CEQA) scoping, and attracting outside investment. The following tasks are proposed:

- **Document Baseline Conditions** – Existing conditions and baseline information from existing reports will be compiled and summarized.
- **Opportunities and Constraints Report Outline** – Topics covered in the report will loosely follow CEQA Initial Study issue areas including, but not limited to:
 - Aesthetics
 - Biological Resources
 - Cultural/Historical Resources
 - Energy/Green House Gas Emissions
 - Geology and Soils
 - Hazards and Hazardous Materials
 - Hydrology and Water Quality
 - Land Use and Planning
 - Noise
 - Transportation
 - Tribal Cultural Resources
 - Utilities and Service Systems
- **Opportunities and Constraints Report Preparation** – The report will include concept level discussions, summarize information from already completed technical reports, and identify anticipated additional data needs. This Report will be used as the basis for moving the CEQA environmental review forward.

- **Pre-Application Regulatory Agency Scoping**

- **Preliminary Tribal Consultation**

- **Public Scoping**

Conducting pre-application outreach with agencies, Tribes, and the public will help inform strategies to manage and address potential concerns early in the project.

Redwood Marine Terminal Predevelopment of a New Multipurpose Dock to Primarily Support the Proposed West Coast Offshore Wind Industry

Deliverables:

- Project area plot plan based on conceptual plans and property surveys
- Opportunities and Constraints Report
- Outreach summary report that documents issues and concerns as the project moves forward

Timeframe	Milestone
June 2021 – Dec. 2021	<ul style="list-style-type: none">• Industry Outreach & Consultation• Plot Plan - Property Survey, Ownership, Easements• Prepare Opportunities and Constraints Report• Agency, Tribal, & Public, Scoping
June 2021 – June 2022	

ATTACHMENT D

HEADWATERS YEAR 1 FUNDING (2020-2021) – PROGRESS SUMMARY

The Humboldt Bay Harbor, Recreation, and Conservation District (Harbor District) continues to prepare for multipurpose marine terminal development on the Samoa Peninsula, with offshore wind energy as the anchor tenant.

The following deliverables and timeline were included as Exhibit A of the 2020 Headwaters Grant Agreement # 20-GF-04.

Deliverables:

Completed technical studies, environmental assessments, and site evaluations for the offshore wind development project.

Timeline:

Timeframe	Milestone
June 2020 – June 2021	CEQA technical reports. Define site requirements, site surveys, environmental assessments marine docking assessment, public consultation and awareness*
Feb. 2021 – June 2021	Refine CEQA Project Description*

*Headwaters grant funded pre-construction activities.

The Headwaters Grant was approved by the Board of Supervisors at their March 26, 2020 meeting and the Grant Agreement was executed on September 25, 2020. As with almost every other project, there were significant COVID 19 related delays between March and October. The project is getting back on schedule as the Harbor District, our consultants, and the country as a whole begins to adjust to the new realities of working during a pandemic. During the grant award through December 31, 2020 the following technical reports have been completed:

- **Initial CEQA technical reports**

The Harbor District conducted baseline scoping and obtained cost estimates from qualified consultants for required technical studies for port improvements and operations including land use and permitting; circulation; geotechnical; biological – upland, wetland, and eelgrass; cultural resources; infrastructure needs; conceptual engineering study; and identifying subsequent environmental compliance and permitting considerations. The cost estimates for many of these studies is beyond what could be covered by currently available Headwaters and other funds. However, to date the Harbor District completed biological habitat assessment and wetland assessment studies, as further described below under site surveys

- **Defining site requirements for BOEM**

The Bureau of Ocean Energy Management (BOEM) Humboldt Call Area is roughly 20 – 30 nautical miles offshore with an area of 210 mi² and ocean depths between 1,600 to 3,600 ft. The Harbor District has been closely following BOEM to determine the specific requirements, information materials; and timelines for releasing the Humboldt and Central California Call

Redwood Marine Terminal Predevelopment of a New Multipurpose Dock to Primarily Support the Proposed West Coast Offshore Wind Industry

