

**SEATTLE PUBLIC UTILITIES
SEPA ENVIRONMENTAL CHECKLIST**

This SEPA environmental review of Seattle Public Utilities' (SPU) Murray Canyon Illicit Discharge Repair Project has been conducted in accord with the Washington State Environmental Policy Act (SEPA) (RCW 43.21C), State SEPA regulations [Washington Administrative Code (WAC) Chapter 197-11], and the City of Seattle SEPA ordinance [Seattle Municipal Code (SMC) Chapter 25.05].

A. BACKGROUND

1. Name of proposed project:

Murray Canyon Illicit Discharge Repair Project

2. Name of applicant:

Seattle Public Utilities (SPU)

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

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Project Delivery and Engineering Branch
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4. Date checklist prepared:

June 15, 2020

5. Agency requesting checklist:

Seattle Public Utilities (SPU)

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

Construction is expected to take up to 60 working days, is scheduled to begin in 2021, and would be substantially complete in 2022. Monitoring and maintenance of the restoration plantings would occur through 2027.

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

There are no plans for future additions, expansion, or further activity related to or connected with this proposal.

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

SPU Geotechnical Engineering. 2020 (February). Final Geotechnical Report, Murray Canyon Illicit Discharge Project, Seattle, Washington.

The Watershed Company. 2019 (October). Critical Area Assessment Report, SPU Murray Canyon Sewer Repair, Murray Canyon at 47th Ave SW Street End.

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 applications are known to be pending for governmental approvals of other proposals directly affecting the property covered by this proposal.

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

The following permits and approvals may be required:

U.S. Army Corps of Engineers (Corps)

Clean Water Act (CWA), Section 404 Nationwide Permit authorization

U.S. Fish and Wildlife Service and/or National Marine Fisheries Service

- Endangered Species Act (ESA) compliance (linked to CWA Section 404 authorization)
- Magnuson-Stevens Fishery Conservation and Management Act compliance (linked to CWA Section 404 authorization)

Washington State Department of Ecology

CWA Section 401 Water Quality Certification (linked to CWA Section 404 authorization)

Washington State Department of Archaeological and Historic Preservation (DAHP)

National Historic and Preservation Act Section 106 compliance (linked to CWA Section 404 authorization)

City of Seattle Departments of Transportation (SDOT)

- Construction Use Permit for construction in street rights-of-way
- Utility Permit

SPU

Side Sewer Permit

11. Give a 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.

In July 2009, SPU identified fecal coliform bacteria in a 12-inch diameter stormwater drainage pipe in the Murray Canyon area. Investigation of the source of that contamination implicated an 8-inch diameter underdrain associated with the 1924-vintage 36-inch diameter brick sewer mainline in the street right-of-way for SE Eddy St. Underdrains were originally installed for dewatering during construction of sewer mains and are typically open-joint pipes installed beneath the sewer line to convey collected groundwater to a local drain or water body. If the sewer mainline leaks, then the underdrain collects the leakage, resulting in potential sewage contamination of local receiving waters.

In this case, the underdrain appears to have been cross-connected to the adjacent 12-inch diameter storm drainage system when that stormwater system was constructed in the 1970s. As a temporary fix in 2009, SPU installed a plug in the stormwater pipe and added a bypass pipe to direct the contaminated stormwater to the 36-inch diameter sewer main. However, because it's undesirable to route clean drainage flow to the sewer system, SPU identified this project that would separate clean stormwater flows from the sewer system.

The project includes the following major work elements:

1. Install one new maintenance hole to provide access to the underdrain pipe.
2. Install approximately 100 lineal feet of new 8-inch diameter vitrified clay pipe to connect the upstream existing underdrain pipe to the sewer main. Depth of the new pipe would vary from 6 to 8 feet; the utility trench is anticipated to be 4 feet wide.
3. Discontinue flow through the bypass pipe from the stormwater drainage pipe to the sewer system by removing the plug in the downstream stormwater maintenance hole and plugging the bypass pipe in the upstream stormwater maintenance hole.
4. Stabilize and restore disturbed ground using native plants.

- 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 project area is in Murray Canyon, a forested ravine immediately west of Morgan Junction City Park (6413 California Ave SW) in West Seattle (Section 26, Township 24 North, Range 03 East). The project is in unimproved right-of-way for SW Eddy St south of 46th Ave SW in the West Seattle neighborhood of City of Seattle, King County, Washington. Vicinity and location maps are included as Attachments A and B, respectively.

B. ENVIRONMENTAL ELEMENTS

1. Earth

a. General description of the site:

Flat Rolling Hilly Steep Slopes Mountainous Other:

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

The work area is mostly confined to the flat bottom of the ravine. Adjacent slopes exceed 40%.

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.

