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January 21, 2016

Dear Ms. Bumpus:

Thank you for the opportunity to comment on the draft Environmental Impact Statement (EIS) for the Tesoro Savage Petroleum Terminal LLC (the Applicant) Site Certification ([ASC] No. 2013-01).ⁱ The Applicant is proposing to construct and operate the Vancouver Energy Distribution Terminal Facility (proposed Project) at the Port of Vancouver (Port) that would receive an average of 360,000 barrels (bbl) of crude oil per day by rail, temporarily store the oil onsite, and then load the oil on to marine vessels for transport to existing refineries primarily located on the West Coast of the United States.

Audubon Washington is an organization dedicated to the protection of birds and their habitats. We have 25 active chapters here in Washington, representing over 21,000 members. We also have three science and nature centers located in Seattle, Sequim and Tacoma that serve over 35,000 people each year. As an organization dedicated to bird conservation, our comments are focused on our concerns about impacts to birds or resources important to birds within the Columbia River Estuary and rail and river corridors, including habitat and food resources.

In recent years, the health of the Columbia River, long subject to modification, degradation, and neglect, has received new life as collaborative groups such as the Columbia River Estuary Partnership have come together to recover and restore this vital waterway and the species and habitats that it supports. We applaud the efforts of past and current Oregon and Washington State governors and legislators, as well as local citizens, environmental groups, and landowners in supporting a new era of stewardship for the Columbia River.

The Columbia River Estuary represents prime habitat for migratory shorebirds and other waterbirds within the Pacific Flyway. The western extent of the Estuary is a designated Western Hemisphere Shorebird Reserve Network site,ⁱⁱ supporting large numbers of shorebirds during migration, and some of the largest colonies of Caspian Terns and Double-Crested Cormorants in the world nest and roost on islands within the Estuary.ⁱⁱⁱ Nine Important Bird Areas – defined as sites critical for the conservation of bird populations - have been designated within the Estuary,^{iv} and avian species lists for the Estuary top 300 species, reflecting the diverse habitats available.^v Two ESA listed species, the Streaked Horned Lark and the Western Snowy Plover, also occur here.

The EIS for the proposed Project evaluates a range of environmental impacts anticipated during construction, ongoing impacts due to facility operation, impacts due to increased frequency of oil transport by rail and vessel, and cumulative effects that are expected to occur should the proposed Project and other foreseeable actions be approved. According to the EIS, the following unavoidable significant impacts to resources we understand as critical to avian food and habitat are expected:^{vi}

- Moderate, long-term impacts to shoreline vegetation from wake-induced shoreline erosion and spread of invasive wetland and riparian plants.
- Moderate to major long-term effect on nearshore fish including listed salmonids and eulachon species in the lower 33-mile portion of the Columbia River.
- Moderate to major long-term changes to vegetation communities, indirectly affecting fish species that rely on these habitats to complete their life cycle.
- Moderate to major long-term changes to tidal wetlands, shallow water, and tidal flats EFHs (Essential Fish Habitats) and thus the species that rely on these habitats as well as wake stranding of small or juvenile fish.

The EIS categorized potential impacts from oil spills along the rail and vessel corridor as ranging from minor to major and short to long-term depending on the size of the spill. Although the EIS found that numerous special-status wildlife and priority wildlife habitats could be affected by a spill or explosion or fire event, resulting in damage to wildlife and their habitats, these impacts were not deemed to be significant and unavoidable.

Based on our review of the environmental impacts considered in the EIS, we are dismayed that the EIS has failed to adequately assess the potential impacts of the proposed projects on resident and migratory bird populations, including ESA listed species. As a result of this insufficient analysis, appropriate mitigation measures have not been explored. **Based on our review of the proposed Project, we have concluded that the environmental risks and likely impacts posed by the Project may result in unavoidable and significant impacts to birds and other wildlife, including priority aggregations of seabirds and other waterbirds, ESA listed species, and the food and habitat resources they depend upon. We therefore stand in opposition to the Vancouver Energy Distribution Terminal.**

Our comments below highlight specific aspects of the Affected Environment and Impact Assessment that we deem inadequately assessed or overlooked in the EIS. Recommendations for further consideration or study are summarized on page 7; potential mitigation measures are proposed throughout, and summarized on page 8.

