Biosolids General Permit Application

January 2025

CITY OF EVERETT

PUBLIC WORKS

WATER POLLUTION CONTROL FACILITY

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Biosolids General Permit Application for COE's Active Biosolids Management Facility

Application for Coverage Under the Statewide General Permit for Biosolids Management

Active Biosolids Management Facilities

Solid Waste Management Program
Washington State Department of Ecology
Olympia, WA

Revised June 2022 | ECY 070-652

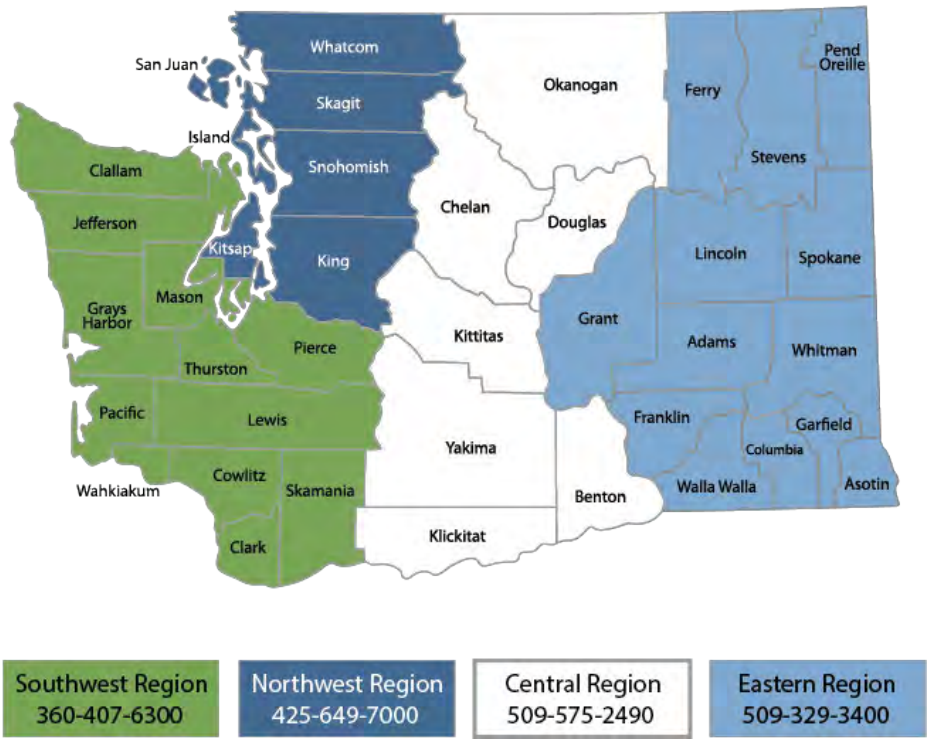
DEPARTMENT OF
ECOLOGY
State of Washington

Form Information

This document is available on the Department of Ecology's website.[1]

Department of Ecology's Regional Offices

Map of Counties Served



Southwest Region	Northwest Region	Central Region	Eastern Region
360-407-6300	425-649-7000	509-575-2490	509-329-3400

Contact Information

Contact information for biosolids staff is located on Ecology's biosolids webpage[2].

ADA Accessibility

The Department of Ecology is committed to providing people with disabilities access to information and services by meeting or exceeding the requirements of the Americans with Disabilities Act (ADA), Section 504 and 508 of the Rehabilitation Act, and Washington State Policy #188.

To request an ADA accommodation, contact Ecology by phone at 360-407-6900 or email at SWMpublications@ecy.wa.gov. For Washington Relay Service or TTY call 711 or 877-833-6341. Visit Ecology's website for more information.

[1] https://apps.ecology.wa.gov/publications/summarypages/070654.html
[2] https://ecology.wa.gov/Waste-Toxics/Reducing-recycling-waste/Biosolids/Program-contacts

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Instructions for Completing Application for Coverage Under the General Permit for Biosolids Management

Active Biosolids Management

Who is subject to the general permit

Public and private facilities within the jurisdiction of the State of Washington that meet the definition of **Treatment Works Treating Domestic Sewage** (TWTDS) are subject to the Statewide General Permit for Biosolids Management. This includes:

All publicly owned treatment works,

- Privately owned treatment works that treat only domestic sewage,
- Beneficial Use Facilities (provide land application services to biosolids generators,
- Septage management facilities (treat and/or land apply septage), and
- Other facilities that treat biosolids and septage like Compost facilities.

Covered activities include treating, storing, land applying, selling, giving away, transferring from one facility to another, and disposing of biosolids in a municipal solid waste landfill or incinerator.

Important note

Existing facilities without Active Biosolids or Septage Management programs, operating under the previous permit as of **September 4, 2020,** are not required to submit a permit application unless directed to do so by Ecology.

Who must submit a permit application

All facilities with active management programs, and all new facilities, regardless of their practices, that begin operations after September 4, 2020, are required to submit a permit application, and are subject to additional public notice and SEPA review.

General instructions

When completing the general permit application, read all questions carefully, do not leave any applicable sections blank, and be sure to submit all necessary supporting documents.

Facilities applying for coverage under the general permit should start by reviewing the required content for a complete application. Ecology provides some templates and guidance materials, and regional biosolids coordinators can help with questions.

Common application errors that will delay permit issuance

Incomplete or poorly prepared applications are the most common cause of delays in permit processing. We encourage responsible officials to take time to prepare an accurate, thorough, and professional permit application. Applications must be suitable for review by both Ecology staff and interested parties. To ensure a smooth review process, facilities must:

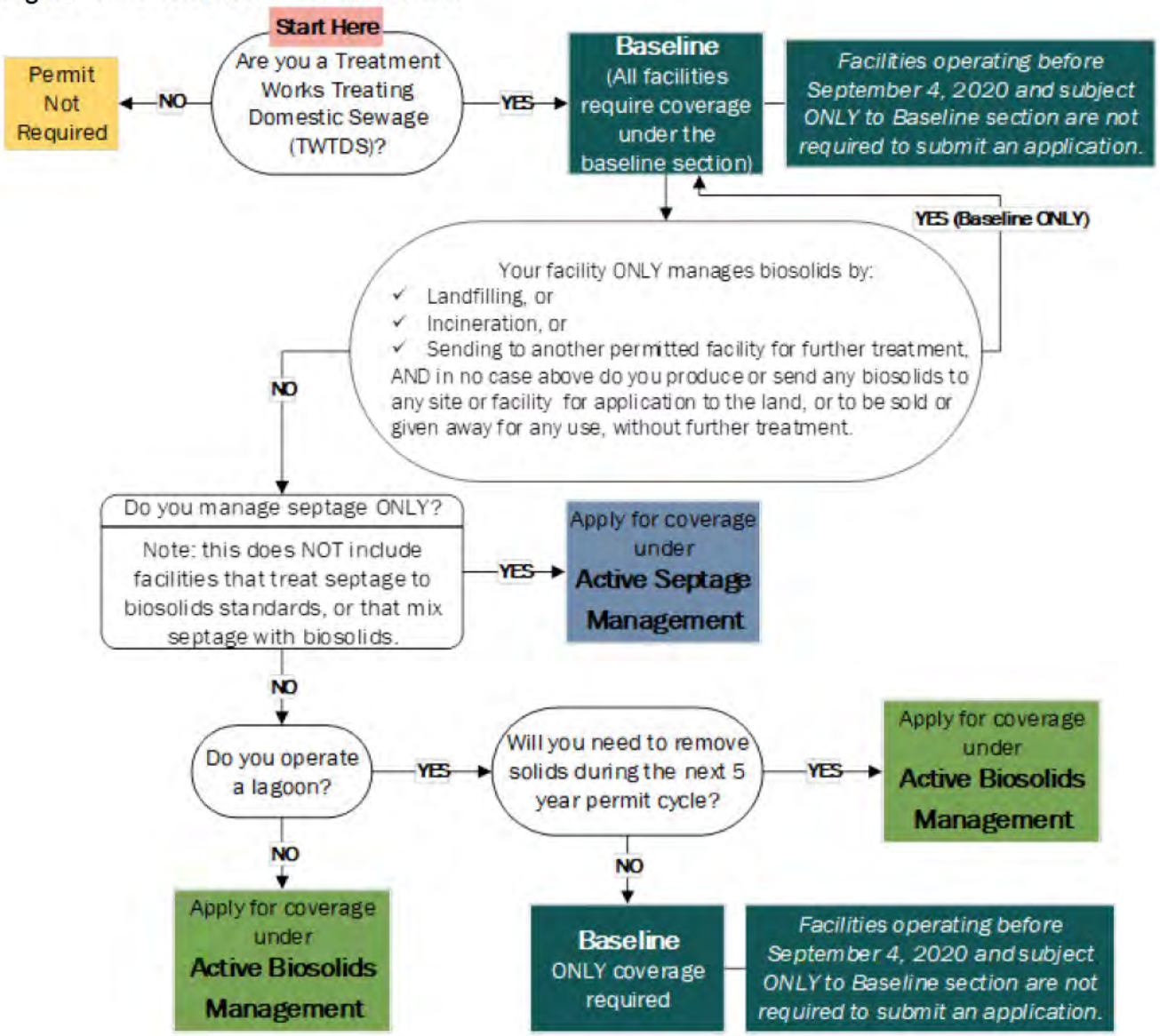
- Prepare and write their application in a way that a reasonably knowledgeable person can understand.
- Use the application form provided by Ecology for their facility type.
- Adhere to proper format and organization.

Ecology will advise each facility when their application is ready for public notice. Ecology may post the applications to our web site, and/or release it directly to interested parties on request.

Confirming what sections of the permit your facility is subject to

Use the flowchart below provided by Ecology to confirm what sections of the permit your facility is subject too. Consult your biosolids coordinator with any questions.

Figure 1 – Permit sections flow chart



Submitting the application

Electronic copies are preferred. Hard copies can be submitted via mail, in person, or by parcel delivery service. All facilities must submit their permit application as follows:

- One copy to the **Regional Biosolids Coordinator** (regional contact and address information provided above and online),
- One copy to all **Local Health Jurisdictions** where you will treat, store, dispose, or land apply biosolids, sewage sludge, or septage, **unless** the health jurisdiction has declined to receive a copy.

Exisiting facilities operating under the previous general permit as of September 4, 2020, must submit their applications by the following deadlines. Please note deadlines vary depending on submission format as outlined below:

- By **Email**: Received no later than **11:59 PM, 90 days after permit issuance.**
- By **Mail**: Postmarked no later than **11:59 PM, 90 days after permit issuance.**
- In **Person or Parcel Delivery Service**: Delivered to office no later than **5:00 PM, 90 days after permit issuance.**

New facilities must submit their applications 180 days before beginning operations.

Active Biosolids Management Application for coverage under the statewide general permit for Biosolids Management

Permit sections applicable to your facility

This application is for facilities that require coverage under the General Permit for Biosolids Management and have **Active Biosolids Management** programs. Use the Figure 1 flowchart above and list of facilities provided by Ecology to confirm whether the sections listed below are applicable to your facility

- **baseline, and**
- **Active Biosolids Management**

Consult your biosolids coordinator with any questions. Next, follow the instructions to complete the application.

Basic facility information

Please provide complete and accurate information.

Name of facility
List all business names associated with your facility.

Everett Water Pollution Control Facility

Owner(s)

City of Everett

Ownership status

☐ State ☐ Private ☐ WA Tribe

☒ Local ☐ Federal ☐ Other

Physical address of facility
Address used to locate facility for visits/inspections.

4027 4th Street SE, Everett, WA 98201

Mailing address
Where notifications should be delivered.

3200 Cedar Street, Everett, WA 98201

Permit number
Biosolids permit numbers begin with BA or BT. Consult your regional biosolids coordinator if you don't know yours.

BA0024490

Facility Contacts

Consult section 2.1.3 of the general permit for an explanation of Responsible Official vs. Primary Contact

Primary Contact

Typically an individual who works at the facility and is first point of contact for Ecology

Name
Jeff Marrs

Mailing address
3200 Cedar Street, Everett, WA 98201

Title
Operations Superintendent

Phone
(425) 257-8967

Email
JMarrs@everettwa.gov

Responsible official

See link below. Responsible official depends on facility ownership and size.

Name
Cassie Franklin

Mailing address
2930 Wetmore Avenue, Everett, WA 98201

Title
Mayor

Phone
(425) 257-7112

Email
CFranklin@everettwa.gov

Billing contact

Name

Jeff Marrs

Mailing address

3200 Cedar Street, Everett, WA 98201

Title

Operations Superintendent

Phone

(425) 257-8967

Email

JMarrs@everettwa.gov

Other contact (if applicable)

Specify Contact Type

Biosolids Program Manager

Mailing Address

3200 Cedar Street, Everett, WA 98201

Name

Hanna Lintukorpi

Phone

(425) 257-8946

Title

Associate Engineer - Biosolids Manager

Email

HLintukorpi@everettwa.gov

Facility Type

Check all boxes that apply to your facility.
Example: Minor WWTPs with lagoons will check the 2nd AND 7th boxes below.

- [x] Major sewage treatment facility (design flow of ≥ 1 mgd or serving a population of ≥ 10,000)
- [ ] Minor sewage treatment facility (design flow of < 1 mgd and serving a population of <10,000)
- [x] Have a pretreatment program or designated as a Class I facility as defined in WAC 173-308-080[3]
- [ ] Composting facility (using biosolids as a feedstock)
- [ ] Mixing facility (mixes both biosolids and septage and treats to biosolids standards)
- [ ] Septage Management Facility treating **only** septage to biosolids standards
- [x] Have a lagoon
- [ ] Other – describe

Other Permits

Check all that apply to your facility and provide associated permit number(s):

- [x] National Pollutant Discharge Elimination System (NPDES)

Permit number

WA0024490

- [ ] State Waste Discharge

Permit number

- [ ] Solid Waste

Permit number

[3] https://apps.leg.wa.gov/WAC/default.aspx?cite=173-308-080

☐ Air

Permit number

☐ Local special or conditional use

Permit number

Issuing Authority

Additional or More Stringent Requirements

Facilities must comply with additional or more stringent requirements imposed by Ecology under the previous expired permit.

Do you have any additional or more stringent requirements imposed on your facility under the previous expired permit coverage? ☐ Yes, ■ No

If yes:

If you wish to have provisional approval to engage in the biosolids management activities proposed in this application prior to Ecology reviewing it and issuing final approval of coverage, you must state that you agree to be bound by any additional, more stringent conditions that Ecology imposed on your previous, expired permit coverage until such time as Ecology makes a decision on your new permit coverage.

☐ I have read and understand the statement above and agree to the conditions.

Process, Production and Storage

Describe your facility's operations, touching on each phase of solids production and management:

For example, "Our biosolids are stabilized in two aerobic digesters that operate on alternating cycles. We pump the stabilized biosolids to our drying beds. When a drying bed reaches 75% or more solids content, we move the solids to a covered storage bay. We test the material in our storage bay in mid to late summer. When we have confirmation of Class B pathogen reduction and pollutant concentration limits, we notify our contract land applier and they come and remove the solids for land application."

The Everett Water Pollution Control Facility (WPCF) is comprised of parallel treatment systems: a Trickling Filter/Solids Contact (TF/SC) process and an Aeration/Oxidation Pond lagoon system. These parallel systems are connected by Aeration Cells 1 and 2.

The lagoon system is used for both solids treatment and storage as well as wastewater treatment. The lagoons consist of two mechanically aerated cells in series (AC1 and AC2) followed by an unaerated Recirculation Channel, Oxidation Pond, and a Polishing Pond. Treatment is accomplished biologically in the lagoon system by utilizing bacteria and other microorganisms to convert organic solids to stable and settleable solids.

The City contracts the removal and disposal of 2,000 dry tons of biosolids annually from either the AC2, Oxidation Pond, or Recirculation Channel on a rotating basis. Solids dredged from the AC2 and Recirculation Channel are expected to meet Class B standards and to be land applied. However, legacy solids from the Oxidation Pond have historically been characterized higher than Table 3 Pollutant Limits and have been disposed of in a Subtitle D landfill. Hauling and land application/landfilling of Everett's biosolids is bid in a competitive process. The City owns and leases Marshland Site for the purpose of land application of Everett's biosolids, however, soils may also go to other beneficial use facilities.

Do you plan to make any changes to your operations during this 5-year permit cycle? ☐ Yes, ■ No

If yes, explain

You must notify your coordinator about any changes you plan to make.

Do you operate a lagoon? ■ Yes ☐ No

If no, continue on to the question after the indentations.

If yes, provide answers to the remaining questions below.

When was the last time you sampled for pollutants in lagoon solids?

February 2024 - Aeration Cell #2
March 2024 - Oxidation Pond
April 2024 - Recirculation Channel

On average, how often do you remove solids from the lagoon?

Annual removal from either Aeration Cell #2, Recirculation Channel, or Oxidation Pond

When was the last time you removed any solids?

January 2024 from Aeration Cell #2

Do you plan to remove solids within the 5-year permit cycle? ■ Yes ☐ No

If no, continue on to the next page.

If yes, provide answers to the remaining questions on this page.

When do you plan to start the removal process?

January 2026

How long do you anticipate the project taking?

Contract dredging and dewatering of 2,000 dry tons normally takes around four weeks.

What do you plan to do with the materials removed?
Check all boxes that apply.

- ☐ Send to another facility for further treatment
- ■ Send to another facility for land application
- ■ Directly land apply the materials on land permitted for your facility
- ■ Other – Please explain

When solids meet pollutant limits, they are sent to either another land-application facility or the City of Everett's Marshland site, depending on results of a competitive bidding process. Solids that exceed Table 3 limits (typically from the Oxidation Pond) are landfilled.

Pathogen Reduction

Please identify the alternative(s) used at your facility to meet pathogen reduction standards.

Class A[4]:

- ☐ Alternative 1 (time/temperature)
- ☐ Alternative 2 (pH/time/temperature/% solids)
- ☐ Alternative 3 (process to further reduce pathogens [PFRP])
  - ☐ Composting
  - ☐ Heat drying
  - ☐ Heat treatment
  - ☐ Pasteurization
  - ☐ Thermophilic aerobic digestion
- ☐ Alternative 4 (PFRP equivalent)

Class B[5]:

- ■ Alternative 1 (7 samples)
- ☐ Alternative 2 (process to significantly reduce pathogens)
  - ☐ Aerobic digestion
  - ☐ Air drying
  - ☐ Anaerobic digestion
  - ☐ Composting
  - ☐ Lime stabilization
- ☐ Alternative 3 (PSRP equivalent)

Be sure all checked processes are included in the **process, production, and storage** section, above.

[4] https://apps.leg.wa.gov/WAC/default.aspx?cite=173-308-170
[5] https://apps.leg.wa.gov/WAC/default.aspx?cite=173-308-170

Vector Attraction Reduction

Please identify the alternative(s) used at your facility to meet Vector Attraction Reduction standards[6].

Be sure all checked processes are included in the **process, production, and storage** section, above.

- [x] Alternative 1 (38% volatile solids reduction)
- [x] Alternative 1a (bench test-anaerobic)
- [ ] Alternative 1b (bench test-aerobic)
- [ ] Alternative 2 (SOUR)
- [ ] Alternative 3 (aerobic process)
- [ ] Alternative 4 (pH stabilization)
- [ ] Alternative 5 (≥ 75% solids)
- [ ] Alternative 6 (≥ 90% solids)
- [ ] Alternative 7 (injection)
- [ ] Alternative 8 (incorporation)

Pollutants

Please answer all applicable questions below about analysis of pollutants. Pollutant concentration limits are described in WAC 173-308-160[7]

How often do you test your biosolids?:

- [x] Annually - Once per year
- [ ] Bimonthly – Six times per year
- [ ] Quarterly – Four times per year
- [ ] Monthly – Twelve times per year
- [x] *Other (Describe)*

In-situ lagoon pollutant sampling is done biannually for internal monitoring purposes.
Characterization of dredged solids will be done once per dredge event.

Did any of the sampling events from the last 5 years find pollutants in quantities exceeding Table 1 or Table 3 values?

Be sure all processes outlined in the **pollutants** section are included in the **process, production, and storage** section, above.

Yes, in-situ samples of solids from the Oxidation Pond have historically exceeded Table 3 limits.

[6] https://apps.leg.wa.gov/WAC/default.aspx?cite=173-308-180
[7] https://apps.leg.wa.gov/WAC/default.aspx?cite=173-308-160

Treatment Process Components

Be sure all checked processes are included in the **process, production, and storage.**

Check all that apply

- ☐ Aerobic digester
- ☐ Anaerobic digester
- ☐ Autothermal Thermophilic Anaerobic Digestion
- ☒ Screening (trash removal)
- ☒ Mechanical Dewatering
- ☐ Heat Drying
- ☐ Air drying / drying beds
- ☐ Lime Stabilization
- ☐ Composting
- ☐ Gravity Thickener
- ☒ Flocculation
- ☒ Other, please describe

Trickling Filter/Solids Contact Plant and Aerated/Oxidation Pond Lagoon System

Tank Info

Check **all boxes** that apply to your facility, and answer associated questions as directed.

Do you operate under an NPDES or State Waste Discharge Permit? ☒ Yes, ☐ No

Do you have tanks on site used for storage or treatment of biosolids? ☐ Yes, ☒ No

If yes, please provide the number of tanks, their capacity, and whether they are above or below ground.

Material end use

Check **all boxes** that apply to your facility, and answer associated questions as directed. However ONLY check the boxes associated with an end use your facility is designed, and intends to produce.
For example if you have experienced isolated issues meeting standards, you do not need to identify that here. But, if you regularly land apply material on land specifically permitted for this purpose AND depend on other permitted facilities for further treatment, land application, or disposal, please check the applicable boxes, and answer the questions that follow.

Beneficial use

☐ **Exceptional quality biosolids**

Do you land apply or sell/give away second-generation EQ biosolids? ☐ Yes, ☐ No

Do you land apply or sell/give away first-generation EQ biosolids? ☐ Yes, ☐ No

If yes, please explain what you do with your EQ biosolids

☒ **Land apply non-exceptional quality biosolids**

Do you apply non-exceptional quality biosolids to land that you own, or control by lease or other arrangement, that is specifically approved as part of your permit coverage? ☒ Yes, ☐ No

If yes, please explain what you do with your biosolids

The City contracts the removal and disposal of 2,000 dry tons of biosolids annually from either the AC2, Oxidation Pond, or Recirculation Channel on a rotating basis. Solids dredged from the AC2 and Recirculation Channel are expected to meet Class B standards and to be land applied. Hauling and land application of Everett's biosolids are bid in a competitive process. The City owns and leases Marshland Site for the purpose of land application of Everett's biosolids, however, solids may also go to other beneficial use facilities.

☒ **Rely on other facilities**

Do you send any biosolids to a BUF for land application? ☒ Yes, ☐ No

Do you send any biosolids to another permitted facility for further treatment? ☐ Yes, ☒ No

Where do you send the biosolids?
If you send to multiple facilities, list all.

