

From: [BrownScott, Jennifer](#)
To: [Ogura, Christine](#)
Subject: Re: Leases since CD signing
Date: Thursday, September 16, 2021 8:27:48 AM
Attachments: [Outlook-fs2qvoxb.png](#)
[DNR Tidelands Lease to Jamestown Tribe 2007.pdf](#)
[USFWS 1997 DNWR PublicUseMgt Plan.pdf](#)
[6.2013 Compatibility Determinations.pdf](#)

Good questions. Context would be helpful.

The Refuge completed a Public Use Management Plan in 1997. That plan and associated boating CDs (which were actually signed in 1994 - sorry for the incorrect date in the previous email) included the tideland closure from October 1 - May 14 (Alternative D). The CD and plan specifically analyzed public uses. Economic uses were not addressed.

The 2013 CCP and associated public use CDs continued the closure. Economic uses were not analyzed.

Lease #20-A13012 was executed by DNR on October 24, 2007. Within the footprint of the ~50 acre lease area (same as the current lease), Jamestown S'Klallam Tribe was allowed "60 aqua-purses. The size, location, and culture methods used to grow oysters will be discussed and approved by DNR and USFW prior to establishment. The Tribe will strive to recognize and plan work in the Bay from May 15 through July 30 when cultivation activities will be least disruptive to use of the Bay by Brant and other waterfowl. The Tribe will confer with USFW before conducting activities on the lease outside this window. "

The prior lease was executed in 1990 (before the public use CDs were in place).

Hope this email provides the context needed. Please let me know if any additional clarity is needed.

-jennifer

Jennifer Brown-Scott
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Sequim, WA 98382
(360) 457-8451

[~~Dungeness NWR](#)~[Protection Island NWR](#)~[San Juan Islands NWR](#)~[Copalis NWR](#)~[Flattery Rocks NWR](#)~[Quillayute Needles NWR](#)~~

From: Ogura, Christine <christine_ogura@fws.gov>
Sent: Thursday, September 16, 2021 7:29 AM
To: BrownScott, Jennifer <jennifer_brownScott@fws.gov>
Subject: Re: Leases since CD signing

Thanks Jennifer. This is helpful. What is the lease for and what is the CD for? And just reconfirming that the lease was executed with closure requirements in it (hence the exhibit B stipulation).

Thanks and please take care,
Christine

Christine Ogura
Acting Regional Chief, [National Wildlife Refuge System](#)
[U.S. Fish and Wildlife Service](#)
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[A Beginner's Guide to the National Wildlife Refuge System](#)
[Why Visit National Wildlife Refuges?](#)

From: BrownScott, Jennifer <jennifer_brownScott@fws.gov>
Sent: Wednesday, September 15, 2021 11:21 AM
To: Ogura, Christine <christine_ogura@fws.gov>
Subject: Leases since CD signing

DNR just confirmed that the 2007 lease is the only one executed since the CDs were first signed (1997). Exhibit B of the lease requires "*The Tribe will confer with USFW before conducting activities on the lease outside this [May 15 – July 30] window*". The lease was renewed in 2015.

The previous lease was executed in 1990.

Just wanted to make sure you have accurate information.

Thanks for taking the time to understand this super complicated issue. I know you have a lot on your plate. Your assistance is greatly appreciated.

-jennifer

Jennifer Brown-Scott
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Washington Maritime National Wildlife Refuge Complex
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NATIONAL 
WILDLIFE
REFUGE SYSTEM

AQUATIC LANDS
Aquatic Lease Renewal

Application and Lease No. 20-A13012

Region: Olympic

To lease the beds of navigable water of Dungeness Harbor in Clallam County.

Date Filed: January 12, 2005

Description: For the purpose of continued use of commercial oyster cultivation and harvesting.

In front of portion of Government Lots 1 & 2 located within Section 23, Township 31 North, Range 4 West, Willamette Meridian.

Name: Jamestown S'Klallam Tribe

Address: 1033 Old Blyn Highway

City: Sequim

State: Wa.

Zip: 98382

Plate No. TS05-062 (Note 10)

No Encumbrances of Record

Special Notations

This renewal excludes parcel 2 of the original lease (Government Lots 4 & 5 in Section 24) per request of applicant.

Title Examiner: Erik Nedergard

Application
Register:

Erik Nedergard
1/12/2005

Plate:

Instrument

Register:

Erik Nedergard
1/12/2005

Plate:



STATE OF WASHINGTON
DEPARTMENT OF NATURAL RESOURCES
DOUG SUTHERLAND, Commissioner of Public Lands

AQUATIC LANDS OYSTER AND GEODUCK AQUACULTURE LEASE

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**STATE OF WASHINGTON
DEPARTMENT OF NATURAL RESOURCES
DOUG SUTHERLAND, Commissioner of Public Lands**

AQUATIC LANDS OYSTER AND GEODUCK AQUACULTURE LEASE

AQUATIC LANDS OYSTER AND GEODUCK AQUACULTURE LEASE NO. 20-A13012

THIS LEASE is made by and between the STATE OF WASHINGTON, acting through the Department of Natural Resources ("State"), and JAMESTOWN S'KLALLAM TRIBE, a government entity ("Tenant").

BACKGROUND

Tenant desires to lease the aquatic lands commonly known as Dungeness Bay, which are tidelands located in Clallam County, Washington, from State, and State desires to lease the property to Tenant pursuant to the terms and conditions of this Lease. Tenant and State acknowledge and recognize that the property to be leased hereunder is the subject of a Consent Decree and Settlement Agreement ("Settlement Agreement") in *U.S. v. Washington*, Case No. C70-9213, Subproceeding No. 89-3 (Shellfish), United States District Court, Western District of Washington at Seattle. Under the terms of the Settlement Agreement, the property leased hereunder is to be free from tribal shellfish harvesting while this Lease is in effect. However, the Settlement Agreement also provides that if the signatory tribes do not receive the monetary compensation they seek, the Settlement Agreement will be null and void. The parties acknowledge that, in the event the Settlement Agreement is nullified, the property leased hereunder will become subject to the Stipulation and Order Amending Shellfish Implementation Plan ("Revised Shellfish Implementation Plan") and any subsequent amendments in the above-referenced case. Pursuant to Section 6 of that Implementation Plan, the leased area may then be evaluated to determine if there is a treaty right to harvest from the leased area, and a treaty harvest conducted pursuant to Section 6 of the Implementation Plan may result.

The property Tenant desires to lease is the subject of a tentative Consent Decree and Settlement Agreement ("Settlement Agreement") in *U.S. v. Washington*, Case No. C70-9213,

Subproceeding No. 89-3 (Shellfish), United States District Court, Western District of Washington at Seattle. Under the Settlement Agreement, the signatory tribes agree to not conduct tribal shellfish harvest on the property while this Lease is in effect. However, the Settlement Agreement provides that if the signatory tribes do not receive the monetary compensation they seek through the Settlement Agreement, the Settlement Agreement will be null and void. If the Settlement Agreement is rendered null and void, the property will become subject to the Stipulation and Order Amending Shellfish Implementation Plan as revised and/or amended (“Implementation Plan”) and any subsequent amendments in the above-referenced case. Pursuant to Section 6 of the Implementation Plan, the leased area may then be evaluated to determine if there is a treaty right to harvest from the leased area, and a treaty harvest pursuant to Section 6 of the Implementation Plan may result.

THEREFORE, the parties agree as follows:

SECTION 1 PROPERTY

1.1 Property Defined.

- (a) State leases to Tenant and Tenant leases from State the real property described in Exhibit A together with all the rights of State, if any, to improvements on and easements benefiting the Property, but subject to the exceptions and restrictions set forth in this Lease (collectively the “Property”).
- (b) This Lease is subject to all valid interests of third parties noted in the records of Clallam County, or on file in the office of the Commissioner of Public Lands, Olympia, Washington; rights of the public under the Public Trust Doctrine or federal navigation servitude; and treaty rights of Indian Tribes.
- (c) Not included in this Lease are any right to harvest, collect or damage any natural resource, including aquatic life or living plants, any water rights, or any mineral rights, including any right to excavate or withdraw sand, gravel, or other valuable materials.
- (d) State reserves the right to grant easements and other land uses on the Property to others when the easement or other land uses will not unreasonably interfere with Tenant’s Permitted Use.

1.2 Survey and Property Descriptions.

- (a) Tenant prepared Exhibit A, which describes the Property. Tenant warrants that Exhibit A is a true and accurate description of the Lease boundaries and the improvements to be constructed or already existing in the Lease area.
- (b) Tenant shall not rely on any written legal descriptions, surveys, plats, or diagrams (“property description”) provided by State. Tenant shall not rely on State’s approval or acceptance of Exhibit A or any other Tenant-provided property description as affirmation or agreement that Exhibit A or other property description is true and accurate. Tenant’s obligation to provide a true and accurate description of the Property boundaries shall be a material term of this

Lease. Tenant shall also provide a copy of the property description to the Director of the Department of Fish and Wildlife.

- (c) State agrees to accept a preliminary Exhibit A upon the Commencement Date of this Lease. Tenant shall submit a final Exhibit A for State's approval within Three Hundred Sixty Five (365) days of the Commencement Date. Upon State's written approval, the final Exhibit A shall supersede the preliminary Exhibit A. Until superseded, the preliminary Exhibit A shall have full legal effect.

1.3 Inspection. State makes no representation regarding the condition of the Property, improvements located on the Property, the suitability of the Property for Tenant's Permitted Use, compliance with governmental laws and regulations, availability of utility rights, access to the Property, or the existence of hazardous substances on the Property. Tenant has inspected the Property and accepts it "AS IS."

SECTION 2 USE

2.1 Permitted Use. Tenant shall use the Property for Oyster and Geoduck Cultivation with Limited Commercial Harvest (the "Permitted Use"), and for no other purpose. The Permitted Use is described or shown in greater detail in Exhibit B, the terms and conditions of which are incorporated by reference and made a part of this Lease. This is a water-dependent use.

- (a) As indicated above, if the tribes signing the Settlement Agreement identified above do not receive the monetary compensation they seek, the Settlement Agreement will become null and void, and the Property may become subject to tribal treaty shellfish harvesting under the Implementation Plan. In the event the Settlement Agreement becomes null and void, State will provide Tenant with notice that the Property is thereafter subject to tribal assertions of treaty shellfishing rights on the Property.
- (b) The parties to this Lease acknowledge that if the contingency identified in subsection (a) occurs, the Implementation Plan will then govern the tribes' exercise of their treaty shellfishing rights on the Property. The Implementation Plan specifies the manner in which adjudicated tribal shellfish harvesting treaty rights shall be undertaken. Among other things, the plan allows a treaty tribe to assert that lands leased by the State contain beds of shellfish subject to tribal harvest. The plan provides the notification requirements that must be met for tribes asserting a treaty right and the effect of a tribe's failure to assert a treaty right prior to the issuance of a lease. It further specifies that a treaty right to harvest may be asserted after the initial term of this Lease or after ten years, whichever is shorter.
- (c) Tenant agrees to hold State harmless from any damage to Tenant arising from any assertion of a tribal treaty right to harvest shellfish from within the Property and agrees that its sole recourse in the event that the tribal harvesting materially interferes with Tenant's economic use of the Property remedy shall be the ability to terminate the Lease. The State shall not be obligated to defend against any assertion of a tribal treaty right to harvest from the Property.

2.2 Restrictions on Use.

- (a) Tenant shall not cause or permit any damage to natural resources on the Property.
- (b) Tenant shall also not cause or permit any filling activity to occur on the Property or adjacent state-owned aquatic land. This prohibition includes any deposit of rock, earth, ballast, wood waste, refuse, garbage, waste matter (including chemical, biological, or toxic wastes), hydrocarbons, any other pollutants, or other matter in or on the Property, except as approved in writing by State.
- (c) Tenant shall neither commit nor allow waste to be committed to or on the Property or adjacent state-owned aquatic land.
- (d) Failure to Comply with Restrictions on Use.
 - (1) If State gains actual knowledge of Tenant's failure to comply with any of the restrictions set out in this Subsection 2.2, State may notify Tenant and provide Tenant a reasonable time to take all steps necessary to remedy the failure and restore the Property to the condition before the failure occurred.
 - (2) If Tenant fails to restore the Property in a timely manner, then State may take any steps reasonably necessary to restore the Property. Upon demand by State, Tenant shall pay all costs of any remedial action, including but not limited to the costs of removing and disposing of any material deposited improperly on the Property.
- (e) State's failure to notify Tenant of Tenant's failure to comply with all or any of the restrictions set out in this Subsection 2.2 does not constitute a waiver of any remedies available to State.
- (f) This section shall not in any way limit Tenant's liability under Section 8, below.

2.3 Conformance with Laws. Tenant shall, at all times, keep current and comply with all conditions and terms of any permits, licenses, certificates, regulations, ordinances, statutes, and other government rules and regulations regarding its use or occupancy of the Property.

2.4 Liens and Encumbrances. Tenant shall keep the Property free and clear of any liens and encumbrances arising out of or relating to its use or occupancy of the Property.

SECTION 3 TERM

3.1 Term Defined. The term of this Lease is Six (6) years (the "Term"), beginning on the 1st day of August, 2007 (the "Commencement Date"), and ending on the 31st day of July, 2013 (the "Termination Date"), unless terminated sooner under the terms of this Lease.

3.2 Renewal of the Lease. Tenant shall have the option to renew this Lease for One (1) additional term of Four (4) years. The initial Term of this Lease, and all renewal terms, shall not exceed Ten (10) years in the aggregate. Tenant shall exercise this option by providing written notice of its election to renew at least ninety (90) days prior to the Termination Date of the initial Term or any renewal term of this Lease. Tenant shall not be entitled to renew if it is in default under the terms of this Lease at the time the option to renew is exercised. The terms and conditions of any renewal term shall be the same as set forth in this Lease, except that rent shall

be recalculated, the required amounts of financial security may be revised, and provisions dealing with hazardous waste, impacts to natural resources or Plan of Operations/Best Management Practices may be changed at the time of the renewal. Renewal of the Lease by State does not constitute a waiver of any action for breaches under a previous lease or a succession of previous leases.

3.3 Preference Right to Re-lease At the expiration of this Lease, Tenant, or an approved assignee, shall have a preference right to re-lease all or part of the Property if the State deems it to be in the best interest of the State to re-lease the Property. Tenant shall not have a preference right to re-lease if it is in default under the terms of this Lease at the time the re-lease application is pending with the State. To exercise its preference-right to re-lease, Tenant should submit its application to re-lease at least ninety (90) days prior to the Termination Date of this Lease. If the State determines a re-lease is appropriate, the State shall fix the terms and conditions upon which the re-lease shall be granted and offer the re-lease to the Tenant. The Tenant shall have ninety (90) days to accept the State's offer of re-lease. If the Tenant rejects the State's offer, the State shall be free to lease the Property to others, subject to the conditions in Section 7.4.

The parties acknowledge that if Tenant elects to terminate this Lease pursuant to one of the provisions of the Lease, or if Tenant chooses not to renew or re-lease upon termination or expiration of this Lease, the Settlement Agreement provides certain tribes (those whose usual and accustomed fishing grounds overlap the Property) with an opportunity to lease the Property. Tenant agrees to execute any documents that may be required to waive any preferential leasing rights, or to issue any consent, that may be necessary to facilitate the issuance of such lease pursuant to the provisions of RCW Title 79.

3.4 End of Term.

- (a) Upon the expiration or termination of this Lease, Tenant shall surrender the Property to State in the same or better condition as on the Commencement Date, reasonable wear and tear excepted.
- (b) Definition of Reasonable Wear and Tear.
 - (1) Reasonable wear and tear is defined as deterioration resulting from the intended use of the leasehold that has occurred without neglect, negligence, carelessness, accident, or abuse of the premises by Tenant or any other person on the premises with the permission of Tenant.
 - (2) Reasonable wear and tear shall not include any deposit of rock, earth, ballast, wood waste, refuse, garbage, waste matter (including chemical, biological or toxic wastes), hydrocarbons, any other pollutants, or other matter in or on the Property that State has not expressly approved of in writing regardless of whether the deposit is incidental to or the byproduct of the intended use of the leasehold.
- (c) If Property is in worse condition, excepting for reasonable wear and tear, on the surrender date than on the Commencement Date, the following provisions apply.
 - (1) State shall provide Tenant a reasonable time to take all steps necessary to remedy the condition of the Property. State, at its option, may require

- Tenant to enter into a right-of-entry or other use authorization prior to the Tenant entering the Property to remedy any breach of this Subsection 3.3.
- (2) If Tenant fails to remedy the condition of the Property in a timely manner, then State may take any steps reasonably necessary to remedy Tenant's failure. Upon demand by State, Tenant shall pay all costs of such remedial action, including but not limited to the costs of removing and disposing of any material deposited improperly on the Property, lost rent resulting from the condition of the Property prior to and during remedial action, and any administrative costs associated with the remedial action.

3.5 Holdover.

- (a) If Tenant remains in possession of the Property after the Termination Date, the occupancy shall not be an extension or renewal of the Term. The occupancy shall be a month-to-month tenancy, on terms identical to the terms of this Lease, which may be terminated by either party on thirty (30) days' written notice.
 - (1) The monthly rent during the holdover shall be the same rent that would be due if the Lease were still in effect and all adjustments in rent were made in accordance with its terms.
 - (2) Payment of more than the monthly rent shall not be construed to create a periodic tenancy longer than month-to-month. If Tenant pays more than the monthly rent and State provides notice to vacate the property, State shall refund the amount of excess payment remaining after the Tenant ceases occupation of the Property.
- (b) If State provides a notice to vacate the Property in anticipation of the termination of this Lease or at any time after the Termination Date and Tenant fails to do so within the time set forth in the notice, then Tenant shall be a trespasser and shall owe the State all amounts due under RCW 79.02.300 or other applicable law.

SECTION 4 RENT

4.1 Annual Rent. Until adjusted as set forth below, Tenant shall pay to State an annual rent in the amount of Five Hundred Dollars and 00/100 (\$500.00). The annual rent, as it currently exists or as adjusted or modified (the "Annual Rent"), shall be due and payable in full on or before the Commencement Date and on or before the same date of each year thereafter. In addition to the annual minimum base rent, Tenant shall also pay a production based rent as detailed in Section 4.2, below.

4.2 Rent Adjustment

- (a) **Oyster Inflation Adjustment.** State shall adjust the rent annually according to the change in the Producer Price Index ("PPI") for Oysters (code 2092-224) as published by US Department of Commerce, Bureau of Labor Statistics. The adjustment is calculated by using the annual average adjustment averaged over the preceding five years. If publication of the PPI is discontinued, a reliable

governmental or other non-partisan publication evaluating the information used in determining the PPI shall be used.

(b) **Geoduck Rent Adjustment.**

- (1) **Production Based Rent.** When the Tenant commences harvest of cultured geoduck, Tenant shall pay to State, in addition to the annual minimum base rent, a quarterly Production Based Rent. The Production Based Rent shall be computed as follows: the total quarterly volume of geoduck harvested in pounds multiplied by the current average wholesale price per pound, multiplied by the royalty rate of Ten (10) percent.
- (2) **Quarterly Reports and payment of Production Based Rent.** At the same time Tenant submits its quarterly aquaculture production report to the Washington State Department of Fish and Wildlife, Tenant shall submit a copy of the same report to State along with the Production Based Rent as calculated in Section 4.2(a). The quarterly aquaculture production report must include the poundage or other unit of measure and price received for geoduck harvested and sold. If Tenant makes no sales in any quarter, Tenant shall so report.

4.3 Payment Place. Payment is to be made to Financial Management Division, 1111 Washington St SE, PO Box 47041, Olympia, WA 98504-7041.

4.4 Audit. State shall be allowed to inspect and audit the books, contracts, and accounts of Tenant to determine whether or not State is being paid the full amount owed to it under this Lease. If the audit discloses that Tenant has underpaid the amount due to State by two percent (2%) or more, Tenant shall pay to State, on demand, the cost of the audit. Any deficiency shall be paid to State within thirty (30) days of delivery of the audit to Tenant.

SECTION 5 OTHER EXPENSES

During the Term, Tenant shall pay the following additional expenses:

5.1 Utilities. Tenant shall pay all fees charged for utilities in connection with the use and occupancy of the Property, including but not limited to electricity, water, gas, and telephone service.

5.2 Taxes and Assessments. Tenant shall pay all taxes (including leasehold excise taxes), assessments, and other governmental charges, of any kind whatsoever, applicable or attributable to the Property, Tenant's leasehold interest, the improvements, or Tenant's use and enjoyment of the Property.

5.3 Right to Contest. Tenant may, in good faith, contest any tax or assessment at its sole cost and expense. At the request of State, Tenant shall furnish reasonable protection in the form of a bond or other security, satisfactory to State, against any loss or liability by reason of such contest.

5.4 Proof of Payment. Tenant shall, if required by State, furnish to State receipts or other appropriate evidence establishing the payment of any amounts required to be paid under the terms of this Lease.

5.5 Failure to Pay. If Tenant fails to pay any of the amounts due under this Lease, State may pay the amount due, and recover its cost in accordance with the provisions of Section 6.

SECTION 6 LATE PAYMENTS AND OTHER CHARGES

6.1 Late Charge. If any rental payment is not received by State within ten (10) days of the date due, Tenant shall pay to State a late charge equal to four percent (4%) of the amount of the payment or Fifty Dollars (\$50), whichever is greater, to defray the overhead expenses of State as a result of the delay.

6.2 Interest Penalty for Past-Due Rent and Other Sums Owed.

- (a) If State does not receive rent within thirty (30) days of the date due, then Tenant shall pay interest on the amount outstanding at the rate of one percent (1%) per month until paid, in addition to paying the late charges determined under Subsection 6.1, above.
- (b) If State pays or advances any amounts for or on behalf of Tenant, including but not limited to leasehold taxes, taxes, assessments, insurance premiums, costs of removal and disposal of unauthorized materials pursuant to Subsection 2.2 above, costs of removal and disposal of improvements pursuant to Section 7 below, or other amounts not paid when due, Tenant shall reimburse State for the amount paid or advanced and shall pay interest on that amount at the rate of one percent (1%) per month from the date State notifies Tenant of the payment or advance.

6.3 No Accord and Satisfaction. If Tenant pays, or State otherwise receives, an amount less than the full amount then due, State may apply such payment as it elects. In the absence of an election, the payment or receipt shall be applied first to accrued taxes which State has advanced or may be obligated to pay, then to other amounts advanced by State, then to late charges and accrued interest, and then to the earliest rent due. State may accept any payment in any amount without prejudice to State's right to recover the balance of the rent or pursue any other right or remedy. No endorsement or statement on any check, any payment, or any letter accompanying any check or payment shall constitute or be construed as accord and satisfaction.

6.4 No Counterclaim, Setoff, or Abatement of Rent. Except as expressly set forth elsewhere in this Lease, rent and all other sums payable by Tenant pursuant to this Lease shall be paid without the requirement that State provide prior notice or demand, and shall not be subject to any counterclaim, setoff, deduction, defense or abatement.

6.5 Referral to Collection Agency and Collection Agency Fees. If State does not receive payment within thirty (30) days of the due date, State has discretion to refer the unpaid amount to a collection agency as provided by RCW 19.16.500 or other applicable law. Upon referral,

Tenant shall pay collection agency fees in addition to the unpaid amount. Under RCW 19.16.500, a collection agency fee of up to fifty percent (50%) of the first One Hundred Thousand Dollars (\$100,000) of unpaid debt and up to thirty-five percent (35%) of unpaid debt over One Hundred Thousand Dollars (\$100,000) is reasonable.

SECTION 7 IMPROVEMENTS

7.1 Improvements Defined.

- (a) **Improvements.** Consistent with RCW 79.105 through 79.145, Improvements are additions within, upon, or attached to the land. This includes, but is not limited to, fill, structures, bulkheads, docks, pilings, and other fixtures.
- (b) **Personal Property.** Personal property is defined as items that can be removed from the Property without (1) injury to the Property or Improvements or (2) diminishing the value or utility of the Property or Improvements.
- (c) **State-Owned Improvements.** State-Owned Improvements are Improvements made or owned by State. State-Owned Improvements includes any construction, alteration, or addition to State-Owned Improvements made by Tenant.
- (d) **Tenant-Owned Improvements.** Tenant-Owned Improvements are Improvements made by Tenant with State's consent or acquired by Tenant from former tenant in accordance with RCW 79.125.300 or 79.130.040.
- (e) **Unauthorized Improvements.** Unauthorized Improvements are Improvements made on the Property without State's prior consent or Improvements made by Tenant that are not in conformance with plans submitted to and approved by the State.

7.2 Existing Improvements. On the Commencement Date, the following Improvements are located on the Property: Boundary Markers, Cultivation Equipment, and Scientific Measurement Instruments. The Improvements are Tenant-Owned Improvements.

7.3 Construction, Alteration, Replacement, and Modification.

- (a) Tenant shall not place, construct, remove, or demolish Improvements without State's prior written consent. State may deny consent if State determines that denial is in the best interests of the State. State's consent is not required for routine maintenance or repair to Improvements made by the Tenant pursuant to its obligation to maintain the Property in good order and repair. Routine maintenance or repair does not include alteration, replacement, removal, or major repair of any Improvements on the Property. Subsection 7.4 shall govern removal of Improvements at end of Lease.
- (b) Prior to any placement, construction, alteration, replacement, removal, or major repair of any Improvements (whether State-Owned or Tenant-Owned), Tenant shall submit to State plans and specifications that describe the proposed activity. If State does not notify Tenant of its grant or denial of consent within sixty (60) days of submittal, State waives the requirement for State's written consent with regards to Tenant's proposed plans or activity.

- (c) Construction shall not commence until Tenant has obtained a performance and payment bond in an amount equal to One Hundred Twenty Five percent (125%) of the estimated cost of construction. The performance and payment bond shall be maintained until the costs of construction, including all laborers and material persons, have been paid in full.
- (d) Upon completion of construction, Tenant shall promptly provide State with as-built plans and specifications.
- (e) State shall not charge rent for authorized Improvements installed by Tenant during this Lease, but State may charge rent for such Improvements when and if the Tenant or successor obtains a subsequent use authorization for the Property and State has waived the requirement for Improvements to be removed as provided in Subsection 7.4.

7.4 Disposition and Removal of Tenant-Owned Improvements at End of Lease.

- (a) Disposition
 - (1) Tenant shall remove Tenant-Owned Improvements upon the expiration, termination, or cancellation of the Lease unless State waives the requirement for removal.
 - (2) Tenant-Owned Improvements remaining on the Property on the expiration, termination or cancellation date shall become State-Owned Improvements without payment by State, unless State elects otherwise. State may refuse or waive ownership.
 - (3) If Tenant-Owned Improvements remain on the Property after the expiration, termination, or cancellation date without State's actual or deemed consent, Tenant-Owned Improvements, State may remove all Improvements and Tenant shall pay the costs of removal and disposal.
- (b) Conditions Under Which State May Waive Removal of Tenant-Owned Improvements.
 - (1) State has option to waive removal of any or all Tenant-Owned Improvements whenever State determines that it is in the best interests of the State and regardless of whether Tenant re-leases the Property.
 - (2) If Tenant re-leases the Property, State may waive requirement remove Tenant-Owned Improvements. State also may consent to Tenant's continued ownership of Tenant-Owned Improvements.
 - (3) If Tenant does not re-lease the Property, State has option to waive requirement to remove Tenant-Owned Improvements upon consideration of a timely request from Tenant, as follows:
 - (i) Tenant must notify State at least one (1) year before the Termination Date of its request to leave Tenant-Owned Improvements.
 - (ii) State, within ninety (90) days, shall notify Tenant whether State consents to any or all Tenant-Owned Improvements remaining. State has no obligation to grant consent.

- (iii) State's failure to respond to Tenant's request to leave Improvements within ninety (90) days shall be deemed a denial of the request.
- (c) Removal.
 - (1) Tenant shall not remove or demolish Tenant-Owned Improvements without State's prior written consent.
 - (2) At least ninety (90) days prior to planned removal and/or demolition, Tenant shall submit to State plans and specifications that describe the proposed activity. If regulatory permits are required for removal and/or demolition of Improvements, Tenant shall submit plans and specifications at least sixty (60) days before submitting permit applications to the regulatory agencies unless Tenant and State otherwise agree to coordinate permit applications.
 - (3) Within sixty (60) days of receiving Tenant's plans and specifications, State shall notify Tenant that State grants consent for removal and/or demolition as proposed. State may impose additional conditions reasonably intended to protect and preserve the Property. State also may waive removal of any or all Improvements.
 - (4) State's failure to respond to Tenant's submittal within sixty (60) days shall be a waiver of the requirement for State's consent and Tenant may commence with the proposed activity.
- (d) Tenant's Obligations if State Waives Removal.
 - (1) Tenant shall not remove Improvements if State waives the requirement for removal of any or all Tenant-Owned Improvements.
 - (2) Tenant shall maintain such Improvements in accordance with this Lease until the expiration, termination, or cancellation date. Tenant shall be liable to State for cost of repair if Tenant causes or allows damage to Improvements State has designated to remain.

7.5 Disposition of Unauthorized Improvements.

- (a) Unauthorized Improvements shall be the property of State, unless State elects otherwise.
- (b) State, at its option, may either:
 - (1) Consent to Tenant ownership of the Improvements, or
 - (2) Charge rent for use of the Improvements from the time of installation or construction and
 - (i) Require Tenant to remove the Improvements, in which case Tenant shall pay rent for the Improvements until removal,
 - (ii) Consent to Improvements remaining and Tenant shall pay rent for the use of the Improvements, or
 - (iii) Remove Improvements and Tenant shall pay for the cost of removal and disposal, in which case Tenant shall pay rent for use of the Improvements until removal and disposal.

7.6 Disposition of Personal Property.

- (a) Tenant retains ownership of Personal Property unless Tenant and State agree otherwise in writing.
- (b) Tenant shall remove Personal Property from the Property by the Termination Date. Tenant shall be liable for any and all damage to the Property and any Improvements that may result from removal of Personal Property.
- (c) State, at its option, may sell or dispose of all Personal Property left on the Property after the Termination Date.
 - (1) If State conducts a sale of Personal Property, State shall apply proceeds first to the State's administrative costs in conducting the sale, second to payment of amount that then may be due from the Tenant to the State, and State shall pay the remainder, if any, to the Tenant.
 - (2) If State disposes of Personal Property, Tenant shall pay for the cost of removal and disposal.

7.8 Payment for Value of Aquaculture Product Left on Leasehold. All planted geoduck clams resulting from Tenant's aquaculture operation shall be tenant-owned during the term of this Lease. If Tenant leaves planted geoduck clams on the Property at expiration of the Lease, and if DNR subsequently leases the Property within three years of expiration to another person for the purpose of harvesting geoduck clams or conducting further geoduck aquaculture, that new tenant shall pay the Tenant the value of planted geoduck remaining on the Property at the time the new tenant begins its occupancy.

SECTION 8 ENVIRONMENTAL LIABILITY/RISK ALLOCATION

8.1 Definitions.

- (a) "Hazardous Substance" means any substance that now or in the future becomes regulated or defined under any federal, state, or local statute, ordinance, rule, regulation, or other law relating to human health, environmental protection, contamination, pollution, or cleanup, including, but not limited to, the Resource Conservation and Recovery Act ("RCRA"), 42 U.S.C. 6901 *et. seq.*, as amended; Comprehensive Environmental Response, Compensation and Liability Act of 1980 ("CERCLA"), 42 U.S.C. 9601 *et seq.*, as amended; Washington's Model Toxics Control Act ("MTCA"), Chapter 70.105 RCW, as amended; and Washington's Sediment Management Standards, WAC Chapter 173-204.
- (b) "Release or threatened release of Hazardous Substance" means a release or threatened release as defined under any law described in Paragraph 8.1(a) or any similar event defined under any such law.
- (c) "Utmost care" means such a degree of care as would be exercised by a very careful, prudent, and competent person under the same or similar circumstances; the standard of care established under MTCA, RCW 70.105D.040.

8.2 General Conditions.

- (a) Tenant's obligations under this Section 8 extend to the area in, on, under, or above:
 - (1) The Property and
 - (2) Adjacent state-owned aquatic lands where a release or the presence of Hazardous Substances arises from Tenant's use of the Property.
- (b) Standard of Care.
 - (1) Tenant shall exercise the utmost care with respect to Hazardous Substances.
 - (2) Tenant shall exercise utmost care for the foreseeable acts or omissions of third parties affecting Hazardous Substances, and the foreseeable consequences of those acts or omissions, to the extent required to establish a viable, third-party defense under the law, including – but not limited to – RCW 70.105D.040.

8.3 Current Conditions, Duty of Utmost Care, and Duty to Investigate.

- (a) State makes no representation about the condition of the Property. Hazardous Substances may exist in, on, under, or above the Property.
- (b) This Lease does not impose a duty on State to conduct investigations or supply information to Tenant about Hazardous Substances.
- (c) Tenant is responsible for conducting all appropriate inquiry and gathering sufficient information concerning the Property and the existence, scope, and location of any Hazardous Substances on the Property, or adjacent to the Property, that allows Tenant to meet Tenant's obligations under this Lease.

8.4 Use of Hazardous Substances.

- (a) Tenant, its subtenants, contractors, agents, employees, guests, invitees, or affiliates shall not use, store, generate, process, transport, handle, release, or dispose of Hazardous Substances, except in accordance with all applicable laws.
- (b) Tenant shall not undertake, or allow others to undertake by Tenant's permission, acquiescence, or failure to act, activities that:
 - (1) Result in a release or threatened release of Hazardous Substances, or
 - (2) Cause, contribute to, or exacerbate any contamination exceeding regulatory cleanup standards whether the regulatory authority requires cleanup before, during, or after Tenant's occupancy of the Property.

8.5 Management of Contamination.

- (a) Tenant shall not undertake activities that:
 - (1) Damage or interfere with the operation of remedial or restoration activities;
 - (2) Result in human or environmental exposure to contaminated sediments;
 - (3) Result in the mechanical or chemical disturbance of on-site habitat mitigation.
- (b) If requested, Tenant shall allow reasonable access to:

- (1) Employees and authorized agents of the Environmental Protection Agency, the Washington State Department of Ecology, health department, or other similar environmental agencies; and
- (2) Potentially liable or responsible parties who are the subject of an order or consent decree that requires access to the Property. Tenant may negotiate an access agreement with such parties, but Tenant may not unreasonably withhold such agreement.

8.6 Notification and Reporting.

- (a) Tenant shall immediately notify State if Tenant becomes aware of any of the following:
 - (1) A release or threatened release of Hazardous Substances;
 - (2) Any new discovery of or new information about a problem or liability related to, or derived from, the presence of any Hazardous Substance;
 - (3) Any lien or action arising from the foregoing;
 - (4) Any actual or alleged violation of any federal, state, or local statute, ordinance, rule, regulation, or other law pertaining to Hazardous Substances;
 - (5) Any notification from the US Environmental Protection Agency (EPA) or the Washington State Department of Ecology (DOE) that remediation or removal of Hazardous Substances is or may be required at the Property.
- (b) Tenant's duty to report under Paragraph 8.6(a) extends to the Property, adjacent state-owned aquatic lands where a release or the presence of Hazardous Substances could arise from the Tenant's use of the Property, and any other property used by Tenant in conjunction with Tenant's use of the Property where a release or the presence of Hazardous Substances on the other property would affect the Property.
- (c) Tenant shall provide State with copies of all documents concerning environmental issues associated with the Property, and submitted by Tenant to any federal, state or local authorities. Documents subject to this requirement include, but are not limited to, applications, reports, studies, or audits for National Pollution Discharge and Elimination System Permits; Army Corps of Engineers permits; State Hydraulic Project Approvals (HPA); State Water Quality certification; Substantial Development permit; and any reporting necessary for the existence, location, and storage of Hazardous Substances on the Property.

8.7 Indemnification.

- (a) "Liabilities" as used in this Subsection 8.7 means any claims, demands, proceedings, lawsuits, damages, costs, expenses, fees (including attorneys' fees and disbursements), penalties, or judgments.
- (b) Tenant shall fully indemnify, defend, and hold State harmless from and against any liabilities that arise out of, or are related to:
 - (1) The use, storage, generation, processing, transportation, handling, or disposal of any Hazardous Substance by Tenant, its subtenants,

- contractors, agents, invitees, guests, employees, affiliates, **licensees**, or permittees regardless of whether the act occurs before, during, or after the Term of this Lease;
- (2) The release or threatened release of any Hazardous Substance, or the exacerbation of any Hazardous Substance contamination resulting from any act or omission of Tenant, its subtenants, contractors, agents, employees, guests, invitees, or affiliates regardless of whether the release, threatened release, or exacerbation occurs before, during, or after the Term of this Lease.
- (c) Tenant shall fully indemnify, defend, and hold State harmless for any and all liabilities that arise out of or are in any way related to Tenant's breach of obligations under Subsection 8.5.
 - (d) Third Parties.
 - (1) Tenant has no duty to indemnify State for acts or omissions of third parties unless Tenant fails to exercise utmost care with respect to the foreseeable acts or omissions of the third party and the foreseeable consequences of those acts or omissions to the extent required to establish a viable third-party defense under the law, including – but not limited to – RCW 70.105D.040. Tenant's third-party indemnification duty arises under the conditions described in Subparagraph 8.7(d)(2).
 - (2) If an administrative or legal proceeding arising from a release or threatened release of Hazardous Substances finds or holds that Tenant failed to exercise care as described in Subparagraph 8.7(d)(1), Tenant shall fully indemnify, defend, and hold State harmless from and against any liabilities arising from the acts or omissions of third parties in relation to the release or threatened release of Hazardous Substances. This shall include any liabilities arising before the finding or holding in the proceeding.

8.8 Reservation of Rights.

- (a) For any environmental liabilities not covered by the indemnification provisions of Subsection 8.7, the parties expressly reserve and do not waive or relinquish any rights, claims, immunities, causes of action, or defenses relating to the presence, release, or threatened release of Hazardous Substances that either party may have against the other under federal, state, or local laws, including, but not limited to, CERCLA, MTCA, and the common law.
- (b) This Lease affects no right, claim, immunity, or defense either party may have against third parties, and the parties expressly reserve all such rights, claims, immunities, and defenses.
- (c) The provisions under this Section 8 do not benefit, or create rights for, third parties.
- (d) The allocations of risks, liabilities, and responsibilities set forth above do not release either party from, or affect the liability of either party for, claims or actions by federal, state, or local regulatory agencies concerning Hazardous Substances.

8.9 Cleanup.

- (a) If Tenant's act, omission, or breach of obligation under Subsection 8.4 results in a release of Hazardous Substances, Tenant shall, at Tenant's sole expense, promptly take all actions necessary or advisable to clean up the Hazardous Substances in accordance with applicable law. Cleanup actions shall include, without limitation, removal, containment, and remedial actions.
- (b) Tenant's obligation to undertake a cleanup under Section 8 shall be limited to those instances where the Hazardous Substances exist in amounts that exceed the threshold limits of any applicable regulatory cleanup standards.
- (c) At the State's discretion, Tenant may undertake a cleanup of the Property pursuant to the Washington State Department of Ecology's Voluntary Cleanup Program, provided that Tenant cooperates with State (DNR) in development of cleanup plans. Tenant shall not proceed with Voluntary Cleanup without State (DNR) approval of final plans. Nothing in the operation of this provision shall be construed as an agreement by State (DNR) that the Voluntary Cleanup complies with any laws or with the provisions of this Lease. Tenant's completion of a Voluntary Cleanup shall not be a release from or waiver of any obligation for Hazardous Substances under this Lease.

