SEPA ENVIRONMENTAL CHECKLIST

Purpose of checklist:

Governmental agencies use this checklist to help determine whether the environmental impacts of your proposal are significant. This information is also helpful to determine if available avoidance, minimization or compensatory mitigation measures will address the probable significant impacts or if an environmental impact statement will be prepared to further analyze the proposal.

Instructions for applicants:

This environmental checklist asks you to describe some basic information about your proposal. Please answer each question accurately and carefully, to the best of your knowledge. You may need to consult with an agency specialist or private consultant for some questions. You may use "not applicable" or "does not apply" only when you can explain why it does not apply and not when the answer is unknown. You may also attach or incorporate by reference additional studies reports. Complete and accurate answers to these questions often avoid delays with the SEPA process as well as later in the decision-making process.

The checklist questions apply to all parts of your proposal, even if you plan to do them over a period of time or on different parcels of land. Attach any additional information that will help describe your proposal or its environmental effects. The agency to which you submit this checklist may ask you to explain your answers or provide additional information reasonably related to determining if there may be significant adverse impact.

Instructions for Lead Agencies:

Please adjust the format of this template as needed. Additional information may be necessary to evaluate the existing environment, all interrelated aspects of the proposal and an analysis of adverse impacts. The checklist is considered the first but not necessarily the only source of information needed to make an adequate threshold determination. Once a threshold determination is made, the lead agency is responsible for the completeness and accuracy of the checklist and other supporting documents.

Use of checklist for nonproject proposals:

For nonproject proposals (such as ordinances, regulations, plans and programs), complete the applicable parts of sections A and B plus the SUPPLEMENTAL SHEET FOR NONPROJECT ACTIONS (part D). Please completely answer all questions that apply and note that the words "project," "applicant," and "property or site" should be read as "proposal," "proponent," and "affected geographic area," respectively. The lead agency may exclude (for non-projects) questions in Part B - Environmental Elements –that do not contribute meaningfully to the analysis of the proposal.

A. Background [HELP]

1. Name of proposed project, if applicable:

   Boeing Everett Facility Cleanup Actions: Upland Area, Powder Mill Gulch, and BOMARC Property

2. Name of applicant:

   The Boeing Company

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

   Applicant:

   The Boeing Company
   Project Manager: Deborah Taege
   Environment, Health, & Safety – Environmental Remediation
   Bldg. 10-20, MC 9U4-26
   Renton, WA 98055-1409
   818-720-5575

   Contact Persons:

   Upland Area and BOMARC Property:
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   206-403-4259 (office)
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   Powder Mill Gulch:
   Piper Roelen
   Landau Associates
   130 Second Avenue South
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4. Date checklist prepared:

   January 12, 2020

5. Agency requesting checklist:

   Washington State Department of Ecology (Ecology)

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

   A detailed schedule for implementation of the cleanup actions described in A.11 of this SEPA checklist is provided in the Draft Cleanup Action Plan (dCAP) (Ecology 2020). Ecology will make the dCAP and this SEPA checklist available for public review and comment, anticipated in February 2021. Timing of the cleanup actions is dependent on approval of the final CAP following the public comment period and the effective date of Ecology's Enforcement Order for Upland Area and

Powder Mill Gulch located on the Boeing Everett Facility and Agreed Order for the offsite BOMARC property (both currently in development), as well as Ecology review and approval of required engineering design reports, and contractor selection. In general, near-term cleanup work is planned to occur between 2022 to 2030. Future cleanup actions are anticipated to occur when facility operations allow for access to areas requiring cleanup; however, there is no scheduled start date at this time.

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

   The proposed project described in this checklist includes both near-term (within next 10 years) and future (schedule unknown or >10 years) cleanup actions. Future actions described in this checklist are considered part of this proposal and SEPA review. However, future actions may require additional SEPA review at a later time if substantially delayed or SEPA requirements change. No additional activity related to this proposal is anticipated.

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

   The documents listed below have been prepared related to this proposal. Many of these documents are available on Ecology's online document repository for the Boeing Everett Facility Cleanup Site at: https://apps.ecology.wa.gov/gsp/CleanupSiteDocuments.aspx?csid=4534, as noted. Other documents listed below are available upon request.

   The dCAP will be available on Ecology's SEPA register at https://ecology.wa.gov/Regulations-Permits/SEPA/Environmental-review/SEPA-Register when made available for public comment. The final CAP will be available upon completion of the SEPA review process.

   - AECOM. *Feasibility Study, Sediments and Surface Water, BCA Everett Plant, Everett, Washington.* August 18, 2016.
   - AECOM and Landau and Associates (Landau). 2015. *Feasibility Study, Upland Areas and Powder Mill Gulch, BCA Everett Plant*. November 2015. Available at: https://apps.ecology.wa.gov/gsp/CleanupSiteDocuments.aspx?csid=4534
   - AECOM and Landau. 2020. *Draft Cleanup Action Plan, Upland Areas, Powder Mill Gulch and BOMARC Property, Boeing Everett Facility*. February 2020.
   - Boeing. 2018. *Boeing Everett Uplands/Powder Mill Gulch Feasibility Study. Boeing's Alternative Proposals for Formally Disputed Items Submitted September 8, 2017. Supplement to Boeing's November 16, 2017, Alternative Proposals.* January 22, 2018. Available at: https://apps.ecology.wa.gov/gsp/CleanupSiteDocuments.aspx?csid=4534,
   - Ecology (Washington State Department of Ecology). 1997. *RCRA Corrective Action Agreed Order No. DE 96HS-N274; In the Matter of Remedial Action by: The Boeing Company, Boeing Commercial Airplane Group – Everett Plant*. State of Washington Department of Ecology. February 12, 1997. October 22, 1998, July 26, 2004, July 27, 2006, January 24, 2008, April 26, 2011, August 6, 2012, and April 30, 2014 as amended. Available at: https://apps.ecology.wa.gov/gsp/CleanupSiteDocuments.aspx?csid=4534
   - Ecology. 2020. *Cleanup Action Plan, Upland Area, and Powder Mill Gulch (PMG), Boeing Everett Facility*. Northwest Regional Office, Hazardous Waste and Toxics Reduction Program. August 28, 2020.

- Landau. 2011. *Work Plan, Phase 1 Downgradient Plume Interim Action, Powder Mill Gulch, Boeing Everett Plant, Washington*. October 14, 2013.
- Landau. 2013. *Revision 1 – Work Plan, Downgradient Plume Interim Action, Phase 2, Powder Mill Gulch, Boeing Everett Plant, Washington*. July 25, 2013.
- Landau. 2018. *Agency Review Draft, Supplemental Feasibility Study Report, BCA Everett Plant – Powder Mill Gulch, Everett, Washington*. November 29, 2018.
- URS. 2006. *Basis of Design and Site Management Plan, Powder Mill Creek, Sediment Removal Interim Action, BCA Everett Plant*. June 30, 2006.
- URS. 2014. *Feasibility Study, BOMARC Building 45-70 Property, Revision 1, BCA Everett Plant, Everett, Washington*. March 31, 2014.
- URS and Landau. 2011. *Final Remedial Investigation Report (Volume 1A Report), BCA Everett Plant, Everett, Washington*. November 4, 2011. Available at: https://apps.ecology.wa.gov/gsp/CleanupSiteDocuments.aspx?csid=4534
- Groundwater Monitoring Reports, Boeing Everett Facility (numerous)

The following documents are currently being prepared:

- Ecology. 20xx. Enforcement Order.
- Ecology. 20xx. Agreed Order No. x; In the Matter of Remedial Action by: The Boeing Company, BOMARC Property.

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 for governmental approvals are known to be pending at this time.

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

- US Environmental Protection Agency Resource Conservation and Recovery Act (RCRA) Permit Renewal (Permit No. WAD 041585464)
- US Army Corps of Engineers Nationwide Permit 38 (may be needed for impacts to wetlands in Powder Mill Gulch)
- Ecology Drilling Permits
- Ecology Underground Injection Control Permits
- Ecology National Pollutant Discharge Elimination System (NPDES) Construction Stormwater General Permits (for each project that disturbs greater than 1 acre)
- Puget Sound Clean Air Agency Permits (for the soil vapor extraction [SVE] systems)
- Snohomish County Grading Permit
- City of Everett Public Works Grading and Excavation Permit

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

The proposed project includes cleanup actions on the Boeing Everett Facility and the BOMARC property (**Figure 1, Vicinity Map**). Each cleanup action area is identified in this checklist (including figures) by the Solid Waste Management Units (SWMUs)/Areas of Concern (AOCs), building numbers, and/or site names as used in the dCAP.

The proposed project includes near-term cleanup actions, future cleanup actions, and "maintain containment" actions. Near-term cleanup actions are actions that will be implemented as soon as practical after Ecology's approval of an engineering design report. The proposed near-term actions are anticipated to begin within the next 2 to 10 years. Future cleanup actions are actions that include future excavation or SVE. The proposed future cleanup actions are anticipated to begin when operations allow access, which may include shutdowns, upgrades, or change of the operations; however, there is no scheduled start date at this time. "Maintain containment" actions are those where the existing containment of contaminated soil or groundwater will be maintained with or without groundwater monitoring, and where no additional future cleanup actions are necessary. Some of the cleanup actions include installation of deep monitoring wells for monitoring of the Esperance Sand aquifer. These are described in detail in Section 4.4 of the dCAP.

The proposed cleanup actions are described below, separated by the overall categories of near term, future, and maintain. Note that two near-term action sites also include future excavation, and both near-term and future action sites include current maintain containment actions.

Near-Term Cleanup Actions

- **SWMU Nos. 086, 089, 094, Building 40-56, Former Underground Storage Tanks (USTs) – SVE and Groundwater Extraction (Figure 2)**

The final remedy for SWMU Nos. 086, 089, and 094 and Building 40-56 is In Situ Treatment (SVE and groundwater extraction). Under the In Situ Treatment remedy, the majority of soil and perched groundwater exceeding cleanup levels will be treated by SVE and groundwater extraction with treatment via the on-site industrial wastewater treatment facility and discharge of treated water to the sanitary sewer. The SVE system will consist of the installation of vapor extraction wells. The groundwater extraction will consist of installation of groundwater extraction and monitoring wells.

- **SWMU Nos. 055 and 168, Building 40-24, Utility Trenches and Sumps – Near-Term Excavation with Dewatering and Future Excavation (Figure 3)**

The final remedy for SWMU Nos. 055 and 168 is Near-Term Excavation with Dewatering and Future Excavation. The majority of soil and perched groundwater exceeding cleanup levels will be removed by excavation and disposed of at an off-site waste facility or treated by the on-site industrial wastewater facility. Near-Term Excavation (using trench boxes near the building) will consist of off-site disposal at a non-hazardous waste facility of approximately 300 cubic yards (cy) of soil containing chemical constituents. During excavation, removal of perched groundwater will be completed until only negligible perched groundwater enters the excavation. The excavation will be backfilled with relatively impermeable materials (controlled density fill

[CDF] or equivalent) to preclude perching of groundwater in the future. Dewatering activities will include installation of piping connection to well EGW037, located inside of Building 40-24, and low-flow recovery pump installation in well EGW037. Extraction of perched groundwater from well EGW037 will be completed by using portable equipment on a quarterly basis. The extracted perched groundwater will be discharged into the on-site industrial wastewater treatment facility. This remedy includes installation of new Well #1 into the Esperance Sand aquifer, as detailed in Section 4.4 of the dCAP.

Future Excavation is part of the remedy to clean up remaining contaminated soils that were not removed during Near-Term Excavation due to operations. This cleanup will be completed when changes in operations allow access.

- **SWMU No. 097, Building 40-11, Former Vapor Degreaser – Near-Term Excavation (Figure 4)**

The final remedy for SWMU No. 097 is Near-Term Excavation. Implementation of this remedy will include relocation of the shelving units above the excavation area, demolition and repair of the wall on the southern side of the excavation area, excavation and disposal of approximately 3 cy of soil, confirmation soil sampling, and site restoration.

- **SWMU No. 068, South Complex, South Fire Pit – Near-Term Excavation (Figure 5)**

The selected remedy for SWMU No. 068, South Fire Pit, is Near-Term Excavation. Under the selected remedy for SWMU No. 068, soil exceeding the cleanup levels will be excavated and disposed of at an off-site non-hazardous waste facility. Implementation of this remedy will include completion of a pedestrian and traffic control plan, temporary closure of the parking lot and road, excavation and disposal of approximately 470 cy of soil, confirmation soil sampling, and site restoration.

- **SWMU No. 165, Building 45-52, Former Fuel Farm USTs – Limited Excavation and Maintain Containment with Future Excavation (Figure 6)**

The final remedy for SWMU No. 165 is Limited Excavation, which will include excavation and disposal of soil at an off-site non-hazardous waste facility. Approximately 150 cy of soil/CDF beneath the utility ducts will be excavated to a depth of 9 feet below ground surface (bgs), where free product was noted. Implementation of this remedy will also include installation of a shoring system, confirmation soil sampling, and site restoration. The excavation work will be performed in conjunction with electrical substation upgrades, so that the substation does not have to be relocated during remediation. The electrical substation upgrades are anticipated to occur in the next 2 to 10 years. This remedy includes installation of new Well #11 into the Esperance Sand aquifer, as detailed in Section 4.4 of the dCAP.

Future Excavation is part of this remedy to clean up soil exceeding the cleanup levels in the future when an infrastructure project provides an opportunity for excavation to be completed.