Proposed application sites in the hauling and application competitive bid process may vary from year to year. In the last three years, bidders have proposed Marshland Site, Boulder Park, and Elysian Fields.

Who is responsible for completing the spill prevention and response plan for transportation of your biosolids?

City of Everett

Disposal

☐ **Send materials to an incinerator**

State law emphasizes the maximum beneficial use of biosolids. Please provide justification for disposing of your materials.

Provide the name of the incinerator which you send biosolids.

Who is responsible for completing the spill prevention and response plan for transportation of your biosolids?

☒ **Send materials to a municipal landfill**

State law emphasizes the maximum beneficial use of biosolids. Please provide justification for disposing of your materials.

Legacy solids from the Oxidation Pond Have historically been characterized higher than Table 3 Pollutant Limits in lead. To prolong its useful life, Marshland Site is managed and operated so that all biosolids applied must meet Table 3 Pollutant Limits. Many other beneficial use facilities operate in the same manner. This leaves landfilling as the only option for these legacy solids. Once pollutant levels in the Oxidation Pond fall consistently below Table 3 limits, it is expected for all solids at the WPCF to go to a beneficial use facility.

Provide the name of the landfill to which you send biosolids.

Roosevelt Regional Landfill

Who is responsible for completing the spill prevention and response plan for transportation of your biosolids?

City of Everett

Attachments

Check all applicable boxes and include all attachments with your application. If previously submitted (historical) documents are still accurate, you may submit copies if they meet criteria as to form and content for this permit process.

Confirm required attachments for your facility with your biosolids coordinator, and please note your region coordinator may require updated documents.

Attachments:	Applicable to:	Included:
Vicinity map	All facilities	☑
Facility schematic	All facilities	☑
Contingency plan	EQ Producers, Land appliers and facilities that send materials for land application.	☐
Spill Prevention and Response Plan	Facilities that haul biosolids	☑
Biosolids Sampling and Analysis Plan	EQ Producers, Land appliers, and facilities that send to BUFs	☑
Soil Sampling and Analysis Plan	Land appliers	☑
Analytical data	All Facilities	☑
Site Specific Land Application Plan	Land appliers of non-EQ biosolids	☑
General Land Application Plan	Land appliers where applicable	☐
State Environmental Policy Act (SEPA)	All facilities	☑
Public Notice	All facilities	☐
Temporary Disposal Plan	All facilities	☐
Lagoon Cleanout Plan	Lagoons cleaning out within 5-year permit cycle	☐
Second-Generation Products Plan	Facilities producing second-generation EQ products	☐

Certification Statement

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

Signature of Responsible Official	Title	Date
	Mayor, City of Everett	03/27/2025

Must be signed by the **Responsible Official**; see WAC 173-308-310(10)(a).

EVERETT Attest: Office of the City Clerk

VICINITY MAPS

Figure 1: Everett WPCF Overview

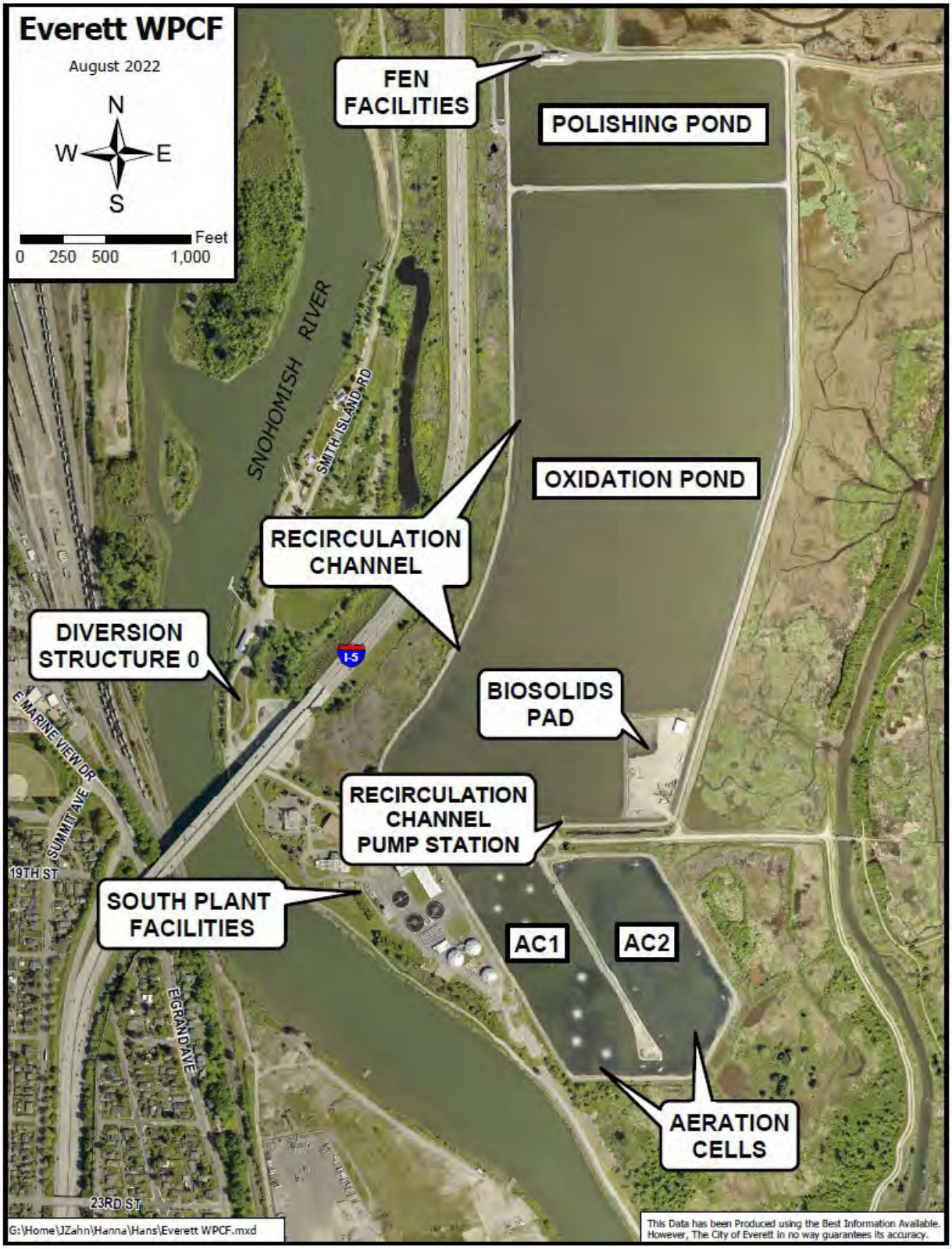
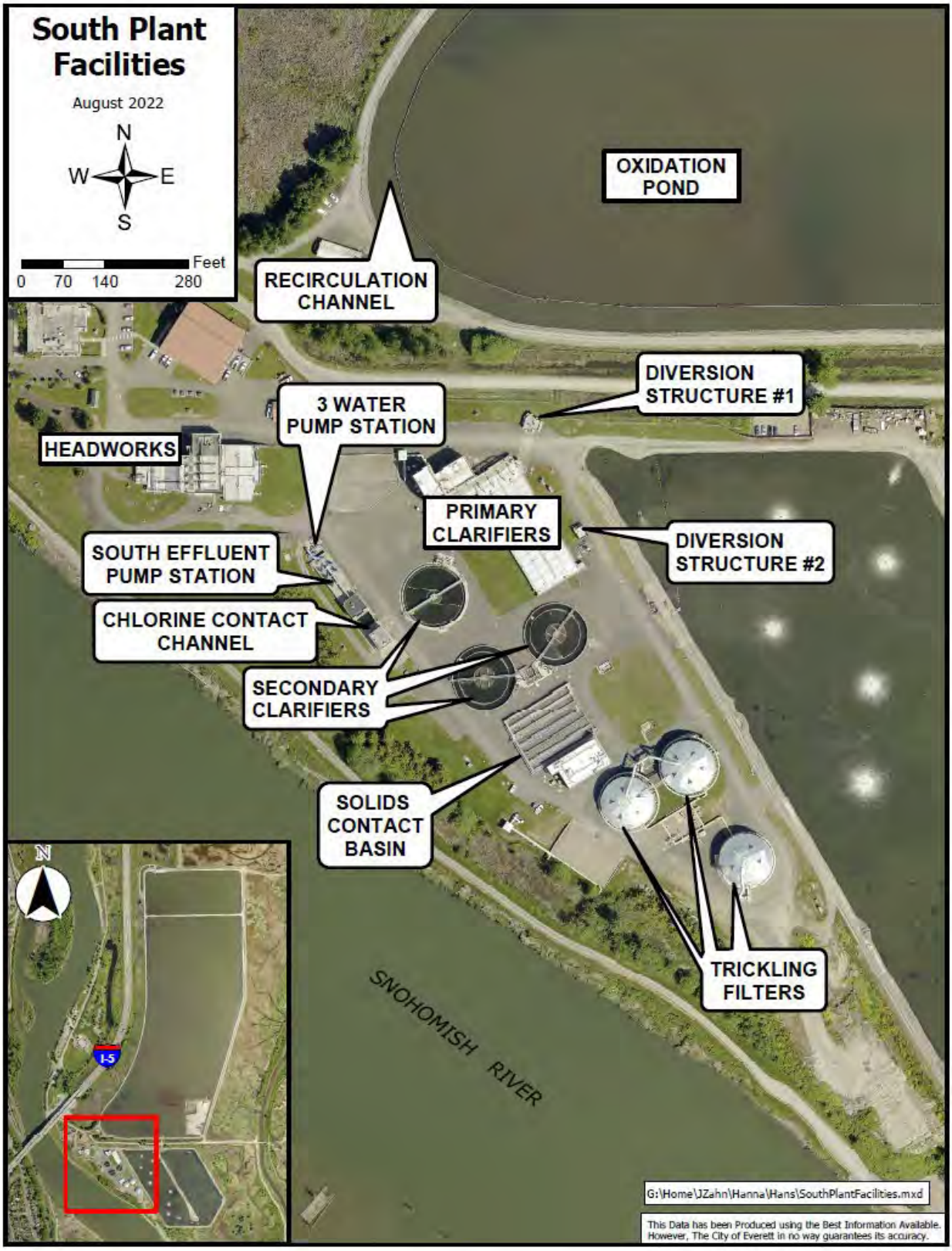


Figure 2: Everett WPCF South Plant Facilities



Biosolids SAP

Biosolids Sampling and Analysis Plan

Submitted to the Washington Department of Ecology

City of Everett

Public Works Department

Water Pollution Control Facility

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Introduction

The mission of the Everett Biosolids Management Program is to safely and beneficially reuse the biosolids produced at the Everett Water Pollution Control Facility (WPCF). The Biosolids Management Program also ensures optimal operation of the lagoon system for both biosolids and wastewater treatment.

This document provides information on the WPCF's plan for sampling and analysis of biosolids as required under the Biosolids General Permit.

History

The WPCF was originally constructed in 1960 by the Snohomish County Health District and at the time consisted only of an oxidation lagoon and an outfall into the Snohomish River. The City of Everett took over operation of the facility in 1975 and has since made many improvements to the treatment process. The Industrial Pretreatment Program, designed to mitigate pollutant loading from significant industrial users, was approved in 1986. The trickling filter/solids contact system was built in 1991 and later upgraded in 2014. The South Effluent Pump Station was added in 2005 to send discharge into the Port Gardner Bay. Primary clarifiers were built in 2007, and the aerated lagoons were improved in 2010 to enhance treatment.

As of 2024, the City of Everett sewer system serves approximately 115,000 people in the City of Everett and 56,000 in nearby municipalities.

Solids Treatment Process

The WPCF operates a parallel treatment system consisting of the Trickling Filter/Solids Contact (TF/SC) System and the Aerated/Facultative Lagoon System. The TF/SC System discharges treated effluent into Port Gardner Bay, and the Lagoon System discharges treated effluent into the Snohomish River. These two systems are connected through the Aeration Cells.

Solids must be removed from the wastewater stream in order to achieve acceptable effluent quality. Inorganic material like rags and grit are removed by the Headworks to be ultimately landfilled. Floating fats, oils, and grease removed by the Primary Clarifiers are landfilled. Settling sludge is removed by the Primary Clarifiers and is pumped to the Aeration Cells for digestion. Settled solids from the Secondary Clarifiers (microorganisms used for biological treatment) are also pumped to the Aeration Cells for digestion. Solids from the Primary and Secondary Clarifiers can be strategically placed via several ports around the perimeter of the Aeration Cells.

The Lagoon System in the order of hydraulic flow consists of the Aeration Cells, the Oxidation Pond, and the Polishing Pond. Excess flows from the several areas in the TF/SC system can be diverted to the Aeration Cells as a hydraulic buffer. The Aeration Cells consist of two 15-acre cells in series (AC1 and AC2) which have mechanical aeration for odor control and treatment. Wastewater flows from AC2 to the 130-acre Oxidation Pond, which is not mechanically aerated. Wastewater in the Oxidation Pond is recirculated via the Recirculation Channel to improve treatment. Wastewater flows from the Oxidation Pond to the 27-acre Polishing Pond and finally the Snohomish River outfall.

The WPCF does not operate digestors or a continuous solids dewatering facility. Solids pumped to the Aeration Cells migrate to the unaerated portions of the Lagoon System and are digested as they sit in the anaerobic zone at the bottom of the lagoons. These digested solids are stabilized and become biosolids ready for beneficial use once analyzed per the requirements of Chapter 173-308 WAC.

Figure 1 - Aerated Lagoons Flow Diagram

Biosolids Management

The City contracts the removal of approximately 2,000 dry tons of biosolids from its lagoons annually. The three typical removal areas, AC2, the Oxidation Pond, and the Recirculation Channel are dredged on a rotating basis. Solids dredged from AC2 and the Recirculation Channel are expected to meet Class B standards and are land applied. However, legacy solids from the Oxidation Pond are historically higher than Table 3 Pollutant Concentration Limits (WAC 173-308-160) in lead and are typically disposed of in a Subtitle D landfill. The City also contracts the hauling of biosolids to either a beneficial use facility or a landfill.

In 2019, the City of Everett purchased a site called Marshland located in southeastern Everett for the purpose of land application. Marshland is leased by Sno-Valley Farms who manages the site and bids on hauling and applying biosolids to Marshland. However, since the hauling contract is a competitive bidding process, the application sites vary from year to year. Soil sampling at Marshland is done every spring and after crop cutting in years biosolids are applied to the site.

Biosolids Sampling

Chemical analyses of 40 CFR part 503 regulated metals, vector attraction reduction (VAR), and pathogen reduction provide the basis for establishing Class B biosolids. Nutrient concentrations determine agronomic rates when biosolids are land applied. All chemical analysis of biosolids follow the methods outlined in WAC 173-308-140. Samples will be tested for the pollutants listed in section WAC 173-308-160, pathogen reduction per WAC 173-308-170, and vector attraction reduction per WAC 173-308-180.

Everett removes from its lagoons more than 1,500 dry tons of biosolids annually, which sets sampling per WAC 173-308-150 at six times per year. However, because solids removals only occur during the annual dredging project, Ecology has agreed that sampling is only required per dredging event on the dredged solids.

Table 1 – Biosolids Testing Analytes and Methods

Analytes	Method	Laboratory
Metals (As, Cd, Cr, Cu, Pb, Hg*, Mo, Ni, K, Se, Ag, Zn)	6020B 7471B (Mercury)*	Everett Environmental Lab
Vector Attraction Reduction (VAR)	Alternative 1a	Everett Environmental Lab
Fecal Coliform	9221E/9221C	Everett Environmental Lab
Percent Total Solids (%TS) Percent Total Volatile Solids (%TVS)	SM2540-G	Everett Environmental Lab Analytical Resources Incorporated
Ammonia-N	SM 4500-NH3 H-97	Analytical Resources Incorporated
Nitrite + Nitrate as N	EPA 353.2	Analytical Resources Incorporated
Total Kjeldahl Nitrogen (TKN)	EPA 351.2	Analytical Resources Incorporated
Phosphorus	SM 4500-P E-99	Analytical Resources Incorporated
TCLP Metals (As, Cd, Cr, Cu, Pb, Hg*, Mo, Ni, Se, Zn)	6010C 7470A (Mercury)*	Analytical Resources Incorporated

Table 2 – Approximate Schedule of Biosolids Management

Month	Analysis	Location	Frequency	Required By/For	Notes
January - February	In-Situ - Metals, %TS, %TVS	AC2, Recirc. Channel, Oxidation Pond	Biannually (1/2)	Internal Monitoring	Sample lagoon to be dredged within 30 days of dredging if possible. Verify VAR samples have been taken.
January/February – Contract Dredging Project Begins					
March - April	Dewatered Biosolids - Nutrients, Metals, %TS, Pathogens	Biosolids Pad	Per Dredge Event	General Permit, Annual Report, Hauling and Application Project	Sample dewatered solids from dredging contract.
	Marshland Soil Sampling	Marshland Site	Biannually (1/2)	Marshland Site Management	Schedule close to dewatered solids sampling.
	Lagoon Bottom Survey	AC2, Recirc. Channel, Oxidation Pond	Annually (1/1)	Special request by Ecology	Schedule soon after dredging project in dredged lagoon.
April/May – Biosolids Hauling and Application					
August - September	Pond Solids Survey	AC2, Recirc. Channel, Oxidation Pond	Annually (1/1)	Pond Monitoring, Dredging Project	Solids blanket data included in preparation of dredging bid.
	In-Situ - Metals, %TS, %TVS	AC2, Recirc. Channel, Oxidation Pond	Bi-annually (2/2)	Internal Monitoring	%TS results included in preparation of dredging bid.
September/October – Crop Cutting					
October	Marshland Soil Sampling	Marshland Site	Biannually (2/2)	Marshland Site Management	Schedule as soon as possible after crop cutting and before rain events.
December	In-Situ - Vector Attraction Reduction	Upcoming Dredge Location	Per Dredge Event (1/1)	General Permit, Annual Report, Hauling and Application Project	Sample within 30 days of dredging in lagoon to be dredged.

Biosolids Sampling for Required Biosolids Characterization

The City of Everett removes approximately 2,000 dry tons of biosolids annually in a bulk dredging event and does not operate a continuous biosolids dewatering facility. To comply with the requirements of WAC 173-308-150, analyses for pollutant metals, nutrients, and pathogens are done on at least six distinct samples of dewatered biosolids. VAR analysis will be completed on one composited sample consisting of at least six samples of in-situ solids before each dredging event and a lab duplicate.

Vector Attraction Reduction (VAR) analysis is completed on in-situ lagoon solids in the area that is scheduled to be dredged. This sampling is done at most 30 days prior to the start of dredging to ensure the sample is representative of the area to be dredged and the final dewatered biosolids product. The VAR sample is collected as a composite of several samples in the area to be dredged, and that composite is duplicated in the lab. The VAR analysis is done on that composite sample and its duplicate.

Pollutant metals, nutrients, and fecal coliform analyses are completed on dewatered biosolids. Sampling of the dewatered solids will either be done in several events as solids are being dredged or in a single event throughout the dewatered biosolids stockpile once the dredging project has concluded.

If dewatered biosolids are being collected concurrent with the dredging and dewatering project, then a minimum of six discrete grab samples will be collected at even intervals throughout the project. For example, if 2,000 dry tons are to be dredged, then one grab sample will be collected from the dewatered solids every 330 dry tons produced, making six discrete grab samples collected for analysis.

If dewatered biosolids are being collected from the stockpile after the dredging project is over, then the stockpile will be split into six distinct areas. Samples will be collected from each area as a composite of several samples throughout the area, making six discrete composite samples collected for analysis.

Biosolids Sampling for Internal Monitoring

In order to monitor historical metal pollutants and to track changes in metals concentrations, the City of Everett will monitor in-situ solids in the regularly dredged lagoon areas twice per year. These regularly dredged lagoon areas (Aeration Cell #2, Oxidation Pond, and Recirculation Channel) are subdivided for sampling purposes and to trend changes in solids over time.

Hydrographic surveys of the lagoons created by City staff assist in tracking the quantity and distribution of biosolids prior to and after contract dredging. Plant operations staff use a Garmin device to take depth data and a sludge judge to take density samples from a boat on the lagoons. The CAD division then uses that data to produce hydrographic survey maps. Surveys of the AC2, Oxidation Pond, and Recirculation Channel are taken in September of each year, and after an area is dredged.

In 2021, a small area of AC2 was found to have a lower pond bottom than what was designed. To track any potential changes to the pond bottom, a pond bottom survey is also completed after dredging projects. Pond bottom surveys are conducted by City Staff using a Garmin device to mark GPS coordinates and to take depth data using a rigid, incremented pole. The manual depth measurements and Garmin coordinates are compiled by City Staff and forwarded to the CAD division to produce bottom surveys similar to the hydrographic surveys. Changes in this liner survey would prompt further liner sampling, and, if necessary, notice to Ecology.

Land Application Site Management - Marshland

City of Everett biosolids that are land applied meet the Class B Pathogen Reduction Requirements in WAC 173-308-170 and the Table 3 Pollutant Concentration Limits in WAC 173-808-160. To preserve the lifetime of the City owned application site, biosolids with pollutant concentrations that would require recording cumulative loading to the site will be landfilled in a Subtitle D facility.

The Marshland site is owned by the City of Everett and leased to Snohomish Valley Farms (SVF) for the purpose of land application of Everett's Class B biosolids. SVF, along with other beneficial use facilities in the region, bid on the hauling and land application of Everett's biosolids. If Marshland cannot take the dredged biosolids for any reason, or is not lowest bidder, then Everett's biosolids are applied to other beneficial use facilities. The City of Everett and SVF's work together to prepare a bid document and SSLAP through the process described below.

The City takes soil samples each spring and after crop cutting in the years biosolids are applied. Samples measure nitrate, nitrite, ammonia, TKN, and pH in the soil. For sampling methods, see the specific Marshland Soil Sampling and Analysis Plan.

The amount of biosolids that can be applied depend on the nutrient concentrations in the dewatered biosolids and a site-specific agronomic rate based off the planned crop and site conditions. Marshland is divided into the East Field and the West Field by the Marshland Canal. Each field is sampled separately and may be planted with different crops with different agronomic rates.

As part of the biosolids hauling and land application bid, each bidder is required to submit a SSLAP for their proposed site. The low bidder submits and obtains approval directly for application onto their site by the Ecology Regional Biosolids Coordinator. Any remaining biosolids over the calculated and approved application amount as permitted by Ecology go to the next lowest bidder and their proposed site.

Marshland spring soil sampling is scheduled annually in March/April to track and determine appropriate application rates for the East and West Fields. Sampling is scheduled in March/April to allow the site to dry from wet weather conditions and to be representative of the soil at the time of application. Sampling methods require the water table to be lower than a foot down, so any sample site that is not sampled due to high water table is marked and recorded.

