



Grays Harbor County

Department of Public Services

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Montesano, WA 98563

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ENVIRONMENTAL CHECKLIST GRAYS HARBOR COUNTY

INSTRUCTIONS FOR APPLICANTS: Answer each question accurately and carefully. If you do not know the answer or if a question does not apply write "do not know" or NA. Complete answer now may avoid unnecessary delays later. If you require additional space for answer or explanations, attach separate sheets.

A. BACKGROUND

OFFICE USE ONLY

1. Project Title: Connor Creek Erosion Control Project	
2. Applicant: Grays Harbor County Attn: Kevin Varness	
3. Address and Phone: 100 West Broadway, Suite #31 Montesano, WA 98563 (360) 249-4222	
4. Date checklist prepared: December 26, 2002	
5. Agency requiring checklist: Grays Harbor County	
6. Proposed timing or schedule: Project construction will begin as soon as all required permits and funding are obtained.	
7. Plans for future additions, expansion, or further activity. If yes, explain. There are no plans for future additions or expansion. Future activities related to the project would include monitoring stability of project features and, potentially, monitoring a variety of environmental parameters. The structural elements of the project are designed to be stable and durable; however, it is possible that these features could require repair or maintenance at some future time.	
8. List other environmental information you know about related to this proposal: Existing environmental information includes a natural resources assessment (i.e., wetland delineation and habitat assessment) and wetland functional assessment. Other environmental information to be prepared for the project includes a Biological Evaluation to assess potential effects on threatened and endangered species. The Preliminary Engineering Report (PI Engineering 2001) includes information on physical process at and near the project site.	

<p>9. List other pending applications or approvals: There are no known pending applications or approvals for other proposals at the project site. To implement this proposal, required permits and approvals are expected to include: Shoreline Substantial Development Permit, Hydraulic Project Approval, Section 404 Permit (including Endangered Species Act consultation), Section 401 Water Quality Certification, Coastal Zone Management consistency review, and approval by the Washington State Parks and Recreation Commission.</p>	
<p>10. Give detailed description of proposal including off-site improvements, utility requirements, land and building dimensions etc. (attach site plan): The proposed project is designed to address erosion and flooding problems associated with the ongoing northward migration of Connor Creek. The proposal involves excavation of a new channel near the historic (1987) mouth of Connor Creek and placing a "plug" of excavated material in the existing creek channel to prevent northward flow. This would shorten the existing lower Connor Creek channel (as of November, 2002) by approximately 8,000 feet. Two dikes would be constructed to limit the northward and southward migration of the new creek mouth to a zone approximately 2,000 feet in width (see site plan).</p> <p>The bottom of the new excavated channel would be approximately 20 feet wide, with gently-sloping (5:1) banks. The excavated material would be used to plug the existing Connor Creek channel, and the northern dike would be tied into this plug. The southern dike would be tied into an existing rock revetment adjacent to the Surfcrest Condominiums. The seaward ends of both structures would terminate near or slightly below Mean Higher High Water (MHHW). The dikes would consist primarily of layered, sand-filled geotextile tubes, with the seaward ends consisting of layered geotextile and armor rock constructed to resist wave forces. The dikes would be buried below existing grade for most of their length; only the tops of the rock-armored seaward ends would be exposed above grade. The dikes would be densely planted with vegetation appropriate for the exposure and salinity regime.</p> <p>Following construction, the structures would be regularly monitored to ensure that they are performing as designed.</p>	
<p>11. Location of proposal including section, township, range and parcel number. The project site lies within a portion of Sec 34, T19N, R12W W.M.</p>	

