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

Loop® Compost Pilot Project at South Treatment Plant

December 23, 2020

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) 477-5371 (voice) or 711 (TTY).

ENVIRONMENTAL CHECKLIST

A. BACKGROUND

1. Name of proposed project, if applicable:

Loop® Compost Pilot Project at South Treatment Plant

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
Environmental Services Unit
KSC-NR-0505
201 S. Jackson Street
Seattle, WA 98104

CONTACT: Jacob Sheppard, Environmental Planner
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4. Date checklist prepared:

December 23, 2020

5. Agency requesting checklist:

King County Department of Natural Resources and Parks
Wastewater Treatment Division

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

Project construction is scheduled to occur in 2022. The proposed pilot-scale composting facility is temporary, with an expected operation period of approximately five years, or according to the term of its temporary land use permit from the City of Renton.

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

Once operational, information from the project will be used to demonstrate proof of concept and develop a business case for composting, develop reliable sources of feedstocks and bulking agents, conduct product and process optimization, develop markets and distribution channels, build community support and collect data to inform the capital project process for a potential larger, permanent facility which would be located off-site. Such a facility would be subject to a separate SEPA process in the future.

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

- *Dispersion Modeling Protocol, King County South Treatment Plant Loop Compost Pilot Project.* Prepared by Jacobs Engineering and HDR Engineering on behalf of King County Wastewater Treatment Division (2020). *W3X90702* [Technical Memorandum].

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.

None known

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

City of Renton
- Temporary Use Permit
- Grading Permit

Puget Sound Clear Air Agency (PSCAA)
- Notice of Construction

Washington Department of Ecology (Ecology)
- Certificate of Compliance

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.

King County proposes to construct a temporary pilot composting system at King County's South Treatment Plant (STP) which will further process Class B Loop® biosolids into a Class A Loop compost. The facility is designed to demonstrate the

practicability of composting of Class B Loop biosolids mixed with bulking agents, such as wood chips and yard clippings, at various ratios to produce Class A biosolids. The proposed pilot project will enable the County to demonstrate the business case for a full-scale Loop composting facility and evaluate various blends of feedstock to determine the optimal conditions for proceeding into a full-scale facility. This project is the first step to address a current lack of redundancy in the County's biosolids program. The project will operate for three to five years, after which it will be decommissioned.

Approximately 0.91 acres will be used for the project. The project will have no permanent above ground structures.

Biosolids are a soil amendment (a natural soil conditioner and fertilizer replacement) that are made by cleaning the water that arrives at County wastewater treatment plants (WWTPs). The County's biosolids, which are branded as "Loop," are Class B, which have some detectable pathogens and therefore restrictions for use. At the WWTPs, the County's anaerobic digester tanks use naturally occurring bacteria and other microorganisms to break down the waste and kill disease-causing pathogens. These microorganisms transform the solids into a renewable, nutrient-rich, fully digested resource called biosolids. Most biosolids are used directly on farms and forests to improve crop yield and soil health. But Class B biosolids can also be mixed with bulking material such as yard clippings and wood chips and processed further into a compost. Biosolids compost has a Class A regulatory designation from the Washington State Department of Ecology (Ecology), which allows for unrestricted use, just like any other retail garden product.

Loop is used directly on farms and forests, with 25 percent applied to western Washington forests and 75 percent transported and applied to eastern Washington farms. However, transport of Loop can be suspended by road conditions on the Cascade mountain passes, which results in a rapid backlog of trucks filled with biosolids, especially in winter. The County has limited emergency storage options. The County is looking into composting as a local alternative for recycling Loop because it would provide distribution options during inclement winter weather as well as generate a useful local soil amendment with a low energy input requirement.

The completed facility will employ a covered aerated static pile (CASP) technology using a bunker-style primary composting operation to fit within the limited available area at STP. The proposed facility will be configured with a series of functional areas, each equipped to perform the function of a full-scale compost facility. The functional areas include areas for receipt, mixing, composting, curing, and screening. Each functional area will be encircled with interlocking stacked concrete blocks that provide a confining barrier, or bunker, to the respective contents of each area. Some of the bunkers may be covered by an open-sided fabric structure that is not fully enclosed but is intended to protect the bunkers from rainfall. The active composting and curing areas are anticipated to have three blowers in nearly constant operation.

The facility will function in a series of batches based on the amount of material received from the delivery of a single truckload of Loop from one of the County's treatment plants. The facility will be equipped to receive up to one truck per week but could receive material less frequently, if desired. Each Loop delivery will initiate a two-month-long process. Mixing of biosolids with bulking material will occur immediately upon receipt of a load of biosolids, directly followed by placement of the mixed material into an active composting bunker. This is intended to occur on the same day as receipt. Doing so will reduce the propensity of odorous emissions. The mixer will be powered by electricity. Active composting will last 28 days per batch. Curing, which will occur after active composting, will last an additional 28 days. Once curing is complete, the compost will be screened using a trommel to remove large-diameter material from the finished product. The finished product area will be sized to accommodate approximately 400 cubic yards of material, or approximately four to seven batches of processed material depending on the bulking ratio employed.

