

**KING CONSERVATION DISTRICT  
BOARD OF SUPERVISORS MEETING**

**July 13<sup>th</sup>, 2020**

**4:00 PM to 6:10 PM– King Conservation District Office  
800 SW 39<sup>th</sup> St, Suite 150  
Renton, WA 98057**

**Zoom Link: <https://zoom.us/j/94829143309>**

**Call-In Number: (253) 215 8782**

**Meeting ID: 948 2914 3309**

**Meeting Agenda**

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**Call to Order**

- |   |                          |
|---|--------------------------|
| <b>1. Preliminary Matters:</b>            | <b>4:00 PM – 4:02 PM</b> |
| a) Introductions                          |                          |
| b) Additions or Corrections to the Agenda |                          |
| c) Adoption of the Board Agenda           |                          |
|   |                          |
| <b>2. Consent Agenda:</b>                 | <b>4:02 PM – 4:10 PM</b> |

Items listed below will be enacted by one motion. If separate discussion is desired on an item, that may be removed from the Consent Agenda and placed on the Regular Agenda at the request of a Board Member

- a) Board Minutes – 06.08.20 Finance Sub-Committee Meeting; 06.08.20 GSC Meeting; 06.08.20 BOS Meeting; 06.08.20 Special BOS Meeting; 6.22.20 BOS Working Session
- b) LIP Applications –
  - 1. AI 20-033: Discovery Farms – Lanning – Waste Storage Facility
  - 2. AI 20-034: Discovery Farms – McCarthy – Waste Storage Facility
  - 3. AI 20-035: King County Housing Authority – Casa Juanita – Riparian Forest Buffer
  - 4. AI 20-036: Devries – Stream Crossing
  - 5. AI 20-037: Ritter – Riparian Forest Buffer
  - 6. AI 20-038: Joss – Riparian Forest Buffer
  - 7. AI 20-039: Budget Revision Request – Haberzette – Riparian Forest Buffer
- c) Member Jurisdiction Grant Applications – None

- |                           |                          |
|---------------------------|--------------------------|
| <b>3. Public Comment:</b> | <b>4:10 PM – 4:15 PM</b> |
|---------------------------|--------------------------|

**4. Finance:**

- |  |                          |
|--|--------------------------|
| a) AI 20-040: A motion to approve check number 22705 through 22761 for a total of \$260,438.12; non-payroll EFTs totaling \$569.66; Bank Fees of \$33.00; Void Check of \$132,982.97 and June 2020 Payroll for \$233,569.82. – Souza | <b>4:15 PM – 4:30 PM</b> |
| b) Payroll Changes & Purchasing – Board  | <b>4:30PM - 4:40 PM</b>  |

**5. Old Business:**

- |  |                         |
|--|-------------------------|
| a) AI 20-041: Approval of 2019 Annual Report – Grace | <b>4:40 PM – 4:50PM</b> |
|--|-------------------------|

**6. New Business:**

- |   |                          |
|---|--------------------------|
| a) AI 20-042: Pine Brook Meadows HOA - Forest Health Management Application - Lasecki | <b>4:50 PM – 5:05 PM</b> |
| b) Office Opening – Mosby/ Board  | <b>5:05 PM- 5:25 PM</b>  |
| c) Strategic Initiatives- Reed  | <b>5:25 PM- 5:45 PM</b>  |
| d) AI 20-043: FSA Plan -Souza   | <b>5:45 PM -6:00 PM</b>  |
| e) Grant Programs Updates- Haugen/ Mosby  | <b>6:00PM –6:10 PM</b>   |

# CONSENT AGENDA

KING CONSERVATION DISTRICT

Board of Supervisors  
Finance Sub-Committee  
Meeting Minutes

6/8/2020

1 **Supervisors Present:** Burr Mosby –Chair; Bill Knusten – Auditor; Jim Haack – Supervisor; Kirstin  
2 Haugen – Supervisor; Chris Porter - Supervisor

3 **Associate Supervisors Present:** None

4 **Guests Present:** None

5 **Staff Present:** Bea Covington, Ava Souza, Lindsey Davidson

6 **Preliminary Matters:**

7 Chairman Mosby called meeting to order at 2:11 pm. All attendees introduced themselves. Mosby  
8 asked for additions or corrections to the current agenda.

9 **Public Comment:** None

10 **Finance:**

11 Souza stated she had received a recommendation from Knutsen to move the Finance Sub-  
12 Committee Meeting to the fourth Monday of every month.

13 Knutsen explained his thought process behind the recommendation in that it would shorten the  
14 main meeting day on the second Monday of the month, and would allow Souza to present a full,  
15 detailed set of financials to the Board.

16 Covington pointed out the financials might be too old by the fourth Monday of the month. Knutsen  
17 disagreed.

18 Porter asked about making a motion in the Finance Sub-Committee meeting.

19 Knutsen explained that the motion can be also be discussed and motioned at the regular Board  
20 meeting.

21 **Knutsen moved; Haugen seconded passed unanimously a motion to move the Finance Sub-**  
22 **Committee Meetings to the Fourth Meeting of Every Month. (5 ayes, 0 nays).**

23 Souza went over the budget overview which totals approximately \$9.5 million. She continued that  
24 the program areas match the ILA. Souza also noted the budget includes interest, Working Lands  
25 Initiative funding, and grants totaling the \$9.5 million.



26 Souza continued by reviewing the current MIP budget overview that showed the following:  
27 \$7,662,651.36 in Rates & Charges, \$329,723.95 in interest and the annual plant sale, \$888,753 in  
28 grants, and \$629,4232.00 in Working Lands.

29 Souza reviewed expenses and revenue for the month of May. She stated that everything was normal  
30 for the time of year. She explained the report she was reviewing was for the current operating  
31 budget expenditures and did not include reserve account expenses.

32 Souza continued to review May 2020 overview cash breakout. She pointed out the four bank  
33 accounts we have and how they are utilized.

34 Porter asked if the vehicles have been purchased. Covington said she is on track to purchase one  
35 of them, but it has not been purchased yet.

36 Souza continued to review the balance sheet, which has all the accounts. She explained the Balance  
37 Sheet is reviewed and analyzed monthly.

38 Souza stated that grant funding is short in a couple of programs by a total of \$551,298. She then  
39 stated that in order for the budget sheets to match the ILA, the data sheets for programs that have  
40 grant funding that KCD gives out, like the Member Jurisdiction program, would need to be made  
41 whole. She made one suggestion to move \$164,000 from Elections which was unspent in the 2020  
42 budget.

43 Haugen asked why it's not matching.

44 Covington stated total money entered into MIP is the total expenses to run the program and that  
45 grant money was cut to include true operating costs. She then stated moving forward, the grant  
46 numbers will be locked in the data sheets.

47 There was a Board discussion about how this shortfall occurred.

48 Haugen and Souza expressed urgency to make the budget match before meeting with King County.

49 Souza continued another solution would be to move money from a reserve account into this year's  
50 budget. The Board can then approve the amended budget that will be matched to the ILA.

51 Haack asked what formula or calculation was made to cut the grant programs.

52 Souza explained that all overhead and salary is already represented. The funds going to the grants  
53 specifically was shorted and money moved to other programs by Covington.

54 Haack expressed concern of a cash flow.

55 Knutsen and Covington explained that there will not be a cash issue. Haack asked for further  
56 clarification. There was a Board discussion.

57 Porter asked if there was a hiring freeze. Mosby stated yes since October 2019.  
58 Covington stated that a new person was hired and will be starting on June 26, 2020. The position  
59 filled was the Forestry Manager position.

60 Knutsen moved; Porter seconded passed unanimously a motion to approve moving  
61 \$164,000.00 from unspent elections money from the 2020 budget to the Member Jurisdiction  
62 grant program (5 ayes, 0 nays).

63 Porter moved, Haugen seconded passed unanimously a motion authorizing Souza to review  
64 the reserve accounts and make a recommendation at the next Finance meeting to make the  
65 rest of the grant program budgets whole. (5 ayes, 0 nays).

66 There was no more business before the Board.

67 The meeting was adjourned by Mosby at 3:14 pm.

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Authorized Signature

\_\_\_\_\_  
Date

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### Summary of Motions

73 Knutsen moved; Haugen seconded passed unanimously a motion to move the Finance Sub-  
74 Committee Meetings to the Fourth Meeting of Every Month. (5 ayes, 0 nays).

75 Knutsen moved; Porter seconded passed unanimously a motion to approve moving  
76 \$164,000.00 from unspent elections money from the 2020 budget to the Member Jurisdiction  
77 grant program (5 ayes, 0 nays).

78 Porter moved, Haugen seconded passed unanimously a motion authorizing Souza to review  
79 the reserve accounts and make a recommendation at the next Finance meeting to make the  
80 rest of the grant program budgets whole. (5 ayes, 0 nays).

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KING CONSERVATION DISTRICT

Board of Supervisors

Grant Subcommittee Meeting

Meeting Minutes

June 8th, 2020

1 **Supervisors Present:** Burr Mosby– Chair, Kirsten Haugen

2 **Associate Supervisors Present:** None.

3 **Guests Present:** None

4 **Staff Present:** Jessica Saavedra, Deirdre Grace, Bea Covington

5 **Preliminary Matters:**

6 Meeting began at 3:20 pm once all Board members joined the zoom meeting.

7 Saavedra requested the agenda be amended to add discussion about the KCD logo use guidelines  
8 document written by staff. Saavedra also added the City of Medina Pond Water Quality close out  
9 to the agenda.

10 Saavedra reviewed the KCD logo use guidelines for interpretive signs. Haugen and Mosby gave  
11 the guidelines a thumbs up for distribution to grantees installing signs.

12 Applications - none

13 Amendments

14 **Haugen moved, Mosby seconded, unanimously passed a motion to approve the amendment**  
15 **request from Mountains to Sound Greenway Trust for the Issaquah Creek Restoration at**  
16 **Lake Sammamish State Park 2011 revising the budget to reflect actual expenditures as**  
17 **detailed.**

18 The grant subcommittee determined that the two Mountains to Sound Greenway Trust projects on  
19 the agenda for close out, Issaquah Creek and Raging River Enhancement, would not be officially  
20 closed with a final payment until after site visits were completed, instead of closing out and then  
21 conducting a site visit when conditions are safer. Saavedra will bring those grants back for close  
22 out after site visits are completed, which may be several months from now due to Greenway staff  
23 inability to go on site visits during this time.

24 Close outs

25 **Haugen moved, Mosby seconded, unanimously passed a motion to close the ECOSS City of**  
26 **Renton Spill Kit Incentive Program grant agreement.**

KING CONSERVATION DISTRICT

Board of Supervisors

Grant Subcommittee Meeting

Meeting Minutes

June 8th, 2020

27 Haugen moved, Mosby seconded, unanimously passed a motion to close the City of Medina  
28 - Medina Park Ponds Water Quality Study grant agreement.

29 The meeting adjourned at 3:55 pm.

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31 \_\_\_\_\_  
Authorized Signature

\_\_\_\_\_  
Date

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Summary of Motions

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34 Haugen moved, Mosby seconded, unanimously passed a motion to approve the amendment  
35 request from Mountains to Sound Greenway Trust for the Issaquah Creek Restoration at  
36 Lake Sammamish State Park 2011 revising the budget to reflect actual expenditures as  
37 detailed.

38 Haugen moved, Mosby seconded, unanimously passed a motion to close the ECOSS City of  
39 Renton Spill Kit Incentive Program grant agreement.

40 Haugen moved, Mosby seconded, unanimously passed a motion to close the City of Medina  
41 - Medina Park Ponds Water Quality Study grant agreement.

KING CONSERVATION DISTRICT

Board of Supervisors  
Meeting Minutes

6/8/2020

**Supervisors Present:** Burr Mosby –Chair; Bill Knusten – Auditor; Jim Haack – Supervisor; Kirstin Haugen – Supervisor; Chris Porter - Supervisor

**Associate Supervisors Present:** None

**Guests Present:** Dick Ryon, Tom Salzer, Alan Chapman, Cynthia Krass

**Staff Present:** Bea Covington, Ava Souza, Lindsey Davidson, Josh Monaghan, Brandy Reed, Deirdre Grace

**Preliminary Matters:**

Auditor Knutsen called meeting to order at 4:08 pm. All attendees introduced themselves. Knutsen asked for additions or corrections to the current agenda.

**Knutsen moved; Haugen seconded passed unanimously a motion to approve the agenda (5 ayes, 0 nays)**

**Consent Agenda:**

Knutsen read the consent agenda items aloud and all items were voted on.

Haugen asked Covington about the guidance received to make the minutes more succinct. Covington stated the minutes will continue to be as brief as possible.

**Knutsen moved; Haugen seconded passed unanimously a motion to approve the consent agenda (5 ayes, 0 nays)**

**Pulled Consent Agenda Items:** None

**Public Comment:**

Monaghan read a personal statement about racism, white privilege, and equity change work. Monaghan spoke to his own reflections and observations about racism and white privilege.

Chapman added to Monaghan's same sentiment.

Porter stated his take-away from his participation in the recent protests are that people are making commitments to change the system and his commitment as a member of the Board is to ensure action is made behind the words that are spoken.

**Presentations:** None

**Finance:**

1. AI 20-030: A motion to approve check numbers 22618 through 22669 for a total of \$657,096.36; non-payroll; EFT's totaling \$928.18; Bank Fees of \$33.00; Void Checks for \$0 and May 2020 payroll for \$219,833.47.

Souza reviewed the May 2020 check register. She noted the amount of checks being cut are high, but many are coming out of restricted accounts. Souza continued that it was decided by the Board in the Finance Sub-Committee meeting that the Finance meeting will be moving to the fourth Monday of the month. She added two other motions were made at the Finance Sub-Committee meeting to move funds to make the budget whole.

**Haack moved; Mosby seconded passed unanimously a motion to approve AI 20-030: A motion to approve check numbers 22618 through 22669 for a total of \$657,096.36; non-payroll; EFT's totaling \$928.18; Bank Fees of \$33.00; Void Checks for \$0 and May 2020 payroll for \$219,833.47. (5 ayes, 0 nays).**

Knutsen requested the two motions made in the Finance Sub-Committee Meeting be added to the minutes to this meeting.

**Knutsen moved; Porter seconded passed unanimously a motion to approve moving \$164,000.00 from unspent elections money from the 2020 budget to the Member Jurisdiction grant program (5 ayes, 0 nays)**

**Porter moved, Haugen seconded passed unanimously a motion authorizing Souza to review the reserve accounts and make a recommendation at the next Finance meeting to make the rest of the grant program budgets whole. (5 ayes, 0 nays).**

**Unfinished Business:**

1. Stakeholder Engagement Reports – Haack, Haugen, Knutsen, Mosby, Porter

Haugen asked if she can attend the WRIA meetings. Reed added was already attending those meetings. Mosby asked if a motion is needed for Haugen to be a stakeholder.

Knutsen said meetings are open so no motion would be needed.

Haugen and Porter summarized the meetings they attended.

**New Business:**

1. Recognition of Outgoing BOS member(s)/Seating of New BOS Members
2. AI 20-031: WSCC Master Grant Approvals
3. AI 20-032: Price Cap for Select Multi-Benefit 2020 ADAP Projects in the Snoqualmie Valley
4. Annual Report - Introduction and Discussion

60

61 1. Recognition of Outgoing BOS member(s)/Seating of New BOS Members

62 Covington shared the proclamation written about Ryon's service on the Board and read it aloud in  
63 its entirety.

64 Ryon spoke about his history with the District and expressed his pride and gratitude.

65 2. AI 20-031: WSCC Master Grant Approvals

66 Reed provided the history and partnership details between KCD and WSCC. Reed reviewed the  
67 action item brief and read it in its entirety. She explained the Implementation grant through WSCC  
68 is a grant we receive every year and funds riparian and marine shoreline enhancement projects.

69 **Knutsen moved; Haugen seconded passed unanimously a motion to approve AI 20-031 a**  
70 **motion to approve submittal of FY2021 IM Grant Addendum to the FY 20-21 WSCC Master**  
71 **Grant Contract in amount not to exceed \$95,600. (5 ayes, 0 nays).**

72 3. AI 20-032: Price Cap for Select Multi-Benefit 2020 ADAP Projects in the Snoqualmie  
73 Valley

74 Monaghan read the action item brief in its entirety. He summarized the partnership between  
75 Snoqualmie Valley and KCD would provide ditch maintenance and agricultural drainage  
76 assistance to eligible landowners. He added this approval would be a one-time exception to current  
77 project cap of \$30,000 set in 2018.

78 Krass spoke on behalf of Snoqualmie Valley Watershed Improvement District and the work that  
79 they do.

80 **Haugen moved; Haack seconded passed unanimously AI 20-032 a motion to approve the**  
81 **King Conservation District-Snoqualmie Valley Watershed Improvement District Interlocal**  
82 **Agreement with the 2020 KCD Agricultural Drainage Project Funding (5 ayes, 0 nays).**

83 4. Annual Report - Introduction and Discussion

84 Covington explained the details that go into the Annual Report and that the report closes out KCD's  
85 previous ILA. The Board asked if they could receive input and commentary from the previous  
86 Advisory Committee members since they were a part of the process. Covington stated she would  
87 look into it.

88 Porter asked if Board position appointments would be made at the next meeting. The Board  
89 decided they were ready to make appoints now.

90 After brief discussion, it was unanimously decided that Mosby will be appointed Chairman,  
91 Haugen will be appointed Vice Chairman, and Knutsen will be Auditor.

92 There was no more business before the Board.

93 Knutsen moved; Porter seconded passed unanimously a motion to adjourn the meeting at  
94 5:33 pm. (5 ayes, 0 nays).

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97 \_\_\_\_\_  
Authorized Signature

\_\_\_\_\_  
Date

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Summary of Motions

100 Knutsen moved; Haugen seconded passed unanimously a motion to approve the agenda (5  
101 ayes, 0 nays)

102 Knutsen moved; Haugen seconded passed unanimously a motion to approve the consent  
103 agenda (5 ayes, 0 nays)

104 Haack moved; Mosby seconded passed unanimously a motion to approve AI 20-030: A  
105 motion to approve check numbers 22618 through 22669 for a total of \$657,096.36; non-  
106 payroll; EFT's totaling \$928.18; Bank Fees of \$33.00; Void Checks for \$0 and May 2020  
107 payroll for \$219,833.47. (5 ayes, 0 nays)

108 Knutsen moved; Porter seconded passed unanimously a motion to approve moving  
109 \$164,000.00 from unspent elections money from the 2020 budget to the Member Jurisdiction  
110 grant program (5 ayes, 0 nays)

111 Porter moved, Haugen seconded passed unanimously a motion authorizing Souza to review  
112 the reserve accounts and make a recommendation at the next Finance meeting to make the  
113 rest of the grant program bdugets whole. (5 ayes, 0 nays).

114 Knutsen moved; Haugen seconded passed unanimously a motion to approve AI 20-031 a  
115 motion to approve submittal of FY2021 IM Grant Addendum to the FY 20-21 WSCC Master  
116 Grant Contract in amount not to exceed \$95,600. (5 ayes, 0 nays).

117 Haugen moved; Haack seconded passed unanimously AI 20-032 a motion to approve the  
118 King Conservation District-Snoqualmie Valley Watershed Improvement District Interlocal  
119 Agreement with the 2020 KCD Agricultural Drainage Project Funding (5 ayes, 0 nays)

120 Knutsen moved; Porter seconded passed unanimously a motion to adjourn the meeting at  
121 5:33 pm. (5 ayes, 0 nays)



KING CONSERVATION DISTRICT

Board of Supervisors

Minutes for Special Meeting

June 8, 2020

**Supervisors Present:** Burr Mosby, Chair; Jim Haack; Kirstin Haugen; and Chris Porter.

**Others Present:** Ava Souza, and Eric Frimodt, District legal counsel.

Pursuant to Governor Inslee's Proclamations 20-25 and 20-28, as amended, the special meeting was conducted as a remote meeting using teleconferencing facilities.

Supervisor Haack called the special meeting to order at 6:53 p.m. Supervisor Haack indicated that the Board would be moving into an executive session. Mr. Frimodt announced that the purpose of the executive session was to discuss the performance of a public employee and related matters pursuant to RCW 42.30.110(1)(g). Mr. Frimodt announced that the executive session would last for approximately 1 hour, unless extended.

The Board then moved into an executive session at approximately 6:54 p.m. using a separate teleconferencing service. The executive session was extended three times as follows: at 7:53 p.m. for an additional 10 minutes, at 8:02 p.m. for an additional 10 minutes, and at 8:09 p.m. for an additional 5 minutes, by formal announcement of the referenced extensions by Ava Souza who was facilitating the Zoom conference call. The executive session concluded at 8:12 p.m.

Attorney Frimodt reconnected to the Zoom conference and advised Ava Souza that the special meeting was concluded. No action was taken by the Board following the executive session.

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Authorized Signature

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Date

# KING CONSERVATION DISTRICT

## Board of Supervisors

### Meeting Minutes

6/22/2020

**Supervisors Present:** Burr Mosby –Chair; Kirstin Haugen – Vice Chair; Bill Knusten – Auditor;  
Jim Haack – Supervisor; Chris Porter - Supervisor

**Associate Supervisors Present:** None

**Guests Present:** Jean Fike – WSCC; Eric Frimodt – Inslee Best; Carol Smith – WSCC; Bill Eller  
– WSCC; Ron Schultz – WSCC; Alison Halpern - WSCC

**Staff Present:** Bea Covington, Ava Souza, Lindsey Davidson, Carrie King; Jessica Saavedra,  
Yuliy Makhovitskiy, Josh Monaghan, Natalie Quist, Deirdre Grace, Mark Dostal

#### **Preliminary Matters:**

Chairman Mosby called meeting to order at 4:05 pm. All attendees introduced themselves. Mosby  
asked for additions or corrections to the current agenda.

Porter requested Finance Committee Report & Discussion be moved to the next Board meeting.  
The Board agreed unanimously.

**Public Comment:** None

#### **New Business:**

1. Discussion of the performance of a public employee pursuant to RCW 42.30.110(1)(g)

Mosby adjourned the Board to Executive session for 30 minutes to be facilitated by Frimodt at  
4:11pm. The Board requested an additional 10 minutes be added to the Executive Session at  
4:41pm. The Board requested an additional 10 minutes be added to the Executive Session at  
4:51pm. The Board requested an additional 10 minutes be added to the Executive Session at  
5:01pm. The Board requested an additional 5 minutes be added to the Executive Session at  
5:11pm. The Board requested an additional 5 minutes be added to the Executive Session at  
5:16pm. The Board requested an additional 5 minutes be added to the Executive Session at  
5:21pm. The Executive Session was adjourned at 5:24pm.