The general geologic condition of Seattle is a result of glacial and non-glacial activity that occurred over the course of millions of years. The Geologic Map of Seattle (Troost *et al.*, 2005) indicates the site is underlain by Vashon-stade advance outwash and Vashon recessional coarse-grained deposits (primarily mapped southwest of the project site). The site is on the relatively flat floor of a steep-sided ravine. Surficial soil materials included disturbed soil deposits and undisturbed native glacial deposits. The disturbed soil deposits are of unknown origin and may be colluvium as a result of the steep slope failures adjacent to the project or may be fill and reworked native deposits from construction of existing drainage and sewer infrastructure in Murray Canyon. The project would remove or disturb soil due to trenching. The trench would be backfilled with native soil materials as well as imported materials.

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

The project area has steep slopes, potential landslide areas, wetlands, and wetland buffers, as mapped by the Seattle Department of Construction and Inspections (SDCI) (<http://www.seattle.gov/dpd/toolsresources/Map/default.htm>). A Category III wetland was identified on site (The Watershed Company 2019).

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

This project would disturb up to 0.25 acre as a result of excavation, grading, and filling during clearing and construction of underground utilities. Approximately 110 cubic yards (CY) of material would be excavated for utility improvements. Approximately 35 CY of mineral aggregate, landscape soil, borrow material, and backfill for utilities would be imported as fill material. Fill material would be obtained from a commercial licensed and permitted (by the State of Washington) purveyor of such materials. Excavated materials would be reused on-site where feasible or exported off-site and disposed of in an approved disposal location per construction contract requirements.

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

Erosion could occur as a result of the land-disturbing activity, although the risk is low because areas to be disturbed are relatively flat and proposed construction would begin only after best management practices (BMPs) to limit erosion potential were installed. For work in wetlands, BMPs would be used to protect these ECAs. All proposed construction would be required to comply with a SPU-approved construction erosion and sedimentation control (CESC) plan and comply with conditions of the project's CWA authorization and the City of Seattle ECA regulations.

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

Construction of this project would neither increase nor decrease impervious surfaces.

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

The project would implement a CESC plan with BMPs appropriate to the site, conditions, and activities. During construction, work would be monitored, maintained, and adjusted as necessary to meet changing conditions. Upon completion of construction, disturbed ground would be stabilized and restored using native plants.

2. Air

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

The project would produce greenhouse gas (GHG) emissions in three ways: embodied in materials to be used; through construction activity (especially as described above); and by regular operation, maintenance, and monitoring activities throughout the life of the

completed project. Emissions generated during manufacture of materials used in this project are not estimated or otherwise considered in this environmental analysis due to the difficulty and inaccuracy inherent in calculating such estimates.

The project would generate GHG emissions during construction through the operation of diesel- and gasoline-powered equipment, and in the transportation of materials, equipment and workers to and from the site. Construction equipment could include hand-held power tools, gasoline and diesel-powered compressors and generators, and gasoline and diesel-powered vehicles to remove existing utility infrastructure and construct new utility improvements. These tools would generate GHG emissions due to the combustion of gasoline and diesel fuels, including oxides of nitrogen, carbon monoxide, particulate matter and smoke, uncombusted hydrocarbons, hydrogen sulfide, carbon dioxide, and water vapor. Other emissions during construction could include dust and exhaust from construction vehicles. These effects are expected to be localized, temporary, and minimized.

The completed project would generate GHG emissions through the routine and emergency operation, maintenance, and monitoring of the project through an assumed life expectancy of 50 years.

Total GHG emissions for the project are summarized in the table below; calculations are provided in Attachment C. The estimates provided are based on assumptions for typical numbers of vehicle operations to execute the work.

SUMMARY OF GREENHOUSE GAS (GHG) EMISSIONS

Activity/Emission Type	GHG Emissions (pounds of CO ₂ e) ¹	GHS Emissions (metric tons of CO ₂ e) ¹
Buildings	0	0
Paving	0	0
Construction Activities (Diesel)	374,966	170
Construction Activities (Gasoline)	9,623	4.4
Long-term Maintenance (Diesel)	5,310	2.4
Long-term Maintenance (Gasoline)	4,860	2.2
Total GHG Emissions	394,759	179

¹Note: 1 metric ton = 2,204.6 pounds of CO₂e. 1,000 pounds = 0.45 metric tons of CO₂e

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

No off-site sources of emissions or odors would affect the project. The project is in a ravine surrounded by single and multi-family residential neighborhoods.

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

During construction, impacts to air quality would be reduced and controlled through implementation of federal, state, and local emission control criteria and City of Seattle required construction practices. These include requiring contractors to use BMPs for construction methods, proper vehicle maintenance, and minimizing vehicle and equipment idling.

