



City of Seattle

Department of Planning & Development
D. M. Sugimura, Director

**CITY OF SEATTLE
ANALYSIS AND RECOMMENDATION OF THE DIRECTOR
OF THE DEPARTMENT OF PLANNING & DEVELOPMENT**

Application Number: 3012604
Applicant Name: King County, Department of Natural Resources,
Wastewater Treatment Division
Address of Proposal: 4215 36th Avenue West
Council File Number: 311872

SUMMARY OF PROPOSED ACTION

Council Land Use Action to allow an approximately 5,600 expansion of a public facility (West Point Sewage Treatment Plant) in an environmentally critical area. Project includes 2,600 cubic yards of grading. Determination of Non-Significance prepared by King County.

The following approvals are required:

Council Conditional Use to allow expansion of an existing sewage treatment plant.

SEPA to approve, condition or deny pursuant to 25.05.660.

SEPA DETERMINATION: [] Exempt [X] DNS* [] MDNS [] EIS

[] DNS with conditions

[] DNS involving non-exempt grading, or demolition,
or involving another agency with jurisdiction.

*The King County Department of Natural Resources and Parks issued a Determination of Non-Significance in this matter on November 24, 2011.

BACKGROUND DATA

Site and Vicinity Description

The West Point Treatment Plant (the Plant) is located about four miles northwest of downtown Seattle on the shores of Puget Sound and in Discovery Park. It is part of King County's regional system that treats wastewater for about 1.5 million people and covers 420 square miles in the Puget Sound region. West Point Plant treats wastewater and stormwater from homes, offices, schools, agencies, businesses and industries in Seattle, north King County, south Snohomish County, and some areas of Lake Washington.

The history of the Plant began in 1958, when voters in Seattle and King County created Metro, an agency charged with developing and operating a regional wastewater treatment system.

In 1966, construction of a primary treatment plant was completed at West Point.

In 1994, a voter approved measure merged Metro with King County and King County assumed responsibility for West Point Plant.

In 1991, to comply with the 1972 Federal Clean Water Act, Metro began an expansion of the Plant to provide secondary treatment. Expansion and upgrading to secondary treatment was completed in 1996. The average capacity for wet weather flow is 133 million gallons per day. The maximum capacity is 440 million gallons per day during peak storm events.

West Point Treatment Plant is surrounded by retaining walls, berms, and extensive native landscaping to effectively blending into the surrounding Discovery Park.

Proposal Description

This proposed improvement is required under recent Washington State Department of Ecology biosolids management regulations as outlined under Washington Administrative Code (WAC) 173-308-205. The regulations require all treatment plants in Washington State to install 3/8-inch (or finer) bar screens somewhere in the treatment process to "significantly remove manufactured inerts" such as plastics, metals, ceramics and other manufactured items from the biosolids.

In order to accomplish this, the existing 5/8-inch bar screens need to be replaced. This project will upgrade the screening and screening handling facilities at the West Point Treatment Plant. The project will replace six 5/8-inch travelling rake bar screens in the existing Raw Sewage Pump Building (Screenings Room) with four new 3/8-inch multi-rake bar screens and two new 1/4-inch multi-rake bar screens.

The project will also construct a new Screenings Handling building located south of, and directly adjacent to the existing Screenings Room. The new building will house the screenings handling facilities as needed to accommodate the expected 5-times increase in screened

material, including equipment and facilities necessary to grind, wash, dry, compact, load and haul the additional screened material. The footprint of the new two-story building will be approximate 4,174 square feet and up to 38 feet in height; the overall square footage of the building itself is 5597 square feet. The building will function as a process facility only, not an occupied space, and there will be no office space, restrooms, or break facilities.

ANALYSIS—COUNCIL CONDITIONAL USE

The Seattle Land Use Code provides as follows: “The decision on an application for the expansion or reconfiguration of a sewage treatment plant is a Type IV Council land use decision.” (SMC § 23.51A.002 D) The Code then sets forth specific criteria that shall be considered in evaluating and approving, conditioning or denying proposals for the expansion or reconfiguration of an existing sewage treatment plant.