Area(s). BOEM's website titled California Offshore Wind Energy Gateway located at <https://caoffshorewind.databasin.org/> provides a great deal of information regarding their intention to develop offshore wind resources off California. During this initial phase of the Headwaters Grant, BOEM has released the following documents specifically related to the proposed Humboldt Call Area:

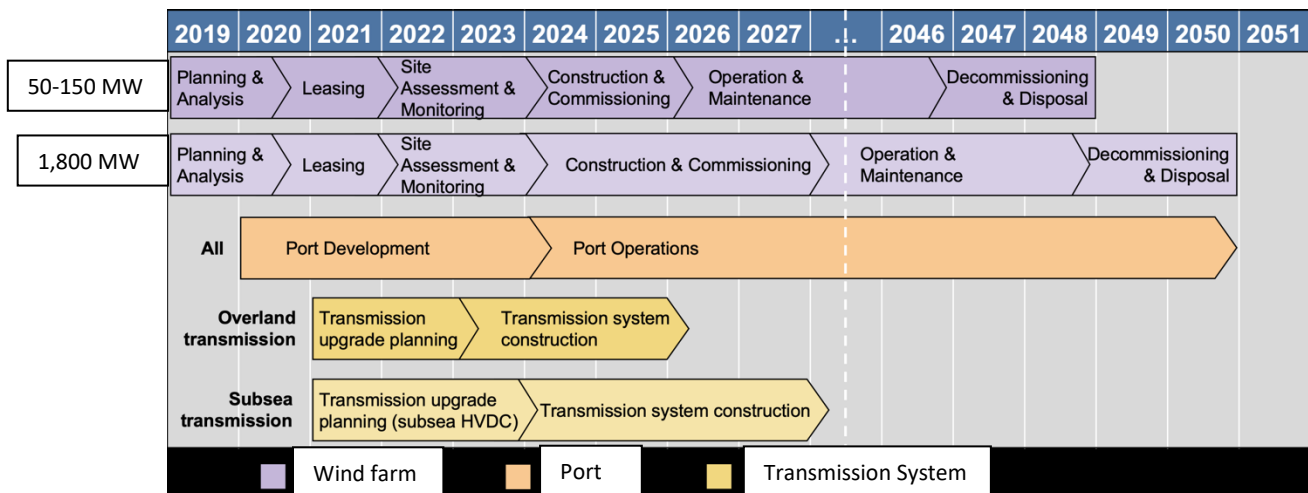
- October 31, 2020: Journal *Energies* published the article "[Resource and Load Compatibility Assessment of Wind Energy Offshore of Humboldt County, California](#)". The article, based on a [BOEM-funded study](#), describes the offshore wind generation profile in the Humboldt Call Area and the compatibility with Humboldt County electric load. The article is free to download.
- October 9, 2020 - [Offshore Wind Research Buoys Float into California's Waters](#)
- September 14, 2020 - [Northern California Offshore Wind Generation and Load Compatibility Assessment with Emphasis on Electricity Grid Constraints, Mitigation Measures and Associated Costs](#)
- July 1, 2020 - [California Energy Commission Notice of Workshop to Take Comment on Additional Considerations for Offshore Wind Energy off the Central Coast of California](#)
- May 13, 2020 - [Understanding Potential Effects of West Coast Offshore Renewable Energy Development on Marine Mammals](#). Presenter: Desray Reeb, Marine Biologist, BOEM
- May 7, 2020 - [UPDATED California Energy Commission Notice of Availability of Outreach on Additional Considerations for Offshore Wind Energy off the Central Coast of CA](#) - The public outreach process and comment deadline included in the original notice have been updated. Written comment period has been extended from July 31, 2020 to September 30, 2020.
 - Notice Docket - [Public Comments](#) (link to <https://efiling.energy.ca.gov/Lists/DocketLog.aspx?docketnumber=17-MISC-01>)
 - [Related Information on Local Outreach and Offshore Working Group Visual Simulations](#)

In addition, BOEM released "panoramic visual simulations" of Humboldt Offshore Wind Energy Call area as a developed project would be viewed from Patrick's Point State Park. The simulations are intended to be viewed as large high-resolution printed panoramas with the printed image attached to curved stands and placed at a proper viewing distance based on the image width. The panoramas cover a field of view 124-degrees horizontally by 55-degrees vertically, which is consistent with the typical human field of view.