- **North Complex, Esperance Sand, Powder Mill Gulch – Enhanced In Situ Bioremediation and Concurrent/Groundwater Extraction and Treatment (GET) System Operation/Dynamic Groundwater Recirculation/MNA and Institutional Controls (Figure 7)**

The selected remedy for trichloroethylene groundwater contamination in Powder Mill Gulch is a combination of bioremediation in the contaminant source area (beneath Boeing Everett Facility stormwater detention basin) and modifying and upgrading the GET system (extraction wells to pump contaminated water to a treatment system, then discharge treated water to Powder Mill Creek) to operate as a dynamic groundwater recirculation (DGR) system by adding groundwater injection wells (i.e., instead of discharging to the creek, treated water will be reinjected into groundwater to enhance flushing of the contaminated aquifer with clean water). DGR system components will be located both on Boeing property and other properties north of Seaway Boulevard, including City of Everett Lot 9 property, Powder Mill Business Center property, and potentially Seaway West property.

- **SWMU Nos. 123 and 124, Oil Water Separators EV-151 and EV-152 – Near-Term Excavation (Figure 8)**

The final remedy for SWMU Nos. 123 and 124 is Near-Term Excavation. This remedy will include excavation and disposal of soil at an off-site hazardous waste facility. Implementation of the remedy will include:

- Demolition and reconstruction of surface features at EV-151 and EV-152, including pavement, fencing, and landscaping grass;
- Excavation of soil to a depth of 11 feet bgs around EV-152 and to a depth of approximately 8 feet bgs around EV-151;
- Confirmation soil sampling from all areas of excavated soil;
- Off-site disposal of excavated soil and sediment at a RCRA Subtitle D landfill or an approved recycling facility; and
- Restoration of on-site infrastructure to match existing conditions (changes or upgrades to the existing stormwater system are assumed not to be required).

Future Cleanup Actions

- **Building 40-22, Utility Slants #2 and #3; Building 40-23, Static Test Pad; and No. 177, Building 40-25, Utility Vault – Maintain Containment with Future Excavation**

The final remedy for these SWMUs/AOCs is Maintain Containment with Future Excavation. Soil exceeding the cleanup levels at these locations will be contained below asphalt or concrete until excavation and disposal at an off-site hazardous waste facility can occur. This remedy includes installation of new Well #9 into the Esperance Sand aquifer, as detailed in Section 4.4 of the dCAP.

- **SWMU No. 054, Building 40-51, Former Wastewater AST (Aboveground Storage Tank) – Maintain Containment with Future Excavation**

The final remedy for SWMU No. 054 is Maintain Containment with Future Excavation. Soil exceeding the cleanup levels at this location will be excavated and disposed of at an appropriate

off-site waste facility in the future, when an infrastructure project provides an opportunity for excavation. This remedy includes installation of new Well #4 into the Esperance Sand aquifer, as detailed in Section 4.4 of the dCAP.

- **SWMU No. 171, Building 40-31, Former Bluestreak Vapor Degreaser – Maintain Containment with Future SVE**

The final remedy for SWMU No. 171 is Maintain Containment with Future SVE. Soil exceeding the cleanup levels at this location will be treated using SVE in the future, when changes in operation allow access, unless excavation is possible and preferable at that time. As part of this remedy, periodic sampling and analysis of the extracted vapors will be performed. This remedy includes installation of new Well #2 into the Esperance Sand aquifer, as detailed in Section 4.4 of the dCAP.

- **Building 40-11, UST EV-48-1 – Maintain Containment with Future Excavation**

The final remedy for Building 40-11, UST EV-48-1, is Maintain Containment with Future Excavation. Soil exceeding the cleanup levels at this location will be excavated and disposed of at an off-site non-hazardous waste facility in the future, when an infrastructure project provides an opportunity for excavation. In addition, total petroleum hydrocarbon contamination found in May 2018 during work on EV-49-1, which is near UST EV-48-1, will be addressed when both tanks are removed. This remedy includes installation of new Well #6 into the Esperance Sand aquifer, as detailed in Section 4.4 of the dCAP.

- **SWMU Nos. 067 and 071, Building 40-56, Former Recycling Unit and UST EV-153 – Maintain Containment with Future Excavation**

The final remedy for SWMU Nos. 067 and 071 is Maintain Containment with Future Excavation. Soil exceeding the cleanup levels at this location will be excavated and disposed of at an off-site non-hazardous waste facility in the future, when an infrastructure project provides an opportunity for excavation. This remedy includes installation of new Well #8 into the Esperance Sand aquifer, as detailed in Section 4.4 of the dCAP.

- **SWMU No. 093, Building 45-01, Former Solvent USTs – Maintain Containment with Future Excavation**

The final remedy for SWMU No. 093 is Maintain Containment with Future Excavation. Soil exceeding the cleanup levels at this location will be excavated and disposed of at an off-site hazardous waste facility in the future, when an infrastructure project provides an opportunity for excavation. This remedy includes installation of new Well #7 into the Esperance Sand aquifer, as detailed in Section 4.4 of the dCAP.

Maintain Containment Action

- **SWMU No. 090, Building 40-51, Former UST EV-11 – Maintain Containment with Groundwater Monitoring**

The final remedy for SWMU No. 090 is Maintain Containment with Groundwater Monitoring. Perched groundwater exceeding the cleanup levels at this location will be contained below

asphalt or concrete, and monitoring of the perched groundwater and sub-slab and indoor air vapor will occur.

- **SWMU No. 112, Building 40-11, Oil/Water Separator – Maintain Containment with Groundwater Monitoring**

The final remedy for SWMU No. 112 is Maintain Containment with Groundwater Monitoring. Perched groundwater exceeding the cleanup levels at this location will be contained below asphalt or concrete, and monitoring of the perched groundwater and sub-slab and indoor air vapor will occur.

- **SWMU No. 151, Building 40-51, Southern Scrubber Sumps – Maintain Containment with Groundwater Monitoring**

The final remedy for SWMU No. 151 is Maintain Containment with Groundwater Monitoring. Perched groundwater exceeding the cleanup levels at this location will be contained below asphalt or concrete, and monitoring of the perched groundwater will occur.

- **SWMU No. 166, Building 45-53, Former UST EV-110-1 – Maintain Containment with Groundwater Monitoring**

The final remedy for SWMU No. 166 is Maintain Containment with Groundwater Monitoring. Perched groundwater exceeding the cleanup levels at this location will be contained below asphalt or concrete, and monitoring of the perched groundwater will occur.

- **SWMU No. 098, Building 40-53, Former Mock-Up Degreaser – Maintain Containment**

The final remedy for SWMU No. 098 is Maintain Containment. Soil exceeding cleanup levels at this location will be contained below asphalt or concrete, and monitoring of the Esperance Sand (Well #3) groundwater and indoor air vapor will occur. This remedy includes installation of new Well #3 into the Esperance Sand aquifer, as detailed In Section 4.4 of the dCAP

- **SWMU No. 169, Building 40-02, Former Small Vapor Degreaser – Maintain Containment**

The final remedy for SWMU No. 169 is Maintain Containment. Soil exceeding the cleanup levels at this location will be contained below asphalt or concrete, and monitoring of the Esperance Sand groundwater and indoor air vapor will occur.

- **SWMU No. 170, Building 40-02, Former Larger Vapor Degreaser – Maintain Containment**

The final remedy for SWMU No. 170 is Maintain Containment. Soil exceeding the cleanup levels at this location will be contained below asphalt or concrete, and monitoring of the Esperance Sand groundwater and indoor air vapor will occur.

- **Building 40-02, Former Paint Crib – Maintain Containment**

The final remedy for Building 40-02, Former Paint Crib, is Maintain Containment. Soil exceeding the cleanup levels at this location will be contained below asphalt or concrete, and monitoring of the Esperance Sand groundwater and indoor air vapor will occur.

- **Building 40-32, Footing Excavation – Maintain Containment**

The final remedy for Building 40-32, Footing Excavation, is Maintain Containment. Soil exceeding the cleanup levels at this location will be contained below asphalt or concrete, and monitoring of the Esperance Sand (Well #5) groundwater and indoor air vapor will occur. This remedy includes installation of new Well #5 into the Esperance Sand aquifer, as detailed in Section 4.4 of the dCAP.

- **SWMU No. 065, Building 40-51, Former Paint Stripping Tankline – Maintain Containment**

The final remedy for SWMU No. 065 is Maintain Containment. Soil exceeding the cleanup levels at this location will be contained below asphalt and concrete.

- **SWMU No. 083, Former UST EV-15 – Maintain Containment**

The final remedy for SWMU No. 083 is Maintain Containment. Soil exceeding the cleanup levels at this location will be contained below concrete and flightline panels.

- **SWMU No. 011, BOMARC Building 45-70 – Air Monitoring**

The final remedy for SWMU No. 011 is Air Monitoring. This remedy will include indoor air vapor monitoring.

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.

    Address: Boeing Everett Facility, 3003 W. Casino Road, Everett, Washington 98203.

    Township, Range, Section: T 28 N, R 04 E, and portions of the following Sections:
    Section 3 (SE ¼), Section 10 (E 1/2), Section 11 (SW ¼), Section 14 (SW ¼) and Section 15 (NE ¼).

    - The location of each SWMU/AOC is shown on **Figure 1, Vicinity Map**.

B. Environmental Elements [HELP]

1. *Earth* [help]

a. General description of the site:

(circle one): Flat, rolling, hilly, steep slopes, mountainous, other __See below__

The near-term and future cleanup actions will occur in developed/paved areas of the Boeing Everett Facility and the BOMARC property, with the exception of the Powder Mill Gulch site.

- SWMUs 086, 089, and 094 are in a paved parking lot in the interior of the North Complex.
- SWMU 055 and 168 are in a paved parking lot at the south edge of the North Complex.
- SWMU 097 is in Building 40-11 on the North Complex.
- SWMU 068 is in a paved parking lot on the South Complex, near the intersection of 29th Avenue W. and 94th Street SW.
- SWMU 165 is at an electrical substation (former fuel farm) at the north edge of the South Complex.
- SWMUs 123 and 124 are in a paved road (94th Street SW) on the BOMARC property.

The Powder Mill Gulch site includes a stormwater detention and treatment facility that occupies the floor of Powder Mill Gulch, a natural, north-trending valley with a perennial stream that empties into Possession Sound approximately 1.3 miles north of the site. The facility consists of a series of engineered ponds, pipelines, and engineered wetland systems that contain and convey stormwater step wise to the north (**Figure 7**). The facility is flanked by the steep and wooded slopes of Powder Mill Gulch to the east and west, which are also included in the project site.

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

Except for the Powder Mill Gulch site, slopes are generally level.

Powder Mill Gulch: In the north-south direction, the surface slopes northward at approximately 4 percent in a step-wise fashion down through the series of engineered ponds by way of pipelines to a peat-lined filter basin, which discharges to an engineered wetland and Powder Mill Creek. In the east-west direction, the site is essentially level across the engineered ponds but is situated in a V-notch gulch north of Seaway Boulevard. The slopes of the surrounding Powder Mill Gulch are approximately 50 percent and are locally steepest on the west side.

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.

Except for the Powder Mill Gulch site, the soils are mapped as Urban Land.

Powder Mill Gulch: Soils in the basin consist primarily of Alderwood gravelly sandy loam, 0 to 8 percent slopes, on the ridge and summit positions, and Alderwood-Everett gravelly sandy loam, 25 to 75 percent slopes, on the shoulders and sideslopes. These soils developed in Vashon Till and Esperance Sand Advance Outwash. Most of the project site is unpaved and consists of gravel maintenance roads, lined stormwater detention basins, peat filters, engineered wetlands, and

wooded open space. The peat material is used as a filtration media for stormwater that flows out of the uppermost detention pond. The peat filter is surrounded and transected by gravel access roads. An access road that leads to the peat filter is paved with asphalt. No agricultural soils are anticipated to be disturbed during the proposed project.

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

Powder Mill Gulch: The slopes surrounding the detention and treatment facility are heavily forested. Slope failures requiring stabilization have been recorded historically in the site vicinity resulting from saturated soils overlying denser less permeable layers. City of Everett Landslide Hazards map identifies medium to high landslide hazard in the northern portion of the project area. City of Everett Erosion Hazards map identifies high to very high/severe erosion hazards in the northern portion of the project area. These areas are associated with the steep upper slopes representative of Powder Mill Gulch.

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 dCAP calls for near-term excavation of contaminated soils, their disposal in an approved off-site waste facility, and site restoration as follows:

- SWMUs 086, 089, and 094: dCAP calls for no excavation in these sites, only SVE and perched groundwater extraction with treatment via the on-site industrial wastewater treatment facility and discharge of treated water to the sanitary sewer. One new monitoring well extending into the Esperance Sand aquifer will be installed.
- SWMU 055 and 168: Excavation using trench boxes of approximately 300 cy of contaminated soil and dewatering of contaminated groundwater. Groundwater will be treated by the on-site industrial wastewater facility. Soil will be disposed of at an off-site non-hazardous waste facility. Area of excavation is approximately 20 feet by 20 feet (400 square feet[sf]). Depth of excavation is up to 20 feet. Area will be backfilled with relatively impermeable materials (CDF or equivalent). One new well will be installed in the perched groundwater zone and another extending into the Esperance Sand aquifer.
- SWMU 097: Excavation is limited to approximately 3 cy. Area of excavation is approximately 8 sf. Depth of excavation is 3 feet. Contaminated soil will be disposed of at an off-site hazardous waste facility. Backfill will be with general clean fill material.
- SWMU 068: Excavation of approximately 470 cy of contaminated soil, with disposal at an off-site non-hazardous waste facility. Area of excavation is approximately 6,500 sf. Backfill will be with general clean fill material.
- SWMU 165: Excavation of approximately 150 cy of contaminated soil/CDF and disposal at an off-site non-hazardous waste facility. Depth of excavation is up to 9 feet. Backfill will be with general clean fill material.
- SWMUs 123 and 124: Excavation of approximately 400 cy/1,500 sf of contaminated soil at SWMU 123 and 800 cy/2,000 sf at SWMU 124. Depth of excavation is up to 8 to 11 feet. Disposal will be at an off-site hazardous waste facility. Backfill will be with general clean fill material.
- Powder Mill Gulch: Water transfer pipes and electrical/communication conduit will be installed through trenching or horizontal drilling methods. Ground disturbance at this site will include:

- Approximately 1,000 linear feet (LF) of trenching (3 feet wide, 3.5 feet deep) along gravel roads or undeveloped land on Boeing and City of Everett Lot 9 properties, resulting in excavation of approximately 390 cy of road fill and native materials in a 3,000 sf area. Fill will include imported pipe bedding (sand) and native material.
- Approximately 1,200 LF of trenching (3 feet wide; 3.5 feet deep) through currently paved parking lots and roads on Powder Mill Business Center property, resulting in excavation of approximately 470 cy of material. Fill will include imported pipe bedding (sand), native material, gravel road base, and asphalt pavement.
- Approximately 600 LF of horizontal drilling from City of Everett Lot 9 property to Powder Business Center property (no fill – PVC casing inserted into borehole).

