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**STATE OF WASHINGTON  
WHATCOM COUNTY SUPERIOR COURT**

STATE OF WASHINGTON,  
DEPARTMENT OF ECOLOGY,

Plaintiff,

v.

CITY OF BELLINGHAM,

Defendant.

NO. \_\_\_\_\_

CONSENT DECREE RE: ELDRIDGE  
MUNICIPAL LANDFILL

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1 **I. INTRODUCTION**

2 A. The mutual objective of the State of Washington, Department of Ecology  
3 (Ecology) and the City of Bellingham (Defendant) under this Decree is to provide for remedial  
4 action at the Eldridge Municipal Landfill site (the Site), a facility where there has been a release  
5 or threatened release of hazardous substances. The Site location is shown on the Site Diagram,  
6 attached hereto as Exhibit A. This Decree requires Defendant to conduct a final cleanup action  
7 of the Site by implementing the Cleanup Action Plan (CAP) attached as Exhibit B, according to  
8 the schedule and other requirements identified in this Decree and all exhibits thereto.

9 B. Ecology has determined that these actions are necessary to protect human health  
10 and the environment.

11 C. The Complaint in this action is being filed simultaneously with this Decree. An  
12 Answer has not been filed, and there has not been a trial on any issue of fact or law in this case.  
13 However, the Parties wish to resolve the issues raised by Ecology’s Complaint. In addition, the  
14 Parties agree that settlement of these matters without litigation is reasonable and in the public  
15 interest, and that entry of this Decree is the most appropriate means of resolving these matters.

16 D. By signing this Decree, the Parties agree to its entry and agree to be bound by its  
17 terms.

18 E. By entering into this Decree, the Parties do not intend to discharge non-settling  
19 parties from any liability they may have with respect to matters alleged in the Complaint. The  
20 Parties retain the right to seek reimbursement, in whole or in part, from any liable persons for  
21 sums expended under this Decree.

22 F. This Decree shall not be construed as proof of liability or responsibility for any  
23 releases of hazardous substances or cost for remedial action nor an admission of any facts;  
24 provided, however, that Defendant shall not challenge the authority of the Attorney General and  
25 Ecology to enforce this Decree.  
26

1 G. The Court is fully advised of the reasons for entry of this Decree, and good cause  
2 having been shown:

3 Now, therefore, it is HEREBY ORDERED, ADJUDGED, AND DECREED as follows:

## 4 II. JURISDICTION

5 A. This Court has jurisdiction over the subject matter and over the Parties pursuant  
6 to the Model Toxics Control Act (MTCA), Chapter 70.105D RCW.

7 B. Authority is conferred upon the Washington State Attorney General by  
8 RCW 70.105D.040(4)(a) to agree to a settlement with any potentially liable person (PLP) if,  
9 after public notice and any required hearing, Ecology finds the proposed settlement would lead  
10 to a more expeditious cleanup of hazardous substances. RCW 70.105D.040(4)(b) requires that  
11 such a settlement be entered as a consent decree issued by a court of competent jurisdiction.

12 C. Ecology has determined that a release or threatened release of hazardous  
13 substances has occurred at the Site that is the subject of this Decree.

14 D. Ecology has given notice to Defendant of Ecology's determination that  
15 Defendant is a PLP for the Site, as required by RCW 70.105D.020(26) and WAC 173-340-500.

16 E. The actions to be taken pursuant to this Decree are necessary to protect public  
17 health and the environment.

18 F. This Decree has been subject to public notice and comment.

19 G. Ecology finds that this Decree will lead to a more expeditious cleanup of  
20 hazardous substances at the Site in compliance with the cleanup standards established under  
21 RCW 70.105D.030(2)(e) and Chapter 173-340 WAC.

22 H. Defendant has agreed to undertake the actions specified in this Decree and  
23 consents to the entry of this Decree under MTCA.

## 24 III. PARTIES BOUND

25 This Decree shall apply to and be binding upon the Parties to this Decree, their successors  
26 and assigns. The undersigned representative of each party hereby certifies that he or she is fully

1 authorized to enter into this Decree and to execute and legally bind such party to comply with  
2 this Decree. Defendant agrees to undertake all actions required by the terms and conditions of  
3 this Decree. No change in ownership or corporate status shall alter Defendant's responsibility  
4 under this Decree. Defendant shall provide a copy of this Decree to all agents, contractors, and  
5 subcontractors retained to perform work required by this Decree, and shall ensure that all work  
6 undertaken by such agents, contractors, and subcontractors complies with this Decree.

#### 7 **IV. DEFINITIONS**

8 Unless otherwise specified herein, all definitions in RCW 70.105D.020 and  
9 WAC 173-340-200 shall control the meanings of the terms in this Decree.

10 A. Site: The Site is referred to as Eldridge Municipal Landfill Site and is generally  
11 located at within the 3100 block of W. Illinois Street and the exterior boundaries of Little  
12 Squalicum Park (Park) in Bellingham, Washington. The Site is more particularly described in  
13 the Site Diagram (Exhibit A). The Site constitutes a Facility under RCW 70.105D.020(8).

14 B. Parties: Refers to the State of Washington, Department of Ecology and the City  
15 of Bellingham (City).

16 C. Defendant: Refers to the City.

17 D. Consent Decree or Decree: Refers to this Consent Decree and each of the exhibits  
18 to this Decree. All exhibits are integral and enforceable parts of this Consent Decree. The terms  
19 "Consent Decree" or "Decree" shall include all exhibits to this Consent Decree.

#### 20 **V. FINDINGS OF FACTS**

21 Ecology makes the following findings of fact without any express or implied admissions  
22 of such facts by Defendant.

23 A. The Site is located in Bellingham, Washington, and consists of  
24 approximately 0.74 acres or 32,300 square feet. The Site is bounded by (within) Little Squalicum  
25 Park. The Site is located on property owned by Whatcom County (Parcel  
26 Number: 3802234732190000), which is currently leased by the City for management of the Park.

1 The remains of the landfill are located west of the Bellingham Technical College (BTC) campus.  
2 A diagram of the Site is attached as Exhibit A.

3 B. In the mid-to-late 1930s, the Site was used by the City as a “sanitary landfill.”  
4 The landfill was operated for only a few years before operations ceased. Contamination at the  
5 Site is related to the burning and burying of local municipal waste hauled by a garbage collection  
6 contractor. The types of municipal garbage observed consisted of glass bottles, metal scraps, ash,  
7 ceramics, construction debris, and various indiscernible rusted materials.

8 C. The landfill was identified and delineated in January 2006 as part of a Remedial  
9 Investigation (RI) conducted by the City under Agreed Order No. DE 2016 (no longer in effect)  
10 for the larger Little Squalicum Park Site (the Park Site). The draft Little Squalicum Park RI  
11 documented a separate and distinct area of contamination within the Park Site, which included  
12 the presence of low levels of polycyclic aromatic hydrocarbons (PAHs), benzoic acid, phthalates,  
13 and pentachlorophenol in surface soil samples collected in the landfill area, as well as elevated  
14 concentrations of some heavy metals (e.g., lead). Higher levels of metals were detected in  
15 subsurface soils. When the investigation showed contamination along Little Squalicum Creek  
16 was associated with the adjacent Oeser federal Superfund site, the U.S. Environmental Protection  
17 Agency took over the regulatory lead for cleanup of the creek area.

18 D. In November 2009, Ecology listed the landfill area as a separate site. Ecology  
19 named both the City and Whatcom County as potentially liable persons (PLPs).

20 E. In September 2010, the Environmental Protection Agency (EPA) uncovered  
21 additional landfill material during excavations at the Oeser/Little Squalicum Creek site. In order  
22 to allow the EPA’s work to continue, the City undertook an independent remedial action to  
23 investigate, analyze, relocate and secure most of the contaminated soil. Some contaminated soil  
24 that was left in-place was addressed, along with the relocated material, as part of the larger  
25 landfill cleanup.

1 F. On November 19, 2010, the City and Ecology entered into Agreed Order No. DE  
2 8073 (Agreed Order) to prepare a Remedial Investigation and Feasibility Study (RI/FS) report,  
3 plus a draft cleanup action plan (DCAP), for the Site.

4 G. An initial draft RI/FS report was completed for the Site in February 2011, and  
5 after review by Ecology and further discussion between parties, the City agreed to conduct an  
6 interim action for the Site.

7 H. In July 2011, the Agreed Order was amended to require the City to perform an  
8 interim action to remove municipal solid waste plus contaminated soils at the Site that exceed  
9 specific remediation levels and to dispose of them in an approved upland landfill.

10 I. An Engineering Design Report was finalized by the City in June 2011 for  
11 implementing the interim action. Remedial activities were conducted from August 22 to October  
12 7, 2011. About 4,290 tons of landfill debris and contaminated soil were excavated from the Site  
13 and disposal at a Subtitle D landfill located in Roosevelt, Washington. Soils containing arsenic,  
14 cadmium, copper, lead, mercury, and zinc above the remediation levels were removed from the  
15 Site except for locations on steep, unstable slopes and within or adjacent to an existing wetland.

16 J. A Performance Monitoring and Contingency Plan was finalized in  
17 November 2011 which confirmed the cleanup of landfill debris and contaminated soil. The City  
18 submitted an Interim Action Construction Completion Report in December 2011 which  
19 summarized the interim action construction activities and performance monitoring.

20 K. After the interim action was completed, the City produced a groundwater  
21 sampling and analysis plan in April 2012 for conducting additional soil and groundwater  
22 characterization at the landfill Site to determine the effectiveness of the interim action. This work  
23 was completed in May 2012.

24 L. A public review draft RI/FS was prepared by the City and provided to Ecology  
25 on April 8, 2014. The public review and comment period is concurrent with this Decree.  
26

1 M. The contaminants of concern remaining at the Site that exceed MTCA cleanup  
2 levels are arsenic and iron in groundwater and lead, zinc, copper, and mercury in soil.

3 N. As documented in the Cleanup Action Plan (CAP) (Exhibit B), the cleanup action  
4 to be implemented at the Site includes monitoring, wetland restoration, implementation of  
5 institutional controls.

## 6 VI. WORK TO BE PERFORMED

7 This Decree contains a program designed to protect human health and the environment  
8 from the known release, or threatened release, of hazardous substances or contaminants at, on,  
9 or from the Site.

10 A. The interim action performed in 2011 is incorporated as part of the CAP.

11 B. The Defendants shall perform all tasks set forth in the CAP (Exhibit B) and  
12 implement the CAP in accordance with the Schedule of Work and Deliverables (Exhibit C). The  
13 CAP requires:

14 1. At least two years of compliance monitoring to measure arsenic and iron  
15 concentrations in groundwater. Should monitoring indicate that groundwater  
16 concentrations continue to be present above cleanup levels, additional monitoring or  
17 other steps may be required.

18 2. Wetland restoration in Wetland B.

19 3. Designation of Especially Valuable Habitat for Area 1 and Wetland A.

20 4. As described in more detail in Section XX, an environmental covenant  
21 will be recorded that will, among other requirements: prohibit groundwater use and  
22 restrict any uses or practices that would damage or reduce the effectiveness of the  
23 cleanup action.

24 C. Defendant agrees not to perform any remedial actions outside the scope of this  
25 Decree unless the Parties agree to modify the Schedule of Work and Deliverables (Exhibit C) to  
26



1 cover these actions. All work conducted by Defendant under this Decree shall be done in  
2 accordance with Chapter 173-340 WAC unless otherwise provided herein.

### 3 **VII. DESIGNATED PROJECT COORDINATORS**

4 The project coordinator for Ecology is:

5 Mary O'Herron  
6 Department of Ecology  
7 Bellingham Field Office  
8 1440 10<sup>th</sup> Street, Suite 102, Bellingham, WA 98225  
9 (360) 715-5224

10 The project coordinator for Defendant is:

11 Renee LaCroix  
12 City of Bellingham  
13 Assistant Public Works Director - Natural Resources Division  
14 2221 Pacific Street, Bellingham, WA 98229  
15 (360) 778-7800

16 Each project coordinator shall be responsible for overseeing the implementation of this  
17 Decree. Ecology's project coordinator will be Ecology's designated representative for the Site.  
18 To the maximum extent possible, communications between Ecology and Defendant and all  
19 documents, including reports, approvals, and other correspondence concerning the activities  
20 performed pursuant to the terms and conditions of this Decree shall be directed through the  
21 project coordinators. The project coordinators may designate, in writing, working level staff  
22 contacts for all or portions of the implementation of the work to be performed required by this  
23 Decree.

24 Any party may change its respective project coordinator. Written notification shall be  
25 given to the other party at least ten (10) calendar days prior to the change.

### 26 **VIII. PERFORMANCE**

All geologic and hydrogeologic work performed pursuant to this Decree shall be under  
the supervision and direction of a geologist or hydrogeologist licensed by the State of

1 Washington or under the direct supervision of an engineer registered by the State of Washington,  
2 except as otherwise provided for by Chapters 18.220 and 18.43 RCW.

3 All engineering work performed pursuant to this Decree shall be under the direct  
4 supervision of a professional engineer registered by the State of Washington, except as otherwise  
5 provided for by RCW 18.43.130.

6 All construction work performed pursuant to this Decree shall be under the direct  
7 supervision of a professional engineer or a qualified technician under the direct supervision of a  
8 professional engineer. The professional engineer must be registered by the State of Washington,  
9 except as otherwise provided for by RCW 18.43.130.