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

There are no water bodies on or in the immediate vicinity of the project. However, most excavation would occur in a Category III wetland having a total of 16 points based on the State of Washington's 2014 wetland rating system (<https://ecology.wa.gov/Water-Shorelines/Wetlands/Tools-resources/Rating-systems>). The wetland scores six points for water quality functions, five points for hydrologic functions, and five points for habitat functions. The City of Seattle's Environmentally Critical Area (ECA) regulations assign wetland buffers based on wetland category and habitat function (SMC 25.09.160.B). A 110-foot buffer is required for this wetland.

- (2) Will the project require any work over, in, or adjacent to (within 200 feet) the described waters? If so, please describe, and attach available plans.**

The proposed work would excavate and then fill portions of a Category III wetland on the floor of Murray Canyon.

- (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.**

Up to approximately 110 CY of wetland material would be excavated and up to 110 CY of fill would be placed in the wetland.

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

The project would not permanently withdraw or divert surface water. However, temporary diversion of drainage water into the 36-inch diameter sewer would be required during construction.

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

The project does not lie in 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.**

This project would not discharge waste material to surface water.

b. Ground:

- (1) Will groundwater 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 groundwater? Give general description, purpose, and approximate quantities if known.

This project would not withdraw groundwater from a well nor discharge any water to the 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.**

This project would not discharge waste material into the ground.

c. Water Runoff (including stormwater):

- (1) Describe the source of runoff (including stormwater) 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.**

Existing sources of stormwater runoff include the steep slope from the ravine and contributions from upstream neighborhood streets, sidewalks, driveways, and other impervious areas on residential parcels. The project would not alter existing sources or flow patterns of stormwater.

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

During construction, it is possible that erosion from the construction site could enter surface waters. However, a CESC plan using appropriate BMPs would be implemented to avoid or minimize this risk. Work would be monitored, maintained, and adjusted as necessary to meet changing on-site conditions.

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

This project would return the stormwater drainage infrastructure to the condition that existed prior to SPU's 2009 temporary fix to prevent sewage from entering the drainage system. Upon completion of the project, sewage leaking from the existing sewer would be captured and returned to the sewer system and collected stormwater would be directed to the original drainage system.

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

This project would return the stormwater drainage infrastructure to the condition that existed prior to SPU's 2009 temporary fix to prevent sewage from entering the drainage system. BMPs identified in the City of Seattle's Stormwater Code SMC 22.800 – 22.808 and in Director's Rule: SDCI's 17-2017/SPU's DWW-700, Volume 2 Construction Stormwater Control would be used to control erosion and sedimentation during construction. As a result, the project would not adversely impact surface or ground waters or drainage patterns.

4. Plants

a. Types of vegetation found on the site:

<input checked="" type="checkbox"/> Deciduous trees:	<input checked="" type="checkbox"/> Alder	<input checked="" type="checkbox"/> Maple	<input type="checkbox"/> Aspen	<input type="checkbox"/> Other:
<input checked="" type="checkbox"/> Evergreen trees:	<input checked="" type="checkbox"/> Fir	<input checked="" type="checkbox"/> Cedar	<input checked="" type="checkbox"/> Pine	<input type="checkbox"/> Other:
<input checked="" type="checkbox"/> Shrubs				
<input checked="" type="checkbox"/> Grass				
<input type="checkbox"/> Pasture				
<input type="checkbox"/> Crop or grain				
<input type="checkbox"/> Orchards, vineyards, or other permanent crops				
<input checked="" type="checkbox"/> Wet soil plants:	<input type="checkbox"/> Cattail	<input checked="" type="checkbox"/> Buttercup	<input type="checkbox"/> Bulrush	<input type="checkbox"/> Skunk cabbage
<input checked="" type="checkbox"/> Other: Horsetail (<i>Equisetum</i> spp.)				
<input type="checkbox"/> Water plants:	<input type="checkbox"/> water lily	<input type="checkbox"/> eelgrass	<input type="checkbox"/> milfoil	<input type="checkbox"/> Other:
<input type="checkbox"/> Other types of vegetation:				

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

The project would require limited clearing of an existing quarry spall access road that enters Murray Canyon starting at the road end of 47th Ave SW. Vegetation to be cleared includes mostly non-native invasive species that infest the Canyon, including Himalayan blackberry (*Rubus bifrons*), English Ivy (*Hedera helix*), and creeping buttercup (*Ranunculus repens*). Non-native species such as creeping buttercup and Himalayan blackberry would also be cleared from the repair site. The project may need to prune or remove up to two non-native, small-diameter (less than eight inches in diameter at standard height) English laurel (*Prunus laurocerasus*) trees.

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

According to a review of the Washington Department of Natural Resources (WDNR) Natural Heritage Program’s document called “Sections that Contain Natural Heritage Features, Current as of November 18, 2019” (accessed at www.dnr.wa.gov), there are no documented occurrences of sensitive, threatened, or endangered plant species in this Section. No federally listed endangered or threatened plant species or State-listed sensitive plant species are known to occur within the municipal limits of the City of Seattle. The project location has been intensively disturbed by development and redevelopment over the last 100 years. The project vicinity has been extensively excavated, filled, paved, or occupied by street and other built structures. There is no habitat for threatened or endangered plants.