8.10 Sampling by State, Reimbursement, and Split Samples.

- (a) State may conduct sampling, tests, audits, surveys, or investigations ("Tests") of the Property at any time to determine the existence, scope, or effects of Hazardous Substances.
- (b) If such Tests, along with any other information, demonstrate the existence, release, or threatened release of Hazardous Substances arising out of any action, inaction, or event described or referred to in Subsection 8.4, above, Tenant shall promptly reimburse State for all costs associated with such Tests.
- (c) State shall not seek reimbursement for any Tests under this Subsection 8.10 unless State provides Tenant written notice of its intent to conduct any Tests at least thirty (30) calendar days prior to undertaking such Tests, except when such Tests are in response to an emergency. Tenant shall reimburse State for Tests performed in response to an emergency if State has provided such notice as is reasonably practical.
- (d) Tenant shall be entitled to obtain split samples of any Test samples obtained by State, but only if Tenant provides State with written notice requesting such samples within twenty (20) calendar days of the date Tenant is deemed to have received notice of State's intent to conduct any non-emergency Tests. Tenant solely shall bear the additional cost, if any, of split samples. Tenant shall reimburse State for any additional costs caused by split sampling within thirty (30) calendar days after State sends Tenant a bill with documentation for such costs.
- (e) Within sixty (60) calendar days of a written request (unless otherwise required pursuant to Paragraph 8.6(c), above), either party to this Lease shall provide the other party with validated final data, quality assurance/quality control information,

and chain of custody information, associated with any Tests of the Property performed by or on behalf of State or Tenant. There is no obligation to provide any analytical summaries or expert opinion work product.

SECTION 9 ASSIGNMENT AND SUBLETTING

9.1 State Consent Required. Tenant shall not sell, convey, mortgage, assign, pledge, sublet, or otherwise transfer or encumber all or any part of Tenant's interest in this Lease or the Property without State's prior written consent, which shall not be unreasonably conditioned or withheld.

- (a) In determining whether to consent, State may consider, among other items, the proposed transferee's financial condition, business reputation and experience, the nature of the proposed transferee's business, the then-current value of the Property, and such other factors as may reasonably bear upon the suitability of the transferee as a tenant of the Property. Tenant shall submit information regarding any proposed transferee to State at least thirty (30) days prior to the date of the proposed transfer.
- (b) State reserves the right to condition its consent upon (1) changes in the terms and conditions of this Lease, including the Annual Rent and other terms; and/or (2) the agreement of Tenant or transferee to conduct Tests for hazardous substances on the Property or on other property owned or occupied by Tenant or the transferee.
- (c) Each permitted transferee shall assume all obligations under this Lease, including the payment of rent. No assignment, sublet, or transfer shall release, discharge, or otherwise affect the liability of Tenant.
- (d) State's consent under this Subsection 9.1 does not constitute a waiver of any claims against Tenant for the violation of any term of this Lease.

9.2 Rent Payments Following Assignment. The acceptance by State of the payment of rent following an assignment or other transfer shall not constitute consent to any assignment or transfer.

9.3 Terms of Subleases.

- (a) Tenant shall submit the terms of all subleases to State for approval.
- (b) All subleases shall meet the following requirements:
 - (1) The sublease shall be consistent with and subject to all the terms and conditions of this Lease;
 - (2) The sublease shall confirm that this Lease shall control if the terms of the sublease conflict with the terms of this Lease;
 - (3) The term of the sublease (including any period of time covered by a renewal option) shall end before the Termination Date of the initial Term or any renewal term;
 - (4) The sublease shall terminate if this Lease terminates, whether upon expiration of the Term, failure to exercise an option to renew, cancellation by State, surrender, or for any other reason;

- (5) The subtenant shall receive and acknowledge receipt of a copy of this Lease;
- (6) The sublease shall prohibit the prepayment to Tenant by the subtenant of more than the annual rent;
- (7) The sublease shall identify the rental amount to be paid to Tenant by the subtenant;
- (8) The sublease shall confirm that there is no privity of contract between the subtenant and State;
- (9) The sublease shall require removal of the subtenant's Improvements and trade fixtures upon termination of the sublease;
- (10) The subtenant's permitted use shall be within the Permitted Use authorized by this Lease; and
- (11) The sublease shall require the subtenant to meet all obligations of Tenant under Section 10, Indemnification and Insurance.

9.4 Event of Assignment. If Tenant is a corporation, a dissolution of the corporation or a transfer (by one or more transactions) of a majority of the voting stock of Tenant shall be deemed to be an assignment of this Lease. If Tenant is a partnership, a dissolution of the partnership or a transfer (by one or more transactions) of the controlling interest in Tenant shall be deemed an assignment of this Lease.

SECTION 10 INDEMNITY, FINANCIAL SECURITY, INSURANCE

10.1 Indemnity.

- (a) Tenant shall indemnify, defend, and hold State, its employees, officers, and agents harmless from any and all claims arising out of the use, occupation, or control of the Property by Tenant, its subtenants, contractors, agents, invitees, guests, employees, affiliates, licensees, or permittees.
- (b) "Claim" as used in this Subsection 10.1 means any financial loss, claim, suit, action, damages, expenses, fees (including attorneys' fees), penalties, or judgments attributable to bodily injury, sickness, disease, death, and damages to tangible property, including, but not limited to, land, aquatic life, and other natural resources. "Damages to tangible property" includes, but is not limited to, physical injury to the Property and damages resulting from loss of use of the Property.
- (c) State shall not require Tenant to indemnify, defend, and hold State harmless for claims that arise solely out of the willful or negligent act of State or State's elected officials, employees, or agents.
- (d) Tenant waives its immunity under Title 51 RCW to the extent it is required to indemnify, defend, and hold State and its agencies, officials, agents, or employees harmless.
- (e) Section 8, Environmental Liability/Risk Allocation, exclusively shall govern Tenant's liability to State for Hazardous Substances and its obligation to indemnify, defend, and hold State harmless for Hazardous Substances.

10.2 Insurance Terms.

- (a) Insurance Required.
 - (1) At its own expense, Tenant shall procure and maintain during the Term of this Lease, the insurance coverages and limits described in this Subsection 10.2 and in Subsection 10.3, Insurance Types and Limits. Failure to maintain the required insurance may result in termination of this Lease at the State's option.
 - (2) All insurance should be issued by an insurance company or companies admitted to do business in the State of Washington and have a rating of A- or better by the most recently published edition of Best's Reports. State's risk manager shall review and approve any exception before acceptance by State. If an insurer is not admitted, the insurance policies and procedures for issuing the insurance policies shall comply with Chapter 48.15 RCW and 284-15 WAC.
 - (3) The State of Washington, the Department of Natural Resources, its elected and appointed officials, agents, and employees shall be named as an additional insured on all general liability, excess, umbrella, property, builder's risk, and pollution legal liability insurance policies.
 - (4) All insurance provided in compliance with this Lease shall be primary as to any other insurance or self-insurance programs afforded to or maintained by State.
- (b) Waiver.
 - (1) Tenant waives all rights against State for recovery of damages to the extent insurance maintained pursuant to this Lease covers these damages.
 - (2) Except as prohibited by law, Tenant waives all rights of subrogation against State for recovery of damages to the extent that they are covered by insurance maintained pursuant to this lease.
- (c) Proof of Insurance.
 - (1) Tenant shall provide State with a certificate(s) of insurance executed by a duly authorized representative of each insurer, showing compliance with insurance requirements specified in this Lease and, if requested, copies of policies to State.
 - (2) The certificate(s) of insurance shall reference additional insureds and the Lease number.
 - (3) Receipt of such certificates or policies by State does not constitute approval by State of the terms of such policies.
- (d) State shall be provided written notice before cancellation or non-renewal of any insurance required by this Lease, in accordance with the following:
 - (1) Insurers subject to RCW 48.18 (admitted and regulated by the Insurance Commissioner): If cancellation is due to non-payment of premium, State shall be given ten (10) days' advance notice of cancellation; otherwise, State shall be provided forty-five (45) days' advance notice of cancellation or non-renewal.

- (2) Insurers subject to RCW 48.15 (surplus lines): If cancellation is due to non-payment of premium, State shall be given ten (10) days' advance notice of cancellation; otherwise, State shall be provided forty-five (45) days' advance notice of cancellation or non-renewal.
- (e) Adjustments in Insurance Coverage.
 - (1) State may impose changes in the limits of liability for all types of insurance as it deems necessary.
 - (2) New or modified insurance coverage shall be in place within thirty (30) days after State requires changes in the limits of liability.
- (f) If Tenant fails to procure and maintain the insurance described above within fifteen (15) days after Tenant receives a notice to comply from State, at its option, State shall either:
 - (1) Deem the failure an Event of Default under Section 14, or
 - (2) State shall have the right to procure and maintain comparable substitute insurance and to pay the premiums. Upon demand, Tenant shall pay to State the full amount paid by State, together with interest at the rate provided in Subsection 6.2 from the date of State's notice of the expenditure until Tenant's repayment.
- (g) General Terms.
 - (1) State does not represent that coverage and limits required under this Lease will be adequate to protect Tenant.
 - (2) Coverage and limits shall not limit Tenant's liability for indemnification and reimbursements granted to State under this Lease.
 - (3) Any insurance proceeds payable by reason of damage or destruction to property shall be first used to restore the real property covered by this Lease, then to pay the cost of the reconstruction, then to pay the State any sums in arrears, and then to Tenant.

10.3 Insurance Types and Limits.

- (a) General Liability Insurance.
 - (1) Tenant shall maintain commercial general liability insurance (CGL) or marine general liability (MGL) covering claims for bodily injury, personal injury, or property damage arising on the Property and/or arising out of Tenant's use, occupation, or control of the Property and, if necessary, commercial umbrella insurance with a limit of not less than One Million Dollars (\$1,000,000) per each occurrence. If such CGL or MGL insurance contains aggregate limits, the general aggregate limit shall be at least twice the "each occurrence" limit. CGL or MGL insurance shall have products-completed operations aggregate limit of at least two times the "each occurrence" limit.
 - (2) CGL insurance shall be written on Insurance Services Office (ISO) Occurrence Form CG 00 01 (or a substitute form providing equivalent coverage). All insurance shall cover liability arising out of premises, operations, independent contractors, products completed operations,

- personal injury and advertising injury, and liability assumed under an insured contract (including the tort liability of another party assumed in a business contract) and contains separation of insured (cross-liability) condition.
- (3) MGL insurance shall have no exclusions for non-owned watercraft. Workers' Compensation.
- (b)
- (1) State of Washington Workers' Compensation.
 - (i) Tenant shall comply with all State of Washington workers' compensation statutes and regulations. Workers' compensation coverage shall be provided for all employees of Tenant. Coverage shall include bodily injury (including death) by accident or disease, which arises out of or in connection with Tenant's use, occupation, and control of the Property.
 - (ii) If Tenant fails to comply with all State of Washington workers' compensation statutes and regulations and State incurs fines or is required by law to provide benefits to or obtain coverage for such employees, Tenant shall indemnify State. Indemnity shall include all fines; payment of benefits to Tenant, employees, or their heirs or legal representatives; and the cost of effecting coverage on behalf of such employees.
 - (2) Longshore and Harbor Worker's Act. Certain work or services under this Lease may require insurance coverage for longshore and harbor workers other than seaman as provided in the Longshore and Harbor Worker's Compensation Act (33 U.S.C. Section 901 *et. seq.*). Failure to obtain coverage in the amount required by law may result in civil and criminal liabilities. Tenant is fully responsible for ascertaining if such insurance is required and shall maintain insurance in compliance with this Act. Tenant is responsible for all civil and criminal liability arising from failure to maintain such coverage.
 - (3) Jones Act. Certain work or services under this Lease may require insurance coverage for seamen injured during employment resulting from negligence of the owner, master, or fellow crew members as provided in 46 U.S.C. Section 688. Failure to obtain coverage in the amount required by law may result in civil and criminal liabilities. Tenant is fully responsible for ascertaining if such insurance is required and shall maintain insurance in compliance with this Act. Tenant is responsible for all civil and criminal liability arising from failure to maintain such coverage.
- (c) Employer's Liability Insurance. Tenant shall procure employer's liability insurance, and, if necessary, commercial umbrella liability insurance with limits not less than One Million Dollars (\$1,000,000) each accident for bodily injury by accident or One Million Dollars (\$1,000,000) each employee for bodily injury by disease.

10.4 Financial Security.

- (a) At its own expense, Tenant shall procure and maintain during the Term of this Lease a corporate security bond or provide other financial security that State, at its option, may approve ("Security"). The Security shall be in an amount equal to Zero Dollars (\$0.00), which is consistent with RCW 79.105.330, and shall secure Tenant's performance of its obligations under this Lease, with the exception of the obligations under Section 8, Environmental Liability/Risk Allocation. Tenant's failure to maintain the Security in the required amount in force at all times during the Term of this Lease shall constitute a breach of this Lease.
- (b) All Security shall be in a form acceptable to the State.
 - (1) Bonds should be issued by companies admitted to do business within the State of Washington and have a rating of A-, Class VII or better, in the most recently published edition of Best's Reports. State's risk manager shall review and approve any exception before acceptance by State.
 - (2) Letters of credit, if approved by State, shall be irrevocable, allow State to draw funds at will, provide for automatic renewal, and comply with RCW 62A.5-101, *et. seq.*
 - (3) Savings account assignments, if approved by State, shall allow State to draw funds at will.
- (c) Adjustment in Amount of Security.
 - (1) State may require an adjustment in the amount of Security:
 - (i) At the same time as revaluation or adjustment of the Rent,
 - (ii) As a condition of approval of assignment or sublease of this Lease,
 - (iii) Upon a material change in the condition of any Improvements, or
 - (iv) Upon a change in the Permitted Use.
 - (2) Tenant shall deliver a new or modified form of Security to State within thirty (30) days after State has required adjustment of the amount of the Security.
- (d) Upon any default by Tenant in its obligations under this Lease, State may collect on the Security to offset the liability of Tenant to State. Collection on the Security shall not relieve Tenant of liability, shall not limit any of State's other remedies, and shall not reinstate or cure the default or prevent termination of the Lease because of the default.

SECTION 11 MAINTENANCE AND REPAIR

11.1 State's Repairs. This Lease does not obligate State to make any alterations, maintenance, replacements, or repairs in, on, or about the Property, or any part thereof, during the Term.

11.2 Tenant's Repairs, Alteration, Maintenance and Replacement.

- (a) Tenant shall, at its sole cost and expense, keep and maintain the Property and all Improvements (regardless of ownership) in good order and repair, in a clean,

attractive, and safe condition. Tenant's obligations under this Subsection 11.2 shall be in addition to Tenant's obligations under Subsections 2.2 and 3.3 of this Lease.

- (b) Tenant shall, at its sole cost and expense, make any and all additions, repairs, alterations, maintenance, replacements, or changes to the Property or to any Improvements on the Property which may be required by any public authority.
- (c) Tenant shall make all additions, repairs, alterations, replacements, or changes to the Property and to any Improvements on the Property in accordance with Section 7, Improvements, above. Section 7 shall govern ownership.

SECTION 12 DAMAGE OR DESTRUCTION

12.1 Notice and Repair.

- (a) In the event of any damage to or destruction of the Property or any Improvements, Tenant shall promptly give written notice to State. Unless otherwise agreed in writing, Tenant shall promptly reconstruct, repair, or replace the Property and any Improvements as nearly as possible to its condition immediately prior to the damage or destruction.
- (b) State shall not be deemed to have actual knowledge of the damage or destruction of the Property or any Improvements without Tenant's written notice.

12.2 State's Waiver of Claim. State does not waive any claims for damage or destruction of the Property unless State provides written notice to Tenant of each claim waived. No claim is waived unless State waives with specificity.

12.3 Insurance Proceeds. Tenant's duty to reconstruct, repair, or replace any damage or destruction of the Property or any Improvements on the Property shall not be conditioned upon the availability of any insurance proceeds to Tenant from which the cost of repairs may be paid. The parties shall use insurance proceeds in accordance with Subparagraph 10.2(g)(3).

12.4 Rent in the Event of Damage or Destruction. Unless this Lease is terminated by mutual agreement, there shall be no abatement or reduction in rent during such reconstruction, repair, and replacement.

12.5 Default at the Time of Damage or Destruction. In the event Tenant is in default under the terms of this Lease at the time damage or destruction occurs, State may elect to terminate the Lease and State shall then have the right to retain any and all insurance proceeds payable as a result of the damage or destruction.

SECTION 13 CONDEMNATION

13.1 Definitions.

- (a) **Taking.** The term “taking,” as used in this Lease, means that an entity authorized by law exercises the power of eminent domain, either by judgment or settlement in lieu of judgment, over all or any portion of the Property and any Improvements. Taking includes any exercise of eminent domain on any portion of the Property and Improvements that, in the judgment of the State, prevents or renders impractical the Permitted Use. A total taking occurs when the entire Property is taken. A partial taking occurs when the taking does not constitute a total taking as defined above.
- (b) **Voluntary Conveyance.** The terms “total taking” and “partial taking” shall include a voluntary conveyance, in lieu of formal court proceedings, to any agency, authority, public utility, person, or corporate entity empowered to condemn property.
- (c) **Date of Taking.** The term “date of taking” shall mean the date upon which title to the Property or a portion of the Property passes to and vests in the condemnor or the effective date of any order for possession if issued prior to the date title vests in the condemnor.

13.2 Effect of Taking. If during the Term there shall be a total taking, the leasehold estate of Tenant in the Property shall terminate as of the date of taking. If this Lease is terminated, in whole or in part, all rentals and other charges payable by Tenant to State and attributable to the Property taken shall be paid by Tenant up to the date of taking. If Tenant has pre-paid rent, Tenant will be entitled to a refund of the pro rata share of the pre-paid rent attributable to the period after the date of taking. In the event of a partial taking, there shall be a partial abatement of rent from the date of taking in a percentage equal to the percentage of Property taken.

13.3 Allocation of Award.

- (a) In the event of any condemnation, the award shall be allocated between State and Tenant based upon the ratio of the fair market value of (1) Tenant’s leasehold estate and Tenant-Owned Improvements on the Property and (2) State’s interest in the Property; the reversionary interest in Tenant-Owned Improvements, if any; and State-Owned Improvements.
- (b) In the event of a partial taking, this ratio will be computed on the basis of the portion of Property or Improvements taken.
- (c) If Tenant and State are unable to agree on the allocation, it shall be submitted to binding arbitration in accordance with the rules of the American Arbitration Association.

SECTION 14 DEFAULT AND REMEDIES

14.1 Default Defined. Tenant shall be in default of this Lease on the occurrence of any of the following:

- (a) Failure to pay Annual Rent or other expenses when due;
- (b) Failure to comply with any law, regulation, policy, or order of any lawful governmental authority;
- (c) Failure to comply with any other provision of this Lease;

- (d) Proceedings are commenced by or against Tenant under any bankruptcy act or for the appointment of a trustee or receiver of Tenant's property.

14.2 Tenant's Right to Cure.

- (a) A default shall become an event of default ("Event of Default") if Tenant fails to cure the default within the applicable cure period after State provides Tenant with written notice of default, which specifies the nature of the default.
- (b) The cure period shall be ten (10) days for failure to pay rent or other monetary defaults; for other defaults, the cure period shall be thirty (30) days.
- (c) State may elect to deem a default by Tenant as an Event of Default if the default occurs within six (6) months after a default by Tenant for which State has provided notice and opportunity to cure. This Paragraph 14.2 is effective regardless of whether the first and subsequent defaults are of the same nature.

14.3 Remedies.

- (a) Upon an Event of Default, State may terminate this Lease and remove Tenant by summary proceedings or otherwise.
- (b) Without terminating this Lease, State may also relet the Property on any terms and conditions as State in its sole discretion may decide are appropriate.
 - (1) If State elects to relet, rent received by it shall be applied: (1) to the payment of any indebtedness other than rent due from Tenant to State; (2) to the payment of any cost of such reletting; (3) to the payment of the cost of any alterations and repairs to the Property; and (4) to the payment of rent and leasehold excise tax due and unpaid under this Lease. State shall hold and apply any balance to Tenant's future rent as it becomes due.
 - (2) Tenant shall be responsible for any deficiency created by the reletting during any month and shall pay the deficiency monthly.
 - (3) At any time after reletting, State may elect to terminate this Lease for the previous Event of Default.
- (c) State's reentry or repossession of the Property under Paragraph 14.3(b) shall not be construed as an election to terminate this Lease or cause a forfeiture of rents or other charges to be paid during the balance of the Term, unless State gives a written notice of termination to Tenant or termination is decreed by legal proceedings.

SECTION 15 ENTRY BY STATE

State shall have the right to enter the Property at any reasonable hour to inspect for compliance with the terms of this Lease. State's failure to inspect the Property shall not constitute a waiver of any rights or remedies under this Lease.

SECTION 16 DISCLAIMER OF QUIET ENJOYMENT

16.1 No Guaranty or Warranty.

- (a) State believes that this Lease is consistent with the Public Trust Doctrine and that none of the third-party interests identified in Paragraph 1.1(b) will materially or adversely affect Tenant's right of possession and use of the Property, but State makes no guaranty or warranty to that effect.
- (b) State disclaims and Tenant releases State from any claim for breach of any implied covenant of quiet enjoyment. This disclaimer and release includes, but is not limited to, interference arising from exercise of rights under the Public Trust Doctrine; Treaty rights held by Indian Tribes; and the general power and authority of State and the United States with respect to aquatic lands and navigable waters.
- (c) Tenant shall be responsible for determining the extent of its right to possession and for defending its leasehold interest.

16.2 In the Event of Eviction by Third Party. In the event Tenant is evicted from the Property by reason of successful assertion of any of the rights of any third party, this Lease shall terminate as of the date of the eviction. In the event of a partial eviction, Tenant's rent obligations shall abate as of the date of the partial eviction, in direct proportion to the extent of the eviction, but in all other respects, this Lease shall remain in full force and effect.

SECTION 17 NOTICE

Any notices required or permitted under this Lease may be personally delivered, delivered by facsimile machine, or mailed by certified mail, return receipt requested, to the following addresses or to such other places as the parties may direct in writing from time to time:

State: DEPARTMENT OF NATURAL RESOURCES
919 N Township St.
Sedro Woolley, WA 98284

Tenant: JAMESTOWN S'KLALLAM TRIBE
1033 Old Blyn Highway
Sequim, WA 98382

A notice shall be deemed given and delivered upon personal delivery, upon receipt of a confirmation report if delivered by facsimile machine, or three (3) days after being mailed as set forth above, whichever is applicable. All notices must identify the lease number to which the notice pertains. Notices transmitted by facsimile machine shall state the number of pages contained in the notice, including the transmittal page, if any.

SECTION 18 MISCELLANEOUS

18.1 Authority. Tenant and the person or persons executing this Lease on behalf of Tenant represent that Tenant is qualified to do business in the State of Washington, that Tenant has full

right and authority to enter into this Lease, and that each and every person signing on behalf of Tenant is authorized to do so. Upon State's request, Tenant will provide evidence satisfactory to State confirming these representations. This Lease is entered into by State pursuant to the authority granted it in Chapters 79.105 to 79.140 RCW and the Constitution of the State of Washington.

18.2 Successors and Assigns. This Lease shall be binding upon and inure to the benefit of the parties, their successors and assigns.

18.3 Headings. The headings used in this Lease are for convenience only and in no way define, limit, or extend the scope of this Lease or the intent of any provision.

18.4 Entire Agreement. This Lease, including the exhibits and addenda, if any, contains the entire agreement of the parties. All prior and contemporaneous agreements, promises, representations, and statements relating to this transaction or to the Property, if any, are merged into this Lease.

18.5 Waiver.

- (a) The waiver by State of any breach or default of any term, covenant, or condition of this Lease shall not be deemed a waiver of such term, covenant, or condition; of any subsequent breach or default of the same; or of any other term, covenant, or condition of this Lease. State's acceptance of a rental payment shall not be construed to be a waiver of any preceding or existing breach other than the failure to pay the particular rental payment that was accepted.
- (b) The renewal of the Lease, extension of the Lease, or the issuance of a new lease to Tenant, shall not constitute waiver of State's ability to pursue any rights or remedies under the Lease.

18.6 Cumulative Remedies. The rights and remedies of State under this Lease are cumulative and in addition to all other rights and remedies afforded to State by law or equity or otherwise.

18.7 Time is of the Essence. TIME IS OF THE ESSENCE as to each and every provision of this Lease.

18.8 Language. The word "Tenant" as used in this Lease shall be applicable to one or more persons, as the case may be. The singular shall include the plural, and the neuter shall include the masculine and feminine. If there is more than one Tenant, their obligations shall be joint and several. The word "persons," whenever used, shall include individuals, firms, associations, and corporations.

18.9 Invalidity. If any provision of this Lease shall prove to be invalid, void, or illegal, it shall in no way affect, impair, or invalidate any other provision of this Lease.

18.10 Applicable Law and Venue. This Lease shall be interpreted and construed in accordance with the laws of the State of Washington. Any reference to a statute shall mean that statute as presently enacted or hereafter amended or superseded. Venue for any action arising out of or in connection with this Lease shall be in the Superior Court for Thurston County, Washington.

18.11 Recordation. Tenant shall record this Lease or a memorandum documenting the existence of this Lease in the county in which the Property is located, at Tenant's sole expense. The memorandum shall, at a minimum, contain the Property description, the names of the parties to the Lease, the State's lease number, and the duration of the Lease. Tenant shall provide State with recording information, including the date of recordation and file number. Tenant shall have thirty (30) days from the date of delivery of the final executed agreement to comply with the requirements of this Subsection. If Tenant fails to record this Lease, State may record it and Tenant shall pay the costs of recording upon State's demand.

18.12 Modification. Any modification of this Lease must be in writing and signed by the parties. State shall not be bound by any oral representations or statements.

18.13 Survival. Any obligations of Tenant which are not fully performed upon termination of this Lease shall not cease, but shall continue as obligations until fully performed.

THIS AGREEMENT requires the signature of all parties and is executed as of the date of the last signature below.

JAMESTOWN S'KLALLAM TRIBE,
a government entity

Dated: 10/15/07

By: 
W. RON ALLEN

Title: Jamestown S'Klallam Tribal Chariman
Address: 1033 Old Blyn Highway
Sequim, WA 98382



STATE OF WASHINGTON
DEPARTMENT OF NATURAL RESOURCES

Dated: 10/24/07

By: 
DAVID ROBERTS

Title: Aquatic Lands Assistant Region Manager
Address: 919 N Township St
Sedro Woolley, WA 98284

Approved as to Form in June, 2006
by Janis L. Snoey
Assistant Attorney General
State of Washington

REPRESENTATIVE ACKNOWLEDGMENT

STATE OF WASHINGTON)
) ss.
COUNTY OF Challam)

I certify that I know or have satisfactory evidence that W. RON ALLEN is the person who appeared before me, and said person acknowledged that he signed this instrument, on oath stated that he was authorized to execute the instrument and acknowledged it as the Tribal Chairman of Jamestown S'Klallam Tribe to be the free and voluntary act of such party for the uses and purposes mentioned in the instrument.

Dated: October 15, 2007

Susan Ann Stark
(Signature)

Susan Ann Stark
(Print Name)

Notary Public in and for the State of Washington,
residing at Sequim, Washington

My appointment expires November 30, 2009



STATE ACKNOWLEDGMENT
(Region Manager)

STATE OF WASHINGTON)
) ss.
County of SRAgit)

I certify that I know or have satisfactory evidence that DAVID ROBERTS is the person who appeared before me, and said person acknowledged that she signed this instrument, on oath stated that she was authorized to execute the instrument and acknowledged it as the Aquatic Lands Assistant Region Manager of the Department of Natural Resources, to be the free and voluntary act of such party for the uses and purposes mentioned in the instrument.

Dated: 10-24-07

Janet A. Daly
(Signature)

Janet A. Daly
(Print Name)

Notary Public in and for the State of Washington,
residing at Burlington

My appointment expires 3-1-2010

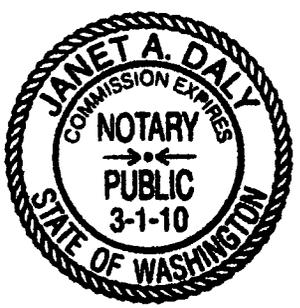


Exhibit A



EXHIBIT "B"
Plan of Operations
Jamestown S'Klallam Tribe
Oyster and Geoduck Aquaculture Lease No. 20-A013012
Dungeness Bay
July 14, 2007

Site Description: The lease area is located on second class tidelands owned by the State of Washington, in front of and adjacent to, or abutting upon the southeasterly side of Government Lots 1, 2 and 3, Section 23, Township 31 North, range 4 West, WM. Clallam County, Washington comprising +/- 52 acres. The area is in the northern part of the bay and encompasses a rather narrow band of land that lies parallel and near the south side of the spit. The lease area is located within the boundaries of the Dungeness National Wildlife Refuge.

Condition of Site at Present:

Flora and Fauna:

The Dungeness NWR provides habitat for many wildlife species. More than 250 species of birds, 41 species of land mammals, and eight species of marine mammals have been recorded in the refuge. It provides critical habitat for a number of these species, some of them threatened or endangered, and is an important stop for many migratory birds.

The Black Brant, which depends on the refuge's eelgrass for its survival, is one of the refuge's most important inhabitants. The black brant is a true sea goose and is able to drink salt water and eat saltwater plants. Approximately 1,500 of these birds spend the winter in the area. In March, as a result of migrations, the number of brant increases to a peak of up to 8,000 birds in late April. Most of the brant can be found on the tideflats to the west and east of Graveyard spit.

At risk birds using Dungeness Bay include the bald eagle, western snowy plover, peregrine falcon, harlequin duck, and marbled murrelet. Other more common species that can be seen are pigeon guillemots, common murre, buffleheads, black oystercatchers, surf scoters, and northern shovelers.

Harbor seals are common in the bay, and can often be found hauled out on the beaches.

Dungeness Harbor is an important nursery habitat for a variety of types of fish, including anadromous salmonids such as pink, Chinook, coho, and chum salmon. It is especially important for the dwindling wild population of Dungeness River pink salmon. The eelgrass beds and shoreline provide escape cover for juvenile salmon. Other fish that use the harbor as a rearing area include: steelhead, cutthroat, lingcod, and Dolly Varden.

Littleneck and manila clams occur along the inside of Dungeness Spit. Other species occur in the upper portions of Dungeness Harbor. Dungeness Crab are found throughout the harbor area, east of Graveyard Spit and along the outside of Dungeness Spit.

Eel grass plants in loose clumps inhabit the lease area. There are no dense, continuous eelgrass beds in the lease area. During the summer months, sea lettuce becomes thick in some areas reducing visibility to the sand/mud bottom and has hampered commercial oyster harvest in past years.

Brief Description on Area and Sediments: Most of the refuge acreage is on the spits which are characterized by sand and cobble beaches surrounded by tidal mudflats and eelgrass beds. There are also two tidal ponds, a large one at the junction of the two spits and a smaller one about 1/2 mile east of Graveyard Spit on the Bay side of Dungeness Spit. Graveyard Spit is closed to the public and set aside as a Research Natural Area because of its unique vegetation. The tideflats within the lease area are composed of mud and fine sand sediments that are 1-2 feet in depth.

Upland, Uses, and Ownership: The leased tidelands are within the boundaries of the USFW Dungeness Wildlife Refuge, which provides critical habitat for wildlife and allows seasonal and limited recreational activities. The U. S. Fish and Wildlife (USFW) retains a use deed with DNR for tidelands in the bay and has consultation rights for any activity that occurs on tidelands included in the use deed.

Survey:

An updated survey will be provided to DNR from the Lessee by September 1, 2007.

Access to Site: Foot access to the tideland lease is possible via the Dungeness spit, however, because the distance to between the lease and parking is several miles, motorized boats will be used to access the lease.

Past Uses: In 1990, the Jamestown Tribe assumed the Dungeness Bay tideland leases previously held by commercial shellfish growers who maintained a lease with the Department of Natural Resources. The Jamestown Tribe has paid commercial lease rates, farmed and sold pacific oysters, and experimented with other types of oysters, clam and geoducks. The Tribe's commercial shellfish business was recently closed by economic infeasibility, health closures that affected the timing of harvest, increased costs associated with processing oysters that were marred by Denman's Island disease. Additionally, increases seasonal growth of sea lettuce during the summer complicated harvest operations and shortened harvest seasons. Subsequently, some 60, 000 stakes and related netting and lines used in the commercial cultivation were removed from the leased tidelands.

Description of Uses Adjacent to the Site: None

Permits Required by the County: None required

Licenses/Certification: DOH Shellfish License WA-0588-HA

Overview of Operations

The goal of the continued cultivation of shellfish for the near future on this lease will be to assist in assessment and monitoring of the health and productivity of Dungeness Bay. The existence and productivity of shellfish are considered an indicator of clean water and a healthy ecosystem in the Straits of Juan de Fuca and adjacent waters. It is expected that the Washington State Dept of Health (DOH) will continue to test water quality in the bay for shellfish cultivation. The Tribe plans to implement an off-bottom oyster operation on the lease with the use of Aquapurses (See attached map). A two year grow out period is required for off-bottom culture. We will plant diploid oysters, which will reach harvestable size in two years, and triploid oysters which will be harvested at the end of one year. Although triploids can be harvested sooner, diploid oysters are more resilient than triploids in warm conditions. The culture area will encompass approximately 100x100 foot plot, roughly equivalent to one quarter acre within the lease area. It will entail using no more than three dozen metal fence posts, rope, and 60 aqua-purses. The size, location, and culture methods used to grow oysters will be discussed and approved by DNR and USFW prior to establishment. The Tribe will strive to recognize and plan work in the Bay from May 15 through July 30 when cultivation activities will be least disruptive to use of the Bay by Brant and other waterfowl. The Tribe will confer with USFW before conducting activities on the lease outside this window.

A small test plot of geoducks was planted in 1997 (about 50 x 100 feet) (see map). Since planting, the predator protection tubes have been removed. A small sample of geoducks will be harvested on a periodically to observe the quality and size of the animals. Any plan to increase or change the number and cultivation of geoduck will be discussed and approved by the DNR and USFW prior to proceeding.

PAYMENT SCHEDULE
Jamestown S'Klallam Tribe
Oyster and Geoduck Aquaculture Lease No. 20-A013012
Dungeness Bay
July 14, 2007

Base Rate:

Due to the experimental /operational nature of this lease, a base rate of \$10.00/ acre will be charged annually. \$10/acre times the number of acres (currently estimated to be 50 acres). Total \$500.00. The annual rent may be adjusted when a survey is completed and may increase or decrease dependent upon the number of acres reflected in the survey.

Remaining Cultivated Oysters:

Any remaining oysters harvested from previous off ground cultivation will continue to be charged \$2.00/bushel until harvest is completed (expected in the next 1-2 seasons).

- 137 oysters/gal/bushel
- 11.5 dozen oysters in a bushel
- A billing will accompany the contract when it goes out for signature.

The billing will cover harvest for 2005 and for 2007 (until July 15). There was no harvest of oysters in 2006.

2005: 4,342 gall x \$2/bushel/gallon=\$8,684 plus \$746.82 (tax@ 8.6%production based LHT) = \$9430.82

2007: 1,504 gall x \$2/bushel/gallon=\$3,008 plus \$258.69 (tax@ 8.6% production based LHT) = \$3,266.69

Aquaculture Rents will be production based rent: It is currently anticipated that oyster and geoduck production will be experimental in nature for research/bay health monitoring. It is expected that a very small portion of the leased area will be encumbered at any time with anticipated low yields and limited quantities of oysters or geoduck. If the use moves to commercial production or products are sold, the price will be calculated using the following formulas:

If the oysters are sold commercially, the following calculation will be used to determine payment to the Department for the State's share of value: Total Annual Production in Gallons x \$2 bushel/gallon plus Lease Hold Tax.

Off ground Culture:

The annual rent will be calculated by multiplying:

Number of acres times the applicable off ground culture rate per acre per year = annual rent.

*the rate for off ground culture was established by DNR with the input from the PCSGA and WDFW effective July 1989 and adjusted by the inflation rate (OPI) effective July 1st of each year.

Floating Culture:

Floating culture rent will be negotiated. The per acre per year rate, which was effective July 1989 and adjusted by the inflation rate (OPI) effective July 1st of each year, is the minimum rate to be charged for floating culture.

Number of acres times the floating culture rate for July 1-June 30 of the harvest year) = minimum annual rent.

Geoduck:

A small plot of geoduck was established for study purposes in 1997. If these are harvested for commercial purposes, they will be assessed at a rate of 10% of the wholesale price. Wholesale price per pound will be determined at the time of harvest.

Management of Public Use for Dungeness National Wildlife Refuge



GOALS

Think About
objectives we want
under each goal
- how organized

go from general
to ~~specific~~ Topic -

then work on
measurable

Environmental Assessment



United States Department of the Interior
Fish and Wildlife Service

Nisqually National Wildlife Refuge Complex
100 Brown Farm Road
Olympia, Washington 98516
(360) 753-9467
fax (360) 534-9302

January 10, 1997

To: Interested Individuals, Representatives of Federal, State, County, and Local Governments;
Citizens' Groups; Landowners; and Others;

The U.S. Fish and Wildlife Service is pleased to provide you with a copy of the *Finding of No Significant Impact*, the *Final Environmental Assessment for Management of Public Use for Dungeness National Wildlife Refuge*, and the *Section 7 Evaluation*. Planning for public use management on Dungeness National Wildlife Refuge was done in coordination with other Federal agencies; State, tribal, and local agencies; private groups; and many concerned individuals. The assessment identifies and addresses the issues and concerns expressed during planning. It contains a list of those who received the draft Environmental Assessment and a summary of the comments that were received. In some cases, the draft has been revised in response to questions and issues raised during the comment period. All comments were considered in preparing the final Environmental Assessment.

The final Environmental Assessment evaluates five alternatives and the potential effects upon the environment. Alternative D was selected for implementation because it effectively protects Refuge wildlife and habitat while accommodating both wildlife-dependent and non-wildlife-dependent public uses that are compatible with the Refuge purpose.

Your interest in and support for minimizing conflicts between wildlife and public use activities on Dungeness National Wildlife Refuge are appreciated. If you have questions, or would like additional copies of the final Environmental Assessment contact Robert Edens, Washington Coastal Refuges Office, 33 South Barr Road, Port Angeles, WA 98362, (360) 457-8451. Jean Takekawa, Deputy Refuge Manager, Nisqually National Wildlife Refuge Complex, Olympia, Washington, (360) 753-9467, is also available to answer questions.

Sincerely,

Willard B. Hesselbart, Refuge Manager
Nisqually National Wildlife Refuge Complex



United States Department of the Interior

FISH AND WILDLIFE SERVICE

North Pacific Coast Ecoregion
Office of the Assistant Regional Director
3773 Martin Way E. Bldg. C, Suite 101
Olympia, Washington 98501

Finding of No Significant Impact

Management of Public Use for Dungeness National Wildlife Refuge

The U.S. Fish and Wildlife (FWS) proposes to adopt and implement modifications in public use management of Dungeness National Wildlife Refuge that would provide refuge visitors with high quality wildlife-dependent education and recreational experiences while ensuring the allowed uses occur in a time, place, and manner that do not conflict with wildlife objectives and are compatible with Refuge purposes.

The Environmental Assessment evaluates five alternatives and subsequent environmental consequences of public use activities occurring on Dungeness National Wildlife Refuge. Alternative D (Allow Compatible Wildlife-Dependent and Non-Wildlife Dependent Public Use) was selected because it effectively protects Refuge wildlife and habitat while accommodating both wildlife and non-wildlife-dependent public uses which are compatible with the Refuge purposes.

Based on the review and evaluation of the information contained in the supporting reference, I have determined that the proposed action for public use management at Dungeness National Wildlife Refuge would not constitute a major federal action with significant effects on the quality of the human environment within the meaning of Section 102 (2)(c) of the National Environmental Policy Act of 1969. Accordingly, the preparation of an environmental impact statement on the proposed action is not required.

Copies of the Finding of No Significant Impact (FONSI) and the Final Environmental Assessment are being sent to all affected agencies, private groups, other interested groups, and interested individuals. Revision of public use management on Dungeness National Wildlife Refuge will not occur until 30 days after the public notification date. As part of the public notice and review process associated with the proposed changes to public use management at Dungeness National Wildlife Refuge, the FWS made the draft Environmental Assessment available for review and comment. In some cases, the draft has undergone minor revisions in response to questions and issues raised during the comment period. No changes were made to the proposed action.

The FONSI, Final Environmental Assessment, and other supporting documents are on file at the Washington Coastal Refuges Office, 33 South Barr Road, Port Angeles, Washington 98362 (telephone (360) 457-8451). They are available for public inspection upon request.

