



King County

Department of Natural Resources and Parks

Wastewater Treatment Division

King Street Center, KSC-NR-0505

201 South Jackson Street

Seattle, WA 98104

Environmental Checklist

for the

West Point Influent Screenings Improvement Project

October 25, 2011

Prepared in compliance with the State Environmental Policy Act (SEPA) (RCW 43.21C), the SEPA Rules (WAC 197-11), and Chapter 20.44 King County Code, implementing SEPA in King County procedures.

This information is available in accessible formats upon request at
206-684-1280 (voice) or 711 (TTY).

ENVIRONMENTAL CHECKLIST

A. BACKGROUND

1. Name of proposed project, if applicable:

West Point Influent Screenings Improvement Project

2. Name of applicant:

King County Department of Natural Resources and Parks
Wastewater Treatment Division

3. Address and phone number of applicant and contact person:

King County Department of Natural Resources and Parks
Wastewater Treatment Division
201 South Jackson Street
Seattle, WA 98104

CONTACT: Katherine Fischer, Telephone: 206-263-3197
Email: katherine.fischer@kingcounty.gov

4. Date checklist prepared:

October 14, 2011

5. Agency requesting checklist:

King County Department of Natural Resources and Parks
Wastewater Treatment Division

6. Proposed timing or schedule (including phasing, if applicable):

Construction is anticipated to begin in the second quarter of 2013 and be substantially completed by December 2014.

7. Do you have any plans for future additions, expansions, or further activity related to or connected with this proposal? If yes, explain.

No.

8. List any environmental information you know about that has been prepared, or will be prepared, directly related to this proposal.

- Screenings Improvement Project Geotechnical Report, Jacobs Associates, June 2010

9. Do you know whether applications are pending for governmental approvals of other proposals directly affecting the property covered by your proposal? If yes, explain.

No.

10. **List any government approvals or permits that will be needed for your proposal, if known.**

City of Seattle

Construction Permit

Council Conditional Use Permit

Mechanical, Electrical, Plumbing, Fire Permits

State Department of Archaeology and Historic Preservation

Archaeological Excavation Permit

11. **Give brief, complete description of your proposal, including the proposed uses and the size of the project and site. There are several questions later in this checklist that ask you to describe certain aspects of your proposal. You do not need to repeat those answers on this page. (Lead agencies may modify this form to include additional specific information on project description).**

New Washington State biosolids regulations require that treatment facilities "significantly remove manufactured inerts" from the waste stream in order to protect the quality of biosolids. There is insufficient space in the existing Raw Sewage Pump Building at the West Point Treatment Plant to accommodate the equipment required for WTD to meet the new state regulations. The proposal is to construct a new approximately 5,600 square foot building adjacent to the existing Raw Sewage Pump Building to house new screenings handling equipment. This new equipment includes conveying, grinding, washing, compacting and loading equipment.

The existing 5/8 inch bar screens housed within the existing Raw Sewage Pump Building will be replaced with four 3/8 inch and two 1/4 inch multi-rake bar screens. These finer screens will result in the removal of approximately five times more material from the waste stream. The new grinding, washing and compacting equipment will result in the production of screenings material that is drier, cleaner and less odorous than the existing material.

12. **Location of the proposal. Give sufficient information for a person to understand the precise location of your proposed project, including a street address, if any, and section, township, and range, if known. If a proposal would occur over a range of area, provide the range or boundaries of the site(s). Provide a legal description, site plan, vicinity map, and topographic map, if reasonably available. While you should submit any plans required by the agency, you are not required to duplicate maps or detailed plans submitted with any permit applications related to this checklist.**

The proposed project will be located within the boundaries of the existing West Point Treatment Plant, adjacent to Discovery Park in Seattle. The West Point Treatment Plant is located at 1400 Utah Street in Seattle, WA, in Section 9, Township 25 North, Range 3 East.

B. ENVIRONMENTAL ELEMENTS

1. Earth

- a. **General description of the site (circle one):** Flat, rolling, hilly, steep slopes, mountainous, other _____.

- b. **What is the steepest slope on the site? (approximate percent slope)?**

The treatment plant site is generally flat.