The Department of Ecology requires soil samples to be taken after crop cutting after a season of application of biosolids to monitor the crop uptake of nutrients. A second round of soil sampling will be scheduled by the COE Biosolids Manager on each field once crop cutting has been completed by Snohomish Valley Farms, typically in September or October.

Data Analysis Review

Recordkeeping and reporting will be per WAC 173-308-290 for land application recordkeeping and WAC 173-308-295 for Annual Reports. All required records and analytical data will be kept for a minimum of five years. Quality data of biosolids removed from the Ponds is submitted to Ecology with the Annual Report as required under WAC 173-308-295.

Site Specific Land Application Plans with the location, acres applied, date applied, vegetation type, application amount, and sample data are kept in a site-specific land application file created for each application site.

Everett Biosolids Management Staff

For more information on this plan, please contact Hanna Lintukorpi.

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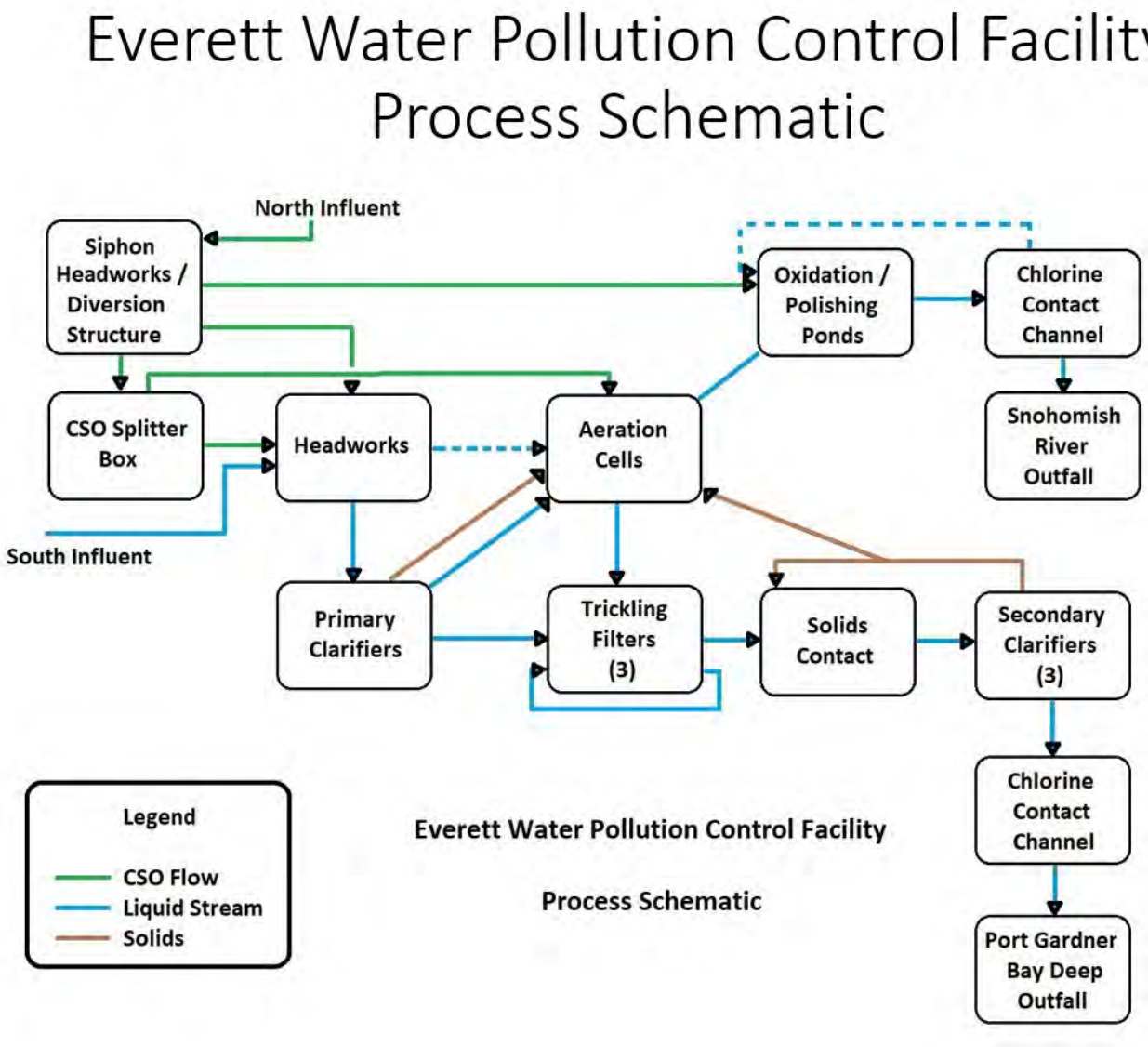
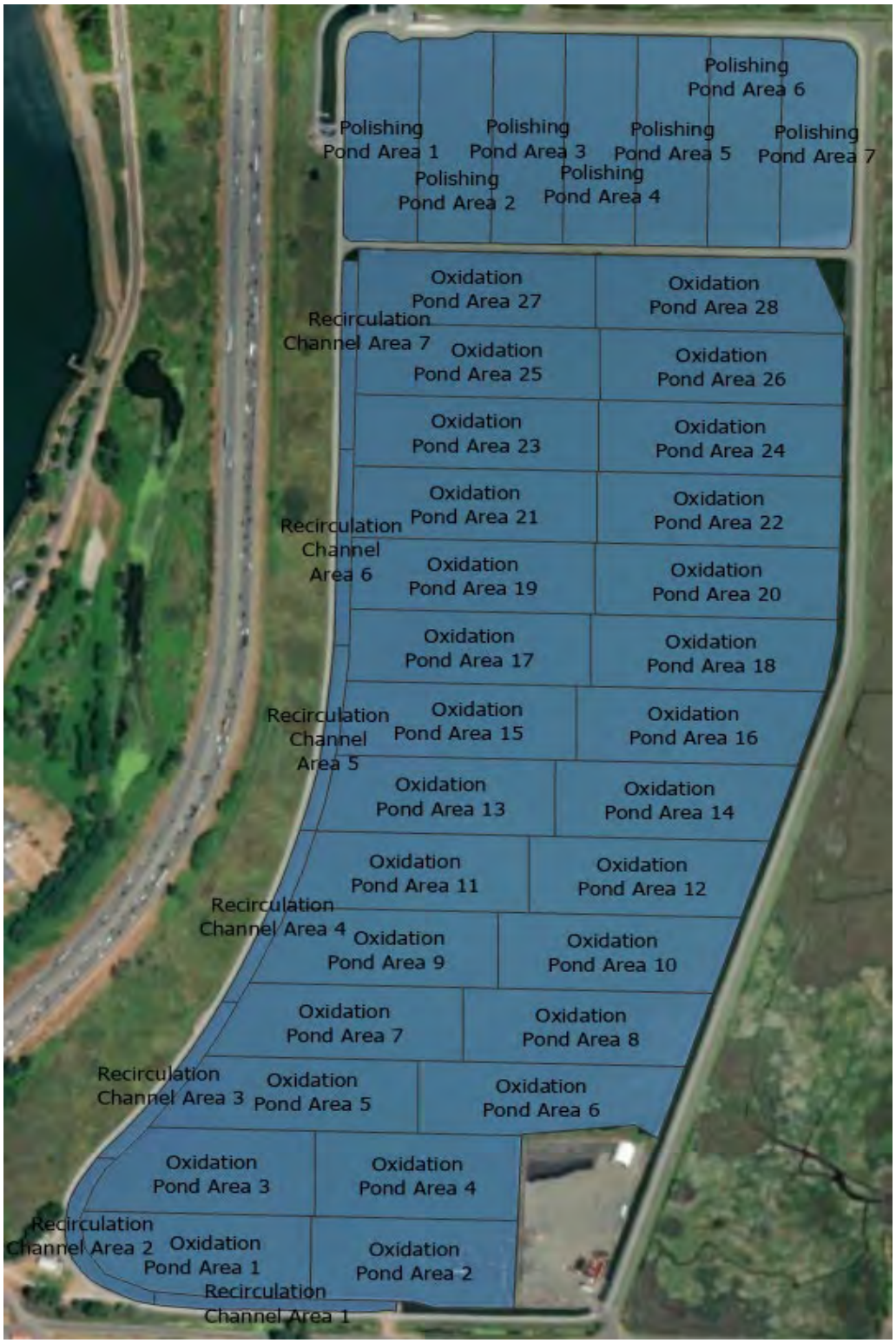
Appendix A – Process Schematic



Appendix B – Aeration Cells Sample Site Map

Appendix C – Oxidation Pond Site Map



Appendix D – Analysis Methods, Preservation and Holding Times

(Reproduced from the General Permit – Table 3)

Parameter	Methods	Basic Preservation	Maximum Holding Time
Arsenic	SW-846 6010 SW-846 6020 SW-846 7010 SW-846 7061	Cool to ~4° C	6 months
Cadmium	SW-846 6010 SW-846 6020 SW-846 7000 SW-846 7010	Cool to ~4° C	6 months
Copper	SW-846 6010 SW-846 6020 SW-846 7000 SW-846 7010	Cool to ~4° C	6 months
Lead	SW-846 6010 SW-846 6020 SW-846 7000 SW-846 7010	Cool to ~4° C	6 months
Mercury	SW-846 7470 SW-846 7471	Cool to ~4° C	28 days
Molybdenum	SW-846 6010 SW-846 6020 SW-846 7000 SW-846 7010	Cool to ~4° C	6 months
Nickel	SW-846 6010 SW-846 6020 SW-846 7000 SW-846 7010	Cool to ~4° C	6 months
Selenium	SW-846 6010 SW-846 6020 SW-846 7010 SW-846 7741	Cool to ~4° C	6 months
Zinc	SW-846 6010 SW-846 6020 SW-846 7000 SW-846 7010	Cool to ~4° C	6 months
Total Kjeldahl Nitrogen (TKN)	SM 4500, Norg B SM 4500, Norg C ASTM D3590-89 ASTM D3590-02	Cool to ~4° C	28 days
Nitrate-nitrogen	EPA 353.2 SM 4500-NO3 E, F, or H	Cool to ~4° C	28 days
Ammonia-nitrogen	SM 4500-NH3 B + C, D, E, or G	Cool to ~4° C	28 days
Organic Nitrogen	Calculated: TKN minus NH3-N	Not applicable	Not applicable

In-Situ and Dewatered Biosolids Sampling SOPs

EVERETT
WASHINGTON

Standard Operating Procedure
WPCF Operations
Dewatered Biosolids Sampling SOP

Updated 2/21/2025

A. Overview

The City of Everett stores residual solids from wastewater treatment in its wastewater lagoons, which are dredged regularly to maintain treatment capacity. Biosolids are the dewatered product removed from the lagoons and are a beneficial resource that can be used as a soil improvement provided that regulatory requirements are met.

The purpose of this SOP is to standardize the sampling method of dewatered biosolids and ensure that analyses are done in a repeatable and representative manner. Sampling methods must meet the guidelines within the Statewide General Permit for Biosolids Management and Chapter 173-308 WAC.

B. Hazards & safety precautions

Biosolids are a wastewater product and, as such, pose potential hazards to human health. Caution should be exercised when handling biosolids. Gloves and other PPE should be worn for the handling of biological materials. Snowshoes and hip waders may be worn at the discretion of the sampling operator.

Stockpiled biosolids are dewatered and can appear solid enough to support the weight of a person. Due to the depth of the piles, the potential for entrapment exists wherever a portion of the biosolids may be less dense than anticipated. Two persons should be present during all sampling activities.

C. Labor and Equipment

1. (1) Operations staff of any certification level
2. PPE (nitrile gloves, rubber boots, etc.)
3. (1) clean soil sampling probe (3-ft penetration depth)
4. (1) clean hand trowel, bucket mixer, or other tool to homogenize samples.
5. (1) clean hand brush to remove debris from sampling and mixing tools
6. Chain of Custody form
7. (12) labelled 8-ounce sample containers from the lab
8. Delineators to mark sampling areas
9. (7) **clean** 5-gallon buckets, labelled 1 through 7

D. Sampling the Entire Stockpiled Solids Pile Procedure

1. Coordinate sampling with Biosolids Manager and Everett Environmental Lab (EEL).
    a. Sampling should be done as soon as possible after dredging production is complete.
    b. In advance of sampling, ensure that the EEL has the capacity and equipment to analyze these samples.
    c. The Biosolids Manager will provide Chain of Custody form. Sample containers and labels will be provided by the lab.
2. Gather and clean equipment.
    a. It is critical that collection equipment is clean and free of any residue that may affect lab results. Sampling tools and buckets dedicated for this process will be stored in the trailer on the biosolids storage pad.
3. Delineate sampling area.
    a. For dredging events resulting in over 1,500 dry tons of biosolids, six equal sampling areas must be delineated within the biosolids stockpile. Use delineators to visually mark the distinct sampling areas. Refer to the attached map for an example.
4. Collect samples.
    a. For representative sampling, collect **a minimum of (6) core samples** from semi-random locations in an even spread of each sampling area.
    b. Use the soil sampling probe to penetrate three feet into the solids stockpile for each grab sample.
    c. Samples taken within each sample area should be placed within its own labelled 5-gallon bucket.
5. Homogenize and composite samples according to the following instructions:
    a. Completely homogenize the contents of each 5-gallon bucket, **without mixing contents between buckets**. Manually break up any large chunks of solids into smaller pieces. Any recognizable inert manufactured material found should be removed and noted. Clean your mixing tool between buckets to prevent cross-contamination.
    b. Place a measured volume of solids from each filled bucket into the bucket labelled “7” or “Composite”. Remove debris from the measuring tool and trowel and repeat this step for each of the buckets labelled 1 through 6, ensuring the samples moved into the composite are of equal volume.
    c. Remove debris from tools and homogenize field composite bucket.
6. Collect samples into their associated containers. Each area and the composite should be placed into two containers.
7. Transport samples and completed Chain of Custody to lab and inform Biosolids Manager that sampling is complete.
8. Clean and store equipment.

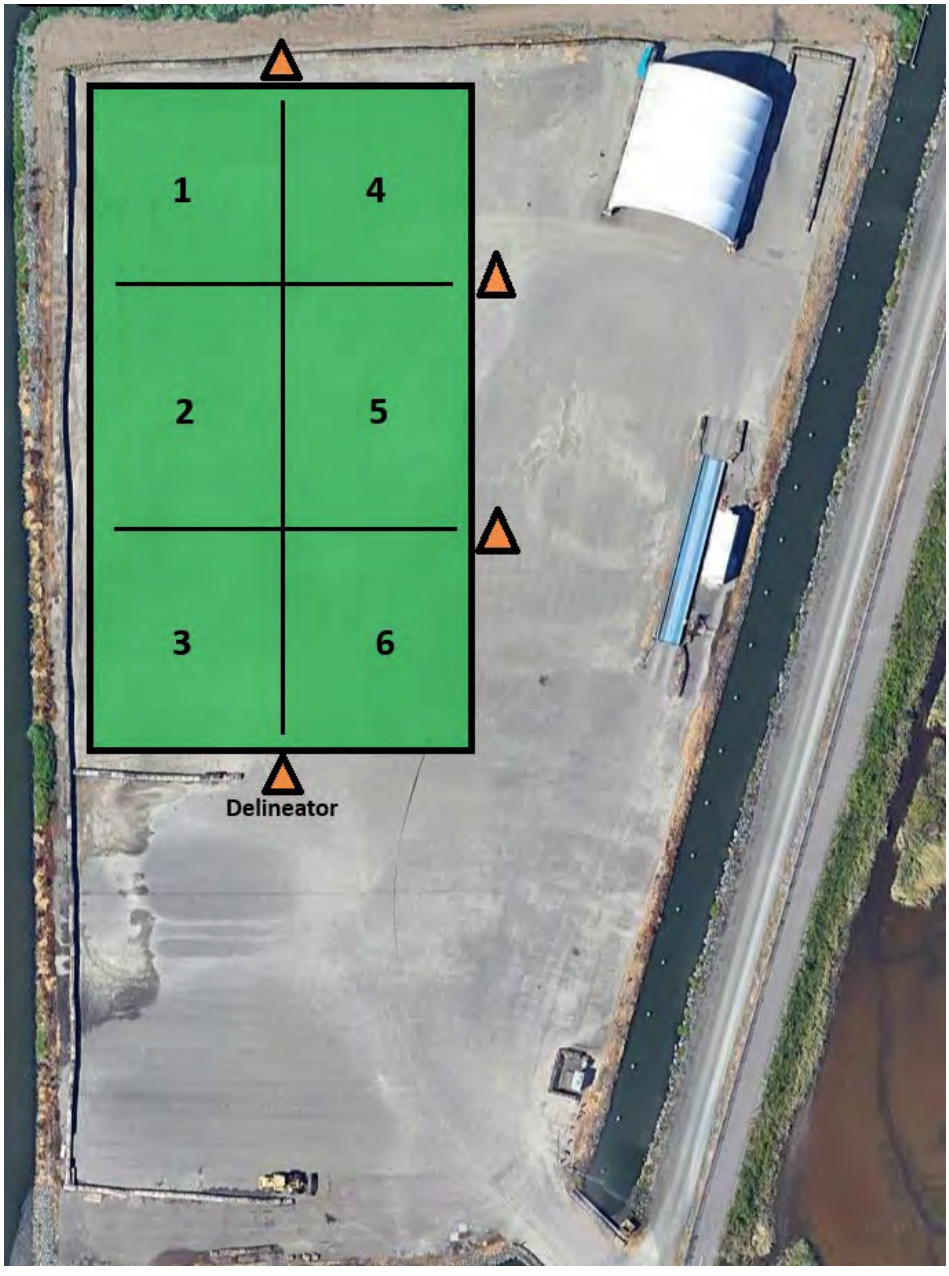
E. Sampling Concurrently with Dredging Procedure

1. Coordinate sampling with Biosolids Manager and Everett Environmental Lab.
   a. Lab constraints for fecal coliform analysis should be discussed in detail.
   b. Biosolids Manager will provide Chain of Custody form, and sample containers and labels will be provided by the lab.
   c. Determine the sampling intervals needed to ensure 6 discrete samples are taken for the project. For example, a 2,000 dry ton project would require a sample approximately every 330 dry tons dredged.
2. Once the threshold number of solids have been dredged and measured, **collect a minimum of (6) core samples** from semi-random locations in an even spread of the freshly stockpiled solids.
   a. Use the soil sampling probe to penetrate three feet into the solids stockpile for each grab sample. Collect all core samples into one bucket.
3. Homogenize and composite sample.
4. Collect sample into containers. The composite sample should be split into two containers. Transport samples and completed Chain of Custody to lab and inform Biosolids Manager that sampling is complete.
5. Clean and store equipment.

F. Revision Record

Revision	Date	Author	Description of Change
0	8/2/24	Joseph Ferguson	SOP Established
1	2/21/25	Joseph Ferguson Hanna Lintukorpi	Grammar changes and clarifications

G. Example Stockpiled Solids Sampling Map



H. Resources and References

1. 40 CFR Part 503
2. Washington Administrative Code 173-308
3. Biosolids Sampling and Analysis Plan

EVERETT
WASHINGTON

Standard Operating Procedure
WPCF Operations
In-situ Biosolids Sampling and Monitoring Procedure

Revised: 2/21/2025

A. Overview

The City of Everett stores residual solids from wastewater treatment in its wastewater lagoons. These lagoon solids are dredged regularly to maintain treatment capacity of the lagoons. Biosolids are the dewatered solids removed from the lagoons and are a beneficial resource that can be used as a soil improvement provided that regulatory requirements are met as stated by the Statewide General Permit for Biosolids Management and Chapter 173-308 WAC.

The purpose of this SOP is to standardize the sampling method of in-situ solids and ensure that analyses are done in a repeatable and representative manner. Sampling methods must meet the guidelines within the Statewide General Permit for Biosolids Management and Chapter 173-308 WAC.

This SOP also describes the methods used to collect sludge blanket and lagoon liner data.

B. Hazards & Safety Precautions

1. A personal floatation device is required at all times when working on watercraft.
2. A minimum of two crew members are required any time a vessel is offshore.
3. The boat deck can become extremely slippery; ensure proper footing as to not fall overboard.
4. Do not operate or board the barge or bio boat in freezing conditions.
5. Sustained winds over 5 mph affect the maneuverability of the barge and make sample collection difficult. Under these conditions, postpone sample collection, if possible. Sustained winds over 10 mph disable the maneuverability of the barge and make barge operation unsafe. Do not operate the barge with sustained winds over 10 mph.
6. The driver of the boat must have a working radio at all times.

C. Definitions

1. **Lagoon Monitoring Sections:** The distinct areas in each lagoon as defined by the Lagoon Monitoring Map.
2. **Representative Sampling Areas:** The area determined by the Biosolids Manager which each analyzed sample is representative of. A predetermined sampling area may be as small as a single lagoon monitoring section or may be as large as the entire lagoon.

D. Labor and Equipment

1. Two (2) plant operators of any certification level.
2. PPE: Nitrile gloves, personal floatation devices
3. Boat, with on-board paddle or pike pole
4. Sampling equipment if collecting samples:
    a. Chain of Custody Form
    b. Labelled 2-liter high-density polyethylene (HDPE) sample containers.
    c. Sludge judge (10 feet long)
    d. Lagoon Monitoring Section Maps
5. Lagoon solids blanket and liner monitoring equipment:
    a. Garmin chartplotter
    b. Lagoon liner depth measuring tool
    c. Notepad and pencil

E. In-situ Vector Attraction Reduction (VAR) Sampling Procedure

1. Schedule sample collection with Biosolids Manager and Lab and determine the representative sample area.
    a. VAR samples only need be collected when a dredging project is scheduled. Sample for VAR a maximum of 30 days prior to the start of the dredging project.
    b. The sample area will be the extent of the expected dredging project. Be sure to document the sampling area clearly on the Chain of Custody and pre-label your sample containers.
2. Place the boat on the water and collect your supplies. Note that using the telehandler to place the boat should be done by an employee trained in rigging.
3. Collect a minimum of 6 core samples from each of the lagoon monitoring sections that fall within the representative sampling area. Place samples collected within each monitoring area into their own sample container. Make sure to collect **a minimum of (6) core samples for the final composite.**
    a. With both ball valves in the open position, slowly lower the sludge judge to the bottom of the pond. Take a core sample through the solids to the bottom of the pond, taking care not to pierce the sludge sampler into the clay pond-liner.
    b. Close the top ball valve with the sludge sampler gently resting on the pond bottom.
    c. Withdraw the sludge sampler from the lagoon. When the lower ball valve is accessible, close the lower ball valve, then open the top ball valve. **Note: If any indication of clay is present, discard the sample and re-sample.**
    d. With the tip of the sludge sampler in a pre-labelled HDPE sample container, slowly open the lower ball valve. Allow the sludge to transfer into the sample container. Remove the tip of the core-sampler from the sample container as the supernatant reaches the bottom of the sampler.
    e. Eject any supernatant back into the pond. Avoid including any supernatant in the sample container.
4. Drop sample bottles and Chain of Custody off at the lab and notify the Biosolids Manager that sampling is complete.