10 Any documents submitted containing geologic, hydrologic, or engineering work shall be  
11 under the seal of an appropriately licensed professional as required by Chapters 18.220 and 18.43  
12 RCW.

13 Defendant shall notify Ecology in writing of the identity of any engineer(s) and  
14 geologist(s), contractor(s) and subcontractor(s), and others to be used in carrying out the terms  
15 of this Decree, in advance of their involvement at the Site.

## 16 IX. ACCESS

17 Ecology or any Ecology authorized representative shall have access to enter and freely  
18 move about all property at the Site that Defendant either owns, controls, or has access rights to  
19 at all reasonable times for the purposes of, *inter alia*: inspecting records, operation logs, and  
20 contracts related to the work being performed pursuant to this Decree; reviewing Defendant's  
21 progress in carrying out the terms of this Decree; conducting such tests or collecting such  
22 samples as Ecology may deem necessary; using a camera, sound recording, or other documentary  
23 type equipment to record work done pursuant to this Decree; and verifying the data submitted to  
24 Ecology by Defendant. Defendant shall make all reasonable efforts to secure access rights for  
25 those properties within the Site not owned or controlled by Defendant where remedial activities  
26 or investigations will be performed pursuant to this Decree. Ecology or any Ecology authorized

1 representative shall give reasonable notice before entering any Site property owned or controlled  
2 by Defendant unless an emergency prevents such notice. All Parties who access the Site pursuant  
3 to this section shall comply with any applicable health and safety plan(s). Ecology employees  
4 and their representatives shall not be required to sign any liability release or waiver as a condition  
5 of Site property access.

6 **X. SAMPLING, DATA SUBMITTAL, AND AVAILABILITY**

7 With respect to the implementation of this Decree, Defendant shall make the results of  
8 all sampling, laboratory reports, and/or test results generated by it or on its behalf available to  
9 Ecology. Pursuant to WAC 173-340-840(5), all sampling data shall be submitted to Ecology in  
10 both printed and electronic formats in accordance with Section XI (Progress Reports), Ecology's  
11 Toxics Cleanup Program Policy 840 (Data Submittal Requirements), and/or any subsequent  
12 procedures specified by Ecology for data submittal.

13 If requested by Ecology, Defendant shall allow Ecology and/or its authorized  
14 representative to take split or duplicate samples of any samples collected by Defendant pursuant  
15 to the implementation of this Decree. Defendant shall notify Ecology seven (7) days in advance  
16 of any sample collection or work activity at the Site. Ecology shall, upon request, allow  
17 Defendant and/or its authorized representative to take split or duplicate samples of any samples  
18 collected by Ecology pursuant to the implementation of this Decree, provided that doing so does  
19 not interfere with Ecology's sampling. Without limitation on Ecology's rights under Section IX  
20 (Access), Ecology shall notify Defendant prior to any sample collection activity unless an  
21 emergency prevents such notice.

22 In accordance with WAC 173-340-830(2)(a), all hazardous substance analyses shall be  
23 conducted by a laboratory accredited under Chapter 173-50 WAC for the specific analyses to be  
24 conducted, unless otherwise approved by Ecology.

1 **XI. PROGRESS REPORTS**

2 Defendant shall submit to Ecology written monthly Progress Reports that describe the  
3 actions taken during the previous month to implement the requirements of this Decree. The  
4 Progress Reports shall include the following:

5 A. A list of on-site activities that have taken place during the month;

6 B. Detailed description of any deviations from required tasks not otherwise  
7 documented in project plans or amendment requests;

8 C. Description of all deviations from the Schedule of Work and Deliverables  
9 (Exhibit C) during the current month and any planned deviations in the upcoming month;

10 D. For any deviations in schedule, a plan for recovering lost time and maintaining  
11 compliance with the schedule;

12 E. All raw data (including laboratory analyses) received by Defendant during the  
13 past month and an identification of the source of the sample; and

14 F. A list of deliverables for the upcoming month if different from the schedule.

15 All Progress Reports shall be submitted by the tenth (10th) day of the month in which  
16 they are due after the effective date of this Decree. Unless otherwise specified, Progress Reports  
17 and any other documents submitted pursuant to this Decree shall be sent by certified mail, return  
18 receipt requested, to Ecology’s project coordinator.

19 **XII. RETENTION OF RECORDS**

20 During the pendency of this Decree, and for ten (10) years from the date this Decree is  
21 no longer in effect as provided in Section XXVIII (Duration of Decree), Defendant shall preserve  
22 all records, reports, documents, and underlying data in its possession relevant to the  
23 implementation of this Decree and shall insert a similar record retention requirement into all  
24 contracts with project contractors and subcontractors. Upon request of Ecology, Defendant shall  
25 make all records available to Ecology and allow access for review within a reasonable time.  
26

1 Nothing in this Decree is intended by Defendant to waive any right it may have under  
2 applicable law to limit disclosure of documents protected by the attorney work-product privilege  
3 and/or the attorney-client privilege. If Defendant withholds any requested records based on an  
4 assertion of privilege, Defendant shall provide Ecology with a privilege log specifying the  
5 records withheld and the applicable privilege. No Site-related data collected pursuant to this  
6 Decree shall be considered privileged.

### 7 **XIII. TRANSFER OF INTEREST IN PROPERTY**

8 No voluntary conveyance or relinquishment of title, easement, leasehold, or other interest  
9 in any portion of the Site shall be consummated by Defendant without provision for continued  
10 operation and maintenance of any containment system, treatment system, and/or monitoring  
11 system installed or implemented pursuant to this Decree.

12 Prior to Defendant's transfer of any interest in all or any portion of the Site, and during  
13 the effective period of this Decree, Defendant shall provide a copy of this Decree to any  
14 prospective purchaser, lessee, transferee, assignee, or other successor in said interest; and, at  
15 least thirty (30) days prior to any transfer, Defendant shall notify Ecology of said transfer. Upon  
16 transfer of any interest, Defendant shall notify all transferees of the restrictions on the activities  
17 and uses of the property under this Decree and incorporate any such use restrictions into the  
18 transfer documents.

### 19 **XIV. RESOLUTION OF DISPUTES**

20 A. In the event a dispute arises as to an approval, disapproval, proposed change, or  
21 other decision or action by Ecology's project coordinator, or an itemized billing statement under  
22 Section XXIV (Remedial Action Costs), the Parties shall utilize the dispute resolution procedure  
23 set forth below.

24 1. Upon receipt of Ecology's project coordinator's written decision, or the  
25 itemized billing statement, Defendant has fourteen (14) days within which to notify  
26

1 Ecology's project coordinator in writing of its objection to the decision or itemized  
2 statement.

3 2. The Parties' project coordinators shall then confer in an effort to resolve  
4 the dispute. If the project coordinators cannot resolve the dispute within fourteen (14)  
5 days, Ecology's project coordinator shall issue a written decision.

6 3. Defendant may then request regional management review of the decision.  
7 This request shall be submitted in writing to the Northwest Region Toxics Cleanup  
8 Program Section Manager within seven (7) days of receipt of Ecology's project  
9 coordinator's written decision.

10 4. Ecology's Regional Section Manager shall conduct a review of the  
11 dispute and shall endeavor to issue a written decision regarding the dispute within  
12 thirty (30) days of Defendant's request for review.

13 5. If Defendant finds Ecology's Regional Section Manager's decision  
14 unacceptable, Defendant may then request final management review of the decision.  
15 This request shall be submitted in writing to the Toxics Cleanup Program Manager within  
16 seven (7) days of receipt of the Regional Section Manager's decision.

17 6. Ecology's Toxics Cleanup Program Manager shall conduct a review of  
18 the dispute and shall endeavor to issue a written decision regarding the dispute within  
19 thirty (30) days of Defendant's request for review of the Regional Section Manager's  
20 decision. The Toxics Cleanup Program Manager's decision shall be Ecology's final  
21 decision on the disputed matter.

22 B. If Ecology's final written decision is unacceptable to Defendant, Defendant has  
23 the right to submit the dispute to the Court for resolution. The Parties agree that one judge should  
24 retain jurisdiction over this case and shall, as necessary, resolve any dispute arising under this  
25 Decree. In the event Defendant presents an issue to the Court for review, the Court shall review  
26

1 the action or decision of Ecology on the basis of whether such action or decision was arbitrary  
2 and capricious and render a decision based on such standard of review.

3 C. The Parties agree to only utilize the dispute resolution process in good faith and  
4 agree to expedite, to the extent possible, the dispute resolution process whenever it is used.  
5 Where either party utilizes the dispute resolution process in bad faith or for purposes of delay,  
6 the other party may seek sanctions.

7 D. Implementation of these dispute resolution procedures shall not provide a basis  
8 for delay of any activities required in this Decree, unless Ecology agrees in writing to a schedule  
9 extension or the Court so orders.

#### 10 **XV. AMENDMENT OF DECREE**

11 The project coordinators may agree to minor changes to the work to be performed  
12 without formally amending this Decree. Minor changes will be documented in writing by  
13 Ecology.

14 Substantial changes to the work to be performed shall require formal amendment of this  
15 Decree. This Decree may only be formally amended by a written stipulation among the Parties  
16 that is entered by the Court, or by order of the Court. Such amendment shall become effective  
17 upon entry by the Court. Agreement to amend the Decree shall not be unreasonably withheld  
18 by any party.

19 Defendant shall submit a written request for amendment to Ecology for approval.  
20 Ecology shall indicate its approval or disapproval in writing and in a timely manner after the  
21 written request for amendment is received. If the amendment to the Decree is a substantial  
22 change, Ecology will provide public notice and opportunity for comment. Reasons for the  
23 disapproval of a proposed amendment to the Decree shall be stated in writing. If Ecology does  
24 not agree to a proposed amendment, the disagreement may be addressed through the dispute  
25 resolution procedures described in Section XIV (Resolution of Disputes).  
26

1 **XVI. EXTENSION OF SCHEDULE**

2 A. An extension of schedule shall be granted only when a request for an extension  
3 is submitted in a timely fashion, generally at least thirty (30) days prior to expiration of the  
4 deadline for which the extension is requested, and good cause exists for granting the extension.

5 All extensions shall be requested in writing. The request shall specify:

- 6 1. The deadline that is sought to be extended;
- 7 2. The length of the extension sought;
- 8 3. The reason(s) for the extension; and
- 9 4. Any related deadline or schedule that would be affected if the extension  
10 were granted.

11 B. The burden shall be on Defendant to demonstrate to the satisfaction of Ecology  
12 that the request for such extension has been submitted in a timely fashion and that good cause  
13 exists for granting the extension. Good cause may include, but may not be limited to:

- 14 1. Circumstances beyond the reasonable control and despite the due  
15 diligence of Defendant including delays caused by unrelated third parties or Ecology,  
16 such as (but not limited to) delays by Ecology in reviewing, approving, or modifying  
17 documents submitted by Defendant;
- 18 2. Acts of God, including fire, flood, blizzard, extreme temperatures, storm,  
19 or other unavoidable casualty; or
- 20 3. Endangerment as described in Section XVII (Endangerment).

21 However, neither increased costs of performance of the terms of this Decree nor changed  
22 economic circumstances shall be considered circumstances beyond the reasonable control of  
23 Defendant.

24 C. Ecology shall act upon any written request for extension in a timely fashion.  
25 Ecology shall give Defendant written notification of any extensions granted pursuant to this  
26 Decree. A requested extension shall not be effective until approved by Ecology or, if required,



1 by the Court. Unless the extension is a substantial change, it shall not be necessary to amend  
2 this Decree pursuant to Section XV (Amendment of Decree) when a schedule extension is  
3 granted.

4 D. An extension shall only be granted for such period of time as Ecology determines  
5 is reasonable under the circumstances. Ecology may grant schedule extensions exceeding ninety  
6 (90) days only as a result of:

- 7 1. Delays in the issuance of a necessary permit which was applied for in a  
8 timely manner;
- 9 2. Other circumstances deemed exceptional or extraordinary by Ecology; or
- 10 3. Endangerment as described in Section XVII (Endangerment).

#### 11 **XVII. ENDANGERMENT**

12 In the event Ecology determines that any activity being performed at the Site under this  
13 Decree is creating or has the potential to create a danger to human health or the environment,  
14 Ecology may direct Defendant to cease such activities for such period of time as it deems  
15 necessary to abate the danger. Defendant shall immediately comply with such direction.

16 In the event Defendant determines that any activity being performed at the Site under  
17 this Decree is creating or has the potential to create a danger to human health or the environment,  
18 Defendant may cease such activities. Defendant shall notify Ecology's project coordinator as  
19 soon as possible, but no later than twenty-four (24) hours after making such determination or  
20 ceasing such activities. Upon Ecology's direction, Defendant shall provide Ecology with  
21 documentation of the basis for the determination or cessation of such activities. If Ecology  
22 disagrees with Defendant's cessation of activities, it may direct Defendant to resume such  
23 activities.

24 If Ecology concurs with or orders a work stoppage pursuant to this section, Defendant's  
25 obligations with respect to the ceased activities shall be suspended until Ecology determines the  
26 danger is abated, and the time for performance of such activities, as well as the time for any other

1 work dependent upon such activities, shall be extended, in accordance with Section XVI  
2 (Extension of Schedule), for such period of time as Ecology determines is reasonable under the  
3 circumstances.