During the active composting and curing processes, temperature will be managed by forced aeration. The aeration system will run according to a system of temperature sensors and programmable controls for optimal process conditions and odor control, according to desired testing parameters, industry standards and best management practices. The aeration system is automatically reversing, drawing cool air into the compost piles either from the top or bottom. The negative aeration process will draw air from beneath the pile, into air ducts placed on-grade beneath the pile, and out to a manifold directing the collected air to an odor-scrubbing biofilter. The positive aeration process will draw cool air into the fan and push it into the plenum on the floor and up through the pile, which is covered by a biolayer of finished compost or wood chips for odor and temperature control.

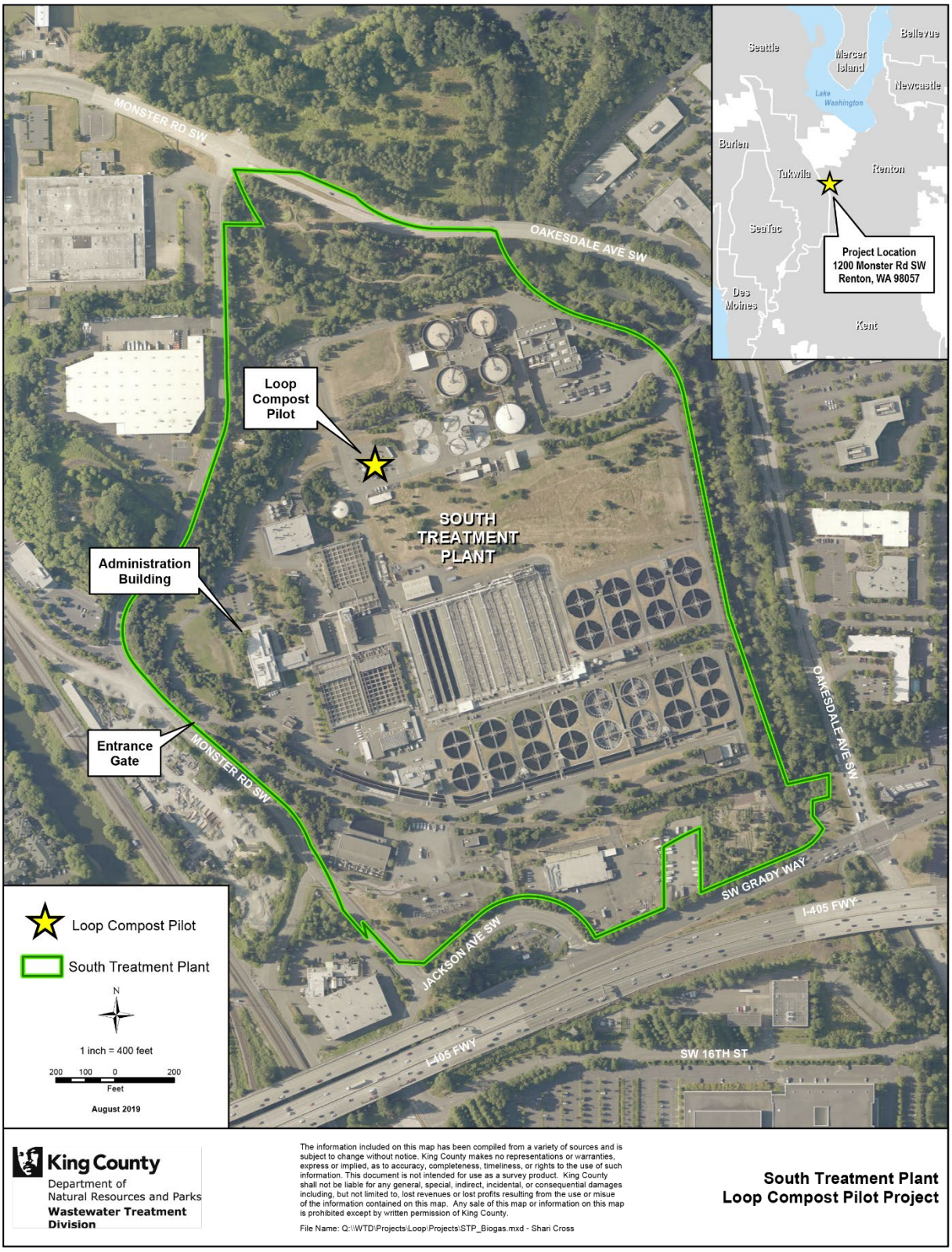
Material will be moved between functional areas using a front-end loader.

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 is located in Renton WA, at 1200 Monster Road SW. The project will occupy King County Parcel Numbers 2423049097 and 2423049006, which are located in NE Quarter-Section, Section 24, Township 23 North, Range 9 East.