Sewage Treatment Plants. The expansion or reconfiguration (which term shall include reconstruction, redevelopment, relocation on the site, or intensification of treatment capacity) of existing sewage treatment plants in single-family zones may be permitted if there is no feasible alternative location in a zone where the use is permitted and the conditions imposed under subsections 23.51A.002.D.3 and D4 are met.

Need for Feasible Alternative Determination. The proponent shall demonstrate that there is no feasible alternative location in a zone where establishment of that use is permitted.

The Council’s decision as to the feasibility of alternative location(s) shall be based upon a full consideration of the environmental, social and economic impacts on the community, and the intent to preserve and to protect the physical character of single-family areas, and to protect single-family areas from intrusions of non-single-family uses.

There is no feasible alternative to locating the proposed new Influent Screenings building on the West Point site as it would be an element of the larger sewage treatment process. The new building would have conveyors that would transport screenings material from the existing screenings building into the proposed Influent Screenings building.

Environmental Impacts

Negative environmental impacts by the project would consist of temporary construction impacts that have been identified and reviewed the proponent’s SEPA document, including odor, height, exhaust emissions from construction vehicles and fugitive dust. These impacts are expected to be minor in scope and many well controlled by preventative measure employed during construction. Long term environmental impacts of the proposal are expected to be positive.

Social Impacts

The proposed Influent Screenings Building is contained within the existing walls of the Plant. The building would, like the rest of the Plant, be screened by high retaining walls, berms and native plantings on the outer perimeters.

Economic Impacts

The construction of the Influent Screenings Building will create short term construction jobs in the region. In the long term the plant improvement is not expected to have an economic impact.

Intent to Protect the Physical Character of Single-Family Areas

There are no nearby single-family uses in Discovery Park, the closest are those set back from the bluff above the Plant and approximately 3,000 feet from the site.

Protect Single Family Areas from Intrusions of Non-Single-Family Uses

The proposed location would not result in a further intrusion into a single family area because it is within the existing footprint of the West Point Plant.

The determination of feasibility may be the subject of a separate application for a Council land use decision prior to submission of an application for a project-specific approval if the Director determines that the expansion or reconfiguration proposal is complex, involves the phasing of programmatic and project-specific decisions or affects more than one site in a single-family zone.

It is the determination of DPD in its early determination pursuant to SMC 23.51A.D.2, that the West Point Influent Screenings Project does not require an early Determination of Feasibility by City Council.

This reconfiguration of work space does not involve the phasing of programmatic and project-specific decisions. The proposed Influent Screenings Building will have uses that have been integral to plant operations for at least the last forty years.

The reconfiguration does not affect more than one site in a single-family zone. The West Point Treatment Plant has been its present 32 acre configuration since the late 1990's, after the secondary treatment upgrades.

Conditions for Approval of Proposal.

a. *The project is located so that adverse impacts on residential areas are minimized;*

The proposed Influent Screenings Building is located in the interior of the Plant and views should be very minimal due to the berm surrounding the site. The public may have a partial view of the building at the entrance to the Plant. The height of the building is the same or shorter than adjacent buildings. Generally, views into the Plant are obscured by a perimeter wall and berm planted with native vegetation.

Lighting from the new proposed building will be directed downward so as to light trespass and glare from the Plant.

b. *The expansion of a facility does not result in a concentration of institutions or facilities that would create or appreciably aggravate impacts that are incompatible with single-family residences.*

The proposed Influent Screenings Building will be located within the footprint of the existing Plant and existing staff will monitor operations inside the new building. Increases in traffic, odor, and noise occur only during the construction phase.

A facility management and transportation plan is required. The level and kind of detail to be disclosed in the plan shall be based on the probable impacts and/or scale of the proposed facility, and shall at a minimum include discussion of sludge transportation, noise control, and hours of operation. Increased traffic and parking expected to occur with use of the facility shall not create a serious safety problem or a blighting influence on the neighborhood;

The Plant's Transportation Plan, developed as part of the 1996 secondary upgrade project conditions, and does not need to be amended as a result of the proposed improvement as the impact on traffic to and from the traffic will be a slight reduction.