B. ENVIRONMENTAL ELEMENTS

1. EARTH	
<p>a. General description of the site (circle one): flat, rolling, hilly, steep slopes, mountainous, other The site is generally flat to gently sloping.</p>	
<p>b. What is the steepest slope on site (approximate percent slope)? The overall site slope is approximately 3 percent. Some localized areas of the stream bank have slopes that are approximately 10 percent.</p>	
<p>c. What general types of soils are found on the site (e.g., clay, sand, gravel, peat, muck)? If you know the classification of agricultural soils, specify them and note any prime farmland. Soils on the site consist of beach sands. In some areas where wetlands have formed, the soils have have a high percentage of organic material the upper few inches.</p>	
<p>d. Are there surface indications or history of unstable soils in the immediate vicinity? If so, describe. The sands on the site are subject to a variety of erosive forces. Substantial areas of public and private property have been eroded along the eastern bank of the creek channel. The long, narrow barrier spit that is forming as the creek moves northward is considered unstable and at risk of breaching by overtopping floodwaters and wave runup. Additional information on potential barrier spit breaching is contained in the Preliminary Engineering Report (PI Engineering 2001).</p>	
<p>e. Describe purpose, type, and approximate quantities of any filling or grading proposed. Indicate source of fill. Approximately 10,600 cubic yards of material would be excavated to form the new creek mouth. Of the 10,600 cubic yards of material excavated, approximately 3,500 cubic yards would be used to form the plug placed in the existing creek channel. The plug would be armored with approximately 870 cubic yards of imported rock material. Most of the remainder of the excavated material would likely be suitable for filling the geotubes. Because the geotubes would require a total of approximately 11,520 cubic yards of sand, additional material for filling the tubes would be obtained from the excavation needed to form the dike foundation. Excess or unsuitable material from the mouth and foundation excavations would be disposed of at an appropriate upland location. Approximately 7,200 cubic yards of imported rock would be used to construct the seaward ends of the dikes.</p>	
<p>f. Could erosion occur as a result of clearing, construction, or use? If so, generally describe. The project is designed to control erosion associated with the northward migration of the Connor Creek mouth. However, it is possible that some erosion could occur as a result of project construction. This could include erosion along the dikes as the new mouth moves within the established migration zone, or wave erosion at the seaward end of the dikes.</p>	
<p>g. About what percent of the site will be covered with impervious surfaces after project construction (e.g., asphalt or buildings)? No impervious surfaces would be constructed as part of the project, although the seaward portions of the dikes that are rock armored would be less permeable than the existing beach sands.</p>	

<p>h. Proposed measures to reduce or control erosion, or other impacts to the earth, if any:</p> <p>Wave erosion of the seaward end of the dikes would be reduced by constructing this portion of the dikes with large, angular armor rock keyed into the sand with geotextile and a 2-foot rock underlayer. Geotubes are proposed because they can adjust to small variations in the ground level they are less subject to foundation scour and erosion than "hard" structures. The geotube dikes would be placed with an anchor tube, buried below grade, and vegetated to further reduce erosion potential. Regular monitoring would be conducted to ensure that the structures are performing as designed and that unacceptable levels of erosion do not occur.</p>	
2. AIR	
<p>a. What types of emissions to the air would result from the proposal (i.e., dust, automobile, odors, industrial wood smoke) during construction and when the project is completed? If any, generally describe and give approximate quantities if known.</p> <p>During construction, there would be emissions of engine exhaust from heavy equipment used for site preparation, excavation of the new mouth, and installation of the dikes. Air emissions from the completed project are not expected.</p>	
<p>b. Are there any off-site sources of emissions or odor that may affect your proposal? If so, generally describe.</p> <p>No.</p>	
<p>c. Proposed measures to reduce or control emissions or other impacts to air, if any:</p> <p>Construction equipment would be fitted with factory-installed emission control devices. The construction contractor would be required to keep this equipment in good running condition during project construction to reduce excess engine exhaust.</p>	
3. WATER	
a. Surface:	
<p>1. Is there any surface water body on or in the immediate vicinity of the site (including year-round and seasonal streams, saltwater, lakes, ponds, wetlands)? If yes, describe type and provide names. If appropriate, state what stream or river it flows into.</p> <p>Surface waters on and in the immediate vicinity of the site include Connor Creek and the Pacific Ocean. Wetlands have formed along Connor Creek in a portion of the site (see Wetland Report). The mouth of the Copalis River is located approximately 7,700 feet from the current mouth of Connor Creek.</p>	
<p>2. Will the project require any work over, in, or adjacent to (within 200 feet) the described waters? If yes, please describe and attach available plans.</p> <p>Yes, the project would require work within Connor Creek and portions of its associated wetlands. In addition, the toe of the dikes would be constructed below the MHHW elevation, with the ends of the dikes extending slightly waterward of the MHHW line (see site plan).</p>	