- Affected Environment
 - Rail Corridor
 - Vessel Corridor
- Terrestrial Wildlife: Impact Assessment
 - Changes in Avian Movement Patterns: Artificial Lighting
 - Changes in Avian Movement Patterns: Vessel Traffic
 - Avian Habitat Loss and Degradation: Wake Effects
 - Avian Habitat Loss and Degradation: Contaminants
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- Affected Environment
 - Recreation: Washington State Birding Trail
 - Recreation: Birding and Wildlife Viewing
- Recreation: Impact Assessment
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- Additive/Cumulative Effects

Affected Environment: Rail Corridor

The EIS did not consider Important Bird Areas (IBAs) in the assessment of the affected environment. The IBA program is a global effort to identify sites that provide essential habitat for one or more species of birds; sites are ranked as Global, Continental, or State level IBAs, depending on their significance. There are five Important Bird Areas located along the rail corridor study area in Washington State, including Reed Island/Steigerwald Lake, Columbia Hills, Turnbull National Wildlife Refuge, Umatilla National Wildlife Refuge, and Sprague Lake (Fig. 1).

Affected Environment: Vessel Corridor

The Columbia River Estuary, including the area from the mouth of the Estuary to 60 river miles inland, supports more than 20,000 shorebirds annually and is considered a site of regional importance for shorebirds. It was designated a Western Hemisphere Shorebird Reserve Network (WHSRN) site in 2009. The WHSRN conservation strategy was launched in the mid-1980's to protect key shorebird habitats throughout the Americas, though it does not confer any protective status. Although shorebirds use the intertidal habitats of the Estuary year-round, the Columbia River Estuary site is particularly important during migration.

The vessel corridor study area also includes nine IBAs: Ridgefield National Wildlife Refuge, Vancouver Lake Lowlands, Lewis & Clark and Julie Butler Hansen National Wildlife Refuges, Sauvie Island, Columbia River Estuary, East Sand Island, Smith and Bybee Wetlands Natural Area, Cape Disappointment, and Clatsop Beaches (Fig. 2).

Although the EIS acknowledges that the Federally Threatened/State Endangered Streaked Horned Lark occurs and nests within the lower Columbia River (Table 3.5-3; 3.5-7), the presence of critical habitat within the Estuary has not been acknowledged and potential impacts to the species have not been assessed. According to the Federal Register final rule on critical habitat for the species (FR 2013-23552)^{vi}, nine areas within the Columbia River are designated critical habitat under Unit 3 (Table 1).

Table 1. Designated Critical Habitat for Streaked Horned Lark in the Columbia River

	Subunit name	Acres (Ha)	Currently Occupied
3-E	Rice Island	224 (91)	Y
3-F	Miller Sands	123 (50)	Y
3-G	Pillar Rock/Jim Crow	44 (18)	Y
3-H	Welch Island	43 (18)	N
3-I	Tenasillahe Island	23 (9)	Y
3-J	Whites/Brown	98 (39)	Y
3-K	Wallace Island	13 (5)	Y
3-L	Crims Island	60 (24)	Y
3-M	Sandy Island	37 (15)	Y

Survey results from 2014 indicate that breeding Streaked Horned Larks are also present at Northport and Lower Deer.^{viii}

The EIS fails to acknowledge the presence of Federal and State Endangered Western Snowy Plovers at the Clatsop Spit at the mouth of the River (otherwise known as Ft. Stevens State Park/Columbia River S. Jetty). As Plover population productivity has increased in both Oregon and Washington in recent years, they are increasingly being seen in northern Oregon, including confirmed occurrences at Clatsop Spit (Daniel Elbert, USFWS Snowy Plover Coordinator, pers. Comm. 1.21.2016). Although these sightings have primarily occurred in late summer/early fall, one breeding season occurrence was documented in 2012.

Clatsop Spit was included as designated critical habitat for the species in 2005, but was later removed from critical habitat designation in 2012(77 FR 36727)^x when it came under coverage of the Oregon Department of Parks and Recreation HCP as a Snowy Plover Management Area. State and federal managers view this area as an important part of Snowy Plover Recovery and anticipate that Snowy Plovers will nest there within the next 20 years; “This SPMA has the potential for playing a particularly important role in snowy plover recovery because this area is closest to historically occupied sites to the north in Washington and would provide a protected nesting area between those in southern Oregon and Washington. This SPMA is one of three northern sites considered important because it is so far north relative to where snowy plovers are currently nesting in Oregon.”^x

Terrestrial Wildlife: Impact Assessment

As stated above, the EIS has failed to adequately assess the potential impacts of the proposed projects on resident and migratory bird populations, including ESA listed species. An overview of the specific additional information that we think warrants consideration, or we found lacking in the EIS, is included below.