The project is located on the STP property. See Figure 1 below.

Figure 1. Site and vicinity map



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 steepest slopes on the site are approximately 25%.

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 agricultural land of long-term commercial significance and whether the proposal results in removing any of these soils.

In general, the site overlies previous fill consisting of silty sand with gravel to a depth of approximately 25 feet. The fill layer is underlain by native sand, silt, and gravel to a depth of approximately 80 feet.

Neither the project site nor its surroundings contain agricultural land of long-term commercial significance.

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

No.

e. Describe the purpose, type, total area, and approximate quantities and total affected area of any filling, excavation, and grading proposed. Indicate source of fill.

The project will occupy approximately 0.91 acre of the approximately 72-acre STP property. Minor grading will be required. Minor excavation will be required, including for shallow trenches that will be cut and filled in order to install utility lines on the site. Subsequent backfill will consist of native soil to the greatest extent possible, supplemented by clean fill when required by permit conditions or engineering specifications.

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

Some localized erosion could occur during clearing and construction. However, erosion control measures will be used to minimize the potential for this to occur. See Section B.1.h below for typical Best Management Practices (BMPs) and

other measures that could be utilized to minimize the potential for erosion. Erosion is not expected to occur as a result of the completed facility.

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

The project site is currently composed entirely of impervious surfaces, and will remain so after project construction.

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

Temporary erosion and sedimentation control measures will be employed throughout project construction, including prior to all clearing, excavation, filling, grading, and other soil-disturbing activities in the project area. These control measures will be identified in the project plans and construction specifications and will be implemented as required by the City of Renton, Ecology, and other permitting agencies.

Typical measures that may be used include installing filter fabric fences and other sediment barriers, placing silt traps in storm drain inlets, covering soil stockpiles and exposed soils, and using settling facilities to prevent sediment from leaving the site.

Additional best management practices (BMPs) and other measures could include the following:

- Designation of personnel to inspect and maintain temporary erosion and sediment control measures
- Use of appropriate means such as stabilized entrances and wheel washes to minimize tracking of sediment onto roadways by construction vehicles
- Regular street cleaning for mud and dust control
- Disposing of excess excavated soil at an approved disposal site as soon as practical
- Restoration of disturbed areas by repaving or replanting as soon as practical after construction is completed

2. Air

a. What types of emissions to the air would result from the proposal during construction, operation, and maintenance when the project is completed? If any, generally describe and give approximate quantities if known.

Project construction will involve temporary, mobile source air emissions (NOx, VOC, CO, PM10, PM2.5), including diesel exhaust from construction equipment and dust generated by earth-moving activities. The exhaust emissions

will be intermittent and spread across the project area. They are not expected to affect attainment of air quality standards in the project area.

Potential emissions from the composting operations include odors, volatile organic compounds (VOCs), hazardous air pollutants (HAPs) and toxic air pollutants (TAPs), greenhouse gases (GHG), and fugitive dust which includes particulate matter with diameter <10 micrometers (PM10) and particulate matter with diameter <2.5 micrometers (PM2.5). There will be minor emissions of nitrogen oxides (NOx), carbon monoxide (CO) and sulfur dioxide (SO2) from the combustion of diesel in a 38 kW (51 Hp) diesel engine used to power the trommel screen. The trommel screen is expected to operate for less than four hours each week. Front-end loader operations and material deliveries will also generate occasional minor diesel exhaust emissions.

The facility will go through new source review (NSR) with the local permitting authority, the Puget Sound Clean Air Agency (PSCAA). As part of NSR, the County will submit a Notice of Construction (NOC) application and receive an Order of Approval issued by PSCAA under PSCAA Regulation I, Article 6 prior to commencement of construction. To minimize emissions and comply with all state and local emission standards, the process will use Best Available Control Technology (BACT) and BACT for TAPs (tBACT).

Facilities submitting a NOC application are also required to complete a review of the air quality impacts from TAPs to demonstrate that the proposed project does not have the potential to adversely affect the health of people in the surrounding community. Washington Administrative Code (WAC) 173-460-150 lists the regulated TAPs along with their respective averaging period, acceptable source impact level (ASIL), small quantity emission rates (SQER), and *de minimis* emission values.

Potential emissions of VOC, PM10 and PM2.5 are estimated to be below NSR exemption levels (2.0 tons per year, 0.75 ton per year, and 0.5 ton per year respectively) per WAC 173-400-110(5)(a)(i). Of the 33 TAPs identified as being potential emissions from the facility, 11 exceeded their *de minimis* thresholds. The *de minimis* values are defined as the maximum level of emissions that do not pose a threat to human health or the environment. If emissions of a given TAP from a source do not exceed the associated *de minimis* emission values, then that TAP is exempt from further NSR evaluation.