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

The project would limit plant removal, pruning, and other disturbance to the minimum required for construction of improvements. Construction limits would be physically delineated by protective construction fencing to prevent unauthorized trespass and collateral damage to adjacent vegetation. The project would stabilize and restore all disturbed ground using native plants.

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

Numerous invasive species dominate upland, wetland, and riparian habitats in Murray Canyon, including English laurel, Himalayan blackberry, English ivy, creeping buttercup, and reed canarygrass (*Phalaris arundinacea*). According to the 'Noxious Weed' data layer in King County's iMap website, giant hogweed (*Heracleum mantegazzianum*; a Class A noxious weed in King County) is known to be near the project area but not in Murray Canyon.

5. Animals

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

Birds:	<input checked="" type="checkbox"/> Hawk	<input type="checkbox"/> Heron	<input checked="" type="checkbox"/> Eagle	<input checked="" type="checkbox"/> Songbirds
	<input checked="" type="checkbox"/> Other: crow, pigeon			
Mammals:	<input type="checkbox"/> Deer	<input type="checkbox"/> Bear	<input type="checkbox"/> Elk	<input type="checkbox"/> Beaver
	<input checked="" type="checkbox"/> Other: possum, raccoon, squirrel			
Fish:	<input type="checkbox"/> Bass	<input type="checkbox"/> Salmon	<input type="checkbox"/> Trout	<input type="checkbox"/> Herring
	<input type="checkbox"/> Shellfish	<input type="checkbox"/> Other:		

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

Based on a check of the WDFW's "Priority Habitat Species on the Web" database on May 27, 2020, the project area is mapped as being within a known occurrence of western pond turtle (*Actinemys marmorata*), a State-listed endangered species. According to the Washington State Recovery Plan for this species (WDFW 1999), individual western pond turtles were reported in West Seattle in the 1960's and 1970's. The Best Available Science Review for Fish and Wildlife Habitat Conservation Areas (Seattle Department of Planning and Development 2013) indicates "it is unlikely that a viable population [of western pond turtle] exists in Seattle." There are currently no known populations of western pond turtle in the City of Seattle. There are no other threatened or endangered species in the vicinity of the project.

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

Seattle is in the migratory route of many birds and other animal species and is part of the Pacific Flyway, a major north-south route of travel for migratory birds in the Americas extending from Alaska to Patagonia. The project is more than 1,800 feet east of Puget Sound, another important water migration route for many animal species.

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

The project would minimize ground disturbance and deploy BMPs identified in the City of Seattle's Stormwater Code (SMC 22.800 through 22.808 and Director's Rule SPU's DW-700 /SDCI's 17-2017) and Construction Stormwater Control Technical Requirements Manual (Volume 2) to generally protect wildlife and manage stormwater. For example, equipment to be used for construction activity would be cleaned and inspected before it arrives at the project location to avoid and minimize potential for fuel

or lubricant leaks. In addition, the project would stabilize and restore disturbed ground using native plantings, which would improve resting, feeding, refuge, and nesting habitat for wildlife compared to existing conditions.

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

King County lists the European starling, house sparrow, Eastern gray squirrel, domestic cat, and fox squirrel as terrestrial invasive species for this area (<http://www.kingcounty.gov/services/environment/animals-and-plants/biodiversity/threats/Invasives.aspx>).

6. Energy and Natural Resources

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

The completed project would not require electrical service.

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

The project is in a ravine and would not construct structures or plant vegetation that would block access to the sun for adjacent properties.

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

The project is in a ravine and would not include any energy conservation features.

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:

Small amounts of materials likely to be present during construction include gasoline and diesel fuels, hydraulic fluids, oils, lubricants, solvents, paints, and other chemical products. A spill of one of these chemicals could potentially occur during construction as a result of either equipment failure or worker error. Though highly unlikely and not expected at this location, contaminated soils, sediments, or groundwater could also be exposed during excavation. If disturbed, contaminated substances could expose construction workers and potentially other individuals in the vicinity through blowing dust, stormwater runoff, or vapors.

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

There are no known contamination issues based on review of available information.

- (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 known hazardous chemicals/conditions. The project would coordinate with all utility purveyors during design to confirm the design does not impact existing gas mains or other utilities and would plan for any locational adjustments to gas mains or other utilities prior to construction.

- (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.**

No toxic or hazardous chemicals are expected to be stored, used, or produced during the project's development or construction, or at any time during the operation life of the project. If the unexpected did occur, material would be stored and handled in accordance with City of Seattle standard specifications and requirements.

- (4) Describe special emergency services that might be required.**

Fire and/or medic services could be required during project construction, as well as possibly during maintenance of the completed project. However, the completed project would not demand higher levels of special emergency services than already exist. Typical emergency services required for medical emergencies are provided by the Seattle Fire Department. Typical security services are provided by the Seattle Police Department and SPU's contractor during construction.