There was a short break while Board members rejoined the regular Zoom meeting. The Board  
meeting reconvened at 5:31pm

2. Election Presentation/Discussion- Commission Staff

Carol Smith introduced herself and her team members on the call. She talked about the July  
Commission meeting agenda topics and discussed innovations coming forth with regards to  
elections. She opened the floor to any questions the Board may have.

*“Promoting sustainable uses of natural resources  
through responsible stewardship”*

30 Porter asked about the elections back-up plan for COVID-19.

31 Shultz explained there are two paths to pursue election reform which are changing the legislation  
32 and continuing internal conversations with WACD and Commission Staff. He continued that by  
33 mid-summer a meeting will be held to improve elections based on issues heard from legislative  
34 sessions in February. Some of these topics included transparency, increasing participation,  
35 legislator engagement, equity, and options for when there is a severe budget downfall.

36 Eller added that the Commission's election plan during the COVID-19 pandemic was brought up  
37 their meeting last month. Not all districts were affected, but he confirmed Franklin, Grace Harbor,  
38 and Pierce had issues. He added that there is a WAC for if an emergency occurs, but it would be  
39 up to the Commissioners to approve and develop an election process on a statewide basis if  
40 COVID-19 is still active next year.

41 Porter asked if the Commission has a process around engagement and voter participation,  
42 especially with communities of people of color.

43 Shultz said this can be addressed immediately and just needs a commitment by the conservation  
44 districts and the Commission. has that can be addressed immediately.

45 Haugen spoke to points of reform the Board has advocated for, such as the flexibility to have  
46 election dates changed. She recognized that not all districts are on the same page, or have the same  
47 level of resources and capabilities, but she asked if there was a way for KCD to move forward  
48 without waiting for the whole legislation to change.

49 Shultz stated they are looking into flexibility. Eller added historical context to why the election  
50 statute states conservation district board elections must occur within the first quarter of the year.  
51 Shultz added additional historical context and understood the reality is that the times have changed  
52 and so should the statutes

### 53 3. ESJ Response Discussion

54 Porter shared the rough draft of his statement about KCD, equity, and social justice. He  
55 summarized areas in which we can improve including employment, leadership roles, and  
56 elections. He noted that there is not much diversity on our current staff except for gender, but  
57 recognizes the subject matter of the organization is historically not a topic people of color are  
58 engaged in. He emphasized that it shouldn't just be a statement, but an action plan.

59 Frimodt shared his positive reaction to the statement and how we could incorporate this  
60 statement into the KCD mission. He commended Porter observing points worthy of Board  
61 discussion on policy, such as the creating a scholarship for students of color.

62 Porter spoke to challenges he's experienced and seen. He asked how diverse the Board has been  
63 in previous years.

64 Mosby asked for ideas on how to attract more people to KCD.

Covington explained that while looking at job candidates, there has been a shift of scoping the level of experience a candidate has instead of academic degrees. She added that Pierce CD has done great work around diversity in the workplace and the customers they serve. She asked the Board if they would like to invite Pierce CD to the next meeting to discuss their process. All Board members agreed,

Haugen and Mosby commended Porter on his work. Porter replied it will be his commitment to start making change.

There was no more business before the Board.

**Haugen moved; Porter seconded passed unanimously a motion to adjourn the meeting at 6:08 pm (5 ayes, 0 nays).**

\_\_\_\_\_  
Authorized Signature

\_\_\_\_\_  
Date

**Summary of Motions**

**Haugen moved; Porter seconded passed unanimously a motion to adjourn the meeting at 6:08 pm (5 ayes, 0 nays).**

King Conservation District Landowner Incentive Program  
2020 June Awards

BUDGET SUMMARY	
Total- Cost-share Budget	\$388,009.59
Total- Cost-share Awarded	\$70,160.90
2020 Awards	\$24,092.85
June Award Cycle	\$46,068.05
<b>Cost-share Budget Remaining</b>	<b>\$317,848.69</b>
**Funding for Forestry Cost-Share has recently become available through Working Lands Initiative Funding	
Funds Available to Reallocate	\$619.24
<b>Adjusted Balance Available for FY 2020</b>	<b>\$318,467.93</b>

COST SHARE AWARD DETAIL - June Cycle										
Last Name	First Name	Best Management Practice	Award Amount	Completion Date	Acres	Feet	Plants	Qty		
Hoffmann	Philipp	Subsurface Drain	\$ 600.00	6/30/2021		60		1.0		
Hoffmann	Philipp	Roof Runoff Structure	\$ 1,295.00	6/30/2021		370		1.0		
Prekeges	Jennifer	Hedgerow	\$ 3,482.40	7/31/2021	0.03	80	110	1.0		
Feist	Chris	Forest Health Management	\$ 9,571.50	7/31/2021	2.25		550	1.0		
Sharkey	Kate	Subsurface Drain	\$ 700.00	7/31/2021		70		1.0		
Sharkey	Kate	Waste Storage Facility	\$ 8,055.00	7/31/2021				1.0		
King County Housing Authority	Juanita Court	Hedgerow	\$ 7,107.55	7/31/2021	0.15	160	532	1.0		
Escalante	Ray	Hedgerow	\$ 6,309.10	7/31/2021	0.21	230	351	1.0		
Schmauser	Lara	Heavy Use Protection Area	\$ 1,050.00	7/31/2021				1.0		
Baum	Richard	Waste Storage Facility	\$ 4,027.50	7/31/2021				1.0		
Culbertson-Gaul	Dana	Waste Storage Facility	\$ 2,370.00	7/31/2021				1.0		
Pepka	Robert	Subsurface Drain	\$ 1,500.00	7/31/2021		150				
<b>Total</b>			<b>\$46,068.05</b>		<b>2.64</b>	<b>1120.00</b>	<b>1543</b>			

COST-SHARE FUNDS AVAILABLE TO REALLOCATE (Prior & Current Year Contracts, Cancelled or Closed Under Budget During CY 2020)		
Status	Number of Contracts	Amount
Closed Underbudget	2	\$ 619.24
Cancelled	0	
	2	\$ 619.24





Leni Karr – Forest Health Management – Inspection March – 2020



Normandy Park – Riparian Forest Buffer – Final Inspection – April - 2020



**King Conservation District Board of Supervisors Meeting 07/13/2020**  
**Agenda Action Briefing/Report AI 20-033**

**SUBJECT:**

Approve KCD Landowner Incentive Program cost-share application from Shawn and Beth Lanning, for Waste Storage Facility, in the amount of \$11,775.00.

**FISCAL IMPACT**

The current balance of cost-share funding for KCD LIP 2020 is summarized in the following table:

2020 LIP Cost-share Available	<b>\$318,467.93</b>
Current Request	<b>\$ 11,775.00</b>
Balance Remaining	<b>\$306,692.93</b>

**POLICY CONSIDERATION**

This proposed cost-share contract has been vetted through a staff approval committee and meets NRCS standards for the applicable best management practice. The application has been advanced for due pass by the Board of Supervisors.

**STAKEHOLDER INTERESTS**

- District cooperators working with District farm management, forestry and aquatic area enhancement programs
- Discovery Farms®, American Farmland Trust and the Department of Ecology
- King CD Board members and staff

**BACKGROUND**

Shawn and Beth Lanning own a 6.2 acre farm in Enumclaw, Washington where they raise a combination of alpaca, sheep and goat for fiber and meat. They also keep chickens, duck and geese. In 2017 the Lanning's partnered with KCD to install a 100 foot width Riparian Forest Buffer along Stonequarry Creek which runs along the eastern border of their property and flows into the Newaukum Creek. The Lanning's currently have an open LIP contract for a Heavy Use Protection Area which they are working on completing this summer. The Lanning's are in need of a structure on their farm to manage their livestock's manure.

This project will install two waste storage facilities on the Lanning's property. The concrete base of the facilities will measure approximately nine and half feet in width by twenty feet in length with a four foot high wall. The concrete floor will be sloped at an approximate one to two percent angle towards the back wall to contain leachate. The facilities will be roofed. This project is part of the Discovery Farms® Washington South Puget Sound project that was first introduced to the KCD Board of Supervisors at the March 9<sup>th</sup> BOS meeting earlier this year. Please see the attached South Puget Sound Discovery Farms® sheet for more information. KCD staff will be acting as project manager in terms of the installation and contract management for the Waste Storage Facilities to ensure that the research project design criteria are being met. Project expenses incurred will first be reimbursed through the Discovery Farms® project grant. Any remaining balance or expenses would then be reimbursed through this proposed LIP contract award.

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Typically, KCD staff do not recommend an LIP application for approval if a cooperator already has an unrelated LIP contract open. Exceptions to this are BMPs that need to be installed simultaneously to ensure successful implementation as well as aquatic area enhancement practices that are project managed by KCD staff. Similarly, for this waste storage facility project, KCD staff will be acting as project manager for the Lanning's in terms of the installation and contract management to ensure that the research project design criteria are being met. Additionally, the Lanning's have expressed serious intentions to complete their heavy use protection area this year and have made recent progress this season. Considering this and that KCD is assuming the project management responsibilities of the second contract for the Lanning's, KCD staff recommend approval for a second open contract.

**EFFECTIVE DATE**

The cost-share award will become effective upon approval by the Board of Supervisors and the LIP contract will become effective upon signature by a Board representative.

**RECOMMENDATION**

Staff seeks Board approval of Landowner Incentive Program cost-share application from Shawn and Beth Lanning, for a Waste Storage Facility, in the amount of \$11,775.00.

**MOTION**

                     Moved,                      Seconded; Passed a motion to Approve KCD Landowner Incentive Program cost-share application from Shawn and Beth Lanning, for a Waste Storage Facility, in the amount of \$11,775.00.



# Discovery Farms Waste Storage Treatment Research Project Introduction:

## **What is the Discovery Farms Waste Storage Treatment project?**

In the fall of 2018 KCD was given an opportunity to partner with the American Farmland Trust (AFT), Whatcom CD and Discovery Farms Washington®, farmers in King County, and the Department of Ecology to design and participate in a Discovery Farms Research project to assess and promote the benefits of on-farm manure storage conservation practices that enhance water quality. Manure storage practices were chosen because it is one of KCD's most commonly prescribed and funded agricultural Best Management Practices (BMPs).

The project will measure water quality data for different treatments of dry manure storage on two farms in the Enumclaw Plateau. It will compare various combinations of tarp coverings, roofs, and concrete floorings as compared to uncovered piles (controls). KCD and Discovery Farm Team members will oversee the installation of the different treatments. We will monitor on-the-ground water quality data associated with installed BMPs collecting data on bacteria, sediment, nitrogen, phosphorus, and other micronutrients. Once the monitoring is complete, the uncovered treatments on concrete pads will be roofed leaving the cooperator with a functional waste storage facility. Both farms are KCD cooperators currently participating in the Landowner Incentive Program (LIP) to install BMPs on their property.

## **What are the potential benefits of this project?**

KCD prescribes a variety of treatments to manage manure, emphasizing the effectiveness of a roof and concrete pad both at quickly producing a superior finished product and at protecting water quality. However, these options often present barriers to landowner due to the additional cost and labor to install these structures as well as potential permitting issues. This study's evaluation of the effectiveness of commonly prescribed manure treatments of varying costs in protecting water quality will inform planner recommendations of manure treatment options to cooperators and potentially inform changes in cost-share policies and procedures.

Additionally, this study will provide a valuable opportunity to engage King County farmers, land managers and other stakeholders in discussions around the different options and benefits of adopting best management practices for manure management. The Discovery Farms model promotes the normalization and adoption of BMPs through farmer to farmer education. During and after the monitoring the cooperators have agreed to host outreach events for other farmers and KCD stakeholders.

## **What is the LIP nexus?**

The Discovery Farm project funds have allocated a set amount of funding to install the bins. Due to the project scope there is a likelihood that the BMP installation may go overbudget. To mitigate whatever additional costs accrue beyond the Discovery Farms we have submitted LIP applications for Waste Storage Facilities to the LIP Review Committee. The LIP has a policy that only certain practices may have concurrent open contracts at the same time. As both landowners have open LIP practices of a Roof Runoff Structure and Heavy Use Area, they would normally be excluded from applying for a Waste Storage Facility until these contracts were complete. As KCD and the Discovery Farms Team will be project managing the installation of these bins, there is little risk of the bins not being installed. In the March Board of Supervisors Meeting this year KCD staff presented this information to the Board and provided background information on the project. Staff have added language added to the application where the landowner acknowledges that if they do not participate in the Discovery Farms Project, their LIP Waste Storage Facility contract would be put on hold until they completed their first contracted BMP.

# KING CONSERVATION DISTRICT (KCD) LANDOWNER INCENTIVE PROGRAM APPLICATION

## Section 1. Applicant (If applicant is not the landowner, then landowner must also sign the agreement)

Applicant Name: <b>Shawn &amp; Beth Lanning</b>		Farm/Business Name:	
Mailing Address: <b>403156 278th Way SE Enumclaw, WA 98022</b>		Project Address: <b>Same</b>	
Phone (home): <b>360-625-8753</b>		Phone (work/mobile): <b>425-749-9267</b>	
Email Address: <b>shawnlanning@outlook.com, bethlan</b>		KCD Staff: <b>Jay Mirro</b>	
Parcel #(s): <b>312007-9064</b>	<input type="checkbox"/> Incorporated <input checked="" type="checkbox"/> Unincorporated	Total Farm/Land Acreage: <b>6.2</b>	<input type="checkbox"/> T.A. <input checked="" type="checkbox"/> Farm Plan <input type="checkbox"/> Forest Plan
Is email an acceptable primary form of communication?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Would you like to be added to our newsletter list?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

## Section 2. Project Information

<b>Best Management Practice (BMP):</b> <b>Waste Storage Facility</b>
<b>Project Completion Date (month and year):</b> <b>3/2021</b>
<p><b>Current Site Conditions</b> (Provide a brief summary of resource management problem addressed by BMP; also note if streams, wetlands, and steep slopes are near or within the project area):</p> <p>Area is flat and slightly muddy. Bins will be located 35 feet south of the property line and 77 feet northwest of a seasonal drainage. Currently manure is stockpiled with no cover within close proximity of the seasonal drainage.</p>
<p><b>Project Details</b> (Provide a brief summary of the project. Include acres treated, length of fence, dimensions of compost bin, types and numbers of plants, etc.):</p> <p>The plan is to build two waste storage facility structures as part of the Discovery Farms project. Each structure will have two bins, with each bin measuring approximately 10ft.(l) x 10 ft.(w) x 4ft.(h) . The location of the waste storage facility is within 100' of a seasonal drainage, which requires the bin to have a roof, a concrete pad (that is sloped toward the back of the bin), and concrete walls on the exterior sides of the bin. This is for leachate containment, per the King County code. The bins will be placed on a concrete slab with apron in front. See attached sheets for details.</p> <p>The bins will be have enough capacity for 32 sheep, 14 goats, 14 alpaca, &amp; 150 poultry.</p>
<p><b>Maintenance Plan</b> (Summarize your plan to maintain the practice. Include frequency and scope of inspections, repairs anticipated, etc.):</p> <p>Bins will be inspected by annually and repaired as needed.</p>

**Permits** (List all permits required to complete this project):

None.

**Photos:** Before photos must be submitted with this application.

### Section 3. Cost-share Programs

- A. Have you previously applied for cost-share through the KCD Landowner Incentive Program (LIP)? ☒ Yes ☐ No  
If yes, please list contract number and BMP below:  
HUA (not yet installed.) 2017-42, a riparian forest buffer as also installed in 2017 using KCD cost share.
- B. Are you applying for (or received) funding (cost-share or grants) through other agencies or programs? ☐ Yes ☒ No  
Please describe below:
1. **King County Cost-share**  
Please list practices and date installed below:
  2. **NRCS EQIP (Natural Resources Conservation Service's Environmental Quality Incentive Program)**  
Please list practices and date installed below:
  3. **Other**  
Please list agency and describe project:

**Other Cost-Share History/Notes:**

### Section 4. Budget (attached as Exhibit A)

The cost-share application budget is the applicant's statement for how the KCD cost-share funds will be spent. Use the attached Excel document to detail the budget for the project. Reimbursement values are restricted by unit maximums as well as practice maximums. KCD will be unable to provide a budget that exceeds either maximum. The cost differential for practices installed at a higher standard or cost shall be the responsibility of the applicant. In cases where a budget for a cost-share award needs to be updated, submit a budget revision request for approval. In the absence of an approved budget revision, the cost differential shall be the responsibility of the applicant. Furthermore, receiving financial assistance for an approved Best Management Practices will be subject to inspection by KCD planners. Approval for reimbursement will be based on the satisfactory completion of the project to the minimum specifications detailed in this application.

Partial reimbursements are available on a limited basis and must be requested in advance. They will only be considered when the installation of a project can be phased to achieve the standard described in the attached job sheet when reimbursement is requested.

☐ Select this box if you intend to request partial reimbursement as the project is installed.

## Section 5. Education and Outreach

KCD encourages public education through demonstration projects. Demonstration projects are used to educate other landowners about innovative ways to address natural resource concerns. A demonstration project may be showcased in a guided tour, or featured in presentations or written fact sheets.

- Will you consider becoming a demonstration project?

☐ Yes ☐ No

## Section 6. Maintenance and Monitoring Expectations

The applicant is responsible to maintain the Best Management Practice (BMP) to standard as detailed in the attached Job Sheet for the lifetime of the BMP.

- ☐ A. I understand the lifetime of the BMP is 15 years.
- ☐ B. I understand KCD will work with me to verify proper maintenance of the installed BMP, which will include a combination of site visits with KCD staff and/or annual photo documentation submitted by me for the lifetime listed in Section 7A.
- ☐ C. I understand I am obligated to maintain and monitor the BMP **for the lifetime listed in Section 6A.**

## Section 7. Application and Agreement

I request financial assistance (cost-share) under the KCD LIP to install the Best Management Practice (BMP) described in this application and detailed in the attached *Job Sheet and Map*. This practice is needed to solve the natural resource problems described in Section 2 of this application. This Agreement expires if the project is not completed by the specified completion date in Section 2 or in an approved timeline revision request. \_\_\_\_\_ (Initial Here)

I agree to ensure that all applicable local, state, and federal permits are obtained for installation of the BMP for which funds are requested. Furthermore, I understand that KCD must receive a copy of any applicable permit to process my cost-share reimbursement.  
\_\_\_\_\_(Initial Here)

I agree to work cooperatively with KCD to ensure the funded BMP is maintained consistent with the design life identified in the attached Job Sheet and in Section 6 of this application. \_\_\_\_\_ (Initial Here)

I agree to indemnify, defend, and hold harmless KCD, its elected or appointed officials, employees and agents, from all claims, alleged liability, damages, losses to or death of person or damage to property allegedly resulting from the negligent or intentional acts of the applicant or any of its employees, agents, contractors or subcontractors in connection with this Agreement. \_\_\_\_\_ (Initial Here)

I represent that the information provided in Section 3 of this application is a full disclosure of all other natural resource financial cost-share relationships in which I have or am participating. Furthermore, I agree to disclose if I am applying for or receive funding (cost-share or grants) for the BMP described in this application through other agencies or programs and to provide KCD with written documentation detailing this funding support. This may include copies of reimbursement checks or letters showing value of provided contribution. I understand that I must provide proof of reimbursement for alternate funding prior to receiving reimbursement through the KCD LIP. I acknowledge that KCD LIP funds cannot be used in combination with other funding sources to exceed 100% of project costs. I agree to allow communication between KCD and any other agency regarding the details of the project as well as funding details.  
\_\_\_\_\_(Initial Here)

I understand that LIP cost-share reimbursement is contingent upon installing the BMP to the minimum standard provided by KCD, and that KCD will verify standard compliance. Furthermore, I understand that changes to the installation details (attached *Job Sheet and Map*) must be approved through a *Scope of Work Revision Process*. Unapproved changes will not be eligible for reimbursement.  
\_\_\_\_\_(Initial Here)

I understand that there may be federal tax liability associated with a LIP cost-share reimbursement, and that KCD will issue a 1099-G for reimbursements made through the LIP. Furthermore, I understand that KCD cannot provide advice with respect to the tax liability associated with LIP cost-share reimbursements and that I have been advised to consult with my own tax professional.

\_\_\_\_\_ (Initial Here)

I understand that I am applying for public funding and am responsible for notifying a buyer upon sale or loss of the property of the installed BMP. If I sell or lose control of the property covered by this Agreement and the new owner or transferee does not assume responsibility for maintaining the installed BMP as required by this Agreement, I may be required to refund all or a portion of the cost-share received through this Agreement. In the event of litigation arising from or related to this Agreement, attorney's fees and costs incurred by the prevailing party shall be paid by the non-prevailing party. \_\_\_\_\_ (Initial Here)

I give permission to KCD to photograph my property to document the site conditions and/or the implementation and maintenance of the funded practice. In the event that I or any of my family members or dependents choose to be photographed in a setting that reflects the assistance provided by KCD, I give KCD permission to publish such photographs in KCD promotional literature, advertising, social media, and other public displays. The photographs will be the property of KCD and may be used by KCD at any time, in the manner described above, without my additional consent. \_\_\_\_\_ (Initial Here)

I understand that this Agreement is subject to disclosure under the Public Records Act, Chapter 42.56 RCW. \_\_\_\_\_ (Initial Here)

I understand that I will no longer be eligible for KCD cost-share funds if one or more of the following occurs: \_\_\_\_\_ (Initial Here)

- a. The KCD funded BMP fails within its design life due to circumstances within my control (e.g., neglect, failure to maintain the BMP, destruction of the BMP before expiration of the design life, or other actions which cause the KCD funded BMP to become non-viable). *Note: Landowners are not responsible for BMP failure caused by circumstances beyond their control (e.g. fire, flood, storm damage, etc.).*
- b. I relinquish or lose ownership of equipment purchased with KCD cost-share.
- c. The KCD funded BMP is not being used for the intended purpose (e.g. cross fencing purchased with KCD funding, but no animals on property).
- d. I cancel 2 cost-share contracts awarded through the KCD Landowner Incentive Program.
- e. I deny KCD staff access to my property to verify BMP installation and maintenance.

I understand KCD will provide a sign free of charge after completion of a project, and I agree that: \_\_\_\_\_ (Initial Here)

- a. I will select a visible location on my property for display of the sign and will install it.
- b. I will maintain the sign and keep it free of visual barriers for at least five years after installation.
- c. I am not responsible for damage to the sign that is beyond my control (e.g. auto accident, storm damage, vandalism, etc.)