F. In-situ Metals Monitoring Sampling Procedure

1. Schedule sample collection with Biosolids Manager and Lab and determine representative sample areas.
    a. In-situ metals samples are monitored only for internal purposes. The sampling schedule and areas may change as determined by the Biosolids Manager.
    b. Several lagoons may be scheduled for in-situ metals monitoring at once – if no fecal coliform analysis is requested then lab constraints are minimal.
2. Place the boat on the water and collect your supplies. Note that using the telehandler to place the boat should be done by an employee trained in rigging.
3. Collect two to four core samples within each representative sampling area into individual pre-labeled bottles. Make sure core samples are taken at semi-random locations within each area.
    a. With both ball valves in the open position, slowly lower the sludge judge to the bottom of the pond. Take a core sample through the solids to the bottom of the pond, taking care not to jam the sludge sampler into the clay pond-liner.
    b. Close the top ball valve with the sludge sampler gently resting on the pond bottom.
    c. Withdraw the sludge sampler from the lagoon. When the lower ball valve is accessible, close the lower ball valve, then open the top ball valve. **Note: If any indication of clay is present, discard the sample and re-sample.**
    d. With the tip of the sludge sampler in a pre-labelled HDPE sample container, slowly open the lower ball valve. Allow the sludge to transfer into the sample container. Remove the tip of the core-sampler from the sample container as the supernatant reaches the bottom of the sampler.
    e. Eject any supernatant back into the pond. Avoid including any supernatant in the sample container.
4. Stow the boat and equipment.
5. Drop samples and Chain of Custody off at the lab. Notify Biosolids Manager that sampling is complete.

G. Lagoon Solids Blanket and Liner Data Collection Procedure

1. Schedule monitoring event with Biosolids Manager
    a. Solids blanket data is used in the calculation of available solids prior to a dredging event and again to monitor changes to the solids blanket after a dredging event.
    b. Liner monitoring should follow immediately after a dredging event to check for damage or changes to the lagoon liner.
2. Schedule monitoring event with Biosolids Manager
3. Place the boat on the water and collect your supplies. Note that using the telehandler to place the boat should be done by an employee trained in rigging.
4. Prepare the Garmin chartplotter.

a. Mount the Garmin chartplotter on the bracket mounted on the boat rail. The Garmin chartplotter will face the interior of the boat.
b. From the Home screen, select ‘Combos’ and then ‘Biosolids Survey’.

c. Use the minus (-) button to decrease maximum pond depth to 10 feet if the Garmin does not automatically adjust to that depth.

d. The brightly colored line above the contour indicates the top of the sludge blanket. The depth from the bottom of the transducer to the top of the sludge blanket is displayed in the top left corner of the screen. When the value is flashing, the transducer is unable to locate the top of the sludge blanket and is flashing the last known value. Drive to a new location, clean the transducer, and/or power cycle the Garmin to troubleshoot.
e. Maneuver the boat around the lagoon, observing the contour and thickness of the sludge on the Garmin chartplotter.
f. If collecting solids blanket data, travel through the entire lagoon a few times to collect an adequate amount of data.
g. If collecting lagoon liner data, measure the liner depth at a minimum of one hundred points throughout the monitoring area according to the following steps:

h. Bring the vessel to a complete stop.
i. Select (tap) Mark on the Garmin screen to create a waypoint. If created successfully, a description will briefly appear on the screen.

j. Use the liner depth measuring tool to measure the liner depth at each waypoint. Record the depth and associated waypoint number for later use in visualization.
k. Stow the boat and equipment.

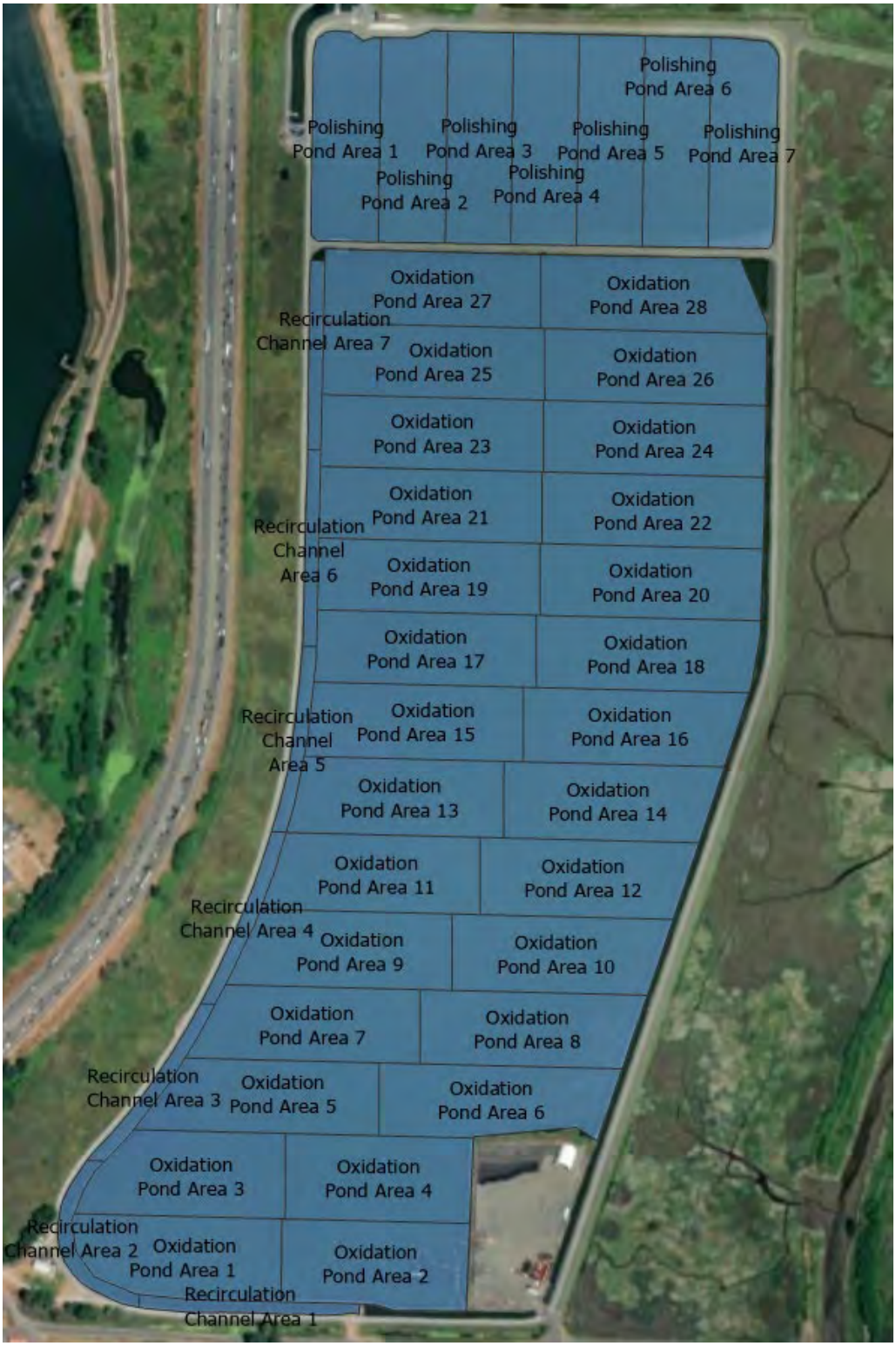
H. Resources and References

1. 40 CFR Part 503
2. Washington Administrative Code 173-308
3. Biosolids Sampling and Analysis Plan

I. Revision Record

Revision	Date	Author	Description of Change
0	03/14/2016	Chris Chesson	SOP Established
1	02/04/2021	Joyful Bell	Complete rewrite to remove obsolete procedure and describe current practices.
2	07/11/2022	Joyful Bell	Annual review. Update boat storage location, sludge sampler details, and include procedures specific to the Mud Buddy.
3	09/12/2022	Joyful Bell	Update sampling frequency, including VAR sampling procedure.
4	08/30/2023	Joyful Bell	Update sampling frequency, sampling locations, appendices, references to the old Garmin removed, new Garmin added, additional safety precautions referenced.
5	8/1/2024	Joseph Ferguson	Several updates to reflect changes in sampling plan.
6	2/21/25	Joseph Ferguson Hanna Lintukorpi	Minor clarifications on samples per composite, added references to regulations

Appendix A – North Lagoons Monitoring Area Map



Appendix B – Aeration Cells Monitoring Area Map

Marshland Soil SAP

EVERETT
WASHINGTON

Marshland Site Sampling and Analysis Plan (SAP)

WPCF Operations

Marshland Soil Nutrients Sampling and Groundwater Monitoring

Revised 2/21/25

A. Overview

Biosolids dredged from the WPCF may be land applied to the City of Everett Marshland Site on Lowell-Snohomish River Road. The East and West fields of the Marshland Site are separated by the Marshland Canal (Appendix A). The City collects soil samples from the fields to determine nutrient levels and agronomic application rates for each field prior to biosolids application and to monitor plant nutrient uptake after crop cutting. Samples are collected below the organic layer and composited for analysis. Groundwater monitoring is also conducted for this site prior to biosolids application. Minor modifications to the implementation of the SAP will be made to ensure representative samples are collected.

B. Access Requirements

Gates are locked with chain to prevent public access. The code for the combination lock is [redacted].

Do not drive on fields if too muddy (tire ruts make cause complications for farming equipment) or if the field has been planted. Make sure vehicle has 4WD.

C. Hazards & Safety Precautions

Personal protective equipment (PPE) is required when handling biosolids sampling equipment, including steel-toed boots and gloves. Rainboots may be required after rain events. Due to wet conditions on the fields, only drive and park vehicles in the areas indicated on the map in Appendix A.

D. Analytes

1) pH (soil)
2) Total Kjeldahl Nitrogen (TKN)
3) Ammonia
4) Nitrate
5) Nitrite

E. Equipment and Supplies

1) Shovel, post-hole digger or core sampler
2) Cordless drill/driver with bucket mixer attachment.
3) Socket wrench kit for opening monitoring well covers.
4) Two 5-gallon buckets.
5) Map of East and West Fields with sample location markers (Appendix A).
6) 6 sample jars per field (250 mL clear glass wide-mouth jars with Teflon-lined lid).
7) Sample container labels.
8) Chain of custody form (COC) and pen.

F. Groundwater Level Monitoring Procedures

1) Schedule monitoring event
    a) Groundwater monitoring should be conducted concurrently with soil sampling, in addition to other monitoring events scheduled by the Biosolids Manager.
    b) Groundwater monitoring will be done at regular intervals in the spring, as decided by the Biosolids Manager, to track groundwater levels in advance of biosolids application.
2) Travel to each well and record the groundwater depth at that site on the site map.
3) If groundwater levels in the East Field are within three feet from the surface, complete the following additional steps:
    a) Using the post hole digger, dig one additional hole at least two feet deep in the Southwest corner of the East Field (within the areas marked 34 or 39 on the soil map in Appendix C). Allow 5-10 minutes to fill with water and record this location and water depth, if any, on the map.
4) Report results to Biosolids Manager.

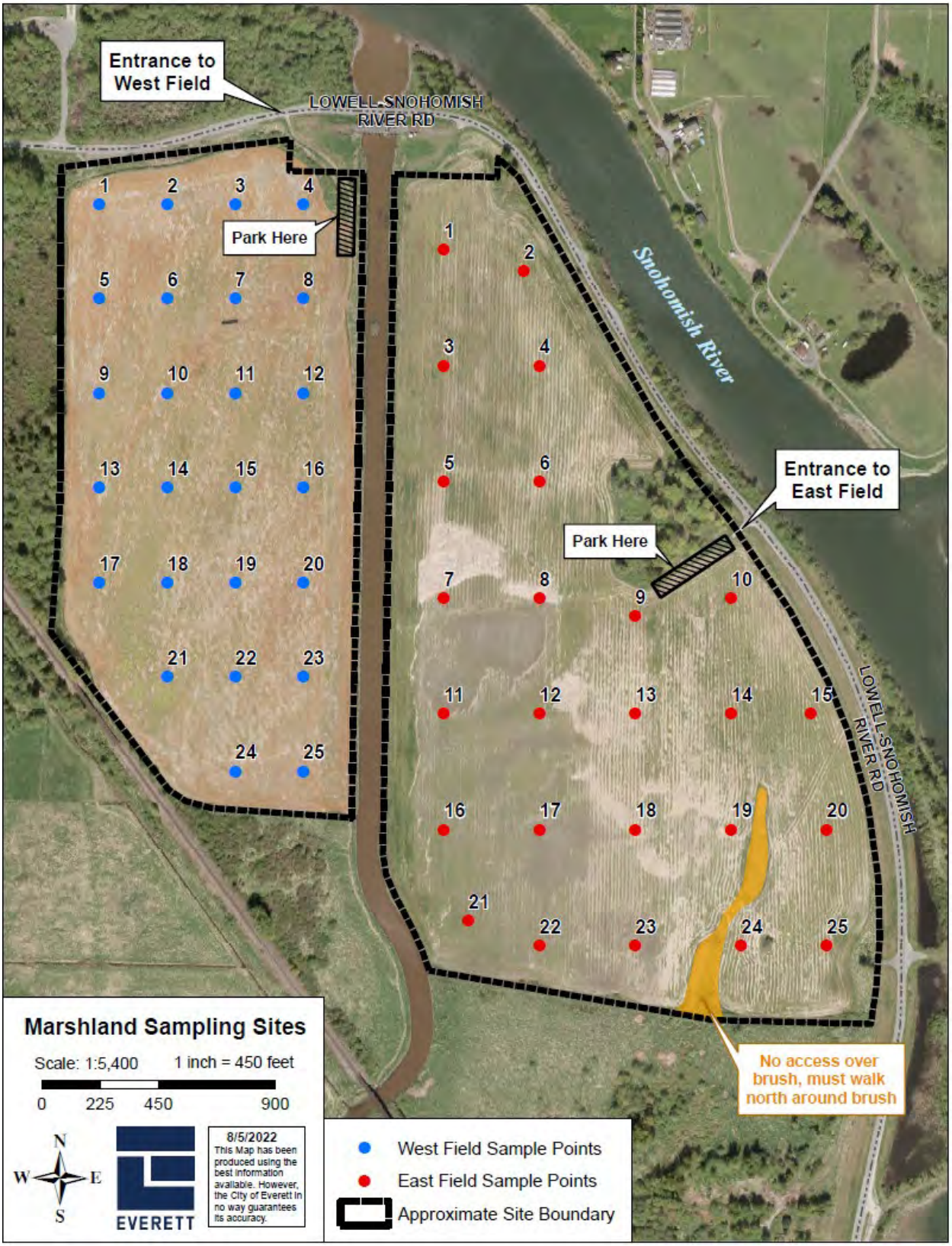
G. Soil Sampling Procedures

1) Schedule sampling event
    a) Biosolids Program Manager will schedule sampling event with IPT and EEL.
        i) Sampling is ideal after a period of dry weather when water table is more than a foot down to minimize impacts of surface water on sampling.
    b) Obtain Chain of Custody from EEL.
    c) Prelog samples and obtain sample labels.
    d) Request soil pH analysis upon return to EEL (must be completed on collection day).
2) Prepare equipment and supplies.
3) Collect soil samples.
    a) Find sample location from the map.
    b) Remove organic matter (grass, roots, sticks, etc.) surrounding sample site.
    c) Dig a hole deeper than the organic layer (about one foot deep).
        i) Skip sample site if water table is less than one foot from surface and make note on the map.
    d) Collect consistently sized samples from each site.
    e) Remove any remaining organic material (roots, leaves, worms, etc.).
    f) Place each sample in a separate bucket.
        i) When bucket becomes too heavy to carry, store bucket in sample vehicle and use another bucket to collect remaining samples.
    g) Mark off sample location on map after collecting sample or note reason if skipped.
    h) Once all 25 sites for a field have been sampled, composite the soil samples in each bucket by mixing with bucket mixer. Make sure large chunks are broken up.
    i) Fill six jars with sample for each field (three for Composite 1, three for Composite 2).
4) Deliver samples to EEL.
    a) Deliver COC to EEL.
    b) Confirm soil pH analysis will be completed same day.
5) Follow-up with Biosolids Program Manager.
    a) Notify Biosolids Program Manager that sampling was completed, send marked map and copy of CoC, and describe site conditions and any other sampling notes.
6) Clean equipment
    a) Clean equipment and return to storage.

H. Revision Record

Revision	Date	Author	Description of Change
0	9/1/2022	Anna Pennington	SAP written
1	9/12/2023	Joseph Ferguson	Updated Contacts, added more info regarding monitoring of groundwater.
2	3/13/24	Joseph Ferguson	Small update to tools and methods.
3	2/21/25	Joseph Ferguson Hanna Lintukorpi	Grammar changes, minor clarifications

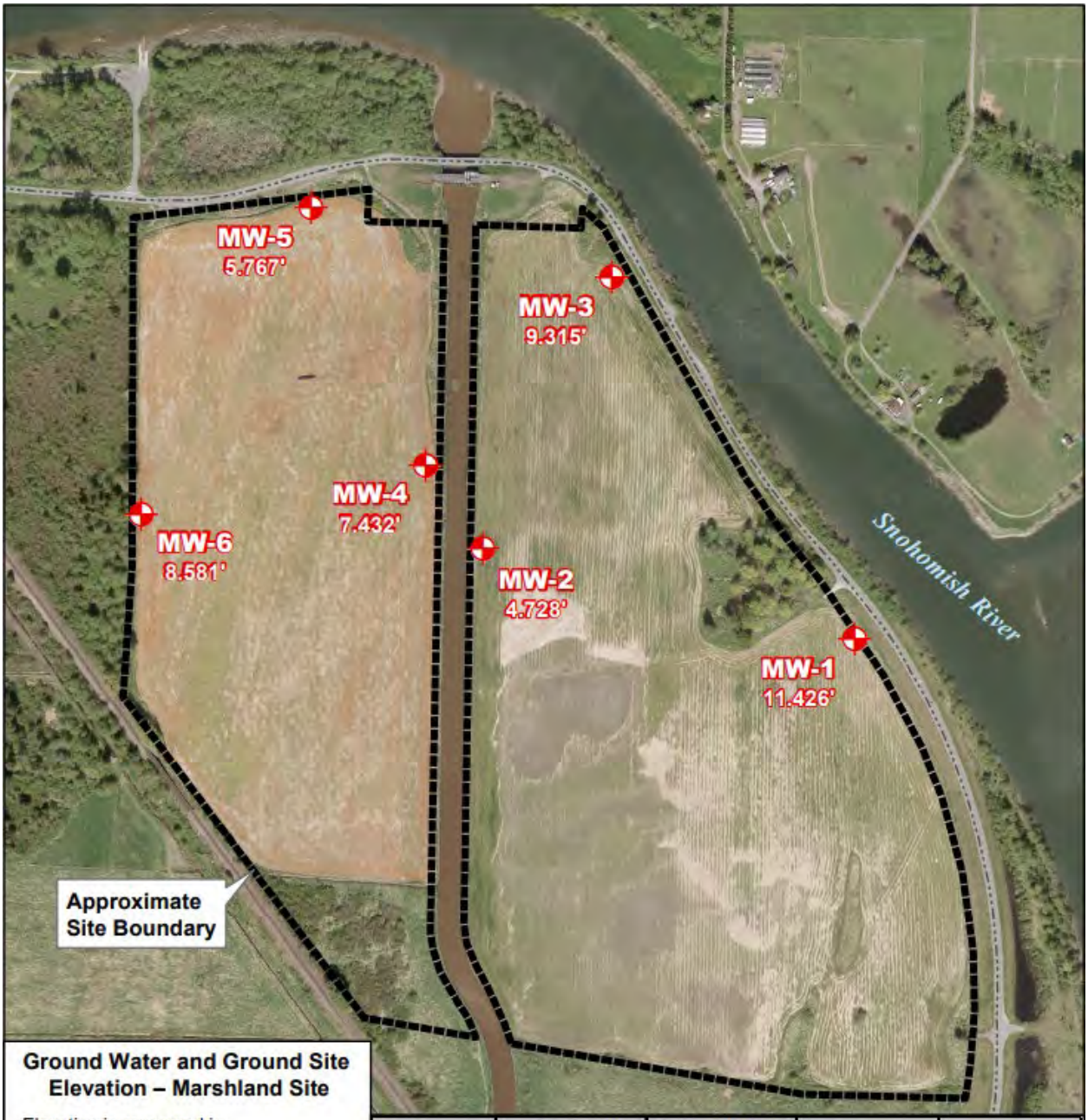
Appendix A: Marshland Sampling Sites as of June 2022



East Field				
Site #	Northing (ft)	Easting (ft)	Latitude (DD)	Longitude (DD)
1	347,592.50	1,310,704.53	47.9450	-122.1787
2	347,512.50	1,311,013.53	47.9448	-122.1775
3	347,145.82	1,310,704.53	47.9438	-122.1787
4	347,145.82	1,311,073.53	47.9438	-122.1772
5	346,699.14	1,310,704.53	47.9426	-122.1787
6	346,699.14	1,311,073.53	47.9426	-122.1772
7	346,252.45	1,310,704.53	47.9413	-122.1786
8	346,252.45	1,311,073.53	47.9414	-122.1771
9	346,182.45	1,311,442.53	47.9412	-122.1756
10	346,252.45	1,311,811.54	47.9414	-122.1741
11	345,805.77	1,310,704.53	47.9401	-122.1786
12	345,805.77	1,311,073.53	47.9401	-122.1771
13	345,805.77	1,311,442.53	47.9402	-122.1756
14	345,805.77	1,311,811.54	47.9402	-122.1741
15	345,805.77	1,312,120.54	47.9402	-122.1728
16	345,359.09	1,310,704.53	47.9389	-122.1786
17	345,359.09	1,311,073.53	47.9389	-122.1771
18	345,359.09	1,311,442.53	47.9389	-122.1756
19	345,359.09	1,311,811.54	47.9389	-122.1741
20	345,359.09	1,312,180.54	47.9390	-122.1725
21	345,006.49	1,310,799.77	47.9379	-122.1782
22	344,912.41	1,311,073.53	47.9377	-122.1770
23	344,912.41	1,311,442.53	47.9377	-122.1755
24	344,912.41	1,311,851.54	47.9377	-122.1739
25	344,912.41	1,312,180.54	47.9377	-122.1725

West Field				
Site #	Northing (ft)	Easting (ft)	Latitude (DD)	Longitude (DD)
1	347,768.06	1,309,376.62	47.9454	-122.1842
2	347,768.06	1,309,638.56	47.9454	-122.1831
3	347,768.06	1,309,900.50	47.9455	-122.1820
4	347,768.06	1,310,162.44	47.9455	-122.1810
5	347,404.05	1,309,376.62	47.9444	-122.1841
6	347,404.05	1,309,638.56	47.9444	-122.1831
7	347,404.05	1,309,900.50	47.9445	-122.1820
8	347,404.05	1,310,162.44	47.9445	-122.1809
9	347,040.04	1,309,376.62	47.9434	-122.1841
10	347,040.04	1,309,638.56	47.9434	-122.1830
11	347,040.04	1,309,900.50	47.9435	-122.1820
12	347,040.04	1,310,162.44	47.9435	-122.1809
13	346,676.03	1,309,376.62	47.9424	-122.1841
14	346,676.03	1,309,638.56	47.9425	-122.1830
15	346,676.03	1,309,900.50	47.9425	-122.1819
16	346,676.03	1,310,162.44	47.9425	-122.1809
17	346,312.02	1,309,376.62	47.9414	-122.1841
18	346,312.02	1,309,638.56	47.9415	-122.1830
19	346,312.02	1,309,900.50	47.9415	-122.1819
20	346,312.02	1,310,162.44	47.9415	-122.1808
21	345,948.01	1,309,638.56	47.9405	-122.1830
22	345,948.01	1,309,900.50	47.9405	-122.1819
23	345,948.01	1,310,162.44	47.9405	-122.1808
24	345,584.00	1,309,900.50	47.9395	-122.1819
25	345,584.00	1,310,162.44	47.9395	-122.1808

Appendix B: Groundwater Well Locations



Ground Water and Ground Site Elevation – Marshland Site

Elevation is measured in feet above Mean Sea Level

Scale: 1:6,000 1 inch = 500 feet

0 250 500 1,000

N W E S

EVERETT

5/5/2023

This Map has been produced using the best information available. However, the City of Everett in no way guarantees its accuracy.