The dCAP calls for future excavation of contaminated soils, their disposal in an approved off-site waste facility, and site restoration as follows:

- Building 40-22, Utility Slants #2 and #3: Excavation of approximately 336 cy of contaminated soil with disposal at an off-site non-hazardous waste facility. Area of excavation is approximately 3,598 sf. Backfill will be with general clean fill material. One new monitoring well extending into the Esperance Sand aquifer will be installed.
- Building 40-23, Static Test Pad: Excavation of approximately 620 cy of contaminated soil with disposal at an off-site non-hazardous waste facility. Area of excavation is approximately 1,850 sf. Backfill will be with general clean fill material.
- SWMU No. 177: Excavation of approximately 8 cy of contaminated soil with disposal at an off-site non-hazardous waste facility. Area of excavation is approximately 25 sf. Backfill will be with general clean fill material.
- SWMU No. 054: Excavation of approximately 2,100 cy of contaminated soil with disposal at an off-site hazardous waste facility. Area of excavation is approximately 4,400 sf. Backfill will be with general clean fill material. One new monitoring well extending into the Esperance Sand aquifer will be installed.
- SWMU No. 171: dCAP calls for no excavation, only Future SVE. One new monitoring well extending into the Esperance Sand aquifer will be installed.
- Building 40-11, UST EV-48-1: Excavation of approximately 560 cy of contaminated soil with disposal at an off-site non-hazardous waste facility. Area of excavation is approximately 710 sf. Backfill will be with general clean fill material. One new monitoring well extending into the Esperance Sand aquifer will be installed.
- SWMUs 067 and 071: Excavation of approximately 970 cy of contaminated soil with disposal at an off-site non-hazardous waste facility. Area of excavation is approximately 1,600 sf. Backfill will be with general clean fill material. One new monitoring well extending into the Esperance Sand aquifer will be installed.
- SWMU 093: Excavation of approximately 40 cy of contaminated soil with disposal at an off-site hazardous waste facility. Area of excavation is approximately 110 sf. Backfill will be with general clean fill material. One new monitoring well extending into the Esperance Sand aquifer will be installed.

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

No erosion will occur, as the cleanup sites are in paved areas, except for the Powder Mill Gulch site. At Powder Mill Gulch, temporary erosion and sediment control (TESC) measures will be installed and

maintained by the contractor throughout the duration of construction to stabilize work areas and limit soil erosion. A restoration planting plan will be developed in compliance with City of Everett municipal code requirements and implemented after completion of construction as required by the City of Everett.

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

Currently, the cleanup sites, except for Powder Mill Gulch, are in developed areas that are 100 percent impermeable. This will not change with this proposal. The ground surface at the Powder Mill Gulch site is currently approximately 50 percent impervious roadways and lined sedimentation basins and 50 percent pervious vegetated surfaces on Boeing property. North of Seaway Boulevard, the site is approximately 10 percent impervious parking lots/roadways (Powder Mill Business Center property) and 90 percent vegetated surfaces. No significant changes in the ratio of pervious and impervious surfaces are proposed.

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

Appropriate TESC best management practices (BMPs) will be implemented in accordance with Ecology's Stormwater Management Manual for Western Washington to prevent, reduce, and control erosion during construction. TESC BMPs may include, but are not limited to, silt fence along the downstream perimeter of the facility, straw wattles staked into the hillside, sweeping and vacuuming paved surfaces adjacent to the work site, minimizing open excavations, dust control, covering stockpiled materials, visual inspections of on-site equipment, and storm drainage inlet protection.

2. Air [help]

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 activities will include demolition, decommissioning, and removal of above and below ground structures; removal of pavement and vegetation; excavation, grading, and backfill; and site restoration activities. These activities could generate on-site dust. However, generation of dust during construction activities is expected to be temporary, minor, and localized within short distances from the project sites. TESC measures will be utilized to control dust emissions, if needed. Project construction activities will also include equipment refueling and heavy equipment operation. These activities will generate minor amounts of localized carbon monoxide and particulate emissions.

The final remedies for SWMUs No. 086, 089, and 094 and SWMU No. 71 will include an SVE system, which will discharge treated air into the atmosphere.

For the Powder Mill Gulch area, the existing groundwater treatment system consists of an air stripper to remove volatile organic compounds (VOCs) from the groundwater, with a granular activated carbon vapor treatment system to capture contaminants prior to discharge to the atmosphere. VOC discharges to the atmosphere are *de minimis*. The project will result in additional groundwater treated through the air stripper system; however, after carbon treatment, discharge to the atmosphere will continue to be *de minimis*.

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 odor have been identified that will affect the proposed project.

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

Appropriate measures will be implemented to control and/or reduce dust emissions from project activities. Dust control BMPs may include, but are not limited to, minimizing cleared areas, reducing traffic speed, covering stockpiles and areas that will not be worked for a week or more, limiting equipment idling, and sprinkling work areas with water while incorporating appropriate TESCs. Pertinent human health regulations will be followed to reduce and control emissions from asphalt paving, fueling operations, and heavy equipment usage.

As indicated in 2.a. above, VOC emissions from the Powder Mill Gulch treatment system will be captured/treated with a granular activated carbon vapor treatment system.

3. Water [help]

a. Surface Water: [help]

1) Is there any surface water body on or in the immediate vicinity of the site (including year-round and seasonal streams, saltwater, lakes, ponds, wetlands)? If yes, describe type and provide names. If appropriate, state what stream or river it flows into.

Surface waters on the North Complex include Powder Mill Creek (mainstem and two tributaries) and associated created and natural wetlands. Powder Mill Creek is a perennial stream that begins on the Boeing Everett Facility north of Seaway Boulevard, flows north through the Powder Mill Gulch SWMU and eventually discharges into Possession Sound. The portion of the Powder Mill Gulch SWMU upstream of Seaway Boulevard contains a stormwater storage and treatment system consisting of a sedimentation basin, detention basin, a pair of peat/sand filters, and 2.1 acres of wetlands (an upper and lower pair in series) created as mitigation for the loss of wetlands due to previous Boeing plant expansion (**Figure 7**). Outflow from the peat/sand filters passes through the created mitigation wetlands before discharging to Powder Mill Creek (AECOM 2016).

Landau and Associates (Landau) conducted a wetland delineation in the upper portion of the Powder Mill Gulch SWMU (upstream/south of Seaway Boulevard) in 2009 as part of the *Powder Mill Gulch Downgradient Plume Interim Action, Phase 1*. In addition to Powder Mill Creek, Landau delineated one wetland in the upper portion of the Powder Mill Gulch SWMU as part of that study, Wetland A.

Wetland A is an approximately 0.64-acre, seasonally flooded/saturated, palustrine forested, slope wetland located on the east bank of Powder Mill Creek just upstream (south) of Seaway Boulevard (**Figure 7**). Landau (2009) indicated that wetland hydrology in Wetland A is from subsurface flows derived from slopes adjacent to the wetland and rated Wetland A as a Category III wetland with a 50-foot regulated buffer.

Landau conducted a wetland delineation in the lower portion of the Powder Mill Gulch SWMU (downstream/north of Seaway Boulevard) in 2012 as part of the *Powder Mill Gulch Downgradient Plume Interim Action, Phase 2*. In addition to the Powder Mill Creek mainstem, Landau delineated five wetlands downstream (north) of Seaway Boulevard as part of that study (Wetlands C, D, E, and F) and two tributary drainages to Powder Mill Creek (Waterways B and G). Wetlands and waterways are shown on **Figure 7**.

Waterway B is an approximately 295 linear foot segment of an intermittent stream that originates from a culvert approximately 100 feet west of Powder Mill Creek adjacent to Seaway Boulevard. Waterway B appears to infiltrate at the bottom of the slope and outlets to Powder Mill Creek via a culvert. Waterway B is classified as a Type Ns stream (i.e., nonfish habitat stream).

Wetland C is an approximately 5.86-acre, palustrine forested, broad-leaved deciduous, seasonally flooded/saturated (PFO1E), slope wetland. Landau (2012) rated Wetland C as a Category III wetland.

Wetland D is an approximately 0.04-acre, palustrine forested, broad-leaved deciduous, seasonally flooded/saturated (PFO1E), depressional wetland. Landau (2012) rated Wetland D as a Category III wetland.

Wetland E is an approximately 0.14-acre, palustrine forested, broad-leaved deciduous, seasonally flooded/saturated (PFO1E), depressional wetland. Landau (2012) rated Wetland E as a Category III wetland.

Wetland F is an approximately 0.48-acre, palustrine forested, broad-leaved deciduous, seasonally flooded/saturated (PFO1E), depressional wetland. Landau (2012) rated Wetland F as a Category III wetland.

Waterway G is an approximately 335 LF segment of an intermittent stream located in the northwest portion of Lot 9. Waterway G originates upslope, outside of the study area, and flows east through Wetland F before flowing north along the access road that bisects Lot 9. The waterway is conveyed beneath the access road to the east and flows to Wetland C. Waterway G is classified as a Type Ns stream (i.e., nonfish habitat stream).

Surface waters on the South Complex are limited to Boeing Lake and the adjacent Boeing Lake Mitigation Wetlands. Boeing Lake is a regulated mitigation wetland that covers approximately 14 acres (**Figure 1**) (URS 2016). Boeing Lake will not be impacted by the project.

There are no surface waters on the BOMARC property. There are two wetlands adjacent to the BOMARC property that receive stormwater from the property, the BOMARC Wetlands adjacent to the northeast corner of the property and the BOMARC Mitigation Wetlands adjacent to the southwest corner of the property (URS 2016) (**Figure 17**).

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

No work will occur directly in or over Powder Mill Creek or its tributaries. Some extraction wells and water conveyance lines will occur within 200 feet of the stream, Wetland A, and Wetland D. See detailed plans on **Figure 7**.

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 Powder Mill Creek or its tributaries, Wetlands A through F, Boeing Lake, or the BOMARC wetlands.

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

The work 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.

No. None of the near-term actions in this proposal are 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.

Waste material will not be discharged to surface waters. Any waste materials generated will be collected and disposed of off-site in accordance with applicable local, state, and federal regulations.

b. Ground Water: [help]

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.

Groundwater will not be withdrawn from a well for drinking water. The purpose of the Powder Mill Gulch Enhanced In Situ Bioremediation, GET, and DGR systems is to remedy the contamination of groundwater that flows to Powder Mill Creek. The existing system will be modified and upgraded to include the proposed addition of 2 new extraction wells (estimated extraction rates of approximately 20 gallons per minute [gpm] each), in addition to the 12 existing extraction wells (with total withdrawal rate of approximately 140 gpm) and 9 injection wells (total estimated injection rate of approximately 180 gpm), along with new water conveyance lines connecting to existing lines. New well and conveyance line locations are also shown on **Figure 7**.

Extraction of contaminated perched groundwater (approximately 3,000 gallons/per year over 20 years) will occur at SWMUs 086, 089, and 094 as part of the cleanup effort. Existing monitoring wells and piping will be used for extraction. A new monitoring well will also be installed, in addition to several wells for SVE.

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.

Waste materials will not be discharged into the ground. Waste materials will be collected and disposed of off-site in accordance with applicable local, state, and federal regulations.

c. Water runoff (including stormwater):

1) Describe the source of runoff (including storm water) and method of collection and disposal, if any (include quantities, if known). Where will this water flow? Will this water flow into other waters? If so, describe.

The source of runoff from the project is limited to stormwater. Temporary stormwater runoff from the construction area in Powder Mill Gulch will be managed using existing infrastructure to the maximum extent feasible; i.e., runoff will be routed to the sedimentation pond and diverted to the detention pond for storage, settling, and normal discharge to Powder Mill Creek by way of the detention pond's stilling basin.

Stormwater runoff in other cleanup action areas will be minimal and temporary. Any runoff will be contained and treated locally using standard BMPs such as silt fencing, straw wattles, etc. Clean stormwater will be conveyed into the local stormwater system. Stormwater from the developed portion of the Boeing Everett Facility is captured by a stormwater collection system and routed through detention and sedimentation basins, retention ponds, peat/sand filters, other media filters, catch basins, and oil/water separators that collect and manage stormwater generated by the plant before it is discharged to natural drainages. Sites on the North Complex discharge to Powder Mill Gulch, those on the South Complex discharge to Japanese Gulch, and those on the BOMARC property discharge to the BOMARC wetlands.

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

Due to the project's proximity to Powder Mill Creek, waste materials could enter surface waters through poorly executed construction. To prevent this occurrence, the selected contractor will be required to execute a TESC plan and use appropriate BMPS to ensure measures are in place to prevent discharge of materials to the waterway, including collection and off-site disposal of waste materials in accordance with applicable local, state, and federal regulations.

During Esperance Sand aquifer well installation, well locations within shallow soil/perched water contamination will use BMPs, which may include telescoping drilling methods, to ensure contamination will not be drawn downward into the aquifer.