Supporting Reference — *Final Environmental Assessment for the Management of Public Use for Dungeness National Wildlife Refuge.*

12/11/96
Date

Curt Smitch
Curt Smitch, Assistant Regional Director
North Pacific Coast Ecoregion

Final Environmental Assessment

Management of Public Use for Dungeness National Wildlife Refuge

Action is proposed under the following legal mandates

National Wildlife Refuge System Administration Act of 1966
(16 U.S.C. 688dd-668ee), as amended

Refuge Recreation Act of 1962
(16 U.S.C. 460k-460k-4), as amended

Clallam County, Washington

January, 1997

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1. The first part of the document discusses the importance of maintaining accurate records of all transactions and activities related to the business.

2. It is essential to ensure that all financial statements are prepared in accordance with the relevant accounting standards and regulations.

3. The document also highlights the need for regular audits and reviews to identify any potential issues or discrepancies in the financial data.

4. Furthermore, it is important to maintain clear and concise communication with all stakeholders, including investors, creditors, and regulatory authorities.

5. The document concludes by emphasizing the role of transparency and accountability in ensuring the long-term success and sustainability of the business.

6. It is recommended that all business owners and managers should take the time to review and understand the key points outlined in this document.

7. Finally, it is important to stay up-to-date with the latest developments in the field of business accounting and finance to ensure compliance and optimal performance.

8. The document is intended to provide a comprehensive overview of the key aspects of business accounting and finance, and is intended to be used as a reference tool for all business owners and managers.

9. It is hoped that this document will be helpful and informative, and that it will contribute to the overall success and growth of the business.

10. The document is a confidential document and should be kept secure and accessible only to those who have a legitimate need to know.

11. It is important to note that this document is not intended to provide legal or financial advice, and should be used in conjunction with professional advice.

12. The document is a living document and will be updated as needed to reflect changes in the business environment and regulatory requirements.

13. The document is a key component of the business's financial management system and is essential for ensuring the accuracy and integrity of the financial data.

Chapter 1

Purpose and Need for Action

Introduction

This Final Environmental Assessment (EA) presents and compares five alternatives for the management of public use on Dungeness National Wildlife Refuge (NWR) (Figure 1). Dungeness NWR has been separated into four management zones to better accommodate management discussions and facilitate implementation of any changes. Zone 1 is the half-mile of beach that extends southwest of the base of Dungeness Spit. Zone 2 includes the base and the first half mile northeast along Dungeness Spit. Zone 3 begins a half mile out from the base, continues to the lighthouse, and includes all tidelands and Graveyard Spit. Zone 4 covers the area from the eastern edge of the lighthouse compound to the end of Dungeness Spit. Trails for foot and equestrian access to Dungeness Spit traverse 74 acres of forested uplands. These forested uplands are not considered in this EA because public uses are limited to the trails and conflicts with wildlife are not occurring. The tideland parcel near Cline Spit and the three tideland parcels at the south end of Dungeness Harbor are included within Dungeness NWR, but are not addressed in this EA because they are currently administratively uncontrollable. The EA describes the predicted environmental, economic, and social consequences of each alternative, identifies a preferred alternative, and provides a means for public review.

The Proposed Action

The U.S. Fish and Wildlife Service (FWS) proposes to adopt and implement modifications in public use management on Dungeness NWR that would provide refuge visitors with high quality wildlife-dependent educational and recreational experiences while ensuring the allowed uses occur in a time, place, and manner that do not conflict with wildlife objectives and are compatible with refuge purposes.

Why Action is Being Considered

The number of visitors to Dungeness NWR has increased substantially in recent years. Between 1988 and 1994, annual visitation rose 67 percent, from 66,000 to 110,000. Visitation during 1996 was 112,000. During the same time period, wildlife use, including black brant, other waterfowl, and harbor seals, declined on Dungeness NWR. Dungeness NWR officials have become concerned that the number of visitors and the types of public use and recreational activities in which they are participating may be in conflict with the wildlife resources. A further concern is if left unregulated many of the activities could cause irreparable damage to Dungeness NWR's wildlife habitats. The rapid surge in visitation has resulted in the need to review the public use program to ensure the purpose for which Dungeness NWR was established is being upheld, and refuge wildlife and habitats are sufficiently protected. This final EA and public use plan describes the types of use and to what degree they will be permitted based on a lengthy review including extensive public participation.

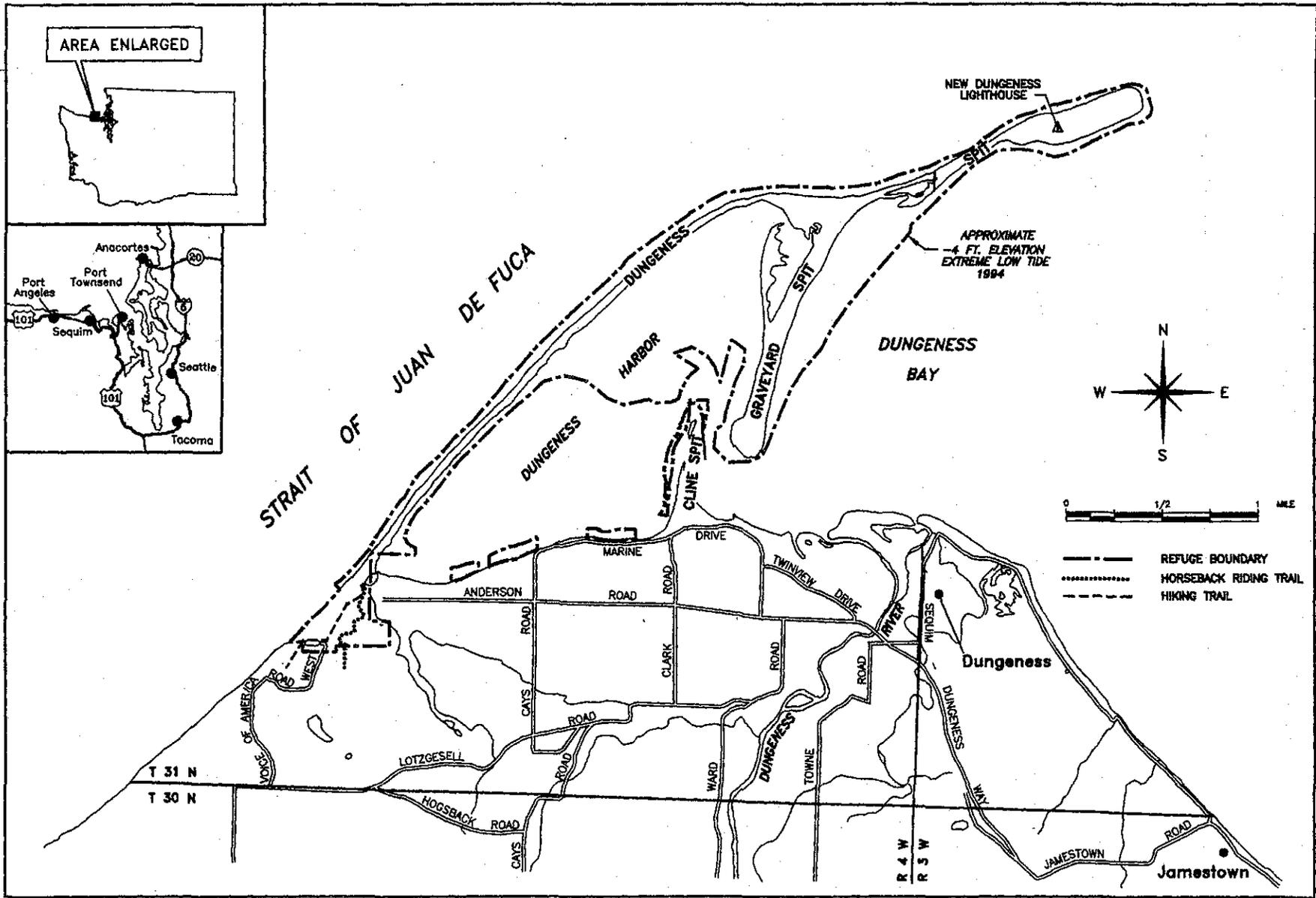


Figure 1. Dungeness National Wildlife Refuge

The Refuge Recreation Act of 1962 authorizes recreational use of refuges when such uses do not interfere with the refuge's primary purposes and when funds are available for the development, operation, and maintenance of these uses (Appendix A). The National Wildlife Refuge System Administration Act of 1966 further stipulates all uses of national wildlife refuges must be compatible with the purposes for which the refuge was established (Appendix A).

Dungeness NWR Purposes

Dungeness NWR was established by Executive Order 2123 on January 20, 1915 for the purpose of "... a refuge, preserve, and breeding ground for native birds ... " under the management of the Federal Government (Appendix B). On May 29, 1943, the State of Washington granted a Use Deed to the FWS for all of the second class tidelands associated with Dungeness NWR (Appendix C). These tidelands are to be managed as part of Dungeness NWR. On March 6, 1971, approximately 45 acres and on March 25, 1972 approximately 29 acres of forested upland were acquired by the U.S. Government, under the Refuge Recreation Act, for addition to Dungeness NWR. Under that act, these lands are "... suitable for: (1) incidental fish and wildlife-oriented recreational development, (2) the protection of natural resources, and (3) the conservation of endangered or threatened species ..."

Relationship of Action to Refuge System Mission, Goals, and Dungeness NWR Objectives

Dungeness NWR is managed by the FWS under the Department of the Interior, and is a unit of the National Wildlife Refuge System (NWRS). It is managed by the Washington Coastal Refuges Office in Port Angeles, Washington, which is part of the Nisqually NWR Complex.

Refuge System Mission and Goals

The mission of the NWRS is to, "preserve a national network of lands and waters for the conservation and management of fish, wildlife, and plant resources of the United States for the benefit of present and future generations" (Executive Order 1996).

To achieve this mission, each refuge emphasizes specific contributions it can make that are consistent with the following long-range NWRS goals (602 FW 1.4M):

- To preserve, restore, and enhance in their natural ecosystem (when practicable) all species of animals and plants that are endangered or threatened with becoming endangered.
- To perpetuate the migratory bird resource.
- To preserve a natural diversity and abundance of fauna and flora on refuge lands.
- To provide an understanding and appreciation of fish and wildlife ecology and people's role in their environment, and to provide refuge visitors with high quality, safe, wholesome and enjoyable recreational experiences oriented toward wildlife, to the extent these activities are compatible with the purposes for which the refuge was established.

Refuge System Guiding Principles

Management and general public use of the Refuge System are also influenced by the following guiding principles (Executive Order 1996):

- **Public Use** — The Refuge System provides important opportunities for compatible wildlife-dependent recreational activities involving hunting, fishing, wildlife observation and photography, and environmental education and interpretation.
- **Habitat** — Fish and wildlife will not prosper without high-quality habitat, and without fish and wildlife, traditional uses of refuges cannot be sustained. The Refuge System will continue to conserve and enhance the quality and diversity of fish and wildlife habitat within refuges.
- **Partnerships** — America's sportsmen and women were the first partners who insisted on protecting valuable wildlife habitat within wildlife refuges. Conservation partnerships with other Federal agencies, State agencies, Tribes, organizations, industry, and the general public can make significant contributions to the growth and management of the Refuge System.
- **Public Involvement** — The public should be given a full and open opportunity to participate in decisions regarding acquisition and management of our National Wildlife Refuges.

Dungeness NWR Objectives

The objectives for Dungeness NWR were developed by Refuge staff and approved by the Olympia Area Office in 1982. These objectives, as listed from highest to lower priority, further define and support the purpose for which Dungeness NWR was established.

- To provide and preserve habitat for the enhancement of wintering waterfowl and other migratory birds with emphasis on black brant.
- To protect and maintain natural habitats capable of supporting a diversity of wildlife.
- To provide public information, interpretation, and education on the wildlife resources of the Refuge.
- To provide wildlife-oriented recreation.
- To cooperate with other agencies, educational institutions, and private organizations and individuals in providing technical assistance and research opportunities consistent with Refuge objectives and management needs.

Management of Dungeness NWR is based upon the above prioritized objectives and several applicable laws and regulations (Appendix A). Regulations developed to guide implementation of applicable laws are codified under Title 50 of the U.S. Code of Regulations (50 CFR).

Public Involvement

An FWS interdisciplinary planning team was established in November 1993 to address the issue of wildlife being adversely impacted by the increase in public use at Dungeness NWR. As mentioned in the Public Involvement Plan (USFWS 1993) that resulted from the initial meeting of the team, “. . . it is the policy of the FWS to involve the public in decision-making regarding policies and/or actions that will affect or interest the public. . .”(Refuge Manual, 4 RM 4.3).

The public process began on March 28, 1994 when interested members of the public were invited to participate in a meeting in which the purpose for modifying public use management on Dungeness NWR was explained. The meeting provided a forum to identify key issues, affected public groups, public use management alternatives, and to develop a mailing list.

A public scoping meeting was held on June 9, 1994 to explain the planning process and identify issues associated with public use management on Dungeness NWR. Two booklets entitled, “Resolving Incompatible Uses at Dungeness National Wildlife Refuge” (USFWS 1994), and “Wildlife of Dungeness National Wildlife Refuge” (USFWS 1994), were distributed to the 37 people in attendance. The conflicts between public use activities and wildlife were explained, and those present were asked to help identify solutions to resolve them. Booklets were also mailed to those on the mailing list to solicit their input. The meetings resulted in numerous comments from the public and local agencies which were considered in developing the draft EA.

The draft EA was released on May 31, 1996 and distributed to individuals, organizations, agencies, governmental representatives, and libraries among others for comment and review (Appendix D). Comments were also received from 130 participants attending open houses on June 19 and 20, 1996. All comments were considered in completing the final EA.

The Issues Associated with the Proposed Action

The issues identified through the scoping effort are listed and described below.

Issue 1. Black brant, other waterfowl, waterbirds, and shorebirds are being disturbed by increased public use activities at Dungeness NWR.

The number of people visiting Dungeness NWR has increased over the past nine years to 112,000 per year. Visitors are participating in such activities as wildlife observation, hiking, clamming, boating, crabbing, picnicking, jetskiing, windsurfing, horseback riding, jogging, and other beach recreation. Depending on the type of activity and location, disturbance to wildlife has generally been greatest from October through mid-May. Many species of shorebirds, black brant other waterfowl, and waterbirds are disturbed during their resting and feeding periods in all habitat types. In 1993, Graveyard Spit was closed to public access to protect sensitive plant species and to provide an undisturbed sanctuary for wildlife.

Nesting shorebirds and seabirds are also being disturbed by public use activities. Black oystercatchers have traditionally nested along the shoreline on both sides of Graveyard Spit and along the shore on the Dungeness Bay side of Dungeness Spit near the lighthouse. Killdeer may nest anywhere along the shoreline of Dungeness and Graveyard spits, but they tend to select nesting sites on the Dungeness Bay and Harbor side of Dungeness Spit and on the east and west side of Graveyard Spit. These species are experiencing disturbance from hiking, horseback riding, wildlife observation, and visitors beaching their watercraft. Pigeon guillemots might also nest in the driftwood on the Dungeness Bay and Harbor side of Dungeness and Graveyard spits if disturbance were minimized.

Issue 2. Harbor seals are being disturbed on the tip of Dungeness Spit.

Fishing, boating, and hiking have negative impacts on harbor seal pupping and haul-out activity especially from March through September. The end of the Dungeness Spit past the lighthouse was closed to public access in August 1993 to protect harbor seals in the highest use area. Small numbers of individual seals continue to haul out and pup along the length of Dungeness Spit and may be adversely affected by public use activities.

Issue 3. The quality of wildlife-dependent recreation (wildlife observation) is being reduced by visitors participating in non-wildlife-dependent recreation.

People who visit Dungeness NWR to observe wildlife are disturbed by people involved in non-wildlife-dependent recreation such as beach use (swimming and other recreational beach activities), jogging, and horseback riding.

Compatibility Issues

National wildlife refuges are the only lands in Federal ownership managed primarily for wildlife. In 1989, two U.S. congressional committees requested that the General Accounting Office (GAO) evaluate management of national wildlife refuges to see if they were being managed for their stated purposes.

The GAO report found that refuges throughout the country were not meeting expectations. Many secondary uses were responsible for the destruction of wildlife habitats and diverting management attention from wildlife. Secondary uses are those activities that are not directly related to managing an area for wildlife. As a result of the report, refuge managers were interviewed to identify and review all secondary uses occurring on refuges to determine compatibility. A use is not compatible if it materially interferes with or detracts from the purpose(s) for which the refuge was established (Refuge Manual, Section 5 RM 20.6A).

A lawsuit was filed on October 22, 1992 against the FWS by the National Audubon Society, Wilderness Society, and Defenders of Wildlife (Audubon et. al. v. Babbitt, C92-1641), which alleged that the Service had, "... violated the Refuge Recreation

Act of 1962, the National Environmental Policy Act of 1969, and the Administrative Procedure Act in authorizing and allowing secondary uses of the National Wildlife Refuge System without ensuring that such uses are compatible with the purposes of the National Wildlife Refuges on which they occur, without ensuring that funds are available for the development, operation, and maintenance of secondary recreational uses, and without considering the environmental impacts of such secondary uses pursuant to NEPA”

The lawsuit resulted in a settlement agreement on October 20, 1993, which required another comprehensive review and evaluation of all secondary uses occurring on refuges, and the identification of uses found to be incompatible with Refuge purposes. Compatibility determinations were to comply with the National Environmental Policy Act process and those uses found not to be compatible would either be modified to assure compatibility or eliminated by October 20, 1994.

Dungeness NWR Compatibility Determinations

On July 11, 1994 compatibility determinations were completed for sixteen secondary use activities on Dungeness NWR. Environmental education, tribal fishing, research, fishing enhancement, and permitted special uses were found to be compatible and will be allowed to continue as presently occurring. Jetskiing and windsurfing were separately reviewed and each was determined not to be compatible even with modifications. Therefore, they cannot be allowed. The remaining nine uses were determined to be potentially compatible, if modified. These nine uses were hiking, wildlife observation, wildlife photography, non-motorized boating, motorized boating, recreational fishing/shellfishing, jogging, beach use (swimming and other recreational beach activities), and horseback riding.

Chapter 2

Alternatives Including the Proposed Action

Introduction

Several alternatives were considered by the planning team to address the issues described in Chapter 1. This chapter includes:

- A description of the five alternatives analyzed.
- The identification of the FWS preferred alternative.
- A comparison of how the alternatives achieve the purpose and need for the action.
- A comparison of how the alternatives address the issues identified in Chapter 1.
- A summary of the environmental consequences of each alternative.

The Process Used to Develop the Alternatives

The following important elements were considered when developing the five alternative strategies for addressing the issues and managing public use on Dungeness NWR:

- Public comment.
- Purpose and objectives for Dungeness NWR.
- Compatibility determinations that were prepared for Dungeness NWR.
- Laws, regulations, and policies that govern secondary uses on national wildlife refuges.

Alternative Considered But Not Studied in Detail

Close Dungeness NWR to Public Use During Peak Wildlife Use: This alternative action would close Dungeness NWR to all public access from October through May. This alternative would not have major advantages over closing portions of Dungeness NWR where peak wildlife use occurs during the same time period. Public use from October through May could be managed to minimize impacts on the wildlife resource.

Description of Alternatives

The planning team considered five alternatives in detail. The different management strategies, beginning with Alternative B, represent a progression from eliminating all public use to allowing the maximum public use possible, while still complying with compatibility mandates.

Alternative A — No Action

This alternative describes current management activities. All public uses would continue to occur throughout most of the Refuge, except on Graveyard Spit and the tip of Dungeness Spit which were closed in 1993 to protect wildlife. This alternative provides a reference point to compare and evaluate environmental consequences associated with the other alternative strategies. The response of wildlife to public use activities would continue to be monitored to determine long- and short-term population trends and to determine if Dungeness NWR's establishing purpose and current objectives are being met. This review would provide a basis for evaluating wildlife and public use management.

Alternative B — Eliminate Public Use

This alternative emphasizes wildlife protection and considers only the needs of wildlife and the protection of wildlife habitat. Although limited use by research and educational groups would be permitted under restrictive special use permits, the general public would not be permitted to visit Dungeness NWR during any time of the year. Wildlife populations would be monitored to measure the effectiveness of the closure.

Alternative C — Allow Compatible, Wildlife-Dependent Public Use

Alternative C would allow compatible wildlife-dependent recreation in selected areas, in some cases on a seasonal basis (Figure 2). Graveyard Spit and the tip of Dungeness Spit would remain closed to public access. Watercraft would not be allowed to beach on any part of Dungeness NWR. Non-wildlife-dependent activities including jogging, beach use (swimming and other recreational beach activities), and horseback riding would not be permitted. Jetskiing and windsurfing would be discontinued because they are not compatible with Refuge purposes.

Wildlife-dependent recreational activities would be modified as follows under Alternative C to make them compatible with Refuge purposes:

Zone 1: Hiking, wildlife observation, and wildlife photography would be permitted year round. Saltwater fishing would be permitted on the Strait side year round.

Zone 2: Hiking, wildlife observation, and wildlife photography would be permitted on the Strait side year round and on the Harbor side, from May 15 to September 30. Saltwater fishing would be allowed on the Strait side year round. Shellfishing (clamming and crabbing) would be allowed by foot access only on the Harbor side of Zone 2, from May 15 to September 30. From October 1 to May 14, the Harbor side of Zone 2 would be closed to all access.

Zone 3: Hiking, wildlife observation, wildlife photography, and saltwater fishing would be allowed on the Strait side year round. The Harbor and Bay side of Dungeness Spit in Zone 3, including a 100-yard buffer zone below the mean high tide line would be closed to public access year round. Where the Refuge boundary does not accommodate a 100 yard buffer, the buffer will be slightly narrower.

The buffer zone would extend to the Refuge boundary on the west side of Graveyard Spit. Motorized and non-motorized boats (kayaks, small sailboats, canoes, rowboats, etc.) would be allowed access to the areas west and east of Graveyard Spit in Zone 3, outside the 100-yard buffer, between May 15 and September 30. A no-wake zone would be in effect for power boats. This area would be closed to all access from October 1 to May 14.

Zone 4: This zone would be closed to public access year round.

Additional management actions would be taken to reduce disturbance to harbor seals pupping in areas open to public use. As soon as a new pup is found, the immediate area where the pup is located would be closed and marked with cones. A volunteer would be stationed at the site whenever possible to prevent disturbance and to educate visitors. Brochures, signs, and visitor contacts would continue to be used to educate the public about unnecessary pup disturbance and human intervention.

The response of wildlife to these modifications in public use activities would be monitored and evaluated to measure the effectiveness of the program in meeting Refuge purposes. Based on monitoring data, public use regulations could become more or less restrictive in the future.

Alternative D — Allow Compatible Wildlife-Dependent and Non-Wildlife-Dependent Public Use (Preferred Alternative)

Alternative D is the preferred alternative (Figure 3 and Table 1). It is identical to Alternative C, except that compatible non-wildlife-dependent public use would also be allowed and boats would be permitted to land in a designated area in Zone 3. Compatible wildlife-dependent uses would be permitted following the same management strategies as in Alternative C. Compatible non-wildlife-dependent activities would be permitted as follows:

Zone 1: Jogging and beach use (swimming and other recreational beach activities) would be permitted year round. Horseback riding would be permitted on the beach daily from October 1 to May 14 and on weekdays (not weekends) from May 15 to September 30, by reservation only through the Refuge Office (as deemed necessary by the Refuge). Depending on demand, numbers may be limited to prevent overcrowding and ensure public safety. Horseback riders may continue west for 3/4 mile on the County beach. Permits may be required in the future if the reservation system is not sufficient.

Zone 2: Jogging and beach use (swimming and other recreational beach activities) would be permitted on the Strait side year round.

Zone 3: Boats would be permitted to land year round, by reservation only through the Refuge Office (as deemed necessary by the Refuge), in the designated 100-yard zone of beach next to the lighthouse compound on the Bay side of Dungeness Spit. Visitors would be allowed to walk through Zone 3 in a designated area, to get to and from the lighthouse to the landing site. Boat landing

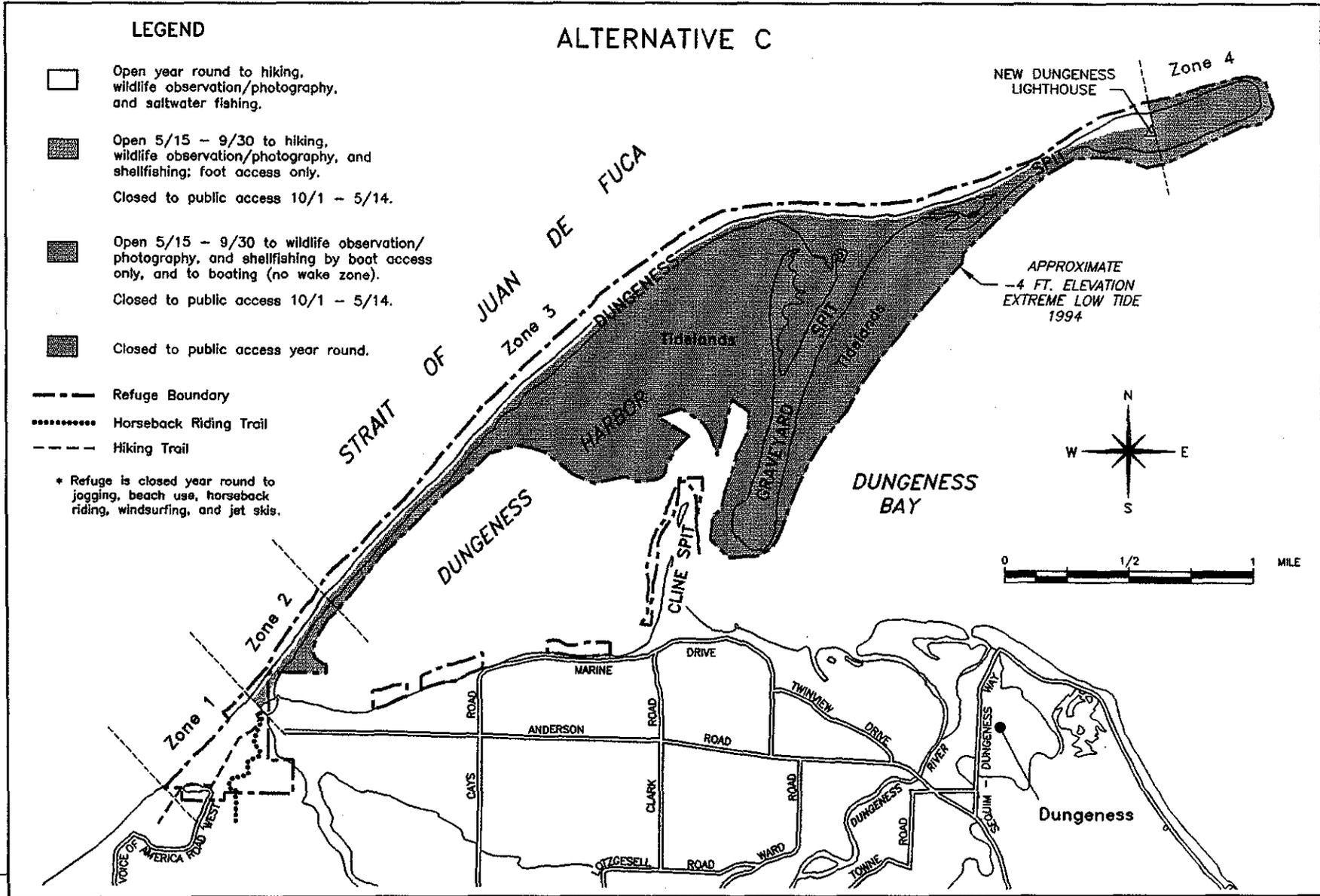
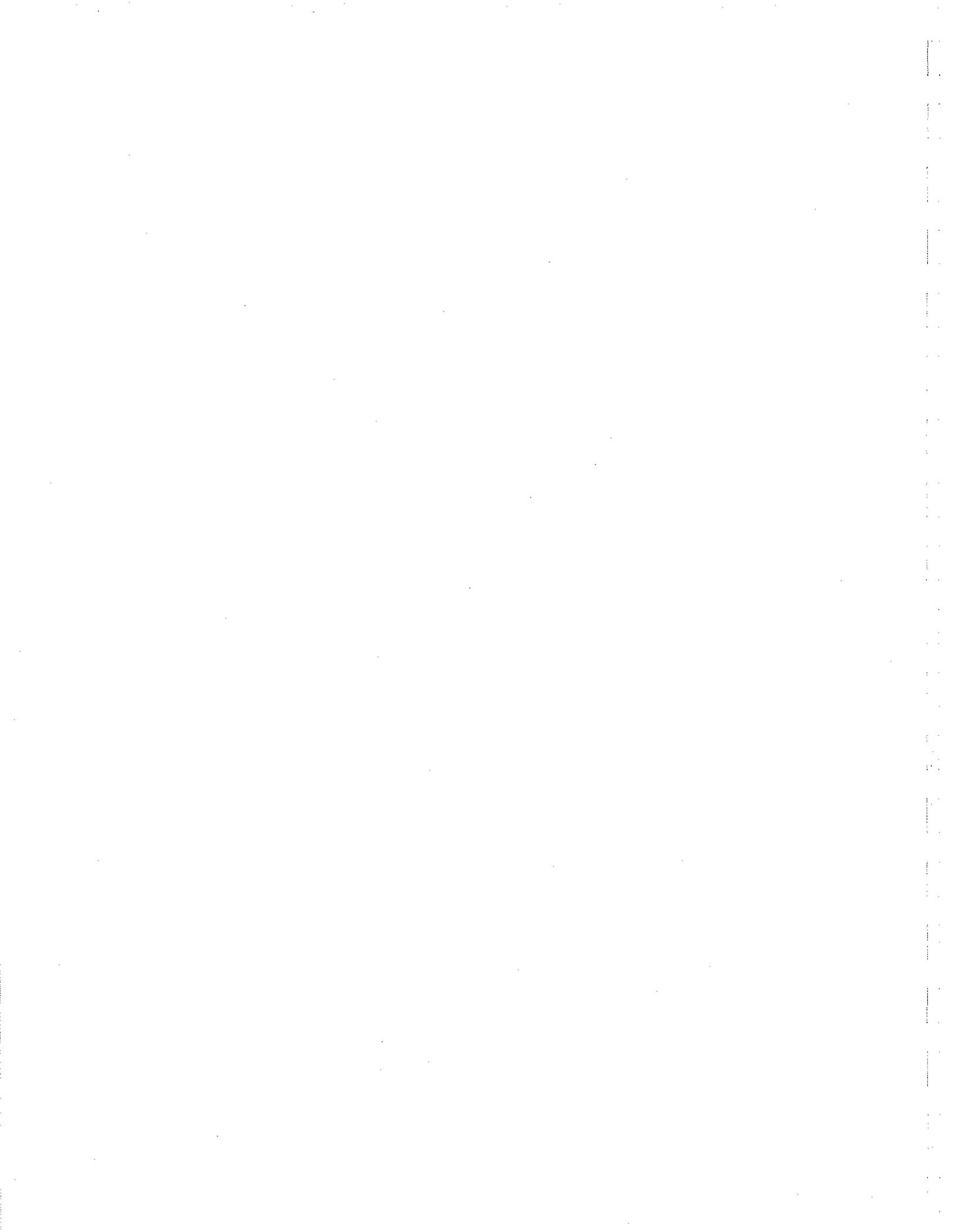


Figure 2. Alternative C.



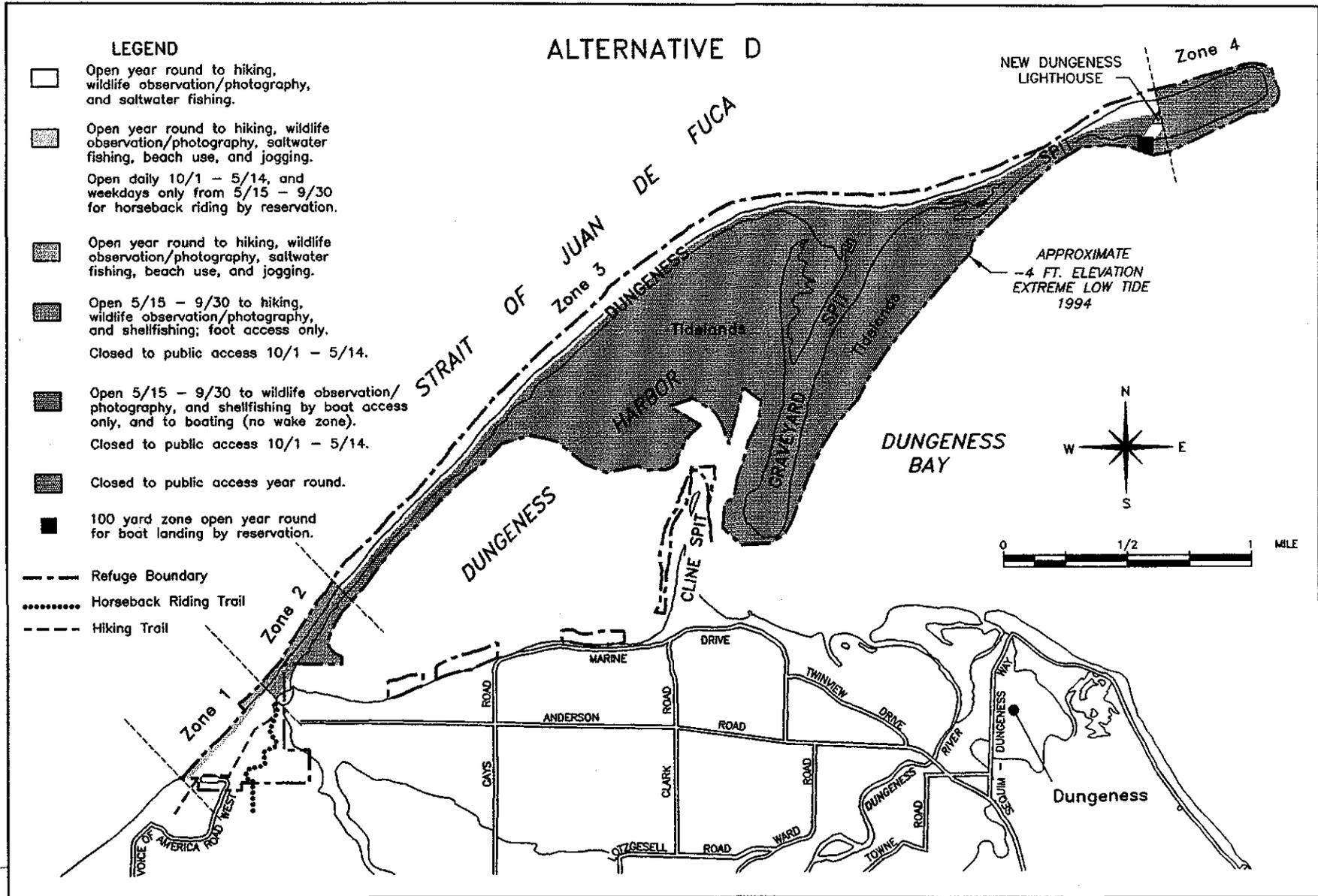
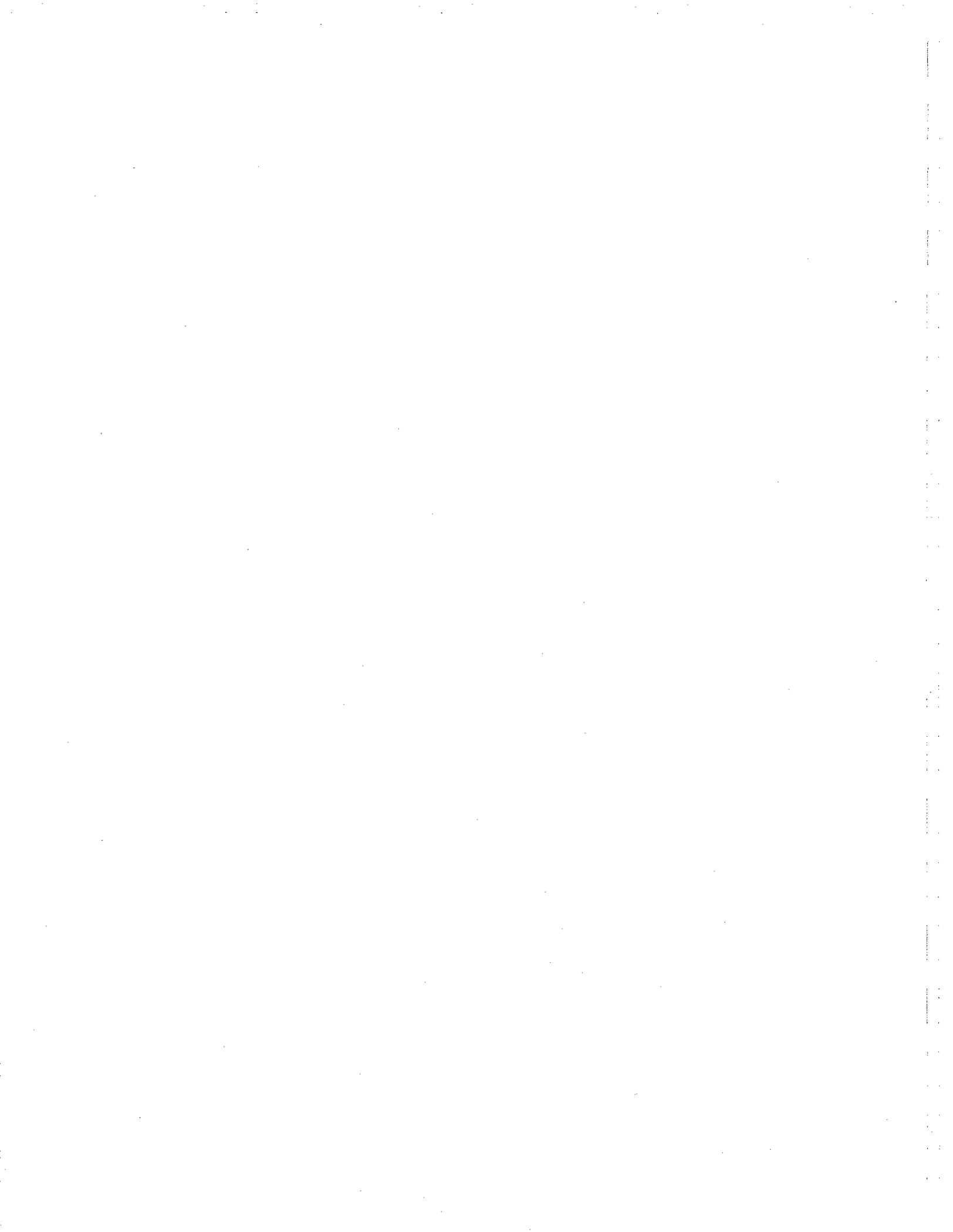


Figure 3. Alternative D.



	Zone 1	Zone 2	Zone 3	Zone 4
Hiking, wildlife observation/ photography	Foot access year round.	Foot access only. Strait side year round; Harbor side May 15 to Sept. 30.	Foot access only. Strait side year round.	-----
Jogging, beach use (swimming and other recreational beach activities)	Foot access year round.	Foot access only. Strait side year round.	-----	-----
Horseback riding	By reservation only. Daily October 1 to May 14. Weekdays May 15 to Sept. 30.	-----	-----	-----
Saltwater fishing	Foot access only. Strait side from shore year round.	Foot access only. Strait side from shore year round.	Foot access only. Strait side from shore year round.	-----
Shellfishing (clamming and crabbing)	Not applicable	Foot access only. Harbor side May 15 to September 30.	Boat access only. Tidelands east and west of Graveyard Spit, outside 100 yard buffer, May 15 to September 30.	-----
Motorized (no wake) and non-motorized boating	-----	-----	Tidelands east and west of Graveyard Spit, outside 100 yard buffer, May 15 to September 30.	-----
Beach landing by boat	-----	-----	By reservation only. Year round in 100 yard zone of beach next to the light-house compound on Bay side of Dungeness Spit.	-----

Table 1. Allowed public uses under Alternative D (Preferred Alternative).
 [“-----” means use not allowed]

would occur under existing, natural beach conditions without additional improvements. The reservation system will allow the number of boat landings to be limited to minimize wildlife disturbance and prevent overcrowding.