**Shawn & Beth Lanning**

Signature of applicant

Date

Signature of Landowner (if applicant is Lessee)

Date

FOR KCD OFFICE USE

Approved for Award (KCD LIP Coordinator)	Date	
Approved for Funding (KCD Management)	Date	LIP ID:

I understand that if my property is approved as a study site for the Discovery Farms Waste Storage Treatment project, the installation of this Waste Storage Facility BMP will be coordinated by KCD staff. I understand that if I am not approved as a study site for the Discovery Farms Project this contract will be put on hold until completion of the open LIP contract for a Heavy Use Area 2017-42 (Lanning, S)

\_\_\_\_\_ (Initial Here)





# SPECIFICATION

## Waste Storage Facility

*\*Please attach the waste calculation worksheet to this application*

Landowner: Lanning	Lifetime of Practice: 15 years
--------------------	--------------------------------

Purpose (check all that apply)	
<input checked="" type="checkbox"/> To temporarily store manure in a dry stack	<input type="checkbox"/> To improve soil fertility, tilth and water holding capacity
<input checked="" type="checkbox"/> To reduce the pollution potential of organic agricultural wastes to surface and ground water	<input type="checkbox"/> To reduce odor, fly and other vector problems
<input checked="" type="checkbox"/> To reduce bulk of organic material to be spread	<input type="checkbox"/> To destroy weed seed and pathogens

Proximity of facility to sensitive areas, wells, and property boundary (distance in feet)
Proximity to sensitive areas: Bins will be located 35 feet south of the property line and 77 feet northwest of a seasonal drainage.
Will the manure bins be located in the floodplain?: No

Number of AUEs the facility is planned for. Include volume of waste.
AUEs: 15.7 AUE (32 sheep, 14 goats, 14 alpaca, & 150 poultry)
Waste volume: Up to 106 yards
How many months of storage is this planned for?: Three bins would accommodate manure from all animals for 6 months.

Specifics of facility (number of bins, type of construction material) *Please attach a drawing of an approved design.
Number of bins, bin dimensions: 3 bins- 12ft.(l) x 10 ft.(w) x 4ft.(h)
Construction materials: Location of the waste storage facility is within 100' of a seasonal drainage so it requires that the bin to has a roof, a concrete pad (that is sloped toward the back of the bin), and a minimum six-inch concrete curb on the three exterior sides of the bin. This is for leachate containment. Bin will be placed on a concrete slab with apron in front. .
Compost bin design: KCD approved manure bin design. See attached sheet.
How will manure be covered?: Bin will have a roof constructed over the three bins..



### Permits

*Are there permits necessary for the project? If so, please list below and include a copy of the permit.*

Yes as the roof is over 200 sq ft.

A permit is not required for bins this size without a roof. A permit may be required if bins are installed with a roof. Total square footage for bins with eco-block walls is 220sq. ft. See permit references below.

*Common circumstances that trigger a KC permit include, but are not limited to:*

*Contact the Permitting Office with questions.*

**Clearing:** King County Code states that in general, a clearing permit is required for any removal of trees or vegetation from a critical area or from properties subject to urban clearing standards or clearing restrictions in a special district overlay defined in 21A.38 (PDF\*, 344KB) of the King County Code.

Clearing over 7,000 square feet on RA zoned properties or removal of 5,000 board feet of merchantable timber also requires a permit. A separate Forest Practice Permit may also be required.

**Grading:** King County code requires that in general, any grading within a sensitive area, or any excavation greater than five feet in depth or over 100 cubic yards, or any fill greater than three feet in depth or greater than 100 cubic yards, or creation of more than 2,000 square feet of new impervious surface, requires a permit.

**Roof:** If the compost facility is under 200 sq. ft. it does not need a permit to cover with a roof. Above 200 sq. ft. would require a King County permit to roof the structure. The roof overhang of a 200 sq. ft structure may not exceed 24 inches, measured horizontally from exterior wall.

**\*\*Landowners must follow all local, state, and federal laws.**

### Operation and Maintenance

Manage the compost piles for temperature, odors, moisture, and oxygen, as appropriate. Appropriate equipment for managing the composting temperature should include a long stem thermometer. Make adjustments throughout the composting period to insure proper composting processes.

Closely monitor temperatures above 165°F. Take action immediately to cool piles that have reached temperatures above 185°F.

Moisture content can be determined by the "squeeze test," a non-quantitative method of estimating moisture. In this test, a handful of the material is squeezed together in the fist. If water actively drips out while the compost is squeezed, the material is too wet. If the material does not release water, and crumbles apart when the fist is opened, the material is too dry. Only if the material does not release water and stays compacted when the fist is opened, is the moisture content "just right." (Mountain Organic Materials)

In order to maintain appropriate moisture content, compost piles in Western Washington must be covered year round.

### Additional Specifications and Notes:

Pursuant to KC Code, manure storage should be covered, 35' from property boundary, 100' from wells, and 100 ft from areas of open water.

If the facility is in a floodplain, compensatory storage must be provided at the same elevation, equivalent to the volume of the facility that is in the 100-year flood plain.





Pictometry, King County

Landowner Name: <b>Shawn &amp; Beth Lanning</b>	Map Type: <b>WSF Cost Share Map-Close</b>	KCD Staff Name: <b>Jay Mirro</b>	Acres: <b>6.2</b>
Address: <b>40316 278th Way SE Enumclaw, WA 98022</b>	Map Date: <b>February 05, 2020</b>	Parcel # (s): <b>072007-9047 &amp; -9048</b>	Directional: <b>NW</b>
©Copyright 2020 - King Conservation District - 800 SW 39th St, Suite 150 - Renton, WA 98057 - 425-282-1900 - www.kingcd.org <small>DISCLAIMER: While every precaution was taken in preparing this map, the publisher disclaims any warranty of fitness or accuracy of the data. This map is approximate in nature, based on compilation of data from multiple sources, and should not be relied upon or referenced in legal documents, including property deeds, title reports, and contract documents. Not substituted for appropriate survey and/or engineering analysis. The user of the map acknowledges its limitations, assumes all responsibility for its use, and agrees to hold the publisher harmless for any damages that may result from the use of this map. This map is subject to change without notice.</small>		Section: <b>07</b>	Township: <b>20</b>
1:429		Range: <b>07</b>	





Landowner Name: **Shawn & Beth Lanning**

Map Type: **WSF Cost Share Map**

KCD Staff Name: **Jay Mirro**

Acres: 6.2

Address: 40316 278th Way SE Enumclaw, WA 98022

Map Date: February 06, 2020

Directional: NW



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1:1,858

Parcel #(s): 072007-9047 &amp; -9048

Section: 07

Township: 20

Range: 07

## Waste Storage Bin Sizing Worksheet

**For:** Shawn and Beth Lanning

**Current Yield**

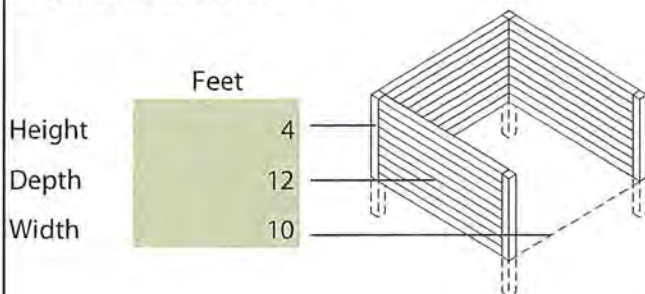
### Production

**Total Animal Units**  
**15.78**

**Days Confined**  
**289**

	Manure with Bedding (Cubic Yards)	Manure Only (Cubic Yards)
12 month Storage Requirement <b>Storage volume required=</b>	151.9	102
6 month Storage Requirement (NRCS) <b>Storage volume required =</b>	95.9	64.4

### Single Bin Dimensions



**Single Bin Capacity = 17.8 Cubic yards**  
**3-Bin System Capacity = 53.3 Cubic yards**

**# Recommended= 6 Bins for full year's storage**  
**# Recommended= 3 Bins for 6 month's storage**

**Days Confined =**  
 number of days manure is picked from stalls and/or Heavy Use Areas (HUAs) and stored in waste storage structure.

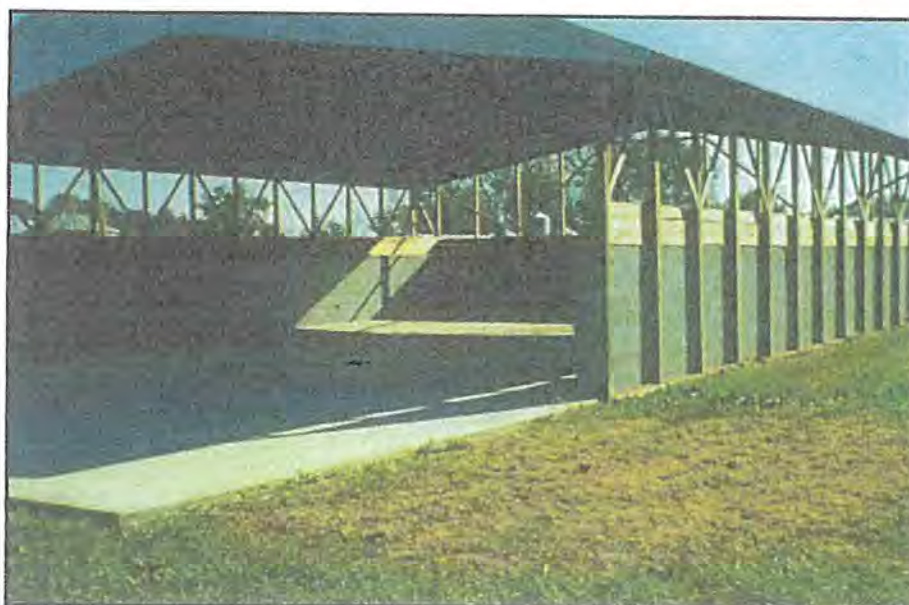


## Waste Storage Facility

## Lanning Farm Farm

40316 278th Wy SE Enumclaw

USDA, Natural Resources Conservation Service - practice code 313



### DEFINITION

A waste storage facility is a waste impoundment made by constructing an embankment, excavating a pit or dugout, or by fabricating a structure.

### PRACTICE INFORMATION

A waste storage facility is a component of a complete agricultural waste management system. The purpose of the practice is to provide temporary storage of waste material generated by production and/or processing of agricultural products. The waste material may be animal manure, wastewater, or contaminated runoff.

An operation and maintenance plan is developed to specify requirements for emptying the storage facility. The plan specifies timing, rates, and volume of

waste applications. For ponds, the plan also includes requirements for timely removal of waste material to accommodate subsequent storms.

Design criteria for this practice includes:

- Site location
- Design storage volume
- Storage period
- Inlet structures
- Safety features
- Pond criteria
- Emptying facilities
- Fabricated structure criteria

Additional information including detailed design criteria and specifications is in the local NRCS Field Office Technical Guide.

## CONDITIONS WHERE PRACTICE APPLIES

Use where regular storage is needed for wastes generated by agricultural production or processing and where soils, geology, and topography are suitable for construction of the facility. For reception pits, use the NRCS Conservation Practice Standard (CPS) Waste Transfer (Code 634).

For liquid waste storage facilities implemented with an embankment, this practice applies only to low hazard structures as defined in the NRCS National Engineering Manual (NEM), Part 520.23.

This practice does not apply to the storage of human waste or routine animal mortality.

## CRITERIA

### General Criteria Applicable to All Waste Storage Facilities.

**Laws and Regulations.** Plan, design, and construct the waste storage facility to meet all Federal, State, and local laws and regulations.

**Location.** Locate and design the waste storage facility such that it is outside the 100-year floodplain unless site restrictions require locating it within the floodplain. If located in the floodplain, protect the facility from inundation or damage from a 25-year flood event. Additionally, follow the policy found in the NRCS General Manual (GM) 190, Part 410.25, Flood Plain Management, which may require providing additional protection for storage structures located within the floodplain.

**Storage Period.** The storage period is the maximum length of time anticipated between emptying events. Base the minimum storage period on the timing required for environmentally safe waste utilization considering the climate, crops, soil, equipment, and local, State, and Federal regulations.

**Design Storage Volume.** Size the facility to store the following as appropriate:

### Operational Volume

- Manure, wastewater, bedding, and other wastes accumulated during the storage period.
- For liquid or slurry storage facilities, include normal precipitation (omit diverted roof runoff) less evaporation during the storage period.
- Normal runoff from the facility's drainage area during the storage period.
- Planned maximum residual solids. Provide a minimum of 6 inches for tanks unless a sump or other device allows for complete emptying.
- Additional storage when required to meet management goals or regulatory requirements.

### Freeboard Volume



- Minimum of 6" for vertical walled tanks.
- Minimum of 12" for all other facilities.

Exclude non-polluted runoff from the structure to the fullest extent practical except where including the runoff is advantageous to the operation of the agricultural waste management system.

**Inlet.** Design inlet to resist corrosion, plugging, freeze damage, and ultraviolet deterioration. Incorporate erosion protection as necessary.

**Waste Removal.** Provide components for removing waste such as gates, pipes, docks, wet wells, pumping platforms, retaining walls, or ramps. Incorporate features to protect against erosion, tampering, and accidental release of stored waste as necessary. Design ramp slopes to accommodate anticipated equipment and traction available. Use NRCS CPS Nutrient Management (Code 590) for land application of stored material or follow other disposal options outlined in a Comprehensive Nutrient Management Plan (CNMP).

For any facility that is an organic producer or that sells manure to organic producers, consider using rot-resistant or treated lumber that meets the requirements for organic production. The producer should consult with the organic certifier as to the use and acceptability of treated lumber for waste storage.

### **Considerations for Improving Air Quality**

Liquid manure storage may result in emissions of volatile organic compounds, ammonia, hydrogen sulfide, methane, nitrous oxide, and carbon dioxide. Solid manure storage may result in emissions of particulate matter, volatile organic compounds, ammonia, carbon dioxide, and nitrous oxide.

To reduce emissions of greenhouse gases, ammonia, volatile organic compounds, particulate matter and odor, other NRCS CPSs such as Anaerobic Digester (Code 366), Roofs and Covers (Code 367), Waste Treatment (Code 629), Amendments for Treatment of Agricultural Waste (Code 591), Composting Facility (Code 317), and Air Filtration and Scrubbing (Code 371) can be added to the waste management system.

Adjusting pH below 7 may reduce ammonia emissions from the waste storage facility but may increase odor when waste is surface applied—see NRCS CPS Nutrient Management (Code 590).

Some fabric and organic covers have been shown to be effective in reducing odors.

Maintain appropriate manure moisture content for solid manure storage facilities. Excessive moisture will increase the potential for air emissions of volatile organic compounds, ammonia, and nitrous oxide, and may lead to anaerobic conditions, which will increase the potential for emissions of methane and hydrogen sulfide. Too little moisture will increase the potential for particulate matter emissions.

## **PLANS AND SPECIFICATIONS**

Prepare plans and specifications that describe the requirements for applying the practice to achieve its intended use. As a minimum, include the following in the engineering plans and specifications:

- Plan view of system layout.
- Structural details of all components, including reinforcing steel, type of materials, thickness, anchorage requirements, lift thickness.
- Locations, sizes, and type of pipelines and appurtenances.
- Requirements for foundation and preparation and treatment.
- Vegetative requirements.
- Quantities.
- Approximate location of utilities and notification requirements.

## **OPERATION AND MAINTENANCE**

Develop an operation and maintenance plan that is consistent with the purposes of the practice, its intended life, safety requirements, and the criteria for its design. At a minimum, the plan will contain where appropriate:

Include the operational requirements for emptying the storage facility including the expected storage period. Begin removal of the liquid storage facility as soon as practical after the maximum operating level has been reached. Also include the requirement that waste be removed from storage and utilized at locations, times, rates, and volume in accordance with the overall waste management system plan.

For impoundments and other liquid storages include an explanation of the staff gauge or other permanent marker to indicate the maximum operating level. For storages where the contents are not visible and a staff gauge would not be visible, such as below a slatted floor, identify the method for the operator to measure the depth of accumulated waste.



# ROOF RUNOFF STRUCTURE

## PRACTICE INTRODUCTION

USDA, Natural Resources Conservation Service—Practice Code 558



### ROOF RUNOFF STRUCTURE

A roof runoff structure is a facility for collecting, controlling, and disposing of runoff water from roofs.

### PRACTICE INFORMATION

The purpose of this practice is to prevent roof runoff water from flowing across concentrated waste areas, barnyards, roads, and alleys. The practice reduces pollution, flooding, and erosion. It also improves water quality, drainage, and the overall efficiency of a waste management system. The water from roof runoff can be stored and reused for cleaning and other purposes. The practice also reduces the volume requirements of

lagoons and waste storage facilities, and reduces the volume of effluent water requiring treatment or land application.

### COMMON ASSOCIATED PRACTICES

Roof Runoff Structure is commonly used in a Conservation Management System with practices such as Waste Storage Facility (313), Composting Facility (317), and Heavy Use Area Protection (561).

For further information, refer to the practice standard in the local Field Office Technical Guide and associated specifications and job sheets.

The following page identifies the effects expected to occur when this practice is applied. These effects are subjective and somewhat dependent on variables such as climate, terrain, soil, etc. All appropriate local, State, Tribal, and Federal permits and approvals are the responsibility of the landowners and are presumed to have been obtained. Users are cautioned that these effects are estimates that may or may not apply to a specific site.



United States Department of Agriculture Natural Resources Conservation Service, Washington

NRCS-WA

## Practice Documentation Requirements

### 313 Waste Storage Facility

Owner Shawn & Beth Lanning Operator I.D. \_\_\_\_\_ Date 6/12/20  
 Operator \_\_\_\_\_ Tract 40316 278th wy Field (s): \_\_\_\_\_  
 Contract Number \_\_\_\_\_ Contract Item Number (s): \_\_\_\_\_  
 Field Office King Conservation Dist.

#### MANDATORY DOCUMENTATION WITHIN THE PLAN



Practice objective,  
 Identification of the extent of practices applied,  
 Location identification, this can be an aerial photo, soils map, reference to the conservation plan map, or a sketch in the plan drawings (legal description is required),  
 Environmental Evaluation NRCS-WA-CPA-052,  
 Documentation of necessary permits – federal, state, tribal and local - as applicable,  
 and Site-specific practice specification

The following additional data are needed for the specific practices listed.

Check Use the Check Box to indicate the Requirements are met.

Box

#### Requirements

#### COMMENTS

<input checked="" type="checkbox"/>	Actual location/dimensions/elevations.	
<input checked="" type="checkbox"/>	Actual Materials Used.	
<input checked="" type="checkbox"/>	As-Built Drawings.	<u>As needed</u>
<input checked="" type="checkbox"/>	Construction Specifications.	
<input checked="" type="checkbox"/>	Cross-section and profile drawings.	
<input checked="" type="checkbox"/>	Detail drawings.	
<input checked="" type="checkbox"/>	Field Survey.	<u>site recon performed</u>
<input checked="" type="checkbox"/>	Geotechnical design computations.	
<input checked="" type="checkbox"/>	Geotechnical investigation.	
<input checked="" type="checkbox"/>	Hydraulic design computations.	
<input checked="" type="checkbox"/>	Hydrology; Hydrologic data.	
<input checked="" type="checkbox"/>	Location and Layout Drawings.	
<input checked="" type="checkbox"/>	Material Specifications.	
<input checked="" type="checkbox"/>	Quantity computations.	<u>SEE Farm Plan</u>
<input checked="" type="checkbox"/>	Soil Reports-Physical Soil Properties	
<input checked="" type="checkbox"/>	Soil Reports-Sewage Disposal	<u>SEE Farm plan</u>
<input checked="" type="checkbox"/>	Soil Reports-Water Features	<u>SEE Farm plan</u>
<input checked="" type="checkbox"/>	Soils.	
<input checked="" type="checkbox"/>	Structural design computations.	
<input checked="" type="checkbox"/>	Topographical data.	

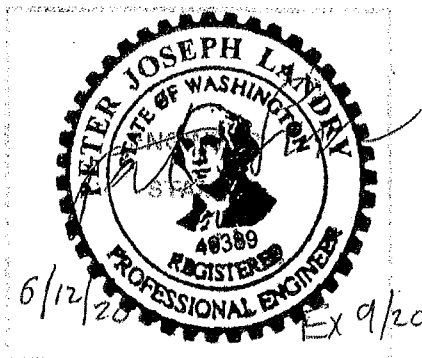
Additional practices [supporting practices] may be necessary to implement, install, operate or maintain this practice. Check the requirements of this practice standard and provide the Practice Documentation Checklist for the necessary supporting practices.

#### Certification:

For non-NRCS employees: If state license is required to complete this practice then the certifying individual must affix their signature and stamp (i.e.; PE Stamp) to this certification.

I have completed a review of all of the practice documentation and certify the applied practice meets NRCS specifications.

Certified by: [Signature] Date: 6/12/20  
 Job Title: District Engineer JAA LEVEL: \_\_\_\_\_  
 (If applicable)





278TH

Discovery Farms Waste Storage Facilities.  
60' (south) from parcel line.  
50' (north) from drainage ditch.

Pasture 1  
0.2 acres

Pasture 2  
0.8 acres

Pasture 3  
0.7 acres

Pasture 4  
0.8 acres

Pasture 5  
1.9 acres

H

B

200 100 0 200 Feet

Pictometry, King County

Landowner Name: Shawn & Beth Lanning	Map Type: WSF Cost Share Map	KCD Staff Name: Jay Mirro	Acre: 6.2
Address: 40316 278th Way SE Enumclaw, WA 98022		Map Date: May 14, 2020	Directional: NW
		Parcel #(s): 072007-9047 & -9048	Section: 07
			Township: 20
			Range: 07

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Pictometry is aerial photography taken in a mosaic of images. The publisher disclaims any warranty of accuracy of the data. The map is approximate in nature, based on compilation of data from multiple sources, and should not be relied upon or referenced in legal documents. We warrant and warrant documents, our liability for damages for any damages that may result from the use of this map, this map is subject to change without notice.