None of the TAPs exceeded their SQER, so dispersion modeling of TAP emissions is not required to demonstrate compliance with the ASIL. See Table 1 for a summary of emissions from facility operations, and Appendix A for King County greenhouse gas emissions worksheets.

Table 1. Emissions summary

Pollutant	Potential Emissions
Odors	52,808 OU/min
Volatile organic compounds (VOCs)	347 lb/year
Hazardous and toxic air pollutants (HAPs and TAPs)	1,421 lb/year
Particulate matter with a diameter <10 micrometers (PM_{10})	3.1 lb/year
Particulate matter with a diameter <2.5 micrometers ($PM_{2.5}$)	0.5 lb/year
Nitrogen oxides (NO_x)	78 lb/year
Carbon monoxide (CO)	87 lb/year
Sulfur dioxide (SO_2)	0.02 lb/year
Greenhouse Gases (GHG)	2,820 lb/year CO_{2eq}

Notes:
OU/min = odor units per minute
lb/year = pounds per year

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

There are no known off-site sources of air emissions or odors that may affect the project.

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

During construction, BMPs will be implemented to control dust. Types of BMPs that will be used may include street sweeping, watering exposed soil surfaces, and covering soil stockpiles to help minimize the amount of fugitive dust and particulate pollution to the surrounding areas. Construction equipment-related emissions will be reduced by requiring proper maintenance of equipment, using electrically-powered equipment where practical, and avoiding prolonged idling of vehicles and equipment.

To minimize emissions during operation and comply with all state and local emission standards, the process will use BACT and tBACT. In addition, a biofilter will be operated and maintained according to recommendations provided by industry experts, in order to minimize odors. Odor management is vital to the success of a compost facility. No compost facility is expected to be odor free. However, WAC 173-350-040 requires the facility to not violate the regulating air authority's emission standards or ambient air quality standards at the property boundary.

Composting is an aerobic process; when the process lacks sufficient oxygen it can be classified as hypoxic or anoxic. In the hypoxic or anoxic states, odorous volatile compounds are produced including alcohols, acids, H2S, and NH3. Maintaining aerobic conditions requires management of oxygen content and temperature in the compost piles. Aeration to manage temperature – keeping

piles uniform in temperature and cooler than 65 degrees Celsius – will also provide sufficient fresh air to stay well above the threshold of 2 parts per million of oxygen required to maintain aerobic conditions. The facility's aeration equipment will be designed and operated to provide a constant, uniform aeration capacity of 5 cubic feet per minute per cubic yard of material.

Process air from the active composting and curing areas will be direct through a biofilter, which will scrub volatile organic compounds (VOCs) and odorous air contaminants. The biofilter will be oversized compared to industry standards and will provide an empty-bed retention time (the average time process air will spend getting through the volume occupied by the biofilter material) of 75 seconds, whereas the industry standard is 60 seconds.

Air quality modeling indicates that additional detectable odors beyond the STP property line will be very infrequent, of short duration, and unlikely to be discernable from other odors in the area.

3. Water

a. Surface Water:

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.

Springbrook Creek, a Type S water (shoreline of the state), is located east of STP. Waterworks Gardens, located north of the project site across an access road, is a complex of connected wetponds and a Category II wetland that provides stormwater detention and treatment for much of the STP property, and outlets into Springbrook Creek.

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.

The project will not require any work over, in, or within 200 feet of water bodies.

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.

No fill or dredge material will be placed in or removed from surface waters or wetlands.

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

The project will not require surface water withdrawals or diversions.

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

The project does not lie within a 100-year floodplain.

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.

The project will not involve any discharges of waste materials to surface waters.

b. Ground Water:

1) Will ground water be withdrawn, from a well for drinking water or other purposes? If so, give a general description of the well, proposed uses, and approximate quantities withdrawn from the well. Will water be discharged to ground water? Give general description, purpose, and approximate quantities if known.

No groundwater will be withdrawn as part of the project, and no water will be discharged to groundwater.

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.

No waste material related to the project will be discharged into the ground from septic tanks or other sources.

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.

At present, the surface water in the project area flows into STP's stormwater conveyance and treatment system, which includes multiple biofiltration swales, catch basins, pipes, a large pump station, and a series of wetponds and wetlands in Waterworks Gardens.

During construction, the primary source of water runoff onto and off of work areas will be stormwater. Stormwater drainage patterns may be altered during construction due to surface alterations. Stormwater runoff during construction will be managed to prevent runoff from leaving the site using storm water BMPs such as those described below in Section B.3.d.

When the project is completed, stormwater from the project site will be collected and routed to the wastewater influent stream at STP. Stormwater flow in the vicinity will not be affected.

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

During construction, the County will implement BMPs to prevent introduction of potential contaminants into ground and surface waters, which could include:

- Storing fuels and other potential contaminants in secured containment areas
- Containing equipment, materials, and wash water associated with construction
- Conducting regular inspections, maintenance, and repairs of fuel hoses, hydraulically operated equipment, lubrication equipment, and chemical/petroleum storage containers
- Maintaining spill containment and clean up material at the construction site
- Establishing a communication protocol for handling spills

After the facility is completed, runoff will be contained on-site and prevented from entering local water bodies prior to treatment.