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

No such measures are proposed; there would be no environmental health hazards.

b. Noise

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

Noises that exist in the area would 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.**

Noise levels in the vicinity of construction would temporarily increase during construction activities. Short-term noise from construction equipment would be limited to the allowable maximum levels of City of Seattle's Noise Control Ordinance (SMC Chapter 25.08). Within the allowable maximum levels, SMC 25.08 permits noise from construction equipment between the hours of 7 am and 7 pm weekdays, and 9 am and 7 pm weekends and legal holidays; however, it is expected that most construction activity would occur from 7 am to 6 pm on weekdays. After project completion, occasional noise from equipment used for operation, maintenance, and monitoring would occur periodically, but would be limited to hours allowed by the City of Seattle's Noise Control Ordinance (SMC 25.08).

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

Construction equipment would be muffled in accordance with the applicable laws. SMC Chapter 25.08 prescribes limits to noise and construction activities and would be enforced while the during construction.

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 project is in unimproved street right-of-way. Adjacent property uses are single-family residential. The project would not affect current land uses on adjacent parcels.

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 non-forest use?

The project location has not been recently used for working farm or forest lands.

(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?

There is no surrounding farm or forest land.

c. Describe any structures on the site.

There are no structures on the site. There are locator poles marking locations of maintenance structures due to the overgrown vegetation obscuring the location.

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

The project would demolish some portions of existing buried drainage and sewer pipes.

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

The project is located entirely in street ROW. Adjacent properties are zoned Single Family Residential.

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

The current comprehensive plan designation is Single Family Residential.

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

The project is not in the City's Shoreline Management District.

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

The project is in steep slope, steep slope buffer, potential slide, known slide, wetland, and wetland buffer ECAs as mapped by SDCI.

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

No people would reside in the project. City maintenance crews would work periodically in the ROW to maintain vegetation, drainage, and other City infrastructural assets.

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

No people would be displaced.

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

There would be no displacements.

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

The project would be compatible with existing and projected land uses and plans.

m. Proposed measures to reduce or control impacts to agricultural and forest lands of long-term commercial significance, if any:

There are no nearby agricultural and forest lands of long-term commercial significance.

9. Housing

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

The project would not construct any housing units.

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

The project would not eliminate any housing units.

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

No measures are proposed because there would be no housing impacts.

10. Aesthetics

a. What is the tallest height of any proposed structure(s), not including antennas? What is the principal exterior building material(s) proposed?

No new buildings are proposed.

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

No views in the immediate vicinity would be altered or obstructed.

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

No measures to reduce or control aesthetic impacts are proposed; there would be no impact.

11. Light and Glare

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

The project would not produce light or glare.

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

The constructed project would not be a safety hazard or interfere with views.

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

No off-site sources of light or glare would affect the proposal.

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

No measures are proposed to reduce or control light and glare impacts because there would be no light and glare impacts.

12. Recreation

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

Murray Junction City Park is located approximately 1,500 feet to the east, at the head of Murray Canyon. Murray Canyon itself is used only rarely by residents for hiking or birdwatching. Much of the Canyon is inaccessible due to the preponderance of invasive species that make foot travel difficult.

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

The project would not displace existing recreational uses.

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

The project would not provide measures to reduce or control impacts on recreations; there would be no impacts.

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? If so, specifically describe.

The project would not affect buildings, structures, or known cultural resources. This project would affect only City of Seattle existing roadway assets and stormwater systems. None of those objects are considered historically or culturally significant.

- 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.**

There are no landmarks, features, or other evidence of Indian or historic use or occupation, including human burials or old cemeteries. There is no material evidence, artifacts, or areas of cultural importance known to be on or near the project. According to DAHP's Washington Information System for Architectural and Archaeological Records Data (WISSARD) and Archaeological Predictive Model based on environmental factors (<https://wisaard.dahp.wa.gov/portal/home/webmap/viewer.html?layers=ee1a6001961948babddb2dafc7316250>), the project site is in an area with Very High Risk of inadvertent discovery of pre-contact cultural resources or other archaeological resources. However, the proposed work would disturb upland areas previously disturbed and filled by construction of buried utilities. The work's location on previously disturbed and filled ground significantly reduces the chance of encountering contextually significant archaeological materials.

- 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 Archaeology and Historic Preservation, archaeological surveys, historic maps, GIS data, etc.**

To determine if National Register, State of Washington Heritage, or City of Seattle Landmark properties are adjacent to the project, SPU consulted the following registers on May 27, 2020:

Washington Heritage Register and National Register of Historic Places:
<http://www.dahp.wa.gov/historic-register>

WISSARD: <https://wisaard.dahp.wa.gov/>

City of Seattle Landmarks Map: <http://www.seattle.gov/neighborhoods/programs-and-services/historic-preservation/landmarks/landmarks-map>

Additionally, background research was completed by a Secretary of Interior professionally qualified team on April 24, 2020. Their research included the King County Historic Register, the Heritage Barn Register, and historic maps from the U.S. Geological Survey and Government Land Office—in addition to the other resources identified above. The team included their findings and recommendations in a Monitoring and Inadvertent Discovery Plan that would be used during construction of this project.