MW #	Ground Elevation (ft)	Groundwater Elevation (ft)	Latitude (°)	Longitude (°)
MW-1	11.426	7.626	47.94161	-122.17361
MW-2	4.728	1.328	47.94248	-122.17932
MW-3	9.315	5.915	47.94529	-122.17742
MW-4	7.432	1.832	47.94332	-122.18021
MW-5	5.767	1.267	47.94595	-122.18204
MW-6	8.581	3.281	47.94277	-122.18455

G:\Home\HFlanagan\Maps\2023\230508_HLintukorpi_MarshlandUpdate\Marshland_Groundwater_Update.mxd

Appendix C: Site Soil Map

Site Specific Land Application Plan

Site Specific Land Application Plan
Marshland Agricultural Land

Submitted for 2025 Biosolids Permit Application

City of Everett
Public Works Department
Water Pollution Control Facility

Contents

Introduction

The City of Everett owns 165 acres of agricultural land within the limits of the City of Everett on Lowell-Snohomish River Road called Marshland Site (Appendix A). About 124 acres of the land has been used for biosolids beneficial use for many years. The site is managed for agricultural use by Sno-Valley Farms Inc. based in Snohomish County. Sno-Valley Farms has farmed Marshland for over fifteen years and has been farming in the area for forty-eight years.

This Site Specific Land Application Plan (SSLAP), submitted pursuant to the requirements of WAC 173-308, provides a site description, overview of operations, and application rate calculation for 2021. In future years, this SSLAP will be updated as needed, with current information on site-specific field operations. The City's Biosolids Program will track and record these activities in accordance with the requirements of WAC 173-308, this SSLAP, and any permit conditions.

Biosolids Characteristics

Biosolids are the processed, stabilized product of municipal wastewater treatment. Biosolids have undergone a Process to Significantly Reduce Pathogens (PSRP) or a Process to Further Reduce Pathogens (PFRP). Biosolids contain numerous plant nutrients, soil conditioning organic matter, and are of such a quality they can be safely and beneficially used. Generally, biosolids have a mild organic or ammonia odor. Biosolids are considered a commodity under Title 70.95J.005 of the Revised Code of Washington.

To be beneficially applied at Marshland Site as a soil amendment, Everett's biosolids are required to meet Class B pathogen reduction requirements, vector attraction reduction requirements, and metal concentrations that do not exceed Table 3 Pollutant Concentration Limits under WAC 173-308-160. A summary of the biological and chemical analysis of biosolids applied will be available in the City of Everett annual biosolids reports required under WAC 173-308 and 40 CFR part 503.

Nutrient Value

Biosolids contain numerous plant macro- and micronutrients essential for plant growth, including nitrogen, phosphorous, potassium, sulfur, boron, manganese, and zinc. Biosolids generally have a nitrogen content in the range between 1% and 6%. Most of this nitrogen is in organic form with a small portion in mineral form (ammonia-nitrogen, nitrate-nitrogen). The mineral nitrogen is rapidly available for plant use, much like commercial fertilizer. The remaining nitrogen is bound in a complex of organic matter and is only available for plant use as it is metabolized by microorganisms into mineral form. This process makes biosolids an excellent soil amendment as it releases nutrients over a period at a rate that closely matches crop needs. This slow-release process reduces the risk of nutrients leaching out of the root zone.

Biosolids application rates will be tailored to the soils, expected crops, and appropriate to the season through a calculation known as the agronomic rate. The agronomic rate supplies nutrients for specific crops while simultaneously protecting the surface and groundwater from excess application that could leach nutrients into the water. See Appendix B for the Application Rate Worksheet for the 2021 application on the East and West fields. Prior to future applications, additional soil and biosolids sampling will be performed to adjust application rate calculations.

Metals and Organic Compounds

There are trace amounts of metals and organic compounds found in most biosolids products. Some of the metals contained in biosolids are micronutrients essential for plant growth and include iron, copper, manganese, and zinc. Other nonessential elements, such as nickel, cadmium, and lead, are relatively immobile in the soil and remain in the surface soil after application. Trace organics remain in the soil where they are generally degraded by soil microorganisms. Trace organics are not readily taken up by plant roots and do not pose a significant risk to the food chain.

The City of Everett's most recent analyses are presented in Appendix C.

Microorganisms

Wastewater solids contain bacteria, viruses, protozoa, and helminths, all of which may be pathogenic. The treatment process reduces the concentration of these pathogens by maintaining conditions hostile to these types of organisms. The organisms that thrive under the treatment conditions out compete the potentially pathogenic organisms and digest or eat the wastewater solids. The digestion and stabilization process reduces the concentration of pathogens. Class B biosolids contain some pathogens, but levels have been reduced to protect human and environmental health when land applied. Class A biosolids are virtually free from pathogens. Pathogens remaining in Class B biosolids are exposed to sunlight, fresh air, and soil microbes. These conditions continue to reduce the risk that biosolids pose to human and environmental health.

The City of Everett's most recent analyses are presented in Appendix C.

Vector Attraction Reduction

Biosolids, as the remains of stabilized putrescible material, may attract vectors such as flying or crawling insects, birds, rodents, and other small vertebrates. These vectors can spread pathogens beyond the land application site boundaries and impact the surrounding environment. To reduce the biosolids' attractiveness to vectors, Everett stabilizes its biosolids using an anaerobic process within the treatment ponds. Everett utilizes Option 1a under 40 CFR 503.33(b)(2) regulations, ensuring that less than 17% additional volatile solids are lost during bench-scale anaerobic batch digestion for 40 days at 30° to 37° Celsius.

The City of Everett's most recent analyses are presented in Appendix C.

Solids Content

Everett mechanically dewaters biosolids with centrifuges after aeration cell dredging, and solids concentrations typically range between 28% and 40%.

Site Description

Location

The application site is located within the City of Everett and lies within Water Resources Inventory Area 7. The land is zoned agricultural and Incorporated City of Everett by the Snohomish County Planning Department.

Topography and Geology

This project is located in an alluvial plain with slopes ranging from 0 to 2%. Elevation above mean sea level is between 5 to 12 feet.

Soils

The Soil Conservation Service has mapped the soils in the project area as predominately Puget silty clay loam (Appendix A). Permeability of this soil is slow with a seasonal water table of 24 to 48 inches below grade.

Climate

The project lies in the Puget Sound lowlands region as classified by the National Oceanic and Atmospheric Administration (NOAA). The climate in this region consists of dry summers and wet mild winters. Maritime air masses originating over the Pacific Ocean are responsible for moderate temperatures year-round.

The dry season extends from May to mid-October which is characterized by prevailing westerly and northwesterly air flows. Daytime temperatures are normally in the low 70s with the maximum around 85° F to 90° F, and a diurnal temperature variation of approximately 20° F. Only one quarter of the average annual precipitation falls in the six months from April through September. The wet season begins in mid-October and peaks in mid-winter. Nearly half of the annual precipitation occurs in the four months from October through January. Prevailing airflow is from the southwest and the west during this period. Overcast cloudy skies with frequent low intensity precipitation are prevalent as a succession of Pacific storms moves into the region. Normal winter temperatures range from 35-40° F in the day and 28-35° F at night.

This marine dominated cycle is broken each winter by outbreaks of cold dry arctic or continental air masses. This condition is often characterized by initial snowfall followed by strong dry northeasterly winds, clear skies, and temperatures ranging from 10-32° F.

Vegetation

The project lies within the Puget Trough physiographic province. Vegetation consists of crops of blueberries, corn, grain, grass, as well as a small area of poplar trees.

Wildlife

The site supports numerous mammal species including small rodents, rabbits, coyotes, and deer. Bird sightings include raptors, corvids, grey herons, shore- and songbirds, in addition to waterfowl including ducks, geese, and swans.

Site Access and Haul Routes

The primary route for this project will be from the City's Water Pollution Control Facility (WPCF) to the Project location using the following roads:

- 4th Street SE to State Route 529 to I-5;
- I-5 south to 41st Street, south on the Larimer Road;
- East on the Lowell-Snohomish River Road to the project site.

Alternate routes with COE approval can be used if road or traffic conditions are not favorable along the primary route (ice, severe fog, road construction, etc.).

Fertilizer Considerations

Soils provide the 17 elements known to be essential for plant growth. The addition of biosolids to soils can provide sufficient nitrogen and potassium for crop growth. Other essential macro- and micronutrients are provided by biosolid application, such as sulfur, phosphorus, and zinc, however crops may need supplementary fertilizers to provide minimum nutrients. Additional nitrogen will not be added without Ecology approval. The appropriate biosolids application rate can be calculated by determining existing soil conditions, identifying crop needs and the fertilizer value of the biosolids.

Biosolids Application Rates

Application rates are calculated by determining annual nitrogen requirement of the proposed crops, biosolids nutrient characteristics, annual nitrogen inputs from nitrogen volatilization rates, mineralization rates, soil nitrogen content, and soil nitrogen storage capacity. Biosolids application rates will be calculated using methods described in "Managing Nitrogen from Biosolids" (Washington State Department of Ecology Publication #99-508) or other tools provided by Ecology.

Biosolids applications are made for a variety of purposes including fertilization and improvement of soil physical properties related to moisture infiltration and retention. Field applications of biosolids will be checked against the target application rate. The actual tons applied will be compared to the target rate. Adjustments to equipment will be made to meet the target rate as closely as possible. Given the type of application and the nature of the material, operations strive for an accuracy of the target rate of plus or minus 15%.

Site Operation

The following describes how biosolids are transported, stored, and handled on-site, including application, buffer areas, operations and environmental monitoring, approximate application schedules, and contingency plans.

Transportation

Biosolids will be transported in trucks, pups, containers, or in end dump trailers. Additional procedures for transportation are covered under the "Spill Prevention and Response Plan" (Appendix E).

Staging and Storage Areas

Staging areas are intended for short-term storage and consist of a location or locations on site where biosolids can be delivered and then loaded into application equipment. Biosolids will be off loaded onto the surface of the ground at predetermined sites on the application area of the permitted field. Centralized locations will be chosen that provide relatively convenient areas for off-loading, loading onto application equipment, close proximity to application sites, and minimal potential for environmental degradation.

Biosolids Application Methods

Biosolids will be applied in semi-solid form (>28% solids) using standard agricultural equipment.

Sno-Valley Farms, a private contractor with extensive experience in silviculture and agricultural applications, will apply the biosolids. Biosolids will be stockpiled on the surface of the ground, loaded into a side or rear discharge spreader, and uniformly spread over the surface of the ground before incorporation by tilling.

Routine equipment maintenance and cleaning are conducted on all applications' related equipment. All haul vehicles and equipment will be free of loose biosolids prior to leaving application areas. Applications will be suspended if weather or soil conditions make operations infeasible or unsafe.

Access Restrictions

Signs surrounding the site prohibit public access to the application site at any time.

Buffers

Buffers are strips of land around storage areas or application areas that are not intended to receive biosolids. Buffers are used to protect features such as surface water or wells that may be adversely impacted by nutrient laden run off water or to minimize the potential for nuisances such as odors from biosolids stockpiles. A list of buffers for a number of features is provided in Appendix D. Out of the 165 acres, approximately 124 acres can receive biosolids when considering the appropriate buffers. Buffer distances and locations will be identified for all significant features on each site with traffic cones, stakes with flagging, or disk implement to form rows.

Site Monitoring

Monitoring of project operations and local environmental conditions will occur as needed. Monitoring of soil nitrate may occur to verify or refine the target application rate. Record keeping and reporting will occur as required by regulations, however, both the Federal biosolids rule, 40 CFR Part 503, and the Washington State Biosolids Management Rule, WAC 173-308, do not require routine monitoring or data reporting of soils, ground, or surface waters. In part this reflects that biosolids metal pollutant concentration limits (Table 3 of WAC 173-308-160) have been set such that biosolids concentration less than Table 3 limits should pose no significant adverse environmental risks or impacts.

Operations Monitoring

The City of Everett Biosolids Program will keep records of biosolids deliveries, applications, and any operational difficulties and solutions. The Biosolids Program will utilize individual maps and application worksheets that list application rates and identify application areas, significant features, storage areas, and buffer zones. The Biosolids Program will conduct periodic visual inspections during operations. Application areas, buffer zones, road conditions, and storage areas will be checked at least once per day during application and trucking and then as applicable after application.

Environmental Monitoring

Environmental monitoring is done to confirm that applications are not negatively impacting the environment as well as demonstrate positive effects, such as increased soil organic matter.

Groundwater (domestic well water)

No private wells exist within a quarter mile of the proposed applications tracts. The site is within the City of Everett and private wells are not allowed within the City per city ordnance (Everett Municipal Code 14.16.020). Six groundwater wells onsite are utilized to measure and track groundwater levels (Appendix A). Application will only occur where water is not found within 1 foot of the surface.

Soil

Samples for all fields will be collected prior (background) and post biosolids application to assess soil conditions and develop application rates for the next growing season. Soil sampling will be completed for pH, ammonia, Nitrate, Nitrite, and TKN.

Vegetation response

Monitored under the City's Biosolids Program and our contractor, Sno-Valley Farms, to determine growth response. Additional analysis and observations may be noted.

Seasonal and daily timing of applications

Biosolids will only be applied during the drier summer months when nutrient addition would provide a significant benefit. In the event of heavy seasonal rainstorms during this period, biosolids application will be curtailed to minimize the potential for runoff. Biosolids will be applied in compliance with City of Everett's noise ordinance, EMC Chapter 20.08. No operations will occur during times or under conditions that may adversely impact the public's health, the environment or the safety of City or contractors' work crews.

Contingency Plan

The City of Everett removes biosolids from its wastewater lagoons once per year. Solids are stored on the bio-pad at the Water Pollution Control Facility and can be stored there for extended periods of time. The application of those solids is contracted out each year. If this Marshland site were to become unavailable for land application, the City would award the application contract to another facility. Therefore, it is extremely unlikely that a situation would occur where biosolids would need to be removed from the production facility on an emergency basis.

The City of Everett Biosolids Program and the Contractor will handle any incidents, such as a spill, traffic, or work site accidents. Incidents will be managed to minimize or eliminate hazards to operations personnel, the environment, and the public. The haul contractor will handle any incidents or problems in transporting biosolids to the site according to the City's Spill Response Prevention and Response Plan Handbook (Appendix D). The City's Biosolids Program and the biosolids application contractor will manage incidents occurring after the delivery of biosolids.

Compliance, Record Keeping, and Reports

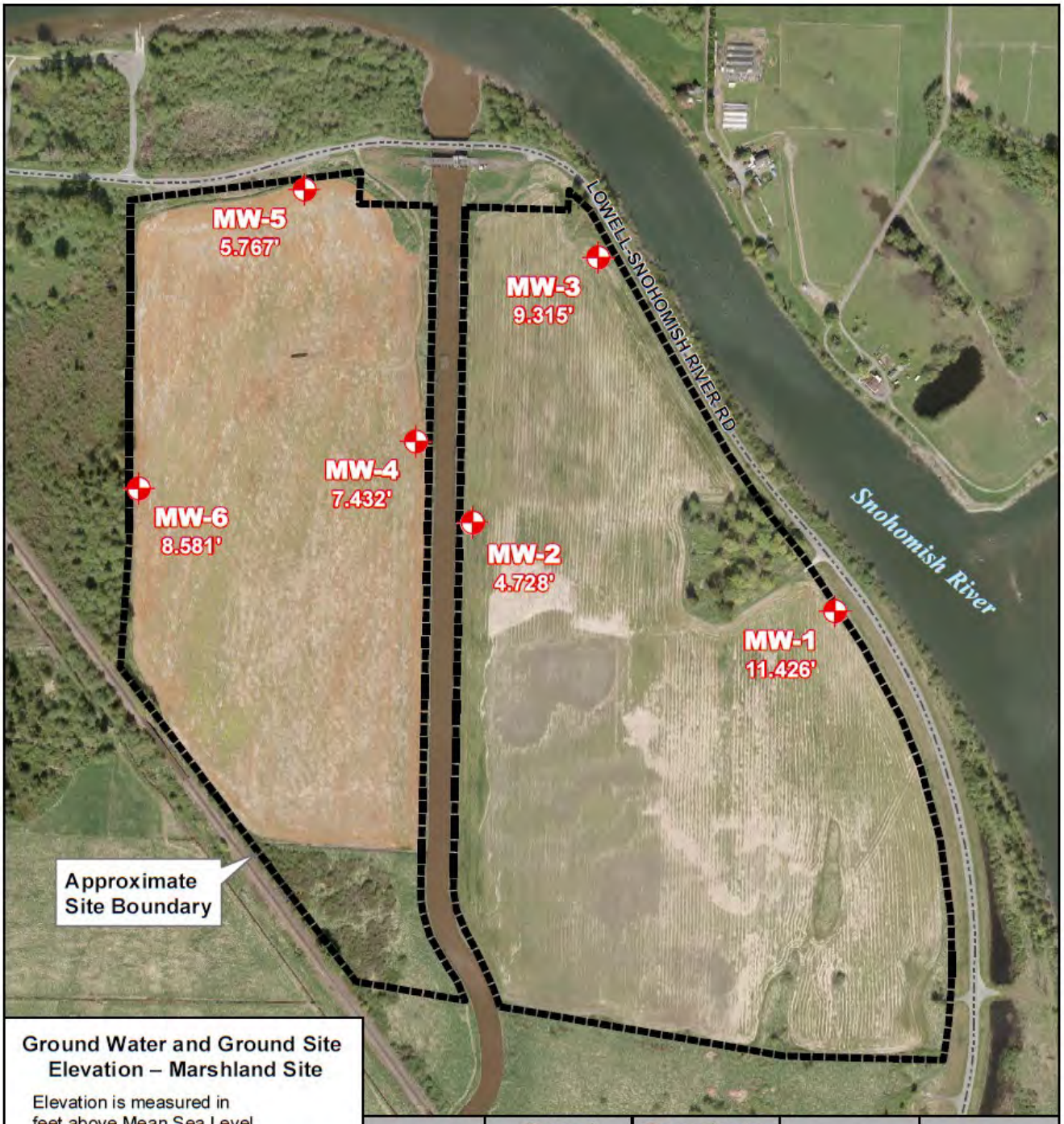
Regulatory compliance will be in accordance with federal regulations (40 CFR Part 503), State regulations (WAC 173-308), and any local jurisdiction with authority.

The City Biosolids Program will keep records for 5 years on the quantity of biosolids applied and biosolids quality information including the metals concentrations, pathogen and vector attraction reduction requirements, and certification statements that state and federal requirements were met. Additionally, records are typically maintained for pre- and post-application monitoring data, application areas, acreage, application rates, and response to incidents.