3) Does the proposal alter or otherwise affect drainage patterns in the vicinity of the site? If so, describe.

The project will not alter drainage patterns in the vicinity of the site.

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

Stormwater management during and after construction will comply with all applicable permits and government approvals, including requirements and guidelines from the City of Renton, King County, and Ecology. In particular, King County will meet performance standards included within the 2017 City of Renton Surface Water Manual and City Amendments. Stormwater management BMPs will be used during construction to control stormwater runoff. Examples of typical BMPs that could be used during construction are presented in Section B.1.h above.

The completed facility will include stormwater containment measures to direct runoff to the wastewater influent stream at STP.

4. Plants

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

deciduous tree: alder, maple, aspen, other: ash, sweet gum, crabapple, pear, cottonwood
evergreen tree: fir, cedar, pine, other: Norway spruce
shrubs: salal, Oregon grape
grass
pasture
crop or grain
orchards, vineyards, or other permanent crops
wet soil plants: cattail, buttercup, bulrush, skunk cabbage, other
water plants: water lily, eelgrass, milfoil, other types of vegetation

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

The project site currently contains landscaping that will need to be removed. Plants to be removed include 13 ornamental cedar trees.

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

There are no threatened or endangered plants known to be on or near the site.

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

No landscaping is currently proposed as part of the project.

e. List all noxious weeds and invasive species known to be on or near the site.

No noxious weeds are known to be located on the site. However, tansy ragwort and spotted knapweed have been documented on neighboring parcels. Invasives on the project site are limited to sporadic, herbaceous species.

5. Animals

a. List any birds and other animals which have been observed on or near the site or are known to be on or near the site.

The project site does not include significant habitat for birds or mammals, although small mammals and some urban-adapted bird species are expected to occur in the general area and at the site. Washington Department of Fish and Wildlife's Priority Habitats and Species list does not list priority species on the site. However, the Black River Riparian Forest, just north of the treatment plant property, contains the largest document great blue heron rookery in the Puget Sound Region. The Black River wetlands and Springbrook Creek also provide habitat numerous other waterfowl species, as well as a variety of fish species (Chinook, coho, resident coastal cutthroat, steelhead, and winter steelhead).

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

Chinook and steelhead are federally-listed, threatened species that occur in the Springbrook Creek segment of the Black River, which is also federally-designated as critical habitat.

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

The project site is within the Pacific Flyway avian migration route.

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

Impacts to wildlife are not anticipated as a result of this proposal; therefore, no special measures to preserve wildlife are proposed.

e. List any invasive animal species known to be on or near the site.

None known

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 facility will use electricity to operate the mixer, and aeration system. The front-end loader and mobile trommel will be diesel-powered.

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

The completed facility will not affect the potential use of solar energy by adjacent properties.

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:

Blower fans will be equipped with variable speed motors to save energy when less aeration is needed.

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.

1) Describe any known or possible contamination at the site from present or past uses.

The STP site was developed in 1965 as a wastewater treatment facility, and prior, was undeveloped land. There are five leaking underground storage tanks (LUSTs) located within the vicinity of the project site, but none are located in the project area and there is no confirmed groundwater contamination associated with the LUSTs.

2) Describe existing hazardous chemicals/conditions that might affect project development and design. This includes underground hazardous liquid and gas transmission pipelines located within the project area and in the vicinity.

There are no hazardous chemicals or conditions in the vicinity that might affect project development or design.

3) Describe any toxic or hazardous chemicals that might be stored, used, or produced during the project's development or construction, or at any time during the operating life of the project.

Construction-related materials such as fuel and hydraulic fluid will be stored and used on site during construction. BMPs will be implemented during construction to minimize the potential for spills or mechanical failures to occur, and to minimize the potential for adverse effects from hazardous chemicals to workers or nearby residents.

The completed facility will process Class B biosolids, which may contain low levels of pathogens. These pathogens do not pose a risk to human health unless ingested. The composting process will reduce or eliminate these pathogens from the finished product.

4) Describe special emergency services that might be required.

None anticipated

5) Proposed measures to reduce or control environmental health hazards, if any:

As described in items B.1.h and B.3.d. above, BMPs and other measures will be used to avoid or contain and control any accidental spills or releases of hazardous materials during project construction. Project plans and construction specifications include measures to safely handle and dispose of contaminated materials. No sources of contaminated materials are known to be on the project site. However, if unexpectedly encountered during construction, contaminated materials will be removed from the work area and transported to a permitted disposal site. The contractor will prepare a health and safety plan as a deliverable for the proposed project prior to the start of construction. This plan will comply with all applicable health regulations and will detail measures to control environmental health hazards.