Changes in Avian Movement Patterns: Artificial Lighting

The EIS considers changes to avian movement patterns due to artificial lighting at the proposed Facility as minor, yet no evidence is presented in support of this conclusion. In the section below, we highlight some additional information that indicates that these impacts should be considered moderate or major.

The proposed facility would include new lights installed on administrative and support buildings, storage tanks, and at the marine terminal. The EIS states, “To minimize the impacts of exterior lighting to wildlife, the Applicant has committed to design directional Facility lighting that would be aimed away from sensitive habitats to the extent practicable. Overall, impacts to wildlife from light and glare at the proposed Facility would be minor.” (p.3.5-27).

Audubon is concerned that the applicants proposed mitigation measure would not be effective at reducing impacts to birds from light and glare. Artificial light interferes with birds’ ability to orient themselves, their internal clock mechanisms, and hormone regulation.^{xi} Disorientation, exhaustion and even death due to attraction to artificial light are considered especially problematic during nocturnal migratory flights. White light, the most common source of artificial light, is considered the most disorienting.^{xii} Both laboratory and field studies suggest that use of green and blue lights may cause less disorientation for nocturnally migrating birds.^{xiii} Research consistently shows that bird responses to all light conditions are strongest on overcast nights.^{xiv}

An increase in artificial light pollution due to the increased number of vessels traveling in and out of the Estuary was not considered in the EIS. The effects of artificial light on seabirds are the subject of increasing

conservation concern. BirdLife International, a global partnership of organizations dedicated to bird conservation, summarizes what is currently known about the sensitivity of nocturnal seabirds, including many of the Procellariiformes (shearwaters, petrels and albatross) to nighttime artificial light.^{xv} In addition to causing disorientation among foraging individuals, particularly during poor weather and the new moon, young burrow-nesting seabirds are vulnerable to disorientation during their first flight to sea. Both coastal and at-sea light pollution can attract seabirds and disorient them to the point of exhaustion and death. Reports of large numbers of Sooty Shearwaters foraging in the Estuary/Plume highlight the vulnerability of local nocturnal foragers to artificial light.

According to Table 3.5-2 in the EIS, five types of priority or vulnerable waterbird aggregations occur within 2 miles of the proposed Facility site: cavity-nesting ducks, mid-summer shorebird concentrations; mixed winter concentrations of geese, ducks, swans and other waterbirds, winter concentrations of dusky Canada geese, and several Great Blue Heron rookeries. According to the wildlife habitat areas depicted in Figure 3.5-1, there are potential sensitive habitats from which birds may come and go in all directions from the Facility. Along the vessel corridor, priority and vulnerable wildlife aggregations (Table 3.5-6), include cavity-nesting ducks, Western Washington breeding concentrations of seabirds, including cormorants, storm-petrels, terns, alcids, and gulls and nonbreeding concentrations of loons, grebes, cormorants, fulmar, shearwaters, storm-petrels, and alcids, significant breeding and nonbreeding concentrations of waterfowl, and nonbreeding concentrations of plovers, sandpipers, and Wilson's phalarope. Other priority species in the vessel corridor include Great Blue Heron, Caspian Tern, Double-crested Cormorant, and Osprey and ESA listed Western Snowy Plovers and Streaked Horned Larks.

If the project is approved, we recommend that the Applicant consult with experts in bird-friendly building and lighting design to ensure that directional Facility lighting is configured appropriately given the location of nearby habitat areas. In addition, we recommend that complementary mitigation measures such as reducing light sources at the Facility and on vessels, changing lights to blue or green colors when possible, and implementing reduced or altered light conditions on overcast nights during high volume migratory periods be implemented.

Changes in Avian Movement Patterns: Vessel Traffic

The EIS states that waterfowl and seabirds using open-water habitats, including a number of priority aggregations, special-status species, and other priority species, are the most likely to be disturbed by vessel traffic but that because they are habituated to existing and routine vessel traffic, impacts would be expected to be minor (p. 3.5-33).

The EIS provides no evidence to support the idea that marine bird habituation to vessel traffic has occurred, or is expected to occur under future increased vessel traffic conditions. An evaluation of the energetic costs to birds due to displacement by marine traffic is similarly lacking. In addition to the 365 vessel trips per year resulting from the proposed facility, the EIS estimates that "if reasonably foreseeable future actions were to be permitted and operated, the total number of vessels that could be added to the Columbia River would be between approximately 2,610 and 3,948 vessel-trips per year...between 4,067 and 5,405 deep-draft vessels per year could travel through the Columbia River. This amount would significantly exceed the recent historical high of 2,086 vessel trips that occurred in 2000." Not only has the EIS failed to accurately assess the potential impacts of increased vessel traffic on marine birds under the current proposal, the cumulative impacts of increased vessel traffic associated with the proposed project in conjunction with other foreseeable actions have not been evaluated.