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

No, the proposed improvements at Powder Mill Gulch will not alter or affect existing 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:

BMPs will be used to divert and filter potential runoff at the construction support areas at the Powder Mill Gulch site. These BMPs will include silt fencing, straw mulch on exposed erodible soils, a rock access road, and a stabilized construction entrance to the work area.

4. Plants [help]

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

_X__deciduous tree: **alder**, **maple**, aspen, other
_X__evergreen tree: **fir**, **cedar**, pine, other
_X__shrubs
_X__grass
____pasture
____crop or grain
____ Orchards, vineyards or other permanent crops.
_X__wet soil plants: cattail, buttercup, bullrush, skunk cabbage, other
____water plants: water lily, eelgrass, milfoil, other
____other types of vegetation

With the exception of the Powder Mill Gulch site, the project sites are paved and not vegetated.

Powder Mill Gulch: This area includes forested upland slopes, created treatment wetlands and ponds, and riparian vegetation along Powder Mill Creek. The upland forest is predominantly red alder and bigleaf maple, with Douglas fir, western red cedar, and western hemlock also present. Emergent wetland plants predominate on the peat filter, where species such as reed canarygrass and rushes are common, and also in the mixed created wetlands where ponded areas are vegetated with stands of bulrushes and sedges. Deciduous trees, primarily willows and alders, fringe the wetland and grow in stands on constructed islands in the lower mixed wetlands. The plant community downstream of the wetlands includes extensive riparian vegetation, and streamside wetlands are suspected to occur.

Aquatic and riparian habitat data was collected during a December 6, 2005, survey by URS biologists (URS 2006). Red alder was the dominant riparian tree, with Sitka willow, Douglas-fir, western hemlock, and bigleaf maple also present in small numbers. Dominant riparian shrub species were salmonberry, trailing blackberry, and Himalayan blackberry, with red-osier dogwood, ocean spray, multiflora rose, hardhack, blackcap raspberry, western redcedar, and red elderberry also relatively common. Herbaceous plant species present in the understory included sword fern, foam flower, bittercress, giant horsetail, deer fern, bracken fern, bedstraw, and youth-on-age. Canopy cover is primarily provided by mature red alders on the east bank and red alders and Douglas-fir saplings on the west bank.

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

No vegetation will be removed from the project sites, which are paved, except for the Powder Mill Gulch site.

Powder Mill Gulch: Proposed new extraction and injection wells and water conveyance lines will be installed in predominantly upland deciduous forest vegetation with red alder and bigleaf maple. Up to 10 trees and other native plants will be removed to accommodate construction of injection wells and conveyance piping (<1 acre); however, disturbed areas will be restored and revegetated with native trees, shrubs, and herbs as required by the City of Everett. Construction BMPs will be used, including minimizing disturbed areas, providing erosion and sediment control, and providing site restoration.

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

No threatened or endangered plant species are known to exist on or near the sites.

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

Powder Mill Gulch: Disturbed areas will be revegetated as part of habitat restoration activities as required by the City of Everett. Construction BMPs will be used, including minimizing disturbed areas, weed control, and site restoration.

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

Reed canarygrass and Himalayan blackberry are the most common invasive plants.

5. Animals [help]

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.

Examples include:

birds: hawk, heron, eagle, songbirds, other:
mammals: deer, bear, elk, beaver, other:
fish: bass, salmon, trout, herring, shellfish, other _____

Birds: Hawk, heron, eagle, songbirds, waterfowl, cormorants, gulls, and terns are present on or near the Boeing property. Waterfowl commonly use Boeing Lake, which is near SWMU 068.

Mammals: Deer, voles, mice, mountain beaver, and raccoons are present on or near the Boeing property.

Fish: The 2017 Powder Mill Creek Basin Plan (contained in Volume III of the City of Everett Comprehensive Surface Water Management Plan) summarizes information on fish access and presence in Powder Mill Creek from multiple data sources, including the City of Everett, Snohomish County, Washington Department of Fish and Wildlife, and Washington Department of Natural Resources. The mainstem of the creek begins at the north end of the Boeing Everett Facility and drains north approximately 1.7 miles to Port Gardner Bay, with culvert crossings at Seaway Boulevard, West Mukilteo Boulevard, and the BNSF railway. The creek basin can generally be divided into three areas: the industrial area consisting of the Boeing Everett Facility in the upper basin, south of Seaway Boulevard (upper reach); the natural channel downstream of Boeing (middle reach); and the residential area south of West Mukilteo Boulevard (lower reach).

The Powder Mill Gulch SWMU encompasses the upper reach and upper quarter (roughly) of the middle reach. The 1,300-foot-long culvert under the BNSF railway, 162-foot-long culvert under West Mukilteo Boulevard, and 220-foot-long culvert under Seaway Boulevard are considered fish barriers. Naturally occurring steep gradients in the middle reach may also impose temporary fish passage barriers, depending on fish species and life stage. WDFW SalmonScape indicates no salmonid presence in Powder Mill Gulch. However, surveys conducted in 2013 by the Tulalip tribe (Beamer et al. 2013, as cited in the Powder Mill Creek Basin Plan) indicated that the creek provides habitat for juvenile coho and chum salmon in the lower reaches. Cutthroat trout were also found in the creek during the 2013 electrofishing surveys. No fish have been documented upstream of West Mukilteo Boulevard (URS 2006).

Amphibians and Reptiles: Previous site investigations (URS 2006) documented the presence of several native amphibian species (Pacific chorus frog, rough-skinned newt, northwestern salamander, long-toed salamander, northern red-legged frog) and reptile species (garter snakes) in the wetland area of Powder Mill Creek.

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

No threatened or endangered species are known to be on or near the sites.

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

Yes, the cleanup action areas are within the Pacific Migratory Flyway. Birds that inhabit the area vary seasonally due to migration.

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

Stormwater runoff during construction will be managed using appropriate TESC BMPs. These may include (but are not limited to) silt fence, straw wattles, dust control, and storm drainage inlet protection. The selected remedies for the various project areas are designed to improve water quality and/or remove contaminants from the environment, which will improve wildlife habitat.

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

Bullfrogs, an invasive species, are likely present in Boeing Lake. No other invasive animal species are known to be on or near the sites.

6. Energy and Natural Resources [help]

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 project’s energy needs will be met by expansion of the site’s electrical service. Electricity will be used to run the SVE systems, extraction well pumps, and the DGR system that is part of the remedy for the Powder Mill Gulch SWMU.

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

No structures will be constructed that could affect the potential use of solar power by 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:

Energy conservation features include variable frequency drives on extraction well pumps and blower motors for SVE systems to reduce energy consumption and gravity drainage for much of the system discharge conveyance piping.

7. Environmental Health [help]

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.

Contamination at the Boeing Everett Facility from present and past uses is summarized in the dCAP. A significant amount of soil and groundwater cleanup has been conducted at the Boeing Everett Facility during numerous independent remedial actions and Ecology-directed interim cleanup actions (IA) implemented under an Agreed Order. Cleanup levels were not attained by most of these interim actions; therefore, further remedial actions are required under the current dCAP. The IAs have included contaminated soil excavation, USTs and other facility infrastructure removal, and groundwater extraction and treatment.

Current site conditions and contaminants of concern (COCs) at SWMUs/AOCs addressed in this SEPA checklist include the following:

- VOCs, both chlorinated and non-chlorinated
- Semi-volatile organic compounds, including carcinogenic and non-carcinogenic polycyclic aromatic hydrocarbons
- Metals (chromium, lead, arsenic, cadmium)
- Petroleum hydrocarbons (gasoline, diesel, jet fuel, heavy oil)
- Hydraulic Jet Fluid, Skydrol and HyJetIV (tributyl phosphate, dibutyl phenyl phosphate, butyl diphenyl phosphate, triphenyl phosphate, butylated hydroxytoluene)

Table 2-1 of the dCAP presents the primary COCs for each SWMU/AOC in detail.

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.

Per the Draft Cleanup Action Plan (Ecology 2020), the Boeing Everett Facility is designed, constructed, maintained, and operated to minimize the possibility of a fire, explosion, or any unplanned, sudden, or non-sudden release of dangerous waste or dangerous waste constituents to air, soil, surface water, or groundwater that could threaten human health or the environment.

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.

Fuels (e.g., gasoline and diesel) will be used during the project to power project equipment. Other chemicals that may be used include those associated with concrete and asphalt work. It is not anticipated that fuels or chemicals will be stored on-site during the project.

4) Describe special emergency services that might be required.

No special emergency services will be required. Potential hazards will be addressed in a site-specific health and safety plan, which will include emergency actions plans.

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

Potential environmental health hazards will be addressed in a site-specific health and safety plan. Appropriate human health guidelines and BMPs including (but not limited to) covering, containing, and protecting from vandalism all chemicals, liquid products, petroleum products, and other materials that have the potential to pose a threat to human health or the environment will be implemented to reduce or control environmental health hazards. With implementation of the site-specific health and safety plan, workers should not be exposed to toxic chemicals as a result of this proposal.

b. Noise

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

Existing ambient sources of outdoor noise include site operations, occasional service trucks (traffic and idling), and occasional heavy equipment usage, in addition to traffic noise on public roads, and Paine Airfield aircraft operations, including takeoffs and landings. However, none of these noise sources will affect the proposed 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 associated with the project may include temporary operation of heavy equipment (compactors, excavators, rollers, dump trucks, etc.), demolition, construction, and truck traffic. Project operation is anticipated to occur during normal working hours, Monday through Friday, 7 a.m. to 5 p.m. Outdoor loading and truck access will be consistent with historic use. After construction has finished, the project will not provide additional sources of noise beyond the existing ambient sources, except the SVE systems and Powder Mill Gulch groundwater treatment system, which are or will be housed inside constructed enclosures to minimize noise.

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

No measures are proposed, as construction, monitoring, and other project activities are not anticipated to noticeably increase ambient noise levels.

8. Land and Shoreline Use [help]

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 cleanup action areas north of Highway 526 are located on the Boeing Everett Facility North Complex, except the Powder Mill Gulch site, which extends north of the Boeing Everett Facility into forested open space portions of the City of Everett Lot 9 property and commercial properties (Powder Mill Business Center and Seaway Center). Adjacent land uses include industrial, commercial, residential, and forested open space uses. The proposed remedies will have no effect on current land uses on nearby or adjacent properties.

The cleanup action areas south of Highway 526 on the Boeing Everett Facility South Complex are bordered by Paine Field, industrial, and commercial land uses. The proposed remedies will have no effect on current land uses on nearby or adjacent properties.

The cleanup action areas located on the BOMARC property east of Airport Road are bordered by Paine Field, Boeing Everett Facility, industrial, and commercial land uses. The proposed remedies will have no effect on current land uses on nearby or adjacent properties.

Overall, the proposed remedial actions will result in improvements to ground and surface waters on lands adjacent to the cleanup action areas, including Powder Mill Gulch, but will have no effect on current land uses on nearby or adjacent 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?

The project sites have not been used as working farmlands or working forest lands, nor are such lands located in the vicinity.

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:

Not applicable. There are no working farm or forest land business operations conducted on or in the vicinity of the site.

c. Describe any structures on the site.

Structures on the site include existing buildings, groundwater extraction and monitoring wells, and piezometers, in addition to sanitary sewer manholes, electrical utility vaults, an electrical substation, creek and drainage culverts, and fencing.

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

No aboveground structures will be demolished, except that some fencing will be replaced. Underground piping, vaults, and/or manholes may be demolished and removed or abandoned in place as part of the project.

At SWMU 165, soil excavation will be conducted in conjunction with electrical substation upgrades, so that the substation does not have to be relocated during the remediation work.

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

SWMU Powder Mill Gulch is zoned as M-M (business park) and M-1 (office and industrial park) by the City of Everett. However, the City of Everett Lot 9 property has a pre-existing deed restriction on the property designating its use only for "open space purposes."

The Boeing Everett Facility North Complex and South Complex are zoned as M-2 (heavy manufacturing) by the City of Everett.

The BOMARC property is zoned as LI (light industrial) by Snohomish County and as within an Airport Influence Area for Paine Field Airport.

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

Industrial – City of Everett Comprehensive Plan Designation for SWMU Powder Mill Gulch and the Boeing Everett Facility North Complex and South Complex

Manufacturing Industrial Overlay (Paine Field Area) – Snohomish County Comprehensive Plan Designation for the BOMARC property

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

Not applicable. The project area is not located within a Shoreline Master Program jurisdiction area (i.e., within 200 feet of a designated Shoreline of the State).

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

The Powder Mill Gulch SWMU contains streams, wetlands, fish and wildlife habitat conservation areas (riparian areas and urban natural open space), and erosion/landslide hazards (steep slopes with low, medium, high, and very high erosion hazard).

The other SWMUs do not contain or directly abut any critical areas.

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

Not applicable.

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

No people will be displaced by the completed project.

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

Not applicable. The project will not displace any people.

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

Boeing is proposing to perform remedial actions and install remedial systems to extract and treat contaminated soils and groundwater. The proposed project will not affect existing land use and improves the site, so it is compatible with future land uses.

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

Not applicable. The proposed project will not result in impacts to agricultural or forest lands.

9. Housing [help]

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

No housing units will be provided as part of the proposed project.

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

No housing units will be eliminated as part of the proposed project.

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

Not applicable. The project will have no impact on housing.

10. Aesthetics [help]

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

Most site improvements associated with the proposed projects (i.e., vaults, monitoring wells) will be installed flush to the existing ground surface. Additional site improvements will be made to the interior and exterior of existing buildings, including improvements to existing sources of perched water (i.e., leaking roof, storm drain piping) and will not increase the height of existing structures. An existing fence will be demolished and reconstructed at SWMU/AOC Nos. 123 and 124.

It is anticipated that the SVE systems will be housed in a small Conex or Tuff shed with a roof height of less than 10-12 feet. No other new structures are proposed.

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

No views will be altered or obstructed as part of the proposed project.

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

Not applicable. The proposed project will have no aesthetic impacts.