The composting process generates enough heat that combustion is possible if temperature is not managed effectively. The facility will operate using industry best practices to maintain an appropriate and safe temperature in the compost piles.

Facility staff will adhere to the same environmental safety requirements and guidelines, prescribed by King County, as the rest of the STP facility. These requirements and guidelines include BMPs for the proper handling of Class B biosolids, as well as BMPs for storage, handling, disposal, and clean-up of hazardous materials.

b. Noise

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

Noise in the project area will not affect the project.

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.

Construction noise may exceed existing background noise levels at times. Noise levels will vary depending on the specific equipment used for particular activities. Based on previous construction projects, typical noise levels can be expected to range from about 70 to 90 dBA measured at a distance of 50 feet from the source. Throughout project construction, short-term, intermittent construction related noise may include engine and mechanical equipment noises associated with the use of heavy equipment such as bulldozers, excavators, cranes, haul trucks, generators, chainsaws, and air compressors.

Construction-related noises will be limited to construction hours allowable by the City of Renton's noise control code. If work outside of daytime working hours is required, an application for a variance will be submitted to the City of Renton.

In the completed facility, mechanical equipment will generate noise during the day and night. None of the noises generated on the completed facility will exceed the City of Renton's maximum permissible sound level for the site's zoning or that of nearby receiving sites.

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

All construction and facility operation activities will be consistent with the City of Renton noise control code. All impacts from noise generated by construction will be short-term and temporary in nature. Construction BMPs will be used to minimize construction noise and could include:

- Using effective vehicle mufflers, engine intake silencers, and engine enclosures, and shutting off equipment when not in use
- Using temporary noise barriers around stationary equipment
- Positioning noise-generating equipment in the project area so that it is as far away as possible from sensitive receptors
- Notifying residents and businesses near the project site of upcoming noisy construction activities

- 24-hour construction hotline to promptly respond to questions and complaints

Sound generated by facility operations will be attenuated and muffled by vegetation and the distance to receptors. Because the maximum predicted acoustical level of noise at the property line of adjacent properties is below code limits, no additional mitigation is proposed.

8. Land and Shoreline Use

a. What is the current use of the site and adjacent properties? Will the proposal affect current land uses on nearby or adjacent properties? If so, describe.

The site is currently occupied by King County's South Treatment Plant. Adjacent properties include commercial and industrial sites. The proposed project will not affect current land uses on adjacent or nearby properties.

b. Has the project site been used as working farmlands or working forest lands? If so, describe. How much agricultural or forest land of long-term commercial significance will be converted to other uses as a result of the proposal, if any? If resource lands have not been designated, how many acres in farmland or forest land tax status will be converted to nonfarm or nonforest use?

Historic aerial photographs suggest the project area was part of a farm between the late 1930s and late 1950s. The site has not been used as agricultural land since that time, and is not designated as agricultural land of long-term commercial significance. The project will not result in conversion of farm or forest land to a nonfarm or nonforest use.

1) Will the proposal affect or be affected by surrounding working farm or forest land normal business operations, such as oversize equipment access, the application of pesticides, tilling, and harvesting? If so, how:

No.

c. Describe any structures on the site.

The area of STP that contains the project site currently includes numerous industrial buildings associated with wastewater treatment, administrative buildings, and access roads.

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

No.

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

Industrial Heavy (IH)

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

The site is located within the designated Employment Area (EA).

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

The proposed project will occur outside of the shoreline zone.

h. Has any part of the site been classified as a critical area by the city or county? If so, specify.

The project site is within two City of Renton-designated geologic hazard areas: a moderate Coal Mine Hazard Area and a high Seismic Hazard Area.

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

Approximately 140 people currently work at STP. The proposed facility will not result in additional staff being employed.

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:

Construction of the project will not conflict with existing land use plans and policies; however, a number of permits or approvals will be required. The City of Renton is being consulted to ensure that the project is compatible with existing and projected land uses and plans.

The City of Renton anticipates that the surrounding area will continue to be used for commercial and light industrial uses during the temporary duration of the project. Therefore, the completed facility is not expected to be incompatible with existing or future land use plans for the area.

m. Proposed measures to ensure the proposal is compatible with nearby agricultural and forest lands of long-term commercial significance, if any:

None

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.

None

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?

Temporary structures for the project will be no higher than approximately one story. Exterior building materials will include asphalt, concrete blocks, and fabric overhead coverings.

b. What views in the immediate vicinity would be altered or obstructed?

Views of the site will remain generally the same. The size of the overall Plant will not change and character of the site will continue to be that of an industrial operation, and the project site will not be visible from outside of the Plant property.

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

There are no measures proposed to address aesthetic impacts of the project.

11. Light and Glare

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

Project construction will take place largely during daylight hours. Temporary site lighting may be used at the beginning and end of work days during construction when daylight hours are short.