Zone 4: This zone would be closed to public access year round.

Management actions to protect harbor seals described under Alternative C would continue to be taken.

The response of wildlife to these modifications in public use activities would be monitored and evaluated to measure the effectiveness of the program in meeting Refuge purposes. Based on monitoring data, public use regulations could become more or less restrictive in the future.

Alternative E — Allow Maximum Public Use

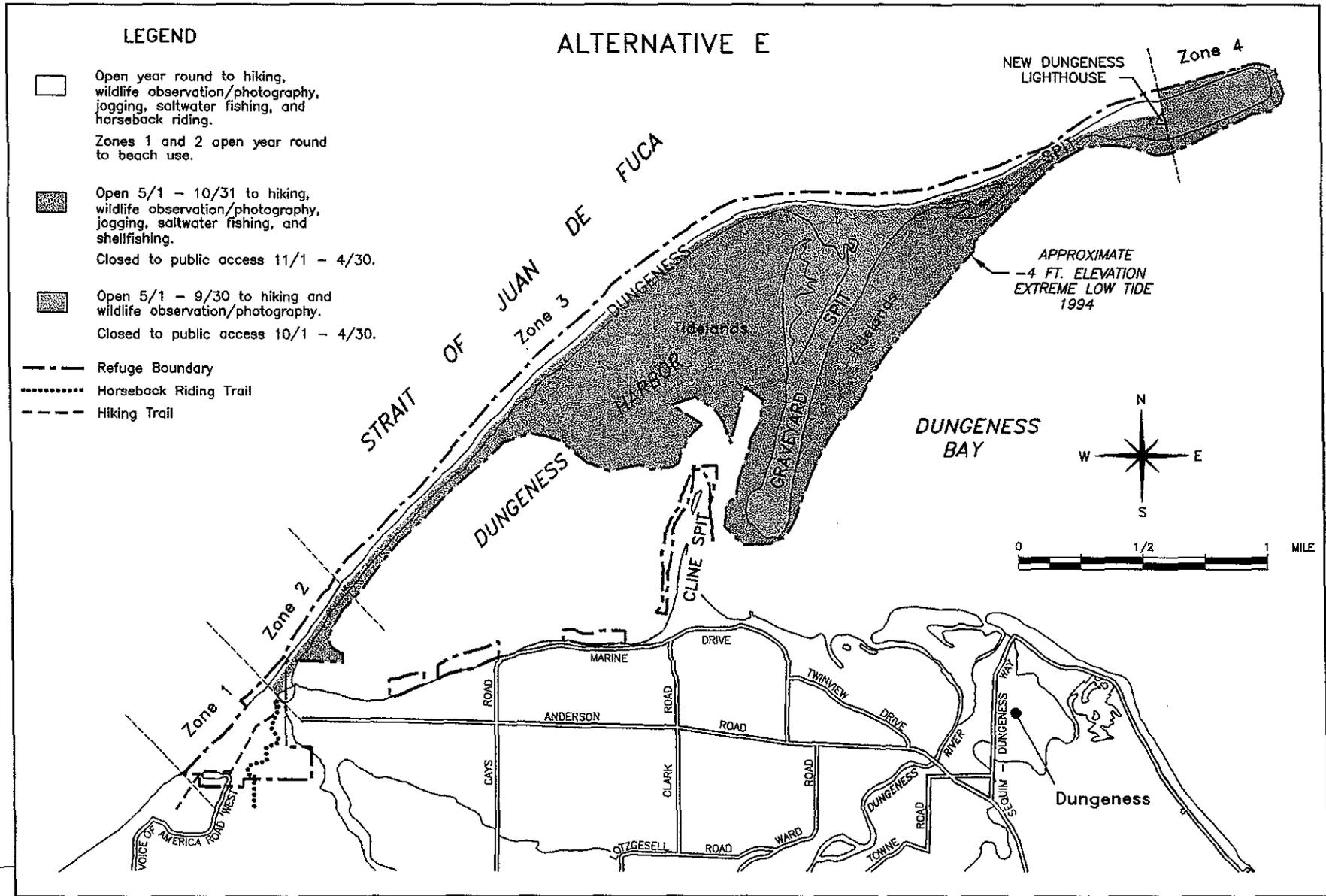
This alternative (Figure 4) allows wildlife-dependent and non-wildlife-dependent public use activities to occur in areas now closed and for a longer time span than recommended in other alternatives. Jetskiing and windsurfing would be discontinued because they are not compatible with Refuge purposes. Boats would be permitted to land on Dungeness NWR except during specific closures related to boating.

Zone 1: Hiking, wildlife observation, wildlife photography, jogging, beach use (swimming and other recreational beach activities), horseback riding, and saltwater fishing from shore would be allowed year round.

Zone 2: Hiking, wildlife observation, wildlife photography, jogging, beach use (swimming and other recreational beach activities), horseback riding, and saltwater fishing from shore would be allowed year round on the Strait side. Hiking, wildlife observation, wildlife photography, saltwater fishing, shellfishing, and boating (motorized and non-motorized) would be allowed on the Harbor side from May 1 to October 31.

Zone 3: Hiking, wildlife observation, wildlife photography, jogging, horseback riding, and saltwater fishing from shore would be allowed year round on the Strait side. Hiking, wildlife observation, wildlife photography, jogging, shellfishing, and boating (motorized and non-motorized) would be allowed on the Harbor and Bay side from May 1 to October 31 and closed November 1 to April 30. Graveyard Spit would be closed to public access October 1 to April 30.

Zone 4: Hiking, wildlife observation, wildlife photography, jogging, saltwater fishing, and shellfishing would be allowed throughout Zone 4 May 1 to September 30. From October 1 to October 31, hiking, wildlife observation, wildlife photography, jogging, and saltwater fishing from shore would be allowed on the Bay side only. The Strait side would be closed to public access during October. All of Zone 4 would be closed to public access November 1 to April 30.



The response of wildlife to these modifications in public use activities would be monitored and evaluated to measure the effectiveness of the program in meeting Refuge purposes. Based on monitoring data, public use regulations could become more or less restrictive in the future.

Summary of Environmental Consequences

Table 2 summarizes and compares the environmental consequences of each alternative. Each alternative was evaluated for its effectiveness in addressing the purpose and need for action, the establishing purpose and objectives, compatibility requirements, and the three issues identified in the public scoping process. (See Chapter 1). The effects of public use activities under the various alternatives on wildlife using Dungeness NWR is based on literature reviews conducted by the planning team, direct observation by staff, and responses from the public. The degree of conflict between public use activities and wildlife was assessed based on the following levels of conflict:

Severe Conflict: A direct impact which affects production or causes high stress level. The impact could result in mortality.

Conflict: An impact which is disrupting to traditional and required use patterns of wildlife. The impact would compromise wildlife objectives or the establishing purpose of Dungeness NWR.

Minimal Conflict: An impact which is a temporary disturbance that is considered acceptable. The impact would not compromise wildlife objectives or the establishing purpose of Dungeness NWR.

The response of wildlife to the alternatives is based on an increase or decrease of total numbers of wildlife that will visit Dungeness NWR annually. Effects of the alternatives on the economy of the area is based on the revenue generated by people camping in the adjacent county campground and on the amount of money spent in the area for fuel, lodging, and food in nearby communities.

Alternative A — No Action

This alternative would not address the purpose and need for action. Wildlife would continue to be disturbed, including brant, other waterfowl, waterbirds, shorebirds, and nesting birds, as described in Issue 1. Harbor seals would continue to be protected by a closure at the tip of Dungeness Spit (Issue 2). However, disturbance of individual harbor seals that occasionally haul out or pup in other locations on Dungeness Spit would continue to occur. Viewing opportunities of visitors participating in wildlife-dependent recreation would continue to be reduced by non-wildlife-dependent recreational visitors (Issue 3). The establishing purpose and objectives set for Dungeness NWR would not be met. The following uses would not be compatible and would not be in compliance with the Refuge Recreation Act and the National Wildlife Refuge System Administration Act: jetskiing, windsurfing, jogging, beach use, horseback riding, boating (motorized and non-motorized), hiking, recreational fishing (shellfishing), wildlife observation, and wildlife photography.

Alternative B — Eliminate Public Use

This alternative would ensure that public use activities and the increase in visitation would not conflict with the needs of wildlife. Wildlife, including brant, other waterfowl, waterbirds, shorebirds, nesting birds, and harbor seals, would not be disturbed by public use activities throughout the Refuge (Issues 1 and 2). Conflicts among user groups would not occur since the Refuge would be closed to the public (Issue 3). This alternative would be compatible with the establishing purpose for Dungeness NWR, but would not provide visitors with high quality wildlife-dependent educational and recreational experiences as outlined in the proposed action. In addition, this alternative would not accomplish one of the lower priority objectives set for Dungeness NWR, to provide wildlife-oriented recreational opportunities.

Alternative C — Allow Compatible Wildlife-Dependent Public Use

Alternative C addresses the purpose and need for action by effectively providing some additional protection of wildlife while making provision for wildlife-dependent public use. Disturbance to wildlife would be reduced because public uses would not be allowed where, or during the seasons when wildlife (brant, other waterfowl, waterbirds, shorebirds, nesting birds, and harbor seals) use is highest (Issues 1 and 2). Seasonal closures (October 1 to May 14) in Zone 3 and the Harbor side of Zone 2 would protect migrating and wintering shorebirds, waterfowl, and waterbirds. Year round closure along the Harbor and Bay side of Zone 3 would provide similar protection, as well as protect nesting birds during the spring and summer. Limited incidences of disturbance to harbor seals would continue to occur in cases where seals haul out or pup in areas open to public use on Dungeness Spit. Conflicts between visitors participating in wildlife-dependent and non-wildlife-dependent recreation would not occur, because the Refuge would be closed to the latter uses (Issue 3). This alternative supports the establishing purpose and objectives set for Dungeness NWR. Jetskiing and windsurfing would not be compatible with Refuge purposes and so would not be allowed. Uses described in Alternative C would be compatible, since only wildlife-dependent public uses, modified in a way that makes them compatible with Refuge purposes, would be allowed.

Alternative D — Allow Compatible Wildlife-Dependent and Non-Wildlife-Dependent Public Use (Preferred Alternative)

This alternative addresses the purpose and need for action by providing protection for wildlife while accommodating wildlife-dependent and non-wildlife-dependent public uses. Similar to Alternative C, public uses would not be allowed where, or during the seasons when, wildlife use is highest (Issues 1 and 2). Limited incidences of disturbance to harbor seals would continue to occur in cases where seals haul-out or pup in areas open to public use on Dungeness Spit. The conflict between wildlife-dependent and non-wildlife-dependent use would be reduced by designating an area where non-wildlife-dependent recreation would be permitted (Issue 3). Alternative D would support the establishing purpose and all of the objectives set for Dungeness NWR. Jetskiing and windsurfing would not be compatible with Refuge purposes and so

would not be allowed. Wildlife such as shorebirds, would be displaced from the designated 100 yard boat landing zone and harbor seals with pups maybe affected by the increase in boat traffic. Only compatible wildlife- and non-wildlife-dependent public uses would be permitted.

Alternative E — Allow Maximum Public Use

This alternative does not meet the purpose and need for action. The establishing purpose and objectives of Dungeness NWR would not be fully met. Wildlife (brant, other waterfowl, waterbirds, shorebirds, and nesting birds) would continue to be disturbed (Issue 1). Harbor seals would be disturbed at the tip of Dungeness Spit during the most sensitive period when pupping occurs (Issue 2). Disturbance to individual harbor seals hauled out or pupping in other parts of Dungeness Spit would continue at a somewhat higher level, since more of the Refuge would be open to public use. Allowing access onto Graveyard Spit would be detrimental to nesting birds and the sensitive plants growing there. Allowing non-wildlife-dependent public use in Zone 2 and some in Zone 3 year round on the Strait side of Dungeness Spit would conflict with visitors participating in wildlife-dependent recreation (Issue 3). Wildlife use during the summer months in many parts of the Refuge and sensitive habitats (e.g., Graveyard Spit) would be adversely affected. Under this alternative, hiking, wildlife observation, wildlife photography, boating (including boat landings), shellfishing, beach use, horseback riding, and jogging would not be compatible with Refuge purposes because they would be permitted in locations and during periods that would be disturbing to wildlife.

	Alternative A	Alternative B	Alternative C	Alternative D	Alternative E
Ability to meet Refuge purpose and objectives	No	Yes	Yes	Yes	No
Compatibility compliance	No	Yes	Yes	Yes	No
Shorebirds (total numbers)	Likely decrease	Likely increase	Likely increase	Likely increase	Likely decrease
Black brant (total numbers)	Likely decrease	Potential increase	Potential increase	Potential increase	Likely decrease
Waterfowl and waterbirds (total numbers)	Likely decrease	Likely increase	Likely increase	Likely increase	Likely decrease
Nesting birds (total numbers)	Likely decrease	Likely increase	Likely increase	Likely increase	Likely decrease
Endangered species (total numbers)	Likely decrease	Potential increase	Potential increase	Potential increase	Likely decrease
Marine Mammals (total numbers)	Stable or increase	Stable or increase	Stable or increase	Stable or increase	Likely decrease
Physical environment	Minimal	Minimal	Minimal	Minimal	Minimal
Quality of wildlife experience for visitors	Likely decrease	Decrease	Increase	Increase	Decrease
Conflict with wildlife-dependent uses	High	Minimal	Minimal	Medium	High
Local economy	Likely decrease	Decrease	Stable or increase	Stable or increase	Stable or increase

Table 2. Summary of environmental consequences.

Chapter 3

Affected Environment

Physical Description of Dungeness NWR

Dungeness NWR is located near Sequim in Clallam County, Washington on the southerly side of the Strait of Juan de Fuca (Figure 1). Natural features of this 631-acre Refuge include Dungeness Spit, Graveyard Spit, and portions of Dungeness Bay and Harbor. Dungeness Spit is believed to have formed during the Vashon glacial era 10 to 20 thousand years ago. An eastward flowing longshore current aided by prevailing northwesterly winds caused an eastward drift of sediments which formed the sand spit as it exists today.

These sediments were caught and held in place by a "backbone" of logs and driftwood that stretches along the entire median of the Spit's top. The 5 1/2 mile long Dungeness Spit is very narrow averaging 300 feet wide with the narrowest portions measuring only 50 feet during high tides. It accretes at an average rate of 15 feet per year. The Spit is characterized on its north side by sand and cobble beaches, and about 300 acres of tidal mudflats to the south. At its base is a tidal pond formed by a breached dike.

Graveyard Spit connects to Dungeness Spit at a point approximately 3 miles from the base of Dungeness Spit. Graveyard Spit averages about 475 feet in width. It extends about 1 1/4 miles south into the middle of Dungeness Bay and is surrounded by tidal mudflats and extensive eelgrass beds. A large tidal pond is located at the junction of the two spits and a smaller one occurs about 1/2-mile east of Graveyard Spit on the Bay side of Dungeness Spit. Graveyard Spit was set aside as a Research Natural Area (RNA) in 1990 due to its unique native vegetation characteristics. The FWS defines RNA's as, "... areas where natural processes are allowed to predominate without human intervention. Activities on RNA's are limited to research, study, observation, monitoring, and educational activities that are non-destructive, non-manipulative, and maintain unmodified conditions" (Refuge Manual, 8 RM 10.7).

The end of Dungeness Spit widens to about 800 feet, 1/2 mile from the tip. The Bay side becomes more sandy resembling the character of the shoreline on the Strait side, but cobble is also present. The spit is held in place at this point by driftwood and a variety of grasses.

Cultural Resources

S'Klallam Indian Tribe

The S'Klallam Indian Tribe inhabited the Dungeness area when the first European settlers arrived. Their use of Dungeness and Graveyard spits probably included temporary camping and food gathering, but the Tribe lived on Dungeness Spit from 1872 to 1873, after being asked to move off land which had been homesteaded in the

Dungeness community. Tribal member, Harriett Adams, was born on Dungeness Spit. After two years of difficult living and hauling water by canoe the S'Klallams purchased 222 acres and moved off the Spit to the area now known as Jamestown (Seattle Times 1961).

Dungeness and Graveyard spits are known S'Klallam burial grounds. In 1980, a burial canoe was collected from Graveyard Spit by the FWS. Eells (1886) described the burial customs of the S'Klallams as matching some of the early burials which had been washed out at Dungeness Spit. Graveyard Spit was the site of a massacre between tribes, which supposedly gave rise to its name.

New Dungeness Lighthouse

In 1857, the New Dungeness Lighthouse, located 1/3 mile from the end of Dungeness Spit became the first operational light in the Strait of Juan de Fuca and Puget Sound. The 32-acre lighthouse compound includes a part of the extreme eastern portion of Zone 3 uplands and all of Zone 4 uplands. The FWS and the United States Coast Guard (USCG) manage this area through a Memorandum of Understanding (MOU) the purpose of which is to "ensure that the natural resources of these Refuges are protected while permitting them to be used for lighthouse and aids to navigation purposes" (Appendix E).

The lighthouse and two-story residence were placed on the National Register of Historic Places in 1993. In 1994, the USCG permanently withdrew on-site staff who were responsible for maintenance of the lightstation. During that same year, the United States Lighthouse Society formed the New Dungeness Chapter (NDC) with the goal of preserving the lightstation facilities. NDC obtained a license agreement with the USCG and is now responsible for maintaining and preserving this historic site. The mission of the NDC is "To preserve, protect, maintain, and improve the lighthouse, while keeping it open to the public for generations to come." The NDC, as a licensee of the USCG, is bound by all agreements stated in the MOU.

The NDC staffs the lightstation with volunteers who perform routine maintenance and conduct lighthouse tours. The FWS issues a Special Use Permit to the NDC which includes allowing trips to and from the lighthouse by watercraft or land vehicle (through Zones 2 and 3) for access needs and emergency situations. In keeping with the spirit of the license agreement, the FWS will continue to provide Lightstation access to both the USCG and the NDC.

Military

From 1942 to 1946, there was a small naval station on Graveyard Spit. Old concrete foundations, cisterns, pathways, fence lines, and rubble still remain.

Biological Environment

Dungeness NWR provides habitat for a diverse number of wildlife species. Over 250 species of birds and 41 species of land mammals have been recorded on Dungeness NWR along with eight species of marine mammals. The nutrient-rich waters and tideflats of the Dungeness Bay and Harbor support extensive eelgrass beds (Figure 5).

The eelgrass beds and tidal mudflats of the inner Bay are especially important because they provide feeding and roosting areas for a variety of waterfowl, shorebirds, seabirds, and other bird species.

The bay and estuary of the Dungeness River produce microorganisms that form the base of a food web which supports a variety of wildlife including waterfowl, shorebirds, waterbirds, shellfish, harbor seals, and anadromous fish such as salmon. Numerous species of waterfowl stop briefly in the Dungeness area each fall on their journey south for the winter and again when they head north in the spring. Many species of waterfowl winter in the area. The black brant, a species of goose that depends on eelgrass for its food, is present from late October through early May. Shorebirds and waterbirds feed and rest along the water's edge, and harbor seals haul out to rest and have their pups on the end of Dungeness Spit. The tidflats are the home of crabs, clams, and other shellfish, while chinook, coho, pink, and chum salmon occur in the waters of Dungeness Bay and Harbor.

Dungeness NWR is internationally significant because many of the birds that stop at the Refuge breed as far north as Alaska and migrate through Canada, the United States, on into Mexico, and South America. The Dungeness area is additionally important as a spring staging area (a place where large groups of birds stop to build up their fat reserves for migration) for black brant and other waterfowl. International treaties have been implemented between the United States, Canada, and Mexico to ensure that migratory birds are protected and managed on a continental basis.

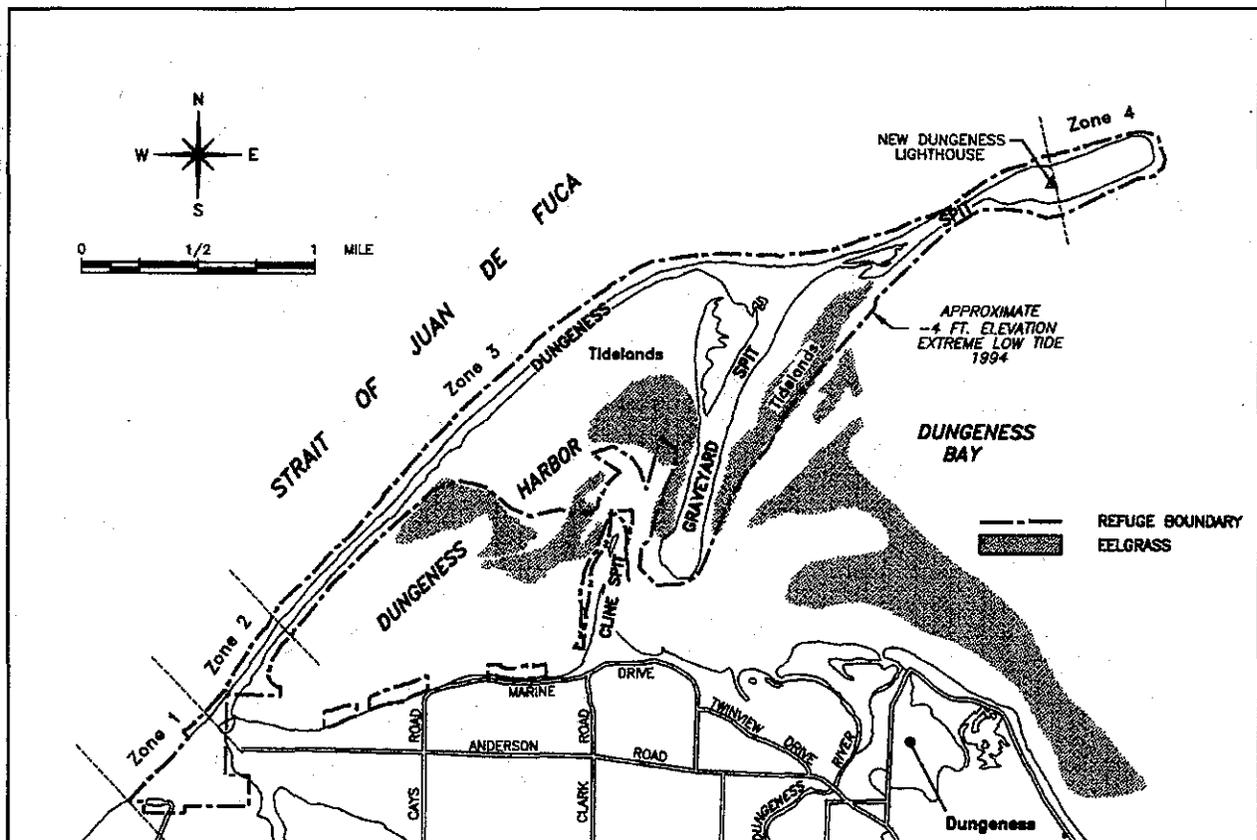


Figure 5. Eelgrass beds on Dungeness Bay and Harbor.

This EA focuses on those wildlife species or groups of species that are most prevalent on Dungeness NWR and that have the greatest potential to be impacted by public use activities. To better accommodate discussion, these species have been divided into seven categories: black brant, other waterfowl, waterbirds, shorebirds, threatened and endangered species, marine mammals, and fish and shellfish. Each wildlife category will be addressed separately in relation to its occurrence in each management zone.

Black Brant

The black brant is a true sea goose with salt glands that enable it to drink salt water and eat saltwater plants. The majority of its winter food is eelgrass interspersed with sea lettuce. Wilson and Atkinson (1995) report that Dungeness Bay is a traditional wintering area and spring staging area for brant. Approximately 1,500 brant spend the winter months (October through February) in this area. Starting in March, numbers increase and reach a peak of up to 8,000 birds in late April. This increase is due to the arrival of northbound migrants that stage in the Dungeness Bay area. Many birds use this area through mid-May. Although brant may be seen throughout the Bay, the majority of use is concentrated in Zone 3 on the tideflats adjacent to the west and east of Graveyard Spit (Figure 6).

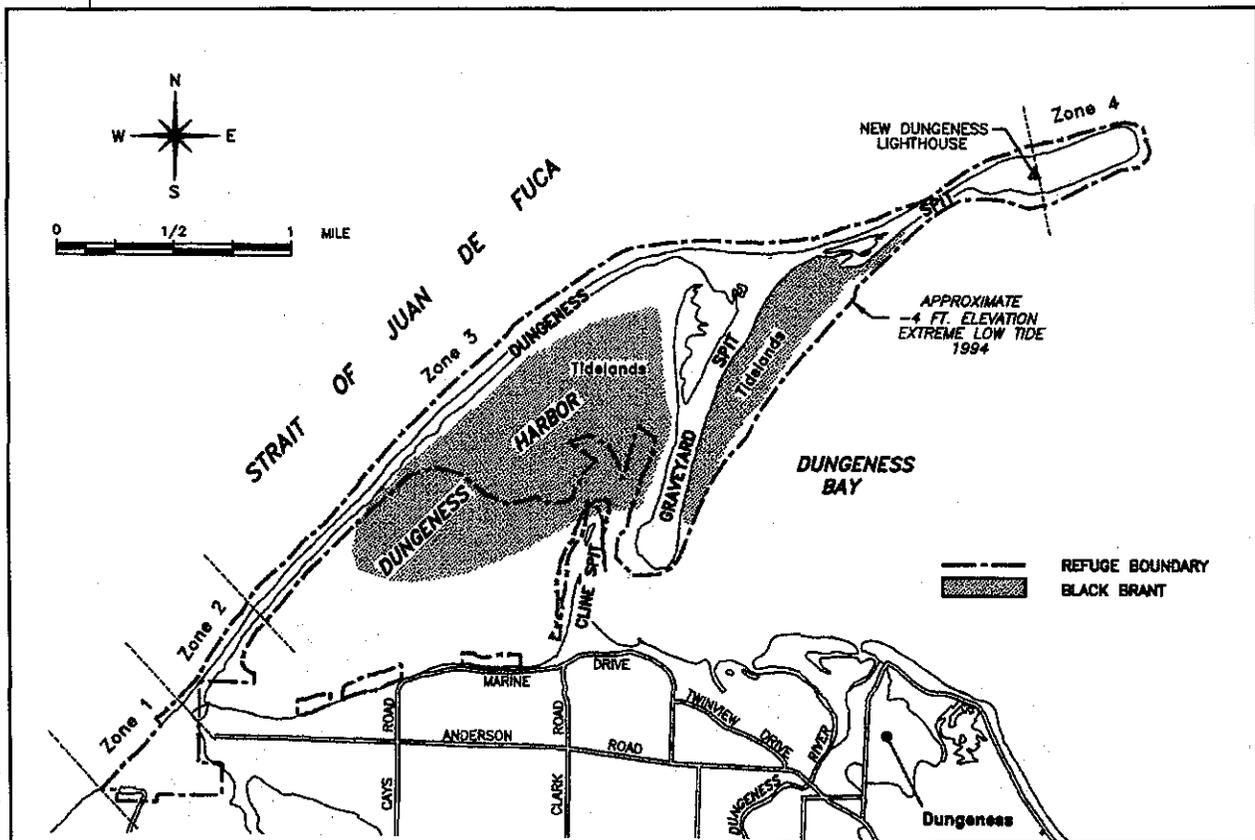


Figure 6. Higher use areas by black brant on Dungeness NWR and Dungeness Harbor.

The Dungeness area (composed of Dungeness Bay and Harbor and the nearshore waters east to Grays Marsh) is one of Washington's major wintering areas for black brant. From 1986-1993 black brant use during the critical spring-staging period declined by 63 percent in the Dungeness area (Figure 7). This decline coincided with a 31 percent decline in the area's eelgrass beds. During this period, immature black brant at Dungeness averaged 9.9 percent of the population, significantly below the 21.2 percent average for the Pacific flyway population. Low reproductive success of Dungeness brant is likely the result of poor quality wintering habitat (Wilson and Atkinson 1995).

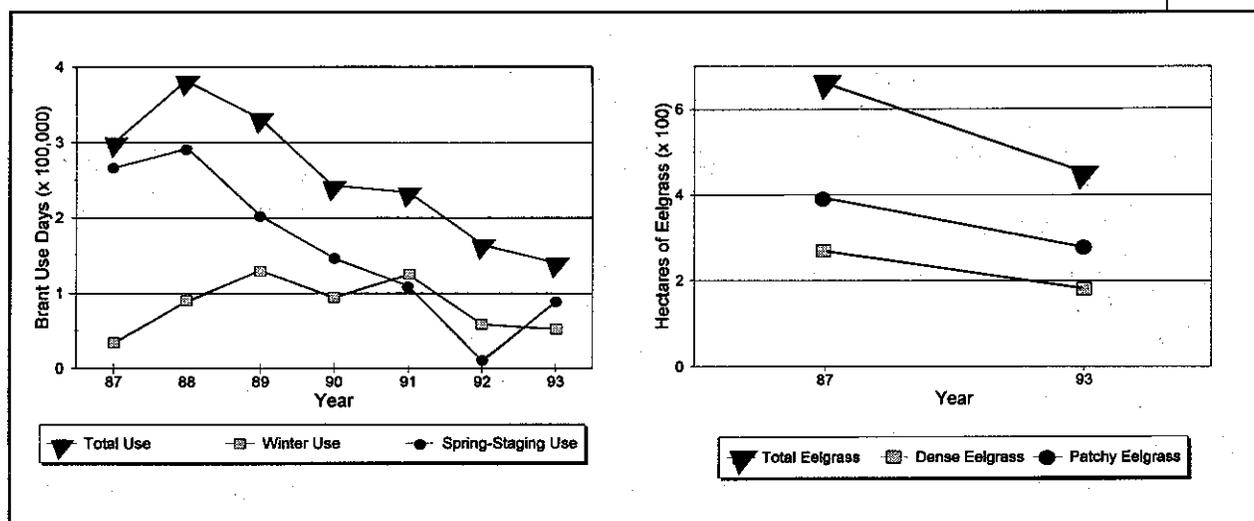


Figure 7. (Left) Black brant total, winter and spring — staging use days in the Dungeness area, 1986/87 to 1992/93.

(Right) Extent of total, dense and patchy eelgrass beds in the Dungeness area, 1987 vs. 1993.

Other Waterfowl

Dungeness NWR is a traditional wintering area for migratory waterfowl. Non-breeding birds also use the area through the spring, summer, and fall. The species of ducks using Dungeness NWR can be divided into dabbling and diving ducks. Dabbling ducks require shallow water for feeding and feed by tipping up their body and tail, and reaching below the surface with head and neck submerged. Common dabbling duck species found at Dungeness NWR are mallard, American wigeon, northern pintail, green-winged teal, and northern shoveler. Dabbling ducks favor the pond at the base of Dungeness Spit in Zone 2 and the water along the shoreline and lagoon at the base of Graveyard Spit in Zone 3 for feeding, but may roost anywhere along the shoreline on the Dungeness Harbor and Bay side of Dungeness Spit including Graveyard Spit (Figure 8). Migrating dabbling ducks begin arriving at Dungeness NWR in mid-October and remain through the winter months into late April. Dabbling duck numbers at Dungeness show a significant negative trend from 1976 through 1993 (USFWS Reports 1993) (Spearman rank correlation: $r = -0.643$, $n = 18$, $P = 0.0025$). The decline at Dungeness (Figure 9) is also correlated with a decline of

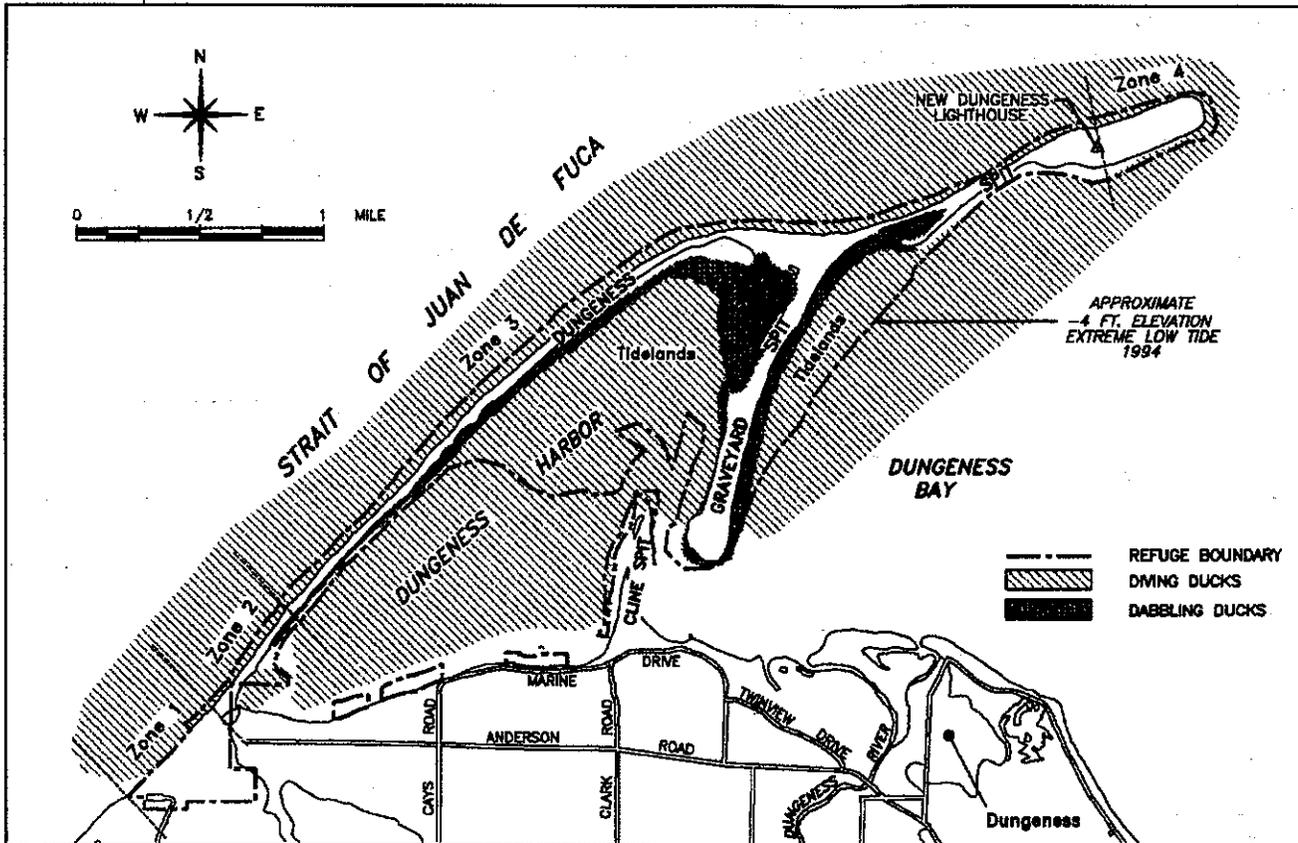


Figure 8. Higher use areas by dabbling and diving ducks on Dungeness NWR and surrounding area.

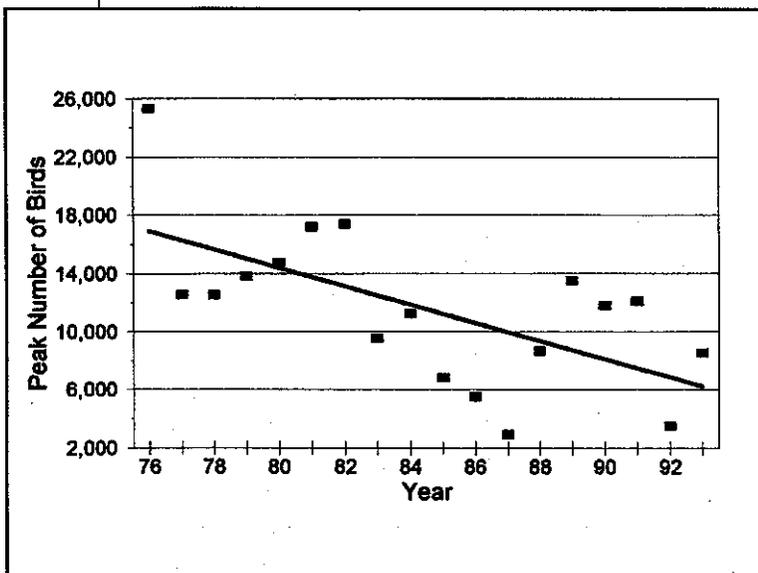


Figure 9. Dabbling duck population trends on Dungeness NWR, 1976-1993.

the Pacific Flyway population from 1980 through 1992 (FWS unpublished data) (Spearman rank correlation: $r = 0.593$, $n = 13$, $P < 0.025$). This suggests that factors beyond those at Dungeness are involved.

Diving ducks differ from dabbling ducks since, as the name implies, they dive for their food, which may be vegetation or animal life such as invertebrates, and therefore require deeper water for feeding. Common diving duck species that frequent Dungeness NWR are bufflehead, common goldeneye, surf and white-winged scoter, and greater and lesser scaup. Migrating

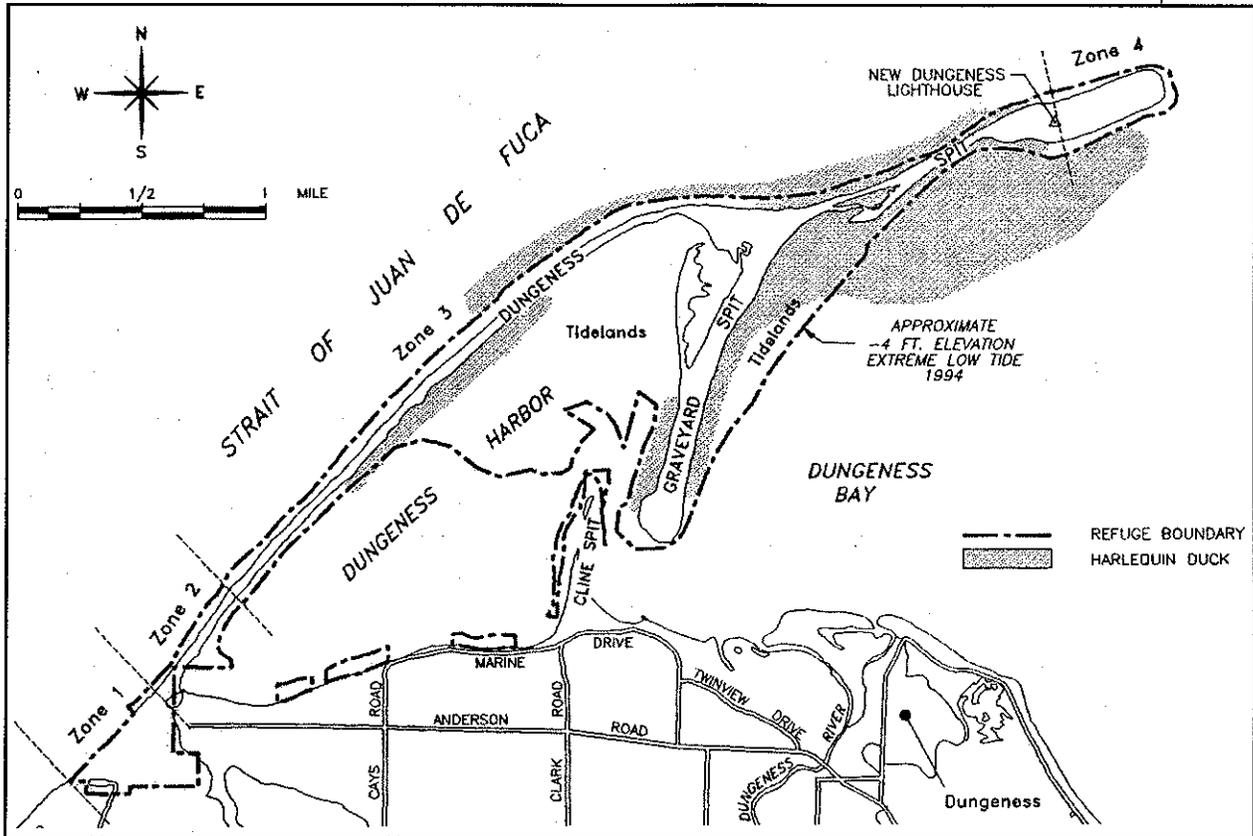


Figure 10. Higher use areas by harlequin ducks on Dungeness NWR and surrounding area.

diving ducks begin arriving at Dungeness NWR in early October with many remaining through the winter into April. Peak population numbers averaged 3,204 between 1976 and 1984 with a low of 1,330 in 1983 and high of 8,178 in 1981. The average peak between 1985 and 1993 was 1,954 with a low of 601 in 1988 and a high of 3,955 in 1985. Diving ducks are distributed over the open water of Zones 2, 3, and 4 and outside the Dungeness NWR boundary in Dungeness Harbor and Bay (Figure 8). The area to the west of Graveyard Spit in Zone 3 provides these birds with an important source of food and shelter from winter storms. Harlequin ducks, a state sensitive species, are year round residents of Dungeness NWR. They are commonly seen roosting on the Dungeness Bay side shoreline from Graveyard Spit northeast to the lighthouse in Zone 3. They concentrate on the north end of Zone 3 and directly opposite in Dungeness Bay (Figure 10). Harlequins feed in nearshore waters on crustaceans and molluscs, preferring rockier substrates or shoreline areas. With the exception of harlequin ducks, these diving ducks have not experienced declines similar to that exhibited by dabbling ducks.