For example, a 36"-wide panorama image would be placed at a distance of approximately 16 inches from the viewer. The images viewed on this website are digital representations and the visibility of the turbines projected on a computer screen will depend on the scale at which the image is being viewed. Simply put, zooming in on the image will over-represent visibility and, conversely, zooming out will minimize visibility of the turbines.

The assumed timeline for development of offshore wind off Humboldt Bay and the Central Coast of California will depend on the actual speed of leasing, permitting, development, and construction.

Redwood Marine Terminal Predevelopment of a New Multipurpose Dock to Primarily Support the Proposed West Coast Offshore Wind Industry



Source: *California North Coast Offshore Wind Studies*. Humboldt, CA: Schatz Energy Research Center. 2020 schatzcenter.org/pubs/2020-OSW-R1.pdf.

- **Site surveys, environmental assessments, marine docking assessments**

Biological Habitat Assessment and Wetland Assessment studies were conducted utilizing Headwaters Grant funds within the Redwood Marine Terminal (RMT) Study Area. The biological studies included field surveys and records searches, and identified potential special status plant and animal species, environmentally sensitive habitat areas (ESHAs), sensitive natural communities, wetlands, and eelgrass populations. The studies are intended to identify potential constraints early in the planning process and identify additional items that will likely need to be addressed during future project review by regulatory/permitting agencies.

The Harbor District also assembled and reviewed previous technical reports and site surveys which were completed with other funding:

- Property Boundary Survey Redwood Marine Terminal I (electronic CAD files).
- Property Boundary Survey Redwood Marine Terminal II (electronic CAD files).
- Sea Level Rise Modeling Data for Project Area (electronic KMZ file).
- Samoa Industrial Waterfront Transportation Access Plan with 10% engineered project area internal road, highway, freight rail access, including right of way title research to Redwood Marine Terminal(s).
- An Archeological and Historic Resource Report for the Nordic Aquafarms Project at Redwood Marine Terminal II. The area reviewed by this report covers a portion of the proposed project area.
- Probabilistic Site Specific Tsunami Hazard Analysis for the Nordic Aquafarms Project at Redwood Marine Terminal II. The area reviewed by this report covers a portion of the proposed project area.
- June 17, 1994 Environmental Impact Report for the Redwood Marine Terminal Reconstruction

Redwood Marine Terminal Predevelopment of a New Multipurpose Dock to Primarily Support the Proposed West Coast Offshore Wind Industry

- **Public consultation and awareness**

Harbor District staff participated as a panelist in the fall 2020 Wind Energy Project webinar series hosted by the Schatz Energy Research Center. The webinars shared topical findings from the recently conducted studies, followed by a moderated panel discussion, and then community Q&A. Webinar topics included: energy production and delivery, and economic development; ecological and geological environment; port and coastal infrastructure; community perspectives on regional impacts and opportunities; reflections and next steps.

The Harbor District Executive Director has also given at least seven recent presentations to local Rotary and Soroptimist clubs about port development to support the offshore wind industry. This provides business leaders and others an opportunity to learn and ask questions as project planning and development moves forward.

- **CEQA Project Description Outline and Conceptual Project Layout**

The Harbor District is currently compiling a preliminary conceptual level project description that identifies project components and will provide the basis for future environmental review and permitting. This project description outline is expected to include the following details:

- Background information regarding the Project site
- A discussion of the proposed Project's purpose and need and proposed Project objectives under NEPA and CEQA
- A description of the proposed Project, including the proposed improvements, the construction phasing, and the changes to operations anticipated as a result of the proposed Project (based on throughput projections)
- A discussion of the baseline conditions under NEPA and CEQA
- A description and discussion of the proposed Project alternatives, including those that were identified and eliminated from further evaluation and the reason for their elimination.

The Harbor District also plans to prepare a conceptual project layout intended to illustrate overall project features (i.e. not to scale). Existing available data from numerous sources will be integrated into a set of illustrations that can be used for the basis of the plot plan moving forward.