4 Nothing in this Decree shall limit the authority of Ecology, its employees, agents, or  
5 contractors to take or require appropriate action in the event of an emergency.

#### 6 **XVIII. COVENANT NOT TO SUE**

7 A. Covenant Not to Sue: In consideration of Defendant's compliance with the terms  
8 and conditions of this Decree, Ecology covenants not to institute legal or administrative actions  
9 against Defendant regarding the release or threatened release of hazardous substances covered  
10 by this Decree.

11 This Decree covers only the Site specifically identified in the Site Diagram (Exhibit A)  
12 and those hazardous substances that Ecology knows are located at the Site as of the date of entry  
13 of this Decree. This Decree does not cover any other hazardous substance or area. Ecology  
14 retains all of its authority relative to any substance or area not covered by this Decree.

15 This Covenant Not to Sue shall have no applicability whatsoever to:

- 16 1. Criminal liability;
- 17 2. Liability for damages to natural resources; and
- 18 3. Any Ecology action, including cost recovery, against PLPs not a party to  
19 this Decree.

20 If factors not known at the time of entry of this Decree are discovered and present a  
21 previously unknown threat to human health or the environment, the Court shall amend this  
22 Covenant Not to Sue.

23 B. Reopeners: Ecology specifically reserves the right to institute legal or  
24 administrative action against Defendant to require it to perform additional remedial actions at  
25 the Site and to pursue appropriate cost recovery, pursuant to RCW 70.105D.050 under the  
26 following circumstances:

1           1.     Upon Defendant's failure to meet the requirements of this Decree,  
2 including, but not limited to, failure of the remedial action to meet the cleanup standards  
3 identified in the Cleanup Action Plan (CAP) (Exhibit B);

4           2.     Upon Ecology's determination that remedial action beyond the terms of  
5 this Decree is necessary to abate an imminent and substantial endangerment to human  
6 health or the environment;

7           3.     Upon the availability of new information regarding factors previously  
8 unknown to Ecology, including the nature or quantity of hazardous substances at the Site,  
9 and Ecology's determination, in light of this information, that further remedial action is  
10 necessary at the Site to protect human health or the environment; or

11          4.     Upon Ecology's determination that additional remedial actions are  
12 necessary to achieve cleanup standards within the reasonable restoration time frame set  
13 forth in the CAP.

14          C.     Except in the case of an emergency, prior to instituting legal or administrative  
15 action against Defendant pursuant to this section, Ecology shall provide Defendant with  
16 fifteen (15) calendar days notice of such action.

#### 17                           **XIX. CONTRIBUTION PROTECTION**

18           With regard to claims for contribution against Defendant, the Parties agree that  
19 Defendant is entitled to protection against claims for contribution for matters addressed in this  
20 Decree as provided by RCW 70.105D.040(4)(d).

#### 21                           **XX. LAND USE RESTRICTIONS**

22           In consultation with Defendant, Ecology will prepare the Environmental (Restrictive)  
23 Covenant consistent with WAC 173-340-440 and Chapter 64.70 RCW. After approval by  
24 Ecology, Defendant shall record the Environmental (Restrictive) Covenant with the office of the  
25 Whatcom County Auditor within ninety (90) days of the effective date of this Decree. The  
26 Environmental (Restrictive) Covenant shall restrict future activities and uses of the Site as agreed

1 to by Ecology and Defendant. Defendant shall provide Ecology with the original recorded  
2 Environmental (Restrictive) Covenant within thirty (30) days of the recording date.

### 3 **XXI. INDEMNIFICATION**

4 Defendant agrees to indemnify and save and hold the State of Washington, its employees,  
5 and agents harmless from any and all claims or causes of action (1) for death or injuries to  
6 persons, or (2) for loss or damage to property to the extent arising from or on account of acts or  
7 omissions of Defendant, its officers, employees, agents, or contractors in entering into and  
8 implementing this Decree. However, Defendant shall not indemnify the State of Washington  
9 nor save nor hold its employees and agents harmless from any claims or causes of action to the  
10 extent arising out of the negligent acts or omissions of the State of Washington, or the employees  
11 or agents of the State, in entering into or implementing this Decree.

### 12 **XXII. COMPLIANCE WITH APPLICABLE LAWS**

13 A. All actions carried out by Defendant pursuant to this Decree shall be done in  
14 accordance with all applicable federal, state, and local requirements, including requirements to  
15 obtain necessary permits, except as provided in RCW 70.105D.090. The permits or other  
16 federal, state, or local requirements that the agency has determined are applicable and that are  
17 known at the time of entry of this Decree have been identified in the CAP (Exhibit B).

18 B. Pursuant to RCW 70.105D.090(1), Defendant is exempt from the procedural  
19 requirements of Chapters 70.94, 70.95, 70.105, 77.55, 90.48, and 90.58 RCW and of any laws  
20 requiring or authorizing local government permits or approvals. However, Defendant shall  
21 comply with the substantive requirements of such permits or approvals. The exempt permits or  
22 approvals and the applicable substantive requirements of those permits or approvals, as they are  
23 known at the time of entry of this Decree, have been identified in the CAP (Exhibit B).

24 Defendant has a continuing obligation to determine whether additional permits or  
25 approvals addressed in RCW 70.105D.090(1) would otherwise be required for the remedial  
26 action under this Decree. In the event either Ecology or Defendant determines that additional

1 permits or approvals addressed in RCW 70.105D.090(1) would otherwise be required for the  
2 remedial action under this Decree, it shall promptly notify the other party of this determination.  
3 Ecology shall determine whether Ecology or Defendant shall be responsible to contact the  
4 appropriate state and/or local agencies. If Ecology so requires, Defendant shall promptly consult  
5 with the appropriate state and/or local agencies and provide Ecology with written documentation  
6 from those agencies of the substantive requirements those agencies believe are applicable to the  
7 remedial action. Ecology shall make the final determination on the additional substantive  
8 requirements that must be met by Defendant and on how Defendant must meet those  
9 requirements. Ecology shall inform Defendant in writing of these requirements. Once  
10 established by Ecology, the additional requirements shall be enforceable requirements of this  
11 Decree. Defendant shall not begin or continue the remedial action potentially subject to the  
12 additional requirements until Ecology makes its final determination.

13 C. Pursuant to RCW 70.105D.090(2), in the event Ecology determines that the  
14 exemption from complying with the procedural requirements of the laws referenced in  
15 RCW 70.105D.090(1) would result in the loss of approval from a federal agency that is necessary  
16 for the state to administer any federal law, the exemption shall not apply and Defendant shall  
17 comply with both the procedural and substantive requirements of the laws referenced in RCW  
18 70.105D.090(1), including any requirements to obtain permits.

### 19 **XXIII. REMEDIAL ACTION COSTS**

20 Defendant shall pay to Ecology costs incurred by Ecology pursuant to this Decree and  
21 consistent with WAC 173-340-550(2). These costs shall include work performed by Ecology or  
22 its contractors for, or on, the Site under Chapter 70.105D RCW, including remedial actions and  
23 Decree preparation, negotiation, oversight, and administration. These costs shall include work  
24 performed both prior to and subsequent to the entry of this Decree. Ecology's costs shall include  
25 costs of direct activities and support costs of direct activities as defined in WAC 173-340-550(2).  
26 Ecology has accumulated \$119,979.72 in remedial action costs related to this facility as of June

1 30, 2015. Payments have been made on this amount totaling \$116,676.59. The remaining  
2 balance of \$3,303.13 shall be submitted within thirty (30) days of the effective date of this  
3 Decree. For all costs incurred subsequent to June 30, 2015, Defendant shall pay the required  
4 amount within thirty (30) days of receiving from Ecology an itemized statement of costs that  
5 includes a summary of costs incurred, an identification of involved staff, and the amount of time  
6 spent by involved staff members on the project. A general statement of work performed will be  
7 provided upon request. Itemized statements shall be prepared quarterly. Pursuant to WAC 173-  
8 340-550(4), failure to pay Ecology's costs within ninety (90) days of receipt of the itemized  
9 statement of costs will result in interest charges at the rate of twelve percent (12%) per annum,  
10 compounded monthly.

11 In addition to other available relief, pursuant to RCW 70.105D.055, Ecology has  
12 authority to recover unreimbursed remedial action costs by filing a lien against real property  
13 subject to the remedial actions.

#### 14 **XXIV. IMPLEMENTATION OF REMEDIAL ACTION**

15 If Ecology determines that Defendant has failed without good cause to implement the  
16 remedial action, in whole or in part, Ecology may, after notice to Defendant, perform any or all  
17 portions of the remedial action that remain incomplete. If Ecology performs all or portions of  
18 the remedial action because of Defendant's failure to comply with its obligations under this  
19 Decree, Defendant shall reimburse Ecology for the costs of doing such work in accordance with  
20 Section XXIV (Remedial Action Costs), provided that Defendant is not obligated under this  
21 section to reimburse Ecology for costs incurred for work inconsistent with or beyond the scope  
22 of this Decree.

23 Except where necessary to abate an emergency situation, Defendant shall not perform  
24 any remedial actions at the Site outside those remedial actions required by this Decree, unless  
25 Ecology concurs, in writing, with such additional remedial actions pursuant to Section XV  
26 (Amendment of Decree).

1 **XXV. PERIODIC REVIEW**

2 As remedial action, including groundwater monitoring, continues at the Site, the Parties  
3 agree to review the progress of remedial action at the Site, and to review the data accumulated  
4 as a result of monitoring the Site as often as is necessary and appropriate under the  
5 circumstances. At least every five (5) years after the initiation of cleanup action at the Site the  
6 Parties shall meet to discuss the status of the Site and the need, if any, for further remedial action  
7 at the Site. Ecology reserves the right to require further remedial action at the Site under  
8 appropriate circumstances. This provision shall remain in effect for the duration of this Decree.

9 **XXVI. PUBLIC PARTICIPATION**

10 Ecology shall maintain the responsibility for public participation at the Site. However,  
11 Defendant shall cooperate with Ecology, and shall:

12 A. If agreed to by Ecology, develop appropriate mailing lists, prepare drafts of public  
13 notices and fact sheets at important stages of the remedial action, such as the submission of work  
14 plans, remedial investigation/feasibility study reports, cleanup action plans, and engineering  
15 design reports. As appropriate, Ecology will edit, finalize, and distribute such fact sheets and  
16 prepare and distribute public notices of Ecology’s presentations and meetings.

17 B. Notify Ecology’s project coordinator prior to the preparation of all press releases  
18 and fact sheets, and before major meetings with the interested public and local governments.  
19 Likewise, Ecology shall notify Defendant prior to the issuance of all press releases and fact  
20 sheets, and before major meetings with the interested public and local governments. For all press  
21 releases, fact sheets, meetings, and other outreach efforts by Defendant that do not receive prior  
22 Ecology approval, Defendant shall clearly indicate to its audience that the press release, fact  
23 sheet, meeting, or other outreach effort was not sponsored or endorsed by Ecology.

24 C. When requested by Ecology, participate in public presentations on the progress  
25 of the remedial action at the Site. Participation may be through attendance at public meetings to  
26 assist in answering questions, or as a presenter.

1 D. When requested by Ecology, arrange and/or continue information repositories at  
2 the following locations:

- 3 1. Bellingham Public Library  
4 210 Central Avenue, Bellingham, WA 98227
- 5 2. Department of Ecology's  
6 Bellingham Field Office  
7 1440 10<sup>th</sup> Street, Suite 102, Bellingham, WA 98225

8 At a minimum, copies of all public notices, fact sheets, and documents relating to public  
9 comment periods shall be promptly placed in these repositories. A copy of all documents related  
10 to this Site shall be maintained in the repository at Ecology's Regional Office in Bellingham,  
11 Washington.

#### 12 **XXVII. DURATION OF DECREE**

13 The remedial program required pursuant to this Decree shall be maintained and continued  
14 until Defendant has received written notification from Ecology that the requirements of this  
15 Decree have been satisfactorily completed. This Decree shall remain in effect until dismissed  
16 by the Court. When dismissed, Section XVIII (Covenant Not to Sue) and Section XIX  
17 (Contribution Protection) shall survive.

#### 18 **XXVIII. CLAIMS AGAINST THE STATE**

19 Defendant hereby agrees that it will not seek to recover any costs accrued in  
20 implementing the remedial action required by this Decree from the State of Washington or any  
21 of its agencies; and further, that Defendant will make no claim against the State Toxics Control  
22 Account or any local Toxics Control Account for any costs incurred in implementing this Decree.  
23 Except as provided above, however, Defendant expressly reserves its right to seek to recover  
24 any costs incurred in implementing this Decree from any other PLP. This section does not limit  
25 or address funding that may be provided under Chapter 173-322 WAC.

#### 26 **XXIX. EFFECTIVE DATE**

This Decree is effective upon the date it is entered by the Court.



**XXX. WITHDRAWAL OF CONSENT**

If the Court withholds or withdraws its consent to this Decree, it shall be null and void at the option of any party and the accompanying Complaint shall be dismissed without costs and without prejudice. In such an event, no party shall be bound by the requirements of this Decree.