Shorebirds

Shorebirds are a very diverse group of birds that frequent shorelines and tideflats. Each species has distinct feeding habits. Some, such as sanderlings, seek food at the surf edge while others may probe in the mudflats with their long bills. Each species has its own habitat requirements which must be considered when providing sanctuary areas on Dungeness NWR. Although 30 different species of shorebirds have been

observed at Dungeness NWR, 10 species are commonly seen. Species such as sanderling and black-bellied plover feed and roost on Dungeness NWR throughout the year. Major species during the spring and fall migration include western sandpiper, black and ruddy turnstone, whimbrel, short-billed dowitcher, and least sandpiper. Dunlins are the most abundant shorebird overwintering on Dungeness NWR forming flocks of 2,000 - 3,000 birds. The only species currently nesting on Dungeness NWR is the killdeer.

Dungeness NWR provides a stopover for shorebirds migrating from northern breeding areas in Alaska and Canada to wintering areas as far south as South America. Because of their long migration and tendency to concentrate in areas where food and shelter are most abundant, migrating shorebirds are particularly vulnerable to disturbance. The post-breeding migration to southern climates starts on Dungeness NWR in July (Paulson 1993 and FWS unpublished data 1993). About 5,000 birds, primarily dunlins, sanderlings, and black-bellied plovers will spend the winter on Dungeness NWR. The spring migration peaks in March when the total population may reach 25,000 birds but averages about 15,000 (FWS surveys 1993).

Critical feeding and roosting areas for shorebirds exist throughout Zones 2, 3, and 4 from the base to the tip of Dungeness Spit on the Dungeness Bay and Harbor side, outward and around Graveyard Spit, and on the tidelands east of the Dungeness Spit base (Figure 11). Many of the most commonly seen shorebirds feed on benthic (bottom) organisms of the Dungeness Harbor and Bay mudflats exposed during low tides. Higher shorebird counts coincide with the change of summer daytime low tides

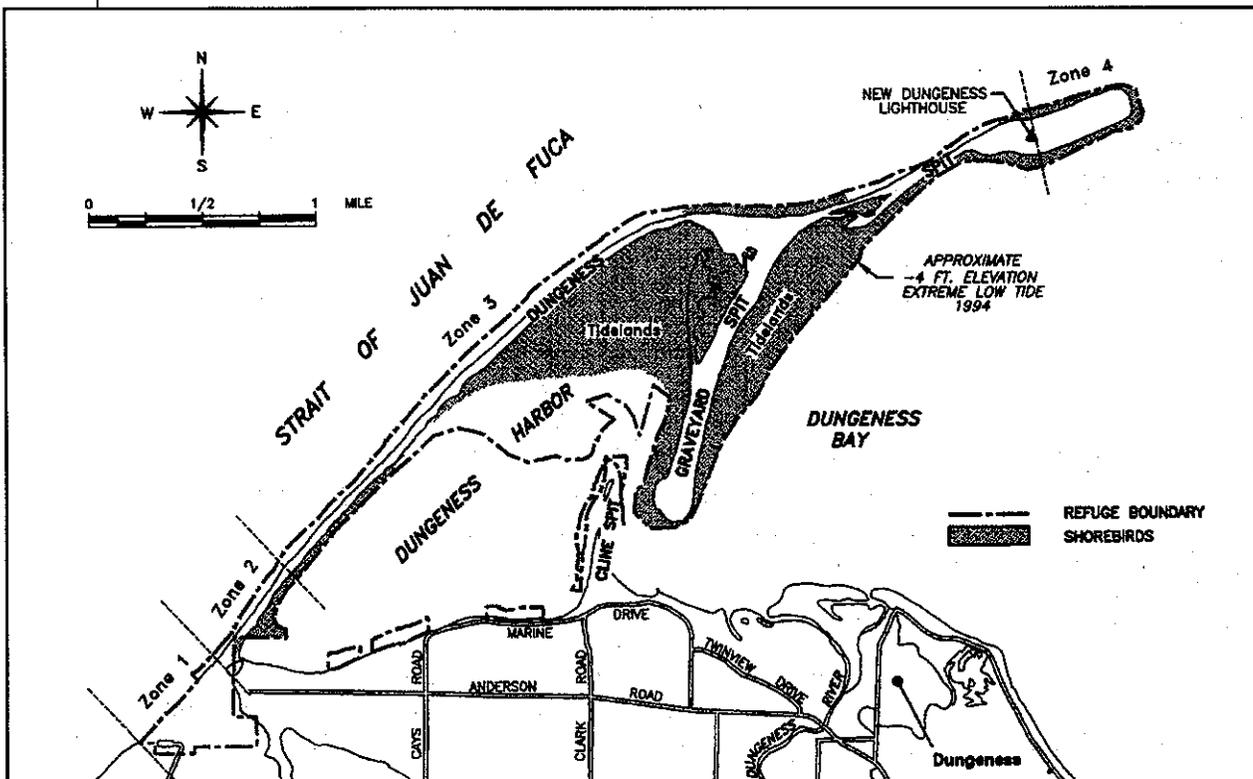


Figure 11. Higher use areas by shorebirds on Dungeness NWR.

to fall daytime high tides. These higher tides force feeding shorebirds closer into shore where they are more easily disrupted by visitors. Shorebirds also use the shoreline area on the inside of Dungeness Spit to roost during high tide or conserve energy during harsh weather conditions. Mixed flocks of 200 - 1,000 shorebirds, such as black-bellied plovers, sanderlings, dunlins, and short-billed dowitchers have been documented roosting within the first two miles of Dungeness Harbor (FWS unpublished survey data 1993, 1994, 1995). Shorebirds also roost in the upland areas from Graveyard Spit to the tip of Dungeness Spit. For example, several thousand ruddy turnstones and black-bellied plovers have been observed overnight on the open upland areas of Zone 4. Shorebirds also frequent the Strait of Juan de Fuca side of Dungeness Spit. As many as 1,000 or more sandpipers will forage along the Strait side of Dungeness Spit in the summer months.

Waterbirds

This category of birds includes great blue herons, grebes, loons, black oystercatchers, common murrelets, pigeon guillemots, and cormorants. Dungeness Bay and Harbor are used extensively by these birds for resting and feeding (Figure 12). Black oystercatchers have nested on Dungeness and Graveyard spits (FWS unpublished survey data 1994). Dungeness NWR is crucial to this group of birds because they return to winter in the area year after year. Some non-breeders also spend the summer. Breeding pigeon guillemots and great blue herons may come many miles from nesting colonies and rookeries to feed in this area. Dungeness Bay provides shelter and a rich feeding environment for the variety of species in this group.

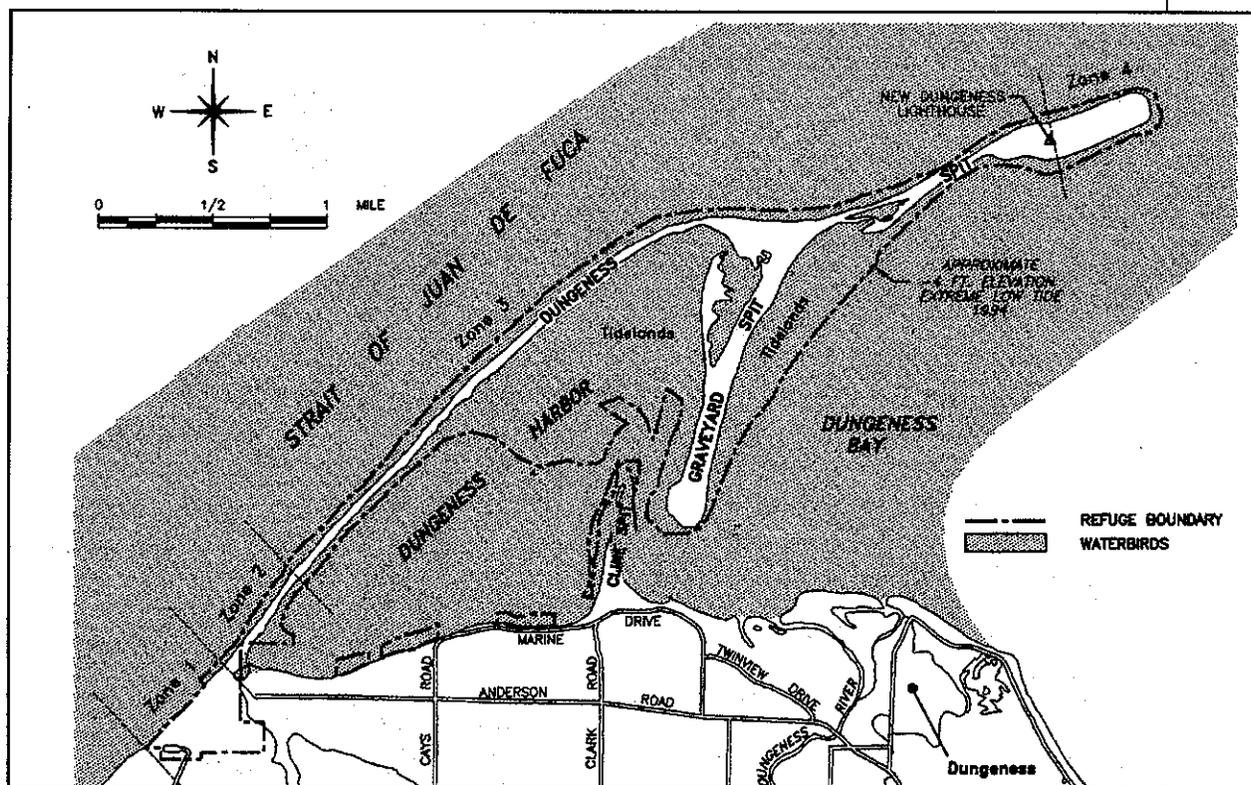


Figure 12. Higher use areas by waterbirds on Dungeness NWR and surrounding area.

Threatened and Endangered Species

The threatened bald eagle, western snowy plover, and marbled murrelet, and endangered peregrine falcon occur on Dungeness NWR. Of these four species, the bald eagle is observed most commonly and up to 24 birds may be seen feeding or roosting on Dungeness NWR. There are 8 known nesting territories within 10 miles of Dungeness NWR. Many of these nesting pairs are residents in the area year round. Eagles fly in and out of the Refuge frequently. Bald eagle use on the Refuge, including feeding and perching, is concentrated between the westside of Graveyard lagoon and the tip of Dungeness Spit. Sightings of peregrine falcons are rare, but they are sometimes observed during the spring and fall migrations, or in the winter. Several birds may be present occasionally.

Numbers of western snowy plovers recorded on Dungeness NWR during their summer breeding season increased from 1 bird in 1978 to 6 birds in 1986 (National Audubon Society 1978, National Audubon Society 1986). In June 1995, 4 to 6 western snowy plovers were sighted in the area between Graveyard Spit and the lighthouse (FWS unpublished data). Western snowy plovers are highly sensitive to disturbance, due to their use of open, sandy areas for nesting, where public use often occurs. Breeding status remains uncertain. Potential breeding areas on the Refuge are in the closed areas at the tip and along the inside of Dungeness Spit east of Graveyard Spit. Portions of Graveyard Spit may also be suitable for plover nesting.

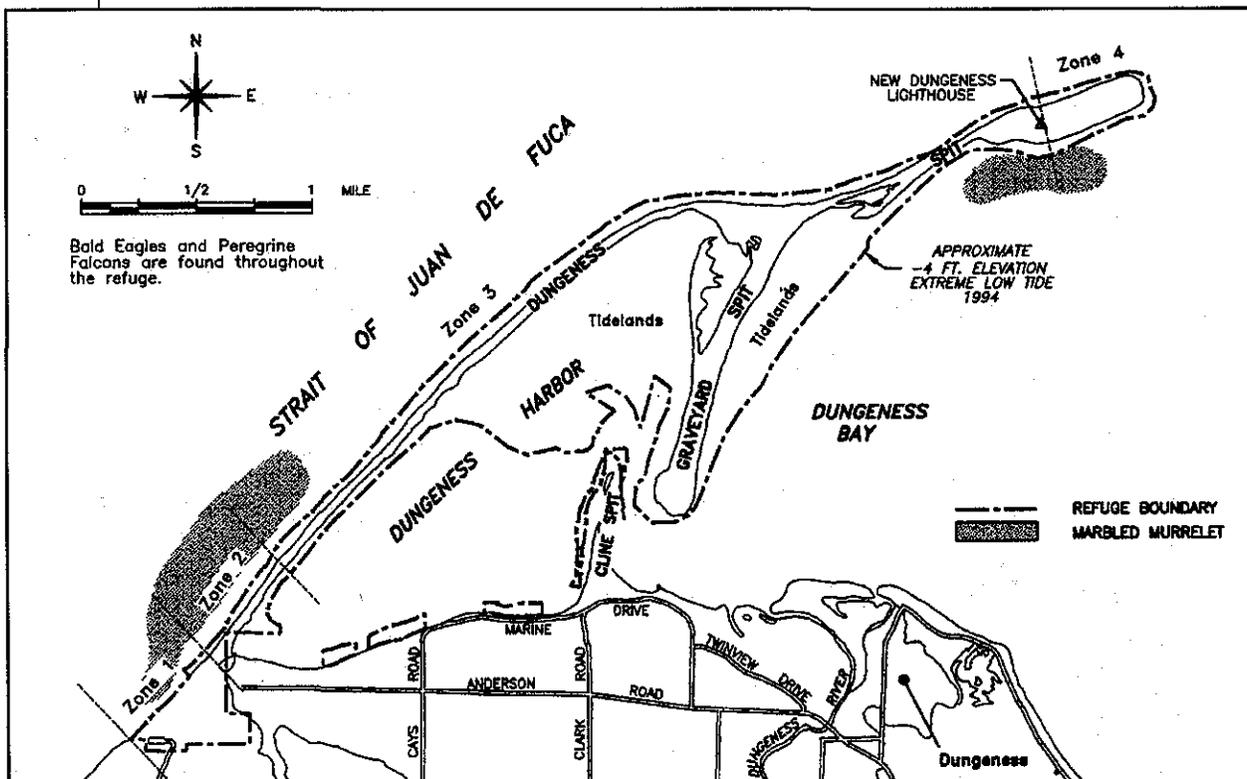


Figure 13. Highest use areas by marbled murrelets adjacent to Dungeness NWR.

The 1993 through 1995 marbled murrelet survey transects from Dungeness Spit to Morse Creek, and from the tip of Dungeness Spit to the base, averaged 12.35 birds/km² and 1.85 birds/km² respectively (Nysewander and Stein 1996). Marbled murrelets are best observed in Zones 1, 2, and 4 (Figure 13). Sightings of brown pelicans are rarely recorded.

Marine Mammals

FWS surveys recorded up to 600 harbor seals on Dungeness NWR (FWS unpublished data 1993). The tip of Dungeness Spit in Zone 4 is a traditional haul-out and pupping site. Haul-out sites are specific areas that are used each year by seals that form colonies when they leave the water to rest and give birth to their pups. Hauling out is crucial to the survival of harbor seals. The animals rest, sleep, mate, give birth, replenish depleted oxygen levels, and nurse their pups during this period. Haul-out sites are usually located in remote areas where seals are protected from predation and human disturbance. Female harbor seals with nursing pups form nursery groups adjacent to the main haul-out site on Dungeness Spit. These groups have been observed on the sheltered Bay side near the lighthouse from July to September. Harbor seals and their pups are very sensitive to disturbance at haul-out sites.

Up to 78 pups have been produced at the Dungeness NWR haul-out site in some years. The tip of Graveyard Spit, although no longer used, was once a traditional haul-out site. It is believed that human disturbance caused this area to be abandoned, leaving one remaining haul-out site on the tip of Dungeness Spit. A small population

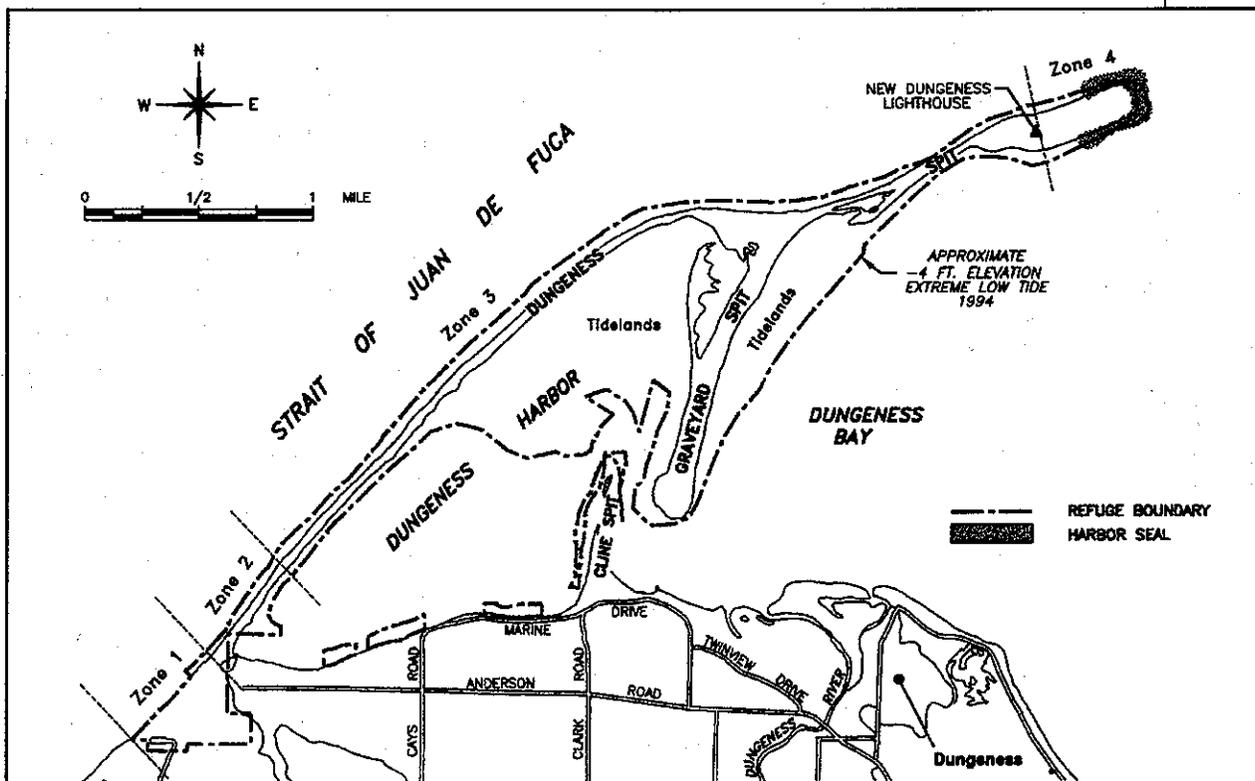


Figure 14. Harbor seal preferred haul-out sites on Dungeness NWR.

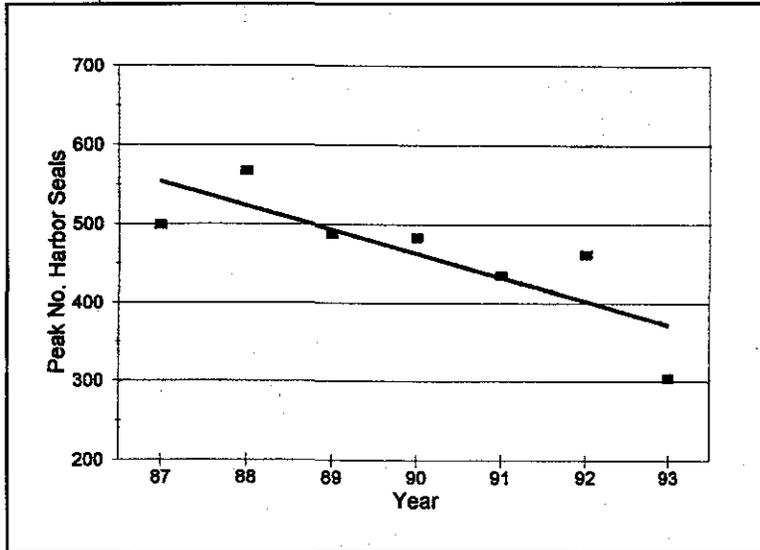


Figure 15. Harbor seal population trends on Dungeness NWR, 1987-1993.

In the Strait of Juan de Fuca there are two major haul-out sites in addition to Dungeness NWR. They are Protection Island and Smith/Minor Islands. Compared to Dungeness Spit these sites are relatively undisturbed. The annual pattern of harbor seal use at these sites shows little use during the winter months. Harbor seal numbers sharply increase during June and July when the first pups are born. In September and October there is another sharp increase in seals due to large numbers of molting animals followed by a decrease with the onset of winter.

According to FWS surveys conducted at Dungeness NWR, local harbor seal population numbers are depressed and the haul-out areas are frequently devoid of seals. The characteristic peak in numbers during molting in late summer no longer occurs, and the pup/adult ratio is unusually low (FWS unpublished data 1987-1993). Overall, the harbor seal population gradually declined over the past eight years (Figure 15). This decline is statistically significant (Spearman rank correlation: $r = -0.929$, $n = 7$, $P = 0.005$). The data also show the production of pups is declining (Figure 16). This decline is also

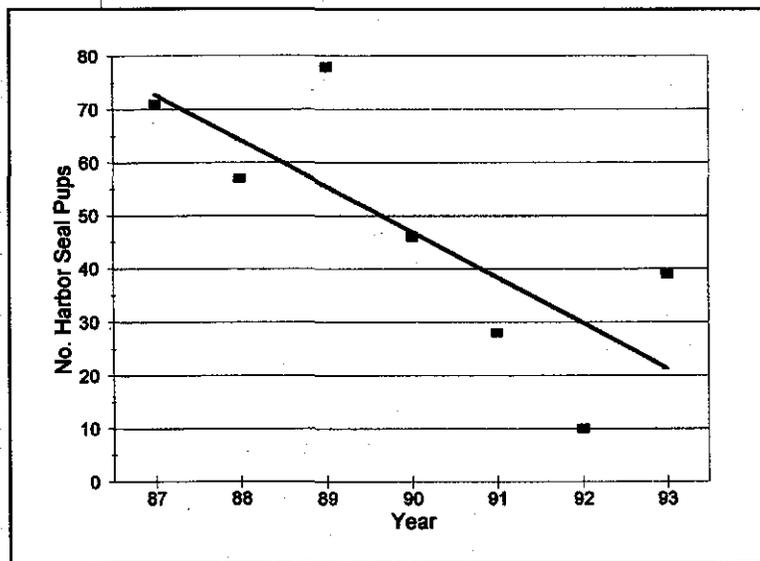


Figure 16. Harbor seal pup production on Dungeness NWR, 1987-1993.

of about 20 seals still pup on a small island located outside the Dungeness NWR boundary about 0.2 mile west of the tip of Graveyard Spit (Figure 14). Small numbers of individual harbor seals also haul-out and pup along the length of Dungeness Spit each year. Human disturbance has been documented to disrupt the relationship between pups and their mothers on numerous occasions along both sides of Dungeness Spit, thereby contributing to pup mortality, particularly where pups are born in higher public use areas.

statistically significant (Spearman rank correlation: $r = -0.786$, $n = 7$, $P = 0.025$). These trends are likely the result of increasing levels of human disturbance.

Small numbers of northern elephant seals occasionally haul-out and may molt on the tip of Dungeness Spit.

Fish and Shellfish

Dungeness Harbor, inclusive of management Zones 2 - 4, is an important nursery habitat for many species of fish including chum, pink, chinook, and coho salmon (Phillips 1984) (Figure 17). The area is especially important to the dwindling wild population of Dungeness River pink salmon. Seining surveys conducted by the FWS suggest that native pink and chum salmon migrate through Dungeness Harbor from the base of Dungeness Spit north along the eastern shoreline around Graveyard Spit and out to the end of Dungeness Spit (Hiss 1994). The shoreline and eelgrass beds provide important escape cover from predators for the juvenile salmon. Steelhead, cutthroat, lingcod, and to a lesser degree Dolly Varden, use the harbor as a rearing area during various times of the year. Adult salmon frequent the deeper parts of the harbor, including Dungeness Bay east of Graveyard Spit in Zone 3 and the tip of Dungeness Spit in Zone 4.

Littleneck and manila clams occur along the inside of Dungeness Spit in Zone 2 for about one mile from the base; other species occur in the upper portions of the Dungeness Harbor in Zone 3. Dungeness crab are found throughout the harbor, east of Graveyard Spit, and along the outside of Dungeness Spit.

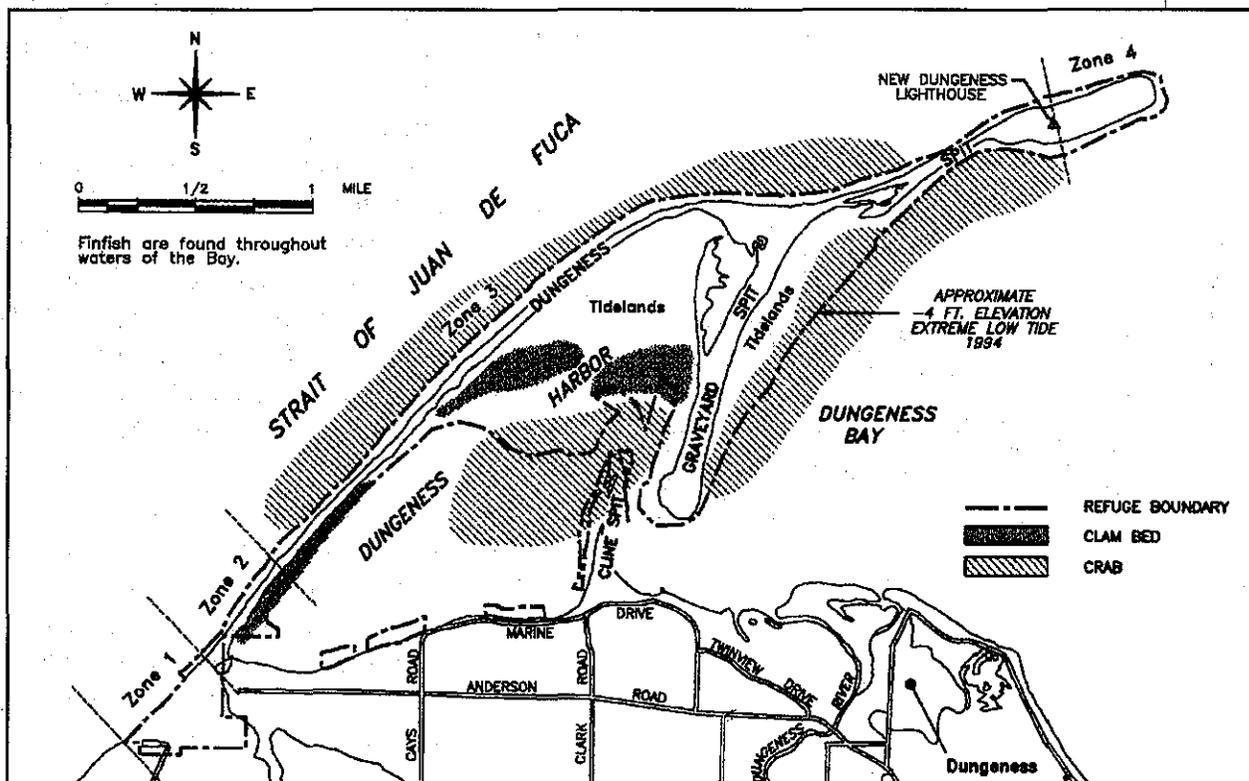


Figure 17. Fish and shellfish use on Dungeness NWR and surrounding area.

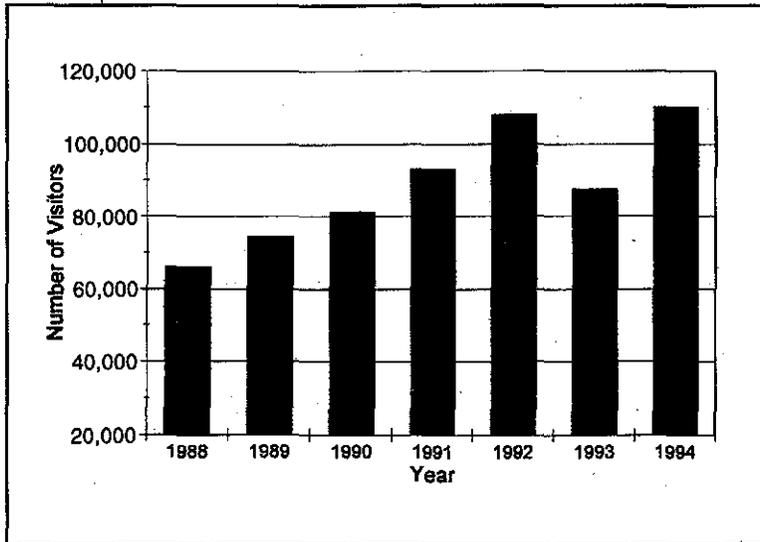


Figure 18. Yearly visitation to Dungeness NWR, 1988-1994.

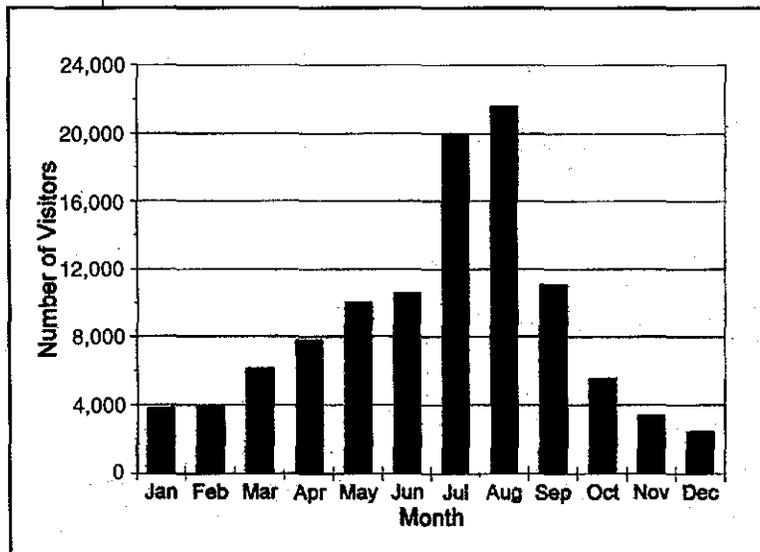


Figure 19. Monthly visitation to Dungeness NWR, 1994.

Visitor Trends

Dungeness NWR with its long sweeping beaches, spectacular views, and variety of wildlife has long been a major destination point for international and national visitors. For many years, Dungeness NWR has attracted people from the Seattle/Puget Sound vicinity who were seeking a place of solitude where they could experience nature or enjoy the outdoors by hiking or walking along the beach, or watching wildlife. Others were attracted to the area because of salmon fishing and shellfishing for clams and crab.

The majority of people visiting Dungeness NWR today have changed little in their recreational pursuits from those of the past. Visitors are still involved in the same kinds of activities, although some new non-wildlife-dependent activities such as jetskiing and windsurfing have emerged. Major changes have occurred, however, in the number of people visiting Dungeness NWR as is reflected in the visitation between 1988 and 1994 which increased from 66,000 to 110,000 (Figure 18). A representation of the monthly visitation to Dungeness NWR is shown in Figure 19. As would be expected, the higher use period occurs during the summer months from June to September. Visitation in 1994 is representative of a typical year in which approximately 60 percent of the visits occur between May and September.

Wildlife-dependent public uses are, “Voluntary, leisure time pursuits which require presence of or proximity to fish, wildlife, or wildlands . . .” (Refuge Manual, 8 RM 9.4A). About 60 percent of visitors to Dungeness NWR participate in this kind of use (Table 3). About 75 percent of these visitors participate in non-consumptive wildlife-dependent public use and 25 percent in consumptive wildlife-dependent use. Non-consumptive refers to uses such as wildlife observation and wildlife photography in which nothing is removed. Consumptive refers to uses such as fishing and shellfishing in which some resource is removed.

Non-wildlife-dependent public uses are, “Voluntary, leisure time pursuits which do not require presence or proximity to fish, wildlife, or wildlands . . .” (Refuge Manual 8 RM 9.4 B). About 40 percent of Dungeness NWR visitors are involved in these kinds of uses which include beach use, jogging, windsurfing, horseback riding, and jetskiing.

Wildlife-Dependent (60%)		Non-Wildlife-Dependent (40%)	
Non-consumptive	Consumptive	Non-consumptive	Consumptive
75 %	25 %	100%	0%

Table 3. Wildlife-dependent and non-wildlife-dependent public use on Dungeness NWR.

Public Use Activities Currently Occurring on Dungeness NWR

The public use review identified eleven public use activities occurring on Dungeness NWR. Wildlife-dependent recreational activities are wildlife observation, wildlife photography, hiking, recreational fishing (saltwater fishing and shellfishing) and boating (non-motorized and motorized) when used to participate in these activities. Non-wildlife-dependent activities are jetskiing, windsurfing, beach use (swimming and other recreational beach activities), jogging, horseback riding, and boating (non-motorized and motorized) when not used for a wildlife-dependent activity. The following describes uses, by management zone, as they now occur on Dungeness NWR.

Zone 1: Beach in Front of the Bluffs

Not many of the visitors currently use Zone 1, but a small percentage will walk along the beach during the summer months. Some visitors wade or swim in this zone while a few horse groups ride here. According to a 4-H group leader, their group rides their horses along the bluffs instead of riding on Dungeness Spit because they believe it is safer not mingling with people walking. When Zone 2 becomes crowded, visitors will use Zone 1 for picnicking and sunbathing.

Zone 2: Base of Dungeness Spit

Zone 2 receives the majority of visitation. People have remarked that they have seen so many people congregated at the base of Dungeness Spit on a warm summer day it resembled a southern California beach. Every person who walks on the Dungeness Spit must pass through this zone. In July and August, Zone 2 may receive up to 1,500 visits on a weekend day. It is not unusual to have 700 people in Zone 2 during the summer on weekdays. People walk both the Strait side and Dungeness Bay and Harbor side of the Spit for exercise, and to observe and photograph wildlife. Zone 2 is popular during the summer months (June through August) for beach use which includes swimming, frisbee tossing, and organized sports such as volleyball. The tideflats on the Harbor side along the first mile of the Dungeness Spit are also a popular clamming area from May through September with some clamming occurring during March, April, and October. Horseback riding is a popular activity during the summer months in Zones 2 and 3. Forty-five percent of the estimated 1,000 annual horseback riding visits occur in Zones 2 and 3 during the summer months. At present, horses are only permitted during weekdays from April 15 to October 15, and riders frequent both the Strait side and Dungeness Bay and Harbor side of the Spit.

Visitation begins to decrease in late September and by December reaches the low point for the year. The number of visitors begins to increase in March and gradually climbs, peaking in August (Figure 19). During the "off season" between October and May, Dungeness NWR may still receive up to 300 visits on a sunny weekend day. Public use activities during this time of year include hiking, wildlife observation, and horseback riding which is permitted seven days a week from October 16 to April 14.

Zone 3: Middle Dungeness Spit, Tidelands, and Graveyard Spit

Approximately 60 percent of the people visiting Dungeness NWR make it to Zone 3 by hiking or horseback, but only about 15 percent venture further than three miles from the base of Dungeness Spit. Both hikers and riders tend to favor the Strait side of the Spit, but many of these users will travel on the Dungeness Bay and Harbor side on their return trip. The shoreline along the inner Dungeness Harbor west of Graveyard Spit is also very popular with visitors who wish to observe wildlife, especially during the winter months from November through March. During the summer months of daytime low tides many visitors clam in the tidelands west of Graveyard Spit. Crabbing with crabpots east of Graveyard occurs from September through April. Both of these areas are accessed by boats. Many people beach their boats on Graveyard Spit while waiting to check their pots.

Pleasure boating takes many forms, including powerboating, jetskiing, sailboating, windsurfing, canoeing, and kayaking. Currently, jetskis are not numerous, but most of this use happens during the summer months and is likely to occur anywhere on Dungeness NWR waters much as powerboat use does. Small sailboats and canoes are occasionally used to visit this area in the summer.

It is possible for windsurfing to occur anytime of the year when the wind is right, but it is most common during the summer months. Windsurfers launch on the west side of Cline Spit and sail in a northerly direction (Figure 20). The Dungeness Harbor is

being advertised as the second best place to windsurf in Washington State and during good wind days as many as twenty windsurfers may be seen in this area. The majority of windsurfing occurs outside of Refuge boundaries and is not affected by this plan.

Kayaking is increasing in popularity on Dungeness NWR waters. Several kayak outfitters offer guided tours to Dungeness NWR and New Dungeness Lighthouse near the end of Dungeness Spit during the summer months. The kayaks launch at Cline Spit and travel through Dungeness NWR waters to a beaching spot in Zone 3 close to the lighthouse. Some kayak tours are given during the winter months, but the majority occur during the summer.

Powerboats are also used year round to visit the lighthouse and are beached in the same area used by kayak groups. Based on the visitor register at the lighthouse, a minimum of 5,000 visitors annually hike, ride horses, or boat as far as the lighthouse. Many of the visitors cross over to the Dungeness Bay side of the Spit to observe wildlife.

Zone 4: End of Dungeness Spit

The tip of Dungeness Spit from the east side of the lighthouse compound out is closed to public access.

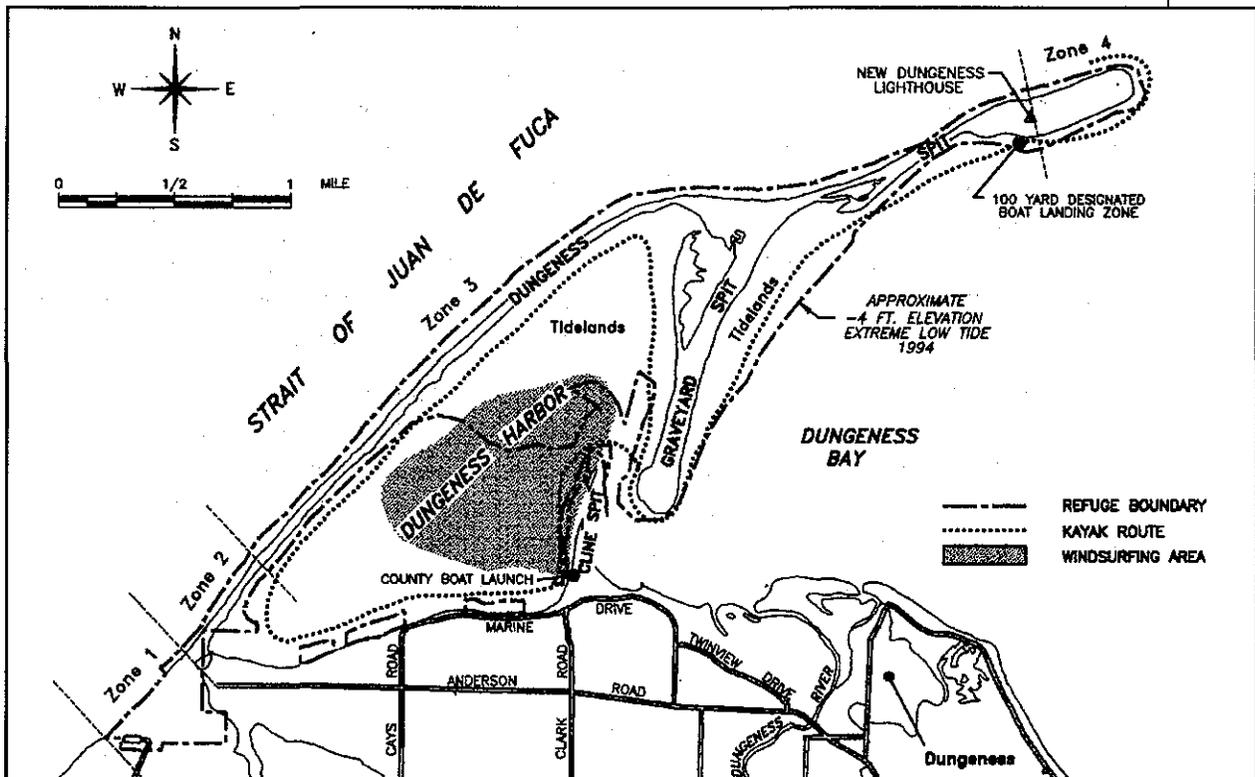


Figure 20. Higher use areas for pleasure boating on Dungeness NWR and surrounding area.