Little empirical research exists documenting the effects of shipping vessel traffic on marine birds,^{xvi} though somewhat more work has been done to evaluate the effects of recreational boat traffic.^{xvii} We know of one study that assessed the response of scoter, loon and eider species (many of which occur in the Columbia River Estuary study area) to shipping traffic in the German North Sea. **Contrary to the idea that marine birds habituate to vessel traffic, researchers in this study noted strong behavioral responses to vessel traffic and altered distribution patterns in relation to shipping lanes.**^{xviii} Furthermore, species-specific flight reactions to ships varied, suggesting that a one-size-fits-all approach to quantifying the impacts of vessel traffic is not appropriate. Although vessel traffic is not expected to be a significant source of direct mortality to marine birds, the additive effects of lost foraging time and increased energetic output may ultimately contribute to a reduction in fitness for sensitive species, particularly if vessel traffic is concentrated in high quality foraging areas. Marbled Murrelets disturbed by boat traffic in Alaska were observed to have reacted to the disturbance by swallowing the fish being held in their beaks for delivery to their young.^{xix} Juveniles in this study showed a greater sensitivity to boat traffic than adults.

The cumulative effects of the increase in vessel traffic and impacts from wake effects will likely exact significant energetic costs from marine birds as they are continually forced to respond to shipping vessel traffic and wakes. It is feasible that over time, this level of traffic may deter birds from attempting to use the Estuary as foraging, roosting or nesting habitat. For ESA listed species that forage in the open water of the Estuary or Plume such as the Marbled Murrelet, and other priority aggregations of waterfowl and seabirds, **the potential ways that increased vessel traffic will impact marine bird behavior must be quantified and potentially mitigated for, and the location of shipping lanes in relation to known marine bird foraging areas should be made clear so that we can understand the impact of increased shipping on marine bird foraging over time.**

Avian Habitat Loss and Degradation: Wake Effects

According to the EIS (p. 3.5-32), “wildlife within the vessel corridor could be affected by shoreline erosion from incremental increases in wake effects, wake and vessel disturbance, and injury or mortality from vessel strikes. Wildlife that use shoreline habitats, including...shorebirds, could experience some shoreline erosion and periodic disturbance as vessel wakes collide with the shoreline...” The EIS also notes that wake effects would be greatest as vessels pass through the Columbia River Estuary and its associated habitats, including tidal wetlands, shallow water, and tidal flats.

For reasons that are unclear to us, the degree to which changes in the volume and frequency of vessel wakes may alter bird nesting, roosting, and foraging habitat in the Estuary was not evaluated, despite the fact that two ESA listed species occur within the Estuary or at the mouth of the River (Streaked Horned Lark and Western Snowy Plover, respectively). Although these impacts were examined for nearshore fish and shoreline vegetation communities under the Aquatic Species section, marine birds were not considered under this section either. **This strikes us as a major oversight;** just as marine mammals spend the majority of their time at sea, so do marine birds, and the environmental impacts of habitat loss due to wake effects, oil leaks, spills, and general water quality degradation have unique and important implications for their survival.

The EIS notes several distinct ways that wake effects may have significant and unavoidable impacts to shoreline vegetation communities, nearshore fish, and intertidal habitats (Table ES-3), all of which have direct implications for marine bird food supplies. In addition, if vessel wakes erode or inundate well-known shorebird areas, including Clatsop Spit, Young’s Bay, Baker Bay, or islands of the lower Columbia River Estuary such as East Sand Island or Rice Island, important nesting, roosting, and foraging habitat may be lost. Streaked Horned Larks, which forage directly adjacent to the water and within the tide lines are also at

risk from wake effects. Their breeding and foraging areas, including the critical habitat areas listed in Table 1, should be carefully assessed.

Finally, we note that missing from the EIS is an acknowledgment of how climate-change driven projected changes in sea-level, coupled with projected changes in hydrology within the river, can be expected to influence transport conditions and wake effects within the river. This strikes us as a critical component of any assessment of wake effects.