- 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.**

Work would be conducted under a Monitoring and Inadvertent Discovery Plan for cultural and archaeological materials.

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 project would occur in existing unimproved City-owned street right-of-way. Access would be via residential streets.

- 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 project location is not served by public transit. The nearest transit stop is approximately 400 feet distant by air on 48th Ave SW (Route 37) and approximately 600 feet distant by air on Fautleroy Ave SW (Routes 22 and 127).

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

The project would neither create new nor eliminate 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).**

The project does not require any new or improvements to existing roads, streets, pedestrian, bicycle or station transportation facilities.

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

The project would not use water, rail, or air transportation.

- 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 non-passenger vehicles). What data or transportation models were used to make these estimates?**

Construction would require approximately 190 round-trips (estimated using Attachment C) due to workers and materials being transported to and from the project location during the anticipated 60 working-day construction period. Generally, trips would occur between 7 am and 7 pm weekdays, and 9 am and 7 pm weekends and legal holidays. Specific timing of peak volumes is not known. The completed project is expected to generate approximately 50 round trips over its anticipated 50-year life span to support on-going routine operation, maintenance, and monitoring. Peak traffic volumes would not change because of the completed project.

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

The proposal would not affect movement of products on roads or streets.

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

During construction, the contractor would be required to deploy a traffic control plan approved by SDOT, if needed. Project construction would comply with SDOT policies. SPU and SDOT would encourage the construction contractor to use carpooling for its employees.

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.

The project would not create an increased need for public services.

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

There are no proposed measures to reduce or control direct impacts on public services because there would be no impacts.

16. Utilities

a. Check utilities available at the site:

None Electricity Natural gas Water Refuse service
 Telephone Sanitary sewer Septic system Other: fiber optic

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 would modify existing sewer and stormwater drainage utilities in Murray Canyon. These utilities are owned and maintained by SPU.