11. Light and Glare [help]

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

The proposed project will not produce any new sources of light or glare at the site.

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

The finished project will not produce any new sources of light or glare at the site.

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

Paine Field, commercial developments, and roadways located adjacent to the project site provide off-site light sources, but they will have no effect on the proposed project.

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

Not applicable. The proposed project will have no light and glare impacts.

12. Recreation [help]

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

There are no designated or informal recreational opportunities in the immediate vicinity of the cleanup action areas on the Boeing Everett Facility North Complex or South Complex or in the immediate vicinity of the cleanup action areas on the BOMARC property.

A north-south access road bisecting the City of Everett Lot 9 property at the Powder Mill Gulch site is used informally by the public for walking and jogging.

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:

Not applicable. The proposed project will have no impact on designated or informal recreational opportunities.

13. Historic and cultural preservation [help]

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.

According to the Washington Information System for Architectural and Archaeological Records Data (WISAARD), there are no Historic Register Properties located on or immediately adjacent to the project sites.

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.

No landmarks, features, or other evidence of Indian or historic use or occupation are known to exist on or near the SWMUs contained entirely within the Boeing Everett Facility.

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 WISAARD online map was accessed to identify potential cultural and historic resources on or near the project SWMUs.

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.

No measures are proposed. The proposed remediation actions will have no impact on any known cultural or historic resources.

14. Transportation [help]

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 primary public highways and streets serving the project site are Highway 26 (Boeing Freeway), Seaway Boulevard, and Airport Road. The Boeing Everett Facility North Complex can be accessed via Boeing Perimeter Road off Highway 26 or via Boeing Access Road off Seaway Boulevard. The Powder Mill Gulch site is accessed via a private gated access road off Boeing Perimeter Road. The South Complex is accessed via 29th Avenue West off Airport Road. The BOMARC property can be accessed via 29th Avenue West off Airport Road or via 100th Street Southwest and 24th Place West off Airport Road.

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 cleanup action areas and affected geographic areas in the interior of the Boeing Everett Facility north of Highway 26 are not directly served by public transit. However, the Boeing Everett Facility is served by public transit along Seaway Boulevard. The Seaway Transit Center is just east of the Boeing Everett Facility at Seaway Boulevard and 75th Street. The project sites and affected geographic areas south of Highway 26 are served by public transit along Airport Road.

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

None.

e. 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.

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

The cleanup action areas will not use or occur in the immediate vicinity of water, rail, or air transportation, except SWMUs 123 and 124 are located roughly 1,500 feet east of Paine Field.

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?

Operation of the SVE systems will require approximately one to four vehicle trips per month to the Powder Mill Gulch. Each of the groundwater monitoring wells on the project site will be visited 1-2 times each quarter, semi-annually, and annually, depending on the year.

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:

The proposed work at SWMU 068 on Boeing property will require an on-site pedestrian and traffic control plan and temporary closure of the parking lot. No impacts to public transportation will result from the proposal.

15. Public Services [help]

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. The proposed project will not result in an increased need for public services.

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

Not applicable. The proposed project will have no direct impacts on public services.

16. Utilities [help]

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.

Existing on-site electrical service at the site will be extended, modified, and/or upgraded as necessary to support the pumps and other infrastructure needed for groundwater extraction, monitoring wells, and converting the existing GET system to a DGR system as part of the remedy for the Powder Mill Gulch cleanup action.

C. Signature [HELP]

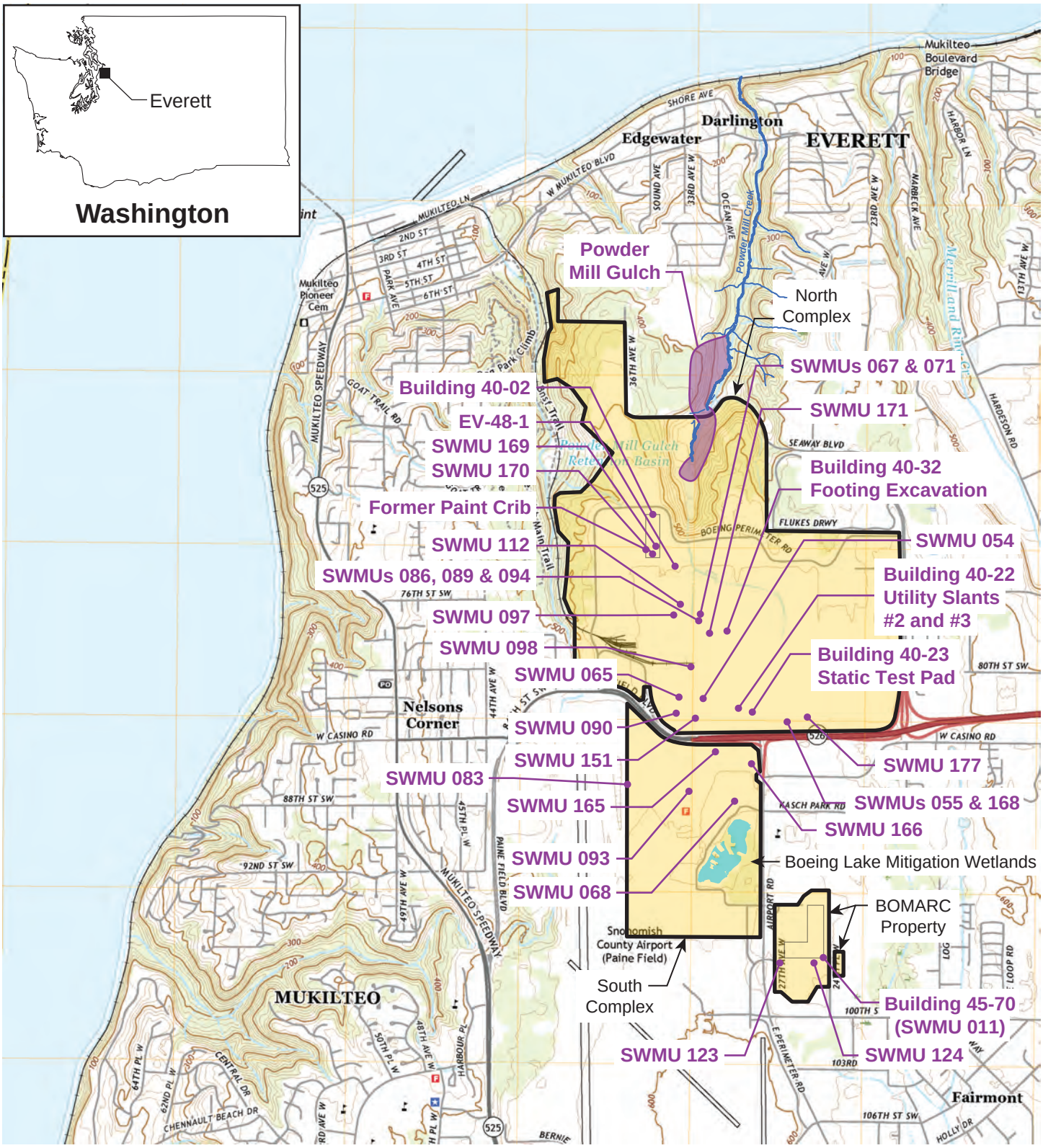
The above answers are true and complete to the best of my knowledge. I understand that the lead agency is relying on them to make its decision.

Signature: Linda M. Howard

Name of signee Linda Howard

Position and Agency/Organization Environmental Planner, AECOM

Date Submitted: _____



Source: USGS 7.5-minute topographic quadrangle, Mukilteo, Washington, 2011

Legend

Everett Plant boundary

0 0.5 1.0

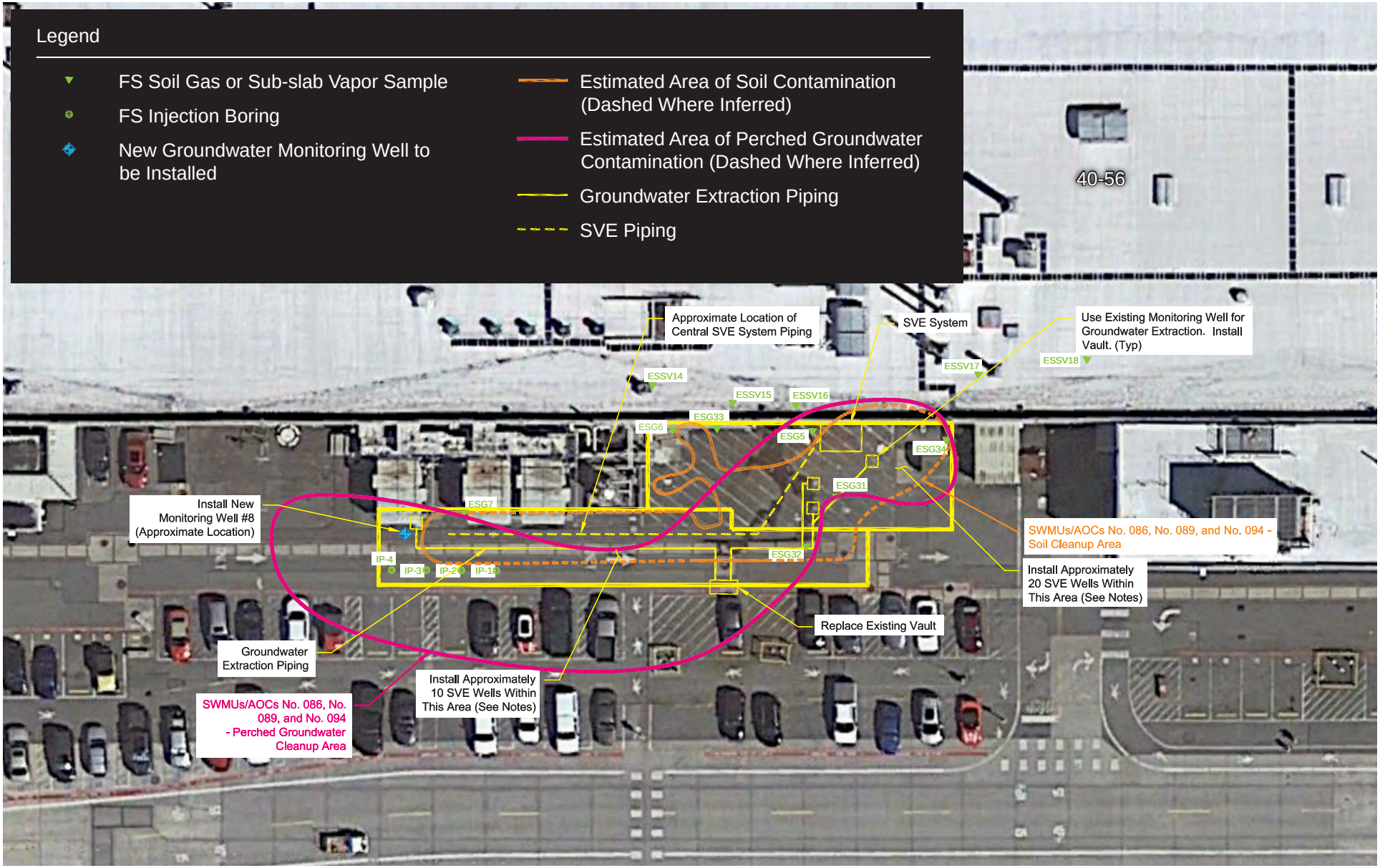
Scale in Miles

Figure 1

Vicinity Map

AECOM

Boeing Everett
SEPA Checklist



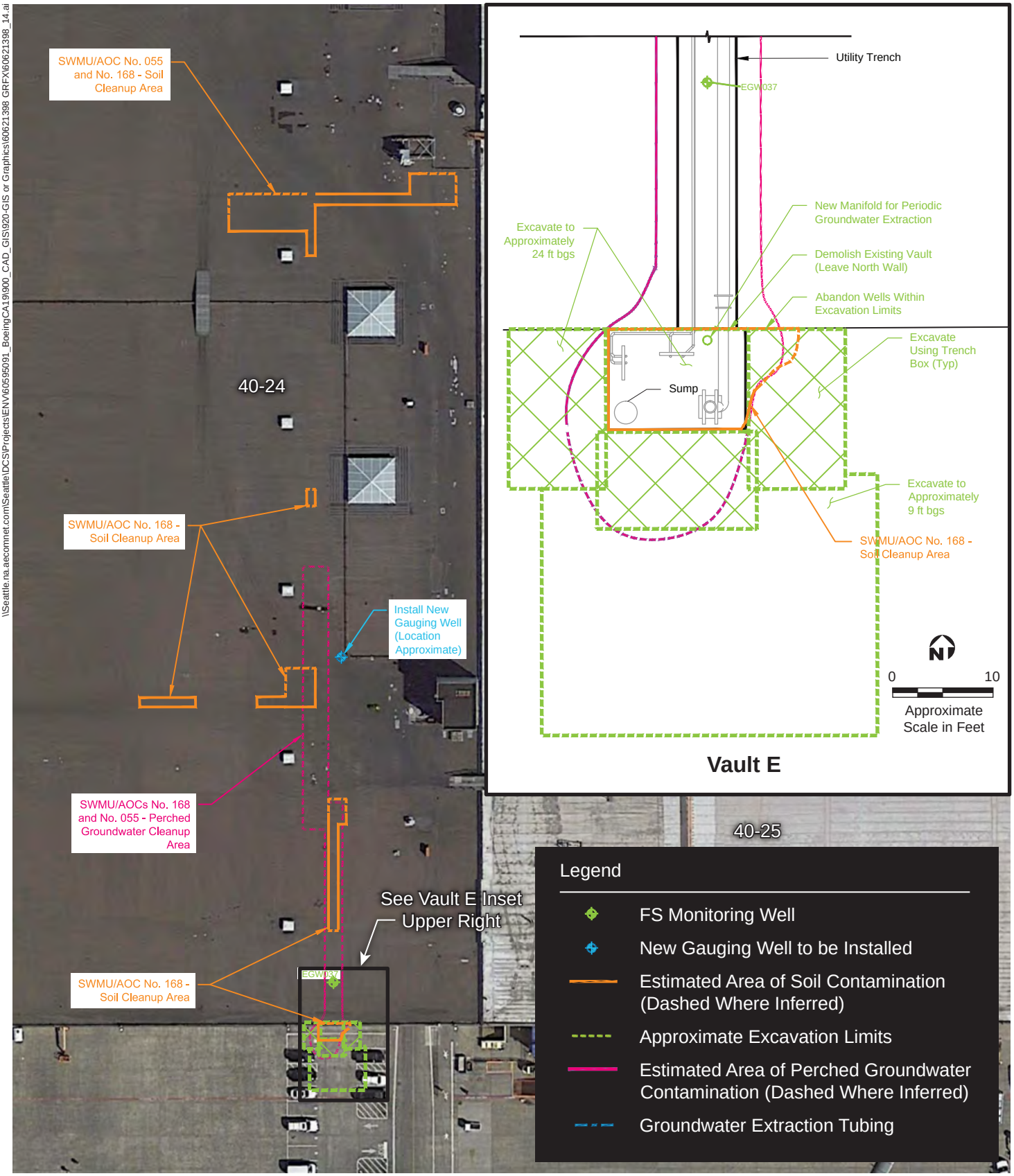
Source: Google Earth, image dated 5/9/2019