ATTACHMENT E

North Coast Offshore Wind Feasibility Analysis Project Summary

Humboldt State University's Schatz Energy Research Center (SERC) is nearing completion of \$750,000 of grant funded studies which included a feasibility assessment of the project area to be used as a wind energy port. The research studies were funded by the California Ocean Protection Council, the Governor's Office of Planning and Research, and the Bureau of Ocean Energy Management. SERC has committed an additional \$15,000 to assist with the technical reports for port infrastructure. The Harbor District is focused on the port infrastructure development and will keep momentum going by taking port and land-based concept layouts developed as part of the SERC project to the next phase of permitting and environmental review.

The SERC project conducted in-depth studies and analysis of the electrical, environmental, coastal infrastructure, stakeholder, and policy issues and needs associated with offshore wind development in the Humboldt Bay region. In addition, they will utilize best scientific and engineering practices and recognized experts to identify issues and propose paths forward to utilize an immense renewable energy resource while protecting the marine and coastal environments. The following 23 reports have been or will be completed prior to the end of the initial Headwaters grant:

California North Coast Offshore Wind Studies (2020)

1. [Description of Study Assumptions](#) (2020)
2. [Wind Speed Resource and Power Generation Profile Report](#) (2020)
3. [Offshore Wind and Regional Load Compatibility Report](#) (2020)
4. [Interconnection Feasibility Study Report](#) (2020)
5. [Subsea Transmission Cable Conceptual Assessment](#) (2020)
6. [Electricity Market Options for Offshore Wind](#) (2020)
7. [Electricity Market Revenue Study](#) (2020)
8. [Interconnection Constraints and Pathways](#) (2020)
9. [Economic Viability of Offshore Wind in Northern California](#) (2020)
10. [Economic Development and Impacts](#) (2020)
11. [Coastal Infrastructure Co-Benefits Linked to Offshore Wind Development](#) (2020)
12. *Electricity transmission policy analysis - coming soon*
13. [Existing Conditions and Potential Environmental Effects](#) (2020)
14. [Feasibility of Potential Subsea Cable Corridor Scenarios](#) (2020)
15. *Environmental permitting policy analysis - coming soon*
16. [Overview of geological hazards](#) (2020)
17. [Anchoring technology risk assessment](#) (2020)
18. [Export cable landfall](#) (2020)
19. *Port infrastructure assessment report - coming soon*
20. [Social impacts to other communities that experienced offshore wind](#): a literature review (2020)
21. [Stakeholder benefits and concerns](#) (2020)
22. [Subsea transmission cable stakeholder identification](#) (2020)
23. [Military mission compatibility](#) (2020)

See <http://schatzcenter.org/publications/> for links to reports and <http://schatzcenter.org/wind/> for more information about SERC offshore wind energy projects. Harbor District staff was part of the peer review of the 343 page report authored by the engineering firm Mott MacDonald titled: Humboldt Bay Offshore Wind Port Infrastructure Assessment Report which should be released in early 2021. In October 2020 at a SERC sponsored webinar Harbor District Staff participated in the presentation made by Mott MacDonald. During this presentation the following topics were presented:

This report will include Sections outlining:

- Marine Terminal required improvement and design requirements to support the offshore wind industry. The report includes preliminary terminal conceptual design with preliminary construction cost estimate.
- Existing navigation channel dimensions and constraints as well as identification for areas that could be expanded
- Port Infrastructure build out schedule

Attachment F

**HUMBOLDT BAY HARBOR, RECREATION
AND CONSERVATION DISTRICT**

RESOLUTION NO. 2020-07

**A RESOLUTION ADOPTING THE FINAL FISCAL YEAR 2020-2021 HUMBOLDT BAY
HARBOR, RECREATION AND CONSERVATION DISTRICT BUDGET AND GOALS**

WHEREAS, the Board of Commissioners of the Humboldt Bay Harbor, Recreation, and Conservation District has prepared a draft and final annual budget pursuant to California Harbors and Navigation Code Section 6093;

WHEREAS, the Board of Commissioners approved the fiscal year 2020-21 preliminary budget on June 11, 2020 and scheduled and noticed a hearing for the adoption of the final budget on June 25, 2020 at 7:00 pm via video conference with a teleconference option.

WHEREAS, notice of said hearing was posted on the Harbor District's website pursuant to California Harbors and Navigation Section 6093.1; and

WHEREAS, copies of the budget were made available on the Harbor District's website and at the District Office.