<p>3. Estimate amount of fill and dredge material that would be placed in or removed from surface water or wetlands and indicate the area of the site that would be affected. Indicate the source of fill material.</p> <p>An estimated 4,370 cubic yards of native sand and imported armor rock would be placed in the existing Connor Creek channel. This plug would cover approximately 0.5 acre of channel area. Approximately 1,920 cubic yards of native material contained within geotubes would be placed in wetlands as part of the south dike construction. This would directly affect approximately 0.25 acre of wetlands.</p>	
<p>4. Will the proposal require surface water withdrawals or diversions? Give general description, purpose, and approximate quantities if known.</p> <p>The project would involve no surface water withdrawals or consumption of surface water. However, the lower portion of Connor Creek would be diverted to a location near its circa-1987 mouth.</p>	
<p>5. Does the proposal lie within a 100-year flood plain? If so, note location on the site plan.</p> <p>The site lies within the 100-year floodplain of Connor Creek.</p>	
<p>6. Does the proposal involve any discharges of waste materials to surface waters? If so, describe the type of waste and anticipated volume of discharge.</p> <p>No waste materials would be discharged to surface waters.</p>	
b. Ground:	
<p>1. Will ground water be withdrawn, or will water be discharged to ground water? Give general description, purpose, and approximate quantities if known.</p> <p>There would be no groundwater withdrawals or discharges.</p>	
<p>2. Describe waste material that will be discharged into the ground from septic tanks or other sources, if any (e.g., domestic sewage; industrial, containing the following chemicals _____; agricultural; etc.). Describe the general size of the system, the number of such systems, the number of houses to be served (if applicable), or the number of animals or humans the system(s) are expected to serve.</p> <p>No waste material would be discharged to ground water.</p>	
c. Water Runoff (including storm water):	
<p>1. Describe the source of runoff, (including storm water) and method of collection and disposal, if any (include quantities, if known). Where will this water flow? Will this water flow into other waters? If so, describe.</p> <p>Stormwater and wave runoff within the project area would either infiltrate into the ground or flow into Connor Creek or directly into the ocean.</p>	
<p>2. Could waste materials enter ground or surface waters? If so, generally describe.</p> <p>There is the potential for spills of fuel or lubricants to enter ground or surface waters during construction.</p>	

3. Proposed measures to reduce or control surface, ground, and runoff water impacts, if any:

The construction contractor would be required to have a Spill Prevention, Control and Countermeasures Plan in place that would be followed at all times during project construction to reduce the potential for spill-related impacts to surface or ground waters.

4. PLANTS

- a. Check or circle types of vegetation found on the site:

deciduous tree: alder, maple, aspen, other willow _____

evergreen tree: fir, cedar, pine, other _____

shrubs

grass

pasture

crop or grain

wet soil plants: cattail, buttercup, bullrush, skunk cabbage, other

_____ rushes, sedges, sweet gale, ditch-grass, yellow flag iris _____

water plants: water lily, eel grass, milfoil, other _____ pondweed, water parsley, duckweed_

other types of vegetation

- b. What kind and amount of vegetation will be removed or altered?

Wetland vegetation would be removed in areas where the dikes would be installed. Wetland vegetation would be replanted in these areas once dike construction is completed.

The project would also result in changes in hydrology and possibly salinity that could cause alterations in the density or type of vegetation present in wetlands located near the new constructed creek mouth. The project would cause water surface elevations in the creek and adjacent wetlands to be lower than under current conditions. This could cause the outer portions of the existing wetlands (away from the channel) to become drier. At the same time, the decreased water surface elevation would create conditions that would allow wetland vegetation to colonize new inner edges toward the channel. Monitoring over several growing seasons would be needed to determine if these changes result in a decrease or increase in wetland area or changes in vegetation types.

The vegetation types present in these wetlands could also be affected by changes in salinity from the introduction of seawater through the new creek mouth. Calculations that include tidal and creek inflow to the wetland area, mixing and dilution with water in the wetland, and discharge to the ocean on the falling tide, show that salinity could rise to 10 ppt during the summer low flow period and in the hours just around the peak of the higher high tide. In other parts of the tidal cycle, salinity could fall to near zero. Calculations also show that if a large volume of water having ocean salinity were introduced into the wetland, salinity would return to the 1 – 10 ppt level in the wetland in a few tidal cycles.