In summary, we recommend that **the vulnerability of known avian roosting, foraging, and nesting locations within the Estuary and along the shoreline should be assessed, along with the potential for loss of habitat or direct mortality of eggs or young. ESA listed species such as the Western Snowy Plover and Streaked Horned Lark and priority aggregations of shorebirds and breeding seabirds should be given particular consideration. Loss of food supplies for fish-eating marine bird species should be assessed as well.**

Avian Habitat Loss and Degradation: Contaminants

The effects of petrochemicals and other industrial chemicals on birds are known to range from indirect impacts through loss of food and habitat to mortality due to direct exposure,^{xx} immunosuppression^{xxi} and adverse reproductive effects.^{xxii} Although there is evidence documenting the pathways through which these chemicals harm or kill birds, assessing the effects of oil pollution on bird populations remains a significant challenge.^{xxiii} This is due in part to the wide-ranging migratory patterns of birds and the difficulty of documenting how mechanisms such as sub-lethal exposure to petrochemicals result in population decline. Nevertheless, significant mortality events have been reported as a result of large spills such as the *Exxon Valdez* oil spill in Prince William Sound, Alaska, where an estimated 250,000 to 375,000 birds were killed,^{xxiv} the 1996 *Sea Empress* spill off the coastal of England,^{xxv} and the 1991 Arabian Gulf oil spill,^{xxvi} and these numbers do not begin to address sub-lethal effects and loss of food and habitat.

The ways that crude oil spills may affect birds were given a cursory overview in section 4.7.6. of the EIS and there was general acknowledgment that impacts to terrestrial wildlife could range from moderate to major, depending on the size of the spill. However, an assessment of potential impacts of a spill on marine birds at the detail provided for aquatic species, including fish, invertebrates, and marine mammals, was lacking. This oversight underscores why the failure to consider marine birds in the Aquatic Species section is so problematic.

Because the EIS failed to evaluate the potential impacts to birds of both acute and long-term exposure to petrochemicals and other industrial chemicals, we have no means by which to assess the risk of significant and unavoidable impacts to marine bird species associated with oil spills resulting from the proposed Project.

Avian Habitat Loss and Degradation: Introduction of Harmful Aquatic Species

The EIS acknowledges the potential risk that introduced aquatic species pose to the Columbia River. Introduced species pose a major threat to birds when they significantly alter habitat conditions or food web dynamics. **Mitigation measures to address the potential ecological and economic costs of new harmful species invasions should be assessed.**

Recreation: Affected Environment - Trails

The EIS documents numerous trail systems located within the proposed Facility, rail corridor, and vessel corridor that support a variety of outdoor recreation activities. We would like to suggest the addition of the Great Washington State Birding Trail (Birding Trail) to this list. The Birding Trail includes seven routes that highlight the best places for bird watching in our state. Routes within the vessel and rail corridor include the Southwest Loop, Sun and Sage Loop, Coulee Corridor Scenic Byway, and the Palouse to Pines Loop. Since the first Birding Trail map was published in 2002, over 10,000 maps or Birding Trail Apps have been purchased and many more have been donated. Seven Birding Trail stops overlap with the rail corridor study area (Fig. 1); three birding trail stop overlaps with the vessel corridor study area (Fig. 2).

Recreation: Affected Environment - Birding/Wildlife Viewing

Although the EIS considers hunting, water-based recreation, boating, and recreational fishing areas associated with the proposed Facility, rail corridor and vessel corridor study areas, birding and other types of wildlife viewing are not considered. A recent study estimated that \$10.4 billion is spent on sightseeing and nature activities in our state on an annual basis, including \$7.4 billion on wildlife watching and photography.^{xxvii} Indeed, wildlife viewing and photography generates significantly more total expenditures than any other recreational activity in our state, including all types of boating (\$4.5 billion).

Recreation: Impact Assessment – Birding and Wildlife Tourism

Ten Washington State Birding Trail stops and thirteen Important Bird Areas overlap with the rail and vessel study area (Fig. 1; Fig.2). Any impacts to these areas or the other parks and public lands acknowledged in the EIS, due to fire, oil spill or explosion, will result in reduced birding and wildlife tourism and associated expenditures in the region. **Potential impacts to birding and wildlife tourism should be quantified and mitigated for.**

Additive/Cumulative Effects

The EIS has not assessed how the combined effects of potential changes to marine bird habitat, food supplies, chronic and acute exposure to increased levels of petrochemicals and other industrial chemicals, changes in movement patterns due to boat traffic and increased artificial lighting will impact local and migrating marine bird populations. We suggest that the applicants address this shortcoming using a community modeling approach. Ecological community modeling was used in a recent environmental assessment for the proposed Pacific NorthWest LNG project in Port Edward, British Columbia, which supports similar coastal vegetation communities and wildlife species.^{xxviii} Local baseline ecological conditions were characterized using vegetation assessments and terrestrial and marine wildlife field data, allowing researchers to quantify the potential effects of changes in habitat availability on wildlife species with shared habitat requirements and ecological traits. Habitat suitability for listed species, potential changes to wildlife habitat, changes in mortality risk and potential alteration of movement patterns were evaluated under this framework.