Appendix A

Area Map, Site Map with Groundwater Wells Identified, & Soil Types Map


Marshland Site
Marshland Site Location
County road data and imagery provided by Snohomish County via http://gismaps.snoco.org/snocogis/
Scale: 1:48,000 1 inch = 4,000 feet
0 2,000 4,000 8,000
N
W E
S
EVERETT
5/15/2020
This Map has been produced using the best information available. However, the City of Everett in no way guarantees its accuracy.
16th St
19th St
23rd St
Everett Ave SR 529
Hewitt Ave
Pacific Ave
41st St
52nd St SE
Pecks Dr
Madison St
75th St SE
79th Pl SE
SR 526
W Casino Rd
SE Everett Mall Way
100th St SE
Broadway Ave
Rucker Ave
Colby Ave
Walnut St
E Grand Ave
W Marine View Dr
Nassau St
Dogwood Dr
Glenwood Ave
Beverly Ln
Beverly Blvd
W Mukilteo Blvd
S 3rd Ave
S 2nd Ave
Bothell Everett Hwy
Evergreen Wy
7th Ave SE
27th Ave SE
Whitechuck Dr
Larimer Rd
US 2
51st Ave SE
43rd Ave SE
Sunnyside Blvd SE
SR 204
8th St SE
79th Ave SE
83rd Ave SE
20th St SE
Cavalero Rd
S Lake Stevens Rd
87th Ave SE
Bickford Ave
Skipley Rd
60th St SE
66th Ave SE
83rd Ave SE
Foster Slough Rd
Riverview Rd
Lowell Snohomish River Rd
Marsh Rd
Lowell Larimer Rd
116th St SE
17th St SE
35th Ave SE
51st Ave SE
Seattle Hill Rd
SR 96



Ground Water and Ground Site Elevation – Marshland Site

Elevation is measured in feet above Mean Sea Level

Scale: 1:6,000 1 inch = 500 feet

0 250 500 1,000

N W E S

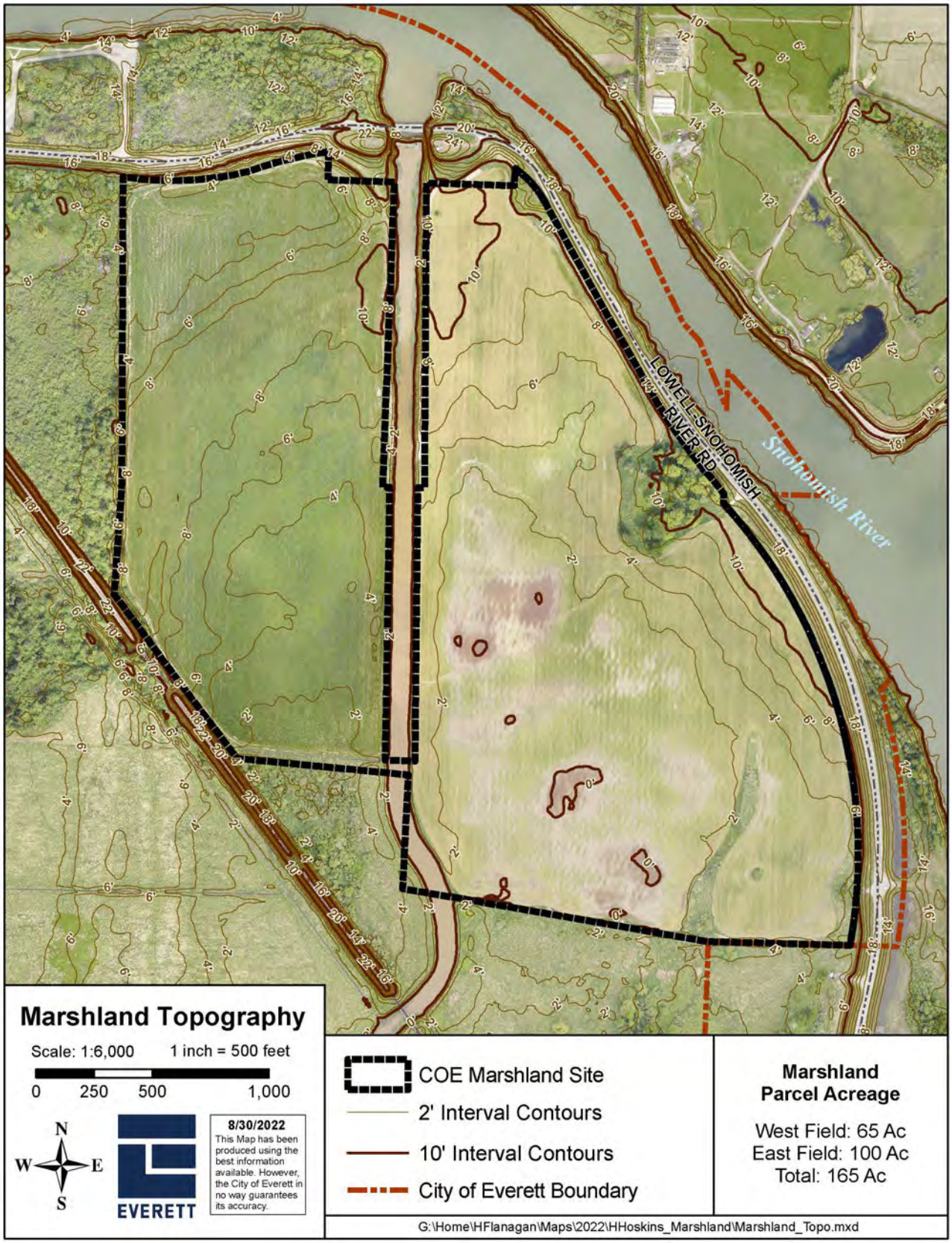
EVERETT

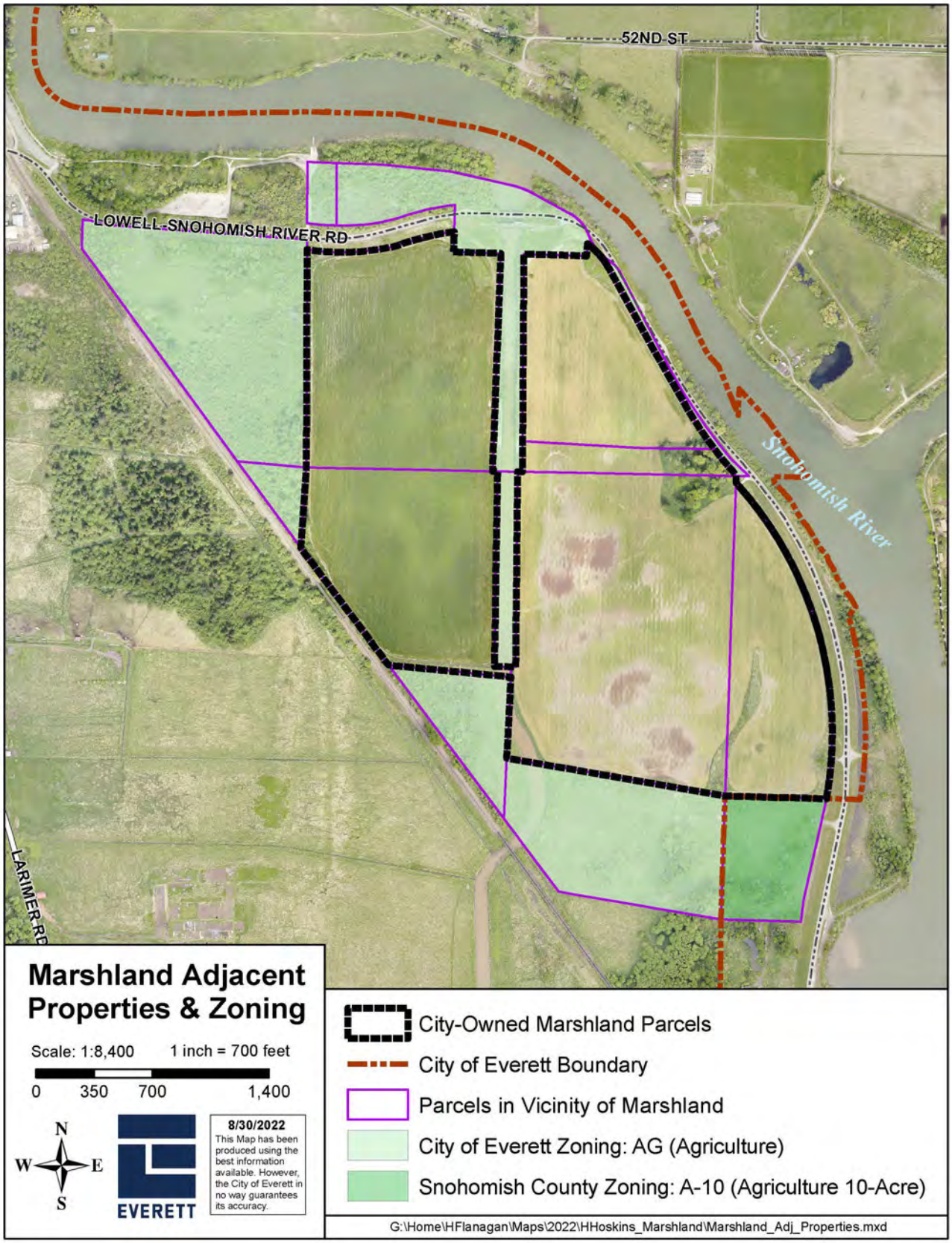
4/5/2021
This Map has been produced using the best information available. However, the City of Everett in no way guarantees its accuracy.

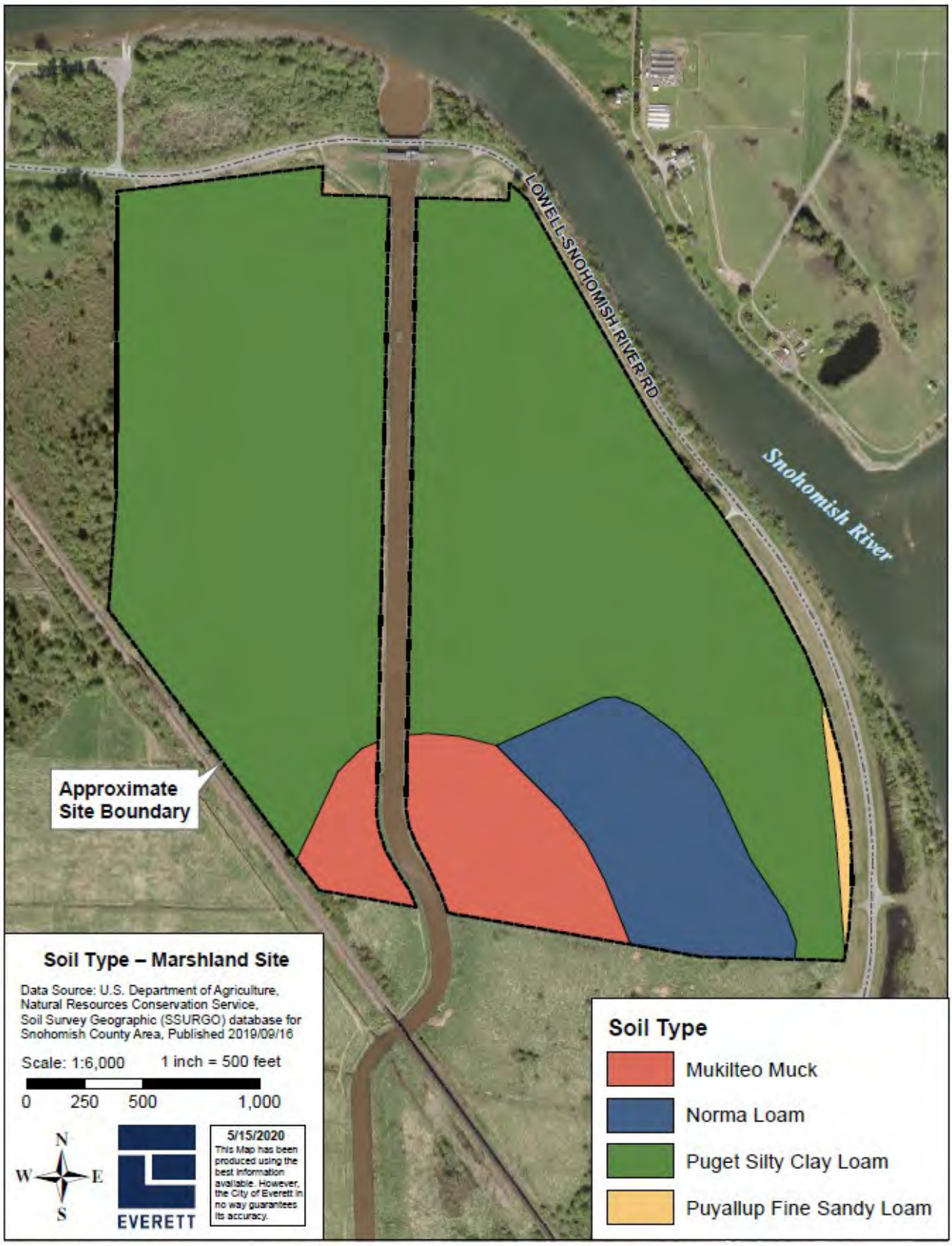
G:\Home\HFlanagan\Maps\2021\HLintukorpi_Marshland_GW_Update\Marshland_MW_Update_2021.mxd

MW #	Ground Elevation (ft)	Groundwater Elevation (ft)	Latitude (°)	Longitude (°)
MW-1	11.426	7.226	47.94161	-122.17361
MW-2	4.728	1.628	47.94248	-122.17932
MW-3	9.315	5.515*	47.94529	-122.17742
MW-4	7.432	2.232	47.94332	-122.18021
MW-5	5.767	0.367	47.94595	-122.18204
MW-6	8.581	3.881	47.94277	-122.18455

*MW-3 groundwater level was measured on 4/26/2021


LOWELL-SNOHOMISH RIVER RD
Snohomish River
Marshland Topography
Scale: 1:6,000
1 inch = 500 feet
0
250
500
1,000
N
W
E
S
EVERETT
8/30/2022
This Map has been produced using the best information available. However, the City of Everett in no way guarantees its accuracy.
COE Marshland Site
2' Interval Contours
10' Interval Contours
City of Everett Boundary
Marshland Parcel Acreage
West Field: 65 Ac
East Field: 100 Ac
Total: 165 Ac
G:\Home\HFlanagan\Maps\2022\HHoskins_Marshland\Marshland_Topo.mxd


52ND ST
LOWELL-SNOHOMISH RIVER RD
Snohomish River
LARIMER RD
Marshland Adjacent Properties & Zoning
Scale: 1:8,400
1 inch = 700 feet
0
350
700
1,400
N
W
E
S
EVERETT
8/30/2022
This Map has been produced using the best information available. However, the City of Everett in no way guarantees its accuracy.
City-Owned Marshland Parcels
City of Everett Boundary
Parcels in Vicinity of Marshland
City of Everett Zoning: AG (Agriculture)
Snohomish County Zoning: A-10 (Agriculture 10-Acre)
G:\Home\HFlanagan\Maps\2022\HHoskins_Marshland\Marshland_Adj_Properties.mxd


LOWELL-SNOHOMISH RIVER RD
Snohomish River
Approximate Site Boundary
Soil Type – Marshland Site
Data Source: U.S. Department of Agriculture, Natural Resources Conservation Service, Soil Survey Geographic (SSURGO) database for Snohomish County Area, Published 2019/09/16
Scale: 1:6,000 1 inch = 500 feet
0 250 500 1,000
N
W E
S
EVERETT
5/15/2020
This Map has been produced using the best information available. However, the City of Everett in no way guarantees its accuracy.
Soil Type
Mukilteo Muck
Norma Loam
Puget Silty Clay Loam
Puyallup Fine Sandy Loam

Appendix B

Example Application Rate Worksheet

East Field, Corn

GENERAL INFORMATION

Biosolids Source	Everett Aeration Cell 2	
Field Number/ID	Marsh	
Dry tons biosolids available (= wet tons x % solids)	1,000.00	dry tons
Acres available	73.000	acres

BIOSOLIDS DATA

Ammonia/ammonium-N	2,480	mg/kg	5	#/dry ton
Nitrate-N	1	mg/kg	0	#/dry ton
Total Kjeldahl N	30,100	mg/kg	60	#/dry ton
Percent solids	36%			
Organic nitrogen	27,620	mg/kg	55	#/dry ton

NITROGEN (N) CREDITS

PREVIOUS BIOSOLIDS APPLICATIONS	Last Year	2 Years Ago	3 Years Ago	4 Years Ago
Dry tons applied/acre to site	15			
Organic N concentration (mg/kg)	10,130			
N credit (#/dry ton)	2	0	0	0
N credit (#/acre)	25	0	0	0

OTHER CREDITS NOT ACCOUNTED FOR

Nitrate-N applied in irrigation water		#/acre
N applied at seeding (starter fertilizer)	2	#/acre
Preplant nitrate-N in root zone (east of Cascades)		#/acre
Plowdown of cover or green manure crop		#/acre
Previous manure applications		#/acre
Total N credit	27	#/acre

NITROGEN FERTILIZER RECOMMENDATION

Nitrogen recommendation **(via guidelines, agronomist, etc.)**	200	# N/acre/yr

ESTIMATED BIOSOLIDS PLANT-AVAILABLE NITROGEN

Percent of ammonium-N retained after application **(see Table 1)**	30%	
Percent of organic N mineralized in Year 1 **(see Table 2)**	20%	
Estimated plant-available N in biosolids	13	# N/dry ton
Amount of plant-available N needed from biosolids	173	# N/acre

AGRONOMIC BIOSOLIDS APPLICATION RATE

Dry tons per acre =	14	dt/acre
Wet tons per acre =	39	wt/acre
Cubic yards per acre =	46	yd^3/acre
Cubic feet per acre =	1,249	ft^3/acre
Gallons per acre =	9,343	gallons/acre
Acre-inches per acre	0	acre-inches/acre

ACREAGE NEEDED

Acres needed	72	acres

West Field, Winter Wheat

GENERAL INFORMATION

Biosolids Source	Everett Aeration Cell 2	
Field Number/ID	Marsh	
Dry tons biosolids available (= wet tons x % solids)	500.00	dry tons
Acres available	51.000	acres

BIOSOLIDS DATA

Ammonia/ammonium-N	2,480	mg/kg	5	#/dry ton
Nitrate-N	1	mg/kg	0	#/dry ton
Total Kjeldahl N	30,100	mg/kg	60	#/dry ton
Percent solids	36%			
Organic nitrogen	27,620	mg/kg	55	#/dry ton

NITROGEN (N) CREDITS

PREVIOUS BIOSOLIDS APPLICATIONS	Last Year	2 Years Ago	3 Years Ago	4 Years Ago
Dry tons applied/acre to site	15			
Organic N concentration (mg/kg)	10,130			
N credit (#/dry ton)	2	0	0	0
N credit (#/acre)	25	0	0	0

OTHER CREDITS NOT ACCOUNTED FOR		
Nitrate-N applied in irrigation water		#/acre
N applied at seeding (starter fertilizer)		#/acre
Preplant nitrate-N in root zone (east of Cascades)		#/acre
Plowdown of cover or green manure crop		#/acre
Previous manure applications		#/acre
Total N credit	25	#/acre

NITROGEN FERTILIZER RECOMMENDATION

Nitrogen recommendation **(via guidelines, agronomist, etc.)**	140	# N/acre/yr

ESTIMATED BIOSOLIDS PLANT-AVAILABLE NITROGEN

Percent of ammonium-N retained after application **(see Table 1)**	30%	
Percent of organic N mineralized in Year 1 **(see Table 2)**	20%	
Estimated plant-available N in biosolids	13	# N/dry ton
Amount of plant-available N needed from biosolids	115	# N/acre

AGRONOMIC BIOSOLIDS APPLICATION RATE

Dry tons per acre =	9	dt/acre
Wet tons per acre =	26	wt/acre
Cubic yards per acre =	31	yd^3/acre
Cubic feet per acre =	830	ft^3/acre
Gallons per acre =	6,212	gallons/acre
Acre-inches per acre	0	acre-inches/acre

ACREAGE NEEDED

Acres needed	54	acres

Appendix C

Biosolids Analytical Data

CITY OF EVERETT
ENVIRONMENTAL LABORATORY

PROJECT #
00065621

Client:	CITY OF EVERETT	Date Received:	01/29/24
Program:	BSM - EWPCF AC2	Data Release:	CM
Contact:	Joe Furguson	Date Reported:	02/28/24

Department	Analysis	Units	DL	Method	PQL	BQ46064 Dewatered AC2 Biosolids 01/29/24	BQ46065 Dewatered AC2 Biosolids 01/29/24
CONTRACT	Ammonia	mg-N/kg				2100	2860
	Nitrate/Nitrite	mg-N/kg				4.51	5.89
	Phosphorus	mg/kg				7910	6600
	TKN	mg-N/kg				34000	31400
CONVENTIONALS	% TS	%		SM2540-G		21.6	23.7
	% TVS	%		SM2540-G		54.7	49.6
METALS(S)	Arsenic mg/kg	mg/kg	0.807	6020B	3.228		10.6
			0.880	6020B	3.520	10.9	
	Cadmium mg/kg	mg/kg	0.538	6020B	2.152		2.49
			0.587	6020B	2.348	2.10 J	
	Chromium mg/kg	mg/kg	1.34	6020B	5.36		72.7
			1.47	6020B	5.88	76.3	
	Copper mg/kg	mg/kg	1.34	6020B	5.36		343
			1.47	6020B	5.88	352	
	Lead mg/kg	mg/kg	0.807	6020B	3.228		46.4
			0.880	6020B	3.520	39.8	
	Mercury mg/kg	mg/kg	0.001	7471	0.004	0.812	0.749
	Molybdenum mg/kg	mg/kg	0.807	6020B	3.228		23.7
			0.880	6020B	3.520	20.3	
	Nickel mg/kg	mg/kg	0.807	6020B	3.228		44.6
			0.880	6020B	3.520	50.8	
	Potassium mg/kg	mg/kg	26.9	6020B	107.6		1410
			29.3	6020B	117.2	1650	
	Selenium mg/kg	mg/kg	0.807	6020B	3.228		5.22
			0.880	6020B	3.520	5.58	
	Silver mg/kg	mg/kg	0.807	6020B	3.228		4.38
			0.880	6020B	3.520	3.53	
	Zinc mg/kg	mg/kg	8.07	6020B	32.28		1170
			8.80	6020B	35.20	1240	
MICRO	Fecal Coliform MPN	#/g Dry		9221E/9221C		14000	72000

DATA REPORTING QUALIFIERS

DL = Detection Limit
PQL = Practical Quantitation Limit (= 4xDL)
J = Analyte concentration less than PQL
SA = See Attached
ND = No Data
TNTC = Too numerous to count

M = Matrix effect / interference
P/A (used for Total Coliform results) P= Coliforms present, A = Coliforms absent
Y/N (used for E. Coli Results) Y= E. Coli present, N=E. Coli absent
E = Estimated Value. Count from plates not within ideal range.
R = Sample was re-analyzed after holding time.
H = Analyzed past hold time
* Flagged value QC not within estabilshed control limits

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CITY OF EVERETT
ENVIRONMENTAL LABORATORY

PROJECT #
00065621

Client:	CITY OF EVERETT	Date Received:	01/29/24
Program:	BSM - EWPCF AC2	Data Release:	CM
Contact:	Joe Furguson	Date Reported:	02/28/24

Department	Analysis	Units	DL	Method	PQL	BQ46066 Dewatered AC2 Biosolids 01/29/24	BQ46067 Dewatered AC2 Biosolids 01/29/24
CONTRACT	Ammonia	mg-N/kg				1950	2750
	Nitrate/Nitrite	mg-N/kg				3.39	<0.34 H
	Phosphorus	mg/kg				6910	7360
	TKN	mg-N/kg				27300	20900
CONVENTIONALS	% TS	%		SM254D-G		22.7	27.1
	% TVS	%		SM254D-G		49.4	39.7
METALS(S)	Arsenic mg/kg	mg/kg	0.691	6020B	2.764		12.1
			0.843	6020B	3.372	15.1	
	Cadmium mg/kg	mg/kg	0.461	6020B	1.844		4.78
			0.562	6020B	2.248	5.94	
	Chromium mg/kg	mg/kg	1.15	6020B	4.60		88.2
			1.41	6020B	5.64	107	
	Copper mg/kg	mg/kg	1.15	6020B	4.60		383
			1.41	6020B	5.64	477	
	Lead mg/kg	mg/kg	0.691	6020B	2.764		90.0
			0.843	6020B	3.372	120	
	Mercury mg/kg	mg/kg	0.001	7471	0.004	1.26	1.75
	Molybdenum mg/kg	mg/kg	0.691	6020B	2.764		31.1
			0.843	6020B	3.372	37.8	
	Nickel mg/kg	mg/kg	0.691	6020B	2.764		60.4
			0.843	6020B	3.372	78.4	
	Potassium mg/kg	mg/kg	23.0	6020B	92.0		1210
			28.1	6020B	112.4	1510	
	Selenium mg/kg	mg/kg	0.691	6020B	2.764		5.09
			0.843	6020B	3.372	5.96	
	Silver mg/kg	mg/kg	0.691	6020B	2.764		11.9
			0.843	6020B	3.372	14.7	
	Zinc mg/kg	mg/kg	6.91	6020B	27.64		1180
			8.43	6020B	33.72	1450	
MICRO	Fecal Coliform MPN	#/g Dry		9221E/9221C		75000	33000