- c. List threatened or endangered species known to be on or near the site.
No threatened or endangered plants are known to be on or near the site.

d. Proposed landscaping, use of native plants, or measures to preserve or enhance vegetation on the site, if any:
Wetland vegetation removed during installation of the dikes would be replaced with the same or similar species as soon as possible following construction. Vegetation would also be planted along the portions of the buried dikes lying outside wetlands to stabilize these areas and to enhance their habitat value. Potential alterations in wetland vegetation that could result from changes in the wetland hydrologic or salinity regime would be mitigated by the creation of new vegetated wetland areas in a nearby location. A wetland mitigation plan will be submitted under separate cover.

5. ANIMALS

a. Circle any birds and animals which have been observed on or near the site or are known to be on or near the site:
birds: hawk, heron, eagle, songbirds, other _waterfowl____
mammals: deer, bear, elk, beaver, other_____
fish: bass, salmon, trout, herring, shellfish, other _ sculpin,
stickleback__

b. List any threatened or endangered species known to be on or near the site.
Bald eagles or marbled murrelets could traverse the site on foraging flights. Coho salmon, a candidate species, are likely present in Connor Creek. The project site falls within the range of the Coastal/Puget Sound bull trout, but Connor Creek does not offer habitat that would be considered suitable for bull trout spawning. A variety of listed whale and sea turtle species, as well as Steller sea lions, may use ocean waters offshore of the project site, but are not expected to be present at the site.

c. Is site part of a migration route? If so, explain.
A variety of salmonids (coho, chum, cutthroat and steelhead trout) use Connor Creek on their migrations to and from saltwater. The area is also part of the Pacific Flyway for migratory birds.

d. Proposed measures to preserve or enhance wildlife, if any:
As noted above, wetland vegetation removed during installation of the dikes would be replaced and vegetation would be planted along the other portions of the buried dikes. Mitigation actions would be taken to create new wetlands to offset wetland losses or alterations associated with the project.

The portion of the creek channel that would be abandoned as a result of the project provides very shallow water column habitat that is devoid of vegetated cover, structure, or other habitat features that are considered important for migratory fish and other aquatic organisms. The unstable banks further degrade the quality of this habitat. Mitigation actions could include creation of a new side channel within the wetland mitigation area to offset the loss of channel function and provide improved instream habitat. The new side channel would be designed to provide habitat elements (stability, low velocity refuge, cover, structure, productivity) that are currently lacking in the lower portions of Connor Creek.

6. ENERGY AND NATURAL RESOURCES

<p>a. What kinds of energy (electric, natural gas, oil, wood stove, solar) will be used to meet the completed project's energy needs? Describe whether it will be used for heating, manufacturing, etc. No energy would be required for the completed project. If any repair or maintenance of the structures were needed in the future, diesel fuel would be needed for construction equipment.</p>	
<p>b. Would your project affect the potential use of solar energy on adjacent properties? If so, generally describe. The project would have no effect on the potential use of solar energy.</p>	
<p>c. What kinds of energy conservation features are included in the plans of this proposal? List other proposed measures to reduce or control energy impacts, if any: During construction, the contractor would be required to keep motorized equipment in good running condition to avoid excess fuel consumption.</p>	
7. ENVIRONMENTAL HEALTH	
<p>a. Are there any environmental health hazards, including exposure to toxic chemicals, risk of fire and explosion, spill, or hazardous waste, that could occur as a result of this proposal? If so, describe. As with any project that involves motorized construction equipment, it is possible that there could be a spill or fire associated with fuels or lubricants.</p>	
<p>1. Describe special emergency services that might be required. Emergency fire or medical services could be required in the event of an accident during construction.</p>	
<p>2. Proposed measures to reduce or control environmental health hazards, if any. The construction contractor will be required to have a Spill Prevention, Control and Countermeasures Plan in place that would be followed at all times during project construction, and to follow all applicable state and federal safety procedures.</p>	
b. Noise	
<p>1. What types of noise exist in the area which may affect your project (e.g., traffic, equipment operation, other)? None.</p>	
<p>2. What types and levels of noise would be created by or associated with the project on a short-term or a long-term basis (e.g., traffic, construction, operation, other)? Indicate what hours noise would come from the site. During construction, noise would be generated by motorized equipment. This would include engine noise and noise from vehicle backup signals required by safety regulations. Construction, and the noise associated with it, would be confined to daylight hours.</p>	
<p>3. Proposed measures to reduce or control noise impacts, if any: The construction contractor would be required to have motorized equipment properly fitted with mufflers to reduce engine noise.</p>	
8. LAND AND SHORELINE USE	