STATE OF WASHINGTON  
DEPARTMENT OF ECOLOGY

ROBERT W. FERGUSON  
Attorney General

\_\_\_\_\_  
JAMES PENDOWSKI  
Program Manager  
Toxics Cleanup Program  
(360) 407-7177

\_\_\_\_\_  
ANNE M. POWELL, #42934  
Assistant Attorney General  
(360) 586-4607

Date: \_\_\_\_\_

Date: \_\_\_\_\_

CITY OF BELLINGHAM

\_\_\_\_\_  
KELLI LINVILLE  
Mayor, City of Bellingham  
(360) 778-8100

Date: \_\_\_\_\_

APPROVED AS TO FORM:

\_\_\_\_\_  
Office of the City Attorney

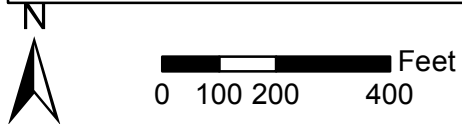
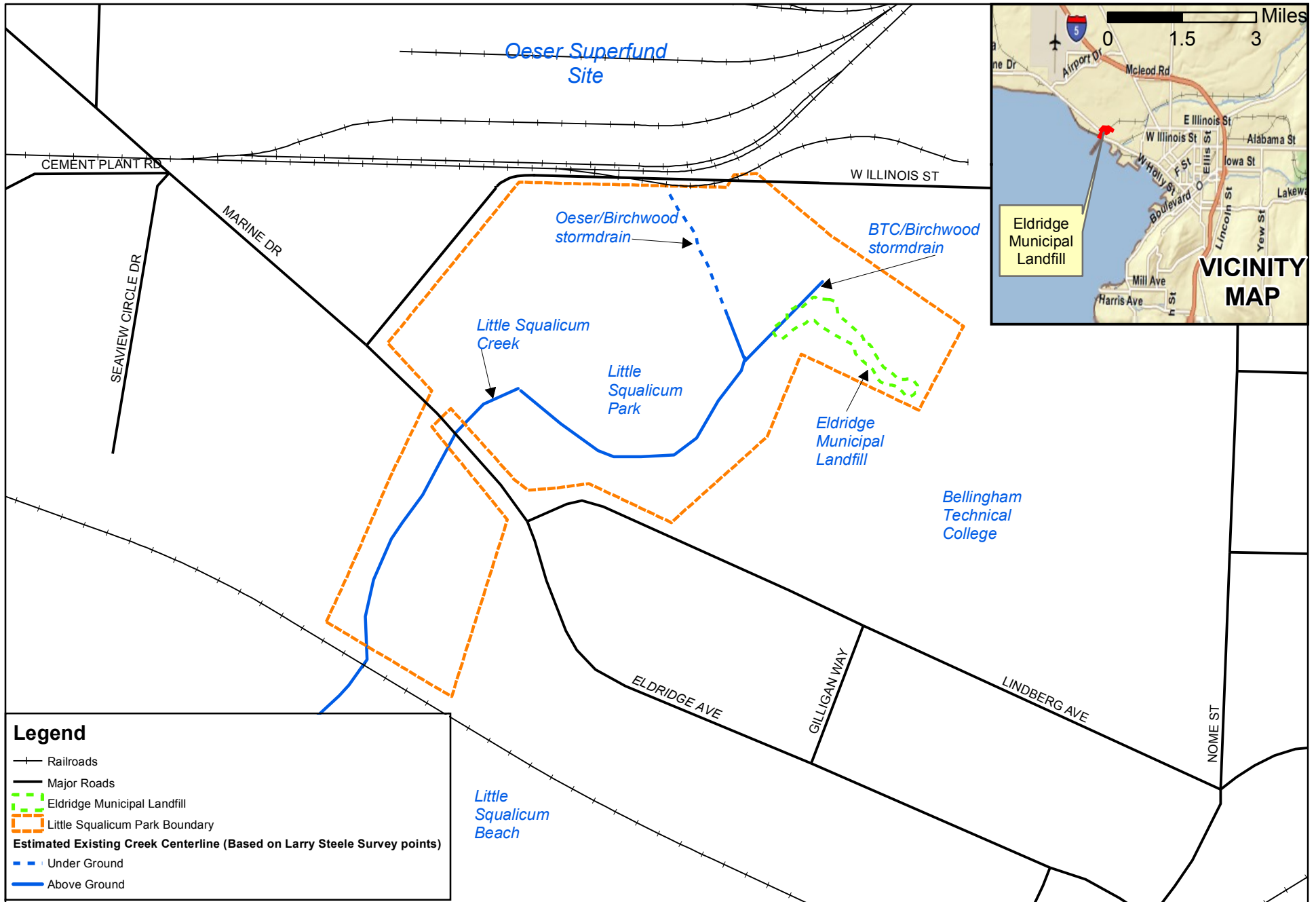
ATTEST: \_\_\_\_\_  
Finance Director  
Date Signed: \_\_\_\_\_

ENTERED this \_\_\_\_\_ day of \_\_\_\_\_ 20\_\_\_\_.

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JUDGE  
Whatcom County Superior Court

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# **EXHIBIT A**



# Exhibit A: Site Diagram

Figure 1  
Eldridge Municipal Landfill  
Site and Vicinity  
Bellingham, WA

# **EXHIBIT B**



**PUBLIC REVIEW DRAFT  
CLEANUP ACTION PLAN  
ELDRIDGE MUNICIPAL LANDFILL  
BELLINGHAM, WASHINGTON**

*Prepared by*

Washington State Department of Ecology  
3190 160<sup>th</sup> Avenue Southeast  
Bellevue, Washington 98008-5452

09/03/15

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## ACRONYMS AND ABBREVIATIONS

BTC	Bellingham Technical College
City	City of Bellingham
Creek	Little Squalicum Creek
CUL	cleanup level
cy	cubic yard
DCAP	draft Cleanup Action Plan
Ecology	Washington State Department of Ecology
EDR	engineering design report
EML	Eldridge Municipal Landfill
EPA	U.S. Environmental Protection Agency
IHS	indicator hazardous substance
MTCA	Model Toxics Control Act
mg/kg	milligrams per kilogram
Oeser	Oeser Company
PAH	polycyclic aromatic hydrocarbon
Park	Little Squalicum Park
PLP	potentially responsible person
RI/FS	remedial investigation and feasibility study
RL	remediation level
SAP	sampling and analysis plan
SL	screening level
TCP	Toxics Cleanup Program
µg/L	micrograms per liter
WAC	Washington Administrative Code



# 1 INTRODUCTION

This cleanup action plan (CAP) describes the cleanup action selected by the Washington State Department of Ecology (Ecology) for the Eldridge Municipal Landfill site (Site). The CAP is based on a Remedial Investigation/Feasibility Study (RI/FS, Herrenkohl Consulting and Integral Consulting 2014) prepared in accordance with an agreed order between Ecology and the city of Bellingham (City) as follows:

Site Name:	Eldridge Municipal Landfill
Site Location:	East end of Little Squalicum Park, Bellingham, WA
Facility Site Identification No.:	16195
Agreed Order No.:	DE 8073
Effective Date of Order:	November 19, 2010, amended July 18, 2011
Potentially Liable Parties:	City of Bellingham, Whatcom County
Parties to the Order:	Ecology, City of Bellingham
Current Property Owner:	Whatcom County
Current Property Lessee:	City of Bellingham

The Site is being cleaned up under the authority of the Model Toxics Control Act (MTCA), Chapter 70.105D of the Revised Code of Washington (RCW), and the MTCA Cleanup Regulation, Chapter 173-340 of the Washington Administrative Code (WAC). The Site cleanup action will be conducted under a consent decree between Ecology and the City. The City and Whatcom County (County) have been identified as potentially liable parties (PLPs) for the Site.

As specified in WAC 173-340-380, this CAP:

- Identifies Site cleanup standards
- Describes the selected cleanup action
- Summarizes the rationale for selecting the cleanup alternative for the Site
- Identifies institutional controls required as part of the cleanup action, if applicable
- Identifies applicable state and federal laws
- Provides the schedule for implementation of the cleanup action
- Specifies the types, levels, and amounts of hazardous substances remaining on site, and the measures that will be used to prevent migration and contact with those substances.

## 1.1 SITE DESCRIPTION

The Site comprises a former City landfill within and at the east end of Little Squalicum Park (Figure 1). The Site is located on property owned by the County and leased to the City. The park occupies the sides and floor of a small ravine, which extends from shortly east of the Site to

the Bellingham Bay shoreline. Little Squalicum Creek drains the ravine and discharges into the bay. The stream originates from two storm water outfalls. One, the outfall for the BTC/Birchwood storm drain, is located within and at the west end of the Site (Figure 1).

Land use around the park is principally residential, except for the Bellingham Technical College (BTC) campus on the south, and a small industrial area, including the Oeser Company wood treating facility on the north.

The Site is approximately 32,000 square feet in plan area, and extends approximately 450 feet along the edge of the ravine. The Site width over this length varies from 30 to 120 feet (refer to Figure 5). The Site is defined by the extent of landfill debris and contaminated soil.

The Site is contained within a larger MTCA cleanup site known as Little Squalicum Park (Park site) Facility Site ID#7551533. Contamination within the larger Park site is associated with releases from the Oeser Company Superfund site, which is located immediately to the north (see Figure 1) and is geographically separate from the landfill.

## 1.2 SITE BACKGROUND

The Eldridge Municipal Landfill was initially discovered while the City was performing a remedial investigation (RI) of the Park site under a separate order with Ecology (Agreed Order No. DE 2016)<sup>1</sup>. In the mid- to late-1930s, the City had used this portion of the Park as a “sanitary landfill” for burning and burying local municipal waste hauled by a garbage collection contractor. The landfill operated for only a few years before operations ceased.

The initial boundaries of the landfill were delineated in January 2006 as part of the Park RI, through the excavation of reconnaissance test pits in which evidence of municipal garbage was found within various fill materials (see Figure 2). The types of municipal garbage observed included glass bottles, metal scraps, ash, ceramics, construction debris, and various indiscernible rusted materials. A draft Park RI report documented the presence of low levels of polycyclic aromatic hydrocarbons (PAHs), benzoic acid, phthalates, and pentachlorophenol in surface soils in the landfill area, as well as elevated concentrations of some heavy metals (e.g., lead). Higher levels of metals were detected in subsurface soils (Integral 2008).

The original Park site Agreed Order (DE 2016) was terminated on October 30, 2009. In November 2009, Ecology listed the landfill area as a separate site and named both the City and County as potentially liable persons (PLPs). Soon after, the City and Ecology began negotiating a new Agreed Order for completing an RI/FS and draft cleanup action plan (DCAP) for the landfill Site. This Agreed Order (DE 8073) became effective on November 19, 2010.

In September 2010, EPA uncovered additional landfill material during their Little Squalicum Creek Removal Action (see Figure 2). The EPA work involved a complete habitat restoration

---

<sup>1</sup> The Agreed Order for the Little Squalicum Park site is no longer in effect. The City and Ecology agreed to terminate the original Little Squalicum Park Agreed Order in October 2009. Oversight of most of the non-landfill Little Squalicum Park site was transferred to the United States Environmental Protection Agency (EPA) to become the Little Squalicum Creek Removal Action site.

effort throughout the length of the Park, construction of a new Little Squalicum Creek channel to handle local storm drainage, and re-construction of the two major storm drain outfalls.

In order to allow the EPA work to continue, the City undertook an independent action to excavate the contaminated landfill material within the EPA work area and stockpile it outside that work area. The area of excavation and the location of the stockpile are shown on Figure 2. The EPA completed their removal action in 2011 (CH2M Hill 2012).

An Ecology review draft RI/FS report was completed for the Site in February 2011 (Herrenkohl Consulting and Integral Consulting 2011a). The report identified a number of organic and inorganic contaminants in soil at the Site including: metals (arsenic, cadmium, chromium, copper, lead, mercury, nickel, silver, zinc); semivolatiles (benzoic acid, various phthalates, retene, 2,3,4,6-tetrachlorophenol, pentachlorophenol); polycyclic aromatic hydrocarbons (PAHs); and diesel- and motor oil-range petroleum hydrocarbons. After review by Ecology and further discussion between parties, the City chose to delay completion of the RI/FS and instead focus on conducting an interim action.

An amendment to the Agreed Order for the interim action was negotiated and signed by the City and Ecology on July 18, 2011. The scope of work was described in an interim action work plan (Exhibit B of the amended Agreed Order) (Herrenkohl Consulting and Integral Consulting 2011b). Essentially, the proposed work consisted of excavating landfill refuse and contaminated soil, disposing of them and the stockpile material off-property, and backfilling the excavation with clean soil.

The City completed an engineering design report (EDR) on June 24, 2011, for implementing the interim action (Herrenkohl Consulting and Wilson Engineering 2011a). The EDR included engineering design plans and specifications for the interim action, and ancillary documents (e.g., monitoring plan, wetland restoration plan).

Construction work for the interim action was conducted from August 22 to October 7, 2011, and included the excavation of about 4,290 tons of landfill debris and contaminated soil from the Site and disposal at a Subtitle D landfill located in Roosevelt, Washington. The excavation was stabilized, backfilled with clean soil, and vegetated by hydroseeding. In addition, a 750 ft<sup>2</sup> depressional wetland (Wetland B)<sup>2</sup> was created within the project area (Figure 3).

The cleanup of landfill debris and contaminated soil on the Site was confirmed by the collection and testing of soils as described in the performance monitoring and contingency plan (Herrenkohl Consulting and Wilson Engineering 2011a). Based on the testing results and performance evaluation, soils containing pentachlorophenol and metals above the remediation levels (RLs) were removed from the Site except for locations on steep, unstable slopes and within or adjacent to an existing wetland (Wetland A) (Figure 3). The interim action construction activities and performance monitoring were summarized in a construction completion report (Herrenkohl Consulting and Wilson Engineering 2011b).