NOW, THEREFORE, BE IT RESOLVED by the Board of Commissioners of the Humboldt Bay Harbor, Recreation and Conservation District that the Board hereby:

1. Adopts the Final Fiscal Year 2020-21 Budget as set forth in Exhibit A and B, attached here to and by reference incorporated herein.
2. Authorizes the Executive Director to transmit the budget to the Humboldt County Board of Supervisors pursuant to California Harbors and Navigation Section 6093.3

PASSED AND ADOPTED by the Humboldt Bay Harbor, Recreation and Conservation District Board of Commissioners at a duly called meeting held on the 25th day of June 2020, by the following polled vote:

AYES: Dale, Doss, Higgins, Kullmann, Marks

NOES: 

ABSENT: 

ATTEST: 

PATRICK HIGGINS, Secretary
Board of Commissioners


STEPHEN KULLMANN, President
Board of Commissioners

CERTIFICATE OF SECRETARY

The undersigned, duly qualified and acting Secretary of the HUMBOLDT BAY HARBOR, RECREATION AND CONSERVATION DISTRICT, does hereby certify that the attached Resolution is a true and correct copy of RESOLUTION NO. 2020-07 entitled,

A RESOLUTION ADOPTING THE FINAL FISCAL YEAR 2020-2021 HUMBOLDT BAY HARBOR, RECREATION AND CONSERVATION DISTRICT BUDGET AND GOALS

as regularly adopted at a legally convened meeting of the Board of Commissioners of the HUMBOLDT BAY HARBOR, RECREATION AND CONSERVATION DISTRICT, duly held on the 25th day of June 2020; and further, that such Resolution has been fully recorded in the Journal of Proceedings in my office, and is in full force and effect.

IN WITNESS WHEREOF, I have hereunto set my hand this 25th day of June, 2020.



PATRICK HIGGINGS, Secretary
Board of Commissioners

EXHIBIT A INCOME

Humboldt Bay Harbor, Recreation, and Conservation District
FY 2020-21 BUDGET
6/25/2020

Account	Sub Account	General Fund	Tidelands	Woodley Island	RMT II	RMT I	Fields Landing	Shelter Cove	Grants	TOTAL 2020-21
R1	Dredging									-
R1a	Dredging Surcharge			125,000			15,000			140,000
R1b	Dredging Set Aside									-
R1c	Dredging Other	85,000							50,000	135,000
R2	Float Replacement			63,000						63,000
R3	Harbor Surcharge		150,000							150,000
R4	Utility Surcharge			56,471	56,422	10,414				123,308
R5	Grants									-
R5a	Conservation									-
R5a	Recreation									-
R5c	Harbor									-
R5d	Facilities								21,274	21,274
R6	Tax Revenue									-
R6a	Property Tax	1,107,465								1,107,465
R6b	Other									-
R8	Other Income									-
R8a	Other Revenue	36,000	32,350							68,350
R8b	Late Fees/Interest	7,000	160,750	5,000						172,750
R9	Interest Income				6,200					6,200
R10	Rents									-
R10a	Slip Rents			500,000						500,000
R10b	Transient Rents			120,000						120,000
R10c	Upland Rent			140,000	568,000	25,000	78,500			811,500
R10d	Tideland Rent		307,000							307,000
R10e	Equipment	12,000								12,000
R10f	Storage			40,000		18,000				58,000
R10g	Work Yard			5,000						5,000
R11	Fees									-
R11a	Services Office			2,200						2,200
R11b	Late Fees/Interest	500		8,000	1,500	200				10,200
	Permits	500	1,500	5,300						7,300
R11c	Miscellaneous	10,000								10,000
R11d	Fork Lift			3,500						3,500
R11e	Boat Launch									-
R11f	Travel Lift									-
R11g	Haul Out									-
R11h	Moorage									-
R11i	Poundage			1,500		6,000				7,500
R11j	Port	9,700	12,500							22,200
	Pilotage		2,000							2,000
R12	Sales									-
R12a	Laundry			6,000						6,000
R12b	Retail									-
R13	Donations									-
R13a	Light House			20						20
R13b	Sea Scouts			10						10
TOTAL REVENUE		1,268,165	666,100	1,081,001	632,122	59,614	93,500	-	71,274	3,871,747
TOTAL EXPENSE		898,911	313,071	1,214,809	1,092,596	156,857	120,451	29,200	25,273	3,851,167
NET INCOME		369,254	353,029	(133,808)	(460,474)	(97,243)	(26,951)	(29,200)	46,001	20,580