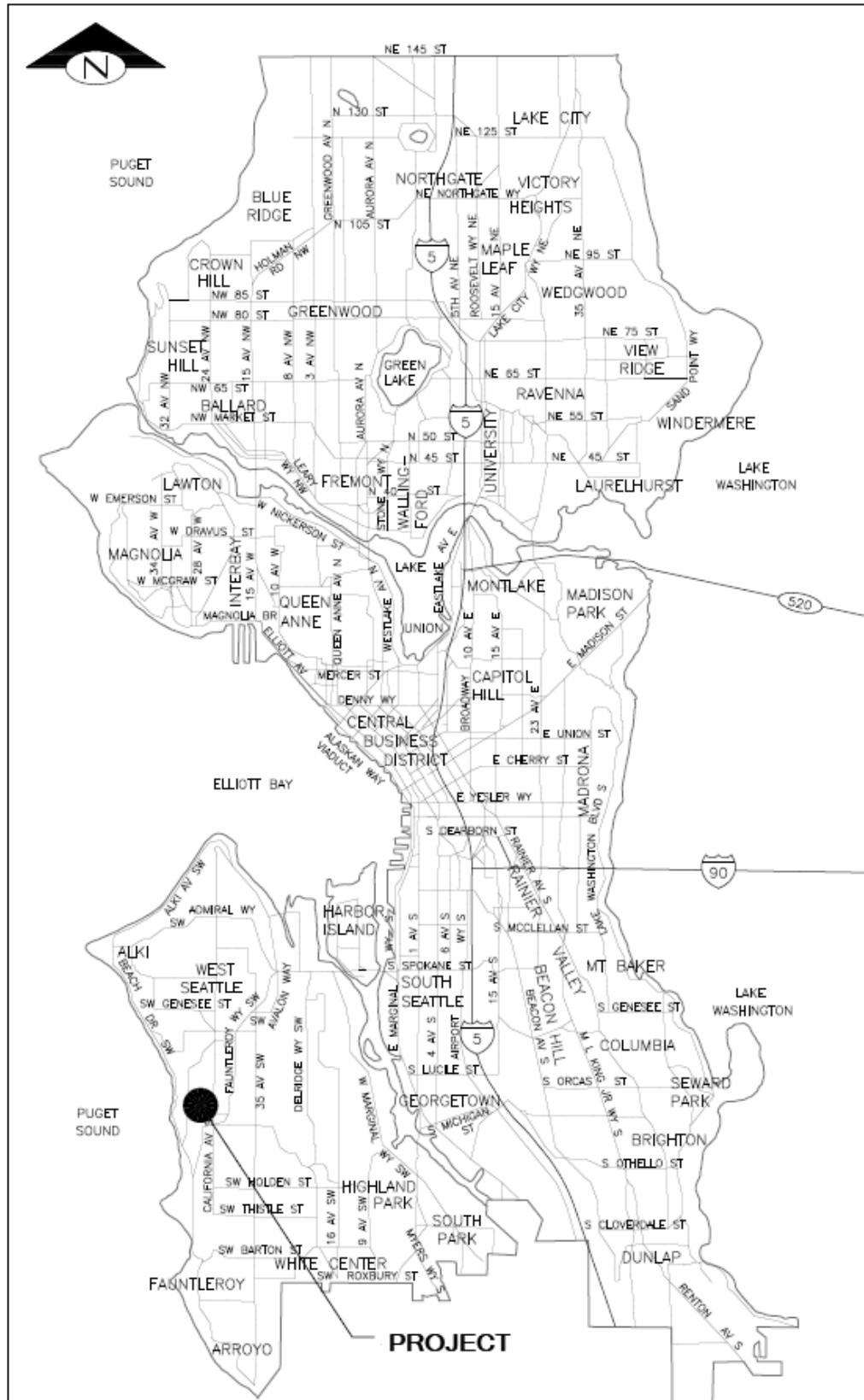
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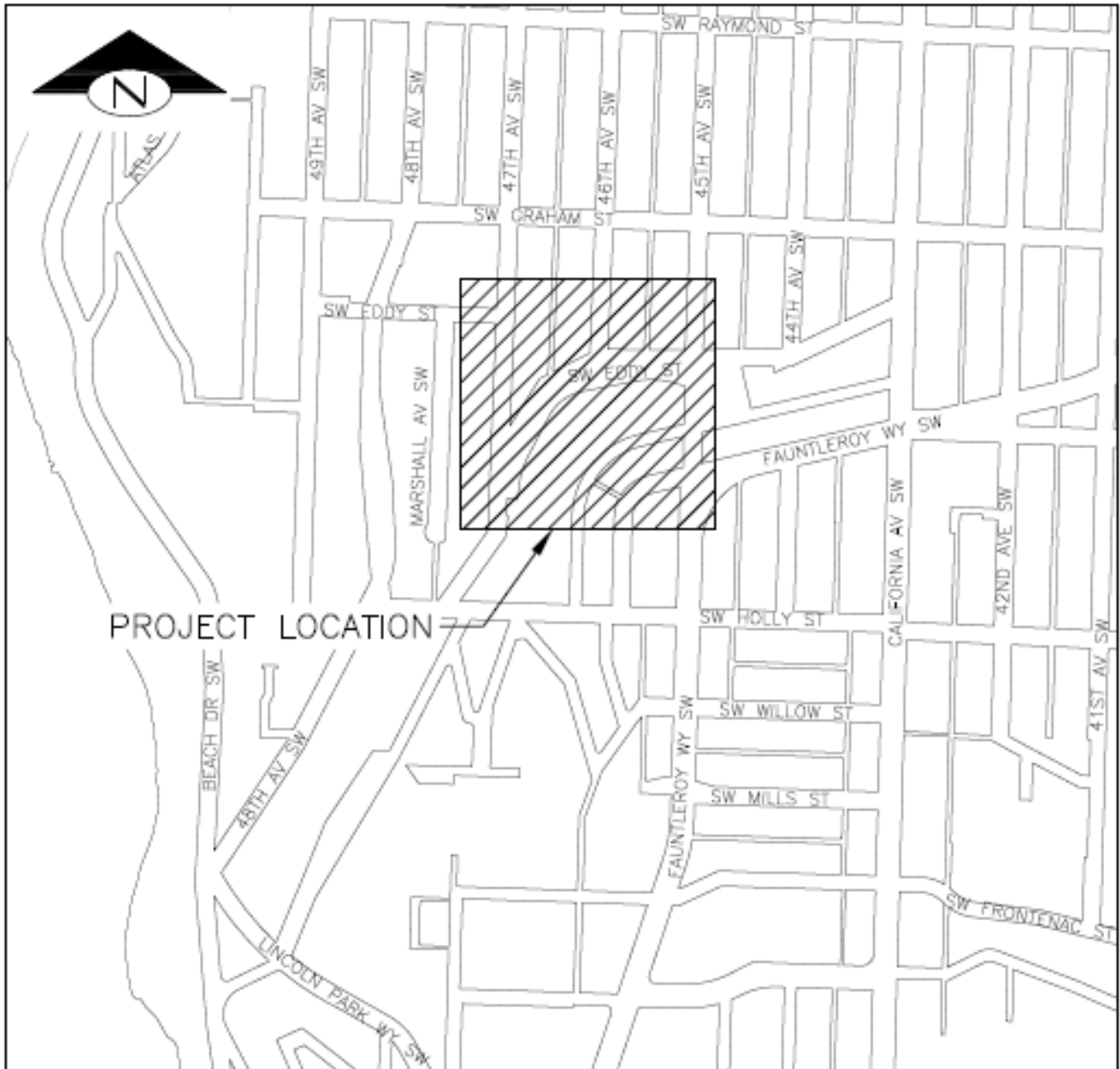
The above answers are true and complete to the best of my knowledge. I understand the lead agency is relying on them to make its decision.