---

<sup>2</sup> Before the interim action, there were two existing wetlands (designated A and B) within the landfill Site. Wetland B was remediated as part of the interim action with a new wetland created in its place. Wetland A was not remediated as part of the interim action.

In April 2012, the City completed a sampling and analysis plan for conducting additional soil and groundwater characterization at the landfill Site to determine the effectiveness of the interim action (Herrenkohl Consulting 2012). The additional Site characterization was completed in May 2012 (Figure 4).

An RI/FS report and this CAP were then prepared. The RI/FS report describes the environmental setting for the Site, identifies the nature and extent of contamination, summarizes the results of the interim action, evaluates the protectiveness of post-interim action conditions, and proposes no further active cleanup measures for the Site.

## 2 CLEANUP STANDARDS

This section discusses Site cleanup standards for indicator hazardous substances (IHSs) detected in affected Site media, specifically soil and groundwater. Cleanup standards consist of:

1) cleanup levels (CULs) defined by regulatory criteria that are protective of human health and the environment and 2) the points of compliance at which the cleanup levels must be met.

### 2.1 CLEANUP LEVELS

#### 2.1.1 Soil

A variety of compounds and metals were detected at the Site as summarized in Section 1.2. Of these, a smaller group of chemicals were determined to be IHSs because they exceeded screening levels or were potentially indicative of an Oeser-related impact. For soil, the final IHSs consisted of: cadmium, copper, lead, mercury, zinc, and pentachlorophenol.<sup>3</sup>

Soil cleanup levels for the IHSs have been established for the Site based on its' current and anticipated future use as a park. The soil CULs are protective of the following exposure pathways and receptors:

- Direct contact/ingestion – human health
- Direct contact/ingestion - terrestrial species (plants, soil biota, wildlife)
- Entrainment in stormwater runoff – freshwater sediment benthic species
- Leaching to ground water – surface water beneficial uses

The final CUL value for each IHS was selected to be the higher of natural background, the practical quantitation limit (PQL), or risk-based values established for each of the applicable exposure pathways in accordance with MTCA, except for the leaching pathway. Explicit CULs were not set for the leaching pathway. Instead, groundwater sampling data was used to demonstrate that Site groundwater already meets cleanup levels for the soil IHSs, so the existing soil concentrations are already protective of groundwater. When risk-based values for the other exposure pathways were higher than natural background or the PQL, the lowest of the risk-based values was selected. Final soil cleanup levels are as follows:

---

<sup>3</sup> Soil remediation levels (RLs) that were developed as part of the interim action were set conservatively because the FS had not been written and soil cleanup levels (CULs) had not yet been established. (See RI/FS, Appendix D). The interim action was then incorporated as part of the final cleanup action and CULs were developed during the FS. These CULs have been subject to an ecological assessment to evaluate terrestrial species protection based on that pathway at the site. As a result, the final soil CULs established for copper, lead, and zinc are higher than the original interim action RLs.

<u>Analyte</u>	<u>CUL (mg/kg)</u>	<u>Basis</u>
Copper	70	Terrestrial species protection (Eco SSL <sup>1</sup> )
Lead	118	Terrestrial species protection (MTCA Table 749-3 <sup>2</sup> )
Mercury	0.1	Terrestrial species protection (MTCA Table 749-3 <sup>3</sup> )
Zinc	120	Terrestrial species protection (Eco SSL <sup>4</sup> )
Pentachlorophenol	2.5	Human health protection (MTCA Method B)

### [Applicable footnotes]

- (1) Based on EPA SSL protection of plants (**70 ppm**), EPA SSL protection of soil invertebrates (80 ppm), and MTCA (Table 749-3) protection of wildlife (217 ppm).
- (2) Based on EPA SSL protection of plants (120 ppm), EPA SSL protection of soil invertebrates (1700 ppm), and MTCA protection of wildlife (**118 ppm**).
- (3) Based on MTCA (Table 749-3) protection of plants (0.3 ppm), protection of soil biota (**0.1 ppm**), and protection of wildlife (5.5 ppm).
- (4) Based on EPA SSL protection of soil invertebrates (**120 ppm**), EPA SSL protection of plants (160 ppm), and MTCA (Table 749-3) protection of wildlife 360 ppm).

The ecological soil screening levels (Eco SSLs) are alternative values developed by EPA to be protective of plants, soil biota and wildlife. The Eco SSLs for wildlife are not suitable as alternatives for the wildlife indicator soil concentrations presented in Table 749-3 of MTCA because they were derived for receptors other than the vole, shrew, and robin. However, the plant and soil biota Eco SSL values were considered as suitable alternative soil cleanup levels for this specific Site under WAC 173-340-7493(6) – *New scientific information*. The alternative SSLs proved to be the lowest of the applicable risk values for copper<sup>1</sup> and zinc<sup>4</sup>, and were therefore used as the final cleanup levels for these metals, as noted above.

A potential soil exposure pathway that wasn't considered applicable to the site was impacts to ambient air via contaminant volatilization. The contaminants in soil at this Site have low volatility and are not considered a risk for this pathway.

## 2.1.2 Groundwater

A select group of analytes was chosen for confirmatory sampling based on their presence in soil or presence in typical landfill leachate. These analytes included: metals (arsenic, cadmium, copper, lead, mercury, zinc), conventionals (calcium, iron, manganese, magnesium, nitrite, nitrate, ammonia), pentachlorophenol, and PAHs.

Groundwater cleanup levels have now been established for all of these analytes, except for pentachlorophenol and PAHs which were not detected in groundwater. The cleanup levels are based on protection of the following exposure pathways and receptors:

- Groundwater potable use – human health
- Groundwater discharge to surface water – human health/aquatic species



The final cleanup level value for each analyte was selected to be the higher of natural background or risk-based values established for each of the applicable exposure pathways in accordance with MTCA or other applicable, relevant, and appropriate requirements (ARARs)– When risk-based values were higher than natural background, the lowest of the risk-based values was selected. Final groundwater cleanup levels are as follows:

<u>Analyte</u>	<u>CUL (µg/l)</u>	<u>Basis</u>
Arsenic	5	Natural background (MTCA Table 720-1)
Cadmium	0.25	Surface water protection (EPA WQC)
Copper	9	Surface water protection (EPA WQC)
Lead	2.5	Surface water protection (EPA WQC)
Mercury	0.012	Surface water protection (WA WQC)
Zinc	100	Surface water protection (NTR)
Iron	300	Groundwater protection (Secondary MCL)
Manganese	50	Groundwater protection (Secondary MCL)
Nitrite	1 (mg -N/L)	Groundwater protection (Secondary MCL)
Nitrate	10 (mg -N/L)	Groundwater protection (Secondary MCL)
Ammonia	7.3 (mg/l TAN)	Surface water protection (EPA WQC)

EPA WQC - U.S. EPA ambient water quality criteria

NTR - National Toxics Rule

MCL - Maximum contaminant level (for drinking water)

TAN – total ammonia nitrogen

Other potential exposure pathways not considered applicable at this Site include:

- Impacts to ambient air via contaminant volatilization - the contaminants at this Site have low volatility and are not considered a risk for soil vapor intrusion.
- Impacts to benthic species in stream sediment –arsenic was found to exceed cleanup levels in groundwater but is expected to decline to background levels (see Section 5.2.2),

## 2.2 POINTS OF COMPLIANCE

### 2.2.1 Soil

The point of compliance for soil, based on WAC 173-340-740(6), is throughout the Site. MTCA recognizes that for those cleanup actions that involve containment of hazardous substances, the soil cleanup levels will typically not be met throughout the Site [WAC 173-340-740(6)(f)]. However, MTCA also recognizes that such cleanup actions may still comply with cleanup standards. The determination of the adequacy of soil cleanup is based on the ability for the remedial action to comply with groundwater cleanup standards for the Site, to meet performance standards designed to minimize human or environmental exposure, and to provide practicable treatment of effected soil. Performance standards to minimize human and environmental

exposure to effected soil include institutional controls that limit activities that interfere with the protectiveness of the cleanup action, as well as compliance monitoring and periodic reviews to ensure the long-term integrity of the containment system [WAC 173-340-740(6)(f)(i-vi)].

### **2.2.2 Groundwater**

The point of compliance for groundwater is throughout the Site.

### **3 APPLICABLE OR RELEVANT AND APPROPRIATE REQUIREMENTS**

Cleanup actions conducted under MTCA must comply with applicable state and federal laws [WAC 173-340-710(1)]. MTCA defines applicable state and federal laws to include legally applicable requirements and those requirements that are relevant and appropriate (collectively referred to as the ARARs).

The Minimum Functional Standards for Solid Waste Handling (Chapter 173-304 WAC) and Criteria for Municipal Solid Waste Landfills (Chapter 173-351 WAC) were considered during evaluation of the cleanup action. These regulations provide for closure and post-closure care generally in accordance with the following:

- The facility shall be closed in a manner that minimizes the need for further maintenance, and controls, minimizes, or eliminates threats to human health and the environment from post-closure escape of solid waste constituents, leachate, landfill gases, contaminated rainfall, or waste decomposition products to the ground, groundwater, surface water, and the atmosphere.
- Post-closure activities include groundwater monitoring; surface water monitoring; gas monitoring; and maintenance of the facility, facility structures, and monitoring systems for their intended use for a period of 20 years or as long as necessary for the facility to stabilize (i.e., little or no settlement, gas production, or leachate generation) and to protect human health and the environment; and until monitoring of groundwater, surface water, and gases can be safely discontinued.

In accordance with MTCA, the cleanup action will be exempt from the procedural requirements of Chapters 70.94, 70.95, 70.105, 77.55, 90.48, and 90.58 RCW, and of any laws requiring or authorizing local government permits or approvals. However, the substantive requirements of such permits or approvals (WAC 173-340-520) must be met.

After consideration of the need for permits (or the need to meet the substantive requirements of such permits) in order to conduct cleanup actions, it was determined that no permits will be needed because no active cleanup measures will be undertaken. Under the CAP, only passive cleanup activities will occur.

## 4 INTERIM ACTION

As described previously, approximately 4,290 tons of landfill debris and contaminated soil were removed from the Site as part of the interim action and transported to Roosevelt Regional Landfill in Washington State for proper disposal. This mass represented the bulk of the contaminated soil/debris comprising the Site. The excavation was stabilized, backfilled with clean soil, and vegetated by hydroseeding. In addition, a 750 ft<sup>2</sup> depressional wetland (Wetland B) was created within the project area (Figure 3).

Performance monitoring conducted during the interim action showed most of the landfill materials had been removed from the Site except for a few locations either on steep, unstable slopes, encroaching into Site wetlands or within the root system of a large tree.

Groundwater was monitored after completion of the interim action to evaluate the soil leaching pathway for the Site.

A variety of wetland plants were planted in the constructed 750 ft<sup>2</sup> depressional Wetland B created as part of the interim action. Some plants did not survive after the first year due to drought and other unforeseen conditions.

## 5 DESCRIPTION OF PROPOSED CLEANUP ACTION

### 5.1 BASIS FOR SELECTION OF THE PROPOSED CLEANUP ACTION

As described previously, an interim action was completed at the Site in 2011. The interim action consisted of excavating 4,290 tons of landfill materials and contaminated soils and disposing of them at a permitted disposal facility. However, implementation of the interim action resulted in contaminated soils being left in a few locations around the periphery of the former landfill, including steep, unstable slopes and within an existing wetland area (see Section 5.2 below). An addendum to the RI/FS provides the basis for selection of the proposed final cleanup action for the Site (Herrenkohl Consulting and Wilson Engineering 2015).

Two cleanup action alternatives were evaluated in the FS. Alternative 1 included wetland planting, compliance monitoring, and institutional controls. Alternative 2 included shoring, excavation and off-site transport and disposal. Alternative 1 was identified as the preferred alternative and is the selected cleanup action for the site.

The two cleanup alternatives presented in the FS were evaluated with respect to their ability to adequately achieve compliance with MTCA threshold criteria [WAC 173-340-360(2)(a)], including each alternative's ability to protect human health and the environment, comply with cleanup standards, comply with state and federal laws, and provide for compliance monitoring. The alternatives were further evaluated for their ability to use permanent solutions to the maximum extent practicable and satisfy these threshold criteria within a reasonable time frame while addressing public concerns [WAC 173-340-360(2)(b)]. The two alternatives were determined to meet these requirements.

MTCA provides for the costs and benefits associated with alternatives to be evaluated through a disproportionate cost analysis (DCA), which compares the relative environmental benefits of each alternative against the most permanent alternative. Costs are disproportionate to benefits if the incremental cost of the most permanent alternative exceeds the incremental degree of benefits achieved over the lower cost alternative [WAC 173-340-360(3)(e)(i)]. Alternatives that exhibit disproportionate costs are considered "impracticable", and that alternative is eliminated from further consideration. The six evaluation criteria for the DCA are:

- Protectiveness
- Permanence
- Long-term effectiveness
- Short-term risk management
- Implementability
- Considerations of public concerns

Based on the results of the DCA, Alternative 1 was determined to be permanent to the maximum extent practicable. More detailed information on the alternative evaluation and the DCA process is included in the Site RI/FS (Herrenkohl Consulting and Wilson Engineering 2015).