Cumulative Effect of Public Uses on Wildlife

As the human population grows, especially in the local area and urban centers such as Seattle, increasing numbers of people will seek wild areas like Dungeness NWR where they can experience the outdoors. Dungeness NWR is unique since even with its proximity to a growing community it still maintains a wilderness quality. The wildlife that live here and for which Dungeness NWR was set aside are basic to that quality. The increase in public use and visitation in recent years has caused managers as well as the general public to become concerned that wildlife populations are being adversely impacted. Many believe the amount of public use and the number of visitors have already reached a saturation point. On the other hand, some visitors believe their type of public use activity is not detrimental to wildlife. While this may be true if only a single use, or even a few uses, were involved, the cumulative impact of eleven unmanaged uses can be devastating to wildlife populations particularly where visitation is high. The challenge is to meet the needs of wildlife (the primary purpose of Dungeness NWR) while ensuring allowed public use activities are compatible, giving priority to wildlife-dependent uses (Executive Order 1996).

Economic Environment

Natural resource-based industries (timber, fishing, and agriculture) have historically dominated the economy of Clallam County (Clallam County 1992). Major employers within eastern Clallam County are the Jamestown S' Klallam Tribe, Olympic Memorial Hospital, Port Angeles School District, ITT Rayonier and Diashowa America. The 1990 census reported the per capita income in Clallam County to be \$16,402.

The scenic opportunities of Olympic National Park, state parks, and the ferry to Victoria, British Columbia draw upwards of three million visitors per year to the area. This supports a growing tourism-based industry. Benefiting businesses include motels, campgrounds, restaurants, grocery services, sporting goods suppliers, marinas, and gasoline stations. In 1990, visitor expenditures within Clallam County were over \$60 million. In addition, this scenic environment combined with a mild climate attracts a growing population of retired people to the Sequim-Dungeness area. The Sequim-Dungeness valley remains rural-residential with the highest rate, both in value and numbers, of residential building construction for the county.

Wildlife viewing opportunities are an important component of the local economy of Clallam County. In a market trend analysis for the North Olympic Peninsula, tourists were surveyed to detect what attractions and recreational opportunities were most significant to visitors (Runyan 1995). The opportunity to visit national parks or scenic wonders, and to view wildlife was ranked in the top three choices for visitor activities on the Peninsula (Runyan 1995) (Appendix F).

Chapter 4

Environmental Consequences

Introduction

This chapter identifies the environmental effects of each management alternative. The effects of specific activities are discussed for the following:

- Effects on Wildlife.
- Effects on the Physical Environment.
- Effects on Visitors Participating in Wildlife-dependent Uses and the Quality of their Experience.
- Effects on the Local Economy.

Effects of Alternative A — No Action

Review of the current public use activities identified many that are in conflict with wildlife and wildlife-dependent public use at Dungeness NWR. These activities are occurring during the same time period large numbers of wildlife are present on Dungeness NWR and in the same areas these species require for feeding, roosting, nesting, or seal pupping. The conflicts are resulting in many wildlife species being harassed and displaced from their preferred use areas. No change in public use activities would continue to stress already depleted wildlife populations. Under this alternative public use activities have a higher priority than wildlife. With the exception of harbor seals, most of which are protected by the closure at the end of Dungeness Spit, the no action alternative would most likely result in a continued decline of wildlife on Dungeness NWR.

Effects on Wildlife

Disturbance to nesting, feeding, and roosting wildlife can have far reaching effects. For example, migratory birds depend on undisturbed feeding and resting to build resources in preparation for breeding. Their ability to store adequate resources during the migratory and wintering periods may influence their breeding success the following season (Raveling and Heitmeyer 1989). In addition, the feeding and resting period may be compressed, leaving a very limited time (e.g., days) for replenishing resources before it is time to move on to another location. Continued or repeated disturbance that causes birds to flush from their feeding or resting site has an energetic cost, disrupts their behavior, temporarily displaces them from optimal sites, and may cause them to leave the area entirely. Alternative sites of equal value may not be available, particularly since the Refuge represents some of the best wildlife feeding and resting habitat in the area. If nesting birds are flushed, unattended eggs or chicks may be more vulnerable to predation. In worst cases, birds may abandon their nests altogether. Some wildlife populations have undergone declines due to a variety of

factors, including habitat loss, e.g., black brant. The need to protect these already depleted populations from added stresses, like disturbance, becomes even more important. Disturbance effects on wildlife are accentuated by the relatively small size of the Dungeness area and the overlap between optimum habitats and public use areas.

Effects on wildlife were evaluated in detail by public use activity to make it easier to compare alternatives.

Jetskiing. This activity is extremely disturbing to wildlife because of the high noise levels, extreme speed, the small area of water available on the Refuge where they could operate, and the high mobility of jetskis. One machine can cause enough disturbance to frighten all of the birds off of Dungeness NWR in a matter of minutes. For example, a jetski was observed putting up clouds of birds west of Graveyard Spit in mid-March 1995. Other nearby areas are available for this kind of activity such as Sequim Bay and Discovery Bay which have boat launch facilities.

Windsurfing. Windsurfing is increasing in popularity and occurs on Dungeness NWR west of Graveyard Spit. This activity causes conflicts with wildlife that frequent open water including black brant, other waterfowl, waterbirds, and harbor seals. The erratic movement of the sail and its associated popping sound causes birds to flush from their feeding and roosting areas on the water. Disturbance from windsurfers can last for long periods and cover large areas when the wind conditions are suitable, since one or more windsurfers will sail into and out of the Dungeness NWR repeatedly. Disturbance to wildlife is greatest from early October through mid-May, but may occur at other times since waterbirds or waterfowl are present in the Harbor all year. The south half of Dungeness Harbor is outside of the Dungeness NWR boundary. The majority of the windsurfing area (Figure 20) is outside the Refuge boundary and would not be affected by this plan. According to many people involved in this sport the area is large enough for tacking so that entry into Dungeness NWR is not necessary. This activity would contribute to a continued reduction in the use of Dungeness NWR by black brant, other waterfowl, and waterbirds resulting in a decline of these wildlife populations.

Boating (motorized). Motorized boating is associated with crabbing, clamming, and pleasure boating which occur all year on Dungeness NWR. The movement of the boat and engine noise are disturbing to black brant, other waterfowl, and waterbirds from October through mid-May when the birds are wintering, or resting and feeding during migration. Beached boats and the associated occupants conflict with shorebird use from late November through late April, but especially during the spring migration from March

through April when shorebird populations peak. Beaching of boats is detrimental to nesting black oystercatchers during the spring and summer. Boating would cause a decrease in the use of Dungeness NWR by shorebirds, and contribute to a continuing decrease in waterfowl, waterbirds, black brant, and nesting birds.

Boating (non-motorized). Non-motorized boating includes sea kayaks, small sailboats, rowboats, and canoes. Currently, the majority of use occurs during the summer months from May through September. Commercial outfitters offer tours originating outside of Dungeness NWR. The heaviest use also takes place during the summer months. Greatest conflicts with wildlife result from boaters "tracking" too close to shorelines and beaching their watercraft in areas where shorebirds, waterfowl, waterbirds, and harbor seals rest and feed and black oystercatchers and killdeer nest. These activities displace shorebirds, waterbirds, waterfowl, nesting birds, and harbor seals causing them to seek less preferred sites, either off Dungeness NWR or to concentrate in other areas on Dungeness NWR where they are less likely to be disturbed. Continuation of current boating patterns would likely lead to a decline of the total number in each wildlife population, since some of the habitat would not be available thus resulting in a lower carrying capacity.

Hiking, wildlife observation, and wildlife photography. These activities are similar in that they all occur in the same areas during the same time of the year and result in similar conflicts with wildlife. Conflicts with wildlife occur when visitors involved in these activities walk along the shore on the Dungeness Bay and Harbor side of Dungeness Spit from the early part of October through mid-May. Shorebirds and waterbirds which feed and roost along the shoreline and on the tideflats are easily disturbed by just a few visitors. For example, one person, or a group, may begin walking along the shore toward a group of feeding shorebirds. The approach of people causes the birds to move further along the beach until they eventually flush and return back to their feeding area. If this were the only instance of disturbance, the birds would be able to resume feeding without much harm. It is common, however, for several groups of visitors to visit an area such as this during the birds' feeding period. If the birds are pushed off of their feeding area several times, energetic costs are higher, feeding is disrupted, and they will eventually abandon the area.

Research has shown that birds such as shorebirds must feed intensively during the time that the tideflats are exposed by low tides to get enough food to survive (Dugan et al 1981). Continual disturbance can deprive them of their food source which will hamper their food intake and therefore lower their energy and fat reserves, which

are especially important for migration and breeding (Boyle and Samson 1985, Burger and Gochfeld 1991). Black brant, bald eagles, and some waterfowl that frequent shorelines, are also disturbed off their feeding and roosting areas by these activities. Before the end of Dungeness Spit was closed to visitor access, harbor seals were often chased from their haul-out sites into the water by people on foot. Pup disturbance, which contributes to mortality, continues to be documented along both sides of Dungeness Spit, where small numbers of individual harbor seals haul out and pup each year. These activities also cause enough disturbance during the spring and summer to impede nesting by black oystercatchers and killdeer on the Dungeness Bay and Harbor side of the Dungeness Spit. Pink and chum salmon smolts that seek cover in the shallows may also be frightened into deeper water by people walking along the shore, causing smolts to become easier prey for larger fish.

These activities, as currently occurring, would likely result in a decline of wintering shorebirds, black brant, other waterfowl, some species of waterbirds and bald eagles on Dungeness NWR. Pink and chum salmon populations would continue to be slightly impacted by these activities.

Recreational fishing and shellfishing. Visitors travel to the clamming and crabbing beds either by foot or by boat. The preferred clamming area is on the tideflats at the base of Dungeness Spit and continues out for about one mile. This area is accessed mostly by foot. Conflicts with wildlife are the same as for people hiking, as described in the previous section. The tidelands east and west of Graveyard Spit also receive some clamming use, but are more popular for crabbing. These areas are accessed by both motorized and non-motorized boats so the conflicts with wildlife are the same for both kinds of boating. Clammers using the tideflats west of Graveyard Spit, however, tend to keep black brant and other waterfowl off of the eelgrass beds during the early spring when brant are staging. Crabbers on the other hand set out crab pots east of Graveyard Spit by boat which impacts waterbirds, black brant, and other waterfowl from November through February. Overall impacts on wildlife would be the same as for hiking and motorized boating.

Effects on the Physical Environment

The effect to the physical environment would be minimal. Foot traffic on the Dungeness Bay and Harbor side of Dungeness Spit may cause minor erosion, but not enough to cause serious damage. Horse traffic may cause more erosion. Clam diggers may disturb the tideflats by leaving uncovered holes. According to recent seagrass research, eelgrass bed scarring may occur when a boat's propeller or anchor tears and cuts up the eelgrass's roots, stems, and leaves (Sargeant 1995). This is more likely to happen in the summer when low tides occur in the daytime. During this

time, boaters frequently anchor over shallow beds and their boats swing at anchor. The retrieval of crab pots from eelgrass beds or the movement of unweighted pots also may dislodge eelgrass plants.

Effects on Visitors Participating in Wildlife-Dependent Uses and the Quality of Their Experience

The quality of the wildlife viewing experience would continue to decline as the number of visitors increase and wildlife populations decrease. The effect of visitors participating in non-wildlife-dependent activities on visitors participating in wildlife-dependent activities such as wildlife observation and wildlife photography would be high. The activities of visitors involved in non-wildlife-dependent activities including jogging, beach use (swimming and other recreational beach activities), and horse-back riding create the greatest conflicts with visitors who are viewing wildlife.

During the last few years, Dungeness NWR staff and volunteers have received over 100 oral complaints from visitors regarding non-wildlife-dependent activities. Some who have traveled for several hundred miles to visit Dungeness NWR said that they were expecting a refuge and instead found a recreation site. In addition to oral comments, written comments range from, "Most disappointing, completely overrun by careless people. Put up a boardwalk and restrict access!! Where's the wildlife?" to "We stopped after walking a short distance out onto the Spit. We support your work in managing this area as a wildlife refuge, but are concerned about the large number of people we saw walking and clamming. Can the area really serve as both a refuge and popular recreational area?"

Many oral complaints regarding conflicts with horses and people on Dungeness NWR have been received, as well as complaints about horses interfering with people observing wildlife. People report being frightened by a horse's behavior because of the horses size and unpredictability. The following is one example of these kinds of conflicts. A written complaint relates, "At 3:30 p.m. three horses were galloping on trails near the clam beds on the Harbor side of Dungeness Spit. I had to leave the trail quickly since one horse was shying. One rider than began rodeo maneuvers in the sand and startled a great blue heron into flight."

Visitors have expressed concern for their personal safety when horses gallop toward them on a narrow portion of beach; visitors on foot have few places to move out of the way of the horses. A woman reported she had been sitting on some driftwood logs enjoying the sounds of the surf and watching seabirds when she saw three horses approaching along the beach. The rider of one horse was apparently not in control and the horse began side prancing and backing in her direction. The horse kept backing into her until it almost backed over her. She finally had to quickly push herself backwards off the log to avoid being injured.

Other conflicts arise on the main trail which is shared by horses and people and leads down the hill to Dungeness Spit. Several people have reported they were pushed off the trail by riders and that horses blocked the trail at the top. People have said they were afraid to pass horses on the trail for fear of being kicked.

Effects on the Local Economy

The revenue generated by people visiting Dungeness NWR would most likely decrease as wildlife populations decrease. According to a recent Tourism Market Analysis, 66.9 percent of survey participants were attracted to vacation in the Sequim/Port Angeles area because of the opportunity to view wildlife (Runyan 1995). This demonstrates another value of Dungeness NWR's wildlife resource as a marketing asset to the community and the importance of preserving and enhancing the appeal of this attraction. Kerlinger (1995) found that Federal lands are an important economic asset to both the national economy and the economies of the communities in which they are located. Ecotourists to national wildlife refuges provide a major source of external revenue to a community, for which the community does not have to provide or pay for the attraction that draws the ecotourists.

Effects of Alternative B — Eliminate Public Use

Effects on the environment from public use would be virtually eliminated. Minimal effects might occur from small groups which were allowed to use Dungeness NWR by Special Use Permit.

Effects on Wildlife

Conflicts with wildlife would be greatly decreased. Black brant, other waterfowl, waterbird, shorebird, threatened and endangered species, and harbor seal use would increase with the absence of public use on Dungeness NWR. The potential for nesting birds would also increase.

Effects on the Physical Environment

Since the majority of public use would be eliminated, adverse effects on the physical environment would be minimal.

Effects on Visitors Participating in Wildlife-Dependent Uses and the Quality of Their Experience

No wildlife viewing experience would occur since visitation would not be permitted. Conflicts between visitors participating in wildlife-dependent use and non-wildlife-dependent use would not exist since neither activity would be permitted.

Effects on the Local Economy

The revenue generated by people visiting Dungeness NWR would decrease since people would not be allowed to visit and therefore would not be attracted to the Refuge.

Effects of Alternative C — Allow Compatible, Wildlife-Dependent Public Use

Adverse environmental effects would greatly decrease since Dungeness NWR would be managed to fully benefit wildlife. Visitors would not be permitted to enter key areas when or where wildlife use was occurring. The overall effect of this alternative would likely be an increase in wildlife use and populations of Dungeness NWR.

Effects on Wildlife

Effects on wildlife were evaluated in detail by public use activity to make it easier to compare alternatives.

Jetskiing. Jetskiing would not be permitted, thus wildlife would not be disturbed by this activity.

Windsurfing. Windsurfing would not be permitted, thus wildlife would not be disturbed by this activity.

Boating (motorized). The effect of boating on wildlife would be minimized because it would only be permitted in a time, manner, and place that would not disturb higher use areas for black brant, other waterfowl, waterbirds, shorebirds, and nesting birds. Use of Dungeness NWR by all of these groups of birds would likely increase. The tip of Dungeness Spit would remain closed under this alternative thus helping to ensure the harbor seal population would either remain stable or increase.

Boating (non-motorized). The effect from canoes, sea kayaks, and small sailboats under this alternative would be the same as for motorized boats.

Hiking, wildlife observation, and wildlife photography. Restrictions placed on these activities under this alternative, would greatly reduce the negative effects on shorebirds, black brant, other waterfowl, waterbirds, bald eagles, and pink and chum salmon smolts. These species would likely increase their use of Dungeness NWR under this alternative. As many as 1,000 or more shorebirds would continue to be disturbed by public activities along the Strait side of Dungeness Spit during the late summer months. However, key shorebird use areas would receive greatly improved protection from disturbance. Harbor seals that haul out and pup in areas open to public use would continue to be vulnerable to disturbance, contributing to occasional pup mortalities. Management actions, including closure of the tip of Dungeness Spit, localized closures to protect individual pups, presence of volunteers, and other educational efforts, will help to reduce effects on harbor seals and insure numbers remain stable or increase.

Recreational fishing and shellfishing. Effects from fishing and shellfishing, under this alternative, would be the same as for hiking and motorized boating.

Effects on the Physical Environment

Effects on the physical environment would be minimal, similar to but slightly less than those described for the No Action alternative.

Effects on Visitors Participating in Wildlife-Dependent Uses and the Quality of Their Experience

The quality of wildlife viewing activities would increase because wildlife abundance would increase and non-wildlife-dependent public use activities that are in conflict with wildlife viewing would not be permitted. Conflicts between visitors participating in wildlife-dependent and non-wildlife-dependent activities would not occur, since non-wildlife-dependent uses would not be allowed.

Effects on the Local Economy

The revenue generated by Dungeness NWR visitors could remain stable, but there is a strong possibility it would increase over time. If wildlife populations were to increase as predicted, more people would be drawn into the local area for the purpose of wildlife observation.

Effects of Alternative D — Allow Compatible, Wildlife-Dependent and Non-Wildlife-Dependent Public Use

The effects would be similar to the Allow Compatible, Wildlife-Dependent Public Use Alternative, with the exception of Effects on Wildlife from boating and Effects on Visitors Participating in Wildlife-Dependent Uses and the Quality of Their Experience.

Effects on Wildlife

Effects on wildlife were evaluated in detail by public use activity to make it easier to compare alternatives.

Boating (motorized and non-motorized). Wildlife, such as feeding and roosting shorebirds, would be displaced from the 100-yard boat landing zone. Harlequin ducks which commonly roost and feed adjacent to the boat landing site may be flushed off the shore. They probably would shift and increase their concentration at the northeast junction of Graveyard Spit and Dungeness Spit. The increase in visitors to this area may be disturbing to harbor seals on the tip of Dungeness Spit due to increased human activity and associated noise levels. The increased landing of boats would limit the accessibility of female-pup pairs to a portion of their preferred nursery areas increasing the potential of pup separation and abandonment. Controlling beach landing by reservation should help to reduce effects on wildlife.

Effects on Visitors Participating in Wildlife-Dependent Uses and the Quality of Their Experience

Although an area would be designated where non-wildlife-dependent uses would be permitted, some of this type of use would no doubt occur outside the area and could conflict with wildlife-dependent public use. Some conflicts would continue to occur between user groups on the Strait side of Zones 1 and 2, where most uses would be allowed. However, fewer numbers of horses will reduce the conflicts between horses

(non-wildlife-dependent activity) and people participating in wildlife-dependent activities. Fewer horses would also reduce public safety issues, where users share the same trails and use areas. Wildlife-dependent users would still need to traverse Zone 2 where some non-wildlife-dependent use occurs, to reach Zone 3. However, effects on the quality of wildlife-dependent recreation would be reduced overall, especially in Zones where non-wildlife-dependent recreation is not allowed. The potential for this to occur would therefore be medium. Although both types of uses would be allowed under Alternative D, new restrictions would provide a focus on wildlife-dependent recreation over non-wildlife-dependent recreation.

Effects of Alternative E — Allow Maximum Public Use

Environmental effects would increase when compared to the No Action Alternative, since Dungeness NWR would be managed with public use as a higher priority than wildlife. The overall effect of this alternative would be a decrease in wildlife use and populations of Dungeness NWR. The effects to the local economy, however, would most likely remain stable, but may increase since the area would attract people interested in using Dungeness NWR as a recreation site.

Effects on Wildlife

Effects on wildlife were evaluated in detail by public use activity to make it easier to compare alternatives.

Jetskiing. Jetskiing would not be permitted, thus wildlife would not be disturbed by this activity.

Windsurfing. Windsurfing would not be permitted, thus wildlife would not be disturbed by this activity.

Boating (motorized and non-motorized) and Recreational fishing and shellfishing. Allowing these public use activities to occur before May 15 would disturb black brant east and west of Graveyard Spit which use this area for feeding and roosting. Allowing these activities to occur on the Dungeness Bay and Harbor side of Dungeness Spit after September 30 would cause disturbance to migrating shorebirds, waterbirds, and waterfowl. Use by populations of black brant, other waterfowl, or shorebirds would likely continue to decrease because of the expanded times that people would be allowed into these areas. Permitting boats to land would have the greatest effects during the spring and summer on nesting black oystercatchers and on migrating shorebirds in the fall.

Hiking, wildlife observation, and wildlife photography. Allowing these public use activities to occur throughout Dungeness NWR from May 1 to September 30 would have the same effect as the No Action Alternative in relation to the impact on wildlife on the Dungeness Bay and Harbor side of Dungeness Spit. A major difference between this alternative and the other four is that Graveyard

Spit and the tip of Dungeness Spit would be open to public access from May 1 to September 30. The harbor seal haul-out site and harbor seal population would be severely impacted by human disturbance during these months as they were prior to the closure of these areas in August 1993. Wildlife habitat and sensitive plants would also be impacted on Graveyard Spit during these months. These activities during this time of the year would cause decreases in the number of animals using these areas.

Effects on the Physical Environment

Effects on the physical environment would be minimal, similar to those described in the No Action alternative, although slightly greater.

Effects on Visitors Participating in Wildlife-Dependent Uses and the Quality of Their Experience

Effects on this activity would be the same as for the No Action alternative except there may be fewer harbor seals in the vicinity of the tip of Dungeness Spit and fewer birds in the vicinity of Graveyard Spit for visitors to view.

Effects on the Local Economy

The number of visitors that would be attracted to Dungeness NWR for non-wildlife-dependent activities would most likely increase. This increase in visitors may generate an increase in revenue for the local area. However, as described under the No Action alternative, as wildlife continues to decrease, visitors participating in wildlife-dependent activities would also likely decline. This decline in visitation by wildlife-dependent visitors may reduce or limit any increases in revenue for the local area.

Chapter 5

List of Preparers

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Chapter 6

Consultation and Coordination

A number of actions were taken between March 28, 1994 and the present to inform the public and encourage involvement to resolve incompatible secondary uses occurring on Dungeness NWR. These public involvement actions are listed here as a summary. Also summarized are the major comments received in response to the draft EA. The summary does not include all of the numerous informal meetings, letters, and telephone conversations with the public and concerned agencies at the state and local level.

Meeting of Interested Parties

Interested members of the public were invited to participate in a meeting on March 28, 1994, in which the purpose of revising public use management was explained. The meeting provided a forum for discussion of objectives, public use management strategies, and development of a mailing list.

Information Letter

An initial information letter was sent to key agencies and individuals during the spring of 1994 stating our intentions to involve the public in the planning process and enhance communication regarding the revision of public use management and resolution of incompatible uses on Dungeness NWR.

Potential Audiences

Efforts were made to identify all organizations, groups, businesses, and individuals that might want to be involved in the planning process. Handouts were distributed during May 1994 to visitors at the Dungeness NWR entrance to encourage them to sign-up to be on the mailing list and to participate in the planning process.

Scoping Meeting

A scoping meeting was held on June 9, 1994 to explain the purpose for revising the management of public use on Dungeness NWR. Two booklets entitled, "Resolving Incompatible Uses at Dungeness National Wildlife Refuge" and "Wildlife of Dungeness National Wildlife Refuge" were distributed to the 37 people in attendance. The conflicts between secondary uses and wildlife were explained, and those present were asked to help identify strategies to resolve them. Booklets were also mailed to those on the mailing list to gather their responses.

Analysis of Public Input

All responses from the scoping meeting and miscellaneous responses were sorted into categories. This analysis summarized public concerns and opinions and helped the planning team in the process of determining solutions to resolve incompatible public uses at Dungeness NWR. The Public Involvement Plan, names of individuals and organizations who provided comment, and the analysis of all comments are on file at the Washington Coastal Refuge's Office, 33 South Barr Road, Port Angeles, Washington, 98362.

Meetings with User Groups and Other Interested Parties

Several briefings were held prior to release of the draft EA to provide information and encourage additional comments. Meetings were held with Senator Gorton's Office; Senator Murray's Office; Congressman Norm Dicks' Office; Clallam County Commissioner Martha Ireland; Clallam County Parks Director, Craig Jacobs; Washington Department of Fish and Wildlife Regional Manager, John Conklin; Esther Veltkamp, Sequim Chamber of Commerce; Duane Cattract, Backcountry Horsemen; Dennis Boyd, Backcountry Horsemen; Bruce Bedinger, Past President, U.S. Lighthouse Society; and Fred Hudson, interested party.

Intra-Service Section 7 Evaluation

An evaluation, pursuant to Section 7 of the Endangered Species Act was completed on November 14, 1996. It was determined that the public use plan was "not likely to adversely affect" the peregrine falcon, bald eagle, marbled murrelet, western snowy plover, or brown pelican (Appendix G).

Draft EA

The draft EA was released on May 31, 1996, and distributed to 238 interested and affected individuals, organizations, agencies, governmental representatives, and libraries (Appendix D). A news release was widely distributed to encourage public participation. Two open houses were held during the 30-day public comment period, which ended on July 1, 1996. All comments received were considered in preparing the final EA.

Open Houses

Open houses were in Sequim, Washington on June 19 and 20, 1996. Open houses were advertised in the cover letter of the draft EA and in a news release. A second letter was sent to those on the mailing list informing them of the meeting times and format of the open houses. The open houses were designed to be informal and to allow everyone the opportunity to make comments. At the open houses, seven identical stations were set up with each station having a technical person and recorder with a flip chart. As people arrived, they were asked to sign-in, given an optional written comment form, and directed to a waiting area where copies of the draft EA were available. As space became available, every person who wished was able to make comments at one of the stations. All of the comments were recorded on flip charts and the commentor was able to verify that the comment was recorded correctly. Comments were later compiled and transcribed to accommodate review. According to the sign-in sheet, 130 people attended the open houses and made comments. Everyone who signed-in was put on the mailing list to receive the final EA.

Summary of Comments

Overview

A total of 185 letters were received during and after the 30-day comment period; 450 individual comments were recorded or received during the open houses. Of the letters received, 121 respondents selected an alternative. Of those, the majority (65 percent) preferred Alternative D, with 9 percent preferring Alternative C, and 7 percent saying they would support either C or D. Twelve percent preferred

Alternative A, 3 percent preferred Alternative E, and 4 percent preferred Alternative B. One person said they preferred A or C. Many people who supported Alternative D commented they preferred Alternative C, but they realized Alternative D was an attempt to maintain a balance between public use and wildlife and would therefore support Alternative D. Percentages could not be accurately determined for the open houses because some people visited multiple stations and repeated their comments and preferences.

Three resolutions were received during the comment period. On June 6, 1996, the Olympic Audubon Society passed a resolution supporting Alternative D as the minimum acceptable level of wildlife protection at Dungeness NWR. The Washington State Environmental Council (WEC) passed Resolution #96-47 dated June 9, 1996 in support of Alternative D as the minimum level of wildlife protection acceptable to the WEC. The Board of Clallam County Commissioners adopted Resolution Number 96 on June 25, 1996 recommending current regulations be retained (Alternative A) with further scientific study, or if Refuge management was compelled to select Alternative D, that it be modified. Recommended modifications included allowing horseback riding on the north side of the spit in Zone 3 with some restrictions, expanding Zone 2 to one mile in length, allowing hiking, wildlife observation/photography, shellfishing, boating, and fishing on the inside of Zone 3 including Graveyard Spit from May 1 to October 31, and eliminating permit requirements for boat landings.

In preparation of the final EA both oral and written comments were reviewed and sorted into the following categories: wildlife and public use management, horseback riding, windsurfing, hiking, boating and beach landing, shellfishing, jetskiing, beach use, jogging, cultural resources, and data content. The strongest appeals came from 1) people who wanted wildlife and habitat protection to come first, 2) horseback riders, and 3) windsurfers.

A summary of the comment categories is presented here; each comment category is addressed separately. Because it is a summary, it does not include every specific comment received. All of the comments received were considered in the development of the final EA.

Wildlife and Public Use Management

The majority of all commentors believed wildlife should be given priority in habitat management at Dungeness NWR. Although many commentors had individual concerns regarding specific activities, only a few said too much emphasis was being put on wildlife. Many expressed their preference to discontinue non-wildlife dependent recreation. Many asked that Dungeness NWR not be allowed to continue to be managed as a recreation area and to at least not let recreational activities increase. Many stated the area should remain a National Wildlife Refuge.

Of the few that believed too much emphasis was being put on wildlife, some said Dungeness NWR should be managed for recreation (people) first and wildlife second. A few people suggested the Refuge status be changed to a National Recreation Area. A few people asked that more weight be given to local needs before considering national needs. One respondent said public use was already significantly controlled

and wildlife had uninterrupted use of the Refuge at night; that charging Refuge entrance fees and closing Protection Island NWR to the public provided a form of mitigation for public use impacts at Dungeness NWR; and since hunting was allowed on 30 percent of some refuges, public use at Dungeness NWR should be compatible.

There was a comment that Zone 2 should be expanded from 1/2 mile in length to 1-mile and all recreational activities should be expanded to include the entire strait side of Dungeness Spit in Zones 2 and 3. A few people believed the Harbor and Bay side should be closed to all use year round.

There were a few comments relating to fish predation by seals; these people believed that seals should not be protected and the population should be controlled on Dungeness NWR to protect salmon stocks and sport fishing.

A number of commentors said their public use activity was related to wildlife observation. Kayakers, horseback riders, power boaters, windsurfers, and one jogger all remarked they saw wildlife while they were recreating. A few people asked if wildlife viewing platforms were going to be installed on the backbone of Dungeness Spit.

Horseback Riding

The majority of people who commented specifically on horse use were horse riders who did not agree that Zone 3 should be closed to horseback riding. The majority of riders said they would be willing to accept Alternative D if horses were allowed on the Strait side of Zone 3, otherwise most preferred Alternative A with no change. However, the majority of overall commentors, by showing a preference for Alternative D, did not support horseback riding past Zone 2.

Some riders agreed there may be conflicts with other users, but believed these conflicts could be resolved by changing the way horseback riding was permitted and by educating riders about the concerns other users have about horses. Other riders questioned the conflicts with other visitors caused by horses and stated that most riders were considerate and careful. Riders suggested ways to change the way horses are ridden on Dungeness NWR in order to minimize conflicts with other users. These changes included not allowing galloping, leading horses the one-half mile through Zone 2, riding horses up and down the hill, and developing some way to separate horses and people on the hill. One person commented that the safety problem between horses and other users was not resolved in Alternative D because people and horses would still be mingling on the hill.

Most riders indicated riding at the Refuge was a unique, family experience, and riding opportunities were dwindling in the area. Several voiced a concern about Alternative D in that horse use would be concentrated in a congested area in Zone 1 and access along the bluffs was almost impossible during the winter months when tides were high during the day and the water comes all the way to the bluff. They also commented that horses provided many handicapped riders the opportunity to visit the lighthouse and enjoy Dungeness Spit. Some users did not see the reason for permits. There were a few riders who said the horse trail in the forested uplands should be closed to hikers.

A few comments were received suggesting horses should not be allowed on Dungeness NWR at all. Most non-riders who commented on horseback riding believed there was a safety problem between horses and people. One commentor mentioned that fecal matter left by horses potentially disperses the seeds of non-native plants.

Windsurfing

Most people agreed Dungeness NWR should be closed to windsurfing and did not support this activity on a National Wildlife Refuge. Many of the windsurfers who supported this activity confused Dungeness NWR with Cline Spit and objected to the closure of this area to their sport. One windsurfer supported Alternative C once he understood the majority of the area used by windsurfers (around Cline Spit) would not be affected by the plan. A few windsurfers commented that windsurfing only occurred during high winds when birds were not on the water, so it did not conflict with wildlife. They also said the popping of the sail did not occur very often and it was not a disturbance to birds. They also challenged the use figures and said high use periods only included 15 to 20 windsurfers instead of 30. Many were offended that they had been included with jetskiing or asked to be distinguished from that user group, and said windsurfers enjoyed wildlife, were very environmentally aware, and they appreciated nature.

Hiking

Most people who commented on hiking supported Alternative D which allows hiking on the strait side of Dungeness Spit in Zones 2 and 3, and not on the Bay and Harbor side, indicating it provided a good balance between protection of habitat for wildlife and wildlife-dependent recreation for people. A few people objected to closing the area to hiking at all. They commented that the government was being too restrictive on "the Spit" and things were running OK the way they are now and should not be changed. A few comments suggested more research should be conducted to prove hiking and other activities were conflicting with wildlife before implementing any changes. One comment said people should be allowed to hike on Graveyard Spit and the tip of Dungeness Spit when wildlife numbers were not at their peak.

Boating and Beach Landing

The majority of comments received on boating indicated agreement with boat closures on the Bay and Harbor side in Alternative D. A few comments were received opposing any boating at all on Dungeness NWR. A few people were strongly opposed to the boat landing in Zone 3 and commented that the Lighthouse Society should not be allowed to operate a commercial venture on Dungeness NWR. They also said they opposed a dock. Some people, however, requested the landing zone be increased to 1/4-mile wide instead of 100 yards. One respondent questioned whether boat landings have substantially impacted wildlife numbers or mortality rates. A number of people remarked the permit system was not needed. A few people requested they be allowed to land on Graveyard Spit and one person asked that a landing zone be established at the base of Dungeness Spit for local people. One comment suggested hovercraft be included as not being permitted on Dungeness NWR.

Shellfishing

A few comments requested the tidelands on the Bay and Harbor side of Zone 3 in Alternative D be opened to foot access for clamming. A few also requested that shellfishing dates be expanded or that shellfishing restrictions be reconsidered.

Jetskiing

Many comments supported the closure of Dungeness NWR to jetskiing.

Beach Use

A few people asked that kite flying not be permitted.

Jogging

One person asked that jogging be allowed in Zone 3.

Cultural Resources

The Jamestown S'Klallam Tribe asked for a revision of the section relating to tribal use of Dungeness NWR. The New Dungeness Chapter of the U.S. Lighthouse Society asked for a revision and inclusion of a more accurate history of the lightstation.

Data Content

A few people questioned the validity of the data for the draft EA and said more qualitative data were needed. One person said everything should be thrown away that had been written and to start over. Another comment asked that others be involved in the preparation of the EA. A few said no changes should be made to current public use management until independent research was conducted for five years to determine wildlife/people interactions on Dungeness NWR. After five years a determination could be made whether more restrictions were needed. Another person commented more research was needed before anything was closed. One comment suggested studies on the effects of predation on bird populations be done before more restrictions on public use were established. This respondent also said the effects of the closures on Graveyard and the Tip of Dungeness spits should be determined. A few comments were made about basing the decline in wildlife on the increase in visitation and non-wildlife-dependent activities. It was suggested wildlife declines are nationwide and not related to the increase in numbers of people on Dungeness NWR.

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Appendix A

Laws and Regulations Affecting National Wildlife Refuges

All migratory birds are federally protected at Dungeness NWR under the authorities of the *Migratory Bird Treaty Act* of 1918 (16 U.S.C. 703-712), the *Migratory Bird Conservation Act* of 1929 (16 U.S.C. 715-715r), and the *Migratory Bird Hunting and Conservation Stamp Act* of 1934 (16 U.S.C. 718-718h).

Refuge management is guided by the *National Wildlife Refuge System Administration Act* of 1966 (U.S.C. 668dd-668ee). The act provides guidelines and directives for administration of all areas in the National Wildlife Refuge System for the conservation of fish and wildlife. Uses of a refuge are authorized by the act if FWS determines that such uses are compatible with the major purposes for which such areas were established.

The *Refuge Recreation Act* of 1962 (U.S.C. 460k-460k-4) authorizes the recreational use of refuges when such uses are compatible and do not interfere with the area's primary purposes. It authorizes the charging of fees for public use, and permits recreation programs only if sufficient funding and staffing are available. The act also authorizes the acquisition of lands adjacent to a refuge which are suitable for wildlife-oriented recreation, protection of natural resources, and conservation of threatened and endangered species.

The *Endangered Species Act* of 1973 (16 U.S.C. 1531-1543) instructs federal agencies to carry out programs to conserve the ecosystem on which these species depend. This act has relevance for Dungeness NWR since the bald eagle, peregrine falcon, and marbled murrelet frequent a variety of Refuge habitats.

The *Marine Mammal Protection Act* of 1972 (16 U.S.C. 1361-1407) gave authority to the Secretary of Interior and Commerce (depending on the species involved) to enforce provisions against "taking" or importation of marine mammals. Harbor seals are protected under the act.

The *National Environmental Policy Act* of 1969 (42 U.S.C. 4321-4347), known as NEPA, requires federal agencies to ensure public involvement in the decision making process, such as the management planning of national wildlife refuges, and to fully consider the environmental and social impact of federal actions.

Appendix B

Executive Order

It is hereby ordered that Dungeness Spit, an arm of land extending from the north shore of the State of Washington into the Strait of Juan de Fuca, as the same is shown upon the official plats of survey of townships thirty-one north, ranges three and four west of the Willamette Meridian, on file in the General Land Office, and as segregated by the broken line upon the diagram hereto attached and made a part of this order, be and the same is hereby reserved and set apart for the use of the Department of Agriculture as a refuge, preserve and breeding ground for native birds. This order is not intended to abrogate the orders creating military and lighthouse reservations located in part upon the same lands, nor shall it in any manner interfere with the use of the lands for military or lighthouse purposes, but rather, in addition to such uses, shall insure the protection of the native birds therein.

It is unlawful for any person to hunt, trap, capture, wilfully disturb or kill any bird of any kind whatever, or take the eggs of such birds within the limits of this reserve, except under such rules and regulations as may be prescribed by the Secretary of Agriculture.

Warning is expressly given to all persons not to commit any of the acts herein enumerated, under the penalties, prescribed by Section 84 of the U.S. Penal Code, approved March 4, 1909 (35 Stat., 1088).

This reservation to be known as Dungeness Spit Reservation.

WOODROW WILSON

The White House,
20 January, 1915.

(No. 2123.)

Note: This has been retyped from an original document.