1:1,858



# AGRICULTURAL STORAGE SHED

Plan 'A' 9'-6" x 20'-0"



## SHEET INDEX

### ARCHITECTURAL DRAWINGS:

C0.0 COVER SHEET  
C1.0 CODE SUMMARY  
A1.1 PLANS

A2.1 ELEVATIONS

A3.1 WALL SECTION and DETAILS  
A3.2 DETAILS  
A3.3 BUILDING SECTION and DETAILS

A4.1 INSTRUCTIONS (Fasteners)  
A4.2 INSTRUCTIONS (Fasteners)  
A4.3 INSTRUCTIONS (Connectors)  
A4.4 INSTRUCTIONS (Connectors)  
A4.5 INSTRUCTIONS (Roof Vent)  
A4.6 INSTRUCTIONS (Roof Vent)  
A4.7 INSTRUCTIONS (Roof Underlayment)  
A4.8 INSTRUCTIONS (Roof Underlayment)  
A4.9 INSTRUCTIONS (Asphalt Shingle)  
A4.10 INSTRUCTIONS (Asphalt Shingle)

## PROJECT DATA

### BUILDING AREA:

GARAGE: 190 SF  
COVERED AREA: 253.5 SF

### CONSTRUCTION SUMMARY:

CONSTRUCTION TYPE: 0 OCCUPANCY/WOOD FRAMED  
OCCUPANCY GROUP: S - GARAGE

### APPLICABLE CODES:

IBC 2018  
USDA NRCS Conservation Practices  
Standard  
WASTE STORAGE FACILITY CODE 31.3

## STRUCTURAL DATA

### VERTICAL DESIGN LOADS (ROOF):

ROOF DEAD LOAD: 15 PSF  
ROOF LIVE LOAD: 20 PSF

### VERTICAL DESIGN LOADS (WALLS):

EXTERIOR WALL DEAD LOAD: 10 PSF  
EXTERIOR WALL DEAD LOAD (STONE): 55 PSF  
INTERIOR WALL DEAD LOAD: 10 PSF

### LATERAL DESIGN LOADS (WIND):

WIND SPEED (31 SEC GUST): 130 MPH  
BASIC WIND SPEED: 101 MPH  
EXPOSURE: C  
RISK CATEGORY: II  
IMPORTANCE FACTOR (I): 1.0  
TOPOGRAPHIC FACTOR (Kzt): 1.0

### LATERAL DESIGN LOADS (SEISMIC):

SEISMIC DESIGN CATEGORY (IBC 1613.5.4): 2b or 3  
RISK CATEGORY: II  
IMPORTANCE FACTOR (I): 1.0  
Ss: 1.305g  
S1: 0.4370g  
F0: 1.0  
Fv: 1.56  
SDS: 0.871g  
Cs (N-S): 0.1339  
Cs (E-W): 0.2488

### SOILS DESIGN CRITERIA:

SOIL BEARING PRESSURE: 2000 PSF  
SOIL BEARING PRESSURE (SHORT TERM): 2000 PSF  
FROST DEPTH: 24 INCHES  
PASSIVE EARTH PRESSURE: 350 PCF  
SOIL FRICTION FACTOR: 0.30  
CONCRETE COMPRESSIVE STRENGTH (F'c): 2500 PSI AT 28 DAYS



ARCHITECT  
Harsen Design, PLLC  
2311 N. 45th Street #256  
Seattle, WA 98103  
(206) 403-8801

OWNER  
King Conservation District  
800 SW 39th Street  
Renton, WA 98057

PROJECT  
Agricultural Shed

PROJECT NO.  
201012.1

DRAWN BY  
SG, DH

ISSUE  
May 15, 2020

DESCRIPTION  
Cover

C<sup>0.0</sup>  
DRAFT

## CODE SUMMARY

The following code summary is intended as a guide and not a rule. The information below has been compiled from multiple building code sources throughout King County in the State of Washington. Please consult local building codes prior to planning and construction. Sheds are considered Accessory Structures and must adhere to local building codes. The documentation of the enclosed design follows the current IBC 2018.

### Accessory Structures

Accessory structures are detached buildings accessory to and associated with a primary single-family or multifamily structure on sites less than 20,000 square feet. Examples include tool sheds, playhouses, garden sheds, detached garages and hot tubs not incorporated into attached decks. Lots greater than 20,000 square feet must meet standard setbacks for the underlying zone.

#### Where can my structure be located?

- The structure must be located at least 10 feet from a street right of way, access easement, or private road. The structure must comply with the front and side setbacks required for the primary structure and must maintain a 5-foot setback from the rear property line.
- Exception: An accessory structure may be built to a side or rear property line if:
1. A written mutual agreement of the abutting property owners is recorded with King County and the City Clerk
  2. The structure does not exceed 15' in height
  3. The structure does not occupy more than 50% of the required setback area
  4. The structure will not be located within 10' of a street right of way, access easement, or private road
  5. The structure must comply with applicable sections of the construction codes related to exterior
  6. The structure may not be located within a front-yard setback
  7. The structure may not be located within any setback or required buffer.

In most cases, accessory structures may not be built over utility easements (e.g., power, water, sanitary sewer, storm sewer, telecommunications) without written permission from the owner of the easement. If you have easements on your property, you should research them to see what allowances and restrictions apply.

**Note:** The construction codes, as adopted by the city, contain additional fire protection requirements that apply to some structures constructed with a side- or rear-yard setback. Check with the Building Division to make sure your structure meets those requirements.

#### How much area can my structure cover?

The structure may cover up to 10% of your lot and must be included in the calculation of lot coverage and impervious surface for compliance with the maximum allowances for your district. Exception: The 10% limit may be exceeded if:

1. The maximum lot coverage allowance is not exceeded
2. A written mutual agreement of all abutting property owners is recorded with King County and City Clerk.

#### How tall can my structure be?

Accessory structures are generally limited to 15' in height. Exception: The 15' limit may be increased up to the maximum height allowed in your district if:

1. The structure will not be located within a required setback
2. A written mutual agreement of all abutting property owners is recorded with King County and the city clerk.

#### When is a building permit required?

The International Building Code exempts certain structures from needing a building permit if they are less than 200 square feet. Exempted structures do not require a building permit from the City but must comply with all Land Use code requirements. An exempt accessory structure may intrude into a side or rear setback using the exception criteria that apply to non-exempt accessory structures noted above.

#### You may not need a permit to build a shed if it meets all of these criteria (check with your local building department):

1. The total area (or "footprint") of the shed's roof is 200 square feet or less
2. The shed is a single-story building
3. The shed sits on a simple concrete slab, pier blocks, or soil
4. The shed is not attached to a house or other building
5. The shed is not in or near an environmentally critical area (ECA), for example a steep slope or wetland

#### All other sheds require a permit; most require only a subject-to-field-inspection permit. You may need a construction addition/alteration permit if:

1. Your shed is in or near an ECA
2. Your shed is larger than 750 square feet
3. Your shed has beams that span more than 14 feet

You may need to apply for electrical service changes or new services from service provider.

#### Research the Code

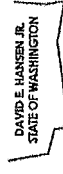
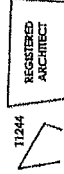
Whether or not you need a permit, you must meet all code requirements when building your shed, including the building, land use, stormwater, grading, and environmentally critical areas codes.

Some building codes limit the size and location of your shed. The combined footprint of all structures (including your house, garage, shed, and decks 36 inches or more above the ground) can't exceed a certain percentage of your lot size. That percentage varies by zoning. For single-family zones in some areas, the total coverage is limited to 35 percent of the lot (on lots 5,000 square feet or larger) or 1,000 square feet plus 15 percent of the lot area (on lots smaller than 5,000 square feet).

You usually can't put the shed within 20 feet of the front property line or within five feet of the side property lines. You can put the shed in your backyard (the rear 25 feet or the rear 20 percent of the lot depth, whichever is less), but there are limits on the shed size and height. Read your local Land Use Code for the complete requirements.



**HANSEN DESIGN, PLLC**  
2311 North 45th Street #256  
Seattle, Washington 98103



These Construction Documents are to be Accompanied by an NRCS Practice Documentation Requirements sheet with a valid engineers stamp



**KCD**  
KING CONSERVATION DISTRICT  
800 SW 39th Street  
Suite 103  
Renton, WA 98007

**Project**  
Agricultural Shed  
Plan 'A'

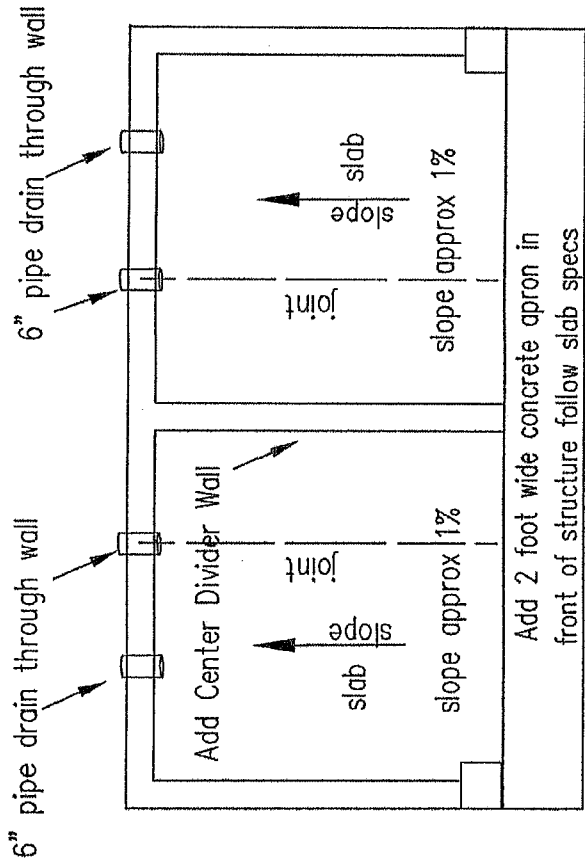
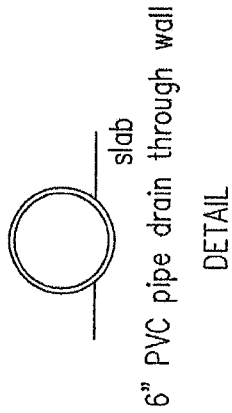
**DRAWN BY**  
SG T DH

**DATE**  
May 26, 2020

**REVISION**  
N/A

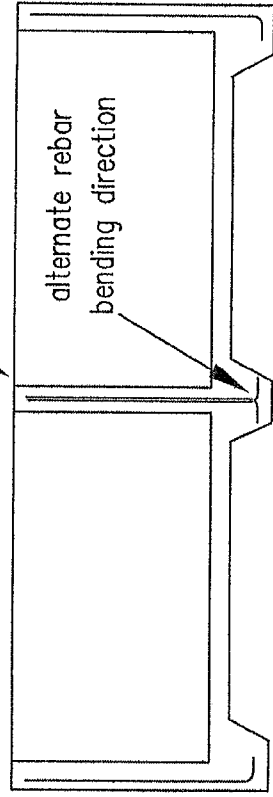
**DESCRIPTION**  
Code Summary

**A1.1**



PLAN VIEW

Add Center Divider Wall



FRONT ELEVATION VIEW

NOTE: See Detail 2 page A3.1 in architect plans for complete wall specifications



# CONCRETE SLAB AND WALL DETAILS

# BEST MANAGEMENT PRACTICE DRIP LINE INFILTRATION TRENCH

STANDARD DRAWING NO.

BMP-001

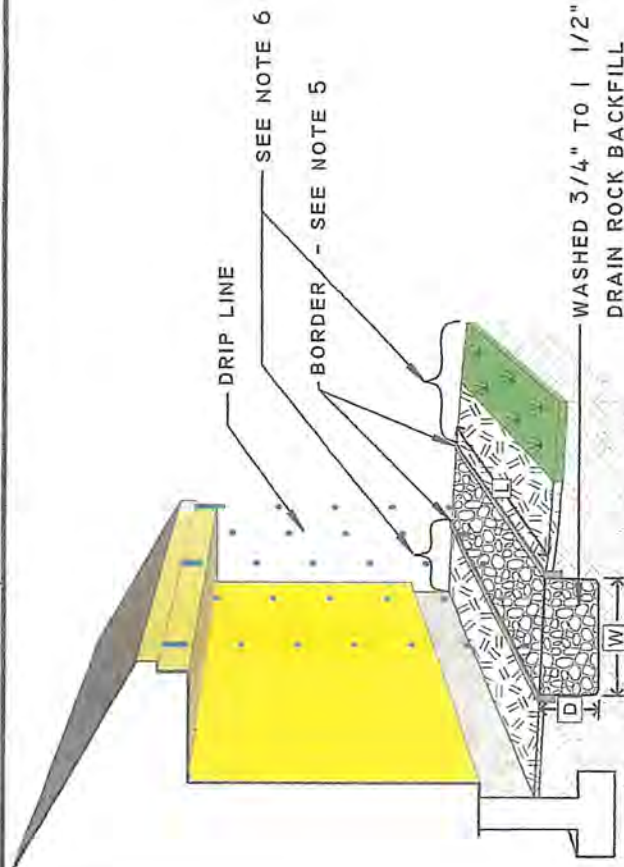
DATE: 4-6-2012

## CONSTRUCTION NOTES

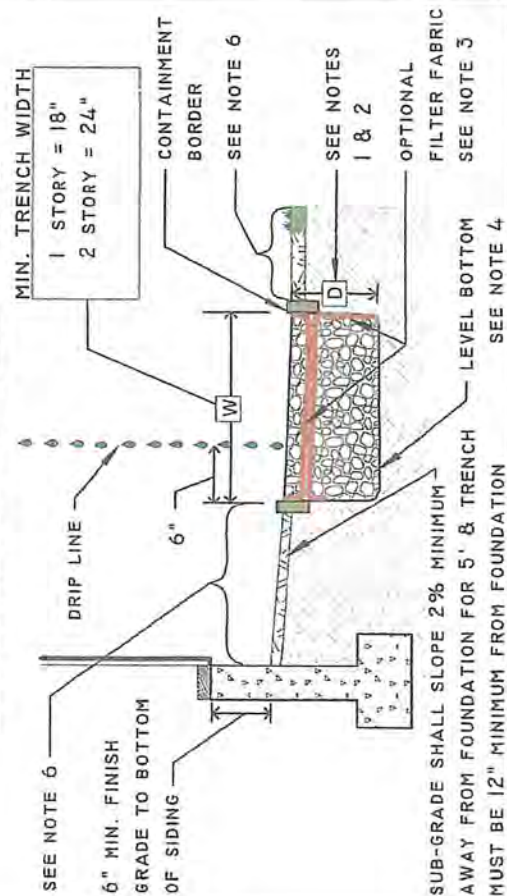
1. FOR SITE SPECIFIC TRENCH DIMENSIONS AND BACKFILL REQUIREMENTS REFER TO THE BMP "SITE EVALUATION RECOMMENDED TREATMENTS" FORM OR OTHER APPROVED BMP SIZING CALCULATIONS.
2. MAXIMUM TRENCH DEPTH RECOMMENDED IS 10".
3. FILTER FABRIC IS OPTIONAL.
4. BOTTOM OF TRENCH MUST BE LEVEL. IF THIS IS NOT FEASIBLE, ALTERNATIVES INCLUDE CONSTRUCTING A SWALE OR SUBSURFACE DRAIN TO COLLECT AND CONVEY THE RUNOFF TO AN INFILTRATION SYSTEM.
5. CONTAINMENT BORDERS ARE REQUIRED. OPTIONS FOR MATERIALS INCLUDE PRESSURE TREATED LUMBER, RECYCLED COMPOSITES, BRICK, STONE, COBBLE, OR OTHER LANDSCAPE EDGING MATERIAL. FIRE DEFENSIBLE SPACE GUIDELINES FOR LAKE TAHOE RECOMMEND A NON-COMBUSTIBLE AREA WITHIN 5 FEET OF A STRUCTURE.

6. CONSULT WITH YOUR LOCAL FIRE PROTECTION DISTRICT WHEN LANDSCAPING NEAR STRUCTURES.

7. REGULARLY SCHEDULED MAINTENANCE IS NECESSARY TO MAINTAIN FULL FUNCTION. MAINTENANCE INCLUDES INSPECTION, REMOVAL, AND PROPER DISPOSAL OF DEBRIS. PINE NEEDLES AND ACCUMULATED SEDIMENT.



## INSTALLATION GUIDELINES



U.S. DEPARTMENT OF AGRICULTURE  
NATURAL RESOURCES CONSERVATION SERVICE

DRAWN BY: \_\_\_\_\_ APPROVED BY: \_\_\_\_\_ DATE: \_\_\_\_\_  
DMGG/MPB

THIS STANDARD DRAWING IS BASED ON A REFERENCE TO THE NRCS STANDARD PRACTICE 570 - STORMWATER RUNOFF CONTROL. THIS DRAWING IS INTENDED TO ASSIST THE DESIGNER IN PREPARATION OF A COMPLETE SITE SPECIFIC DESIGN, AND IT IS NOT TO REPLACE THE INDEPENDENT JUDGMENT AND ANALYSIS BY A QUALIFIED DESIGNER. INFILTRATION SYSTEM SIZING IS CALCULATED BASED ON THE HYDRAULIC CONDUCTIVITY OF THE SOILS ON SITE AND VOLUME OF RUNOFF BEING CAPTURED.

USDA IS AN EQUAL OPPORTUNITY PROVIDER AND EMPLOYER

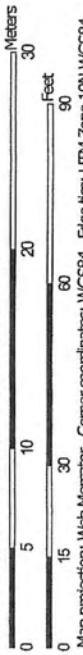


# Soil Map—King County Area, Washington (Lanning Farm)



Soil Map may not be valid at this scale.































Map Scale: 1:353 if printed on A landscape (11" x 8.5") sheet.



Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 10N WGS84



## MAP LEGEND

	Area of Interest (AOI)		Soil Map Unit Polygons		Soil Map Unit Lines		Soil Map Unit Points		Special Point Features		Blowout		Borrow Pit		Clay Spot		Closed Depression		Gravel Pit		Gravelly Spot		Landfill		Lava Flow		Marsh or swamp		Mine or Quarry		Miscellaneous Water		Perennial Water		Rock Outcrop		Saline Spot		Sandy Spot		Severely Eroded Spot		Sinkhole		Slide or Slip		Sodic Spot
	Spoil Area		Stony Spot		Very Stony Spot		Wet Spot		Other		Special Line Features		Water Features		Streams and Canals		Transportation		Rails		Interstate Highways		US Routes		Major Roads		Local Roads		Background		Aerial Photography																

## MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

**Warning:** Soil Map may not be valid at this scale.  
Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service  
Web Soil Survey URL:  
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: King County Area, Washington  
Survey Area Data: Version 15, Sep 16, 2019

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Jul 30, 2018—Aug 6, 2018

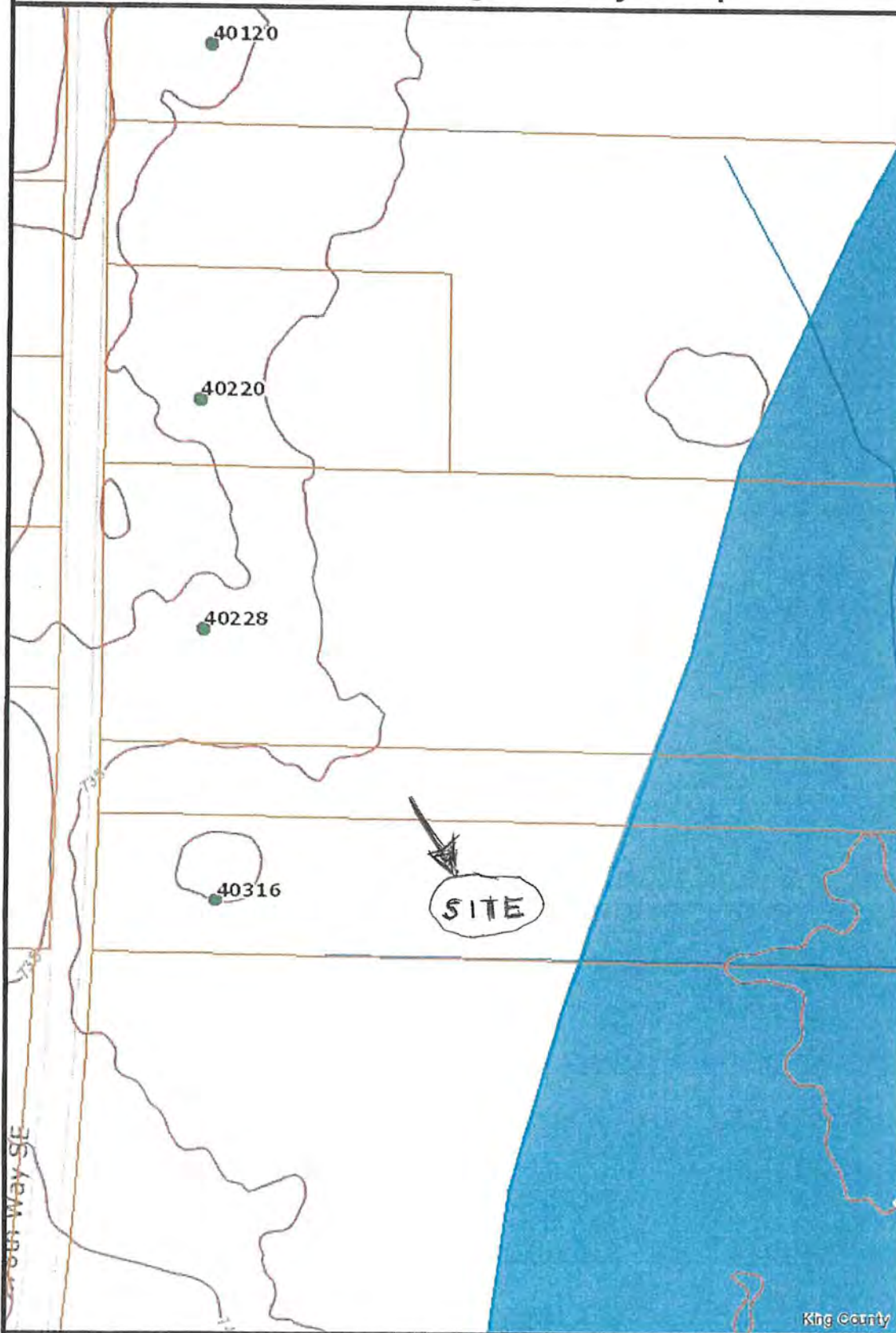
The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

## Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
AgC	Alderwood gravelly sandy loam, 8 to 15 percent slopes	0.6	100.0%
<b>Totals for Area of Interest</b>		<b>0.6</b>	<b>100.0%</b>



# King County iMap



## Legend

- Address points
- Address labels
- Parcels
- index contours - 100 foot
- contours - 5 foot (below 1000 feet) and 10 foot
- FEMA preliminary floodway
- FEMA preliminary 100-year floodplain
- Streams

## Freeways

- freeway
- freeway ramp

## Arterial streets

- arterial street, principal
- arterial street, collector
- arterial street, minor

## Local streets and roads

- local street
- local access road, alley, or other

The information included on this map has been compiled by King County staff from a variety of sources and is subject to change without notice. King County makes no representations or warranties, express or implied, as to accuracy, completeness, timeliness, or rights to the use of such information. This document is not intended for use as a survey product. King County shall not be liable for any general, special, indirect, incidental, or consequential damages including, but not limited to, lost revenues or lost profits resulting from the use or misuse of the information contained on this map. Any sale of this map or information on this map is prohibited except by written permission of King County.