A similar modeling approach is appropriate for the proposed Project and should include wildlife species that are known or are reasonably expected to occur in the project study areas and vegetation communities of known ecological significance.

Recommended for Further Consideration and/or Analysis

- Impacts to WHSRN site;
- Impacts to Important Bird Areas;
- Impacts to ESA listed Streaked Horned Lark, Western Snowy Plover (Vessel Corridor);
- Impacts to marine birds due to increased vessel traffic;
- The location of shipping lanes in relation to known marine bird foraging areas;
- The location of known avian roosting, foraging, and nesting locations within the Estuary and the potential for loss of this habitat or direct mortality of eggs or young due to wake effects;
- Impacts to fish-eating marine bird species as a result of impacts to nearshore fish;
- Impacts to birds resulting from both acute and long-term exposure to petrochemicals and other industrial chemicals;
- Analysis of the potential ecological and economic costs of new harmful species invasions;
- Impacts to birding and wildlife tourism;
- Additive effects of the proposed Project on birds due to the combined effects of Project impacts.

Proposed Mitigation Measures

Very few mitigation measures designed to reduce impacts to birds or other wildlife have been proposed for the proposed project.

As stated previously, it is difficult to assess the overall impacts of the proposed Project when the complete set of environmental impacts associated with the Project have not been adequately assessed. Potential mitigation measures that should be considered under further evaluation of impacts include:

Loss of Habitat

- Wetland habitat compensation, including restoration and compensatory activities to recover the loss of wetland function to terrestrial wildlife and marine fish and wildlife; and
- Fish habitat offsetting, including compensatory activities to recover the net loss of marine fish habitat used for foraging by marine birds and mammals.

Alteration of movement

- Eliminate unnecessary skyward and seaward light projection where feasible from ships and Facility;
- Remove unnecessary illumination, reduce light intensity, and change lighting color to blue or green where possible on ships and Facility;
- Implement reduced lighting operations where feasible during high volume migratory periods; and
- Assess spatial distribution of marine bird and mammals in relation to shipping lanes.

Exposure to petrochemicals and other industrial chemicals

- Implement regular monitoring of contaminant exposure in marine indicator species;
- Provide oil spill bird rescue and response training and coordination; and
- Establish a funding mechanism to provide for oil spill cleanup expenditures on land and water.

Ballast water/non-native species

- Establish funding mechanism to ensure early response to invasive species establishment.

Additive and cumulative effects

- Conduct ecological community modeling to assess the additive effects of project impacts and the cumulative impacts of these and other changes to Port operations.

The potential ways and pathways through which the proposed Project could affect birds and other wildlife are complex, including direct harm through contact with contaminants or vessel traffic; indirect effects

through degradation of food and habitat; and the additive effects of long-term exposure to increased vessel traffic, chronic, low-level contaminant exposure, changes to mortality risk, and alteration of movement patterns.

In summary, Audubon Washington and our 25 independent chapters strongly oppose the proposed Tesoro Savage Oil Terminal facility at the Port of Vancouver and believe that significant and adverse effects to birds and other wildlife are likely, and have not yet been fully evaluated.