- c. **What general types of soils are found on the site? (for example, clay, sand, gravel, peat, muck)? If you know the classification of agricultural soils, specify them and note any prime farmland.**

A geotechnical boring in the proposed building location revealed the following soil conditions. The upper 15 feet of soil in the project location is engineered fill consisting of medium dense, light brown, slightly gravelly, silty sand. This fill was imported to the site during the secondary treatment plant upgrade in the early 1990s. Below the fill layer from 15 to 24 feet is loose to medium dense brown, slightly gravelly sand with trace fines, scattered shell fragments and pockets of organic silt. From 24 to 52 feet original beach deposits are present.

- d. **Are there surface indications or history of unstable soils in the immediate vicinity? If so, describe.**

No.

- e. **Describe the purpose, type, and approximate quantities of any filling or grading proposed. Indicate source of fill.**

Approximately 2,600 cubic yards of soil will be excavated from the site in order to construct the new building. This soil will be removed from the site and reused or disposed of at an approved location. The type of foundation proposed for the new building will require excavation to a depth of approximately 7 feet, within the known layer of engineered fill. In addition, if proofrolling of the subgrade identifies soft or unstable areas, overexcavation of an additional two feet may be required. Trenches for sewer lines will be excavated to a depth of approximately 10 feet but still within the engineered fill.

- f. **Could erosion occur as a result of clearing, construction, or use? If so, generally describe.**

A minor amount of erosion could occur during construction of the proposed project. Construction will occur within the boundaries of the treatment plant so any erosion related to exposed soils would enter the existing drainage system on site and be directed to the treatment plant process.

- g. **About what percent of the site will be covered with impervious surfaces after project construction (for example, asphalt or buildings)?**

The project will not result in an increase in impervious surfaces.

h. Proposed measures to reduce or control erosion, or other impacts to the earth, if any:

Project construction activities would utilize construction-related Best Management Practices (BMPs) such as temporary erosion and sediment control measures. Typical BMPs that could be utilized to minimize the potential for erosion include:

- Installation of filter fabric fences and use of hay bales;
- Covering soil stockpiles and exposed soils;
- Regular inspection of erosion and sediment control measures;
- Use appropriate means to minimize tracking of sediment onto public roadways by construction vehicles.

Temporary erosion and sediment control measures would be identified in the project plans and specifications and would be implemented as required by the City of Seattle.

2. Air

a. What types of emissions to the air would result from the proposal (i.e., dust, automobile emissions, odors, industrial wood smoke) during construction and when the project is completed? If any, generally describe and give approximate quantities if known.

During construction there would temporarily be an increase in exhaust emissions and fugitive dust from construction vehicles and equipment operating at the site.

During operations, the ventilation system in the new building will increase airflow through the existing odor control system by approximately 8,500 cubic feet per minute. The existing odor control system for the treatment plant has adequate capacity to handle the increased airflow from the new building. There will be no effective change in odor impacts as a result of this project.

b. Are there any off-site sources of emissions or odor that may affect your proposal? If so, generally describe.

No.

c. Proposed measures to reduce or control emissions or other impacts to air, if any:

Ventilation air for the new building will be treated by the existing odor control scrubbers at the treatment plant. There are a number of elements of the project design that will reduce odor generation from overall screenings operations:

- Removal of the open dumpster containing raw screenings from the existing screening building.

- Eliminating the need to open the bay door in the existing screening building to change out the dumpster containing raw screenings.
- New screenings handling equipment that will quickly remove raw screenings from the existing screening building for treatment in the new screenings handling building.
- Increased screenings handling equipment capacity that will significantly decrease the likelihood of backups and overflow of raw screenings on the floor during peak flow events.
- Production of a much drier and cleaner product screenings product that will generate significantly less odor during handling, storage, and transport.

Short-term construction-related emissions will be reduced by requiring proper maintenance of equipment, avoiding prolonged idling of vehicles and equipment and utilizing best management practices to manage dust during excavation activities.

When the project is in operation it will reduce the number of truck trips to and from the plant by up to 280 trips per year (see Transportation section below for details). This will eliminate the exhaust emissions from these 280 trips. The reduced truck trips are expected to decrease CO2 emissions alone by up to 300 metric tons per year.