Date: 6/11/2020

Notes:



**OPERATION AND MAINTENANCE PLAN  
FOR  
WASTE STORAGE FACILITY (313)**

A properly operated and maintained **Waste Storage Facility** is an asset to your property. The purpose of this practice is to store manure, agricultural by-products, wastewater, and contaminated runoff in an environmentally sound manner to better manage agricultural nutrients. This practice does NOT apply to the storage of human wastes or animal carcasses. The estimated life span of this practice is **15 years**. The life of the practice can be assured and usually extended by developing and carrying out a good operation and maintenance program.

This practice will require you to perform periodic operation and maintenance to maintain satisfactory performance. The following are some requirements to help you develop a good operation and maintenance program.

**Safety**

1. Exclude livestock and human access, provide fencing, gates and other barriers. Inspect fence and gates at least twice a year. Repair and/or replace damaged fences and gates as soon as possible. Keep gates closed at all times.
2. Inspect all warning signs to see that they are legible and properly mounted. Repair or replace as needed
3. Waste storage facilities must be considered "High Hazard Areas". The anaerobic biodegradation of waste forms noxious gases such as:
  - Methane (CH<sub>4</sub>)
  - Hydrogen sulfide (H<sub>2</sub>S)
  - Ammonia (NH<sub>3</sub>)
  - Carbon dioxide (CO<sub>2</sub>)

These gases can be fatal to both animals and human beings. Especially "Hydrogen Sulfide" which can paralyze the diaphragm and the victim will not be able to breath without the assistance of an Artificial Respirator, even after being removed from the location of the noxious gas. Thoroughly familiarize yourself with all potential gas problems, special wiring needs and ventilation needs.

4. In many cases, noxious gases displaces oxygen and people entering the reception pit succumb to the lack of oxygen as opposed to direct harmful effects of noxious gasses.
5. Some gases (i.e. methane) can be explosive with the proper gas to air ratio. Use caution with open flames, welding equipment, electrical motors with brushes that spark (skill saws, electric drills, shop vacuums, etc.) when working near waste storage facilities. Never smoke near a storage facility and post "No Smoking" signs to warn others. Be sure the work area is well ventilated.

### Inspection and Maintenance

Inspection and maintenance is required to achieve the intended function, benefits, and life of the practice. The landowner/operator is responsible to establish and implement an inspection and maintenance program. Inspect the facility after each significant storm event and at least annually. Items to inspect and maintain include, but are not limited to, the following:

1. Check backfill areas around facilities for excessive settlement. Determine if settlement is being caused by consolidation, piping, wall or floor failure or other issues. Make necessary repairs as soon as possible. If necessary, consult your local NRCS office.
2. Check concrete walls and floor often for cracks and/or separations and make necessary repairs.
3. Check earthen berms and embankments for sloughing, erosion or settlement. Maintain embankment and backfill elevations as specified in the design. Visually inspect the inside of the embankment each time the facility is emptied. Maintain design elevation of the top of berms. If necessary, import additional earthfill and properly compact to maintain the proper top of berm elevation.
4. Inspect foundation drain outlets, keep outlets open and ensure no polluted water is draining. Inspect for signs of leakage such as excessively high flow rate, turbidity, discoloration, odors or other unusual characteristics of the flow. Excessive growth and accumulation of algae at the drain outlet could be another sign that nutrients are leaking from the facility. Check drain outlets each time after the facility is emptied and after each significant storm event. If leakage is detected, make the appropriate repairs as soon as possible. Consult your local NRCS office for guidance. Also, inspect for any obvious blockages in the drain. Make provisions to unblock the drain as soon as possible.
5. Inspect access roads and approaches to and from the storage facility frequently to determine need for additional stone or other stable materials. Repair roads as necessary.
6. Inspect all pipes, pumps, valves, gates, etc. twice a year to make sure they are properly functioning, structurally sound, and are not cracked, broken, or pose as a safety or environmental hazard to the operator or livestock.
7. All fences and gates shall be inspected for damage at least twice a year. Damaged fences and gates shall be repaired and/or replaced as soon as possible. Gates shall be kept closed at all times.
8. Begin emptying or drawdown according to the schedule in the Nutrient Management Plan (NMP) or sooner if the contents of the storage facility reach the maximum operating level. The level of manure shall never encroach into the freeboard (6" from the top for structures, 12" from the top for earthen).

### Maintenance

1. Follow the Comprehensive Nutrient Management Plan (CNMP).
2. Maintain a good vegetative cover on earthen berms and embankments. If the vegetative cover is damaged, repair and reseeded as soon as possible. Mow vegetative cover at least twice a year to control weeds and encourage vigorous growth.
3. Check push off ramps, headwalls, retaining walls and other concrete appurtenances for cracks, spalls or other serious damage. Repair as necessary.
4. Immediately repair any damage to the waste storage facility caused by equipment, livestock or vandalism, including the surrounding area and/or any appurtenances.



King Conservation District  
1107 SW Grady Way, Suite 130, Renton, WA 98057  
425-282-1900 - FAX 425-282-1898- district@kingcd.org

### COOPERATIVE AGREEMENT

This agreement is entered into by the King Conservation District (the "District") and

LANNING Acres 6.19 Sec. 7 Twp. 20 Range 7  
Land Owner/ Occupier  
40316 27<sup>TH</sup> WAY SE ENIVERLAND WA 98022  
Street Address City State Zip  
Farm Address (if different) Cell Phone  
Home Phone Work Phone Email shawnlanning@outlook.com

☐ Check here to be added to King CD mailing list (newsletters, plant sale information, and other conservation updates)

Parcel Number(s)\*: 072007-9047 + 9048

#### THE DISTRICT AGREES TO:

1. Assist the land owner/occupier to plan, carry out, and maintain a conservation program for the renewable, natural resources under his/her ownership or control.
2. Provide the land owner/occupier with resource information, technical assistance, and other assistance as it may have available.

#### THE LAND OWNER/OCCUPIER AGREES TO:

1. Use his/her renewable, natural resources as mutually planned.
2. Treat his/her renewable, natural resources consistent with the conservation program and the land owner/occupier's land use objectives.
3. Maintain all structures established under the conservation program and continue use of all other conservation measures put into effect.
4. Use any material or equipment made available to him/her by the District for the stated purpose and in a manner consistent with the conservation program.

#### IT IS FURTHER AGREED THAT:

1. This agreement will become effective on the date of the last signature and may be terminated by either party by giving written notice of such termination to the other party.
2. The provisions of this agreement are understood by the land owner/occupier and the District and neither shall be liable for damage to the other's property from carrying out this agreement unless such damage is caused by negligence or misconduct.

[Signature]  
Land Owner/Occupier

2/5/16  
Date

[Signature]  
King Conservation District

2-5-14  
Date

\* Note to KCD staff: Please include legal description in plan file









**King Conservation District Board of Supervisors Meeting 07/13/2020**  
**Agenda Action Briefing/Report AI 20-034**

**SUBJECT:**

Approve KCD Landowner Incentive Program cost-share application from Jessica and Ryan McCarthy, for Waste Storage Facility, in the amount of \$3,375.00.

**FISCAL IMPACT**

The current balance of cost-share funding for KCD LIP 2020 is summarized in the following table:

2020 LIP Cost-share Available	<b>\$306,692.93</b>
Current Request	<b>\$3,375.00</b>
Balance Remaining	<b>\$303,317.93</b>

**POLICY CONSIDERATION**

This proposed cost-share contract has been vetted through a staff approval committee and meets NRCS standards for the applicable best management practice (BMP). The application has been advanced for due pass by the Board of Supervisors.

**STAKEHOLDER INTERESTS**

- District cooperators working with District farm management, forestry and aquatic area enhancement programs
- Discovery Farms®, American Farmland Trust and the Department of Ecology
- King CD Board members and staff

**BACKGROUND**

Jessica and Ryan McCarthy own a 4.5 acre hobby farm in Enumclaw, Washington. They currently have two horses and some chickens. The McCarthy property has unnamed artificial ditches that run along southern and western borders of their property as well midway between their western pastures. The McCarthy's purchased this property several years ago and have been working with KCD to restore the property to a sustainable hobby farm. The McCarthy's have open LIP contract for a Roof Runoff Structure which they are working on completing this summer. The McCarthy's are in need of a structure on their farm to manage their livestock's manure.

This project will install a Waste Storage Facility on the McCarthy's property near their existing barn and proposed Heavy Use Protection Area. The concrete base of the facility will measure approximately nine and half feet wide by twenty feet long with a four foot high wall. The concrete base will be sloped at a one to two percent angle towards the back wall to contain leachate. The facility will be roofed. This project is part of the Discovery Farms® Washington project that was first introduced to the KCD Board of Supervisors at the March 9<sup>th</sup> BOS meeting. Please see the attached summary for more information. Project expenses incurred will first be reimbursed through the Discovery Farms® project grant. Any remaining balance or expenses would then be reimbursed through this proposed LIP contract award

Typically, KCD staff do not recommend an LIP application for approval if a cooperator already has an unrelated LIP contract open. Exceptions to this are practices that need to be installed simultaneously to ensure successful implementation of the BMPs as well as Aquatic Area Enhancement practices that are project managed by KCD staff. Similarly for this Waste Storage

**King Conservation District Board of Supervisors Meeting 07/13/2020**  
**Agenda Action Briefing/Report AI 20-034**

Facility project, KCD staff will be acting as project manager for the McCarthy's in terms of the installation and contract management to ensure that the research project design criteria are being met. Additionally, the McCarthy's have been actively working to restore their property since purchase, have made consistent progress, and have expressed serious intentions to continue this work and complete their roof runoff structure this year. Considering this and that KCD is assuming the project management responsibilities of the second contract for the McCarthy's, KCD staff recommend approval for a second open contract.

**EFFECTIVE DATE**

The cost-share award will become effective upon approval by the Board of Supervisors and the LIP contract will become effective upon signature by a Board representative.

**RECOMMENDATION**

Staff seeks Board approval of Landowner Incentive Program cost-share application from Jessica and Ryan McCarthy, for a Waste Storage Facility, in the amount of \$3,375.00.

**MOTION**

\_\_\_\_\_ Moved, \_\_\_\_\_ Seconded; *Passed a motion to Approve KCD Landowner Incentive Program cost-share application from Jessica and Ryan McCarthy, for a Waste Storage Facility, in the amount of \$3,375.00.*



# Discovery Farms Waste Storage Treatment Research Project Introduction:

## **What is the Discovery Farms Waste Storage Treatment project?**

In the fall of 2018 KCD was given an opportunity to partner with the American Farmland Trust (AFT), Whatcom CD and Discovery Farms Washington®, farmers in King County, and the Department of Ecology to design and participate in a Discovery Farms Research project to assess and promote the benefits of on-farm manure storage conservation practices that enhance water quality. Manure storage practices were chosen because it is one of KCD's most commonly prescribed and funded agricultural Best Management Practices (BMPs).

The project will measure water quality data for different treatments of dry manure storage on two farms in the Enumclaw Plateau. It will compare various combinations of tarp coverings, roofs, and concrete floorings as compared to uncovered piles (controls). KCD and Discovery Farm Team members will oversee the installation of the different treatments. We will monitor on-the-ground water quality data associated with installed BMPs collecting data on bacteria, sediment, nitrogen, phosphorus, and other micronutrients. Once the monitoring is complete, the uncovered treatments on concrete pads will be roofed leaving the cooperator with a functional waste storage facility. Both farms are KCD cooperators currently participating in the Landowner Incentive Program (LIP) to install BMPs on their property.

## **What are the potential benefits of this project?**

KCD prescribes a variety of treatments to manage manure, emphasizing the effectiveness of a roof and concrete pad both at quickly producing a superior finished product and at protecting water quality. However, these options often present barriers to landowner due to the additional cost and labor to install these structures as well as potential permitting issues. This study's evaluation of the effectiveness of commonly prescribed manure treatments of varying costs in protecting water quality will inform planner recommendations of manure treatment options to cooperators and potentially inform changes in cost-share policies and procedures.

Additionally, this study will provide a valuable opportunity to engage King County farmers, land managers and other stakeholders in discussions around the different options and benefits of adopting best management practices for manure management. The Discovery Farms model promotes the normalization and adoption of BMPs through farmer to farmer education. During and after the monitoring the cooperators have agreed to host outreach events for other farmers and KCD stakeholders.

## **What is the LIP nexus?**

The Discovery Farm project funds have allocated a set amount of funding to install the bins. Due to the project scope there is a likelihood that the BMP installation may go overbudget. To mitigate whatever additional costs accrue beyond the Discovery Farms we have submitted LIP applications for Waste Storage Facilities to the LIP Review Committee. The LIP has a policy that only certain practices may have concurrent open contracts at the same time. As both landowners have open LIP practices of a Roof Runoff Structure and Heavy Use Area, they would normally be excluded from applying for a Waste Storage Facility until these contracts were complete. As KCD and the Discovery Farms Team will be project managing the installation of these bins, there is little risk of the bins not being installed. In the March Board of Supervisors Meeting this year KCD staff presented this information to the Board and provided background information on the project. Staff have added language added to the application where the landowner acknowledges that if they do not participate in the Discovery Farms Project, their LIP Waste Storage Facility contract would be put on hold until they completed their first contracted BMP.

# KING CONSERVATION DISTRICT (KCD) LANDOWNER INCENTIVE PROGRAM APPLICATION

## Section 1. Applicant (If applicant is not the landowner, then landowner must also sign the agreement)

Applicant Name: Jessica & Ryan McCarthy		Farm/Business Name:	
Mailing Address: 47929 280th Ave SE Enumclaw, WA 98022		Project Address: Same	
Phone (home):		Phone (work/mobile): 253-375-2122	
Email Address: mrs.jess.mccarthy@gmail.com		KCD Staff: Jay Mirro	
Parcel #(s): 312007-9064	<input type="checkbox"/> Incorporated <input checked="" type="checkbox"/> Unincorporated	Total Farm/Land Acreage: 4.5	<input type="checkbox"/> T.A. <input checked="" type="checkbox"/> Farm Plan <input type="checkbox"/> Forest Plan
Is email an acceptable primary form of communication?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Would you like to be added to our newsletter list?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

## Section 2. Project Information

Best Management Practice (BMP): Waste Storage Facility	
Project Completion Date (month and year): 3/2021	
<b>Current Site Conditions</b> (Provide a brief summary of resource management problem addressed by BMP; also note if streams, wetlands, and steep slopes are near or within the project area):  Area is flat and grassy. Proposed bin location will be 50 feet south of the property line and 74 feet northeast of a seasonal drainage. Currently manure is stockpiled on a tarp with tarp covering it.	
<b>Project Details</b> (Provide a brief summary of the project. Include acres treated, length of fence, dimensions of compost bin, types and numbers of plants, etc.):  The plan is to build a waste storage facility as part of the Discovery Farms project. Each structure will have two bins, which will each measure approximately 10ft.(l) x 10 ft.(w) x 4ft.(h) . The location of the waste storage facility is within 100' of a seasonal drainage, which requires the bin to have a roof, a concrete pad (that is sloped toward the back of the bin), and concrete walls on the exterior sides of the bin. This is for leachate containment, per the King County code. The bins will be placed on a concrete slab with apron in front. See attached sheets for details.  Bin will be have enough capacity for 3 horses, 3 goats and 2 small pigs.	
<b>Maintenance Plan</b> (Summarize your plan to maintain the practice. Include frequency and scope of inspections, repairs anticipated, etc.):  Bins will be inspected by annually and repaired as needed.	

Permits (List all permits required to complete this project):

None.

Photos: Before photos must be submitted with this application.

### Section 3. Cost-share Programs

A. Have you previously applied for cost-share through the KCD Landowner Incentive Program (LIP)?

☒ Yes

☐ No

If yes, please list contract number and BMP below:

Roof runoff structure- 2018-64 - not yet installed.

B. Are you applying for (or received) funding (cost-share or grants) through other agencies or programs?

☒ Yes

☐ No

Please describe below:

1. **King County Cost-share**

Please list practices and date installed below:

2. **NRCS EQIP (Natural Resources Conservation Service's Environmental Quality Incentive Program)**

Please list practices and date installed below:

3. **Other**

Please list agency and describe project:

Other Cost-Share History/Notes:

### Section 4. Budget (attached as Exhibit A)

The cost-share application budget is the applicant's statement for how the KCD cost-share funds will be spent. Use the attached Excel document to detail the budget for the project. Reimbursement values are restricted by unit maximums as well as practice maximums. KCD will be unable to provide a budget that exceeds either maximum. The cost differential for practices installed at a higher standard or cost shall be the responsibility of the applicant. In cases where a budget for a cost-share award needs to be updated, submit a budget revision request for approval. In the absence of an approved budget revision, the cost differential shall be the responsibility of the applicant. Furthermore, receiving financial assistance for an approved Best Management Practices will be subject to inspection by KCD planners. Approval for reimbursement will be based on the satisfactory completion of the project to the minimum specifications detailed in this application.

Partial reimbursements are available on a limited basis and must be requested in advance. They will only be considered when the installation of a project can be phased to achieve the standard described in the attached job sheet when reimbursement is requested.

☐ Select this box if you intend to request partial reimbursement as the project is installed.

## Section 5. Education and Outreach

KCD encourages public education through demonstration projects. Demonstration projects are used to educate other landowners about innovative ways to address natural resource concerns. A demonstration project may be showcased in a guided tour, or featured in presentations or written fact sheets.

- Will you consider becoming a demonstration project?

☒ Yes ☐ No

## Section 6. Maintenance and Monitoring Expectations

The applicant is responsible to maintain the Best Management Practice (BMP) to standard as detailed in the attached Job Sheet for the lifetime of the BMP.

☒ A. I understand the lifetime of the BMP is 15 years.

☒ B. I understand KCD will work with me to verify proper maintenance of the installed BMP, which will include a combination of site visits with KCD staff and/or annual photo documentation submitted by me for the lifetime listed in Section 7A.

☒ C. I understand I am obligated to maintain and monitor the BMP for the lifetime listed in Section 6A.

## Section 7. Application and Agreement

I request financial assistance (cost-share) under the KCD LIP to install the Best Management Practice (BMP) described in this application and detailed in the attached *Job Sheet and Map*. This practice is needed to solve the natural resource problems described in Section 2 of this application. This Agreement expires if the project is not completed by the specified completion date in Section 2 or in an approved timeline revision request. jm (Initial Here)

I agree to ensure that all applicable local, state, and federal permits are obtained for installation of the BMP for which funds are requested. Furthermore, I understand that KCD must receive a copy of any applicable permit to process my cost-share reimbursement.

jm (Initial Here)

I agree to work cooperatively with KCD to ensure the funded BMP is maintained consistent with the design life identified in the attached Job Sheet and in Section 6 of this application. jm (Initial Here)

I agree to indemnify, defend, and hold harmless KCD, its elected or appointed officials, employees and agents, from all claims, alleged liability, damages, losses to or death of person or damage to property allegedly resulting from the negligent or intentional acts of the applicant or any of its employees, agents, contractors or subcontractors in connection with this Agreement. jm (Initial Here)

I represent that the information provided in Section 3 of this application is a full disclosure of all other natural resource financial cost-share relationships in which I have or am participating. Furthermore, I agree to disclose if I am applying for or receive funding (cost-share or grants) for the BMP described in this application through other agencies or programs and to provide KCD with written documentation detailing this funding support. This may include copies of reimbursement checks or letters showing value of provided contribution. I understand that I must provide proof of reimbursement for alternate funding prior to receiving reimbursement through the KCD LIP. I acknowledge that KCD LIP funds cannot be used in combination with other funding sources to exceed 100% of project costs. I agree to allow communication between KCD and any other agency regarding the details of the project as well as funding details.

jm (Initial Here)

I understand that LIP cost-share reimbursement is contingent upon installing the BMP to the minimum standard provided by KCD, and that KCD will verify standard compliance. Furthermore, I understand that changes to the installation details (attached *Job Sheet and Map*) must be approved through a *Scope of Work Revision Process*. Unapproved changes will not be eligible for reimbursement.

jm (Initial Here)

I understand that there may be federal tax liability associated with a LIP cost-share reimbursement, and that KCD will issue a 1099-G for reimbursements made through the LIP. Furthermore, I understand that KCD cannot provide advice with respect to the tax liability associated with LIP cost-share reimbursements and that I have been advised to consult with my own tax professional.

jm (Initial Here)

I understand that I am applying for public funding and am responsible for notifying a buyer upon sale or loss of the property of the installed BMP. If I sell or lose control of the property covered by this Agreement and the new owner or transferee does not assume responsibility for maintaining the installed BMP as required by this Agreement, I may be required to refund all or a portion of the cost-share received through this Agreement. In the event of litigation arising from or related to this Agreement, attorney's fees and costs incurred by the prevailing party shall be paid by the non-prevailing party. jm (Initial Here)

I give permission to KCD to photograph my property to document the site conditions and/or the implementation and maintenance of the funded practice. In the event that I or any of my family members or dependents choose to be photographed in a setting that reflects the assistance provided by KCD, I give KCD permission to publish such photographs in KCD promotional literature, advertising, social media, and other public displays. The photographs will be the property of KCD and may be used by KCD at any time, in the manner described above, without my additional consent. jm (Initial Here)

I understand that this Agreement is subject to disclosure under the Public Records Act, Chapter 42.56 RCW. jm (Initial Here)

I understand that I will no longer be eligible for KCD cost-share funds if one or more of the following occurs: jm (Initial Here)

- The KCD funded BMP fails within its design life due to circumstances within my control (e.g., neglect, failure to maintain the BMP, destruction of the BMP before expiration of the design life, or other actions which cause the KCD funded BMP to become non-viable). *Note: Landowners are not responsible for BMP failure caused by circumstances beyond their control (e.g. fire, flood, storm damage, etc.).*
- I relinquish or lose ownership of equipment purchased with KCD cost-share.
- The KCD funded BMP is not being used for the intended purpose (e.g. cross fencing purchased with KCD funding, but no animals on property).
- I cancel 2 cost-share contracts awarded through the KCD Landowner Incentive Program.
- I deny KCD staff access to my property to verify BMP installation and maintenance.