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<p>a. What is the current use of site and adjacent properties? The site is used for beach-related recreation; however, access has been lost as a result of the northward movement of Connor Creek. Adjacent properties are developed for recreational and year-round residential use. Griffiths-Priday State Park, located north of the project site, is used for picnicking, fishing, clamming, and other recreational activities.</p>	
<p>b. Has the site been used for agriculture? If so, describe. No.</p>	
<p>c. Describe any structures on site. Structures on the construction site are limited to a rock revetment located adjacent to the Surfcrest Condominiums.</p>	
<p>d. Will any structures be demolished? If so, what? No structures would be demolished.</p>	
<p>e. What is the current zoning classification of the site? Resort Residential</p>	
<p>f. What is the current comprehensive plan designation of the site? Recreational-Residential</p>	
<p>g. If applicable, what is the current shoreline master program designation of the site? Ocean Beach and Rural Environments</p>	
<p>h. Has any part of the site been classified as an "environmentally sensitive" area? The site has not been classified as environmentally sensitive per regulations adopted under the Growth Management Act. Lower Connor Creek has been classified by the federal government as an Aquatic Resource of National Importance.</p>	
<p>i. Approximately how many people would reside or work in the completed project? None.</p>	
<p>j. Approximately how many people would the completed project displace? None.</p>	
<p>k. Proposed measures to avoid or reduce displacement impacts, if any: There would be no displacement impacts associated with the project, and no mitigation measures are proposed.</p>	

<p>I. Proposed measures to ensure proposal is compatible with existing and projected land uses and plans, if any: Implementation of the project would protect existing and proposed land uses. The project would help to ensure that residential, recreational, and commercial lands are not subject to ongoing erosion or potential flood damage associated with Connor Creek's northward migration. The project would allow access to beach areas to be safely reestablished. The project would protect public and private investment in land, buildings, and infrastructure (water supply wells, septic systems, County roadways, State highway) by helping to ensure that lands and structures are not subject to further damage from erosion and flooding. An inventory of wells and septic systems in the area that are potentially at risk is attached to this checklist.</p>	
9. HOUSING	
<p>a. Approximately how many units would be provided, if any? Indicate whether high, middle, or low-income housing. No housing would be provided.</p>	
<p>b. Approximately how many units, if any, would be eliminated? Indicate whether high, middle, or low-income housing. No housing would be eliminated.</p>	
<p>c. Proposed measures to reduce or control housing impacts, if any: There would be no direct housing impacts associated with the project. The project would help to avoid housing impacts that could potentially occur if homes and residential property are subject to additional erosion and flooding damage.</p>	
10. AESTHETICS	
<p>a. What is the tallest height of any proposed structure(s), not including antennas; what is the principal exterior building material(s) proposed? The proposed dikes would be buried below grade for most of their length; the seaward ends would extend approximately 10 feet above grade. The exposed portions of the dikes would consist of large, clean, angular rock.</p>	
<p>b. What views in the immediate vicinity would be altered or obstructed? No views would be obstructed. During construction, heavy equipment and human activity would be visible from adjacent properties. Long-term changes would be limited to a minor alteration in the appearance of the beach where the seaward portions of the dikes are above grade.</p>	
<p>c. Proposed measures to reduce or control aesthetics impacts, if any: Aesthetic impacts associated with the project would be minor. Construction activity would be temporary. The visible portions of the dikes would be constructed with natural rock material.</p>	
11. LIGHT AND GLARE	
<p>a. What type of light or glare will the proposal produce? What time of day would it mainly occur? During construction, it is possible that construction vehicle lights may be needed during early morning hours.</p>	