DATA REPORTING QUALIFIERS

DL = Detection Limit
PQL = Practical Quantitation Limit (= 4xDL)
J = Analyte concentration less than PQL
SA = See Attached
ND = No Data
TNTC = Too numerous to count

M = Matrix effect / interference
P/A (used for Total Coliform results) P= Coliforms present, A = Coliforms absent
Y/N (used for E. Coli Results) Y= E. Coli present, N=E. Coli absent
E = Estimated Value. Count from plates not within ideal range.
R = Sample was re-analyzed after holding time.
H = Analyzed past hold time
* Flagged value QC not within established control limits

CITY OF EVERETT
ENVIRONMENTAL LABORATORY

PROJECT #
00065621

Client:	CITY OF EVERETT	Date Received:	01/29/24
Program:	BSM - EWPCF AC2	Data Release:	CM
Contact:	Joe Furguson	Date Reported:	02/28/24

Department	Analysis	Units	DL	Method	PQL	BQ46068 Dewatered AC2 Biosolids 01/29/24	BQ46069 Dewatered AC2 Biosolids 01/29/24
CONTRACT	Ammonia	mg-N/kg				1960	2600
	Nitrate/Nitrite	mg-N/kg				0.35	<0.35
	Phosphorus	mg/kg				6990	8640
	TKN	mg-N/kg				21400	20700
CONVENTIONALS	% TS	%		SM2540-G		27.5	26.6
	% TVS	%		SM2540-G		40.5	42.0
METALS(S)	Arsenic mg/kg	mg/kg	0.673	6020B	2.692	11.5	
			0.695	6020B	2.780		10.7
	Cadmium mg/kg	mg/kg	0.449	6020B	1.796	4.83	
			0.464	6020B	1.856		4.68
	Chromium mg/kg	mg/kg	1.12	6020B	4.48	74.6	
			1.16	6020B	4.64		84.3
	Copper mg/kg	mg/kg	1.12	6020B	4.48	355	
			1.16	6020B	4.64		411
	Lead mg/kg	mg/kg	0.673	6020B	2.692	99.5	
			0.695	6020B	2.780		108
	Mercury mg/kg	mg/kg	0.001	7471	0.004	1.59	3.05
	Molybdenum mg/kg	mg/kg	0.673	6020B	2.692	30.4	
			0.695	6020B	2.780		36.2
	Nickel mg/kg	mg/kg	0.673	6020B	2.692	54.6	
			0.695	6020B	2.780		57.9
	Potassium mg/kg	mg/kg	22.4	6020B	89.6	1200	
			23.2	6020B	92.8		1150
	Selenium mg/kg	mg/kg	0.673	6020B	2.692	4.54	
			0.695	6020B	2.780		4.97
	Silver mg/kg	mg/kg	0.673	6020B	2.692	11.0	
			0.695	6020B	2.780		12.0
	Zinc mg/kg	mg/kg	6.73	6020B	26.92	1110	
			6.95	6020B	27.80		1210
MICRO	Fecal Coliform MPN	#g Dry		9221E/9221C		62000	90000

DATA REPORTING QUALIFIERS

DL - Detection Limit
PQL - Practical Quantitation Limit (= 4xDL)
J - Analyte concentration less than PQL
SA - See Attached
ND - No Data
TNTC - Too numerous to count

M - Matrix effect / Interference
P/A (used for Total Coliform results) P= Coliforms present, A = Coliforms absent
Y/N (used for E. Coli Results) Y= E. Coli present, N=E. Coli absent
E = Estimated Value. Count from plates not within ideal range.
R = Sample was re-analyzed after holding time.
H = Analyzed past hold time
* Flagged value QC not within established control limits

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CITY OF EVERETT
ENVIRONMENTAL LABORATORY

PROJECT #
00065621

Client:	CITY OF EVERETT	Date Received:	01/29/24
Program:	BSM - EWPCF AC2	Data Release:	CM
Contact:	Joe Furguson	Date Reported:	02/28/24

Department	Analysis	Units	DL	Method	PQL	BQ46070 Field Composite 01/29/24
CONTRACT	Ammonia	mg-N/kg				2390
	Nitrate/Nitrite	mg-N/kg				<0.36
	Phosphorus	mg/kg				7400
	TKN	mg-N/kg				25600
CONVENTIONALS	% TS	%		SM2540-G		25.2
	% TVS	%		SM2540-G		45.4
METALS(S)	Arsenic mg/kg	mg/kg	0.731	6020B	2.924	11.2
	Cadmium mg/kg	mg/kg	0.487	6020B	1.948	4.08
	Chromium mg/kg	mg/kg	1.22	6020B	4.88	81.9
	Copper mg/kg	mg/kg	1.22	6020B	4.88	373
	Lead mg/kg	mg/kg	0.731	6020B	2.924	77.9
	Mercury mg/kg	mg/kg	0.001	7471	0.004	1.15
	Molybdenum mg/kg	mg/kg	0.731	6020B	2.924	30.1
	Nickel mg/kg	mg/kg	0.731	6020B	2.924	65.1
	Potassium mg/kg	mg/kg	24.4	6020B	97.6	1310
	Selenium mg/kg	mg/kg	0.731	6020B	2.924	5.11
	Silver mg/kg	mg/kg	0.731	6020B	2.924	9.17
	Zinc mg/kg	mg/kg	7.31	6020B	29.24	1180
MICRO	Fecal Coliform MPN	#/g Dry		9221E/9221C		28000

DATA REPORTING QUALIFIERS

DL - Detection Limit
PQL - Practical Quantitation Limit (= 4xDL)
J - Analyte concentration less than PQL
SA - See Attached
ND - No Data
TNTC - Too numerous to count

M - Matrix effect / interference
P/A (used for Total Coliform results) P- Coliforms present, A - Coliforms absent
Y/N (used for E. Coli Results) Y- E. Coli present, N-E. Coli absent
E - Estimated Value. Count from plates not within ideal range.
R - Sample was re-analyzed after holding time.
H - Analyzed past hold time
* Flagged value QC not within established control limits

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CITY OF EVERETT
ENVIRONMENTAL LABORATORY

PROJECT #
00065192

Client:	CITY OF EVERETT	Date Received:	11/29/23
Program:	BSM - EWPCF AC2	Data Release:	SF
Contact:	JOSEPH FERGUSON	Date Reported:	01/18/24

Department	Analysis	Units	DL	Method	PQL	BQ26372 COMP 11/29/23	BQ26373 COMP DUP 11/29/23
MICRO	VAR Test	Pvsn %				**11.5**	**10.4**

DATA REPORTING QUALIFIERS

DL = Detection Limit
PQL = Practical Quantitation Limit (= 4xDL)
J = Analyte concentration less than PQL
SA = See Attached
ND = No Data
TNTC = Too numerous to count

M = Matrix effect / interference
P/A (used for Total Coliform results) P= Coliforms present, A = Coliforms absent
Y/N (used for E. Coli Results) Y= E. Coli present, N=E. Coli absent
E = Estimated Value. Count from plates not within ideal range.
R = Sample was re-analyzed after holding time.
H = Analyzed past hold time
* Flagged value QC not within established control limits

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Appendix D

Buffers

Buffers

Minimum Distance	Feature
100 ft	Surface Water*
100 ft	Irrigation Wells*
25 ft	Monitoring Wells
200 ft	Surface Water, perennial
30 ft	Surface Water, intermittent*
200 ft	Dwellings*
10-50 ft	Roadways, state (from centerline, as appropriate)*
10-50 ft	Roadways, county (from centerline as appropriate)*
25 ft	Property line

***not applicable to this site**

Appendix E

Spill Prevention & Response Plan

City of Everett Biosolids Program

Spill Prevention & Response Plan

General

Vehicles

The vehicle owner is responsible for maintaining and repairing equipment. At a minimum, the following safety equipment should be in all trucks:

- Flares
- Flashlight
- Flashing light or beacon
- Safety cones
- Shovel
- Broom
- First aid kit
- Personal protective equipment
- Absorbent pads for blocking storm drains
- State of Washington Accident Report Forms
- A copy of this handbook

The Contractor is responsible for assuring an appropriate communication system is in all Contractor vehicles.

All truck and trailer tires must be washed at the City provided wash station prior to leaving the Biosolid Pad to minimize tracking or dropping biosolids onto the roadways.

Safety

All drivers should be trained in defensive, safe driving methods and should have current first aid certifications. All drivers must have current licenses for the vehicles they operate.

Safe materials handling practices:

- Wear appropriate personal protective gear when cleaning up spills or cleaning vehicles
- Wash hands frequently
- Keep vaccinations up to date

Driving safety:

- Drive safely, courteously, and defensively
- Operate vehicles within posted speed limits
- Check vehicles before operating including oil, air lines, water, tires, and lights
- Secure loads

Odor Control

To avoid nuisance odors, drivers should not stop en route to disposal sites other than at rest areas, truck stops, or weigh stations. Emergencies or equipment failure are the exceptions.

All trailers should be covered; covers should be maintained and in good repair.

Emergency Procedures

All vehicles should contain a copy of this handbook to help the driver respond to emergencies. A quick response to an emergency will help to minimize impacts. Drivers shall remain at the scene of any accident or spill until emergency responders arrive and give the driver permission to leave.

Communications

If the driver is involved in a vehicle accident or is the first to arrive at the scene of an accident, the driver shall radio or call their dispatcher and their respective supervisor. The dispatcher will notify appropriate emergency responders. If the driver is unable to contact their dispatcher or supervisor, contact emergency services (911) immediately.

The following information should be provided to the dispatcher or emergency response personnel:

- Address or location of accident
- Number of people involved
- Injuries
- Nature of accident

Vehicular Accidents

If the driver is involved in a vehicle accident or is the first to arrive at the scene of an accident, assist any injured persons per First Aid/CPR training.

The driver should radio or call their dispatcher and their respective supervisor. The dispatcher will notify appropriate emergency responders. If the driver is unable to contact their dispatcher or supervisor, contact emergency services (911) immediately.

The following information should be provided to the dispatcher or emergency response personnel:

- Address or location of accident
- Number of persons involved
- Injuries
- Nature of accident

Move vehicles out of traffic if it is safe to do so and law enforcement allows. Turn on warning lights or place traffic control devices if necessary.

Complete the Vehicle Accident Report Forms and obtain a copy of the police report prior to leaving the scene.

Non-Vehicular Accidents

Accidents of this nature that involve real or suspected property or bodily damage must be reported to the dispatcher immediately. The dispatcher shall notify the appropriate agency for follow up and investigation.

Spills

The primary concern with a spill is the risk of adverse impacts to the public through direct contact or the environment, e.g., surface water bodies. Regardless of the spill size, immediate action should be taken to contain the spill and the driver should not leave the site until the spill is adequately cleaned up.

All spills should be reported to the City and any appropriate regulating agencies. A starting point for reporting is provided on the last page, however additional reporting may be required.

Minor spills may only require a shovel for cleanup. Major spills may require mobilization of trucks, loaders, vactor trucks, water trucks, and temporary erosion control measures.

Definitions

Major Spill

A major spill results from the truck or pup tipping or collapsing due to accidents, mechanical malfunctions, or driver error. Major spills cannot be cleaned up by the driver alone in a reasonable amount of time and may present a risk to the public or the environment.

Minor Spill

A minor spill results from shifting of contents in the truck or pup or sudden stops. Minor spills can be cleaned up by the driver with a shovel in a reasonable amount of time, and do not present a risk to the public or the environment.

Driver Responsibilities

In the event of a spill, the driver must take the following steps to minimize the effects of a spill, if applicable:

- Secure area surrounding spill to prevent public contact
- Divert traffic to prevent motorists from driving through the material
- Notify dispatcher and describe the quantity of spilled material
- Contain the spilled material
- Remove and transport material to staging or disposal site

Contractor Responsibilities

The Contractor shall notify the City of Everett's Project Manager and appropriate spill reporting agencies immediately. If needed, the Contractor will also arrange for emergency response and clean up assistance. A list of City of Everett and a sample of spill reporting contacts and phone numbers are in the Emergency Contacts section.

The size of the spill will affect clean up methods and materials. In the event of a spill that does not have the potential to adversely impact the public or the environment, the Contractor shall first notify the City and then proceed with clean up. The City's Project Manager alternate may perform an on-site inspection to verify that corrective action is adequate. In the event cleanup is not adequate, the City may authorize its own crews or a third party to complete the work at the Contractor's expense.

The Contractor must complete an Incident Spill Report and provide a copy to the City as soon as possible. Incident Spill Reports are included in Contract Bid documents or per request.

Emergency Contact

Driver Responsibilities

When making an emergency contact the following information should be provided:

- Who is calling
- What has happened
- Where it happened
- When it happened
- What caused the event
- How much material is involved
- Risk of public or environmental exposure
- Actions taken

Contractor Responsibilities

The Contractor is responsible for making the following contacts:

- Emergency response (911), if applicable
- City PM or alternate
- Regulatory Agencies
- Clean-up subcontractors

Emergency Contacts Numbers

Primary

Hanna Lintukorpi – Biosolids Manager *HLintukorpi@everettwa.gov*	(425) 257-8946

Alternates

Derek Kerlee, Chief Wastewater Operator	(425) 257-6790
Water Pollution Control Facility Day Operator	(425) 257-8244
Public Works 24 Hour Dispatch	(425) 257-8821

Regulatory Agencies*

Ecology Spill Reporting Line	(206) 594-0000
Washington Emergency Management Division (If to Waters of the State)	(800) 258-5990
National Response Center (If to Waters of the State)	(800) 424-8802

Biosolids Regulator per Region

Northwest – Amber Corfman	**(425) 918-4786**
Central – Ruby Irving-Hewey	(509) 379-4737
Central – Canming Xiao (Septage) Benton, Kittitas, Klickitat, Yakima	(509) 571-3542
Central - Terri Costello (Septage) Chelan, Douglas, Okanogan	(509) 570-8097
Southwest – Shawnté Greenway	(360) 522-0505
Southwest – Eddie Simons	(360) 763-2871
Eastern – Mounia Sassi Grant, Ferry, Lincoln, Pend Oreille, Spokane, Stevens	(509) 220-3166
Eastern – Terri Costello Adams, Asotin, Columbia, Garfield, Franklin, Walla Walla, Whitman	(509) 570-8097

*This may not a be a comprehensive list - other agencies may require notification depending on specific types of hazards or materials.

SEPA

CITY of EVERETT
PLANNING and COMMUNITY DEVELOPMENT

LAND USE APPLICATION

RECEIVED
OCT 30 2015
CITY OF EVERETT
PLANNING DEPT

- Name of Applicant CITY OF EVERETT PUBLIC WORKS ATTN: PAUL CRANE
  Address 3200 CEDAR ST.
  City EVERETT State WA. Zip Code 98201
  Phone 425-257-8949 Alt ph _____
  Email PCRANE@EVERETTWA.GOV

- Primary Contact (if other than applicant) SEE ABOVE
  Address _____
  City _____ State _____ Zip Code _____
  Phone _____ Alt ph _____
  Email _____

FOR OFFICIAL USE ONLY
TYPE: SEPA
FILE # 15-027
FEE $ _____ RECEIPT # _____
ASSIGNED TO: Grace Pollard

- Property Owner(s) CITY OF EVERETT
  Address 3200 CEDAR ST. City EVERETT State WA Zip Code 98201

- Property Address or Location ~~[illegible]~~ 12224 92ND S.E SNOHOMISH, WA
  Tax Parcel No(s) SEE ATTACHED Area of Property (acres/sq ft) _____
  Zoning A-10 Comprehensive Plan Designation RIVERWAY, COMMERCIAL FARMLAND

- Brief Description of Project ORGANIC FERTILIZER IN THE FORM OF CITY CLASS A OR B BIOSOLIDS WILL BE APPLIED TO AGRICULTURAL PROPERTY & CROPS.

- Name of the planner who conducted or waived the Pre-Application meeting S. INGLESBE

- **Authorization:** I am the owner or am authorized by the owner to sign and submit this application. I grant permission for City staff and agents to enter onto the subject property for the sole purpose of making any inspections of the property which are necessary to process this application. I certify under penalty of perjury of the laws of the State of Washington that the information on this application and all information submitted herewith is true, complete, and correct.

Signature _____ Date _____

Please print name PAUL B. CRANE ☒ Owner ☐ Applicant ☒ Primary Contact

City and State where this application is signed EVERETT (City), WA (State)

CITY of EVERETT
PLANNING and COMMUNITY DEVELOPMENT

SEPA APPLICATION (REVIEW PROCESS II)

Use this application for proposals that require an environmental review through the State Environmental Policy Act (SEPA), chapter 43.21C RCW, which aids governmental agencies in the consideration of the environmental impacts of a proposal before making decisions. Examples of proposals that require a SEPA review include the following: 1)construction or location of more than four residential dwelling units; 2)construction of an office, school, commercial, industrial, recreational, service or storage building with at least 4,000 square feet of gross floor area; and, 3) construction of a parking lot designed for more than 20 automobiles. Certain demolition actions will also require a SEPA review. For a complete list of proposed actions that are categorically exempt, see WAC 197-11-800. For SEPA information from WA State Dept of Ecology, go to: http://www.ecy.wa.gov/pubs/0206013.pdf

☐ **Fee**	**$350** application fee + **$250** for each Special Study (i.e. wetland, traffic, etc). Non-refundable and payable by check, credit card or cash upon application.
☒ **Pre-Application Meeting**	A *Pre-application Meeting* is required prior to this application unless waived by the Planning Department.
☒ **Land Use Application**	The *Land Use Application* must be filled out completely and signed by the owner, applicant, or primary contact.
☐ **Environmental Checklist**	Provide **one** copy. Must be filled out completely and accurately (see attached).
☐ **Special Studies**	Critical Area, Traffic, etc., as required by the City. Provide **four** copies of each study.
☒ **Site Plan**	Must be drawn in accordance with the *General Site Plan Checklist*. Provide **18** copies and **one reduced copy no larger than 11" x 17"**. Copies must be legible and drawn to scale.
☒ **Mailing List**	Must be completed per the *Mailing List Instructions for Review Process II*.
☒ **Submit Application with this Checklist**	**In Person:** City of Everett Public Works Building, Permit Counter 3200 Cedar St 2nd Floor, Everett, WA 98201 **By Mail:** City of Everett Planning and Community Development 2930 Wetmore Ave Ste. 8-A, Everett, WA 98201

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: [help]

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: [help]

Application for Coverage under the Statewide General Permit for Biosolids Management

2. Name of applicant: [help]

City of Everett Public Works

3. Address and phone number of applicant and contact person: [help]

City of Everett Public Works Department

Attn: Paul B. Crane
3200 Cedar Street
Everett WA 98201

4. Date checklist prepared: [help]
10/19/2015

5. Agency requesting checklist: [help]
WA State Department of Ecology

6. Proposed timing or schedule (including phasing, if applicable): [help]
Application for Coverage Under the General Permit due 12/2/2015

7. Do you have any plans for future additions, expansion, or further activity related to or connected with this proposal? If yes, explain. [help]
No

8. List any environmental information you know about that has been prepared, or will be prepared, directly related to this proposal. [help]
N/A

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. [help]
No

10. List any government approvals or permits that will be needed for your proposal, if known. [help]
N/A

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.) [help]
Application for Coverage under the Statewide General Permit for Biosolids Management

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. [help]

The City is proposing coverage for land applcation of Class A and Class B biosolids in Snohomish County

B. ENVIRONMENTAL ELEMENTS [help]

1. Earth [help]

a. General description of the site: [help]

See attached Site Specific Land Application Plan (SSLAP) for the City's Lowell Snohomish River Road Site

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

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

SAA

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. [help]

SAA

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

No

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

None

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

N/A

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

None

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

N/A

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. [help]

Biosolids from the Everett Water Pollution Control Facility are exceptionall well digested. Very little odor is noted or generated.

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

N/A

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

N/A

3. Water [help]

a. Surface Water:

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

Yes, Deadwater Slough bisects the property N-S. It flows into the Snohomish River. See attached SSLAP for location and map.

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. [help]

No

3) Estimate the amount of fill and dredge material that would be placed in or removed from surface water or wetlands and indicate the area of the site that would be affected. Indicate the source of fill material. [help]

None

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

No

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

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. [help]

No

b. Ground Water:

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. [help]

No

2) Describe waste material that will be discharged into the ground from septic tanks or other sources, if any (for example: Domestic sewage; industrial, containing the following chemicals. . . ; agricultural; etc.). Describe the general size of the system, the number of such systems, the number of houses to be served (if applicable), or the number of animals or humans the system(s) are expected to serve. [help]

N/A

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. [help]

N/A

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

N/A

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

No

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

See SSLAP for details regarding Site Operations, Environmnetal Controls, Buffers and Monitoring

4. **Plants** [help]

a. Check the types of vegetation found on the site: [help]

____deciduous tree: alder, maple, aspen, other
____evergreen tree: fir, cedar, pine, other
____shrubs
____grass
____pasture
__X__crop or grain
____ Orchards, vineyards or other permanent crops.
____ wet soil plants: cattail, buttercup, bullrush, skunk cabbage, other
____water plants: water lily, eelgrass, milfoil, other
___other types of vegetation

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

None

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

Eagles are in the vicinty

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

None

e. List all noxious weeds and invasive species known to be on or near the site. [help]
None

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. [help]

Examples include:

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

Eagles

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

c. Is the site part of a migration route? If so, explain. [help]
Unknown

d. Proposed measures to preserve or enhance wildlife, if any: [help]
N/A

e. List any invasive animal species known to be on or near the site. [help]
Unknown

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. [help]
Fossile fuels will be used to power equipment (trucks, loaders, tractors)

b. Would your project affect the potential use of solar energy by adjacent properties? If so, generally describe. [help]
No

b. 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: [help]
The beneficial reuse fo biosolids reduces the need for inorganic fertilizers that require large amounts of energy to produce

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. [help]
No

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

None known

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. [help]

None

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. [help]

None

4) Describe special emergency services that might be required. [help]

None

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

None

b. Noise [help]

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

None

2) What types and levels of noise would be created by or associated with the project on a short-term or a long-term basis (for example: traffic, construction, operation, other)? Indicate what hours noise would come from the site. [help]

Noise associated with typical agricultural activities

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

None

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. [help]

Agricultrual

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? [help]

Yes, used as working farmland for many years. Farming will continue on the site.