Sincerely,



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Anna Swartz, President
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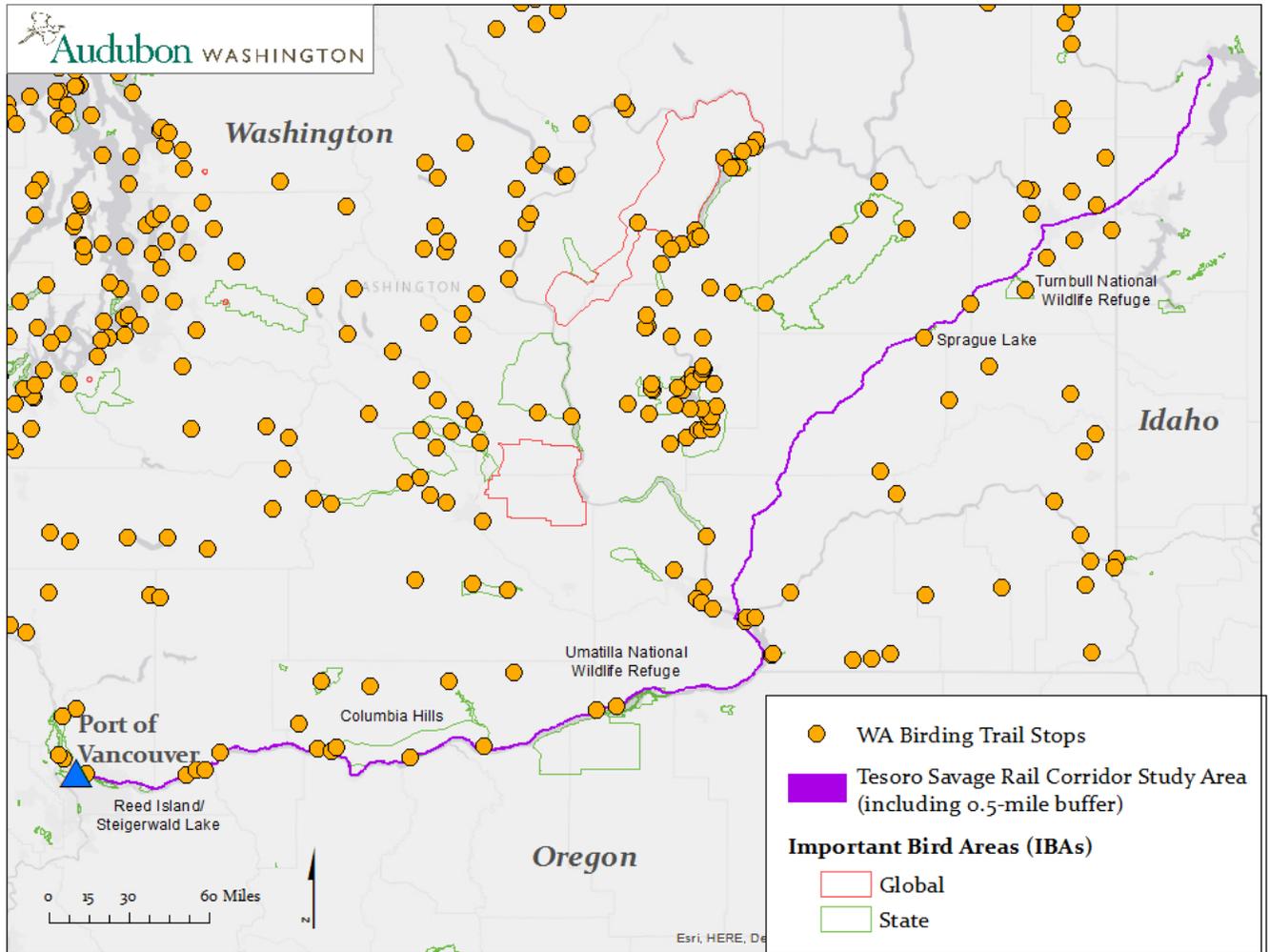


Figure 1. Intersection of Tesoro Savage Rail Corridor Study Area with five Important Bird Areas and seven Washington Birding Trail Stops.