As a result of this evaluation, a remedial alternative was selected that includes additional measures of wetland planting, compliance groundwater monitoring, and institutional controls to address these areas of residual soil contamination. The restoration time frame for the cleanup action following the finalization of the CAP is expected to be:

- 1 year: Construction of fencing and signage and recorded environmental covenant
- 2 years: Determination of wetland replanting success
- 2 years: Achievement of ground water cleanup standards

Ecology is choosing the cleanup action for this Site as being the completed interim action and these additional measures, as described in Section 5.3. Implementation of these additional measures is expected to result in the cleanup action meeting the requirements of WAC 174-340-360.

## **5.2 AREAS SUBJECT TO ADDITIONAL CLEANUP**

### **5.2.1 Soil**

Figure 5 shows the boundary of the Site and the areas with residual soil contamination labeled 1 through 4. These are identified as follows:

- Area 1: Soils under existing wetland A and the cottonwood tree.
- Area 2: Soils at the base of the steep slope in the southwestern corner of the Site
- Area 3: Soils at the base of the steep slope along the southeastern edge of the Site
- Area 4: Soils at the eastern end of the Site

Prior to the interim action, the entire area within the Site boundary required cleanup. Following the interim action, certain areas still contained soils with metals concentrations exceeding remediation levels. The contaminated soils were typically present beneath 2 to 7 feet of clean imported soil. Because remediation levels for many of the IHSs were based on protection of terrestrial life (i.e., were lower than corresponding values protective of human health), an ecological risk-assessment was undertaken to evaluate whether the residual soil contamination represented a risk to terrestrial life.

As presented in Section 8.3.2 of the RI/FS, a stepwise approach was used to address potential ecological risks from the residual metal concentrations that exceeded remediation levels after

completion of the interim action. The specific metals involved consisted of copper, lead, mercury, and zinc. This stepwise approach involved first calculating depth-weighted soil concentrations, then developing alternative ecological soil cleanup levels, and finally developing exposure-adjusted soil concentrations. The results are described in the following paragraphs.

Step 1: Depth-weighted soil concentrations were estimated for soil within the conditional point of compliance (POC) which extends from the surface to a depth of 6 ft below ground surface (bgs). The 90<sup>th</sup> percentile natural background concentration for Puget Sound (Ecology, 1994) was used to represent metals concentrations in the clean cover layer, and the residual site soil concentration was used to represent the concentration in the soil below the cover layer. Please see Equation 1 in Section 8.3.2 of the RI/FS for the formula that was used. Results were that:

- Copper exceeded the remediation level of 50 mg/kg in 1 of 10 stations.
- Lead exceeded the remediation level of 50 mg/kg in 6 of 17 stations.
- Mercury exceeded the remediation level of 0.1 mg/kg in 6 of 17 stations.
- Zinc exceeded the remediation level of 86 mg/kg in 4 of 10 stations.

Step 2: Alternative ecological soil screening levels (Eco SSLs) were developed for copper, lead, and zinc as described in Section 2.1.1. After the Eco SSLs were identified, they were compared to the depth-weighted soil concentrations derived in step 1. Results from that comparison were as follows:

- Copper concentrations were below the Eco SSL concentration (determined to be protective of plants) of 70 mg/kg in the 10 confirmation stations.
- Lead concentrations exceeded the Eco SSL concentration (determined to be protective of plants) of 120 mg/kg at 2 stations
- Zinc concentrations exceeded the Eco SSL concentration (determined to be protective of plants) of 160 mg/kg at 2 stations.
- Zinc concentrations exceeded the Eco SSL concentration (determined to be protective of soil biota) of 120 mg/kg at 3 stations.

Step 3: Because ecological receptors are not homogeneously exposed to soil within the conditional point of compliance (i.e. 0 – 6ft), exposure adjusted soil concentrations were calculated to provide an improved estimate of ecological exposures. Please see Equation(s) 2 and 3 in Section 8.3.2 of the RI/FS for the formula that were used. Plant rooting depths for grasses, shrubs, and trees were based on empirical data obtained from a comprehensive review of scientific literature. For soil biota, literature reviews were conducted to estimate the normal burrowing depths of soil macroinvertebrates likely to inhabit the Site. Results indicate that residual levels of contaminants should not pose a risk to plants and soil biota.

Based on the results of this evaluation, Ecology determined that the post interim action ecological risk assessment provides sufficient information to conclude that ecological receptors

should not be at risk from residual soil metals concentrations present on the landfill site. This determination is based on the clean cover soils and underlying contaminated soils remaining undisturbed. Long-term care is therefore required to maintain these existing conditions in the following specific areas:

Area 1: Contaminated soils under existing wetland A and the cottonwood tree are below a depth of 0.5 ft to 1.0 ft and contain copper, lead, mercury, and zinc concentrations exceeding the CULs protective of terrestrial species, and lead exceeding a value protective of human direct contact.

Area 2: Contaminated soils at the base of the steep slope in the southwestern corner of the Site are below a depth of 0 ft to 5.5 ft, and contain lead, mercury, and zinc concentrations exceeding cleanup levels protective of terrestrial species.

Area 3: Contaminated soils at the base of the steep slope along the southeastern edge of the Site are below a depth of 3.0 ft to 4.0 ft and contain copper, lead, mercury and zinc concentrations exceeding cleanup levels protective of terrestrial species, and lead exceeds a value protective of human direct contact.

Area 4: Contaminated soils at the eastern end of the Site are below a depth of 4.5 ft to 6.0 ft and contain copper, lead, mercury, and zinc concentrations exceeding cleanup levels protective of terrestrial species, and lead exceeds a value protective of human direct contact.

### 5.2.2 Groundwater

As indicated in the RI/FS, the uppermost groundwater potentially impacted by landfill leachate occurs as an unconfined water-bearing zone extending from near land surface to a depth of about 10 feet. The saturated thickness in this water-bearing zone is typically between 6 and 8 feet, and the groundwater in it is separated from deeper aquifers by a silty clay aquitard.

None of the compounds or metals analyzed in groundwater samples obtained following the interim action exceeded cleanup levels or were higher than background levels, except for the metals: arsenic and iron. Specific issues associated with these metals are as follows:

- Iron is commonly elevated in landfill leachate, but was not expected to be elevated above background because the landfill debris had been replaced almost entirely with imported pit run fill. However, iron was slightly elevated in the three wells completed in the footprint of the former landfill with respect to the upgradient well. These results may indicate a residual impact from the former landfill, a variation in subsurface geochemical conditions unrelated to the landfill, or a variation in natural geochemical conditions related to the new pit run fill or surface soil amendments placed to help with revegetation. Because the source of the elevated concentrations is



not fully understood, Ecology does not consider the ground water as currently meeting cleanup levels with respect to iron.

- Arsenic concentrations can sometimes be elevated in landfill leachate, but can also be quite variable in an un-impacted aquifer due to natural variations in subsurface geochemical conditions. The sampling showed an elevated arsenic detection in one well (MW-03) completed in the footprint of the former landfill with respect to the upgradient well. Two other wells completed in the former landfill footprint had arsenic concentrations below the CUL and also slightly lower than the upgradient well. These contradictory data could represent an artifact related to sampling methods for MW-03, a residual impact from the former landfill, or a natural or recent geochemical variation in the uppermost water-bearing zone (as described above). There is, in fact, some data from other wells in the area suggesting that arsenic concentrations in the uppermost water-bearing zone vary within the range observed at the Site. However, because the source of the elevated concentration is not fully understood, Ecology does not consider the groundwater as currently meeting cleanup levels with respect to arsenic.

In conclusion, arsenic and iron in groundwater do not currently meet their cleanup levels, and need to be addressed further as part of the cleanup action.

## 5.3 CLEANUP ACTION DESCRIPTION

### 5.3.1 Wetland planting

A variety of wetland-type plants were initially planted in the created Wetland B as part of the interim action. Successful species include Salmonberry (*Rubus spectabilis*), Pacific willow (*Salix lasiandra*), Pacific dogwood (*Cornus nuttallii*), and slough sedge (*Carex obnupta*). Although the plant species that have survived should continue growing in the following years, the overall survival rate is considered below normal for a wetland restoration (Herrenkohl Consulting and Wilson Engineering 2011a)<sup>4</sup>.

Additional wetland restoration is required for Wetland B using the following guidelines (from Herrenkohl Consulting and Wilson Engineering 2011a):

- Replanting a combination of the shrub species Salmonberry, Pacific willow, and Pacific dogwood; a minimum of 10 plants each.

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<sup>4</sup> Based on best professional judgment, an overall survival rate of between 70-90% is desirable for successful wetland restoration. The survival rate for Wetland B was estimated at 50-60%.

- After planting, watering will take place at least once per month during the driest part of the year (July, August, September) for two consecutive years.
- Installation of a boundary fence (wooden, two-rail) and signs labeled “Native Growth Protection Area” for both wetland areas (Wetlands A and B) and the adjacent large cottonwood tree.

### **5.3.2 Compliance monitoring for groundwater**

Ecology expects that elevated arsenic and iron concentrations in groundwater within the former landfill footprint will decline and meet background conditions with the passage of time. For arsenic, the decline may occur immediately if the initial elevated concentration was due to a sampling artifact. Otherwise, the decline for both arsenic and iron should occur within two years, due either to the flushing of residual contamination, if present, or the establishment of equilibrium between the new pit run fill and the surrounding native soils. There is also a possibility that iron, in particular, will remain elevated over background due to natural differences in the geochemistry of the new fill versus the native soils outside the new fill, or to leaching of surface fertilizers placed to help revegetation.

To track and confirm the expected decline, groundwater samples will be collected during the wettest season (December – March) over two years of monitoring. The samples will be obtained from wells EML-SB-01, -02, -03, and -04, and analyzed for arsenic and iron (dissolved only) following methods described in the sampling and analysis plan (SAP, Herrenkohl Consulting 2012). Standard field parameters (pH, temperature, conductivity, and the redox potential) will also be measured during each sampling event.

After the last sampling round is conducted, the results will be evaluated to determine if the arsenic and iron concentrations have reached or are reaching background conditions. Additional sampling, or other steps, may be required depending on the results of that evaluation.

### **5.3.3 Designation of especially valuable habitat**

As part of the cleanup action, Area 1 will be designated as “especially valuable habitat”. The designation is warranted since Wetland A is considered a critical area based on the results of previous wetland delineations for the Site (Herrenkohl Consulting and Integral Consulting 2014). This designation will allow the wetland and the cottonwood tree to remain in place and be protected; however, the area will require institutional controls as described in section 5.3.4.

The designation process will be based on a net environmental benefit analysis, as outlined in a 2012 draft Ecology document – Terrestrial Evaluation Technical Assistance. This analysis is, in turn, based on the MTCA requirement that overall environmental protectiveness be considered in the selection of a cleanup alternative that is permanent to the maximum extent practicable (WAC 1730-340-360(3)(f)(i)).

### **5.3.4 Institutional controls**

Institutional controls will be required as part of the cleanup action, and will include an environmental covenant, an operations and maintenance plan for the Site, and special boundary fencing and signage. The purpose of these institutional controls will be to protect especially valuable habitat, to prevent human exposure to residual soil contamination, and to protect terrestrial wildlife at the Site.

The environmental covenant will be recorded with Whatcom County and limit human activity (e.g., intrusive activities such as digging) in the areas of residual contamination at the Site. It will also identify and protect the area designated as “especially valuable habitat” - Area 1. The restrictive environmental covenant will be subject to Ecology’s approval before being recorded, and the special operating procedures will also be subject to Ecology approval.

A wooden two-rail, boundary fence and signs will be installed around the Wetland A and B areas and the cottonwood tree.

The operations and maintenance plan will include special procedures for accessing, working in, and maintaining the Site by the parks department or other city departments.

## 6 IMPLEMENTATION OF THE CLEANUP ACTION

The design and implementation of the cleanup action for the Site will be completed over a period of approximately one year, with additional time to complete compliance monitoring, as necessary. The expected schedule for design and implementation of the cleanup action is described below.

- **Wetland Planting** – Additional wetland planting and installation of a boundary fence and signage will be completed in the fall/winter of 2015. Upon completion of the planting, the plants will be watered once per month during the summer months (July, August, September) over two consecutive years.
- **Compliance Monitoring** – Groundwater monitoring will be performed as described in Section 5 and with methods presented in the SAP (Herrenkohl Consulting 2012). The monitoring is planned for the 2015-2016 and the 2016-2017 seasons.
- **Designation of Especially Valuable Habitat** - The designation process is expected to take place by the end of 2015.
- **Recording of Environmental Covenant** – An environmental covenant restricting property use and protection of Wetland A and the cottonwood tree will be recorded upon finalization of the Consent Decree. These controls will remain in place indefinitely unless removal is approved by Ecology. Recording is expected to occur by the end of 2015.
- **Preparation of Operations and Maintenance Plan**– Preparation of this document will be completed by the end of 2015.