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: [help]

No

c. Describe any structures on the site. [help]

None

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

No

e. What is the current zoning classification of the site? [help]

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

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

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

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

2-3 agricultural/farmers

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

None

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

N/A

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

N/A

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

Continued support of farming on existing agricultural land

9. **Housing** [help]

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

N/A

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

N/A

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

N/A

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? [help]

N/A

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

N/A

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

N/A

11. **Light and Glare** [help]

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

N/A

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

N/A

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

N/A

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

N/A

12. **Recreation** [help]

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

Boating and fishing in the Snohomish River

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

No

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

N/A

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 located on or near the site? If so, specifically describe. [help]

None known

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. [help]

None known

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. [help]

N/A

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. [help]

N/A

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. [help]

Lowell Snohomish River 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? [help]

N/A

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

N/A

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). [help]

NO

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

No

f. How many vehicular trips per day would be generated by the completed project or proposal? If known, indicate when peak volumes would occur and what percentage of the volume would

be trucks (such as commercial and nonpassenger vehicles). What data or transportation models were used to make these estimates? [help]

Approxiamtely 4-5 truckloads per day during a one month period in the spring/summer

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. [help]

No

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

N/A

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. [help]

No

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

N/A

16. **Utilities** [help]

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

None

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. [help]

None

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: _____

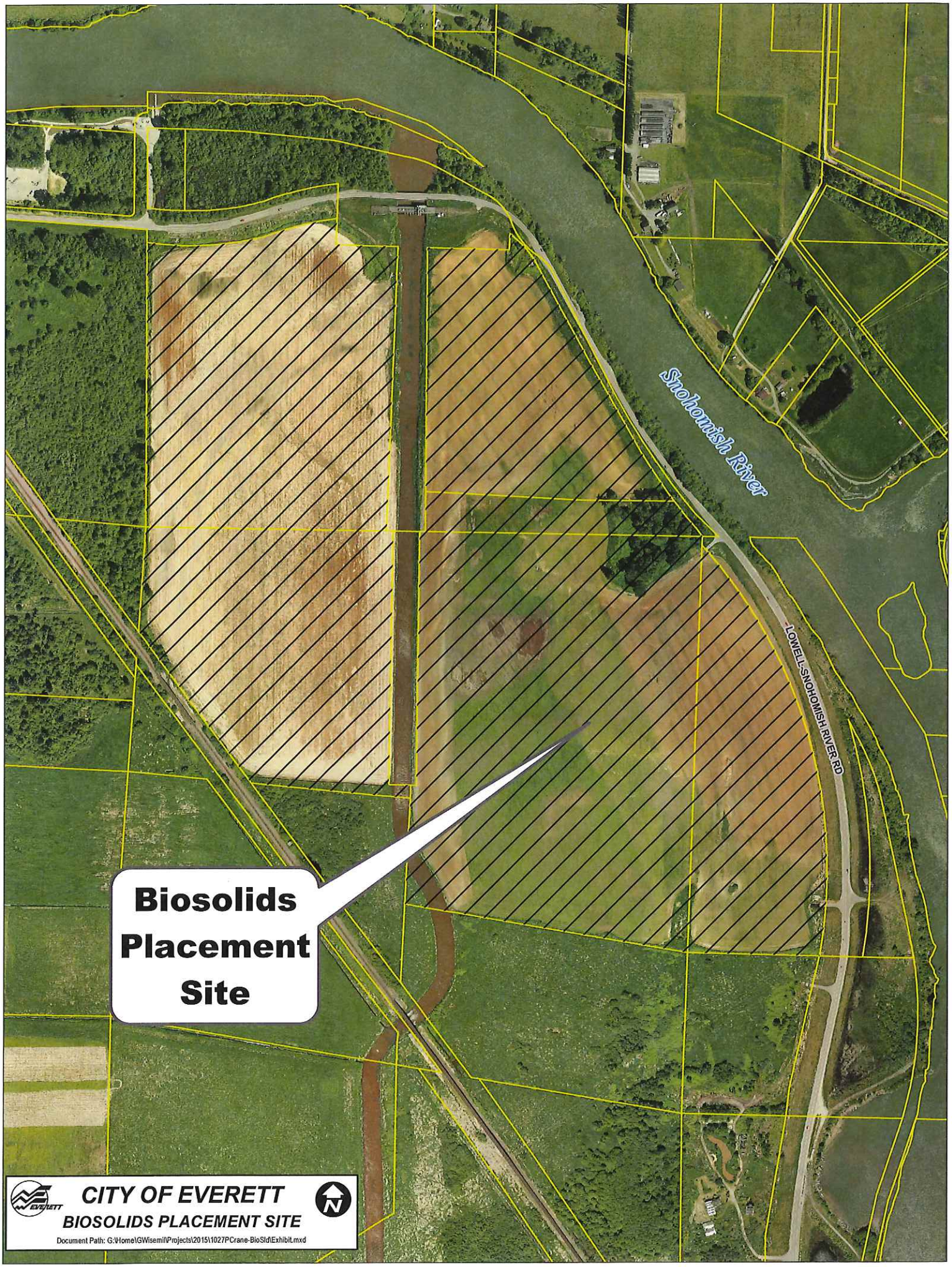
Name of signee PAUL B CRANE

Position and Agency/Organization CITY OF EVERETT

Date Submitted: 10/29/2015

D. supplemental sheet for nonproject actions [help]

(**IT IS NOT NECESSARY** to use this sheet for project actions)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LOWELL-SNOHOMISH RIVER RD
Biosolids Placement Site
CITY OF EVERETT
BIOSOLIDS PLACEMENT SITE
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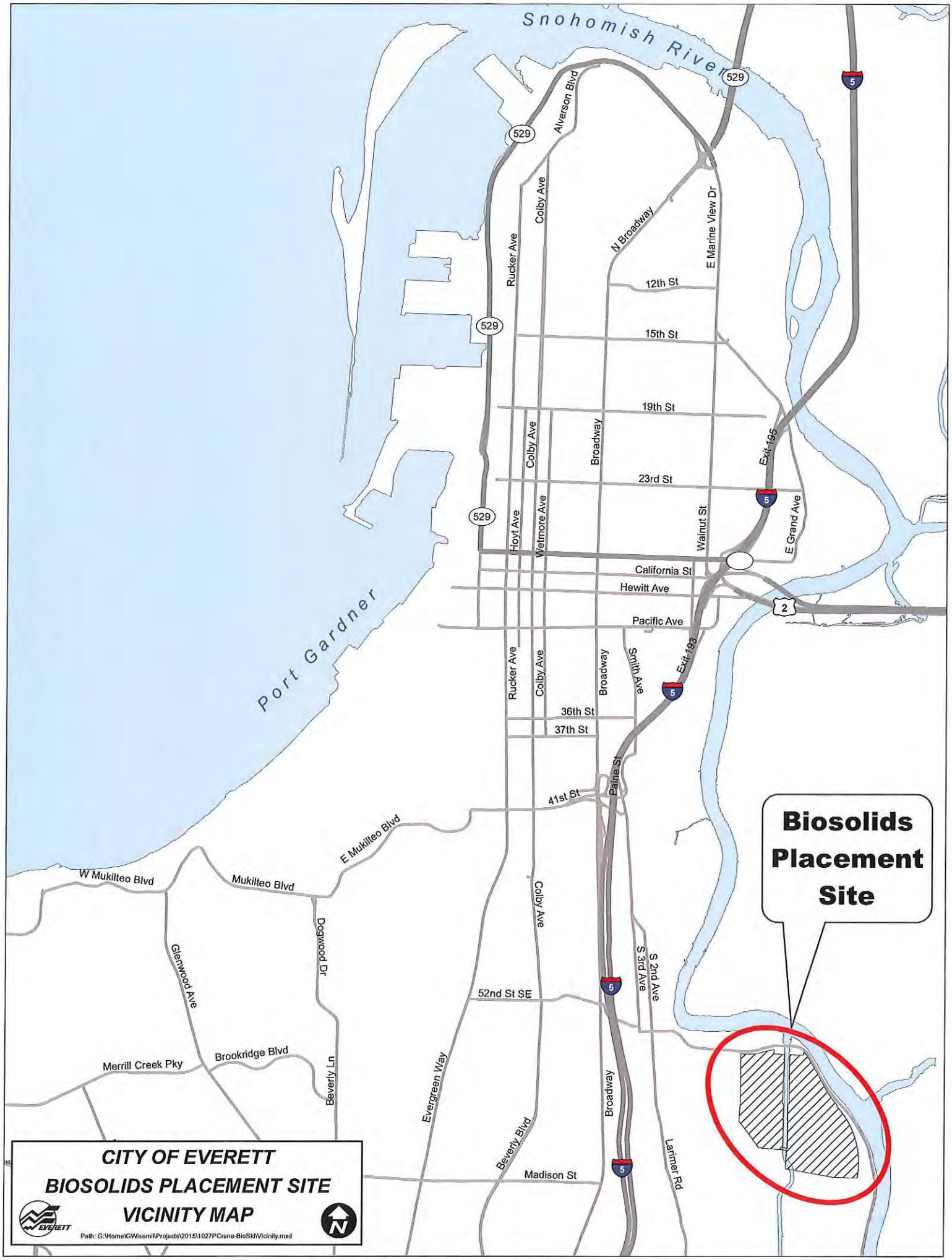
Snohomish River
Port Gardner
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Alverson Blvd
Rucker Ave
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N Broadway
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15th St
19th St
Broadway
Exit 195
23rd St
Hoyt Ave
Wetmore Ave
Walnut St
E Grand Ave
California St
Hewitt Ave
Pacific Ave
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Smith Ave
Exit 193
36th St
37th St
Paine St
41st St
Biosolids Placement Site
E Mukilteo Blvd
W Mukilteo Blvd
Mukilteo Blvd
Dogwood Dr
Glenwood Ave
Merrill Creek Pky
Brookridge Blvd
Beverly Ln
Evergreen Way
52nd St SE
S 3rd Ave
S 2nd Ave
Beverly Blvd
Madison St
Larimer Rd
CITY OF EVERETT
BIOSOLIDS PLACEMENT SITE
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FINAL
DETERMINATION OF NON-SIGNIFICANCE
SEPA15-027
January 26, 2016

Description of Proposal: The City of Everett's Class A or B biosolids will be applied to approximately 163 acres of agricultural property and crops.

Applicant: City of Everett, c/o Paul Crane
3200 Cedar Street
Everett, WA 98201

Location: Lowell-Snohomish River Road

Parcel No.: 28050400200900
28050400300200
28050400201400
28050400201600
28050400300100
28050400400100

Zoning: A-1, Agriculture

General Plan: 6.1 - Agriculture

Lead Agency: City of Everett Planning Department

Contact Person: Grace Pollard Phone: 425.257.8807

The environmental impacts of this proposal are documented in the Environmental Checklist and other information on file with the City. The listed requirements are placed in response to our review of this information:

OTHER AGENCIES WITH JURISDICTION

1. Department of Ecology must approve an Application for Coverage under the Statewide General Permit for Biosolids Management.

The lead agency for this proposal has determined that it does not have a probable significant adverse impact on the environment. An Environmental Impact Statement is not required under RCW 43.21C.030(2)(c). This determination assumes compliance with State law and City ordinances related to general environmental protection including but not limited to right-of-way improvement requirements, drainage, etc. This decision was made after review of a completed environmental checklist and other information on file with the lead agency. This information is available to the public on request.

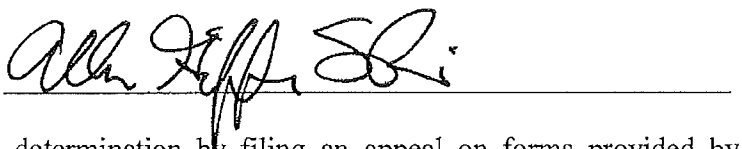
This FINAL DNS is issues under WAC 197-11-355. A fourteen (14) day public comment period for this proposal has been completed.

Responsible Official: Allan Giffen Phone: 425.257.8731

Title: Planning and Community Development Director

Address: 2930 Wetmore Avenue, Suite 8-A, Everett, WA 98201

Date: January 26, 2016

Signature: 

You may appeal this determination by filing an appeal on forms provided by the Planning Department and a fee to the Planning and Community Development Permit Services Counter at 3200 Cedar Street, 2nd Floor, no later than February 9, 2016.

Contact Grace Pollard to read or ask about the procedures for SEPA appeals.

Notes:

1. A DNS may be withdrawn in the event of significant changes in the proposal, disclosure of new significant information, misrepresentation by the applicant, or failure to comply with the conditions upon which this Determination of Non-Significance is predicated.

2. This land use permit shall terminate if applicant does not apply for a permit within 18 months (or, with an extension, 24 months), except where a time limit on the land use permit is otherwise established under federal or state law, city ordinance, or an executed development agreement.

INFORMATION FOR THE DEVELOPMER:

1. No biosolids may be applied within 200 feet of the Snohomish River or Woods Creek shorelines.

2. A Public Works permit is required for this project.

3. Insure that no dirt or debris from the agricultural application site is tracked onto public roads during/after biosolids application.

4. Be aware there is a 51" steel transmission line for water on the Northwest corner of the site. Make sure you locate the water main.

5. City streets are to be kept clear of dirt and debris at all times during construction. Dust suppression and street cleaning must occur as directed by the Public Works Inspector.

6. Lack of comment on the plans submitted with the application does not constitute approval of these plans.

BIOSOLIDS ANALYTICAL DATA

CITY OF EVERETT
ENVIRONMENTAL LABORATORY

PROJECT #

00065621

Client:	CITY OF EVERETT	Date Received:	01/29/24
Program:	BSM - EWPCF AC2	Data Release:	CM
Contact:	Joe Furguson	Date Reported:	02/28/24

Department	Analysis	Units	DL	Method	PQL	BQ46064 Dewatered AC2 Biosolids 01/29/24	BQ46065 Dewatered AC2 Biosolids 01/29/24
CONTRACT	Ammonia	mg-N/kg				2100	2860
	Nitrate/Nitrite	mg-N/kg				4.51	5.89
	Phosphorus	mg/kg				7910	6600
	TKN	mg-N/kg				34000	31400
CONVENTIONALS	% TS	%		SM2540-G		21.6	23.7
	% TVS	%		SM2540-G		54.7	49.6
METALS(S)	Arsenic mg/kg	mg/kg	0.807	6020B	3.228		10.6
			0.880	6020B	3.520	10.9	
	Cadmium mg/kg	mg/kg	0.538	6020B	2.152		2.49
			0.587	6020B	2.348	2.10 J	
	Chromium mg/kg	mg/kg	1.34	6020B	5.36		72.7
			1.47	6020B	5.88	76.3	
	Copper mg/kg	mg/kg	1.34	6020B	5.36		343
			1.47	6020B	5.88	352	
	Lead mg/kg	mg/kg	0.807	6020B	3.228		46.4
			0.880	6020B	3.520	39.8	
	Mercury mg/kg	mg/kg	0.001	7471	0.004	0.812	0.749
	Molybdenum mg/kg	mg/kg	0.807	6020B	3.228		23.7
			0.880	6020B	3.520	20.3	
	Nickel mg/kg	mg/kg	0.807	6020B	3.228		44.6
			0.880	6020B	3.520	50.8	
	Potassium mg/kg	mg/kg	26.9	6020B	107.6		1410
			29.3	6020B	117.2	1650	
	Selenium mg/kg	mg/kg	0.807	6020B	3.228		5.22
			0.880	6020B	3.520	5.58	
	Silver mg/kg	mg/kg	0.807	6020B	3.228		4.38
			0.880	6020B	3.520	3.53	
	Zinc mg/kg	mg/kg	8.07	6020B	32.28		1170
			8.80	6020B	35.20	1240	
MICRO	Fecal Coliform MPN	#/g Dry		9221E/9221C		14000	72000

DATA REPORTING QUALIFIERS

DL = Detection Limit
PQL = Practical Quantitation Limit (= 4xDL)
J = Analyte concentration less than PQL
SA = See Attached
ND = No Data
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CITY OF EVERETT
ENVIRONMENTAL LABORATORY

PROJECT #
00065621

Client:	CITY OF EVERETT	Date Received:	01/29/24
Program:	BSM - EWPCF AC2	Data Release:	CM
Contact:	Joe Furguson	Date Reported:	02/28/24

Department	Analysis	Units	DL	Method	PQL	BQ46066 Dewatered AC2 Biosolids 01/29/24	BQ46067 Dewatered AC2 Biosolids 01/29/24
CONTRACT	Ammonia	mg-N/kg				1950	2750
	Nitrate/Nitrite	mg-N/kg				3.39	<0.34 H
	Phosphorus	mg/kg				6910	7360
	TKN	mg-N/kg				27300	20900
CONVENTIONALS	% TS	%		SM2540-G		22.7	27.1
	% TVS	%		SM2540-G		49.4	39.7
METALS(S)	Arsenic mg/kg	mg/kg	0.691	6020B	2.764		12.1
			0.843	6020B	3.372	15.1	
	Cadmium mg/kg	mg/kg	0.461	6020B	1.844		4.78
			0.562	6020B	2.248	5.94	
	Chromium mg/kg	mg/kg	1.15	6020B	4.60		88.2
			1.41	6020B	5.64	107	
	Copper mg/kg	mg/kg	1.15	6020B	4.60		383
			1.41	6020B	5.64	477	
	Lead mg/kg	mg/kg	0.691	6020B	2.764		90.0
			0.843	6020B	3.372	120	
	Mercury mg/kg	mg/kg	0.001	7471	0.004	1.26	1.75
	Molybdenum mg/kg	mg/kg	0.691	6020B	2.764		31.1
			0.843	6020B	3.372	37.8	
	Nickel mg/kg	mg/kg	0.691	6020B	2.764		60.4
			0.843	6020B	3.372	78.4	
	Potassium mg/kg	mg/kg	23.0	6020B	92.0		1210
			28.1	6020B	112.4	1510	
	Selenium mg/kg	mg/kg	0.691	6020B	2.764		5.09
			0.843	6020B	3.372	5.96	
	Silver mg/kg	mg/kg	0.691	6020B	2.764		11.9
			0.843	6020B	3.372	14.7	
	Zinc mg/kg	mg/kg	6.91	6020B	27.64		1180
			8.43	6020B	33.72	1450	
MICRO	Fecal Coliform MPN	#/g Dry		9221E/9221C		75000	33000

DATA REPORTING QUALIFIERS

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* Flagged value QC not within established control limits

CITY OF EVERETT
ENVIRONMENTAL LABORATORY

PROJECT #
00065621

Client:	CITY OF EVERETT	Date Received:	01/29/24
Program:	BSM - EWPCF AC2	Data Release:	CM
Contact:	Joe Furguson	Date Reported:	02/28/24

Department	Analysis	Units	DL	Method	PQL	BQ46068 Dewatered AC2 Biosolids 01/29/24	BQ46069 Dewatered AC2 Biosolids 01/29/24
CONTRACT	Ammonia	mg-N/kg				1960	2600
	Nitrate/Nitrite	mg-N/kg				0.35	<0.35
	Phosphorus	mg/kg				6990	8640
	TKN	mg-N/kg				21400	20700
CONVENTIONALS	% TS	%		SM2540-G		27.5	26.6
	% TVS	%		SM2540-G		40.5	42.0
METALS(S)	Arsenic mg/kg	mg/kg	0.673	6020B	2.692	11.5	
			0.695	6020B	2.780		10.7
	Cadmium mg/kg	mg/kg	0.449	6020B	1.796	4.83	
			0.464	6020B	1.856		4.68
	Chromium mg/kg	mg/kg	1.12	6020B	4.48	74.6	
			1.16	6020B	4.64		84.3
	Copper mg/kg	mg/kg	1.12	6020B	4.48	355	
			1.16	6020B	4.64		411
	Lead mg/kg	mg/kg	0.673	6020B	2.692	99.5	
			0.695	6020B	2.780		108
	Mercury mg/kg	mg/kg	0.001	7471	0.004	1.59	3.05
	Molybdenum mg/kg	mg/kg	0.673	6020B	2.692	30.4	
			0.695	6020B	2.780		36.2
	Nickel mg/kg	mg/kg	0.673	6020B	2.692	54.6	
			0.695	6020B	2.780		57.9
	Potassium mg/kg	mg/kg	22.4	6020B	89.6	1200	
			23.2	6020B	92.8		1150
	Selenium mg/kg	mg/kg	0.673	6020B	2.692	4.54	
			0.695	6020B	2.780		4.97
	Silver mg/kg	mg/kg	0.673	6020B	2.692	11.0	
			0.695	6020B	2.780		12.0
	Zinc mg/kg	mg/kg	6.73	6020B	26.92	1110	
			6.95	6020B	27.80		1210
MICRO	Fecal Coliform MPN	#/g Dry		9221E/9221C		62000	90000

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CITY OF EVERETT
ENVIRONMENTAL LABORATORY

PROJECT #
00065621

Client:	CITY OF EVERETT	Date Received:	01/29/24
Program:	BSM - EWPCF AC2	Data Release:	CM
Contact:	Joe Furguson	Date Reported:	02/28/24

Department	Analysis	Units	DL	Method	PQL	BQ46070 Field Composite 01/29/24
CONTRACT	Ammonia	mg-N/kg				2390
	Nitrate/Nitrite	mg-N/kg				<0.36
	Phosphorus	mg/kg				7400
	TKN	mg-N/kg				25600
CONVENTIONALS	% TS	%		SM2540-G		25.2
	% TVS	%		SM2540-G		45.4
METALS(S)	Arsenic mg/kg	mg/kg	0.731	6020B	2.924	11.2
	Cadmium mg/kg	mg/kg	0.487	6020B	1.948	4.08
	Chromium mg/kg	mg/kg	1.22	6020B	4.88	81.9
	Copper mg/kg	mg/kg	1.22	6020B	4.88	373
	Lead mg/kg	mg/kg	0.731	6020B	2.924	77.9
	Mercury mg/kg	mg/kg	0.001	7471	0.004	1.15
	Molybdenum mg/kg	mg/kg	0.731	6020B	2.924	30.1
	Nickel mg/kg	mg/kg	0.731	6020B	2.924	65.1
	Potassium mg/kg	mg/kg	24.4	6020B	97.6	1310
	Selenium mg/kg	mg/kg	0.731	6020B	2.924	5.11
	Silver mg/kg	mg/kg	0.731	6020B	2.924	9.17
	Zinc mg/kg	mg/kg	7.31	6020B	29.24	1180
MICRO	Fecal Coliform MPN	#/g Dry		9221E/9221C		28000

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CITY OF EVERETT
ENVIRONMENTAL LABORATORY

PROJECT #

00065192

Client:	CITY OF EVERETT	Date Received:	11/29/23
Program:	BSM - EWPCF AC2	Data Release:	SF
Contact:	JOSEPH FERGUSON	Date Reported:	01/18/24

Department	Analysis	Units	DL	Method	PQL	BQ26372 COMP 11/29/23	BQ26373 COMP DUP 11/29/23
MICRO	VAR Test	FVSR %				**11.5**	**10.4**

DATA REPORTING QUALIFIERS

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DOE-Biosolids General Permit App Renewal-App-HL-SD

Final Audit Report 2025-03-27

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Status:	Signed
Transaction ID:	CBJCHBCAABAAyZpduVtclp0P-nBUIc0Cf2uJuRUViL4l

"DOE-Biosolids General Permit App Renewal-App-HL-SD" History

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