3. Water

a. Surface:

- 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, or wetlands)? If yes, describe type and provide names. If appropriate, state what stream or river it flows into.**

Puget Sound is located immediately to the west of the treatment plant.

- 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.**

No.

- 3) **Estimate the 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.**

None.

- 4) **Will the proposal require surface water withdrawals or diversions? Give general description, purpose, and approximate quantities if known.**

No.

- 5) Does the proposal lie within a 100-year floodplain? If so, note location on the site plan.

No.

- 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.

No.

b. Ground:

- 1) Will ground water be withdrawn, or will water be discharged to groundwater? Give general description, purpose, and approximate quantities if known.

No.

- 2) Describe waste material that will be discharged into the ground from septic tanks or other sources, if any (for example: 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.

None.

c. Water Runoff (including storm water):

- 1) Describe 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.

Storm water runoff from the project site during construction and following completion of the project will be routed through the treatment plant process as it currently is elsewhere at the treatment plant.

- 2) Could waste materials enter ground or surface waters? If so, generally describe.

No, runoff from the project site will be routed through the treatment plant process.

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

Runoff will be directed to the treatment plant process.

4. Plants

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

- deciduous tree: alder, maple, aspen, other
- evergreen tree: fir, cedar, pine, other
- shrubs
- grass
- pasture
- crop or grain
- wet soil plants: cattail, buttercup, bullrush, skunk cabbage, other
- water plants: water lily, eelgrass, milfoil, other
- other types of vegetation

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

None.

c. List threatened or endangered species known to be on or near the site.

None.

d. Proposed landscaping, use of native plants, or other measures to preserve or enhance vegetation on the site, if any:

None proposed. The existing site is paved and located within the West Point Treatment Plant.

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: _____

mammals: deer, bear, elk, beaver, other: _____

fish: bass, salmon, trout, herring, shellfish, other: _____

b. List any threatened or endangered species known to be on or near the site.

Threatened or endangered species that have been observed in adjacent Discovery Park and/or Puget Sound include Marbled Murrelet, Peregrine Falcon, Chinook Salmon and Bull Trout. No impacts to threatened or endangered species are anticipated as a result of the proposed project.

c. Is the site part of a migration route? If so, explain.

The entire Puget Sound area is part of the Pacific Flyway for migratory birds.

d. Proposed measures to preserve or enhance wildlife, if any:

None proposed.

6. Energy and Natural Resources

a. What kinds of energy (electric, natural gas, oil, woodstove, solar) will be used to meet the completed project's energy needs? Describe whether it will be used for heating, manufacturing, etc.

The completed project would primarily utilize electricity, but the new screenings handling building would be heated by the plant's existing hot water heat loop.

b. Would your project affect the potential use of solar energy by adjacent properties? If so, generally describe.

No.

c. What kind of energy conservation features are included in the plans of this proposal? List other proposed measures to reduce or control energy impacts, if any:

The project incorporates the following energy conservation features:

- Use of the treatment plants existing hot water loop to provide heat for the new screenings handling building.
- The use of natural light to minimize artificial lighting.
- Use of variable speed drives on equipment motors for energy efficiency
- The new grinders and washers are expected to return a much higher degree of organics to the plant effluent, which will increase the amount of biogas generated by the plant by 420 million kilojoules per year—an increase in biogas production at West Point of approximately 0.1 percent. This biogas is used to generate electricity.
- Reduction of up to 140 truck trips per year and associated fuel usage. The reduced truck trips are expected to decrease CO2 emissions by up to 150 metric tons per year.

7. Environmental Health

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.

No.

1) Describe special emergency services that might be required.

None.

- 2) **Proposed measures to reduce or control environmental health hazards, if any:**

None proposed.

b. Noise

- 1) **What types of noise exist in the area which may affect your project (for example: traffic, equipment, operation, other)?**

None.

- 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 (for example: traffic, construction, operation, other)? Indicate what hours noise would come from the site.**

Short-term construction related noise is anticipated to occur during the project. The main source of noise would be construction equipment performing activities such as pavement sawcutting, excavation, removal of spoils, etc. These types of equipment typically generate noise in the range of 70 to 85 dBA at a distance of 50 feet. Construction related noise should not be detectable beyond the boundaries of the treatment plant.