**EXHIBIT B
EXPENSES**

**Humboldt Bay Harbor, Recreation, and Conservation District
FY 2020-21 BUDGET
6/25/2020**

Account	Sub Account	General Fund	Tidelands	Woodley Island	RMT II	RMT I	Fields Landing	Shelter Cove	Grants	TOTAL 2020-21
Personnel										
E1	Salaries/Wages	251,677		327,480	107,828	61,861	28,720		15,187	792,752
E1a	Salaries/Wages PT	-		-	-	-	-			-
E2	Commissioners Fees	25,200		-	-	-	-			25,200
E3	Payroll Burden	220,370		246,429	74,786	44,096	21,681			607,362
E3a	Payroll Burden PT					-				-
Materials and Services										
E5	Advertising & Promotion									-
E6	Communications	6,000		7,000	11,200					24,200
E7	Conference & Meetings	6,000							1,000	7,000
E8	Dues,Subscript.,License	33,565							435	34,000
E9	Elections & Government Fees	10,000			40,000					50,000
E10	Insurance	9,000	19,000	33,700	16,000		7,600	7,200		92,500
E11	Supplies Office	4,349	5,000	4,000					4,651	18,000
E12	Supplies Maintenance	750		14,000	1,000	1,000				16,750
E13	Permits		3,400	500	22,000	400	2,700			29,000
E14	Utilities	8,000		220,000	217,000	10,000	5,000	7,500		467,500
E15	Fuel		15,750	3,900	350					20,000
E16	Accounting	41,000		8,300						49,300
E17	Legal	35,000								35,000
E18	Planning	30,000								30,000
E19	Engineering	12,000		1,000		3,000	10,000	2,000	2,000	30,000
E20	Other Professional/Outside Services	5,000		8,000	1,000	5,000	2,500	-	2,000	23,500
E20a	Information Technology									-
E20b	HSU Ports		32,350							32,350
E21	Small Tools - Protective Clothing			2,000	1,500		250			3,750
E22	Maintenance Facilities		30,000	23,500	40,900	25,000	33,000	2,500		154,900
E23	Maintenance Equipment			17,000	14,900	3,500	5,000	10,000		50,400
E24	Maintenance IT	3,000		2,000	4,000					9,000
E25	Dredging			150,000						150,000
E26	Capital Outlay									-
E26a	Building & Facilities			45,000	100,000		4,000			149,000
E26b	Equipment									-
E26c	Automotive									-
E26d	Vessels									-
E27	Rent/ Lease Payments				205,632					205,632
E28	Interest/Debt Payments									-
E29	Other Expenses	2,000		1,000		3,000				6,000
E30	Grant Expenses									-
E30a	Conservation Grant									-
E30b	Recreation Grant									-
E30c	Harbor Grant									-
E30d	Facilities Grant									-
TOTAL EXPENSE		702,911	105,500	1,114,809	858,096	156,857	120,451	29,200	25,273	3,113,096
Debt										
D1	Bonds 2014		207,571	100,000						307,571
D2	Coast Seafood	196,000								196,000
D3	BVVA Loan NMTC				234,500					234,500
D4	Acquisition									-
D5										-
D6										-
TOTAL EXPENSE		196,000	207,571	100,000	234,500	-	-	-	-	738,071
TOTAL EXPENSE		-	-	-	-	-	-	-	-	-
GRAND TOTAL EXPENSE		898,911	313,071	1,214,809	1,092,596	156,857	120,451	29,200	25,273	3,851,167
TOTAL REVENUE		1,268,165	666,100	1,081,001	632,122	59,614	93,500	-	71,274	3,871,777
NET INCOME		369,254	353,029	(133,808)	(460,474)	(97,243)	(26,951)	(29,200)	46,001	20,610