0 40 80

Approximate Scale in Feet

Figure 2

SWMUs 086, 089, and 094



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Source: Google Earth, image dated 5/9/2019

0 80 16

Approximate Scale in Feet

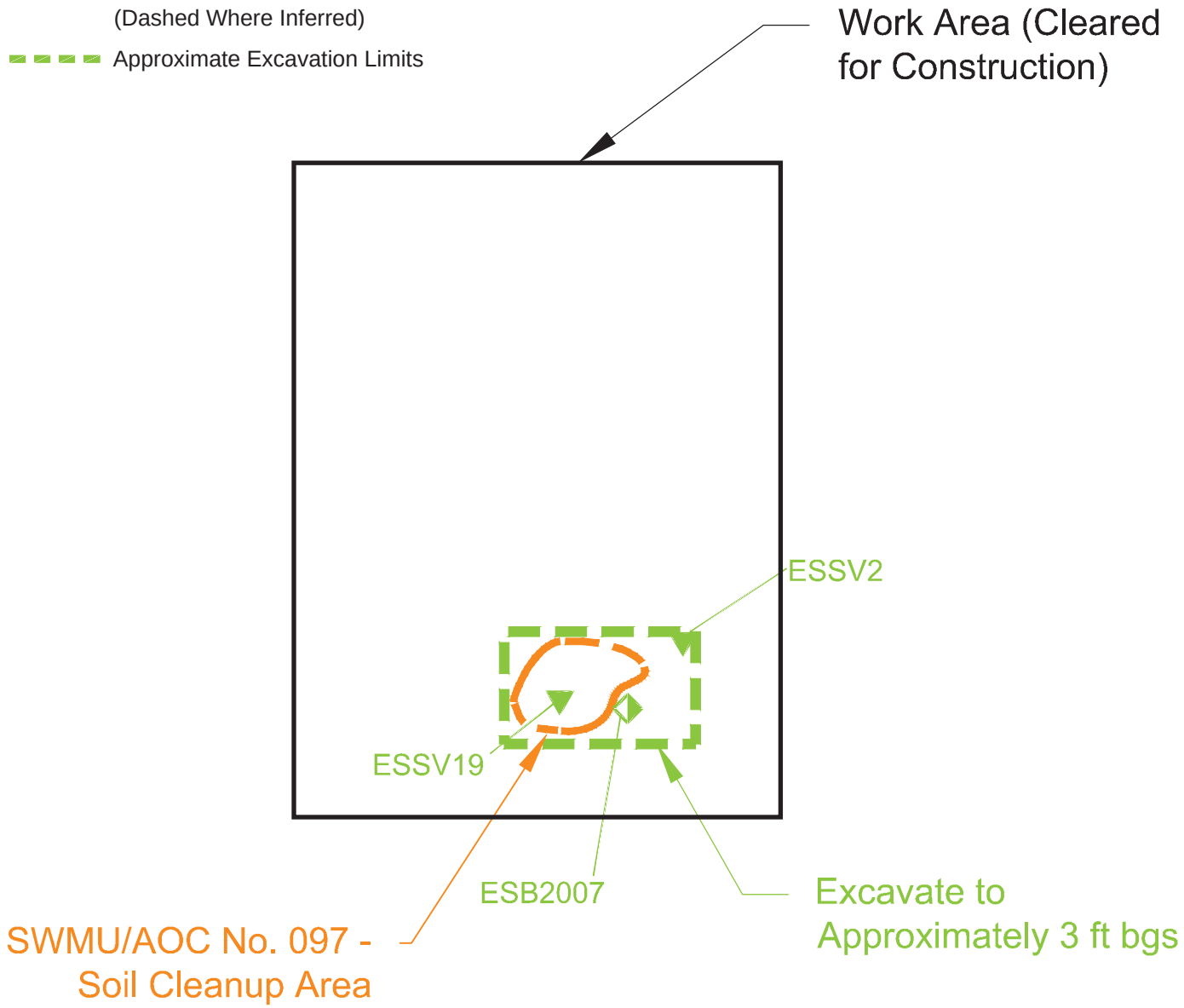
Figure 3

SWMU 055 & 168

Legend

- FS Soil Boring
- FS Soil Gas or Sub-slab Vapor Sample
- Estimated Area of Soil Contamination (Dashed Where Inferred)
- Approximate Excavation Limits

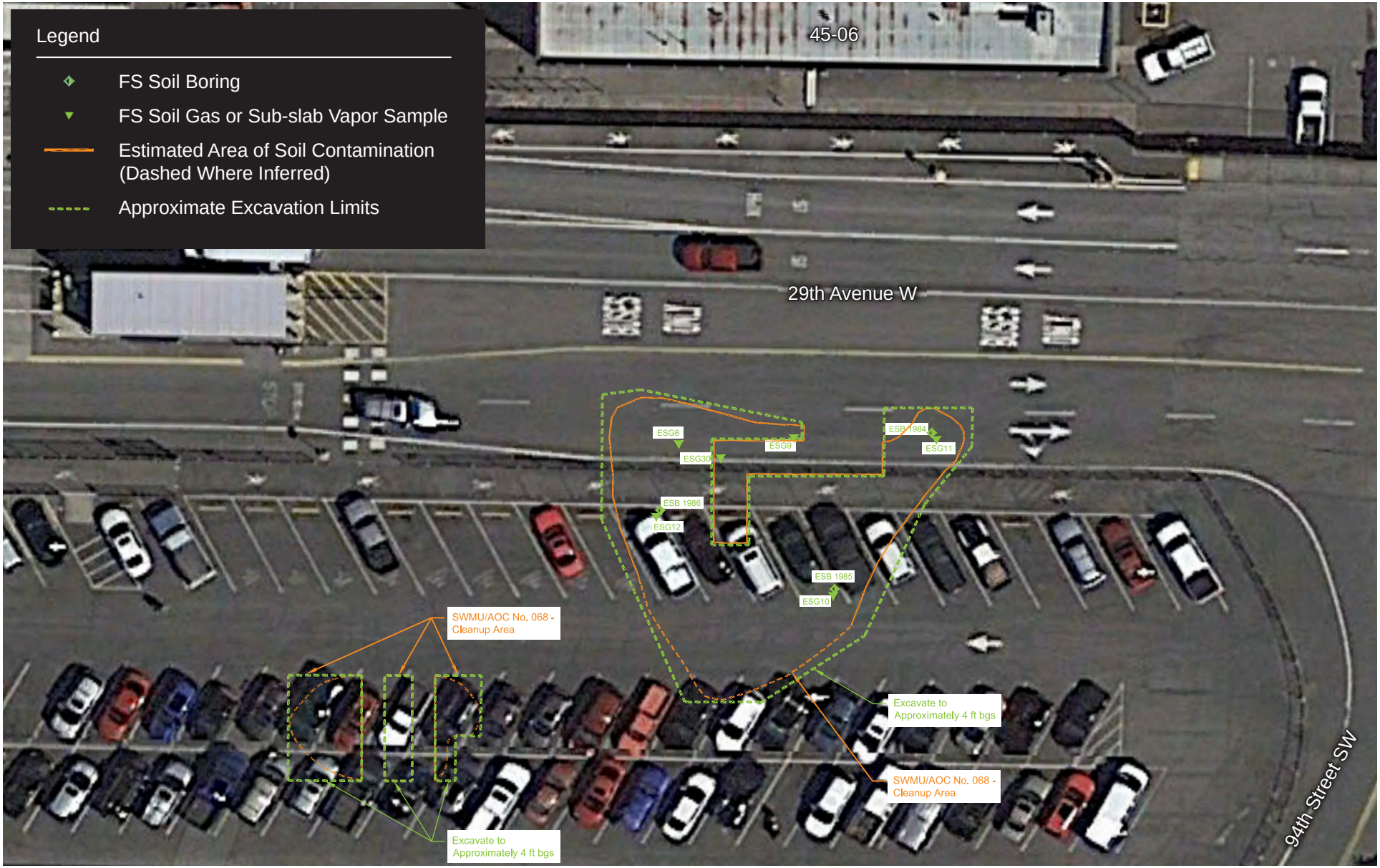
Building 40-11
Automotive - Electric Shop



Building 40-11
Radio Ship

0 5 10
Approximate Scale in Feet

Figure 4
SWMU 097



Source: Google Earth, image dated 5/9/2019

0 30 60

Approximate Scale in Feet

Figure 5

SWMU 068

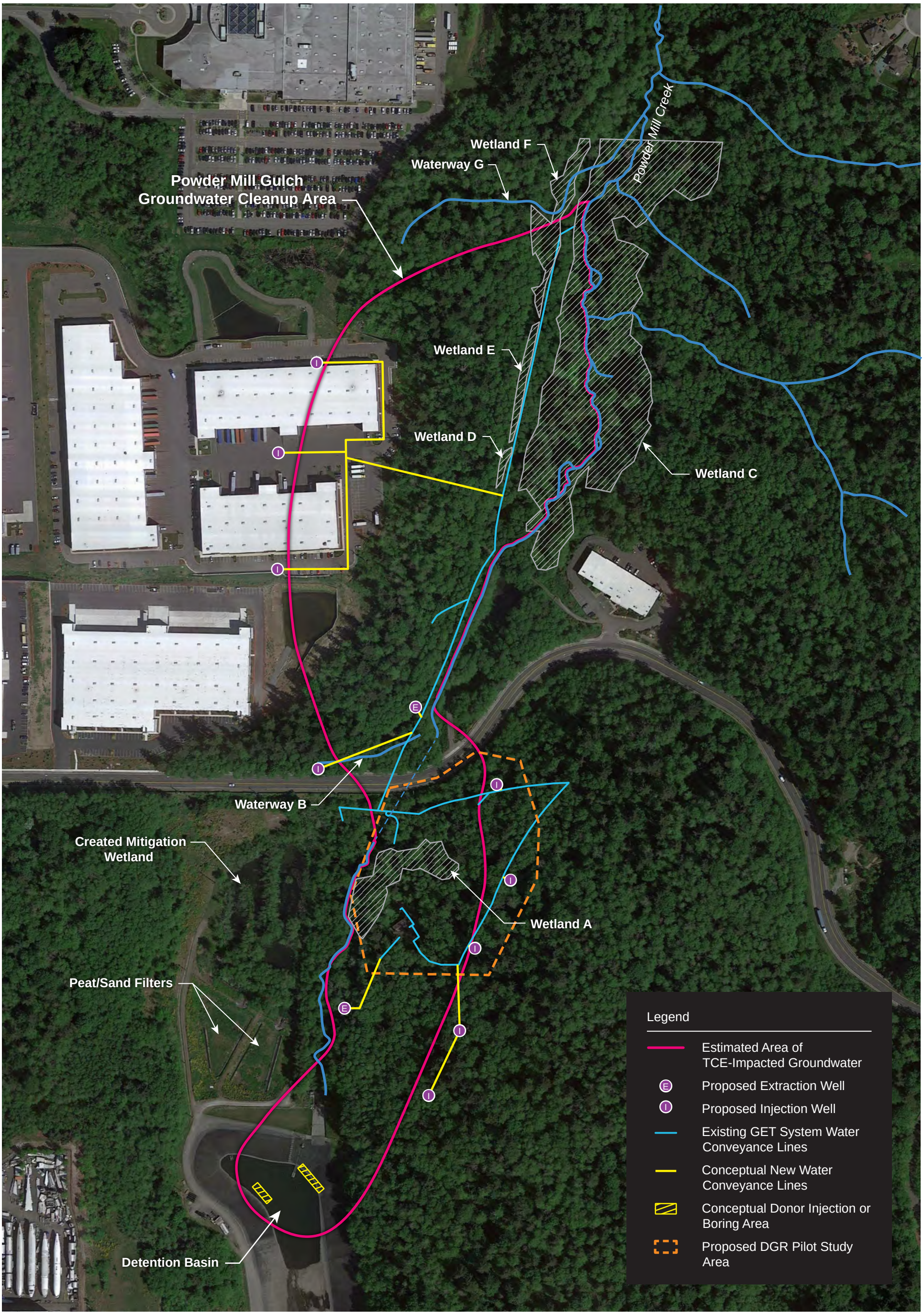
Source: Google Earth, image dated 5/9/2019