There will be no long-term increase in noise levels related to the proposed project. The new building is completely enclosed and new equipment will include noise attenuation features. New bar screens and belt conveyors installed in the existing building will generate noise that is similar (or slightly less) than existing equipment.

- 3) **Proposed measures to reduce or control noise impacts, if any:**

Construction activity associated with the project would be limited to the days and hours specified by the City of Seattle.

8. Land and Shoreline Use

- a. **What is the current use of the site and adjacent properties?**

Current use of the site is as a wastewater treatment plant. Discovery Park is located east of the site and a US Coast Guard lighthouse, walking trail and public beach are located directly west.

- b. **Has the site been used for agriculture? If so, describe.**

No.

- c. **Describe any structures on the site.**

The site consists of numerous buildings and other structures associated with operation of a wastewater treatment plant.

d. **Will any structures be demolished? If so, what?**

No.

e. **What is the current zoning classification of the site?**

Residential, Single Family 7200.

f. **What is the current comprehensive plan designation of the site?**

Single-family.

g. **If applicable, what is the current shoreline master program designation of the site?**

N/A.

h. **Has any part of the site been classified as an "environmentally sensitive" area? If so, specify.**

Yes. The proposed site is within a documented liquefaction zone.

i. **Approximately how many people would reside or work in the completed project?**

The number of staff at the treatment plant would not change as a result of the proposed project. Staff would access the building routinely as they do other buildings on the treatment plant site.

j. **Approximately how many people would the completed project displace?**

None.

k. **Proposed measures to avoid or reduce displacement impacts, if any:**

None.

l. **Proposed measures to ensure the proposal is compatible with existing and projected land uses and plans, if any:**

The proposed project is consistent with the use of the site as a treatment plant.

9. **Housing**

a. **Approximately how many units would be provided, if any? Indicate whether high, middle, or low-income housing:**

None.

- b. **Approximately how many units, if any, would be eliminated? Indicate whether high, middle, or low-income housing.**

N/A.

- c. **Proposed measures to reduce or control housing impacts, if any:**

None.

10. **Aesthetics**

- a. **What is the tallest height of any proposed structure(s), not including antennae; what is the principal exterior building material(s) proposed?**

The tallest height of the new building would be 38 feet and the principal exterior building material would be concrete.

- b. **What views in the immediate vicinity would be altered or blocked?**

None.

- c. **Proposed measures to reduce or control aesthetic impacts, if any:**

None proposed.

11. **Light and Glare**

- a. **What type of light or glare will the proposal produce? What time of day would it mainly occur?**

The building will include interior and exterior lighting but would not produce any glare.

- b. **Could light and glare from the finished project be a safety hazard or interfere with views?**

No.

- c. **What existing off-site sources of light or glare may affect your proposal?**

None.

- d. **Proposed measures to reduce or control light and glare impacts, if any:**

None proposed.

12. **Recreation**

- a. **What designated and informal recreational opportunities are in the immediate vicinity?**

The City of Seattle's Discovery Park is located immediately east of the West Point Treatment Plant. There is a public beach and walking path located west of the treatment plant on the shoreline of Puget Sound.

- b. **Would the proposed project displace any existing recreational uses? If so, describe.**

No.

- c. **Proposed measures to reduce or control impacts on recreation, including recreation opportunities to be provided by the project or applicant, if any:**

None proposed.

13. **Historic and Cultural Preservation**

- 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.**

The West Point Lighthouse located west of the treatment plant site is listed on the National Register of Historic Places.

- b. **Generally describe any landmarks or evidence of historic, archaeological, scientific or cultural importance known to be on or next to the site.**

Two archaeological sites were identified and mitigated during construction of the West Point Secondary Treatment Facilities Project in the 1990's. The proposed project will not disturb either of these known archaeological sites.

- c. **Proposed measures to reduce or control impacts, if any:**

No impacts to cultural resources are anticipated during construction of the proposed project due to the shallow depth of the foundation for the building. Excavation is anticipated to occur exclusively in fill imported to the site during the West Point Secondary Treatment Facilities Project. Monitoring of excavation activities by a professional archaeologist would occur as specified in the Archaeological Excavation Permit obtained for the project.