I understand KCD will provide a sign free of charge after completion of a project, and I agree that: jm (Initial Here)

- I will select a visible location on my property for display of the sign and will install it.
- I will maintain the sign and keep it free of visual barriers for at least five years after installation.
- I am not responsible for damage to the sign that is beyond my control (e.g. auto accident, storm damage, vandalism, etc.)

Jessica & Ryan McCarthy

Signature of applicant

Date

Signature of Landowner (If applicant If Lessee)

Date

FOR KCD OFFICE USE

Jessica McCarthy

6-28-2020

<u>[Signature]</u>	06/29/2020
Approved for Award (KCD LIP Coordinator)	Date
Approved for Funding (KCD Management)	Date
	LIP ID:

I understand that if my property is approved as a study site for the Discovery Farms Waste Storage Treatment project, the installation of this Waste Storage Facility BMP will be coordinated by KCD staff. I understand that if I am not approved as a study site for the Discovery Farms Project this contract will be put on hold until completion of the open LIP contract for a Roof Runoff Structure 2018-64 (McCarthy, J). jm (Initial Here)



Cooperator: McCarthy

BMPs	Units	cost/unit	%	reimbursement rate	
Animal Trails & Walkways	sq ft	\$ 0.75	0.5	\$ 0.38	Ac.
Aquatic Area Buffer	project	\$ 30,000.00	0.9	\$ 27,000.00	AUE
Buffer Fencing	ft	\$ 12.00	0.75	\$ 9.00	Ft.
Building Relocation for Aquatic Area/Buffer	project	\$ 50,000.00	0.5	\$ 25,000.00	Sq. Ft.
Bulkhead Removal (Freshwater, Marine)	project	\$ 50,000.00	0.75	\$ 37,500.00	Project
Cover Crops	acre	\$ 150.00	0.9	\$ 135.00	
Cross Fencing	ft	\$ 6.00	0.5	\$ 3.00	
Forest Health Management	project	\$ 30,000.00	0.75	\$ 22,500.00	
Heavy Use Area Protection	AUE	\$ 1,400.00	0.5	\$ 700.00	
Pasture & Hay Planting	acre	\$ 325.00	0.5	\$ 162.50	
Roof Runoff Management	ft	\$ 7.00	0.5	\$ 3.50	
Stream Crossing	ft	\$ 1,100.00	0.75	\$ 825.00	
Subsurface Drain	ft	\$ 20.00	0.5	\$ 10.00	
Upland Wildlife Habitat Management	project	\$ 20,000.00	0.75	\$ 15,000.00	
Waste Storage Facility	AUE	\$ 1,000.00	0.75	\$ 750.00	
Watering Facility	project	\$ 50,000.00	0.5	\$ 25,000.00	



# SPECIFICATION

## Waste Storage Facility

*\*Please attach the waste calculation worksheet to this application*

Landowner: Jessica and Ryan McCarthy	Lifetime of Practice: 15 years
--------------------------------------	--------------------------------

Purpose (check all that apply)	
<input checked="" type="checkbox"/> To temporarily store manure in a dry stack	<input type="checkbox"/> To improve soil fertility, tilth and water holding capacity
<input checked="" type="checkbox"/> To reduce the pollution potential of organic agricultural wastes to surface and ground water	<input type="checkbox"/> To reduce odor, fly and other vector problems
<input checked="" type="checkbox"/> To reduce bulk of organic material to be spread	<input type="checkbox"/> To destroy weed seed and pathogens

Proximity of facility to sensitive areas, wells, and property boundary (distance in feet)
Proximity to sensitive areas: Bins will be located 50 feet south of the property line and 74 feet northeast of a seasonal drainage.
Will the manure bins be located in the floodplain?: No

Number of AUEs the facility is planned for. Include volume of waste.
AUEs: 4.5 AUE (three horses, three goats and two small pigs)
Waste volume: Up to 38 yards
How many months of storage is this planned for?: Two bins would accommodate manure from all animals for 12 months.

Specifics of facility (number of bins, type of construction material) *Please attach a drawing of an approved design.
Number of bins, bin dimensions: 2 bins- 10ft.(l) x 10 ft.(w) x 4ft.(h)
Construction materials: The bins will be constructed with a roof on top of a concrete pad and walls. See attached sheets for details. Location of the waste storage facility is within 100' of a seasonal drainage so it requires that the bin to has a roof, a concrete pad that is sloped toward the back of the bin, and a minimum of six-inch concrete curb on the three exterior sides of the bin. This is for leachate containment.
Compost bin design: KCD approved manure bin design.
How will manure be covered?: Bin will have a roof constructed over the two bins..



## Permits

*Are there permits necessary for the project? If so, please list below and include a copy of the permit.*

A permit is not required for bins this size without a roof. A permit may be required if bins are installed with a roof. Total square footage for bins with ecoblock walls is 220sq. ft. See permit references below.

*Common circumstances that trigger a KC permit include, but are not limited to:*

*Contact the Permitting Office with questions.*

**Clearing:** King County Code states that in general, a clearing permit is required for any removal of trees or vegetation from a critical area or from properties subject to urban clearing standards or clearing restrictions in a special district overlay defined in 21A.38 (PDF\*, 344KB) of the [King County Code](#).

Clearing over 7,000 square feet on RA zoned properties or removal of 5,000 board feet of merchantable timber also requires a permit. A separate [Forest Practice Permit](#) may also be required.

**Grading:** King County code requires that in general, any grading within a sensitive area, or any excavation greater than five feet in depth or over 100 cubic yards, or any fill greater than three feet in depth or greater than 100 cubic yards, or creation of more than 2,000 square feet of new impervious surface, requires a permit.

**Roof:** If the compost facility is under 200 sq. ft. it does not need a permit to cover with a roof. Above 200 sq. ft. would require a King County permit to roof the structure. The roof overhang of a 200 sq. ft structure may not exceed 24 inches, measured horizontally from exterior wall.

**\*\*Landowners must follow all local, state, and federal laws.**

## Operation and Maintenance

Manage the compost piles for temperature, odors, moisture, and oxygen, as appropriate. Appropriate equipment for managing the composting temperature should include a long stem thermometer. Make adjustments throughout the composting period to insure proper composting processes.

Closely monitor temperatures above 165°F. Take action immediately to cool piles that have reached temperatures above 185°F.

Moisture content can be determined by the "squeeze test," a non-quantitative method of estimating moisture. In this test, a handful of the material is squeezed together in the fist. If water actively drips out while the compost is squeezed, the material is too wet. If the material does not release water, and crumbles apart when the fist is opened, the material is too dry. Only if the material does not release water and stays compacted when the fist is opened, is the moisture content "just right." (Mountain Organic Materials)

In order to maintain appropriate moisture content, compost piles in Western Washington must be covered year round.

## Additional Specifications and Notes:

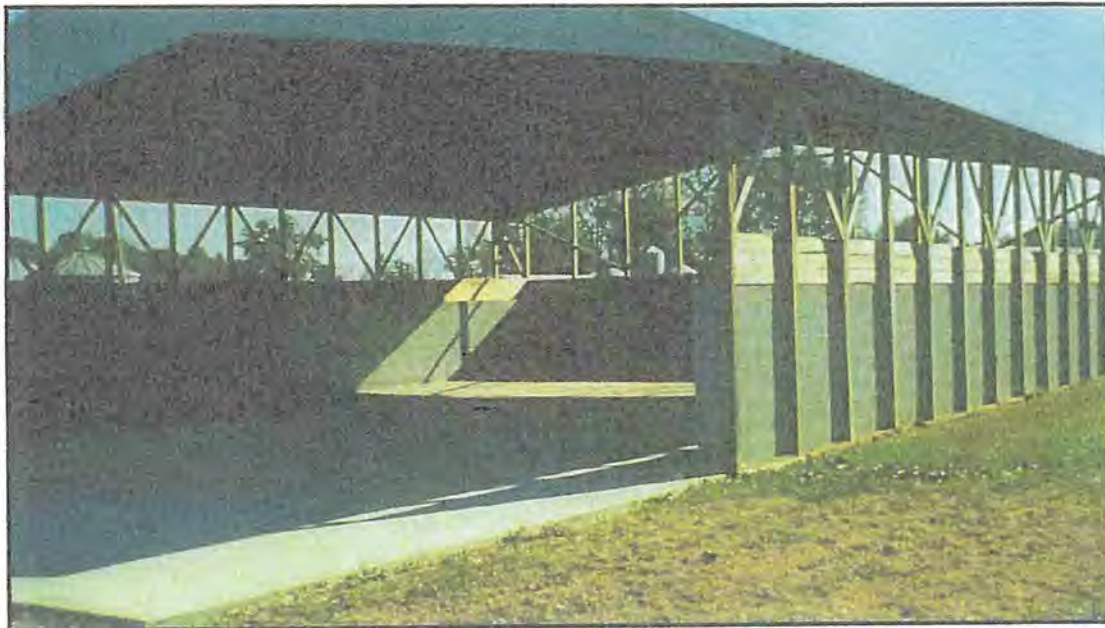
Pursuant to KC Code, manure storage should be covered, 35' from property boundary, 100' from wells, and 100 ft from areas of open water.

If the facility is in a floodplain, compensatory storage must be provided at the same elevation, equivalent to the volume of the facility that is in the 100-year flood plain.

# WASTE STORAGE FACILITY    McCarthy Farm

47929 280th Ave SE Enumclaw

USDA, Natural Resources Conservation Service—Practice Code 313



## WASTE STORAGE FACILITY

A waste storage facility is a waste impoundment made by constructing an embankment, excavating a pit or dugout, or by fabricating a structure.

## PRACTICE INFORMATION

A waste storage facility is a component of a complete agricultural waste management system. The purpose of the practice is to provide temporary storage of waste material generated by production and/or processing of agricultural products. The waste material may be animal manure, wastewater, or contaminated runoff.

An operation and maintenance plan is developed to specify requirements for emptying the storage facility. The plan specifies timing, rates, and volume of waste applications. For ponds, the plan also includes requirements for timely removal of waste material to accommodate subsequent storms.

Design criteria for this practice includes:

- Site location
- Design storage volume

- Storage period
- Inlet structures
- Safety features
- Pond criteria
- Emptying facilities
- Fabricated structure criteria

## COMMON ASSOCIATED PRACTICES

Waste Storage Facility is commonly used in a Conservation Management System with practices such as Manure Transfer (634), Composting Facility (317), Nutrient Management (590), and Waste Utilization (633).

For further information, refer to the practice standard in the local Field Office Technical Guide and associated specifications and job sheets.



## CONDITIONS WHERE PRACTICE APPLIES

Use where regular storage is needed for wastes generated by agricultural production or processing and where soils, geology, and topography are suitable for construction of the facility. For reception pits, use the NRCS Conservation Practice Standard (CPS) Waste Transfer (Code 634).

For liquid waste storage facilities implemented with an embankment, this practice applies only to low hazard structures as defined in the NRCS National Engineering Manual (NEM), Part 520.23.

This practice does not apply to the storage of human waste or routine animal mortality.

## CRITERIA

### General Criteria Applicable to All Waste Storage Facilities.

**Laws and Regulations.** Plan, design, and construct the waste storage facility to meet all Federal, State, and local laws and regulations.

**Location.** Locate and design the waste storage facility such that it is outside the 100-year floodplain unless site restrictions require locating it within the floodplain. If located in the floodplain, protect the facility from inundation or damage from a 25-year flood event. Additionally, follow the policy found in the NRCS General Manual (GM) 190, Part 410.25, Flood Plain Management, which may require providing additional protection for storage structures located within the floodplain.

**Storage Period.** The storage period is the maximum length of time anticipated between emptying events. Base the minimum storage period on the timing required for environmentally safe waste utilization considering the climate, crops, soil, equipment, and local, State, and Federal regulations.

**Design Storage Volume.** Size the facility to store the following as appropriate:

#### Operational Volume

- Manure, wastewater, bedding, and other wastes accumulated during the storage period.
- For liquid or slurry storage facilities, include normal precipitation (omit diverted roof runoff) less evaporation during the storage period.
- Normal runoff from the facility's drainage area during the storage period.
- Planned maximum residual solids. Provide a minimum of 6 inches for tanks unless a sump or other device allows for complete emptying.
- Additional storage when required to meet management goals or regulatory requirements.

#### Freeboard Volume



- Minimum of 6" for vertical walled tanks.
- Minimum of 12" for all other facilities.

Exclude non-polluted runoff from the structure to the fullest extent practical except where including the runoff is advantageous to the operation of the agricultural waste management system.

**Inlet.** Design inlet to resist corrosion, plugging, freeze damage, and ultraviolet deterioration. Incorporate erosion protection as necessary.

**Waste Removal.** Provide components for removing waste such as gates, pipes, docks, wet wells, pumping platforms, retaining walls, or ramps. Incorporate features to protect against erosion, tampering, and accidental release of stored waste as necessary. Design ramp slopes to accommodate anticipated equipment and traction available. Use NRCS CPS Nutrient Management (Code 590) for land application of stored material or follow other disposal options outlined in a Comprehensive Nutrient Management Plan (CNMP).

For any facility that is an organic producer or that sells manure to organic producers, consider using rot-resistant or treated lumber that meets the requirements for organic production. The producer should consult with the organic certifier as to the use and acceptability of treated lumber for waste storage.

### **Considerations for Improving Air Quality**

Liquid manure storage may result in emissions of volatile organic compounds, ammonia, hydrogen sulfide, methane, nitrous oxide, and carbon dioxide. Solid manure storage may result in emissions of particulate matter, volatile organic compounds, ammonia, carbon dioxide, and nitrous oxide.

To reduce emissions of greenhouse gases, ammonia, volatile organic compounds, particulate matter and odor, other NRCS CPSs such as Anaerobic Digester (Code 366), Roofs and Covers (Code 367), Waste Treatment (Code 629), Amendments for Treatment of Agricultural Waste (Code 591), Composting Facility (Code 317), and Air Filtration and Scrubbing (Code 371) can be added to the waste management system.

Adjusting pH below 7 may reduce ammonia emissions from the waste storage facility but may increase odor when waste is surface applied—see NRCS CPS Nutrient Management (Code 590).

Some fabric and organic covers have been shown to be effective in reducing odors.

Maintain appropriate manure moisture content for solid manure storage facilities. Excessive moisture will increase the potential for air emissions of volatile organic compounds, ammonia, and nitrous oxide, and may lead to anaerobic conditions, which will increase the potential for emissions of methane and hydrogen sulfide. Too little moisture will increase the potential for particulate matter emissions.

### **PLANS AND SPECIFICATIONS**

Prepare plans and specifications that describe the requirements for applying the practice to achieve its intended use. As a minimum, include the following in the engineering plans and specifications:

- Plan view of system layout.
- Structural details of all components, including reinforcing steel, type of materials, thickness, anchorage requirements, lift thickness.
- Locations, sizes, and type of pipelines and appurtenances.
- Requirements for foundation and preparation and treatment.
- Vegetative requirements.
- Quantities.
- Approximate location of utilities and notification requirements.

### **OPERATION AND MAINTENANCE**

Develop an operation and maintenance plan that is consistent with the purposes of the practice, its intended life, safety requirements, and the criteria for its design. At a minimum, the plan will contain where appropriate:

Include the operational requirements for emptying the storage facility including the expected storage period. Begin removal of the liquid storage facility as soon as practical after the maximum operating level has been reached. Also include the requirement that waste be removed from storage and utilized at locations, times, rates, and volume in accordance with the overall waste management system plan.

For impoundments and other liquid storages include an explanation of the staff gauge or other permanent marker to indicate the maximum operating level. For storages where the contents are not visible and a staff gauge would not be visible, such as below a slatted floor, identify the method for the operator to measure the depth of accumulated waste.

# ROOF RUNOFF STRUCTURE

## PRACTICE INTRODUCTION

USDA, Natural Resources Conservation Service—Practice Code 558



### ROOF RUNOFF STRUCTURE

A roof runoff structure is a facility for collecting, controlling, and disposing of runoff water from roofs.

### PRACTICE INFORMATION

The purpose of this practice is to prevent roof runoff water from flowing across concentrated waste areas, barnyards, roads, and alleys. The practice reduces pollution, flooding, and erosion. It also improves water quality, drainage, and the overall efficiency of a waste management system. The water from roof runoff can be stored and reused for cleaning and other purposes. The practice also reduces the volume requirements of

lagoons and waste storage facilities, and reduces the volume of effluent water requiring treatment or land application.

### COMMON ASSOCIATED PRACTICES

Roof Runoff Structure is commonly used in a Conservation Management System with practices such as Waste Storage Facility (313), Composting Facility (317), and Heavy Use Area Protection (561).

For further information, refer to the practice standard in the local Field Office Technical Guide and associated specifications and job sheets.

The following page identifies the effects expected to occur when this practice is applied. These effects are subjective and somewhat dependent on variables such as climate, terrain, soil, etc. All appropriate local, State, Tribal, and Federal permits and approvals are the responsibility of the landowners and are presumed to have been obtained. Users are cautioned that these effects are estimates that may or may not apply to a specific site.



NRCS-WA

## Practice Documentation Requirements

## 313 Waste Storage Facility

Owner Jessica & Ryan McCarthy Operator I.D. \_\_\_\_\_ Date 6/12/20  
 Operator \_\_\_\_\_ Tract 47929 280<sup>th</sup> AVE Field (s): \_\_\_\_\_  
 Contract Number \_\_\_\_\_ Contract Item Number (s): \_\_\_\_\_  
 Field Office King Conservation District

## MANDATORY DOCUMENTATION WITHIN THE PLAN

Practice objective,  
 Identification of the extent of practices applied,  
 Location identification, this can be an aerial photo, soils map, reference to the conservation plan map, or a sketch in the plan drawings (legal description is required),  
 Environmental Evaluation NRCS-WA-CPA-052,  
 Documentation of necessary permits – federal, state, tribal and local - as applicable,  
 and Site-specific practice specification

The following additional data are needed for the specific practices listed.

Check Use the Check Box to indicate the Requirements are met.  
 Box Requirements

Actual location/dimensions/elevations.  
 Actual Materials Used.  
 As-Built Drawings.  
 Construction Specifications.  
 Cross-section and profile drawings.  
 Detail drawings.  
 Field Survey.  
 Geotechnical design computations.  
 Geotechnical investigation.  
 Hydraulic design computations.  
 Hydrology; Hydrologic data.  
 Location and Layout Drawings.  
 Material Specifications.  
 Quantity computations.  
 Soil Reports-Physical Soil Properties  
 Soil Reports-Sewage Disposal  
 Soil Reports-Water Features  
 Soils.  
 Structural design computations.  
 Topographical data.

## COMMENTS

As needed

site recon performed

SEE Farm Plan

SEE Farm plan  
 SEE Farm plan

Additional practices [supporting practices] may be necessary to implement, install, operate or maintain this practice. Check the requirements of this practice standard and provide the Practice Documentation Checklist for the necessary supporting practices.

## Certification:

For non-NRCS employees: If state license is required to complete this practice then the certifying individual must affix their signature and stamp (i.e.; PE Stamp) to this certification.

I have completed a review of all of the practice documentation and certify the applied practice meets NRCS specifications.

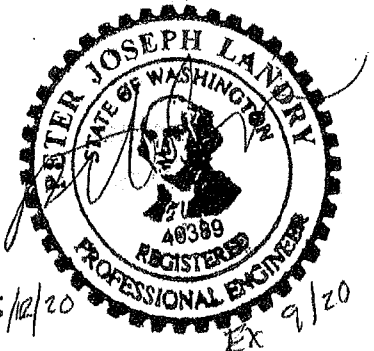
Certified by:

Job Title:

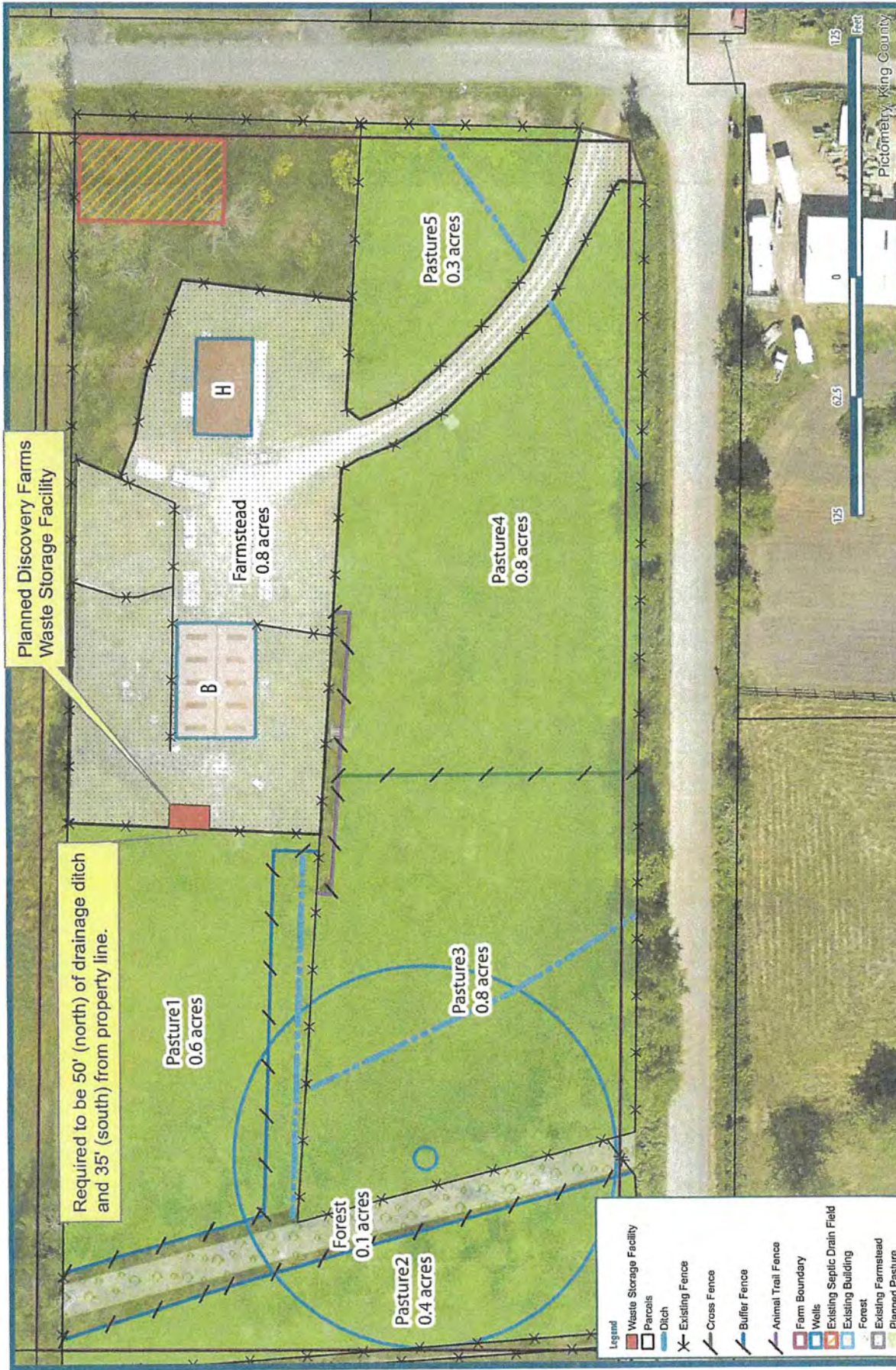
[Signature]  
 District Engineer

Date:

JAA LEVEL: \_\_\_\_\_  
 (If applicable)







Landowner Name: Jessica & Ryan McCarthy		Map Type: WSF Cost Share Map		KCD Staff Name: Mirro		Acres: 4.5	
Address: 47929 280th Ave SE Enumclaw, WA 98022		Map Date: May 14, 2020		Map Date: May 14, 2020		Directional: SE	
						Section: 31	
						Township: 20	
						Range: 07	
						Parcel # (s): 312007-9064	

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# AGRICULTURAL STORAGE SHED

Plan 'A' 9'-6" x 20'-0"



## SHEET INDEX

### ARCHITECTURAL DRAWINGS:

C0.0 COVER SHEET

C1.0 CODE SUMMARY

A1.1 PLANS

A2.1 ELEVATIONS

A3.1 WALL SECTION and DETAILS

A3.2 DETAILS

A3.3 BUILDING SECTION and DETAILS

A4.1 INSTRUCTIONS (Fasteners)

A4.2 INSTRUCTIONS (Connections)

A4.3 INSTRUCTIONS (Connections)

A4.4 INSTRUCTIONS (Rafter)

A4.5 INSTRUCTIONS (Roof Vent)

A4.6 INSTRUCTIONS (Roof Underlayment)

A4.7 INSTRUCTIONS (Roof Flashing)

A4.8 INSTRUCTIONS (Asphalt Shingle)

A4.9 INSTRUCTIONS (Asphalt Shingle)

A4.10

## PROJECT DATA

### BUILDING AREA:

GARAGE: 190 SF

COVERED AREA: 253.5 SF

### CONSTRUCTION SUMMARY:

CONSTRUCTION TYPE: 0 OCCUPANCY/WOOD FRAMED

OCCUPANCY GROUP: S - GARAGE

### APPLICABLE CODES:

IBC 2018

USDA NRCS Conservation Practice

Standard:

WASTE STORAGE FACILITY CODE 313

## STRUCTURAL DATA

### VERTICAL DESIGN LOADS (ROOF):

ROOF DEAD LOAD:

ROOF LIVE LOAD:

15 PSF

20 PSF

### VERTICAL DESIGN LOADS (WALLS):

EXTERIOR WALL DEAD LOAD:

EXTERIOR WALL DEAD LOAD (STONE):

INTERIOR WALL DEAD LOAD:

10 PSF

55 PSF

10 PSF

### LATERAL DESIGN LOADS (WIND):

WIND SPEED (3) SEC GUST:

WIND WIND SPEED:

EXPOSURE:

RISK CATEGORY:

IMPORTANCE FACTOR (I):

TOPOGRAPHIC FACTOR (K<sub>z</sub>):

130 MPH

101 MPH

C

II

1.0

1.0

### LATERAL DESIGN LOADS (SEISMIC):

SEISMIC DESIGN CATEGORY (IBC 1613.5.4):

RISK CATEGORY:

IMPORTANCE FACTOR (I):

S<sub>s</sub>:

S<sub>1</sub>:

F<sub>a</sub>:

F<sub>v</sub>:

S<sub>DS</sub>:

C<sub>s</sub> (N-S):

C<sub>s</sub> (E-W):

2b or 3

II

1.0

1.306g

0.4370g

1.0

1.56

0.871g

0.1339

0.2468

### SOILS DESIGN CRITERIA:

SOIL BEARING PRESSURE:

SOIL BEARING PRESSURE (SHORT TERM):

FROST DEPTH:

PASSIVE EARTH PRESSURE:

SOIL FRICTION FACTOR:

CONCRETE COMPRESSIVE STRENGTH (F<sub>ci</sub>): 2500 PSI AT 28 DAYS

2000 PSF

3200 PSF

24 INCHES

350 PCF

0.30



King Conservation District

### ARCHITECT

Hansen Design, PLLC

2311 N. 45th Street #256

Seattle, WA 98103

(206) 403-8801

### OWNER

King Conservation District

800 SW 39th Street

Renton, WA 98057

### PROJECT

Agricultural Shed

### PROJECT NO.

201012.1

### DRAWN BY

SG, DH

### DATE

NOV 15, 2020

### DESCRIPTION

Cover

C<sup>0.0</sup>  
DRAFT



## CODE SUMMARY

The following code summary is intended as a guide and not a rule. The information below has been compiled from multiple building code sources throughout King County in the State of Washington. Please consult local building codes prior to planning and construction. Sheets are considered Accessory Structures and must adhere to local building codes. The documentation of the enclosed design follows the current IBC 2018.

### Accessory Structures

Accessory structures are detached buildings accessory to and associated with a primary single-family or multifamily structure on sites less than 20,000 square feet. Examples include tool sheds, playhouses, garden sheds, detached garages and hot tubs not incorporated into attached decks. Lots greater than 20,000 square feet must meet standard setbacks for the underlying zone.

#### Where can my structure be located?

- The structure must be located at least 10 feet from a street right of way, access easement, or private road. The structure must comply with the front and side setbacks required for the primary structure and must maintain a 5-foot setback from the rear property line.
- Exception: An accessory structure may be built to a side or rear property line if:
1. A written mutual agreement of the abutting property owners is recorded with King County and the City Clerk
  2. The structure does not exceed 15' in height
  3. The structure does not occupy more than 50% of the required setback area
  4. The structure will not be located within 10' of a street right of way, access easement, or private road
  5. The structure must comply with applicable sections of the construction codes related to exterior wall and opening fire protection, as well as limitations on projections
  6. The structure may not be located within a front-yard setback
  7. The structure may not be located within any setback or required buffer.

In most cases, accessory structures may not be built over utility easements (e.g., power, water, sanitary sewer, storm sewer, telecommunications) without written permission from the owner of the easement. If you have easements on your property, you should research them to see what allowances and restrictions apply.

**Note:** The construction codes, as adopted by the city, contain additional fire protection requirements that apply to some structures constructed with a side- or rear-yard setback. Check with the Building Division to make sure your structure meets those requirements.

#### How much area can my structure cover?

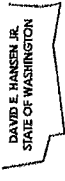
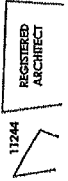
- The structure may cover up to 10% of your lot and must be included in the calculation of lot coverage and impervious surface for compliance with the maximum allowances for your district. Exception: The 10% limit may be exceeded if:
1. The maximum lot coverage allowance is not exceeded
  2. A written mutual agreement of all abutting property owners is recorded with King County and City Clerk.

#### How tall can my structure be?

- Accessory structures are generally limited to 15' in height. Exception: The 15' limit may be increased up to the maximum height allowed in your district if:
1. The structure will not be located within a required setback
  2. A written mutual agreement of all abutting property owners is recorded with King County and the city clerk.



**HANSEN DESIGN, PLLC**  
2311 North 45th Street #256  
Seattle, Washington 98103



These Construction Documents are to be Accompanied by an NRCS Practice Documentation Requirements sheet with a valid engineers stamp



**CLIENT**  
KING CONSERVATION DISTRICT  
800 SW 39th Street  
Suite 105  
Renton, WA 98507

**PROJECT**  
Agricultural Shed  
Plan 'A'

**DRAWN BY**  
SG | DH

**DATE**  
May 26, 2020

**RE-ISSUE**  
N/A

**DESCRIPTION**  
Code Summary

**A1.1**

#### When is a building permit required?

The International Building Code exempts certain structures from needing a building permit if they are less than 200 square feet. Exempted structures do not require a building permit from the City but must comply with all Land Use code requirements. An exempt accessory structure may intrude into a side or rear setback using the exception criteria that apply to non-exempt accessory structures noted above.

#### You may not need a permit to build a shed if it meets all of these criteria (check with your local building department):

1. The total area (or "footprint") of the shed's roof is 200 square feet or less
2. The shed is a single-story building
3. The shed sits on a simple concrete slab, pier blocks, or soil
4. The shed is not attached to a house or other building
5. The shed is not in or near an environmentally critical area (ECA), for example a steep slope or wetland

#### All other sheds require a permit; most require only a subject-to-field-inspection permit. You may need a construction addition/alteration permit if:

1. Your shed is in or near an ECA
2. Your shed is larger than 750 square feet
3. Your shed has beams that span more than 14 feet

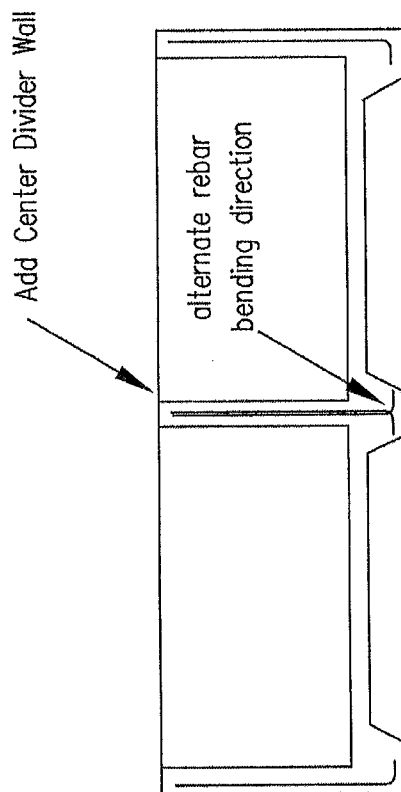
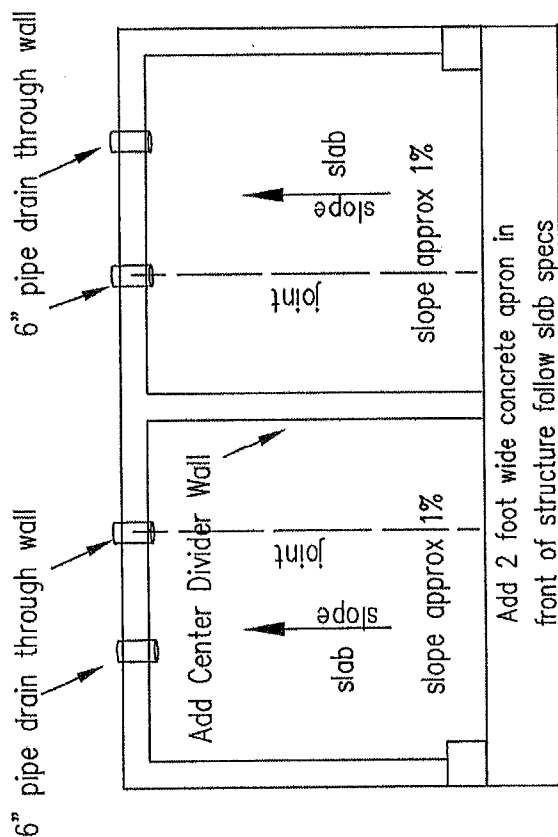
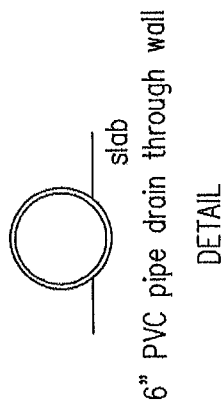
You may need to apply for electrical service changes or new services from service provider.

#### Research the Code

Whether or not you need a permit, you must meet all code requirements when building your shed, including the building, land use, stormwater, grading, and environmentally critical areas codes.

Some building codes limit the size and location of your shed. The combined footprint of all structures (including your house, garage, shed, and decks 36 inches or more above the ground) can't exceed a certain percentage of your lot size. That percentage varies by zoning. For single-family zones in some areas, the total coverage is limited to 35 percent of the lot (on lots 5,000 square feet or larger) or 1,000 square feet plus 15 percent of the lot area (on lots smaller than 5,000 square feet).

You usually can't put the shed within 20 feet of the front property line or within five feet of the side property lines. You can put the shed in your backyard (the rear 25 feet or the rear 20 percent of the lot depth, whichever is less), but there are limits on the shed size and height. Read your local Land Use Code for the complete requirements.



FRONT ELEVATION VIEW

NOTE: See Detail 2 page A3.1 in architect plans for complete wall specifications

## CONCRETE SLAB AND WALL DETAILS



# BEST MANAGEMENT PRACTICE DRIP LINE INFILTRATION TRENCH

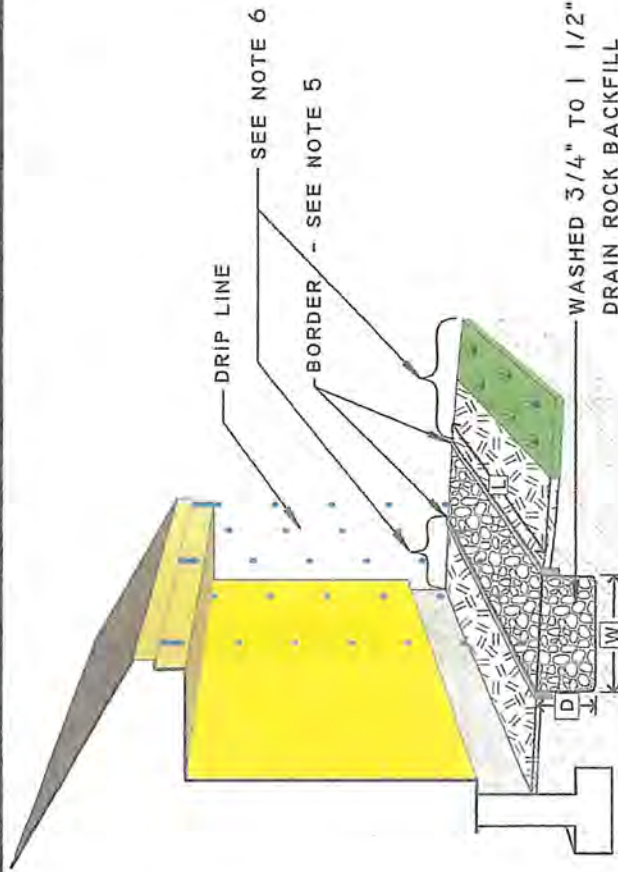
STANDARD DRAWING NO.

BMP-001

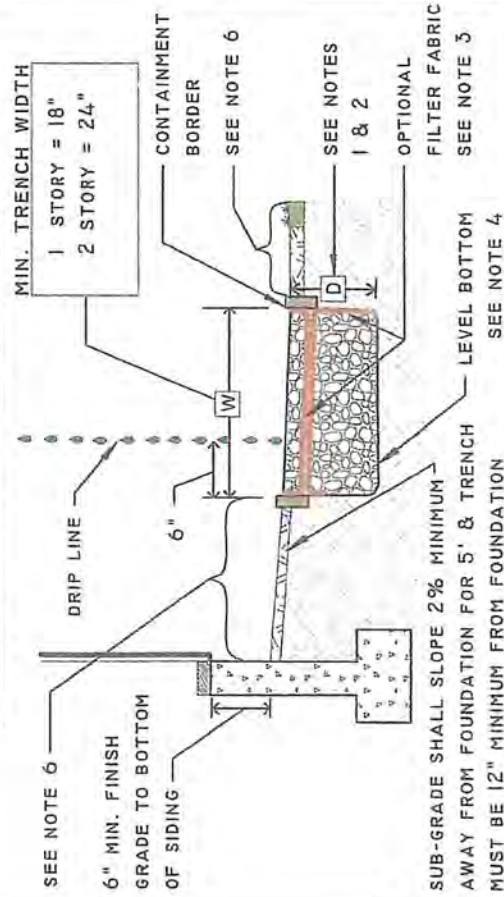
DATE: 4-6-2012

## CONSTRUCTION NOTES

1. FOR SITE SPECIFIC TRENCH DIMENSIONS AND BACKFILL REQUIREMENTS REFER TO THE BMP "SITE EVALUATION RECOMMENDED TREATMENTS" FORM OR OTHER APPROVED BMP SIZING CALCULATIONS.
2. MAXIMUM TRENCH DEPTH RECOMMENDED IS 10".
3. FILTER FABRIC IS OPTIONAL.
4. BOTTOM OF TRENCH MUST BE LEVEL. IF THIS IS NOT FEASIBLE, ALTERNATIVES INCLUDE CONSTRUCTING A SWALE OR SUBSURFACE DRAIN TO COLLECT AND CONVEY THE RUNOFF TO AN INFILTRATION SYSTEM.
5. CONTAINMENT BORDERS ARE REQUIRED. OPTIONS FOR MATERIALS INCLUDE PRESSURE TREATED LUMBER, RECYCLED COMPOSITES, BRICK, STONE, COBBLE, OR OTHER LANDSCAPE EDGING MATERIAL. FIRE DEFENSIBLE SPACE GUIDELINES FOR LAKE TAHOE RECOMMEND A NON-COMBUSTIBLE AREA WITHIN 5 FEET OF A STRUCTURE.
6. CONSULT WITH YOUR LOCAL FIRE PROTECTION DISTRICT WHEN LANDSCAPING NEAR STRUCTURES.
7. REGULARLY SCHEDULED MAINTENANCE IS NECESSARY TO MAINTAIN FULL FUNCTION. MAINTENANCE INCLUDES INSPECTION, REMOVAL, AND PROPER DISPOSAL OF DEBRIS, PINE NEEDLES AND ACCUMULATED SEDIMENT.



## INSTALLATION GUIDELINES



U.S. DEPARTMENT OF AGRICULTURE  
NATURAL RESOURCES CONSERVATION SERVICE

DRAWN BY: \_\_\_\_\_ APPROVED BY: \_\_\_\_\_ DATE: \_\_\_\_\_

DMGG/MPB

THIS STANDARD DRAWING IS BASED ON A REFERENCE TO THE NRCS STANDARD PRACTICE 570 - STORMWATER RUNOFF CONTROL.

THIS DRAWING IS INTENDED TO ASSIST THE DESIGNER IN PREPARATION OF A COMPLETE SITE SPECIFIC DESIGN, AND IT IS NOT TO REPLACE THE INDEPENDENT JUDGMENT AND ANALYSIS BY A QUALIFIED DESIGNER. INFILTRATION SYSTEM SIZING IS CALCULATED BASED ON THE HYDRAULIC CONDUCTIVITY OF THE SOILS ON SITE AND VOLUME OF RUNOFF BEING CAPTURED.







USDA IS AN EQUAL OPPORTUNITY PROVIDER AND EMPLOYER







## MAP LEGEND

 Area of Interest (AOI)	 Soil Area
 Soils	 Stony Spot
 Soil Map Unit Polygons	 Very Stony Spot
 Soil Map Unit Lines	 Wet Spot
 Soil Map Unit Points	 Other
<b>Special Point Features</b>	<b>Special Line Features</b>
 Blowout	 Streams and Canals
 Borrow Pit	<b>Transportation</b>
 Clay Spot	 Rails
 Closed Depression	 Interstate Highways
 Gravel Pit	 US Routes
 Gravelly Spot	 Major Roads
 Landfill	 Local Roads
 Lava Flow	<b>Background</b>
 Marsh or swamp	 Aerial Photography
 Mine or Quarry	
 Miscellaneous Water	
 Perennial Water	
 Rock Outcrop	
 Saline Spot	
 Sandy Spot	
 Severely Eroded Spot	
Sinkhole	
Slide or Slip	
Sodic Spot	

## MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

**Warning:** Soil Map may not be valid at this scale.  
Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service  
Web Soil Survey URL:  
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: King County Area, Washington  
Survey Area Data: Version 15, Sep 16, 2019

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Jul 30, 2018—Aug 6, 2018

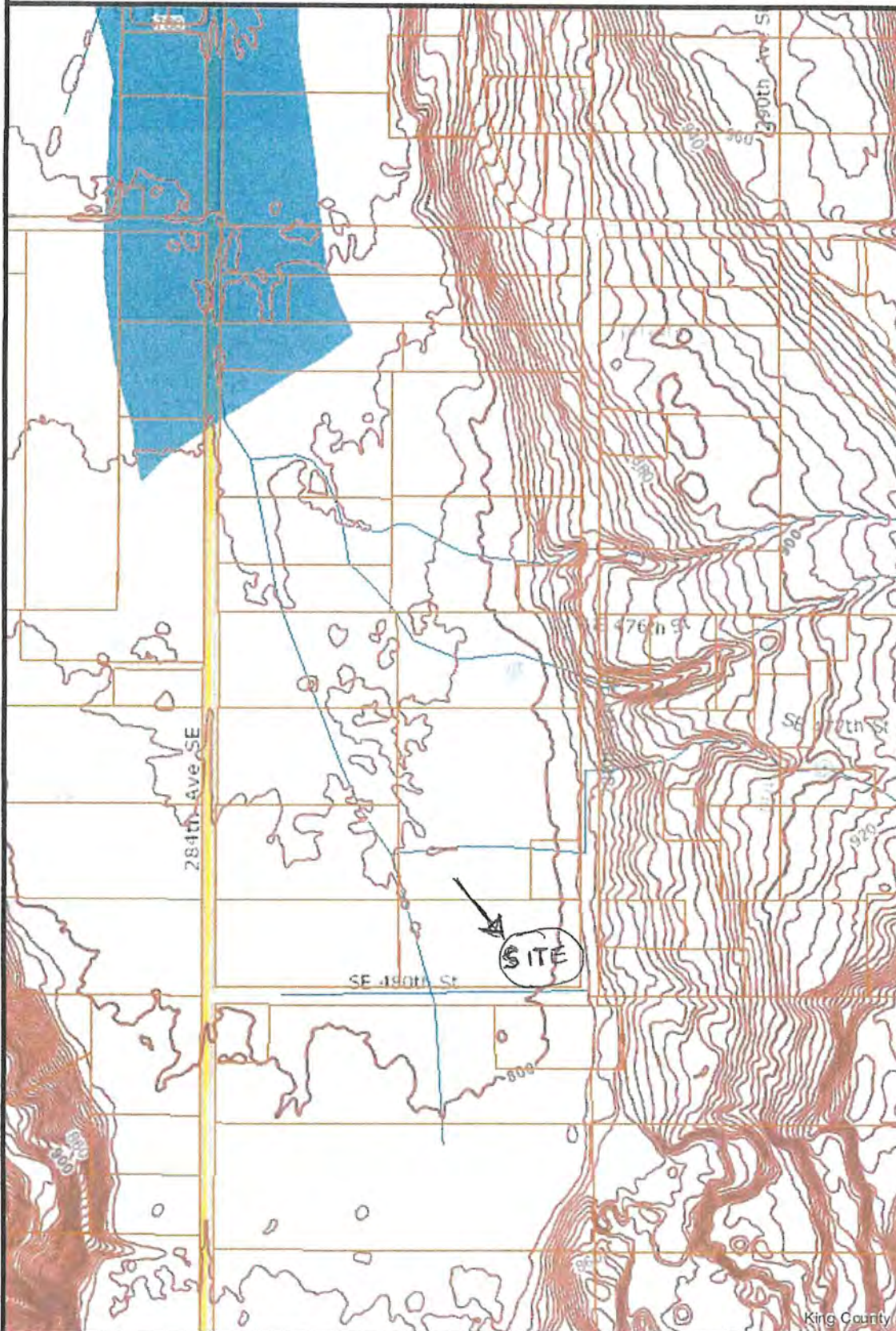
The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

## Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
No	Norma sandy loam	1.1	100.0%
Totals for Area of Interest		1.1	100.0%



# King County iMap



## Legend

- Parcels
- index contours - 100 foot
- contours - 5 foot (below 1000 feet) and 10 foot
- FEMA preliminary floodway
- FEMA preliminary 100-year floodplain
- Streams

## Freeways

- freeway
- freeway ramp

## Arterial streets

- arterial street, principal
- arterial street, collector
- arterial street, minor

## Local streets and roads

- local street
- local access road, alley, or other

The information included on this map has been compiled by King County staff from a variety of sources and is subject to change without notice. King County makes no representations or warranties, express or implied, as to accuracy, completeness, timeliness, or rights to the use of such information. This document is not intended for use as a survey product. King County shall not be liable for any general, special, indirect, incidental, or consequential damages including, but not limited to, lost revenues or lost profits resulting from the use or misuse of the information contained on this map. Any sale of this map or information on this map is prohibited except by written permission of King County.