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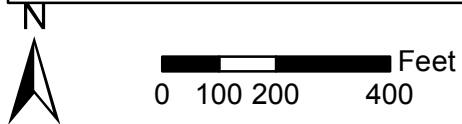
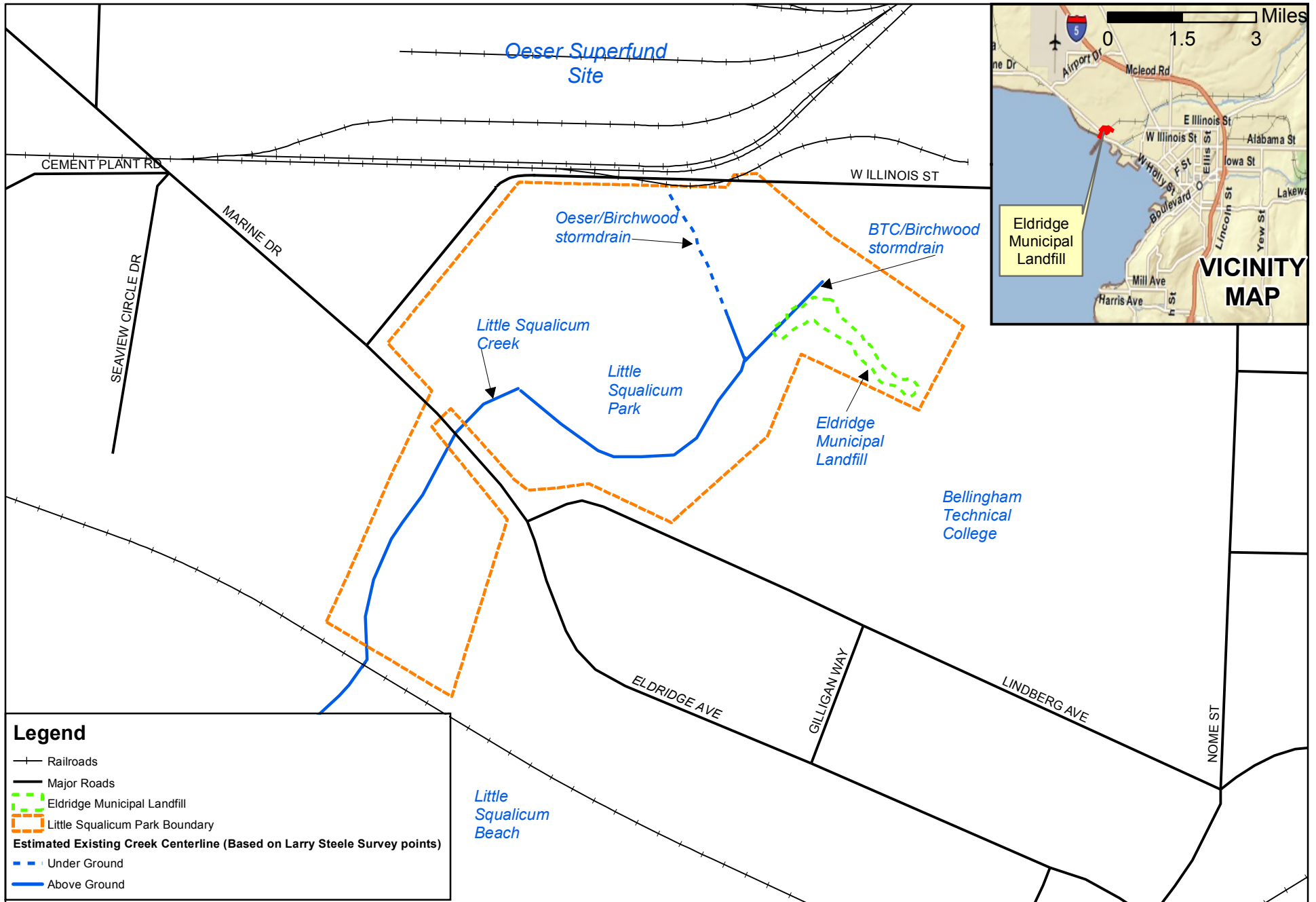
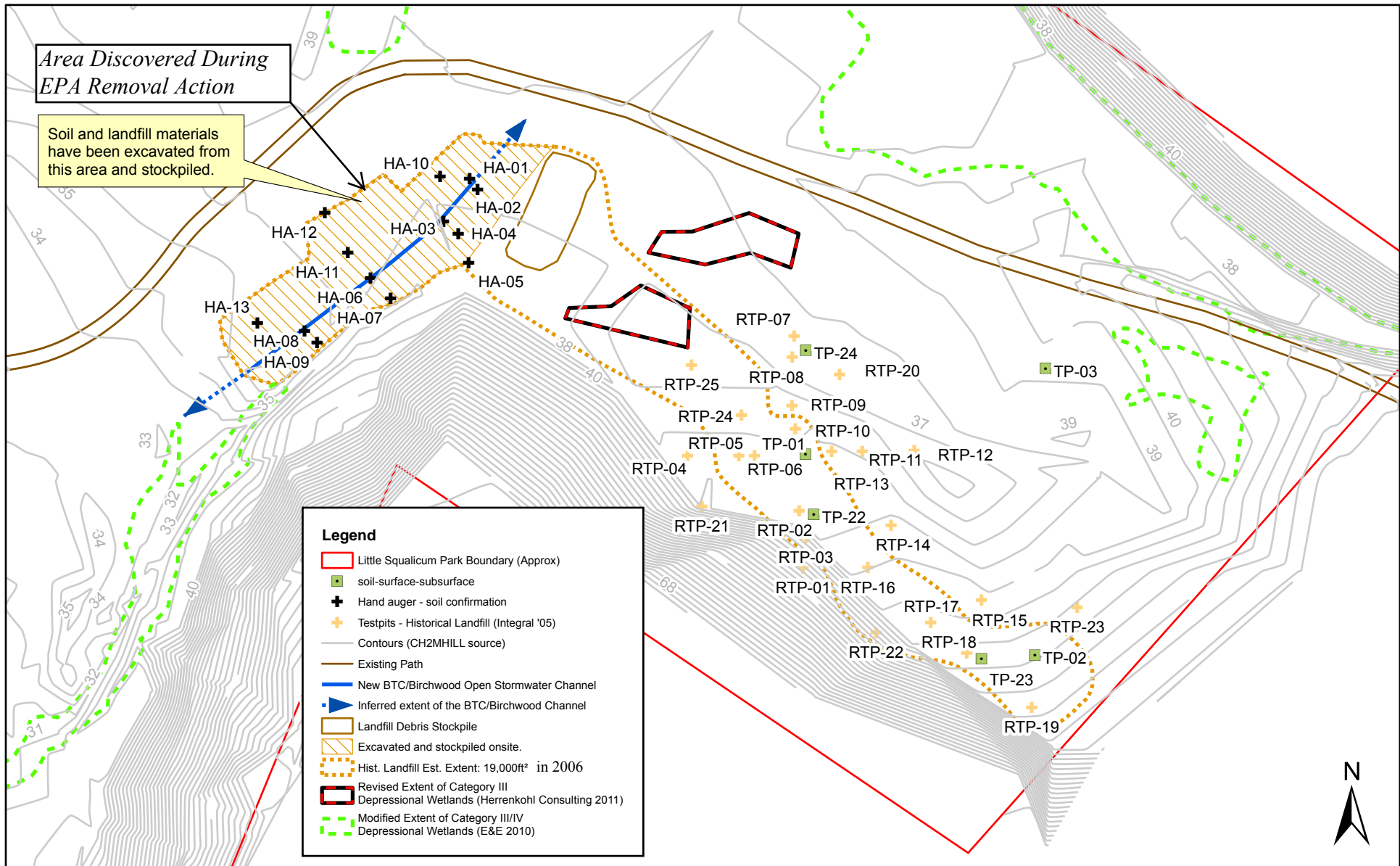


Figure 1  
Eldridge Municipal Landfill  
Site and Vicinity  
Bellingham, WA



\*Survey data horizontal datum is WA State Plane 1983, WA-North, NAD83-HARN, US Feet

\*Survey data vertical datum is NAVD88

\*Topographic contour lines were provided by CH2M Hill from the Little Squalicum Park Topographic Survey completed by White Shield, Inc dated August 21, 2008.

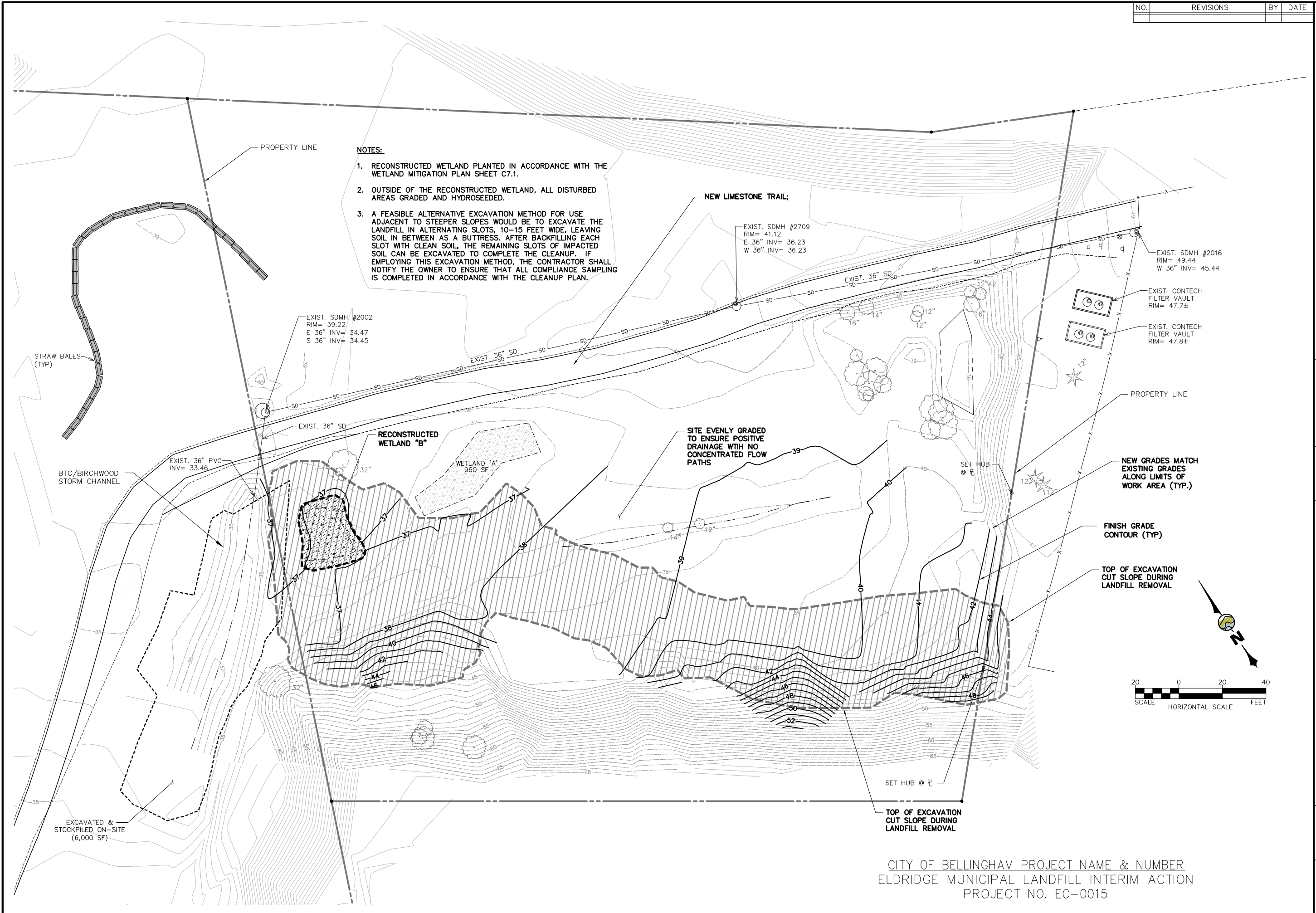
\*Wetlands delineation completed by Ecology and Environment 2010 for CH2M Hill and EPA in support of Little Squalicum Creek removal action.

\* Revised wetland delineation completed by Herrenkohl Consulting Feb 2011.