Signature: _____
Arnel Valmonte, Project Manager

- Attachment A – Vicinity Map
- Attachment B – Site Map
- Attachment C – Greenhouse Gas Emissions Worksheet

Attachment A – Vicinity Map





Attachment C – Greenhouse Gas Emissions Worksheet

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 (MTCO ₂ e)			Lifespan Emissions (MTCO ₂ e)
			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
TOTAL Section I Buildings						0

Section II: Pavement						
						Emissions (MTCO ₂ e)
Asphalt Pavement (50 MTCO ₂ /1000 sq ft)		0 SF				0
Concrete Pad (50 MTCO ₂ e/1,000 sq ft of pavement at a depth of 6 inches; cy *2.7 to convert to MTCO ₂ e)		0 cy				0
TOTAL Section II Pavement						0

Section III: Construction						
(See detailed calculations below)						Emissions (MTCO ₂ e)
TOTAL Section III Construction						174.4

Section IV: Operations and Maintenance						
(See detailed calculations below)						Emissions (MTCO ₂ e)
TOTAL Section IV Operations and Maintenance						4.6

TOTAL GREENHOUSE GAS (GHG) EMISSIONS FOR PROJECT (MTCO₂e)						179
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**Murray Canyon Illicit Discharge Repair Project
SEPA Environmental Checklist**

Attachment C – Greenhouse Gas Emissions Worksheet, continued

Section III: Construction Details		
Construction: Diesel		
Equipment	Diesel (gallons)	Assumptions
Backhoe/Excavator x 2	10,000	500 hrs x 20 gal/hr (345 hp engine)
Front-end Loader x 2	4,000	200 hrs x 20 gal/hr (345 hp engine)
Flat-bed Truck	75	5 round trips x 75 mi/round trip ÷ 5 mpg
Dump Truck and Pup (17 cubic yard/load)	48	4 round trips x 60 mi/round trip ÷ 5mpg
Subtotal Diesel Gallons	14,123	
GHG Emissions in lbs CO₂e	374,966	26.55 lbs CO ₂ e per gallon of diesel
GHG Emissions in metric tons CO₂e	170	1,000 lbs = 0.45359237 metric tons

Construction: Gasoline		
Equipment	Gasoline (gallons)	Assumptions
Pick-up Trucks or Crew Vans	360	60 workdays x 3 trucks x 1 round-trip/day x 40 miles/round-trip ÷ 20 mpg
Misc Hand equipment	36	60 workdays x 2 hours x 1 piece of equipment x 0.3 gal/hour
Subtotal Gasoline Gallons	396	
GHG Emissions in lbs CO₂e	9,623	24.3 lbs CO ₂ e per gallon of gasoline
GHG Emissions in metric tons CO₂e	4.4	1,000 lbs = 0.45359237 metric tons

Construction Summary		
Activity	CO₂e in pounds	CO₂e in metric tons
Diesel	374,966	170
Gasoline	9,623	4.4
Total for Construction	384,589	174.4

Attachment C – Greenhouse Gas Emissions Worksheet, continued

Section IV: Long-Term Operations and Maintenance Details		
Operations and Maintenance: Diesel		
Equipment	Diesel (gallons)	Assumptions
Maintenance Operation (vector truck support) (1)	200	(1x annually for 50 years) x 1 round-trip/event x 20 miles/round-trip ÷ 5 mpg
Subtotal Diesel Gallons	200	
GHG Emissions in lbs CO₂e	5,310	26.55 lbs CO ₂ e per gallon of diesel
GHG Emissions in metric tons CO₂e	2.4	1,000 lbs = 0.45359237 metric tons

Operations and Maintenance: Gasoline		
Equipment	Gasoline (gallons)	Assumptions
Pick-up Truck or Crew Van (1)	200	(1x annually for 50 years) x 1 round-trip/event x 20 miles/round-trip ÷ 5 mpg
Subtotal Gasoline Gallons	200	
GHG Emissions in lbs CO₂e	4,860	24.3 lbs CO ₂ e per gallon of gasoline
GHG Emissions in metric tons CO₂e	2.2	1,000 lbs = 0.45359237 metric tons

Operations and Maintenance Summary		
Activity	CO ₂ e in pounds	CO ₂ e in metric tons
Diesel	5,310	2.4
Gasoline	4,860	2.2
Total for Operations and Maintenance	10,170	4.6