The completed project will require sufficient light for safety and security, similar in nature to the existing STP site. Outside areas that are currently lit at night at STP include entry and exit driveways, truck staging and parking areas, and building entrances.

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

No. The site is surrounded by buildings to the west, east, and south with similar exterior lighting.

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:

All exterior lights will be focused or shielded as necessary to cast light only in areas that require it and to minimize light spilling onto neighboring properties.

12. Recreation

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

Waterworks Gardens is a King County-owned eight-acre park located north of the project area. The main feature of the gardens are wetlands established to provide storm water treatment for STP.

Other recreational opportunities in the general vicinity include Springbrook Trail, a 2.3-mile trail that parallels the eastern boundary of the 50-acre STP site until it crosses Oakesdale Ave SW and enters the Black River Riparian Forest and Wetland. The Black River Riparian Forest is a 93-acre refuge that is popular for birdwatching.

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

13. Historic and Cultural Preservation

a. Are there any buildings, structures, or sites, located on or near the site that are over 45 years old listed in or eligible for listing in national, state, or local preservation registers located on or near the site? If so, specifically describe.

No buildings, structures, or sites that are listed in or eligible for listing in preservation registers have been identified on the project site, or within 0.5 miles of the project site.

Two unevaluated historic properties are within or adjacent to the project site. The first is South Treatment Plant itself, described as "Renton Sewage Treatment Plant" in the Washington Department of Archaeology and Historic Preservation (DAHP) database, which was constructed in 1965, and is therefore over 45 years old. South Treatment Plant was recorded on a DAHP Historic Property Inventory form in 2010, but no determination has been made regarding eligibility for listing in the National Register of Historic Places (NRHP). An update to this inventory form may be required by DAHP. The second unevaluated historic property is the Graphic Packaging International factory, located adjacent to STP at 601 Monster Road SW. The building, constructed in 1956, was recorded in the Historic Property Inventory as part of an import of county assessor data, but no recommendation has been made regarding its eligibility for listing in the NRHP. However, that building is outside of the view-shed of the project, and no impact is anticipated.

b. Are there any landmarks, features, or other evidence of Indian or historic use or occupation? This may include human burials or old cemeteries. Are there any material evidence, artifacts, or areas of cultural importance on or near the site? Please list any professional studies conducted at the site to identify such resources.

Numerous cultural resources investigations have been conducted in the recent past associated with construction projects at STP. No landmarks, features, or other evidence of Indian or historic use have been identified on the project site during these investigations; however, there are several nearby sites, including

precontact- and historic-era sites. Historic resources are railroad grades and historic debris scatters. Precontact resources are village sites, including sites where human burials have been identified. Three of the village sites have been determined eligible for listing on the NRHP. Based on proximity of the project site to recorded archaeological sites, its location above the former Black River channel and near the confluence with the Green (White) River, and the presence of ethnographic sites within the vicinity, it is likely that people used the landforms contained within the project area during the precontact and ethnographic periods. However, due to the previous development of STP, which involved large-scale earth work, the likelihood for intact archaeological sites is diminished.

c. Describe the methods used to assess the potential impacts to cultural and historic resources on or near the project site. Examples include consultation with tribes and the department of archeology and historic preservation, archaeological surveys, historic maps, GIS data, etc.

The project was screened by the King County Historic Preservation Program for the presence of cultural and historic resources within the project area and the probability of an inadvertent discovery of cultural resources during project construction. This screening included a review of historic registers, databases including the DAHP records database ("WISAARD"), historic maps and reports, and predictive GIS modeling. Environmental Science Associates also conducted an in-depth review of existing cultural resources reports and databases.

d. Proposed measures to avoid, minimize, or compensate for loss, changes to, and disturbance to resources. Please include plans for the above and any permits that may be required.

King County will prepare an inadvertent discovery plan (IDP) for project construction. The IDP will provide guidance to contractors for identifying potential cultural resources, and establish procedures to follow in the event of the unanticipated discovery of potential cultural resources in order to protect the discovery until it can be assessed by a professional archaeologist.

14. Transportation

a. Identify public streets and highways serving the site or affected geographic area, and describe proposed access to the existing street system. Show on site plans, if any.

The site is bordered by SW Grady Way and I-405 to the south, Oakesdale Avenue SW to the east and north, and Monster Road SW to the west. The primary access to the northern portion of STP, where the project will be

developed, is via SW 7th Street. However, there are additional driveways located off of Monster Road SW, Longacres Drive SW, and SW Grady Way.

b. Is the site or affected geographic area currently served by public transit? If so, generally describe. If not, what is the approximate distance to the nearest transit stop?

The 50-acre STP site is served by public transit. King County Metro stops for the 161 and 280 are located on SW Grady Way and the Tukwila Station for Amtrak and the Sounder Train are located a mile to the south of STP.

c. How many additional parking spaces would the completed project or non-project proposal have? How many would the project or proposal eliminate?