Construction specifications will include language providing for proper treatment of historic or archaeological materials if they are encountered. If artifacts are uncovered during excavation, work will be stopped pending notification of and response from appropriate agencies.

14. **Transportation**

- a. **Identify public streets and highways serving the site, and describe proposed access to the existing street system. Show on site plans, if any.**

Access to the treatment plant is via Utah Street West.

- b. Is site currently served by public transit? If not, what is the approximate distance to the nearest transit stop?**

No. The nearest transit stop is approximately one mile east of the treatment plant.

- c. How many parking spaces would the completed project have? How many would the project eliminate?**

The proposed project would eliminate approximately 21 parking spaces within the treatment plant. Because there is a surplus of parking areas within the treatment plant, elimination of these spaces will not result in an overall reduction in parking at the treatment plant below the minimum required by the City.

- 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).**

No.

- e. Will the project use (or occur in the immediate vicinity of) water, rail, or air transportation? If so, generally describe.**

No.

- f. How many vehicular trips per day would be generated by the completed project? If known, indicate when peak volumes would occur.**

Overall the project will decrease truck trips to and from the treatment plant (total truck trips) by up to 280 trips annually. Under existing conditions material screened from the wastewater entering the treatment plant is collected, dewatered, compacted and loaded in 20 cubic yard containers for transport to the landfill. Currently there are approximately 140 total truck trips per year to dispose of screenings.

Following installation of the new finer screens, approximately five times more material will be removed from the wastewater liquid stream. Because of the new screenings handling equipment being installed as part of the project, this screened material will be drier, cleaner and more compact. In addition, the new building will be able to accommodate two larger 40 yard containers for future operations. The number of screenings truck trips is anticipated to increase by up to 200 total trips annually. However, the number of total biosolids truck trips will be reduced by up to 480 trips annually since less inert material will be entering the biosolids—an overall decrease of up to 280 truck trips per year to and from the treatment plant as a result of the proposed project.

Construction of the proposed project would generate approximately 800 total truck trips during the approximately 20 month construction period. In addition

approximately 20 vehicular trips per day would be generated by construction workers travelling to the treatment plant.

g. **Proposed measures to reduce or control transportation impacts, if any:**

None proposed.

15. Public Services

a. **Would the project result in an increased need for public services (for example: fire protection, police protection, health care, schools, other)? If so, generally describe.**

No.

b. **Proposed measures to reduce or control direct impacts on public services, if any:**

None proposed.

16. Utilities

a. **Circle the utilities currently available at the site: electricity, natural gas, water, refuse service, telephone, sanitary sewer, septic system, other.**

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 new utilities are proposed for the project.

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: Wesley Sprague

Date Submitted: 10/17/11

DDP: JRP

King County Greenhouse Gas Emissions Worksheet—West Point Influent Screenings Improvement Project

Section I: Buildings

Type (Residential) or Principal Activity (Commercial)	# Units	Square Feet (in thousands of square feet)	Emissions Per Unit or Per Thousand Square Feet (MTCO2e)			Lifespan Emissions (MTCO2e)
			Embodied	Energy	Transportation	
Single-Family Home.....	0		98	672	792	0
Multi-Family Unit in Large Building	0		33	357	766	0
Multi-Family Unit in Small Building	0		54	681	766	0
Mobile Home.....	0		41	475	709	0
Education.....		0.0	39	646	361	0
Food Sales		0.0	39	1,541	282	0
Food Service		0.0	39	1,994	561	0
Health Care Inpatient		0.0	39	1,938	582	0
Health Care Outpatient		0.0	39	737	571	0
Lodging		0.0	39	777	117	0
Retail (Other Than Mall).....		0.0	39	577	247	0
Office		0.0	39	723	588	0
Public Assembly		0.0	39	733	150	0
Public Order and Safety		0.0	39	899	374	0
Religious Worship		0.0	39	339	129	0
Service		0.0	39	599	266	0
Warehouse and Storage		0.0	39	352	181	0
Other		0.0	39	1,278	257	0
Vacant		0.0	39	162	47	0

Section II: Pavement.....

Pavement.....		0.00				0
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Total Project Emissions:

0