0 20 40

Approximate Scale in Feet

Figure 6

SWMU 165



Source: Google Earth, image dated 5/9/2019

NT

0 250 500

Approximate Scale in Feet

Figure 7

Powder Mill Gulch

Source: Google Earth, image dated 5/9/2019

0 40 80

Approximate Scale in Feet

Figure 8

SWMUs 123 & 124

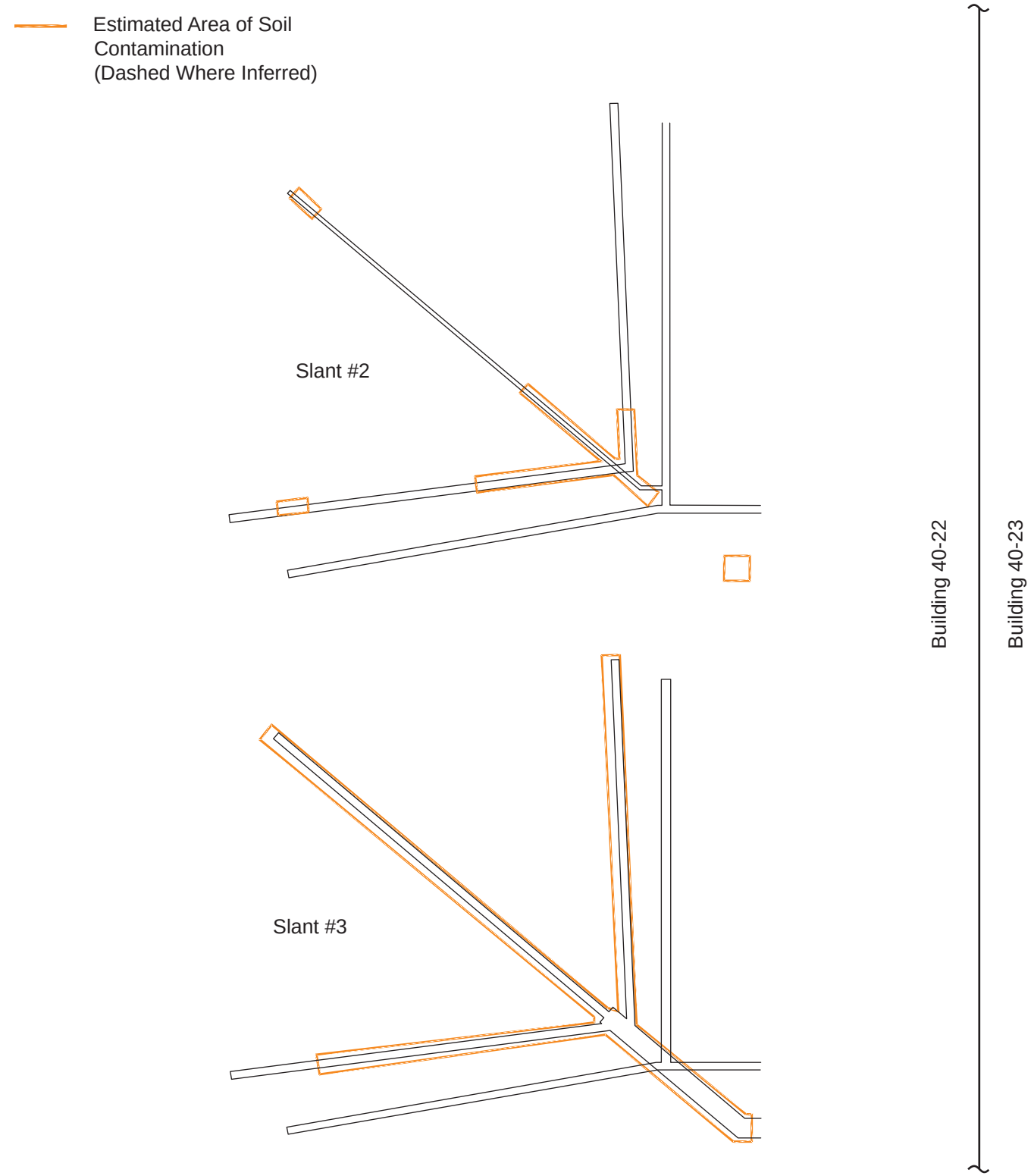


Figure 9
Slant #2 and #3

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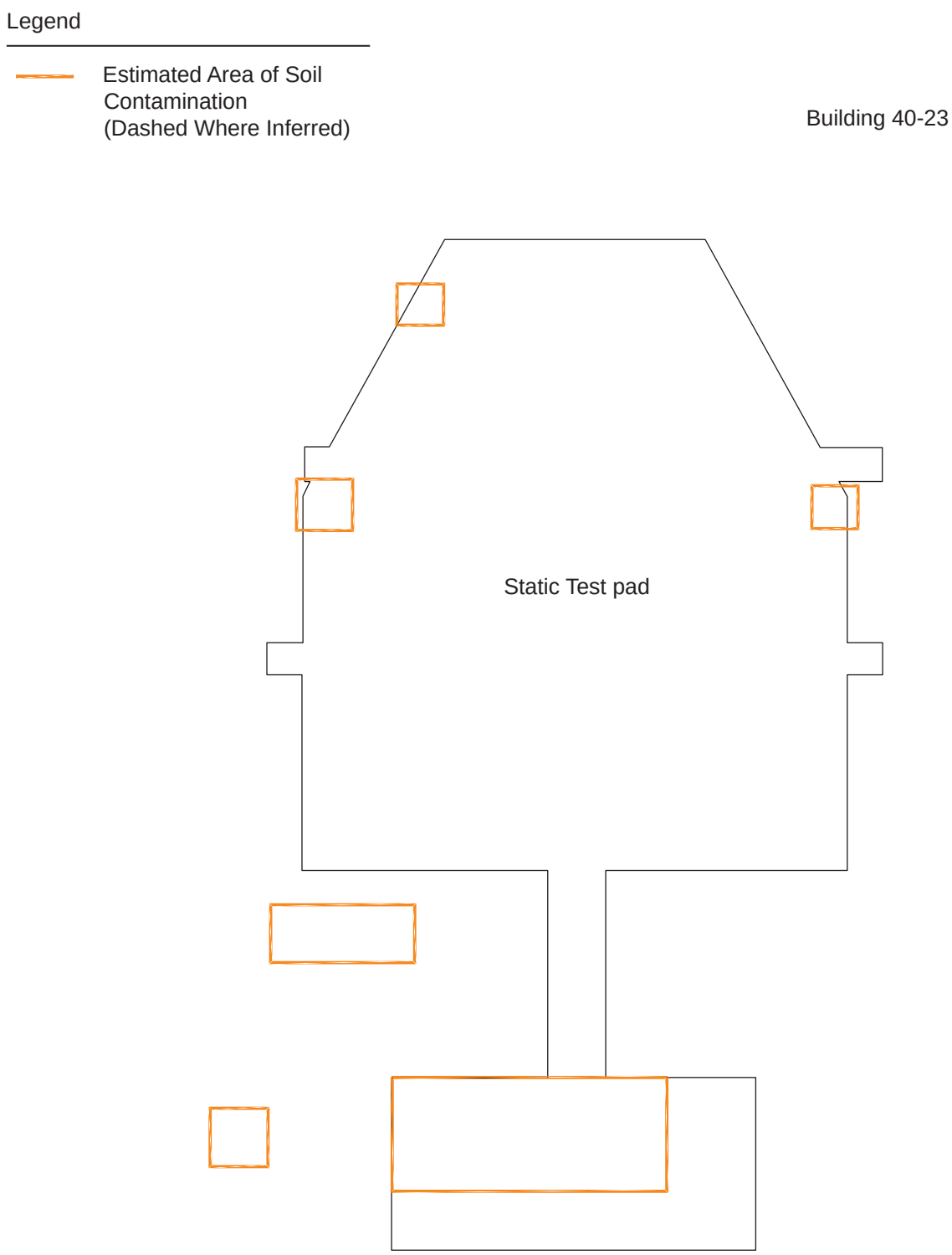
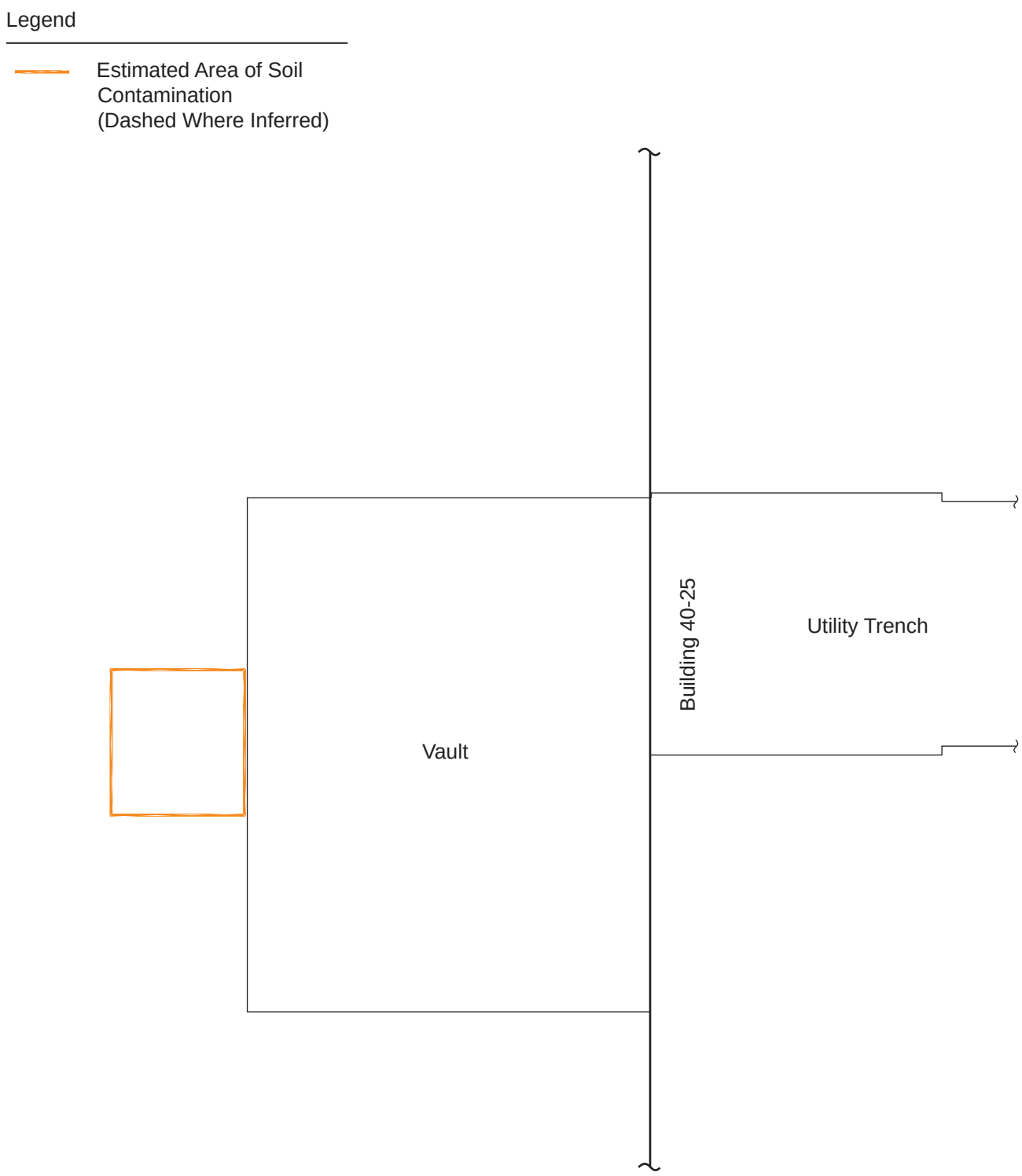


Figure 10

Static Test Pad

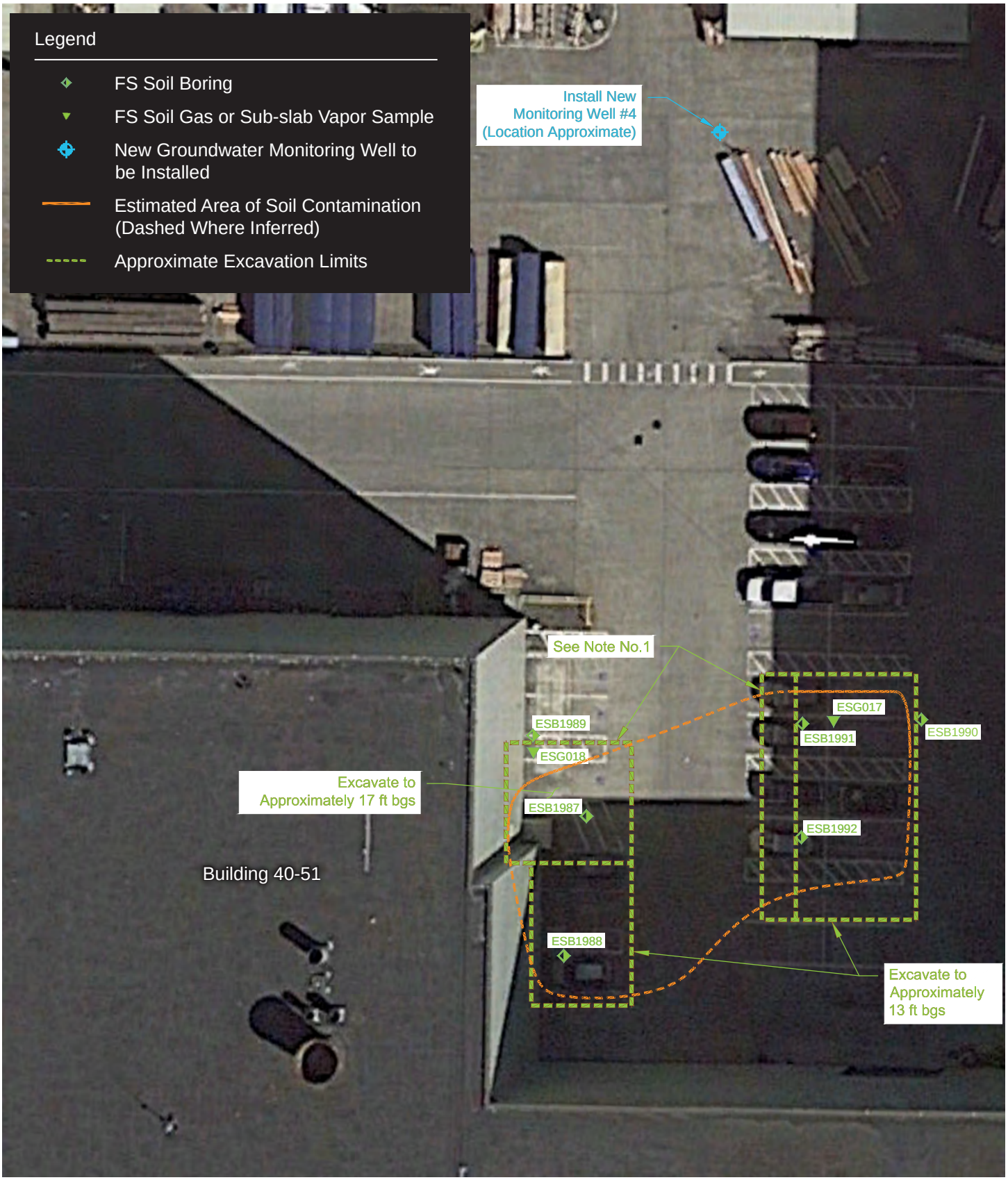


0 4 8

Approximate Scale in Feet

Figure 11

SWMU 117



Source: Google Earth, image dated 5/9/2019

0 30 60

Approximate Scale in Feet

Figure 12

SWMU 054

Legend

- FS Soil Boring
- FS Soil Gas or Sub-slab Vapor Sample
- Estimated Area of Soil Contamination (Dashed Where Inferred)
- Approximate Location of SVE Well
- Solid SVE Conveyance Piping