Figure 2  
Eldridge Municipal Landfill  
Historical Site Map



NO.	REVISIONS	BY	DATE



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REGISTERED PROFESSIONAL SURVEYOR  
STATE OF WASHINGTON  
#15478

DESIGNED BY EAS	DRAWN BY JGS/BAH/RDN	CHECKED BY
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CITY OF BELLINGHAM  
WASHINGTON  
ELDRIDGE MUNICIPAL LANDFILL INTERIM ACTION  
FINISH GRADING PLAN

DATE  
FEBRUARY 2014

SCALE  
AS SHOWN

JOB NUMBER  
2014-016

**FIG 3**

CITY OF BELLINGHAM PROJECT NAME & NUMBER  
ELDRIDGE MUNICIPAL LANDFILL INTERIM ACTION  
PROJECT NO. EC-0015

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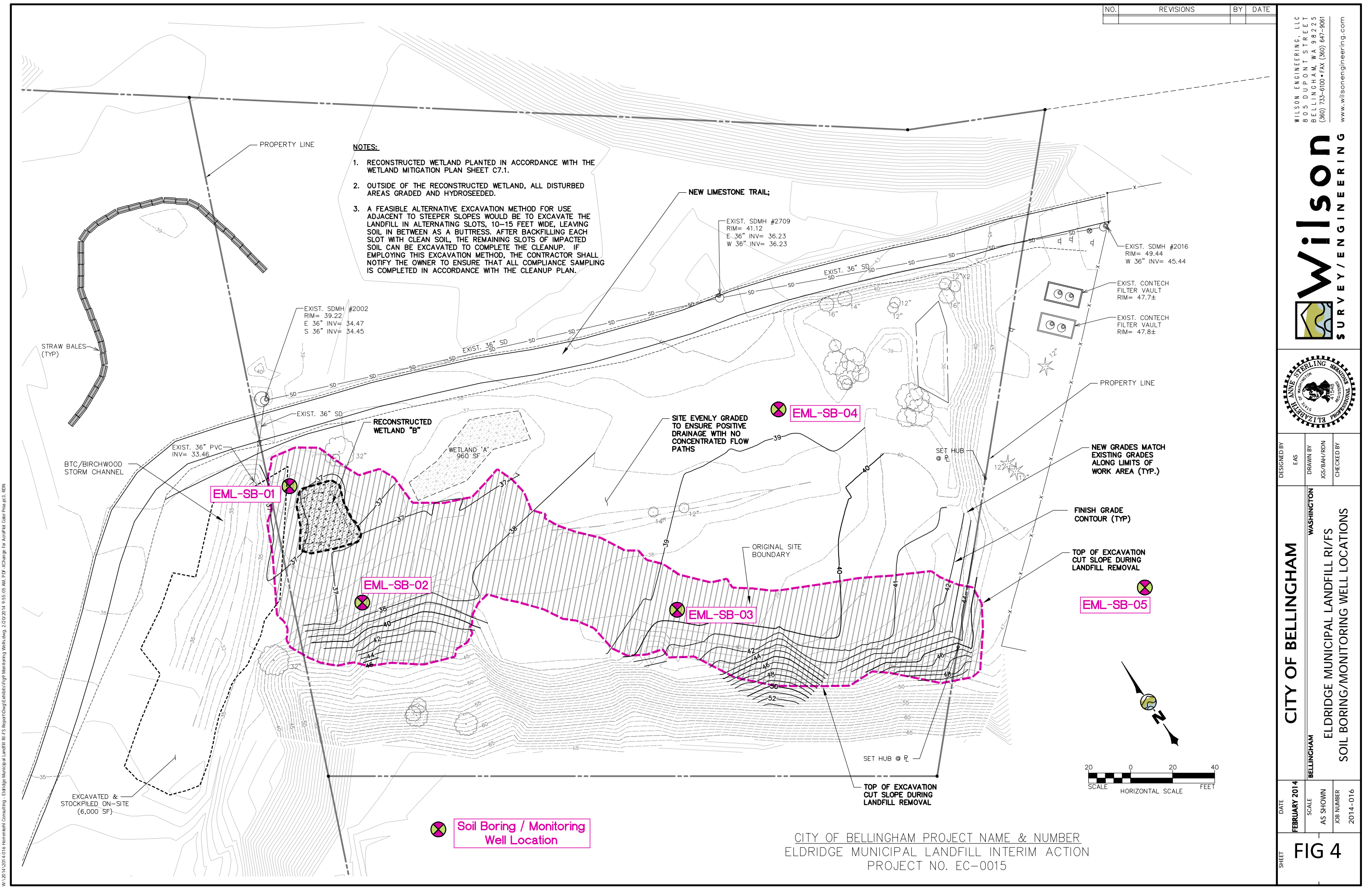
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 CHECKED BY: [blank]

**CITY OF BELLINGHAM**  
 WASHINGTON  
 BELLINGHAM  
 ELDRIDGE MUNICIPAL LANDFILL R/I/F/S  
 SOIL BORING/MONITORING WELL LOCATIONS

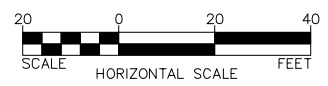
DATE: FEBRUARY 2014  
 SCALE: AS SHOWN  
 JOB NUMBER: 2014-016

**FIG 4**

- NOTES:**
1. RECONSTRUCTED WETLAND PLANTED IN ACCORDANCE WITH THE WETLAND MITIGATION PLAN SHEET C7.1.
  2. OUTSIDE OF THE RECONSTRUCTED WETLAND, ALL DISTURBED AREAS GRADED AND HYDROSEEDED.
  3. A FEASIBLE ALTERNATIVE EXCAVATION METHOD FOR USE ADJACENT TO STEEPER SLOPES WOULD BE TO EXCAVATE THE LANDFILL IN ALTERNATING SLOTS, 10-15 FEET WIDE, LEAVING SOIL IN BETWEEN AS A BUTTRESS. AFTER BACKFILLING EACH SLOT WITH CLEAN SOIL, THE REMAINING SLOTS OF IMPACTED SOIL CAN BE EXCAVATED TO COMPLETE THE CLEANUP. IF EMPLOYING THIS EXCAVATION METHOD, THE CONTRACTOR SHALL NOTIFY THE OWNER TO ENSURE THAT ALL COMPLIANCE SAMPLING IS COMPLETED IN ACCORDANCE WITH THE CLEANUP PLAN.



**Soil Boring / Monitoring Well Location**



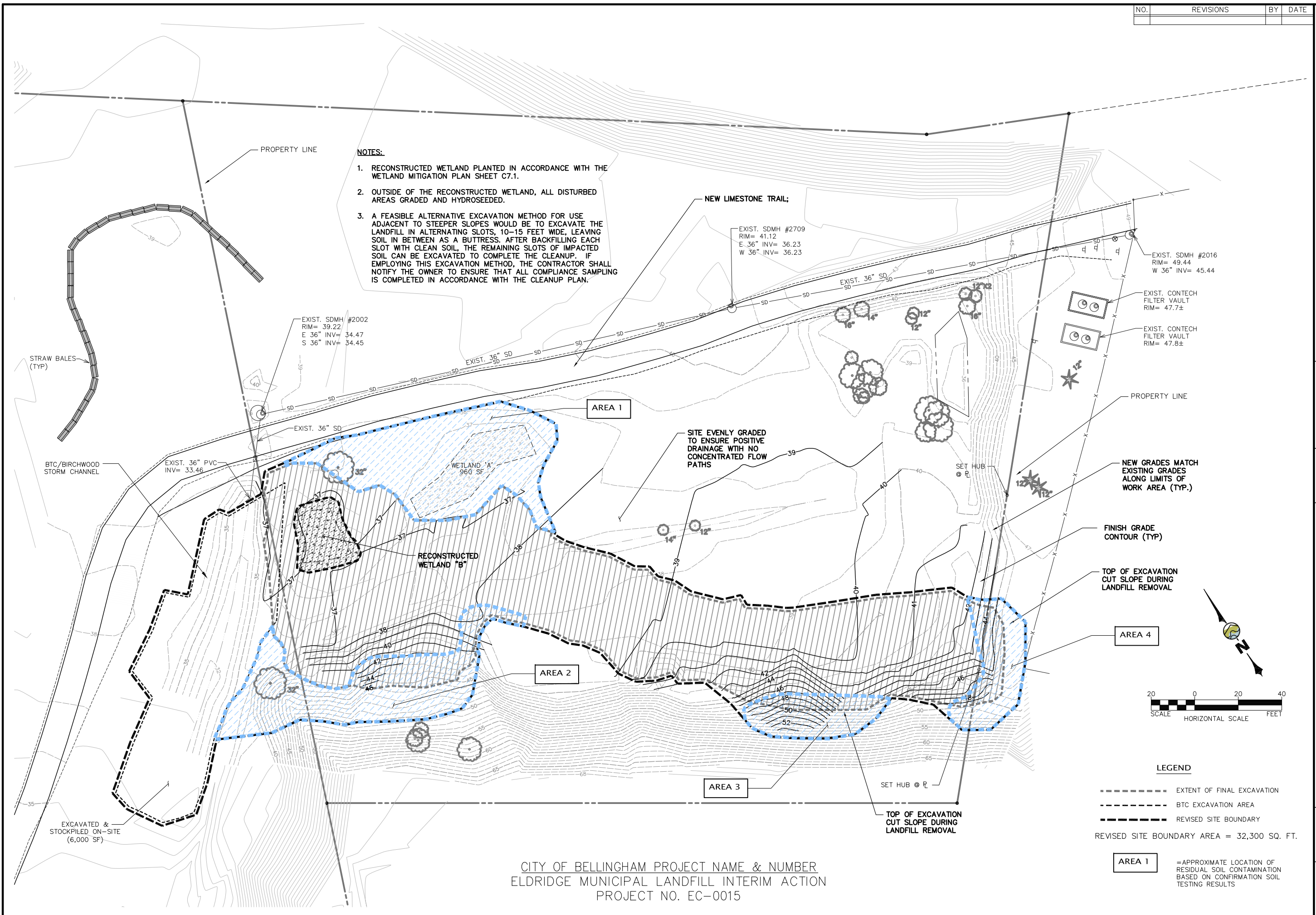
CITY OF BELLINGHAM PROJECT NAME & NUMBER  
 ELDRIDGE MUNICIPAL LANDFILL INTERIM ACTION  
 PROJECT NO. EC-0015

W:\2014\2014-016\_Herron\kohl Consulting - Eldridge Municipal Landfill R/I/F/S Report\DWG\Exhibits\Fig9\_Monitoring Wells.dwg, 2/20/2014 9:55:05 AM, PDF-XChange for Acrobat Color Print.ps, RDN



W:\2014\2014-016 Herrenkohl Consulting - Eldridge Municipal Landfill RI-FS Report\Drawings\Exhibits\Fig5 Revised Site Brdry.dwg, 9/15/2014 1:39:15 PM, JGS

NO.	REVISIONS	BY	DATE



CITY OF BELLINGHAM PROJECT NAME & NUMBER  
ELDRIDGE MUNICIPAL LANDFILL INTERIM ACTION  
PROJECT NO. EC-0015

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STATE OF WASHINGTON  
41848

DESIGNED BY	EAS
DRAWN BY	JCS/RDN
CHECKED BY	

CITY OF BELLINGHAM  
WASHINGTON  
ELDRIDGE MUNICIPAL LANDFILL CAP  
REVISED SITE BOUNDARY & AREAS WITH  
RESIDUAL CONTAMINATION

DATE	FEBRUARY 2014
SCALE	AS SHOWN
JOB NUMBER	2014-016

SHEET  
**FIG 5**  
OF  
1

# **EXHIBIT C**

**Exhibit C**  
**Schedule of Work and Deliverables**  
**Consent Decree for Eldridge Municipal Landfill Site**

**Deliverables/Milestones**

**Schedule**

**A. Administrative**

- |     |   |  |
|-----|---|--|
| A.1 | Lodge Consent Decree in Court (CD Effective Date) | Within 30 days of execution by City and Ecology  |
| A.2 | Progress Report to Ecology                        | For the first 2 years following CD Effective Date, monthly on the 10 <sup>th</sup> of the month beginning after CD Effective Date. Thereafter, annually on the CD anniversary date unless additional sampling is needed or circumstances require otherwise. (C. Compliance Monitoring) |

**B. Environmental (Restrictive) Covenants**

- |     |  |  |
|-----|--|--|
| B.1 | Draft Environmental Covenant                 | Submit to Ecology within 10 days of CD Effective Date. Include identification and protection of area designated as Especially Valuable Habitat |
| B.2 | Final Environmental Covenant                 | Submit to Ecology within 10 days following Ecology approval of draft (C.1)   |
| B.3 | Environmental Covenant recorded              | Record the covenant with Whatcom County Auditor within 90 days of CD Effective Date (A.1)  |
| B.4 | Proof of recording of Environmental Covenant | Submit to Ecology within 30 days following recording of covenant.  |

**C. Compliance Monitoring**

- |     |                                     |   |
|-----|-------------------------------------|---|
| C.1 | Sampling and Analysis Plan Addendum | Submit to Ecology within 10 days of CD Effective Date (A.1) |
|-----|-------------------------------------|---|

C.2	Compliance Monitoring Implementation	For the first year, start within 90 days of CD Effective Date (A.1). Thereafter, annually for a minimum of one additional year to be conducted during the wettest season (December – March).
C.3	Draft Annual Groundwater Monitoring Report	Submit to Ecology annually within 60 days after receipt of current year’s analytical data
C.4	Final Annual Groundwater Report	Submit to Ecology within 30 days following Ecology approval of draft (C.3)
C.5	Draft Evaluation of need for additional sampling or Other Steps	Submit to Ecology within 60 days following second Final Annual Groundwater Report (C.4)
C.6	Final Evaluation of need for additional sampling or Other Steps	Submit to Ecology within 30 days following Ecology approval of draft (C.5)

**D. Wetland Planting**

D.1	Replant wetland plants in Wetland B	Start within 90 days of CD Effective Date (A.1).
D.2	Install Boundary Fence & Signage	Construct fence within 30 days of replanting of wetland plants (D.1) for both wetland areas and adjacent cottonwood tree. Install required signs.
D.3	Water Wetland B	At least once per month during the driest season (July – September) for two consecutive years.
D.4	Draft Evaluation of need for additional wetland work	Submit to Ecology within 60 days following the end of the second post-planting dry season.
D.5	Final Evaluation of need for additional wetland work	Submit to Ecology within 30 days following Ecology approval of draft (D.4)

**E. Operations and Maintenance Plant**

E.1	Draft Operations and Maintenance (O & M) Plan	Submit to Ecology within 60 days of CD Effective Date describing procedures for city staff working in and near the site (A.1)
E.2	Final O & M Plan	Submit to Ecology within 30 days following Ecology approval of draft (E.1)