The West Point Treatment Plant has a Facility Plan¹ registered with the Department of Ecology and a Transportation Plan developed as part of the secondary upgrade.

Transportation patterns are expected to remain the same once construction is complete. The proposed Screenings Handling building will be for operations only and not occupied (i.e., no offices or restrooms) and existing staff will operate and maintain the facility once construction is complete. As mentioned above, there will be no increase in truck traffic (biosolids and solids) and existing routes will be used after the new building is built.

While there would be a temporary short-term increase in traffic during construction these would be well within the capacity of nearby streets and intersections.

Hours of operation - The Plant is operated continuously.

There will be an overall reduction of approximately 280 total truck trips per year. Although it is expected that there will be an increase of approximately 200 trips per year for screenings truck trips, this will be offset by an expected reduction in total biosolids trips by approximately 240 fewer annual biosolids loads, or 480 fewer total truck trips annually. The net result is an overall reduction of approximately 280 total truck trips per year.

In addition to the truck trip reductions described above, it is important to note that the new screenings trailers will be about half the length of the existing trailers. This is because the existing screenings trucks use a double trailer to haul 20-yard screenings containers, and the new screenings trucks will use a single trailer to haul a 40-yard screenings container.

¹West Point Secondary Treatment Facilities Project. Addendum to the March 1989 West Point Facilities Plan. Municipality of Metropolitan Seattle. Publication 408. October 1990.

The existing screenings trucks use a double trailer because of operational considerations; namely, the existing 20-yard screenings containers must be slid from the floor onto the trailer and vice versa, which requires a long trailer to prevent the front of the truck from being lifted off the ground. The proposed screenings containers will remain on the trailer while the screenings are being loaded. In terms of trailer height, the proposed 40-yard containers are about four feet taller than the existing 20-yard containers.

There will be no increase in employee commuter traffic because the new screenings building will not be occupied. The building is strictly for operations and will contain no bathrooms or offices; no additional staff will be employed to operate the new facility.

Measures to minimize potential odor emission and airborne pollutants including methane shall meet standards of and be consistent with best available technology as determined in consultation with the Puget Sound Clean Air Agency (PSCAA), and shall be incorporated into the design and operation of the facility;

Regulated odor emissions will not increase as a result of the proposed Screenings Handling building, and the potential for nuisance odors at the Plant will likely be decreased because of building design and implementation of Best Management Practices (BMPs).

Regulated Emissions

Once construction is complete, the ventilation system in the proposed Screenings Handling building will increase airflow through the existing odor control system by approximately 8,500 cubic feet per minute. Wastewater Treatment Division staff modeled this increased flow using an EPA air dispersion model called SCREEN3. Based upon the modeling results, the proposed project will increase downwind impacts by only 0.36 percent due to the additional flow rates compared to existing conditions. Given the accuracy of the model, the results are essentially identical and therefore we conclude that there will be no effective change in odor impacts as a result of the screenings project. In addition, even with the increased airflow, the existing odor control system is only handling about 80 percent of the airflow upper limit. Based on this information and discussions with a representative from the Puget Sound Clean Air Agency, the County has determined that a Notice of Construction to PSCAA is not required for the project.

Regarding the building design, there will be two enclosed inclined conveyor belts to convey raw screenings from the multi-rake screens in the Existing Screenings Room to the proposed Screenings Handling building (Figure 5). The inclined conveyor belts will be approximately 30 inches wide to convey 1,600 cubic feet per hour of raw screenings. The building penetration from the existing Screen Room will be an opening approximately 4 feet by 4 feet in size.

During normal screening operation, raw screenings would be transported via the inclined belt conveyor for processing. The ventilation system will induce negative pressure in both the existing Screenings Room and the proposed Screenings Handling building, which will prevent transfer of relatively odorous air from the Screenings Room into the inclined belt conveyor and on to the Screenings Handling building.

Because the National Fire Protection Association Standard (NAFP) 820 does not allow any transfer of air between a classified space (the existing Screenings Room) and an unclassified space (the proposed Screenings Handling building), the conveyors between the buildings incorporate passive, louvered openings along their length. This will allow any flammable vapors to escape should a power failure occur. However, during normal operating conditions, no odors will escape through the louvered openings because the existing Screenings Room and proposed Screenings Handling building will be under negative pressure, drawing outside air into the buildings for treatment by the odor control system.