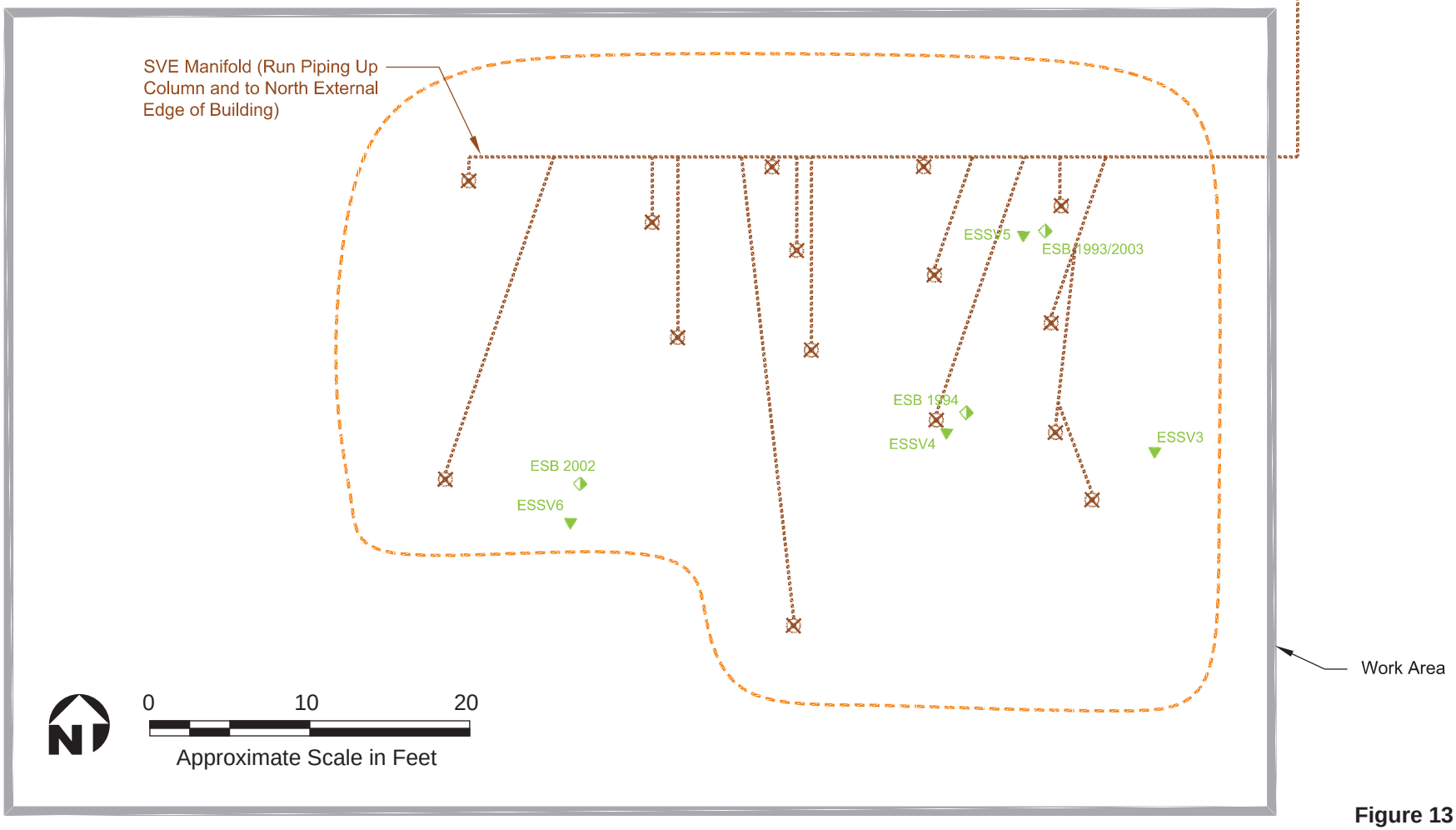


Figure 13
SWMU 171

Source: Google Earth, image dated 5/9/2019

0 30 60

Approximate Scale in Feet

Figure 14

UST EV-48-1

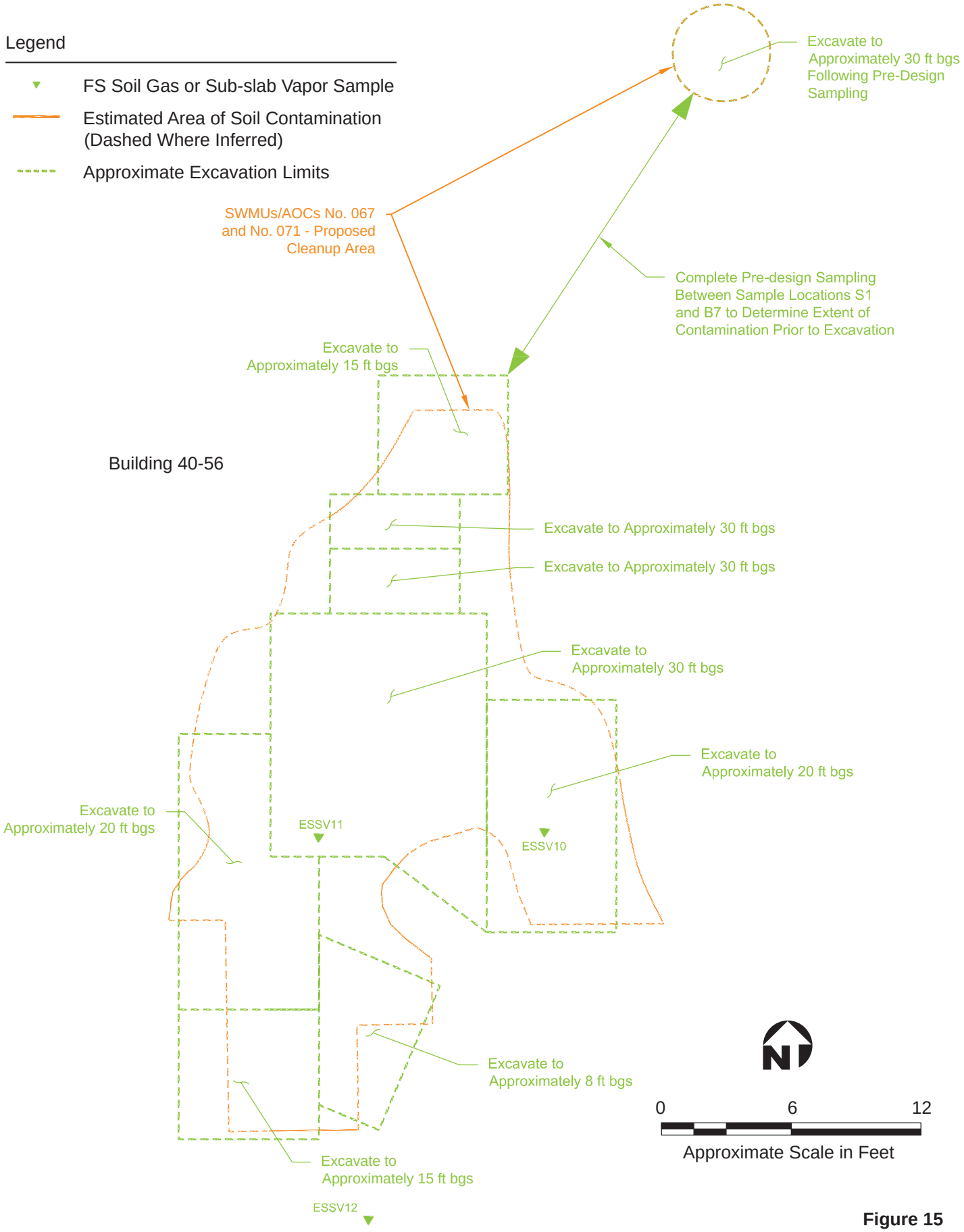


Figure 15

SWMUs 067 and 071

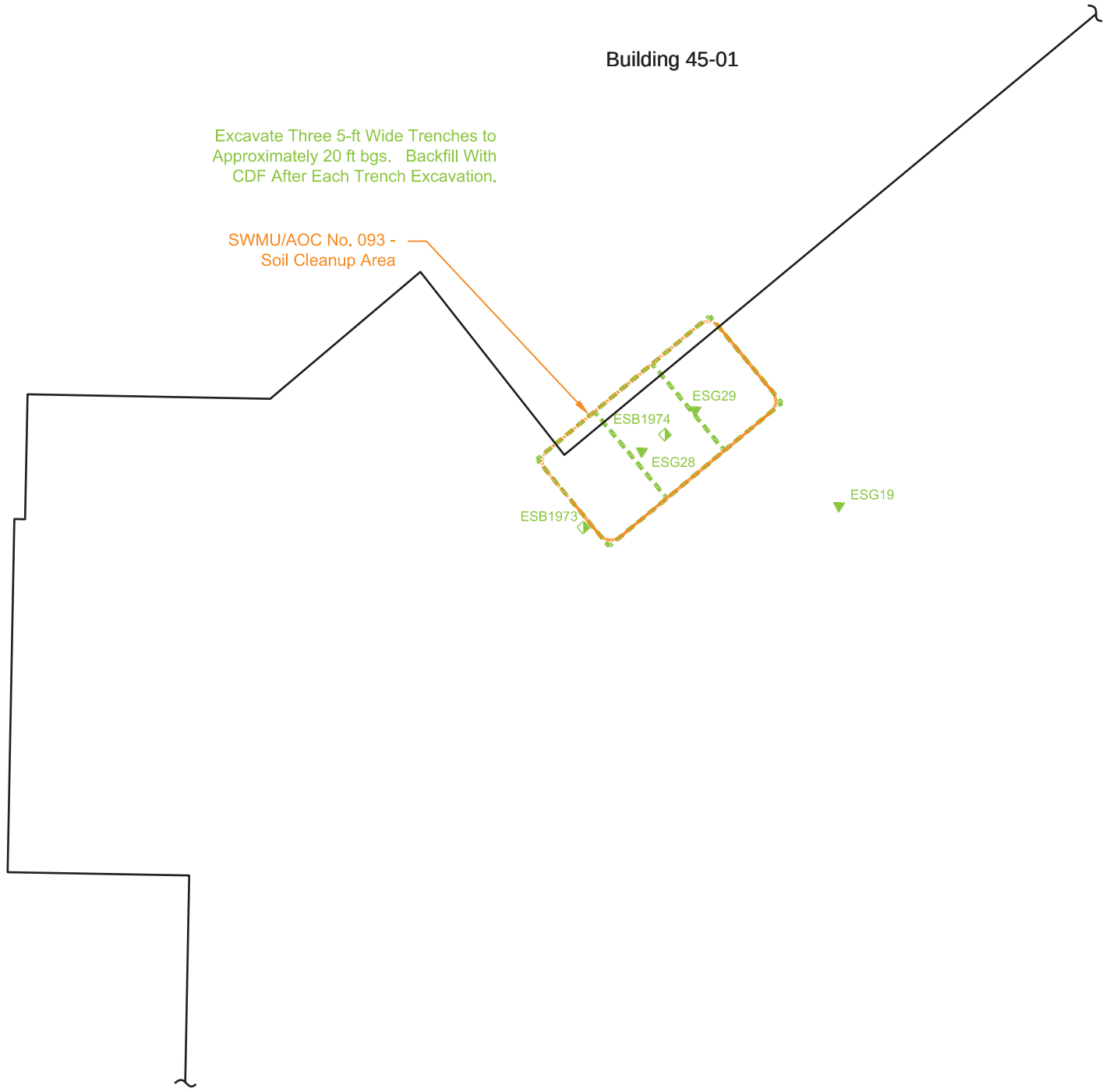


Figure 16
SWMU 093

Source: Google Earth Pro, imagery dated 5/13/18

Figure 17
BOMARC Wetlands