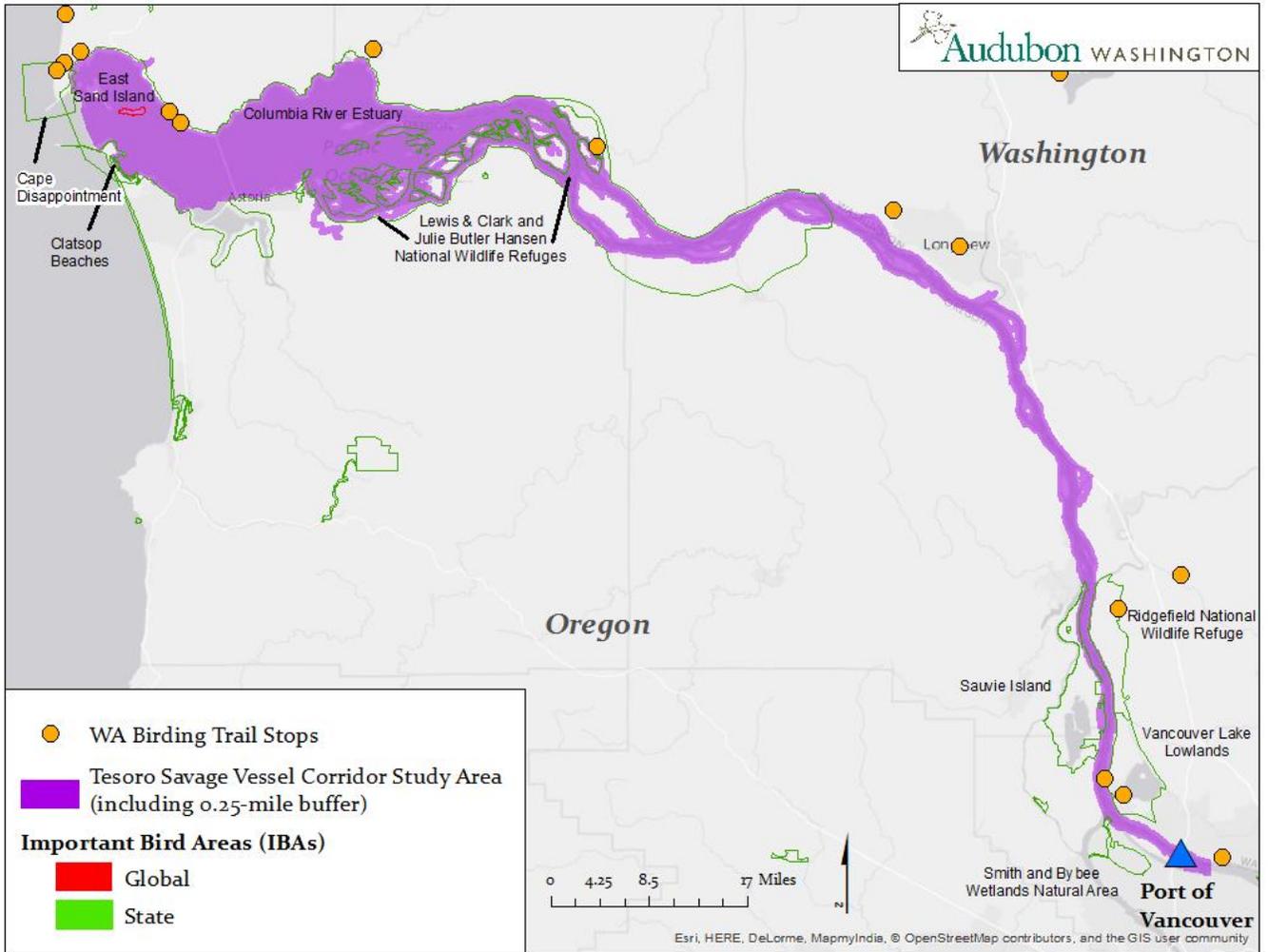


Figure 2. Intersection of Tesoro Savage Vessel Corridor Study Area with nine Important Bird Areas and three Washington Birding Trail Stops.

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- ⁱ Available at <http://www.efsec.wa.gov/Tesoro%20Savage/SEPA%20-%20DEIS/DEIS%20PAGE.shtml>. Accessed 1.5.16
- ⁱⁱ Available at <http://www.whsrn.org/site-profile/columbia-river-estuary>. Accessed 1.18.2016
- ⁱⁱⁱ Available at <http://audubonportland.org/issues/habitat/sand-island>. Accessed 1.18.2016
- ^{iv} Available at <http://netapp.audubon.org/iba/state/US-WA>. Accessed 1.20.2016
- ^v Available at <http://www.estuarypartnership.org/learn/river-species#birds>. Accessed 1.13.2016
- ^{vi} Excerpted from Table ES-2, Summary of Environmental Impacts, Mitigation, and Significant Unavoidable Impacts of the Proposed Project. Tesoro Savage Vancouver Energy Project Draft Environmental Impact Statement.
- ^{vii} Available at <http://www.regulations.gov/#!documentDetail;D=FWS-R1-ES-2013-0009-0020>. Accessed 1.20.2016
- ^{viii} Anderson, H. and G. Slater. 2015. Columbia River Streaked Horned Lark Surveys and Monitoring. Final Report 2014. Center for Natural Lands Management.
- ^{ix} Available at: <https://federalregister.gov/a/2012-13886>. Accessed 1.21.2016
- ^x ICF International. 2010. Habitat Conservation Plan for the Western Snowy Plover. August. (ICF 06537.06.) Portland, OR. Prepared for Oregon Parks and Recreation Department.
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