Nuisance Odors

The potential for nuisance odors associated with the screenings facilities at the Plant should also be decreased once the project is operational. As discussed above, the screened materials will be much drier (59% solids vs. the current 24% solids) and much cleaner, which will significantly reduce the potential for odors emanating from vehicles hauling screened material compared to the existing situation. Further, the raw screenings entering the proposed Screenings Handling building will remain untreated for only a short amount of time before being ground and washed, which will re-entrain most of the organic material back into the Plant's influent. After dewatering and compaction, the screenings material will be substantially less odorous than the existing screened material.

Operational improvements resulting from the proposed project will also reduce the potential for nuisance odors. Currently, the screenings containers in the existing Screenings Room are changed out weekly. This is a complex and labor intensive process that involves sliding containers in and out of the Screenings Room and can take from one to two hours. During this time the roll-up door on the existing Screenings Room remains open, allowing the potential for nuisance odors to escape. These odors result from the raw influent as well as from the relatively unprocessed screening material that is deposited in an open 20-yard container. After the new screenings building is built, the roll-up door on the existing screenings room will be opened only occasionally as needed to maintain or replace equipment, greatly reducing the potential for nuisance odors. In addition, the screened material stored in the containers in the proposed Screenings Handling building will be significantly dryer, cleaner, and less odorous. Also, the change-out of the containers will be much less time consuming because the containers will be mounted on wheeled trailer chasses that can be installed and removed quickly.

In both existing and proposed situations, the screenings containers are/will be tarped before the roll-up doors are opened. Tarping the container is done either from side to side, or front to back within the building. On the proposed project, the container bay design is modified in the proposal to provide platforms on both sides and back of the screenings container for easy access in tarping the container. Once the tarp has been placed over the trailer, the operator will go down to the ground floor level from the intermediate platforms to attach bungee cords to secure the cover. Stairs have been provided at the south end of these platforms to facilitate easy access to the intermediate platforms.

Methods of storing and transporting chlorine and other hazardous and potentially hazardous chemicals shall be determined in consultation with the Seattle Fire Department and incorporated into the design and operation of the facility;

The Plant no longer uses chlorine for disinfection due to safety issues and has changed its disinfection processes to use Sodium Hypochlorite. Sodium Hypochlorite is handled currently at the West Point Treatment Plant under an approved plan and its use at the proposed screening facility would be covered under that plan.

Vehicular access suitable for trucks is available or provided from the plant to a designated arterial improved to City standards;

This project will not alter the existing access route via W. Government Way.

The bulk of facilities shall be compatible with the surrounding community. Public facilities that do not meet bulk requirements may be located in single-family residential areas if there is a public necessity for their location there;

The proposed Screenings Handling building is located within the Plant. The size of the proposed footprint, 5597 square feet in gross floor area, is compatible with other buildings within the vicinity of the project site and would be up to 38 feet from grade at its highest point. The new Screenings building will not be visible from the Discovery Park trail and will be located within the interior footprint of the existing Plant. The existing wall surrounding the Plant will provide screening of the new facility.

Landscaping and screening, separation from less intensive zones, noise, light and glare controls and other measures to ensure the compatibility of the use with the surrounding area and to mitigate adverse impacts shall be incorporated into the design and operation of the facility.

The existing site is 100% impervious surface. It is not feasible to install landscaping where construction will occur because operational facilities are located in, and around the vicinity of the project site which is located within the interior of the Plant. There is existing landscaping surrounding the Plant that serves to screen noise and light.

The Screenings Handling building would add approximately 12 exterior lights including 100-watt wall-mounted luminaire lights over the building entrances and along the outside walls as well as 250-watt metal halide lights below the canopies on the front (south) site of the building. Lighting will be directed downward and otherwise mitigated limit light emission and glare from the Plant.

i. No residential structures, including those modified for nonresidential use, are demolished for facility expansion unless a need has been demonstrated for the services of the institution or facility in the surrounding community.

No residential structures shall be demolished or modified for nonresidential use.