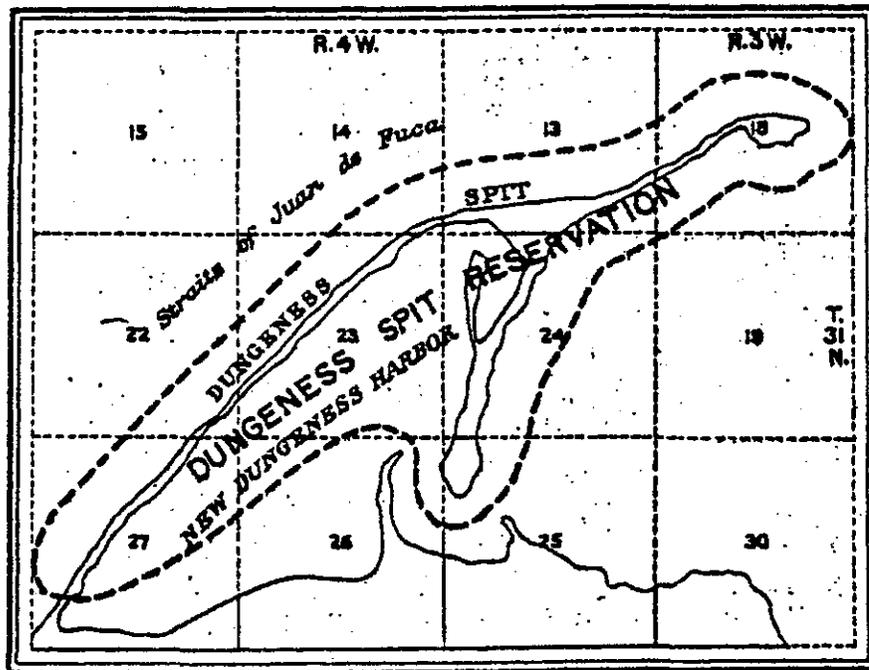
Appendix B. Executive Order 2123 establishing Dungeness National Wildlife Refuge.

DUNGENESS SPIT RESERVATION

For Protection of Native Birds

WASHINGTON

Embracing an arm of land extending from the North shore of Washington into the Straits of Juan de Fuca, in T.31 N. Rgs. 3 and 4 West Willamette Meridian as segregated by broken line and designated "Dungeness Spit Reservation" containing 226.02 acres



DEPARTMENT OF THE INTERIOR
 GENERAL LAND OFFICE
 Clay Tallman, Commissioner

Note: This has been retyped and scanned from an original document.

Attachment to Executive Order 2123 establishing Dungeness National Wildlife Refuge.

Appendix C

State of Washington

IN CONSIDERATION of Section 152, Chapter 255, Laws of 1927 the STATE OF WASHINGTON does hereby grant, bargain, sell and convey unto United States of America Fish and Wild Life Service, its successors and assigns, the following described tide lands of the second class, as defined by Chapter 255 of the Session Laws of 1927, situate in Clallam County, Washington, to-wit:

All tide lands of the second class owned by the State of Washington, situate in front of, adjacent to or abutting upon the following described uplands in township 31 north, range 4 west, W.M.

Lots 1, 2, 3, and 4, section 13, with a frontage of 156.35 lineal chains, more or less, also

Lot 1 Section 14, with a frontage of 30.18 lineal chains, more or less; also

Lot 1, section 22, with a frontage of 54.21 lineal chains, more or less; also

Lots 1, 2, and 3, section 23, with a frontage of 179.28 lineal chains, more or less; also

Lots 1, 2, 3, 4 and 5, section 24, with a frontage of 258.35 lineal chains, more or less; also

Lot 5, section 25, with a frontage of 40.93 lineal chains, more or less; also

Lot 2, section 26, except the tide lands included in a deed from the State of Washington to Don H. Palmer, issues February 26, 1930, under application No. 7609 and except the tide lands included in a tract of oyster land deeded by the State of Washington to San Juan Farm Association, December 23, 1931, under application No. 9396, with a frontage of 47.53 lineal chains, more or less; also

Lot 3, section 26 with a frontage of 5.00 lineal chains, more or less; also

The E1/2 in width of the John Thronton Donation Claim No. 38, in section 26, with a frontage of 20.29 lineal chains, more or less; also

The C.M. Bradshaw Donation Claim No. 39, in sections 26 and 27, except the est 330 feet of the east 1684.39 feet thereof, with a frontage of 34.59 lineal chains, more or less; also

Lots 5, 6 and 7 and the northwesterly side of lot 4, section 27, with a frontage of 174.63 lineal chains, more or less; also

Lots 1 and 2, section 18, township 31 north, range 3 west, W.M., with a frontage of 149.66 lineal chains, more or less.

The above described tide lands are conveyed under the provisions of section 152 of Chapter 255 of the Session Laws of 1927.

NOTE: The above described tide lands have a tidal frontage of 1151 lineal chains, more or less.

The above described lands are sold subject to all the provisions of Chapter 312 of the Session Laws of 1927, to which reference is hereby made, and which shall be as binding upon the grantor and any successor in interest of said grantee as though set out at length herein.

"The grantor hereby expressly saves, excepts and reserves out of the grant hereby made, unto itself, its successors and assigns forever, all oils, gases, coal, ores, minerals and fossils of every name, kind or description, and which may be in or upon said lands above described, or any part thereof, and the right to explore the same for such oil, gases, coal, ores, minerals and fossils; and it also hereby expressly saves and reserves out of the grant hereby made, unto itself, its successors and assigns forever the right to enter by itself, its agents, attorneys and servants upon said lands or any part or parts thereof, at any and all times, for the purpose of opening, developing and working mines thereon, and taking out and removing therefrom all such oil, gases, coal, ores, minerals and fossils, and to that end it further expressly reserves out of the grant hereby made, unto itself, its successors and assigns forever, the right by its or their agents, servants, and attorneys at any and all times to erect, construct, maintain and use all such buildings, machinery, roads and railroads, sink such shafts, remove such soil, and to remain on said lands or any part thereof for the business of mining and to occupy as much of said land as may be necessary or convenient for the successful prosecution of such mining business hereby expressly reserving to itself its successors and assigns, as aforesaid, generally all rights and powers in, to and over said lands, whether herein expressed or not, reasonably necessary or convenient to render beneficial and efficient the complete enjoyment of the property and rights hereby expressly reserved". Provided, That no rights shall be exercised under this reservation by the state, its successors or assigns, until provision has been made by the state, its successors or assigns to pay to the owner of the land upon which the rights herein reserved to the state, its successors or assigns are sought to be exercised, full payment for all damages sustained by said owner, by reason of entering upon said land.

TO HAVE AND TO HOLD the said premises, with their appurtenances, unto the said United States of America Fish and Wild Life Service, its successors and assigns, forever.

WITNESS, The Seal of the State, affixed this 29th
day of May, 1943.

[SEAL]

Deed No. 18251

Application No. 10585

Note: This has been retyped from an original document.

Appendix C. Use Deed granted by the State of Washington to the FWS for all the second class tidelands associated with Dungeness National Wildlife Refuge.

Section 7797-152 of the Revised Statutes of Washington (Vol. 9, page 91), relating to grants to the United States of any State-owned tide or shore lands, provides as follows:

"Whenever application is made to the commissioner of public lands, by any department of the United States Government, for the use of any tide or shore lands belonging to the State, for any public purpose, and said commissioner shall be satisfied that the United States requires or may require the use of such tide or shore lands for such public purpose, said commissioner may reserve such tide or shore lands from public sale and grant the use of them to the United States, so long as it may require the use of them for such public purposes, and the commissioner of public lands shall certify such fact to the Governor, who shall thereupon execute an easement to the United States, which shall be attested by the Secretary of State, granting the use of such tide or shore lands to the United States, so long as it shall require the use of them for said public purpose."
(L. '27, page 551, section 152.).

Note: This has been retyped from an original document.

Attachment to Use Deed for second class tidelands.

Appendix D

Recipients of the Draft Environmental Assessment

Organizations and Individuals

Admiralty Audubon Society
Alexander, Ginger
Anderson, J.
Anderson, Leslie
Anderson, William
Angiuli, Jerry
Augenfield, John
Backcountry Horsemen of Washington
Baker, Sam
Baker, Tamra
Ball, Polly
Barton, Jay
Batelle Northwest
Beam, Jim and Ann
Beckman, Glenn
Bedford, Pam
Bedinger, Bruce
Blakenship, Penni
Blanton, Thomas
Brooke, Steve
Bourm, Melene
Boyd, Dennis
Boyer, Michael
Brestel, Perry
Burnette, James
Cable, Glenda
Cameron, Dave
Carson, John
Carson, Cecil Jr.
Catract, Duane
Colley, Gary
Commeree, Juanita
Cullinan, Tim
Cumming, Jeff
Dewitt, Dan
Diekow, Gearhard
Doig, Carol M.
Doss, Diane
Driver, Charles
Drovdahl, Kat
Easling, Allen
Eisert, Theresa
Engle, Helen
Eshon, Daphne
Fletcher, Jack
Frazier, Homer
Froines, Eric
Gallagher, Tom
Gallant, Jim
Gaw, D.C.
Goin, Dick
Golec, Matt
Goodin, M.P.
Grant, Marianne
Greeley, Sam
Hamilton, Murray
Hanson, Annette and Aaron
Hart, Phil
Hays, Gayleen
Hazelton, Judy
Heal, John
Hiss, Joe
Holden, Pat
Howard, Yvonne
Hudson, Fred
Hughes, Jane
Iverson, John
Jennings, David
Jenks, Vincent J.
Johnson, Nancy
Johnson, Russ
Johnstad, Terri
Jones, Les
Kailin, Eloise
Kalamar, Rick
Kayaks and More, Barry Dove
Kelly, Becky
Kennedy, Tom
King, Dana

Kridler, Gene	Rayl, Eric
Krueger, Max	Reaume, Dave
Kunkle, Babette	Rebar, Michelle
Kuntz, John	Renkens, Madeline
LaCrampe, Emile and Margaret	Redwine, Nancy
Leiter, Renee	Richmond, Judy
Lennstrom, Nancy K.	Riedel, Bill
Lieberg, Jennette	Rogers, Clarie
Linton, Darrell	Ryan, Mike
Livermore, Shirely	Sallee, Cathy
Louch, Charles	Sallee, Jeanie
Madden, Carol	Sandison, Les
Marshall, Norma	Schanfald, Darlene
Martin, Milt	Schroeder, Pete and Carolyn
May, Karl	Sebastian, Marion
McCrorie, Robert	Sequim Bay Yacht Club
Meier, H.W.	Sequim-Dungeness Valley Lodging
Moore, Betty and Bob	Sequim Senior Center
The Mountaineers, Mariann Mann	Siebens, Sherry
Muench, Lynn	Siebersma, Steve and Lois
Myers, Jane	Sierra Club Legal Defense Fund
National Marine Manufacturers Assoc.	Silano, Martha
National Wildlife Refuge Association	Simons, Tom
The Nature Conservancy, Fayette Krause	Smith, L.M.
New Dungeness Chap. of the U.S.	Smith, Larry
Lighthouse Soc., Sheila Ramus	Smith, Lon
Nisbet, Andrew	Smith, Stan and Dorie
N. Olympic Pen. Bed and Breakfast Assoc.	Sorkness, Pat
Nolson, Bill	Souders, Cindy
Norvell, Rod and Jean	Springer, Ron and Dee
Olympic Environ. Council, Pat Wennekins	Stanford, Pricilla
Olympic Park Association	Stopps, Eleanor
Olympic Peninsula Institute	Strait & Nar. Kayak Tripping, Irv Walden
Olympic Peninsula Audubon Society	Susong, Alice and Dunbar
Olsen, Evelyn	Swartz, David
Pacific Mountain Sports, Lee Mayer-Task	Taylor, Sue
Panamaroff, Marcie	Thomas, Nancy
Pareira, Barbara	Titus, Jon
Pearson, Lloyd	Graeme, Ton
Perrin, Frank	Tovey, Walt
Port Angeles Charter and Tackle Comp.	Tyler, Sue
Port Angeles Launch Service	United States Windsurfers Association
Port Angeles Marine	Vest, R.J.
Port Townsend Marine	Waltman, Jim
Price, Brian	Westwood, Deborah
R&R Marine Supply	Whitney, Teresa

The Wilderness Society, Steve Whitney
Wiley, Stuart
Wylie, Christopher,
Zarlingo, Ben

Federal and State Delegations

Office of U.S. Senator Slade Gorton
Office of U.S. Senator Patty Murray
Office of U.S. Representative Norm Dicks
Office of State Senator James Hargrove
Office of State Representative Lynn Kessler
Office of State Representative Jim Buck

Federal Agencies

U.S. Department of Interior

Nat. Park Service, Olympic National Park
Fish and Wildlife Service

U.S. Department of Transportation

U.S. Coast Guard, Port Angeles
Commanding Officer

U.S. Department of Commerce

National Oceanic and Atmospheric Admin.
Olympic Coast Nat. Marine Sanct.

Tribal Representatives

Jamestown S' Klallam Tribe
Ron Allen, Tribal Chairman
Leo Gaten
Lower Elwha S' Klallam Tribe, Carol Brown

State and Local Agencies

Wash. State Dept. of Fish and Wildlife

John Conklin, Reg. Manager, Montesano
Dungeness Fish Hatchery
Steve Evans, Hatcheries Program
Tom Juelson

Mary Lou Mills, Marine Resources Division
Bill Wood, Point Whitney Shellfish Lab
Anita McMillan, Wildlife Biologist

Wash. State Dept. of Ecology

Jeffree Stewart

Wash. State Dept. of Nat. Resources

Jennifer Belcher, Commissioner of
Public Lands
SEPA Center

Clallam County Commissioners

Martha Ireland, District 1
Dorothy Duncan, District 2
Phil Kitchel, District 3

Clallam County

Annette Warren, Planning
Craig Jacobs, Director, County Parks
and Fairground
Leanne Jenkins, Community Develop.
Jerry Royal, Park Man., Dung. Rec. Area

Port Angeles Chamber of Commerce

Sequim Chamber of Commerce

Esther VeltKamp, Executive Director

City of Port Angeles

City of Sequim

Port of Port Angeles

Port Commissioners
John Wayne Marina

Universities and Colleges

Peninsula College, Pat Willits
Peninsula College Fisheries Program
West. Wash. University, Walt Pearson

Public Libraries

North Olympic Library
Clallam Bay
Forks
Port Angeles
Sequim
Peninsula College Library
Jefferson County Library
William G. Reed Public Library

Media

Newspapers

Sequim Gazette
The Sun
Peninsula Daily News
Port Townsend Leader

Television

KING 5
Northland Cable News

Radio

KAPY, KONP

Appendix E

Memorandum of Understanding

between
United States Fish and Wildlife Service
and
United States Coast Guard
for
Operation of Lighthouses on
Dungeness Spit, Destruction Island, and Smith Islands

Purpose

The Coast Guard has the responsibility for the operation and maintenance of lighthouses and aids to navigation located on three National Wildlife Refuges that are administered by the Fish and Wildlife Service (Service): Dungeness, Quillayute Needles, and San Juan Islands National Wildlife Refuges.

The Service has the responsibility for the protection and management of the natural habitat and wildlife on these areas. These areas are major seabird nesting and roosting areas. The Federally listed endangered peregrine falcon and the threatened bald eagle also use the areas. All three areas are important as haulouts and pupping areas for harbor seals. This Memorandum of Understanding will ensure that the natural resources of these Refuges area protected while permitting them to be used for lighthouse and aids to navigation purposes.

The following elements of responsibilities for each party of this Memorandum of Understanding should provide for the protection of the natural resources. Appendix A contains the current Coast Guard and Service contact names, addresses, and phone numbers.

Coast Guard Responsibilities:

1. The Coast Guard will ensure that all non Coast Guard personnel and contractors using the facilities are made aware of the restrictions and cautions.
2. To the extent possible, all non-essential work will be scheduled between November 1 and March 1 in order to minimize the disturbance during the nesting season.
3. To the extent possible, except as required for search and rescue, law enforcement emergency, and other essential operations, activities will be restricted to the developed areas and travel routes. The beach may be accessed on Destruction Island by the trail north of the water tower or near the old tram bridge. All other areas, access routes, and Service maintained trails are closed to all access except as required in essential operations cited above.

Appendix E

4. In the event that any expansion of Coast Guard facilities to areas not now under development is planned, input from the Service will be considered as part of the Coast Guard planning process.
5. Except as required for search and rescue, law enforcement, emergency and other essential operations, helicopter activity will be limited to the developed areas. The following areas that are especially sensitive to overflights and should be avoided unless required for essential operations noted above.
 - Dungeness: The tip of the main spit and all of Graveyard Spit.
 - Smith Island: The west slopes and the southern half of the Island.
 - Destruction Island: The western rocks and the entire eastern half of the Island.
6. The Coast Guard will inform the Service of requests by agencies or persons requesting non-official use of the areas. All requests for use will be reviewed and permits issued if approved by the Service.

The Service Responsibilities:

1. The Service will obtain approval from the Coast Guard of any activities that may affect the operation of the lighthouses and/or aids to navigation.
2. The Service will obtain prior approval from the Coast Guard to use the bunk house on Destruction Island. All facilities will be clean and secured at the end of each field trip.
3. The Service will caution all employees and permittees that use these areas to be careful with the Coast Guard facilities and to immediately report any problems noticed. This includes any fire hazards, unsafe conditions, or any conditions(s) indicating or leading to structural damage.
4. The Service will work with Coast Guard planners to reduce potential wildlife conflicts if changes need to be made in the facilities in these three areas.

Both parties agree to the elements of responsibility as stated above.

This Memorandum of Understanding will remain in effect until canceled by either party or until it is no longer needed.

Amendments may be added to the Memorandum or Understanding by mutual agreement.
This Memorandum of Understanding is executed as of the date last signed below.

United States Coast Guard Thirteenth Coast
Guard District

Date: 9/16/92

By: John U. Paxon, Capt USCG
13th District Commander, Acting

U.S. Fish and Wildlife Service
Nisqually National Wildlife
Refuge Complex

Date: July 29, 1992

By: Willard B. Hesselbart, Refuge Manager

APPENDIX A

Agency Contacts

Fish and Wildlife Service

Nisqually National Wildlife Refuge Complex
100 Brown Farm Road
Olympia, WA 98516
(360) 753-9467
FAX: (360) 534-9302

Refuge Manager: Willard B. Hesselbart
Assistant Refuge Manager: Michael J. McMinn
Nisqually Refuge
San Juan Islands Refuge
San Juan Islands Wilderness Area
Flattery Rocks Refuge
Quillayute Needles Refuge
Copalis Refuge
Washington Islands Wilderness Area
Grays Harbor Refuge

Assistant Refuge Manager: Robert H. Edens, Jr.
Washington Coastal Refuge Office
33 S. Barr Road
Port Angeles, WA 98362
(360) 457-8451
Dungeness Refuge
Protection Island Refuge

U.S. Coast Guard District

Commander
13th Coast Guard District
915 Second Ave.
Seattle, WA 98174-5000

District Planning Officer, Phone (206) 553-1635
District Operations, Phone (206) 553-5886
Group Port Angeles, Phone (360) 457-5229
District Aids to Navigation, Phone (360) 457-4401
Civil Engineering Unit Oakland (510) 535-7258
2000 Embarcadero, Suite 200
Oakland, CA 94606-5337

Appendix F

Summer Visitor Activities by First or Repeat Visitors on the Olympic Peninsula

	Percent of Visitors		
	First	Repeat	Total
Visit national parks/scenic wonders	81.0%	72.8%	77.6%
Sightsee	73.3%	71.4%	72.5%
View wildlife	66.9%	62.1%	64.9%
Visit state parks	56.7%	55.4%	56.2%
Walk/hike	51.2%	48.7%	50.2%
Stroll/window shop	46.0%	51.3%	48.2%
Visit museum/historic site	48.2%	47.3%	47.8%
Shop	31.9%	38.4%	34.5%
Picnic	30.4%	35.7%	32.5%
Camp	32.2%	33.0%	32.5%
Go to restaurant or club for entertainment	24.2%	29.5%	26.4%
Visit friends or relatives	17.5%	27.2%	21.5%
Tour	21.5%	12.9%	18.0%
Swim	10.4%	14.7%	12.2%
Visit vinery/vineyard	9.2%	8.9%	9.1%
Fish	5.2%	10.7%	7.5%
Bike	8.0%	5.8%	7.1%
Attend fair/festival/rodeo	5.5%	8.9%	6.9%
Attend concert or arts event	4.9%	5.8%	5.3%
Canoe/raft/kayak	4.3%	5.8%	4.9%
Golf	2.5%	6.3%	4.0%
Motor boat/water ski	2.5%	6.3%	4.0%
Ride horseback	3.4%	3.1%	3.3%
Sail	1.2%	3.1%	2.0%
Attend sports event(s)	2.1%	1.3%	1.8%
Gamble/game	1.5%	1.3%	1.5%
Windsurf	1.2%	1.3%	1.3%
Hunt/shoot	0.0%	.9%	.4%
Other	3.7%	6.7%	4.9%

Note: Multiple responses total to more than 100 percent.

Source: Dean Runyan Associates, 1995.

Appendix G

Intra-Service Section 7 Evaluation

Originating Person: Ulrich W. Wilson

Date: November 6, 1996

- I. Region:** Region 1.
- II. Service activity:** The U.S. Fish and Wildlife Service will modify public use management of Dungeness National Wildlife Refuge, to provide refuge visitors with high-quality wildlife-dependent educational and recreational experiences while ensuring that the allowed public uses do not conflict with refuge purpose and wildlife objectives.
- III. A. Listed species and/or their critical/essential habitat.**
1. Within the action area that will or may be affected:
Peregrine Falcon (*Falco peregrinus anatum*)
Bald Eagle (*Haliaeetus leucocephalus*)
Marbled Murrelet (*Brachyramphus marmoratus*)
Western Snowy Plover (*Charadrius alexandrinus nivosus*)
Brown Pelican (*Pelecanus occidentalis*)
 2. Within the action area that will not be affected: None
- B. Proposed species and/or proposed critical habitat.**
1. Within the action area that will or may be affected: None
 2. Within the action area that will not be affected: None
- IV. Geographic area or station name and action:**
- Geographic area:
- Dungeness National Wildlife Refuge is located near Sequim, Washington along the south side of Juan de Fuca Strait. The 631-acre refuge includes the 5 1/2 mile long Dungeness Spit which forms Dungeness Bay. For a more detailed description see page 17 of attached Environmental Assessment (EA).
- Action:
- The subject action changes the way visitors may use the refuge. The future management of Dungeness NWR would reduce non-wildlife dependent recreation by area and use, and would allow certain wildlife-dependent recreational activities only in selected areas in some cases on a seasonal basis. Wildlife sensitive areas would be closed to public use year round or seasonally depending on

area. Because the proposed new management scheme is complex, please refer to pages 10 to 12 of attached EA.

V. Location:

- (A) **County and State:** Clallam County, Washington.
- (B) **Latitude and longitude:** 48°10'N, 123°09'W.
- (C) **Distance and direction to nearest town:** 6.9 miles north of Sequim, Washington.

VI. Description of proposed action: The new public use plan for Dungeness NWR would identify four zones on Dungeness Spit where public uses would be modified (see map on page 10b of attached EA). The tip of Dungeness Spit (Zone 4) and the Harbor side of Zone 3 (including Graveyard Spit) would be closed to the public year round, except that a boat landing site would be allowed near the lighthouse. Zones 1 and 2 would support the largest number of public uses, while the remainder of Zone 3 (Strait side) would be open to wildlife-dependent public uses only. See pages 10 to 12 of attached EA.

VII. Explanation of impacts of action:

Peregrine Falcon

Peregrine falcons use Dungeness NWR year round. During the migration periods in early spring and fall, birds may stop at the refuge for several days. Wintering falcons are known to use the refuge and adjacent areas, while non-breeders may occur on the refuge during the spring and summer. The closest known aerie sites are located in the San Juan Islands, over 22 miles northwest of the refuge. The refuge is outside the hunting domain of the nearest known breeding pairs. Peregrine falcon sightings on the refuge are sporadic, although several birds may be present occasionally.

The Dungeness Bay area is attractive to peregrine falcons because of its concentrations of waterbirds and shorebirds. Surrounding agricultural areas are rich in songbirds, pigeons, and starlings. Gulls feed on open pastures, where they also seek shelter from storms. The area also is diverse in habitat types. Forest stands, tall cliffs, beaches, mudflats, marshes, river and creek mouths, and agricultural areas provide for the birds' needs. The reasons peregrines have not nested here is because available cliffs are rapidly eroding and unstable. The area is an important migration stop over for peregrine falcons as well as a general use area during the winter and summer months. The area provides ample feeding opportunities as well as excellent perching and roosting sites. A study conducted by Fred Dobler of the Washington Department of Fish and Wildlife in 1983 and 1984 showed that peregrines wintering in the area feed mainly on ducks, gulls, thrushes, passerines, and starlings. The minimum number of peregrines in the area during the study was seven birds. During their use of the entire Dungeness area the falcons fly in and out of the refuge frequently. One bird was documented to roost on Graveyard Spit during the night.

The anticipated effects of the proposed management action on peregrine falcons are as follows:

- Public use will become more concentrated in Zones 1, 2, and 3 and the 100 yard boat landing area near the lighthouse. Peregrine falcons using these portions of the refuge will face an increased likelihood of being disturbed by refuge visitors.
- The closures along the inside of the spit will result in less human disturbance to peregrine falcons using these sections of the refuge. The additional tide lands closure during the winter will likely result in increased concentrations of undisturbed waterbirds and shorebirds during the October through May 15 period. This will also benefit peregrine falcons using these areas by providing more undisturbed hunting, feeding, and roosting opportunities. These positive effects are expected to outweigh the negative influences mentioned above.

Bald Eagle

Bald eagles use the refuge year round and are commonly observed by visitors. Up to 24 individuals have been seen on the refuge at the same time. There are 8 known nesting territories within 10 miles of Dungeness NWR. Many of these nesting pairs are resident throughout the year and depend on the Dungeness area for all their needs. The nearby Dungeness River attracts additional eagles during the fall and winter when returning salmon and steelhead trout are abundant.

The Dungeness area is attractive to eagles because of its concentrations of waterbirds, seabirds, and anadromous fish on which the eagles feed. The area's diversity provides excellent nesting, perching, and roosting opportunities. During their use of the entire Dungeness area eagles fly in and out of the refuge frequently. The most concentrated bald eagle use of the refuge occurs in the area between the west side of Graveyard lagoon and the tip of Dungeness Spit. Groups of eagles hunt in this area and use the beaches, drift wood, and pilings for feeding and perching.

The anticipated effects of the proposed management action on bald eagles are as follows:

- Public use will become more concentrated in zones 1, 2, and 3 and the 100 yard boat landing area near the lighthouse. Bald eagles using these portions of the refuge will face an increased likelihood of being disturbed by refuge visitors and boaters on their way to the lighthouse.
- The closures along the inside of the spit will result in less human disturbance to bald eagles using these sections of the refuge where eagle use is most concentrated. The additional tide lands closure during the winter will likely result in increased concentrations of undisturbed waterbirds and more seabirds during the October through May 15 period. This will benefit bald eagles using these areas by providing more undisturbed hunting and feeding opportunities. These positive effects are expected to outweigh the negative influences mentioned above.

Marbled Murrelet

Marbled murrelets feed in deep water along portions of Dungeness Spit (See page 26 of attached EA). The birds generally do not occur inside Dungeness Bay where the water is too shallow. The closest area where these birds concentrate is off Green Point approximately 5 miles west of the base of the spit. Studies conducted by the Washington Department of Fish and Wildlife indicated a density of 1.85 birds/km along the outer Dungeness Spit.

- The effect of increased visitor use of the outer beaches of the refuge may be to increase the distance some murrelets feed from the beach, or to displace some birds further toward Green Point. Murrelets using the waters along the inside of the tip of Dungeness Spit will likely be subjected to increased levels of disturbance by boaters due to the proximity of the 100 yard boat landing area near the lighthouse.

Western Snowy Plover

In Washington, western snowy plovers are known to breed in very small numbers at Leadbetter Point at Willapa Bay, and near Ocean Shores north of the mouth of Grays Harbor Bay. Because of the sensitivity of this species to human disturbance breeding success has been low. At Dungeness NWR western snowy plovers have been observed during the breeding season on the inside of Dungeness Spit between the lighthouse and the base of Graveyard Spit. The numbers of plovers seen increased from one bird in 1978 to six birds in 1995. The birds appeared to be non breeders, but because of their secretive habits their breeding status remains uncertain. Potential breeding areas on the refuge are in the closed areas at the tip and along the inside of Dungeness Spit east of Graveyard Spit. Portions of Graveyard Spit may also be suitable for breeding by this species.

- Plovers attempting to breed near the boat landing site near the lighthouse may be prevented from breeding there, or may suffer lower reproductive success. Birds feeding on the outside of Dungeness Spit open to the public will be exposed to increased levels of human disturbance, while birds using the protected portions of the refuge at the tip and on the inside of the bay will be disturbed less, possibly increasing the chance of future breeding attempts in those areas.

Brown Pelican

Brown pelicans do not breed in Washington. Birds from California and Mexico start showing up at Willapa Bay, Grays Harbor Bay and the outer coast of the Olympic Peninsula in June. Numbers peak in September when several thousand individuals may be present on the Washington west coast. By early November most of these pelicans will have migrated back south. In Washington the highest numbers are usually encountered during El Nino years when food becomes scarce around their breeding colonies in the south. During such years a few individuals may move into Juan de Fuca Strait and some may end up on Dungeness or Graveyard Spits for several weeks. In the past five years only one brown pelican has been seen on the refuge.

- Brown pelicans using the outer portions of Dungeness Spit open to the public will face an increased probability of being disturbed by refuge visitors, while birds using the closed areas at the tip of the spit and on the inside of the bay will be subjected to less human disturbance.

VIII. Effect determination and response requested.

A. Listed species/critical/essential habitat:

Determination	Response Requested
<input type="checkbox"/> will not affect	<input type="checkbox"/> *concurrence
<input type="checkbox"/> beneficial effect	<input type="checkbox"/> concurrence
	<input type="checkbox"/> *formal consultation
<input checked="" type="checkbox"/> is not likely to adversely affect	<input checked="" type="checkbox"/> concurrence
	<input type="checkbox"/> *formal consultation
<input type="checkbox"/> is likely to adversely affect	<input type="checkbox"/> formal consultation

(* optional)

Initiating
Officer

William B. Honelbunt

Date 11-8-96

Concur (mark one)

Do not concur

Comments:

ES
Field Office
Supervisor

for

John Engbring

Date Nov. 14, 1996

Concur (mark one)

Do not concur

Comments:

The first part of the document discusses the importance of maintaining accurate records of all transactions. It emphasizes that every entry should be supported by a valid receipt or invoice. This ensures transparency and allows for easy verification of the data.

In the second section, the author details the various methods used to collect and analyze the data. This includes both manual data entry and the use of specialized software tools. The goal is to ensure that the data is both accurate and easy to interpret.

The third section provides a detailed breakdown of the results. It shows that there is a significant correlation between the variables being studied. This finding is supported by statistical analysis and is consistent with previous research in the field.

Finally, the document concludes with a series of recommendations for future research. It suggests that further studies should be conducted to explore the underlying causes of the observed trends and to test the findings in a different context.

The following table summarizes the key findings of the study. It shows that the majority of participants reported a positive impact on their overall well-being. This is particularly true for those who had access to the intervention program.

The data also indicates that there are several factors that influence the effectiveness of the program. These include the duration of the intervention, the quality of the materials used, and the level of participant engagement.

Overall, the study demonstrates the potential of the intervention to improve health outcomes. However, it is important to note that the results are based on a specific sample and may not be generalizable to all populations.

The author acknowledges the limitations of the study and suggests ways to address them in future work. This includes increasing the sample size and using more diverse data sources.

The U.S. Fish and Wildlife Service manages national wildlife refuges and national fish hatcheries throughout the country for the continued conservation, protection, and enhancement of our fish and wildlife resources and their habitats.



U.S. Department of the Interior
Fish and Wildlife Service

January, 1997

Appendix B. Compatibility Determinations

B.1 Introduction

The compatibility determinations (CDs) developed during the comprehensive conservation plan (CCP) planning process evaluate uses projected to occur under Alternative B, the preferred alternative, in the Draft CCP/Environmental Assessment (EA) for the Dungeness National Wildlife Refuge (NWR or Refuge) (USFWS 2012a), which was carried forward as the management direction for the Refuge in this CCP. The evaluation of funds needed for management and implementation of each use is described in Appendix C, Implementation. Chapter 6 of the Draft CCP/EA also contained an analysis of the impacts of refuge uses to wildlife and habitats. That document is incorporated through reference into this set of CDs.

B.1.1 Uses Evaluated At This Time

The following section includes full CDs for all refuge uses that are required to be evaluated at this time. According to Service policy, compatibility determinations are to be completed for all uses proposed under a CCP that have been determined to be appropriate. Existing wildlife-dependent recreational uses must also be reevaluated and new CDs prepared during development of a CCP. According to the Service's compatibility policy, uses other than wildlife-dependent recreational uses are not explicitly required to be reevaluated in concert with preparation of a CCP, unless conditions of the use have changed or unless significant new information relative to the use and its effects have become available or the existing CDs are more than 10 years old. However, the Service planning policy recommends preparing CDs for all individual uses, specific use programs, or groups of related uses associated with the proposed action. Accordingly, the following CDs are included in this document for public review.

Table B-1. Summary of Compatibility Determinations

Refuge Use	Compatible	Page
Environmental Education, Wildlife Observation, Photography, Interpretation	Yes	B-4
Research, scientific collecting, and surveys	Yes	B-11
Recreational fishing	Yes	B-25
Tribal fishery	Yes	B-31
Boating	Yes	B-37
Vehicle access to New Dungeness Light Station	Yes	B-43
Horseback riding	Yes	B-48
Jogging	Yes	B-55

B.1.2 Compatibility—Legal and Historical Context

Compatibility is a tool refuge managers use to ensure that recreational and other uses do not interfere with wildlife conservation, the primary focus of national wildlife refuges. Compatibility is not new to the Refuge System and dates back to 1918, as a concept. As policy, it has been used since 1962. The Refuge Recreation Act of 1962 directed the Secretary of the Interior to allow only those public uses of refuge lands that were “compatible with the primary purposes for which the area was established.”

Compatibility Determination

Use: Environmental Education, Wildlife Observation, Photography, and Interpretation

Refuge Name: Dungeness National Wildlife Refuge

County and State: Clallam County, Washington

Establishing and Acquisition Authorities:

- Executive Order 2123, Dungeness Spit Reservation for Protection of Native Birds, signed 20 January 1915
- Tidelands of the second class were conveyed to the United State of America, U.S. Fish and Wildlife Service, from the State of Washington through a permanent easement on May 29, 1943, (Deed No. 18251 App. No. 10585), under the authority described in Section 152, Chapter 255, State of Washington Laws of 1927.
- Fish and Wildlife Act of 1956 (16 U.S.C. 742a-742j) as amended
- Refuge Recreation Act of 1962 as amended (16 U.S.C. 460k-460k-4)
- Endangered Species Act of 1973

Refuge Purpose(s):

The purposes for the Dungeness NWR have been identified in historic legal documentation establishing and adding refuge lands. The Refuge was originally established to preserve important habitat for native birds with refuge purposes specified as follows:

“...as a refuge, preserve, and breeding ground for native birds.” (Executive Order 2123 dated 20 January 1915.

“... suitable for- (1) incidental fish and wildlife-oriented recreational development, (2) the protection of natural resources, (3) the conservation of endangered species or threatened species ...” (16 U.S.C. 460k-1)

“... the Secretary ... may accept and use ... real ... property. Such acceptance may be accomplished under the terms and conditions of restrictive covenants imposed by donors ...” 16 U.S.C. § 460k-2 (Refuge Recreation Act (16 U.S.C. § 460k-460k-4), as amended).

“... to conserve (A) fish or wildlife which are listed as endangered species or threatened species or (B) plants ...” 16 U.S.C. § 1534 (Endangered Species Act of 1973)

“... for the development, advancement, management, conservation, and protection of fish and wildlife resources ...” 16 U.S.C. § 742f(a)(4) “... for the benefit of the United States Fish and Wildlife Service, in performing its activities and services. Such acceptance may be subject to the terms of any restrictive or affirmative covenant, or condition of servitude ...” 16 U.S.C. § 742f(b)(1) (Fish and Wildlife Act of 1956)

In accordance with 601 FW 1, all lands acquired since the original establishment of the Refuge retain these purposes.

National Wildlife Refuge System Mission:

“The mission of the System is to administer a national network of lands and waters for the conservation, management, and where appropriate, restoration of the fish, wildlife, and plant resources and their habitats within the United States for the benefit of present and future generations of Americans.” (National Wildlife Refuge System Administration Act of 1966 as amended, 16 U.S.C. 668dd-668ee).

Description of Use:

In the National Wildlife Refuge System Improvement Act of 1997, the United States Congress declared wildlife observation and photography, and environmental education and interpretation as four of six priority wildlife-dependent public uses of the NWRs. These four uses are non-consumptive, wildlife-dependent public uses with similar elements and are considered together in this compatibility determination (CD).

Existing wildlife-dependent public uses include wildlife observation, photography, interpretation, and environmental education. Dungeness NWR is open to public use year-round during daylight hours. Existing public use facilities that are involved in these uses include an orientation kiosk with interpretive panels; an entrance fee kiosk; a 3,300 foot main hiking trail with interpretive panels; a 1,800 foot primitive hiking (former equestrian) trail with associated entrance fee kiosk; two observation decks (upper and lower) at the confluence of the main and primitive trails; and a parking lot and public restroom leased from Clallam County. Visitors engage in wildlife observation and photography while walking the self-guided forest trails and open areas of Dungeness Spit (approximately 5 miles of beach), sitting on observation benches along the main trail and at the observation decks. “Dungeness Spit,” as it is known to the local public, provides an opportunity for the public to enjoy the marine portion of the Refuge. Visitors use select portions of the beach for walking, picnicking, and wading in the course of observing seabirds, shorebirds, bald eagles, and occasional marine mammals. By allowing visitors to access only certain areas of the beach and water and monitoring visitor behavior, adverse effects associated with refuge visitation can be minimized. Complex staff, the Friends of Dungeness NWR, and refuge volunteers provide environmental education programs on site to local schools on a request basis. Interpretation is provided of the wildlife resources and habitat via interpretation panels at the orientation kiosk, along the main trail, and during on-site events by refuge friends, volunteers, and staff.

Availability of Resources:

Base funding is available to cover staff costs and sufficient funds are available to manage the activity at current levels but not at the level described under the management direction of the CCP. The following funding/annual costs will be required to administer and manage wildlife observation, photography, interpretation, and environmental education activities as designed under the CCP.

Category	One-time Expenses	Recurring Expenses
Special equipment, facilities, or equipment(signs, brochures, EE material)	\$23,000	
Monitoring and Administration		\$15,000
Maintenance		\$22,000
Law Enforcement		\$18,000
Totals	\$23,000	\$55,000

Anticipated Impacts of the Use(s):

The presence of people observing or photographing wildlife at Dungeness NWR has the potential to cause disturbance to wildlife such as nesting and loafing species and harbor seal pups left on the beach. Human activities on the forest trails and on the beach may result in direct effects on wildlife through harassment, a form of disturbance that can cause physiological effects or varying levels of behavioral modification (Smith and Hunt 1995). Various studies have shown that the severity of the effects depends upon the distance to the disturbance and its duration, frequency, predictability, and visibility to wildlife (Knight and Cole 1995). The variables found to have the greatest influence on wildlife behavior are (a) the distance from the animal to the disturbance and (b) the duration of the disturbance. Animals also show greater flight response to humans moving unpredictably than to humans following a distinct path (Gabrielsen and Smith 1995). These wildlife disturbance considerations were folded into the design of the interpretive trail, which helps keep people on a path to reduce off-trail walking, and assists in keeping human activities away from bluff edges.