The completed project will not include additional parking spaces, nor will it eliminate any existing parking spaces.

d. Will the proposal require any new or improvements to existing roads, streets, pedestrian, bicycle, or state transportation facilities, not including driveways? If so, generally describe (indicate whether public or private).

No such improvements are included as part of this proposal.

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 or proposal? If known, indicate when peak volumes would occur and what percentage of the volume would be trucks (such as commercial and nonpassenger vehicles). What data or transportation models were used to make these estimates?

Project construction will require the delivery of equipment and materials by truck, generating approximately 275 truck trips. Once complete, small amounts of wood chips and yard waste will be regularly transported on-site and finished compost product will regularly be transported off-site. Given the existing vehicular activity on the STP property, including daily biosolids hauling, and the industrial nature of the project vicinity, there will be negligible changes in vehicular traffic as a result of the project.

g. Will the proposal interfere with, affect or be affected by the movement of agricultural and forest products on roads or streets in the area? If so, generally describe.

No.

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

Long-term transportation impacts are not anticipated; therefore, mitigation measures have not been developed.

15. Public Services

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

No.

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

None

16. Utilities

a. Circle 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.

The project will primarily involve short extensions of the existing utilities located on site. Electric and natural gas service on the site is provided by Puget Sound Energy, water and refuse service is provided by City of Renton, and wastewater service is provided by King County.

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: _____

Katherine Fischer, Environmental Programs Managing Supervisor
King County WTD

12/23/20

Date Submitted: _____

Appendix A. King County greenhouse gas emissions worksheets

Table A.1. Net project impact (metric tons of CO2)

	Project or Tool Input		Output	Additional Calculations	Final Output
a	Energy		MTCO2e	Project Life (years)	MTCO2e
		Construction phase	-		-
		Operations phase	123	5	614.82
b	Water		MTCO2e	Project Life (years)	MTCO2e
		Construction phase	-		-
		Operations phase	-	0	-
c	Transportation (VMT)				MTCO2e
	KC Employee Commute Climate Pollution Map		Av MTCO2e	# employees	
			-	0	-
	KC Residential Transportation Climate Pollution Map		Av MTCO2e	# households	MTCO2e
			-	0	-
d	Embodied Energy		MTCO2e		MTCO2e
			71		71.28
1	Waste Reduction Model (WARM)		MTCO2e		MTCO2e
			-		-
2	URBEMIS		lbsCO2/day	# project days	MTCO2e
			-	0	-
3	Roadway Construction Emissions Model		tonsCO2/project		MTCO2e
			-		-
4	Build Carbon Neutral		MTCO2		MTCO2e
			-		-
5	Tree Carbon Calculator		kgCO2	# trees	MTCO2e
			-	0	-
6	Reforestation Calculator		MTCO2e		MTCO2e
			-		-

NET Project Impact
MTCO2e
686.10

*Beneficial use of Loop compost sequesters, or removes, CO2 from the atmosphere. This project will sequester an estimated 514 metric tons of CO2 over its duration, offsetting much of the emissions shown in this worksheet.

Table A.2. Energy use (metric tons of CO2)

Project Input		Data Input	Input Unit	Output		Additional Calculations
Energy Use	**Construction Operations**				**MTCO2e**	**Project Life (years)**
	enter in the amount of electricity or fuel used by project phase					
	Electricity	77,743	kWh	0	**49.6311312**	5
	Gasoline[1]		gallons	0	0	
	Diesel[1]	5,876	gallons	0	**73.33248**	
	Natural Gas		therms	0	0	
	Heating Oil		gallons	0	0	
	Jet Fuel		gallons	0	0	
	Steam		Mlb	0	0	
	Propane		gallons	0	0	
Energy Use--Biofuels						**Project Life (years)**
	Green Electricity[2] Biogenic Sources[3]	51,829	kWh	0	0	
	Biodiesel[1]		gallons	0	0	
	Landfill gas or Biogas[2]		MMBtu	0	0	

Project Input		Data Input	Input Unit	Output		
Vehicle Miles Traveled (VMT)					**MTCO2e**	**Project Life (years)**
	enter the estimated annual VMT for the project	-	miles	0	0	0

Project Input		Data Input	Input Unit	Output		
Water Use ('watergy')					**MTCO2e**	**Project Life (years)**
	enter the amount of water used by project phase	-	gallons	0	0	0

1. *Lifecycle GHG Emissions (includes both combustion and fuel production)*
2. *Green electricity and biogas are considered carbon-neutral energy sources; CO2e output is zero*
3. *Please separately calculate and note any biogenice sources of greenhouse gas emissions*

Table A.3. Embodied energy (metric tons of CO2)

Project Input	Data Input	Input Unit	Output
Materials Use			**MTCO2e**
enter tons (US tons, or short tons) of material used			
Concrete		US tons	0
Cement		US tons	0
Asphalt	648	US tons	71
Dimensional lumber			
Glass			