RECOMMENDED DECISION—COUNCIL CONDITIONAL USE

Council Conditional Approval is Recommended.

RECOMMENDED CONDITIONS—COUNCIL CONDITIONAL USE

DPD recommends no conditions.

ANALYSIS-SEPA

The Department of Natural Resources of King County is the SEPA Lead Agency. King County prepared a SEPA checklist and issued a Determination of Non-Significance. The information in the checklist, the supplemental information submitted by the applicant, the experience of the lead agency and the Department of Planning and Development with the review of similar projects from the basis for this analysis and conditioning decision.

The SEPA Overview Policy (SMC 25.05.665D) clarifies the relationship between codes, policies and environmental review. Specific policies for each element of the environment, certain neighborhood plans, and other policies explicitly referenced may serve as the basis for exercising substantive SEPA authority.

The Overview Policy states, in part, “Where City regulations have been adopted to address an environmental impact, it shall be presumed that such regulations are adequate to achieve sufficient mitigation,” subject to some limitations. Under such limited circumstances (see SMC 25.05.665.D.1-7), mitigation may be considered by the Department.

Short-term Impacts

The project is likely to have minor short-term adverse, construction-related environmental impacts with respect to earth, noise, air, water quality, traffic and pedestrian circulation. No other elements of the environment appear likely to be adversely affected, and no other elements have been identified in the SEPA document.

Air, Earth, and Water. The project is likely to cause some minor soil erosion from grading and other site work while the earth is exposed. Other potential impacts include decreased air quality due to dust and other particulates produced by construction equipment and operations, and tracking of mud and dirt onto adjacent streets by construction vehicles. These air and earth impacts are expected to be minor in scope and would be limited to the period of site preparation. Several adopted City codes and ordinances provide adequate mitigation. The Street Use Ordinance provides for watering the streets to suppress dust; the Stormwater, Grading and Drainage Control Code provides for mitigation of earth impacts related to grading and excavation, such as soil erosion and runoff and the Seattle Building Code provides for appropriate construction measures in general. The Puget Sound Clean Air Agency regulates to enforce limitations on the airborne emission of dust and other particulate material.

Construction activities including worker commutes, truck trips, the operation of construction equipment and machinery, and the manufacture of the construction materials themselves result in increases in carbon dioxide and other greenhouse gas emissions which adversely impact air quality and contribute to climate change and global warming. While these impacts are adverse, they are not expected to be significant due to the relatively minor contribution of greenhouse gas emissions.

No conditioning pursuant to SEPA Policy authority regarding air, earth and water impacts is warranted.

Noise. Short-term noise from construction would be generated during working hours. Noise levels during construction would be expected to comply with codified City of Seattle standards. The remoteness of the proposal site from receptor sites, the presence of a perimeter wall and berm around the West Point site, and the limited nature of the proposed construction activity would further limit noise impacts expected to reach adjoining sites.

Circulation and Traffic. Pedestrian and bicycle routes would be affected during the construction period, particularly in Discovery Park surrounding the proposal site. These impacts would be limited to those occurring in the use of existing roads through the park and would be expected to be minor in nature due to the limited amount of construction traffic expected.

Parking. All construction related parking is expected to be contained within the perimeter wall of the existing treatment plant and no impacts are expected in surrounding areas.

Greenhouse Gases. Construction activities including construction worker commutes, truck trips, the operation of construction equipment and machinery, and the manufacture of the construction materials themselves result in increases in carbon dioxide and other greenhouse gas emissions which adversely impact air quality and contribute to climate change and global warming. While these impacts are adverse, they are not expected to be significant due to the relatively minor contribution of greenhouse gas emissions from this project.

Long-term Impacts

No long term negative impacts are expected to result from the proposed development. No additional traffic is expected to be generated. No additional noise, odors, light or glare is expected to be generated.

DECISION – SEPA

DPD has analyzed the proposal as described in plans provided by the applicant, has reviewed the SEPA checklist provided and exercises substantive SEPA authority to condition or not condition the issuance of construction permits for the proposed development.

RECOMMENDED SEPA CONDITIONS

None

Signature: _____ Date: May 10, 2012

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