Of the wildlife-dependent public uses evaluated, wildlife photographers tend to have the largest disturbance impacts (Klein 1993, Morton 1995, Dobb 1998). While wildlife observers frequently stop to casually view species, wildlife photographers are more likely to approach wildlife (Klein 1993) to get that perfect photograph. Even slow approach by wildlife photographers tends to have behavioral consequences to wildlife species (Klein 1993). Other compounding factors include the potential for photographers to remain close to wildlife for extended periods of time in an attempt to habituate the wildlife subject to their presence (Dobb 1998) and the tendency of casual photographers, with low-power lenses, to get much closer to their subjects than other activities would require (Morton 1995), including wandering off trails. This usually results in increased disturbance to wildlife and habitat, including trampling of plants. The establishment of seasonal and permanent areas closed to the public on Dungeness and Graveyard spits and the requirement that visitors remain on forest trails restricts the general visitor and photographers' accessibility to areas where their actions would cause wildlife disturbance or trample sensitive vegetation.

Impacts from the wildlife-dependent public uses of wildlife observation and photography are contained effectively and mitigated within the overall design of the 1997 Environmental Assessment "Management of Public Use for Dungeness National Wildlife Refuge" (USFWS 1997) by providing clearly defined zones where and seasons when these activities can take place, and requiring that visitors restrict their use to those seasons and areas. This strategy will continue to be implemented under the CCP. The Complex is aware that some visitors disregard signs requiring visitors to stay within the designated public use areas (Area Closed signs). Such unauthorized use creates the potential for greater disturbance to wildlife.

The other two wildlife-dependent public use programs – interpretation and environmental education – use the existing public facilities, including the kiosk area, trail, interpretive panels, and wildlife observation accommodations (upper and lower observation decks). Impacts from these uses will not be additive with regard to impacts from wildlife observation and photography.

Public Review and Comment:

This compatibility determination was submitted for 90-day public review and comment as an appendix to the Draft Comprehensive Conservation Plan and Environmental Assessment for Dungeness NWR.

Determination:

_____ Use is Not Compatible

X Use is Compatible with Following Stipulations

Stipulations Necessary to Ensure Compatibility:

The requirements laid out in the preferred alternative of the Environmental Assessment – “Management of Public Use for Dungeness National Wildlife Refuge” (USFWS 1997) are adopted as stipulations to ensure compatibility and include:

User stipulations:

- Graveyard Spit and the tip of Dungeness Spit are closed to public access
- In Zone 1 – Beach in front of bluffs - Hiking, wildlife observation, and wildlife photography permitted year-round
- In Zone 2 – Base of Dungeness Spit out to ½ mile - Hiking, wildlife observation, wildlife photography and incidental beach uses (picnicking and wading) permitted on the Strait of Juan de Fuca side year-round and on the Dungeness Harbor side from May 15 to September 30. From October 1 to May 14, the Harbor side of Zone 2 is closed to all access.
- In Zone 3 – Strait side of Dungeness Spit from ½ mile to New Dungeness Light Station – Hiking, wildlife observation, and wildlife photography permitted on the Strait side year-round.
- In Zone 4 – Dungeness Spit from lighthouse to end of spit, the Harbor and Bay sides of Dungeness Spit, and all of Graveyard Spit including a 100-yard buffer zone below the mean high tide line - closed to public access year-round. Where the refuge boundary does not accommodate a 100 yard buffer, the buffer is slightly narrower. Boats are permitted to land year-round between the hours of 9 AM and 5 PM, by reservation only through the Complex office (as deemed necessary by the Refuge) in the designated 100 yard zone of beach next to the light station compound on the Bay side of Dungeness Spit. Visitors are allowed to walk through Zone 4 in a designated area to get to and from the landing site to the lighthouse.
- In Zone 5 – Refuge waters and tidelands on the Harbor and Bay sides of Dungeness and Graveyard spits outside of the 100 yard buffer zone - wildlife observation and photography by use of a boat permitted from May 15 through September 30. From October 1 to May 14 this zone is closed to all public access.

Management actions taken to reduce disturbance to harbor seals pupping in areas open to public use will include:

- As soon as a new pup is found, the immediate area where the pup is located will be closed and marked with cones.
- A volunteer will be stationed at the site whenever possible to prevent disturbance and to educate visitors.
- Brochures, signs, and visitor contacts will be used to educate the public about unnecessary pup disturbance and human intervention.

The response of wildlife to these modifications in public use activities will be monitored and evaluated to measure the effectiveness of the program in meeting refuge purposes. Based on monitoring data, public use regulations could become more restrictive in the future.

Justification:

Wildlife observation, photography, and environmental education and interpretation are priority public uses of the NWRs. Providing opportunities for these activities will contribute toward fulfilling provisions of the National Wildlife Refuge System Administration Act, as amended in 1997, and one of the goals of Dungeness NWR. Wildlife observation, photography, and interpretation will provide an excellent forum for allowing public access and increasing understanding of refuge resources. The educational possibilities provided by these opportunities will outweigh any anticipated negative impacts associated with implementation of the program. The stipulations outlined above, as well as the best management practices identified, will minimize potential impacts relative to wildlife/human interactions.

Although all of these activities can result in disturbance to wildlife, disturbance will be limited in time and space. There is more than an adequate amount of undisturbed habitat available to the majority of refuge wildlife for escape and cover.

It is anticipated that wildlife populations will find sufficient food resources and resting places such that their abundance and use of the Refuge will not be measurably lessened from wildlife observation, photography, and environmental education and interpretation activities. The relatively limited number of individuals expected to be adversely affected due to allowing these uses will not cause wildlife populations to materially decline, the physiological condition and production of refuge wildlife species will not be impaired, their behavior and normal activity patterns will not be altered dramatically, and their overall welfare will not be negatively impacted.

Thus, allowing interpretation, environmental education, wildlife observation, and photography to occur with stipulations outlined above will not materially detract or interfere with achieving Dungeness NWR purposes or the NWRs mission, and in some instances may benefit refuge purposes. For example, an educated public is one less likely to damage natural and cultural resources and is more likely to be supportive of funding for national wildlife refuges and other public land.

Mandatory Re-Evaluation Date:

Mandatory 15-year reevaluation date (for wildlife-dependent public uses)

Mandatory 10-year reevaluation date (for all uses other than wildlife-dependent public uses)

NEPA Compliance for Refuge Use Decision: (check one below)

Categorical Exclusion without Environmental Action Statement

Categorical Exclusion and Environmental Action Statement

Environmental Assessment and Finding of No Significant Impact

Environmental Impact Statement and Record of Decision

References:

- Dobb, E. 1998. Reality check: the debate behind the lens. *Audubon* 100(1):44-51, 98-99.
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- USFWS. 1997. Management of public use for Dungeness National Wildlife Refuge – final environmental assessment. U.S. Department of Interior, Fish and Wildlife Service. Sequim, WA. 53 pp. On file at the Washington Maritime National Wildlife Refuge Complex Headquarters. Sequim, Washington.

Refuge Determination:

Prepared by:

Loren Sell
(Signature)

04/19/2013
(Date)

Acting Refuge Manager/
Project Leader Approval:

Loren Sell
(Signature)

04/19/2013
(Date)

Concurrence:

Refuge Supervisor:

[Signature]
(Signature)

4/23/13
(Date)

Regional Chief,
National Wildlife
Refuge System:

L.D. West
(Signature)

4-23-13
(Date)

Compatibility Determination

Use: Fishing, General and Other

Refuge Name: Dungeness National Wildlife Refuge

County and State: Clallam County, Washington

Establishing and Acquisition Authorities:

- Executive Order 2123, Dungeness Spit Reservation for Protection of Native Birds, signed 20 January 1915
- Tidelands of the second class were conveyed to the United State of America, U.S. Fish and Wildlife Service, from the State of Washington through a permanent easement on May 29, 1943, (Deed No. 18251 App. No. 10585), under the authority described in Section 152, Chapter 255, State of Washington Laws of 1927.
- Fish and Wildlife Act of 1956 (16 U.S.C. 742a-742j) as amended
- Refuge Recreation Act of 1962 as amended (16 U.S.C. 460k-460k-4)
- Endangered Species Act of 1973

Refuge Purpose(s):

The purposes for the Dungeness NWR have been identified in historic legal documentation establishing and adding refuge lands. The Refuge was originally established to preserve important habitat for native birds with refuge purposes specified as follows:

“...as a refuge, preserve, and breeding ground for native birds.” (Executive Order 2123 dated 20 January 1915.

“... suitable for- (1) incidental fish and wildlife-oriented recreational development, (2) the protection of natural resources, (3) the conservation of endangered species or threatened species ...” (16 U.S.C. 460k-1)

“... the Secretary ... may accept and use ... real ... property. Such acceptance may be accomplished under the terms and conditions of restrictive covenants imposed by donors ...” 16 U.S.C. § 460k-2 (Refuge Recreation Act (16 U.S.C. § 460k-460k-4), as amended).

“... to conserve (A) fish or wildlife which are listed as endangered species or threatened species or (B) plants ...” 16 U.S.C. § 1534 (Endangered Species Act of 1973)

“... for the development, advancement, management, conservation, and protection of fish and wildlife resources ...” 16 U.S.C. § 742f(a)(4) “... for the benefit of the United States Fish and Wildlife Service, in performing its activities and services. Such acceptance may be subject to the terms of any restrictive or affirmative covenant, or condition of servitude ...” 16 U.S.C. § 742f(b)(1) (Fish and Wildlife Act of 1956)

In accordance with 601 FW 1, all lands acquired since the original establishment of the Refuge retain these purposes.

National Wildlife Refuge System Mission:

“The mission of the System is to administer a national network of lands and waters for the conservation, management, and where appropriate, restoration of the fish, wildlife, and plant resources and their habitats within the United States for the benefit of present and future generations of Americans.” (National Wildlife Refuge System Administration Act of 1966 as amended, 16 U.S.C. 668dd-668ee).

Description of Use(s):

Two types of fishing occur at Dungeness National Wildlife Refuge; fin fish (salmon species primarily) and shell fish (mollusks and Dungeness crab). The Refuge has jurisdiction over the land base including shorelines to mean high water and the second class tidelands under a perpetual easement from the State of Washington and the waters associated with those tidelands. Anglers accessing the fishing opportunities on the Refuge do so by fishing from the shoreline or from boats. Finfishing from the shoreline occurs on the Strait of Juan de Fuca side of Dungeness Spit from the western boundary east to the New Dungeness Light Station (Zones 1, 2 and 3) and from boats in refuge waters associated with the Refuge’s second class tidelands on the Dungeness Harbor and Bay sides of Dungeness Spit outside a 100 yard buffer zone below Mean High Tide (Zone 5). Shellfishing occurs on the Dungeness Harbor side from the base of Dungeness Spit out to ½ mile (Zone 2)—foot access only—and on the Refuge’s second-class tidelands and waters associated with these tidelands on the Dungeness Harbor and Bay sides of Dungeness Spit outside a 100 yard buffer zone below Mean High Tide (Zone 5) – boat access only. Public uses of Zones 2 and 5 are restricted to May 15 to September 30. All fishing is conducted in accordance with State regulations.

This compatibility determination (CD) reassesses and re-evaluates recreational fishing from all shorelines and Dungeness Harbor and Bay areas within the refuge boundary. Under this use fishing will be allowed consistent with State regulations. Specific species/numbers to be taken and open periods will be set by the Washington Department of Fish and Wildlife to match adjacent areas open to fishing, however seasonal closures of Refuge Zones 2 and 5 will continue.

Recreational fishing (a wildlife-dependent activity) has been identified in the National Wildlife Refuge System Administration Act, as amended, as a priority public use, provided it is compatible with the purpose for which the Refuge was established.

Availability of Resources

The recreational fishing program will not require any new infrastructure or personnel. Administration of a fishing program will require coordination with the State of Washington and require monitoring and some law enforcement patrols; however refuge staff is in place and capable of conducting these additional duties.

Category	One Time Expenses	Recurring Expenses
Monitoring/Law Enforcement		\$4,000
Signage/Brochures	\$3,000	\$500
Maintenance		\$1,500
Totals	\$3,000	\$6,000

Anticipated Impacts of the Use(s):

As a solitary and stationary activity, fishing tends to be less disturbing to wildlife than hunting or motorized boating (Tuite et al. 1983). It is well recognized that fishing can give many people a

deeper appreciation of fish and wildlife and a better understanding of the importance of conserving habitat, which has ultimately contributed to the Refuge System mission. A goal of Dungeness National Wildlife Refuge is to provide opportunities for wildlife-dependent recreation. Fishing is one of the six priority public uses in the National Wildlife Refuge System. Of key concern, then, is to manage the activity to keep any potential adverse impacts within acceptable limits.

Any angler activities on the Refuge are and will remain consistent with State guidelines. Related impacts for fish stocks associated with recreational fishing in the Strait of Juan de Fuca adjacent to the Refuge and Dungeness Harbor and Bay, are estimated annually and taken into consideration by the State of Washington in the development of annual fishing agreements and associated regulations. Because fishing regulations are established to provide a sustainable fish resource, impacts to fish populations from recreational fishing activity are expected to be minor.

Additional disturbance will be caused to birds and other wildlife using the open waters and where fishing will occur. Fishing activities may influence the composition of bird communities, as well as abundance, and productivity of waterbirds (Bell and Austin 1985, Bouffard 1982, Cooke 1987, Edwards and Bell 1985, Tydeman 1977). Anglers often fish in shallow, sheltered bays and creeks that birds prefer, negatively impacting distribution and abundance of waterfowl, grebes, and coots (Cooke 1987). Increases in anglers and associated shoreline activity discouraged waterfowl using otherwise suitable habitat (Jahn and Hunt 1964). Anglers influenced the numbers, behavior, and diurnal distribution of avian scavengers present at sites in Washington, when compared to non-fishing days (Knight et al. 1991). Shoreline activities, such as human noise, can cause some birds to flush and go elsewhere.

Boating associated with fishing can alter bird distribution, reduce use of particular habitats or entire areas by waterfowl and other water-birds, alter feeding behavior and nutritional status, and cause premature departure from areas (Knight and Cole 1995). Boating close to shore may disturb harbor seals hauled out on the beach. Impacts of motorized boating can occur even at low densities, given their noise, speed, and ability to cover extensive areas in a short amount of time. (See Boating Compatibility Determination.)

Despite the potential impacts that fishing and supporting activities (boating) can have on wildlife, impacts to wildlife from allowing fishing are expected to be minor for the following reasons. The 100 yard buffer from the mean high tide on the Harbor and Bay side of Dungeness and Graveyard spits coupled with the requirement for boats to have no wake will minimize disturbance to any nesting seabirds or shorebirds and resting or pupping harbor or elephant seals. The majority of waterfowl use on the Refuge occurs in the fall, winter and spring months, with some birds arriving as early as September and October. Because the majority of the fishing activity occurs in the summer and fall (through mid-October), disturbance to waterfowl species is reduced by annual closing refuge waters to all use from October 1 to May 14.

Public Review and Comment:

This compatibility determination was submitted for 90-day public review and comment as an appendix to the Draft Comprehensive Conservation Plan and Environmental Assessment for Dungeness NWR.

Determination:

_____ Use is Not Compatible

X Use is Compatible with Following Stipulations

Stipulations Necessary to Ensure Compatibility:

The requirements laid out in the preferred alternative of the 1997 Environmental Assessment – “Management of Public Use for Dungeness National Wildlife Refuge” (USFWS 1997) are adopted as stipulations to ensure compatibility and include:

User stipulations:

- Graveyard Spit and the tip of Dungeness Spit are closed to public access
- In Zone 1 – Beach in front of bluffs – Fin fishing permitted year-round
- In Zone 2 – Base of Dungeness Spit out to ½ mile – Fin fishing permitted on the Strait of Juan de Fuca side year-round. Fin fishing and shell fishing permitted on the Dungeness Harbor side from May 15 to September 30 – foot access only. From October 1 to May 14, the Harbor side of Zone 2 is closed to all access.
- In Zone 3 – Strait side of Dungeness Spit from ½ mile to New Dungeness Light Station – Fin fishing permitted year-round.
- In Zone 4 – Dungeness Spit from lighthouse to end of spit, the Harbor and Bay sides of Dungeness Spit, and all of Graveyard Spit including a 100-yard buffer zone below the mean high tide line - closed to public access year-round. Where the refuge boundary does not accommodate a 100 yard buffer, the buffer is slightly narrower.
- In Zone 5 – Refuge waters and tidelands on the Harbor and Bay sides of Dungeness and Graveyard spits outside of the 100 yard buffer zone – fin fishing and shell fishing permitted from May 15 through September 30 – boat access only. From October 1 to May 14 this zone is closed to all public access.

The response of wildlife to these modifications in public use activities will be monitored and evaluated to measure the effectiveness of the program in meeting refuge purposes. Based on monitoring data, public use regulations could become more restrictive in the future.

Justification:

Recreational fishing is one of the six priority public uses of the National Wildlife Refuge System. Providing a quality fishing program contributes to achieving one of the Refuge’s goals. Despite the potential impacts that fishing and supporting activities (boating) can have on wildlife, impacts to wildlife from allowing fishing are expected to be minor for the following reasons. The 100 yard buffer from the mean high tide on the Harbor and Bay side of Dungeness and Graveyard spits coupled with the requirement for boats to have no wake will minimize disturbance to any nesting seabirds or shorebirds and resting or pupping harbor or elephant seals. The majority of waterfowl use on the Refuge occurs in the fall, winter and spring months, with some birds arriving as early as September and October. Because the majority of the fishing activity occurs in the summer and fall (through mid-October), disturbance to waterfowl species is reduced by annual closing refuge waters to all use from October 1 to May 14.

Mandatory Re-Evaluation Date:

Mandatory 15-year reevaluation date (for wildlife-dependent public uses)

Mandatory 10-year reevaluation date (for all uses other than wildlife-dependent public uses)

NEPA Compliance for Refuge Use Decision: (check one below)

Categorical Exclusion without Environmental Action Statement

Categorical Exclusion and Environmental Action Statement

Environmental Assessment and Finding of No Significant Impact

Environmental Impact Statement and Record of Decision

References:

Bell, D.V. and L.W. Austin. 1985. The game-fishing season and its effects on overwintering wildfowl. *Biological Conservation* 33:65-80.

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Tuite, C.H., M. Owen, and D. Paynther. 1983. Interaction between wildfowl and recreation at Llangorse Lake and Talybont Reservoir, South Wales. *Wildfowl* 34:48-63.

Tydeman, C.F. 1977. The importance of the close fishing season to breeding bird communities. *Journal of Environmental Management* 5:289-296.

Refuge Determination:

Prepared by:

Lorenz Soll
(Signature)

04/19/2013
(Date)

Acting Refuge Manager/
Project Leader Approval:

Project Leader Approval:

Lorenz Soll
(Signature)

04/19/2013
(Date)

Concurrence:

Refuge Supervisor:

[Signature]
(Signature)

4/23/13
(Date)

Regional Chief,
National Wildlife
Refuge System:

J. S. West
(Signature)

4-23-13
(Date)

Compatibility Determination

Use: Fishing, Other, Tribal

Refuge Name: Dungeness National Wildlife Refuge

County and State: Clallam County, Washington

Establishing and Acquisition Authorities:

- Executive Order 2123, Dungeness Spit Reservation for Protection of Native Birds, signed 20 January 1915
- Tidelands of the second class were conveyed to the United State of America, U.S. Fish and Wildlife Service, from the State of Washington through a permanent easement on May 29, 1943, (Deed No. 18251 App. No. 10585), under the authority described in Section 152, Chapter 255, State of Washington Laws of 1927.
- Fish and Wildlife Act of 1956 (16 U.S.C. 742a-742j) as amended
- Refuge Recreation Act of 1962 as amended (16 U.S.C. 460k-460k-4)
- Endangered Species Act of 1973

Refuge Purpose(s):

The purposes for the Dungeness NWR have been identified in historic legal documentation establishing and adding refuge lands. The Refuge was originally established to preserve important habitat for native birds with refuge purposes specified as follows:

“...as a refuge, preserve, and breeding ground for native birds.” (Executive Order 2123 dated 20 January 1915.

“... suitable for-(1) incidental fish and wildlife-oriented recreational development, (2) the protection of natural resources, (3) the conservation of endangered species or threatened species ...” (16 U.S.C. 460k-1)

“... the Secretary ... may accept and use ... real ... property. Such acceptance may be accomplished under the terms and conditions of restrictive covenants imposed by donors ...” 16 U.S.C. § 460k-2 (Refuge Recreation Act (16 U.S.C. § 460k-460k-4), as amended).

“... to conserve (A) fish or wildlife which are listed as endangered species or threatened species or (B) plants ...” 16 U.S.C. § 1534 (Endangered Species Act of 1973)

“... for the development, advancement, management, conservation, and protection of fish and wildlife resources ...” 16 U.S.C. § 742f(a)(4) “... for the benefit of the United States Fish and Wildlife Service, in performing its activities and services. Such acceptance may be subject to the terms of any restrictive or affirmative covenant, or condition of servitude ...” 16 U.S.C. § 742f(b)(1) (Fish and Wildlife Act of 1956)

In accordance with 601 FW 1, all lands acquired since the original establishment of the Refuge retain these purposes.

National Wildlife Refuge System Mission:

“The mission of the System is to administer a national network of lands and waters for the conservation, management, and where appropriate, restoration of the fish, wildlife, and plant resources and their habitats within the United States for the benefit of present and future generations of Americans.” (National Wildlife Refuge System Administration Act of 1966 as amended, 16 U.S.C. 668dd-668ee).

Description of Use:

The S’Klallam and Skokomish Tribes were signatories to the Point-No-Point Treaty with the U.S. Government in 1855. The S’Klallam tribe today consists of the Jamestown S’Klallam, Lower Elwha Klallam, and Port Gamble S’Klallam. In accordance with the Treaty, the Tribes retained the right to fish “at their usual and accustomed places.” The Tribes, in exercising their Treaty rights, fish in Dungeness Harbor and Bay by set nets or other traditional methods, or by modern or improved fishing techniques. The U.S. Fish and Wildlife Service recognizes that the Treaty fishing rights include access to National Wildlife Refuge System lands. This is a treaty right against land owned by the United States. Access to the Refuge is only open to Tribal members involved in fishing. In 1983, the USFWS and the three S’Klallam Tribes signed a Letter of Agreement for Management of the Tribal Fishery on Dungeness National Wildlife Refuge. The Letter of Agreement contained 8 principles of agreement to promote mutual understanding and cooperation between the USFWS and the Tribes of the Point-No-Point Treaty and to provide for orderly conduct of the fishery on Dungeness NWR. These principles of agreement are reflected in the stipulations necessary to ensure compatibility.

Availability of Resources:

The recreational fishing program will not require any new infrastructure or personnel. Administration of the Tribal fishing program will require coordination with the Point-No-Point Treaty Tribes and require monitoring and some law enforcement patrols; however refuge staff is in place and capable of conducting these duties.

Category	One Time Expenses	Recurring Expenses
Administration- Coordination with tribes		\$1,500
Monitoring/Law Enforcement		\$2,500
Totals		\$4,000

Anticipated Impacts of the Use(s):

Any Tribal angler activities on the Refuge are and will remain consistent with Tribal guidelines. Related impacts for fish stocks associated with Tribal fishing in Dungeness Harbor and Bay are estimated annually and taken into consideration by the State of Washington and Tribes as co-managers of the fishery in the development of annual fishing agreements and associated regulations. Because fishing regulations are established to provide a sustainable fish resource, impacts to fish populations from Tribal fishing activity are expected to be minor.

Additional disturbance will be caused to birds and other wildlife using the open waters and where fishing will occur. Fishing activities may influence the composition of bird communities, as well as abundance, and productivity of waterbirds (Bell and Austin 1985, Bouffard 1982, Cooke 1987, Edwards and Bell 1985, Tydeman 1977). Anglers often fish in shallow, sheltered bays and creeks that birds prefer, negatively impacting distribution and abundance of waterfowl, grebes, and coots

(Cooke 1987). Increases in anglers and associated shoreline activity discouraged waterfowl using otherwise suitable habitat (Jahn and Hunt 1964). Anglers influenced the numbers, behavior, and diurnal distribution of avian scavengers present at sites in Washington, when compared to non-fishing days (Knight et al. 1991). Shoreline activities, such as human noise, can cause some birds to flush and go elsewhere. Tribal members currently may set fires for camping and curing fish and construct temporary shelters as has been done traditionally. These activities reduce drift wood habitat on the spit and may result in a wildfire.

Boating associated with fishing can alter bird distribution, reduce use of particular habitats or entire areas by waterfowl and other water-birds, alter feeding behavior and nutritional status, and cause premature departure from areas (Knight and Cole 1995). Boating close to shore may disturb harbor seals hauled out on the beach. Impacts of motorized boating can occur even at low densities, given their noise, speed, and ability to cover extensive areas in a short amount of time. (See Boating Compatibility Determination.)

There will be impacts to refuge resources from Tribal fishing. Under the 1983 Letter of Agreement for Management of the Tribal Fishery on Dungeness NWR, Tribal members are allowed access to refuge closed areas in exercising their Treaty Rights. Tribal members can camp, collect drift wood and build fires. These activities result in wildlife displacement, reduce drift wood habitat on the spit and may result in a wildfire. Boating in support of the Tribal fishery can take place in waters closed to public use after September 30th if the fishery continues beyond that date. Wildlife species using these closed areas can be disturbed. In addition avian and marine mammal species may become entangled in Tribal nets and be injured or die.

Despite the potential impacts that Tribal fishing and supporting activities (boating) can have on wildlife, impacts to wildlife from allowing fishing are expected to be minor for the following reasons. In most years, relatively few individuals participate in this fishery. The use is limited in time usually beginning in mid- September and finishing in late October before we get large numbers of wintering birds and there is plenty of adjacent sanctuary for disturbed wildlife to escape to. An additional steelhead fishery occurs from December through February but has resulted in very limited participation and occurs mostly outside of refuge waters in the vicinity of Cline Spit. Tribal members must maintain visual contact with their nets and not leave them unattended which reduces the incidence of bycatch of avian and marine mammal species. Fires are not to be left unattended thus reducing the likelihood of a wildfire event.

Public Review and Comment:

This compatibility determination was submitted for 90-day public review and comment as an appendix to the Draft Comprehensive Conservation Plan and Environmental Assessment for Dungeness NWR.

Determination:

Use is Not Compatible

Use is Compatible with Following Stipulations

Stipulations Necessary to Ensure Compatibility:

The principles of agreement as laid out in the 1983 Letter of Agreement for Management of the Tribal Fishery on Dungeness National Wildlife Refuge are adopted as stipulations to ensure compatibility and include:

1. During the prescribed fishing seasons, established by the Tribes and the Washington Department of Fish and Wildlife, the Tribes (Lower Elwha Klallam, Jamestown S’Klallam and Port Gamble S’Klallam) of the Point-No-Point Treaty (PNPT) may conduct their fishery in Dungeness Harbor and Bay in compliance with tribal and applicable state regulations
2. Access by tribal members and fish buyers to the refuge areas, which are the usual and accustomed fishing grounds and stations of the Tribes (Lower Elwha Klallam, Jamestown S’Klallam and Port Gamble S’Klallam), is limited to boat and foot.
3. Leaving equipment (boats, nets, etc.) on the refuge lands is discouraged. The owner assumes all risks associated with unattended equipment
4. The Tribes (Lower Elwha Klallam, Jamestown S’Klallam and Port Gamble S’Klallam) of the PNPT may set fires for camping and curing fish and construct temporary shelters as has been done traditionally. Fires should not be left unattended. Camp sites should be totally removed and fire pits extinguished and covered with sand at the conclusion of the fishing season.
5. The USFWS prohibits pets and littering while on refuge lands
6. The Tribal Enforcement Division will be responsible for ensuring compliance with the above principles and with Tribal fishery regulations and will respond to complaints from USFWS personnel for reasons of non-compliance.
7. The Tribes will notify the USFWS of opening and closing dates of the fishing seasons on Dungeness NWR.
8. The USFWS agrees to discourage visitors to the Dungeness NWR from vandalizing fishing gear or otherwise disturbing Indian fishing activities on refuge lands.

The Letter of Agreement is 29 years old and the Refuge will contact the Tribes concerning updating the document. In particular the Refuge will work to modify conditions 3 and 4. Should these two principles be changed then the CD (stipulations necessary to ensure compatibility) will be modified to reflect same.

Justification:

The USFWS recognizes the Point-No-Point Treaty Tribes retained the right to fish “at their usual and accustomed places” and that Dungeness NWR is one of those places. Although there may be some wildlife and habitat disturbance associated with this activity, the USFWS will continue to work with the Tribes to minimize these effects. Although Tribal fishing and associated boating can result in disturbance to wildlife, disturbance is expected to be intermittent and limited in time and space. There are more than adequate amounts of undisturbed habitat available to the majority of wildlife for escape and cover.

It is anticipated that wildlife populations will find sufficient food resources and resting places such that their abundance and use of the Refuge will not be measurably lessened from Tribal fishing activities. The relatively limited number of individual animals and plants expected to be adversely affected due to fishing will not cause wildlife populations to materially decline, the physiological condition and production of affected species will not be impaired, their behavior and normal activity patterns will not be altered dramatically, and their overall welfare will not be negatively impacted. Thus, allowing Tribal fishing to occur with stipulations (1983 Letter of Agreement for Management of the Tribal Fishery on Dungeness National Wildlife Refuge) will not materially detract from or interfere with the purposes for which the Refuge was established or the Refuge System mission.

Mandatory Re-Evaluation Date:

Mandatory 15-year re-evaluation date (wildlife-dependent public uses)

Mandatory 10-year re-evaluation date (uses other than wildlife-dependent public uses)

NEPA Compliance for Refuge Use Decision: (check one below)

Categorical Exclusion without Environmental Action Statement

Categorical Exclusion and Environmental Action Statement

Environmental Assessment and Finding of No Significant Impact

Environmental Impact Statement and Record of Decision

References:

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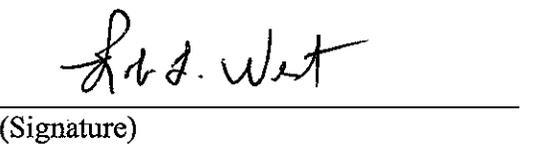
Refuge Determination:

Prepared by:  04/19/2013
(Signature) (Date)

Acting Refuge Manager/
Project Leader Approval:  04/19/2013
(Signature) (Date)

Concurrence:

Refuge Supervisor:  4/23/13
(Signature) (Date)

Regional Chief,
National Wildlife
Refuge System:  4-23-13
(Signature) (Date)

Compatibility Determination

Use: Boating (Motorized and Non-motorized)

Refuge Name: Dungeness National Wildlife Refuge

County and State: Clallam County, Washington

Establishing and Acquisition Authorities:

- Executive Order 2123, Dungeness Spit Reservation for Protection of Native Birds, signed 20 January 1915
- Tidelands of the second class were conveyed to the United State of America, U.S. Fish and Wildlife Service, from the State of Washington through a permanent easement on May 29, 1943, (Deed No. 18251 App. No. 10585), under the authority described in Section 152, Chapter 255, State of Washington Laws of 1927.
- Fish and Wildlife Act of 1956 (16 U.S.C. 742a-742j) as amended
- Refuge Recreation Act of 1962 as amended (16 U.S.C. 460k-460k-4)
- Endangered Species Act of 1973

Refuge Purpose(s):

The purposes for the Dungeness NWR have been identified in historic legal documentation establishing and adding refuge lands. The Refuge was originally established to preserve important habitat for native birds with refuge purposes specified as follows:

“...as a refuge, preserve, and breeding ground for native birds.” (Executive Order 2123 dated 20 January 1915.

“... suitable for-(1) incidental fish and wildlife-oriented recreational development, (2) the protection of natural resources, (3) the conservation of endangered species or threatened species ...” (16 U.S.C. 460k-1)

“... the Secretary ... may accept and use ... real ... property. Such acceptance may be accomplished under the terms and conditions of restrictive covenants imposed by donors ...” 16 U.S.C. § 460k-2 (Refuge Recreation Act (16 U.S.C. § 460k-460k-4), as amended).

“... to conserve (A) fish or wildlife which are listed as endangered species or threatened species or (B) plants ...” 16 U.S.C. § 1534 (Endangered Species Act of 1973)

“... for the development, advancement, management, conservation, and protection of fish and wildlife resources ...” 16 U.S.C. § 742f(a)(4) “... for the benefit of the United States Fish and Wildlife Service, in performing its activities and services. Such acceptance may be subject to the terms of any restrictive or affirmative covenant, or condition of servitude ...” 16 U.S.C. § 742f(b)(1) (Fish and Wildlife Act of 1956)

In accordance with 601 FW 1, all lands acquired since the original establishment of the Refuge retain these purposes.

National Wildlife Refuge System Mission:

“The mission of the System is to administer a national network of lands and waters for the conservation, management, and where appropriate, restoration of the fish, wildlife, and plant resources and their habitats within the United States for the benefit of present and future generations of Americans.” (National Wildlife Refuge System Administration Act of 1966 as amended, 16 U.S.C. 668dd-668ee).

Description of Use:

Boating use addressed in this compatibility determination is for motorized and non-motorized boats, including kayaks and canoes in refuge waters associated with the Refuge’s second class tidelands. Although boating is not a wildlife-dependent public use, it does facilitate other wildlife-dependent uses such as fishing, wildlife observation, and photography. Boating at Dungeness NWR primarily supports fishing (shell fish and fin fish), although wildlife observation and photography are also conducted from these platforms. Access to the New Dungeness Light Station via boat is permitted through a reservation system (See Environmental Education, Wildlife Observation, Photography, and Interpretation Compatibility Determination). Currently boating on refuge waters is limited to May 15 through September 30. Personal watercrafts, wind surfing and para-surfing/sailing are not permitted on refuge waters.

Availability of Resources:

The following funding/annual cost will be required to administer and manage boating activities as described above:

Category	One Time Expense	Recurring Expense
Administration (Reservation system for lighthouse landings)		\$1,000
Monitoring		\$4,000
Signage/Outreach	\$3,500	\$500
Totals	\$3,500	\$5,500

The Refuge has sufficient staff and funding to allow the use.

Anticipated Impacts of the Use(s):

Dungeness NWR provides crucial foraging and resting habitat for wintering migratory birds, including waterfowl, shorebirds, seabirds, and other waterbirds. Recreational boating affects their use of refuge and other Dungeness Harbor and Bay waters. Boating activity, both motorized and non-motorized, can alter distribution, reduce use of particular habitats or entire areas by waterfowl and other birds, alter feeding behavior and nutritional status, and cause premature departure from areas (Knight and Cole 1995). More sensitive species may find it difficult to secure adequate food or loafing sites as their preferred habitat becomes fragmented and recreation-related disturbances increase (Skagen et al. 1991, Pfister et al. 1992). During migration and wintering, Pacific brant can be considered obligate feeders on eelgrass. Because of this, the eelgrass beds associated with the Refuge’s second-class tidelands are important brant feeding areas.

Another species that could be impacted is the harbor seal. Harbor seals haulout and bear their pups on Dungeness Harbor and Bay tideflats and beaches. Harbor seals are afforded protection under the Marine Mammal Protection Act of 1972.

Canoes and kayaks can cause significant disturbance effects based on their ability to penetrate into shallower areas (Speight 1973, Knight and Cole 1995). Canoes or slow-moving boats have been observed to disturb great blue herons (Vos et al. 1985). Huffman (1999) found that non-motorized boats within 30 meters (98 feet) of the shoreline in south San Diego Bay caused all wintering waterfowl to flush between the craft and shore. However, compared to motorboats, canoes and kayaks appear to have less disturbance effects on most wildlife species (Huffman 1999, DeLong 2002).

The overall effects to wildlife will not be significant because refuge waters are closed to all use during the migration and winter season and there is a requirement to maintain a closed area 100 yard buffer zone below the mean high tide line during periods when these waters are open to public use.

Impacts from boating are contained effectively and mitigated within the overall design of the 1997 Environmental Assessment “Management of Public Use for Dungeness National Wildlife Refuge” (USFWS 1997) by providing clearly defined zones where and seasons when these activities can take place, and requiring that visitors restrict their use to those seasons and areas. This strategy will continue to be implemented under the CCP. The Complex is aware that some visitors disregard signs requiring visitors to stay within the designated public use areas (Area Closed signs). Such unauthorized use creates the potential for greater disturbance to wildlife

Public Review and Comment:

This compatibility determination was submitted for 90-day public review and comment as an appendix to the Draft Comprehensive Conservation Plan and Environmental Assessment for Dungeness NWR.

Determination:

Use is Not Compatible

Use is Compatible with Following Stipulations

Stipulations Necessary to Ensure Compatibility:

The requirements laid out in the preferred alternative of the Environmental Assessment – “Management of Public Use for Dungeness National Wildlife Refuge” (USFWS 1997) are adopted as stipulations to ensure compatibility and include:

- In Zone 4 – Dungeness Spit from lighthouse to end of spit, the Harbor and Bay sides of Dungeness Spit, and all of Graveyard Spit including a 100-yard buffer zone below the mean high tide line - closed to public access year-round. Where the refuge boundary does not accommodate a 100 yard buffer, the buffer is slightly narrower.
- In Zone 5 – Refuge waters and tidelands on the Harbor and Bay sides of Dungeness Spit outside the 100 yard buffer – motorized and non-motorized boats (kayaks, small sailboats, canoes, rowboats, etc.) allowed access to the areas west and east of Graveyard Spit in Zone 5, from October 1 to May 14.
- From October 1 to May 14 this zone is closed to all public access.
- Zone 5 is a no wake zone for power boats.
- Boats are permitted to land year-round between the hours of 9 AM and 5 PM, by reservation only through the Complex office (as deemed necessary by the Refuge), in the designated 100 yard zone of beach next to the light station compound on the Bay side of Dungeness Spit.

Number of landings is limited to no more than 20 per day. Visitors are allowed to walk through Zone 4 in a designated area to get to and from the landing site to the lighthouse.

The response of wildlife to these modifications in public use activities will be monitored and evaluated to measure the effectiveness of the program in meeting refuge purposes. Based on monitoring data, public use regulations could become more restrictive in the future.

Justification:

Boating itself is not considered wildlife-dependent recreation, but many wildlife-dependent recreational activities (fishing, waterfowl hunting, environmental education, interpretation, and wildlife observation/photography) are associated with boating. Providing opportunities for wildlife-dependent priority public uses will contribute toward fulfilling provisions under the National Wildlife Refuge System Administration Act as amended in 1997. Although boating has a potential to impact wildlife, implementing the prescribed measures listed in the Stipulations section will minimize these impacts. It is anticipated that closing refuge waters to boating during the migration and winter time periods will provide secure feeding and resting places for brant, waterfowl and shorebirds. The 100 yard buffer on the Dungeness Harbor and Bay side of Dungeness and Graveyard spits will minimize the potential for disturbance to nesting black oystercatchers and harbor seals.

Thus, it is anticipated that birds will find sufficient food resources and resting places such that their abundance and use of the Refuge will not be measurably lessened, the physiological condition and production of waterfowl and other waterbirds will not be impaired, their behavior and normal activity patterns will not be altered dramatically, and their overall status will not be impaired. Thus, allowing boating under the stipulations described above will not materially detract from or interfere with the purposes for which the Refuge was established or the Refuge System mission. The Refuge will also implement a monitoring program to help assess disturbance effects on wildlife and habitat. Improved outreach and educational information for refuge visitors involved in activities associated with boating will also help to reduce the impacts associated with boating activities.

Mandatory Re-Evaluation Date:

Mandatory 15-year re-evaluation date (wildlife-dependent public uses)

Mandatory 10-year re-evaluation date (uses other than wildlife-dependent public uses)

NEPA Compliance for Refuge Use Decision: (check one below)

Categorical Exclusion without Environmental Action Statement

Categorical Exclusion and Environmental Action Statement

Environmental Assessment and Finding of No Significant Impact

Environmental Impact Statement and Record of Decision

References:

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Refuge Determination:

Prepared by:

Loem Soll
(Signature)

04/19/2013
(Date)

Acting Refuge Manager/
Project Leader Approval:

Loem Soll
(Signature)

04/19/2013
(Date)

Concurrence:

Refuge Supervisor:

[Signature]
(Signature)

4/23/13
(Date)

Regional Chief,
National Wildlife
Refuge System:

L. J. Wet
(Signature)

4-23-13
(Date)