<p>c. Could light or glare from the finished project be a safety hazard or interfere with views? No.</p>	
<p>c. What existing off-site sources of light or glare may affect your proposal. None.</p>	
<p>d. Proposed measures to reduce or control light and glare impacts, if any: Light and glare impacts are expected to be temporary and minimal, and no reduction or control measures are warranted.</p>	
12. RECREATION	
<p>a. What designated and informal recreational opportunities are in the immediate vicinity? Recreational opportunities include saltwater and freshwater fishing, clamming, beachcombing, camping, picnicing, bird watching, and wildlife viewing.</p>	
<p>b. Would the proposed project displace any existing recreational uses? If so, describe. No. The project would protect and restore existing recreational uses by ensuring that recreational properties are not subject to ongoing erosion and flood damage. Public and private access for beach recreation would be restored.</p>	
<p>c. Proposed measures to reduce or control impacts on recreation, including recreation opportunities to be provided by the project or applicant, if any: The project would have a beneficial effect on recreation, and no mitigation measures are warranted.</p>	
13. HISTORIC AND CULTURAL PRESERVATION	
<p>a. Are there any places or objects listed on, or proposed for, national, state or local preservation registers known to be on or next to the site? If so, generally describe. None are known to be on or next to the site.</p>	
<p>b. Generally describe any landmarks or evidence of historic, archaeological, scientific or cultural importance known to be on or next to the site. None are known. Because of erosion and wave dynamics, it is unlikely that artifacts would survive for extended periods on or in the vicinity of the site.</p>	
<p>c. Proposed measures to reduce or control impacts, if any: No impacts on cultural or historic resources are expected. In the unlikely event that evidence of historic, archaeological, or cultural importance is found during project construction, activity in the immediate area of the find would be halted until it could be evaluated by a qualified archaeologist.</p>	
14. TRANSPORTATION	
<p>a. Identify public streets and highways serving the site, and describe proposed access to the existing street system. Show on site plans, if any. The area can be reached by SR 109 and Heath and Benner Roads. There is currently no street access to the site due to road damage caused by erosion.</p>	

<p>b. Is site currently served by public transit? If not, what is the approximate distance to nearest transit stop? The site is not served directly by public transit. Scheduled public transit stops are located at Ocean City to the south and Copalis Beach to the north of the site.</p>	
<p>c. How many parking spaces would the completed project have? How many would the project eliminate? No parking spaces would be provided or eliminated.</p>	
<p>d. Will the proposal require any new roads or streets, or improvements to existing roads or streets, not including driveways? If so, generally describe (indicate whether public or private). With the project in place, public roadways (Heath and Benner Roads) that have been damaged by erosion could be reconstructed.</p>	
<p>e. Will the project use (or occur in the immediate vicinity of) water, rail, or air transportation? If so, generally describe. No.</p>	
<p>f. How many vehicular trips per day would be generated by the completed project? If known, indicate when peak volumes would occur. The completed project itself would generate no vehicular trips, other than those associated with periodic site inspections. It is expected that vehicular traffic associated with recreational use of the area would return to levels similar to those prior to loss of beach access.</p>	
<p>g. Proposed measures to reduce or control transportation impacts, if any: The project would be beneficial for transportation. It would allow road access to beach areas to be safely reestablished, and would significantly reduce flooding potential on SR 109 caused by upstream water surface elevation increases in Connor Creek.</p>	
15. PUBLIC SERVICES	
<p>a. Would the project result in an increased need for public services (e.g., fire protection, police protection, health care, schools, other)? If so, generally describe. No.</p>	
<p>b. Proposed measures to reduce or control direct impacts on public services, if any. No impacts on public services are expected, and no reduction or control measures are warranted.</p>	
16. UTILITIES	
<p>a. Circle utilities available at the site: electricity, natural gas, water, refuse service, telephone, sanitary sewer, septic system, other. No utilities are available at the site.</p>	
<p>b. Describe the utilities that are proposed for the project, the utility providing the service and the general construction activities on the site or in the immediate vicinity which might be needed. No utilities are proposed.</p>	

C. SIGNATURE

The above answers are true and complete to the best of my knowledge. I understand that the lead agency is relying on them to make its decision.

Signature: _____

Date Submitted: _____