Date: 6/11/2020

Notes:



**King County**

**OPERATION AND MAINTENANCE PLAN  
FOR  
WASTE STORAGE FACILITY (313)**

A properly operated and maintained Waste Storage Facility is an asset to your property. The purpose of this practice is to store manure, agricultural by-products, wastewater, and contaminated runoff in an environmentally sound manner to better manage agricultural nutrients. This practice does NOT apply to the storage of human wastes or animal carcasses. The estimated life span of this practice is 15 years. The life of the practice can be assured and usually extended by developing and carrying out a good operation and maintenance program.

This practice will require you to perform periodic operation and maintenance to maintain satisfactory performance. The following are some requirements to help you develop a good operation and maintenance program.

**Safety**

1. Exclude livestock and human access, provide fencing, gates and other barriers. Inspect fence and gates at least twice a year. Repair and/or replace damaged fences and gates as soon as possible. Keep gates closed at all times.
2. Inspect all warning signs to see that they are legible and properly mounted. Repair or replace as needed
3. Waste storage facilities must be considered "High Hazard Areas". The anaerobic biodegradation of waste forms noxious gases such as:
  - Methane (CH<sub>4</sub>)
  - Hydrogen sulfide (H<sub>2</sub>S)
  - Ammonia (NH<sub>3</sub>)
  - Carbon dioxide (CO<sub>2</sub>)

These gases can be fatal to both animals and human beings. Especially "Hydrogen Sulfide" which can paralyze the diaphragm and the victim will not be able to breath without the assistance of an Artificial Respirator, even after being removed from the location of the noxious gas. Thoroughly familiarize yourself with all potential gas problems, special wiring needs and ventilation needs.

4. In many cases, noxious gases displaces oxygen and people entering the reception pit succumb to the lack of oxygen as opposed to direct harmful effects of noxious gasses.
5. Some gases (i.e. methane) can be explosive with the proper gas to air ratio. Use caution with open flames, welding equipment, electrical motors with brushes that spark (skill saws, electric drills, shop vacuums, etc.) when working near waste storage facilities. Never smoke near a storage facility and post "No Smoking" signs to warn others. Be sure the work area is well ventilated.



## Inspection and Maintenance

Inspection and maintenance is required to achieve the intended function, benefits, and life of the practice. The landowner/operator is responsible to establish and implement an inspection and maintenance program. Inspect the facility after each significant storm event and at least annually. Items to inspect and maintain include, but are not limited to, the following:

1. Check backfill areas around facilities for excessive settlement. Determine if settlement is being caused by consolidation, piping, wall or floor failure or other issues. Make necessary repairs as soon as possible. If necessary, consult your local NRCS office.
2. Check concrete walls and floor often for cracks and/or separations and make necessary repairs.
3. Check earthen berms and embankments for sloughing, erosion or settlement. Maintain embankment and backfill elevations as specified in the design. Visually inspect the inside of the embankment each time the facility is emptied. Maintain design elevation of the top of berms. If necessary, import additional earthfill and properly compact to maintain the proper top of berm elevation.
4. Inspect foundation drain outlets, keep outlets open and ensure no polluted water is draining. Inspect for signs of leakage such as excessively high flow rate, turbidity, discoloration, odors or other unusual characteristics of the flow. Excessive growth and accumulation of algae at the drain outlet could be another sign that nutrients are leaking from the facility. Check drain outlets each time after the facility is emptied and after each significant storm event. If leakage is detected, make the appropriate repairs as soon as possible. Consult your local NRCS office for guidance. Also, inspect for any obvious blockages in the drain. Make provisions to unblock the drain as soon as possible.
5. Inspect access roads and approaches to and from the storage facility frequently to determine need for additional stone or other stable materials. Repair roads as necessary.
6. Inspect all pipes, pumps, valves, gates, etc. twice a year to make sure they are properly functioning, structurally sound, and are not cracked, broken, or pose as a safety or environmental hazard to the operator or livestock.
7. All fences and gates shall be inspected for damage at least twice a year. Damaged fences and gates shall be repaired and/or replaced as soon as possible. Gates shall be kept closed at all times.
8. Begin emptying or drawdown according to the schedule in the Nutrient Management Plan (NMP) or sooner if the contents of the storage facility reach the maximum operating level. The level of manure shall never encroach into the freeboard (6" from the top for structures, 12" from the top for earthen).

## Maintenance

1. Follow the Comprehensive Nutrient Management Plan (CNMP).
2. Maintain a good vegetative cover on earthen berms and embankments. If the vegetative cover is damaged, repair and reseeded as soon as possible. Mow vegetative cover at least twice a year to control weeds and encourage vigorous growth.
3. Check push off ramps, headwalls, retaining walls and other concrete appurtenances for cracks, spalls or other serious damage. Repair as necessary.
4. Immediately repair any damage to the waste storage facility caused by equipment, livestock or vandalism, including the surrounding area and/or any appurtenances.



800 SW 39th St, Suite 150  
Renton, WA 98057  
425-282-1900 FAX 425-282-1898  
kingcd.org  
district@kingcd.org

## COOPERATIVE AGREEMENT

This agreement is entered into by King Conservation District (the "District") and

Jessica & Ryan McCarthy	4.5	31	20	07
Landowner/Occupier	Acres	Section	Township	Range
47929 288th Ave SE		Enumclaw	WA	98022
Street Address		City	State	Zip Code
N/A				
Farm Address (if Different)		City	State	Zip Code
E-mail Address			Cell Phone	
Home Phone		Work Phone		

Parcel Number(s)\*: 3120079064

- ☐ Check here to be added to King CD mailing list (newsletters, plant sale information, and other conservation updates)

### THE DISTRICT AGREES TO:

1. Assist the land owner/occupier to plan, carry out, and maintain a conservation program for the renewable, natural resources under his/her ownership or control.
2. Provide the land owner/occupier with resource information, technical assistance, and other assistance as it may have available.

### THE LAND OWNER/OCCUPIER AGREES TO:

1. Use his/her renewable, natural resources as mutually planned.
2. Treat his/her renewable, natural resources consistent with the conservation program and the land owner/occupier's land use objectives.
3. Maintain all structures established under the conservation program and continue use of all other conservation measures put into effect.
4. Use any material or equipment made available to him/her by the District for the stated purpose and in a manner consistent with the conservation program.

### IT IS FURTHER AGREED THAT:

1. This agreement will become effective on the date of the last signature and may be terminated by either party by giving written notice of such termination to the other party.
2. The provisions of this agreement are understood by the land owner/occupier and the District and neither shall be liable for damage to the other's property from carrying out this agreement unless such damage is caused by negligence or misconduct.

Jessica & Ryan McCarthy	Jessica McCarthy	10/31/18
Landowner/Occupier		Date
Megan Weldon		10/31/18
King Conservation District		Date

\* Note to KCD staff: Please include legal description in plan file

## Waste Storage Bin Sizing Worksheet

**For:** Melissa & Ryan McCarthy

Planned Animal N

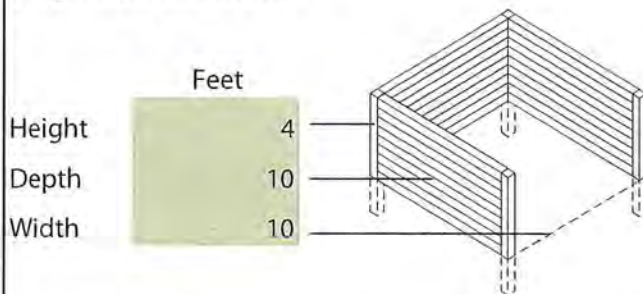
### Production

Total Animal Units  
**4.52**

Days Confined  
183

	Manure with Bedding (Cubic Yards)	Manure Only (Cubic Yards)
12 month Storage Requirement <b>Storage volume required=</b>	35.7	24
6 month Storage Requirement (NRCS) <b>Storage volume required =</b>	35.6	23.6

### Single Bin Dimensions



**Single Bin Capacity = 14.8 Cubic yards**  
**3-Bin System Capacity = 44.4 Cubic yards**

**# Recommended= 2 Bins for full year's storage**  
**# Recommended= 2 Bins for # month's storage**

Days Confined =  
 number of days manure is picked from stalls and/or Heavy Use Areas (HUAs) and stored in waste storage structure.

**King Conservation District Board of Supervisors Meeting 07/13/2020  
Agenda Action Briefing/Report AI 20-035**

**SUBJECT:**

Approve KCD Landowner Incentive Program cost-share application from King County Housing Authority, for Riparian Forest Buffer, in the amount of \$11,561.63.

**FISCAL IMPACT**

The current balance of cost-share funding for KCD LIP 2020 is summarized in the following table:

2020 LIP Cost-share Available	<b>\$303,317.93</b>
Current Request	<b>\$11,561.63</b>
Balance Remaining	<b>\$291,756.30</b>

**POLICY CONSIDERATION**

This proposed cost-share contract has been vetted through a staff approval committee and meets NRCS standards for the applicable best management practice (BMP). The application has been advanced for due pass by the Board of Supervisors.

**STAKEHOLDER INTERESTS**

- District cooperators working with District farm management, forestry and aquatic area enhancement programs
- King CD Board members and staff

**BACKGROUND**

The project site is located along Juanita Creek (WRIA 8) on a 2.2 acre multi-family residential parcel owned by the King County Housing Authority. Juanita Creek flows through the west side of the parcel. The Tilth Alliance completed a restoration project on the west side of the creek a few years ago. The east side of the creek has a considerable amount of bamboo, English ivy, and Himalayan blackberry. It is also infested with knotweed, laurel, morning glory, and reed canarygrass. The Department of Ecology's water quality assessment lists Juanita Creek as a category 5 waterbody due to violations of bacteria, dissolved oxygen, and temperature standards. Historically, chinook, coho, sockeye, winter steelhead, and cutthroat trout have been observed and documented in Juanita Creek.

This project will enhance 17,800 square feet of riparian forest buffer along 275 linear feet of Juanita Creek. Since the west side of the creek has already been restored, KCD will only restore the east side at an average buffer width of 70+ feet. KCD will control invasive weed species will be through an integrated pest management approach following King County Noxious Weed Best Management Practices. KCD will install 846 native trees, shrubs, and groundcovers. The King County Housing Authority also recently had an LIP contract approved to install a hedgerow at a nearby property. Neither properties are owned by King County.

**EFFECTIVE DATE**

The cost-share award will become effective upon approval by the Board of Supervisors and the LIP contract will become effective upon signature by a Board representative.



**King Conservation District Board of Supervisors Meeting 07/13/2020**  
**Agenda Action Briefing/Report AI 20-035**

**RECOMMENDATION**

Staff seeks Board approval of Landowner Incentive Program cost-share application from King County Housing Authority, for a Riparian Forest Buffer, in the amount of \$11,561.63.

**MOTION**

           Moved,            Seconded; *Passed a motion to Approve KCD Landowner Incentive Program cost-share application from the King County Housing Authority, for a Riparian Forest Buffer, in the amount of \$11,561.63.*

# KING CONSERVATION DISTRICT (KCD) LANDOWNER INCENTIVE PROGRAM APPLICATION

## Aquatic Area Enhancement Project

### Section 1. Applicant (If applicant is not the landowner, then landowner must also sign the agreement)

Applicant Name: Jenna Smith		Farm/Business Name: Casa Juanita (KCHA)	
Mailing Address: 9821 NE 122nd St Kirkland, WA 98034		Project Address: 9821 NE 122nd St Kirkland, WA 98034	
Phone (home): 206-826-5339		Phone (work/mobile):	
Email Address: JennaS@kcha.org		KCD Staff: Ashley Allan	
Parcel #(s): 3756900107	<input checked="" type="checkbox"/> Incorporated <input type="checkbox"/> Unincorporated	Total Farm/Land Acreage: 2.2	<input checked="" type="checkbox"/> T.A. <input type="checkbox"/> Farm Plan <input type="checkbox"/> Forest Plan
Is email an acceptable primary form of communication?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Would you like to be added to our newsletter list?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

### Section 2. Project Information

<b>Best Management Practice (BMP):</b>	<b>Riparian Forest Buffer</b>
<b>Project Completion Date</b> <i>(month and year)</i> : June 2021	
<b>Current Site Conditions</b> <i>(Provide a brief summary of resource management problem addressed by BMP: note streams, wetlands, and steep slopes near or within the project area):</i> <p>The project site is located along Juanita Creek (WRIA 8) on a 2.2 acre multi-family residential parcel owned by the King County Housing Authority. Juanita Creek flows through the west side of the parcel. The Tilth Alliance completed a restoration project on the west side of the creek a few years ago. The east side of the creek has a considerable amount of bamboo, English ivy, and Himalayan blackberry. It is also infested with knotweed, laurel, morning glory, and reed canarygrass. The Department of Ecology's water quality assessment lists Juanita Creek as a category 5 waterbody due to violations of bacteria, dissolved oxygen, and temperature standards. Historically, chinook, coho, sockeye, winter steelhead, and cutthroat trout have been observed and documented in Juanita Creek.</p>	
<b>Project Details</b> <i>(Provide a brief summary of the project. Include acres treated, linear feet of stream enhanced, length of fence, types and numbers of plants, etc.):</i> <p>The project will enhance 17,800 square feet of riparian forest buffer along 275 linear feet of Juanita Creek. Since the west side of the creek has already been restored, KCD will only restore the east side at an average buffer width of 70+ feet. The following invasive weed species will be controlled through an integrated pest management approach following King County Noxious Weed Best Management Practices: bamboo, English ivy, Himalayan blackberry, knotweed, laurel, morning glory, and reed canarygrass. After initial invasive control efforts, 846 native trees, shrubs, and groundcovers will be installed. Native species will include: Sitka spruce, western red cedar, western hemlock, black twinberry, red elderberry, red osier dogwood, salmonberry, Sitka willow, Indian plum, oceanspray, snowberry, thimbleberry, vine maple, and sword fern.</p>	
<b>Maintenance Plan:</b> <p>The site will be maintained by KCD 1-2 days each summer for a minimum of the first 3 growing seasons. Maintenance activities will include control of invasive species and replanting if survivorship falls below 80%. The landowner is responsible for maintaining the project and providing photo documentation for the remaining years of the practice. Photos must be submitted by 9/1 of each year.</p>	

Permits (List all permits required to complete this project):

WSDA and DOE Aquatic Herbicide Application Permit  
City of Kirkland Restoration Activities Near A Stream or Wetland Permit

**Photos:** KCD Resource Planner must submit before photos with this application.

### Section 3. Cost-share Programs

A. Have you previously applied for cost-share through the KCD Landowner Incentive Program (LIP)?

☐ Yes

☒ No

If yes, please list contract number and BMP below:

B. Are you applying for (or received) funding (cost-share or grants) through other agencies or programs?

☐ Yes

☒ No

Please describe below:

**1. King County Cost-share**

Please list practices and date installed below:

**2. NRCS EQIP (Natural Resources Conservation Service's Environmental Quality Incentive Program)**

Please list practices and date installed below:

**3. Other**

Please list agency and describe project:

**Other Cost-Share History/Notes:**

### Section 4. Budget (attached as Exhibit A)

KCD will plan and install the Best Management Practice (BMP) on behalf of the Applicant. A detail of the project budget with line items for planning, installation, maintenance and cost-share ratios are attached as Exhibit A. Upon BMP installation, KCD will invoice the Applicant for the Applicant Cost-share listed in the following table. Applicant cost-share is due 30 days after receipt of a KCD invoice.

Program Cost-share	Cost-share Ratio	Amount
King CD Landowner Incentive Program	50%	\$ 11,561.63
King CD Aquatic Area Enhancement Program	40%	\$ 9,249.30
Washington State Conservation Commission	%	\$ 0.00
Other (specify) -	%	\$ 0.00
Other (specify) -	%	\$ 0.00
Applicant Cost-share	10%	\$ 2,312.32
TOTAL	100%	\$ 23,123.25

## Section 5. Education and Outreach

KCD encourages public education through demonstration projects. Demonstration projects are used to educate other landowners about innovative ways to address natural resource concerns. A demonstration project may be showcased in a guided tour, or featured in presentations or written fact sheets.

A. Will you consider becoming a demonstration project?

☒ Yes ☐ No

## Section 6. Maintenance and Monitoring Expectations

The applicant is responsible to maintain the Best Management Practice (BMP) to standard as detailed in the attached Job Sheet for the lifetime of the BMP.

- ☒ A. I understand the lifetime of the BMP is 15 years.
- ☒ B. I understand KCD will coordinate and conduct maintenance and replanting for the first three years of the lifetime of the BMP. After that, KCD will work with the Applicant to verify proper maintenance of the installed BMP. Verification of maintenance includes a combination of site visits with KCD staff members who will take photos of the project, and annual photo documentation submitted by the applicant for the lifetime listed in Section 6A.
- ☒ C. I understand I am obligated to maintain and monitor the BMP **for the lifetime listed in Section 6A.**

## Section 7. Application and Agreement

I request financial assistance (cost-share) under the KCD LIP to install the Best Management Practice (BMP) described in this application and detailed in the attached *Job Sheet and Map*. This practice is needed to solve the natural resource problems described in Section 2 of this application. This Agreement expires if the project is not completed by the specified completion date in Section 2 or in an approved timeline revision request. JS (Initial Here)

I authorize KCD to secure the applicable local, state and federal permits and to install the BMP on my behalf, and I agree to work cooperatively with KCD to obtain these permits. JS (Initial Here)

I agree to work cooperatively with KCD to ensure the funded BMP is maintained consistent with the design life identified in the attached Job Sheet and in Section 6 of this application. JS (Initial Here)

I agree to indemnify, defend, and hold harmless KCD, its elected or appointed officials, employees and agents, from all claims, alleged liability, damages, losses to or death of person or damage to property allegedly resulting from the negligent or intentional acts of the applicant or any of its employees or agents which may occur during the course of KCD's performance of the installation of the BMP provided in connection with this Agreement. JS (Initial Here)

I represent that the information provided in Section 3 of this application is a full disclosure of all other natural resource financial cost-share relationships in which I have or am participating. JS (Initial Here)

I understand that LIP cost-share is contingent upon installing the BMP to the minimum standard planned by KCD, and that KCD will verify and photo document standard compliance through its coordination of BMP installation. JS (Initial Here)

I understand that in cases where I become the recipient of a KCD LIP cost-share reimbursement there may be federal tax liability associated with the reimbursement. When this occurs, KCD will issue a 1099-G for reimbursements made through the LIP. I understand that KCD cannot provide advice with respect to the tax liability associated with LIP cost-share reimbursements. JS (Initial Here)

I understand that I am applying for public funding and am responsible for notifying a buyer upon sale or loss of the property of the installed BMP. If I sell or lose control of the property covered by this Agreement and the new owner or transferee does not assume responsibility for maintaining the installed BMP as required by this Agreement, I may be required to refund all or a portion of cost-share reimbursements received through this Agreement. In the event litigation is commenced by KCD to recover a refund of any cost-share reimbursements received through this Agreement, attorney's fees and costs incurred by the prevailing party in such action shall be paid by the non-prevailing party. JS (Initial Here)

I give permission to KCD to photograph my property to document the site conditions and/or the implementation and maintenance of the funded practice. In the event that I or any of my family members or dependents choose to be photographed in a setting that reflects the assistance provided by KCD, I give KCD permission to publish such photographs in KCD promotional literature, advertising, social media, and other public displays. The photographs will be the property of KCD and may be used by KCD at any time, in the manner described above, without my additional consent. JS (Initial Here)



I understand that this Agreement is subject to disclosure under the Public Records Act, Chapter 42.56 RCW. JS (Initial Here)

I understand that I will no longer be eligible for KCD cost-share funds if one or more of the following occurs: JS (Initial Here)

- a. The KCD funded BMP fails within its design life due to circumstances within my control (e.g., neglect, failure to maintain the BMP, destruction of the BMP before expiration of the design life, or other actions which cause the KCD funded BMP to become non-viable).

*Note: Landowners are not responsible for BMP failure caused by circumstances beyond their control (e.g. fire, flood, storm damage, etc.)*

- b. I relinquish or lose ownership of equipment purchased with KCD cost-share.  
c. The KCD funded BMP is not being used for the intended purpose (e.g. cross fencing purchased with KCD funding, but no animals on property).  
d. I cancel two cost-share contracts awarded through the KCD Landowner Incentive Program.  
e. I deny KCD staff access to my property to verify BMP maintenance.

I understand KCD will provide two signs, an LIP sign and aquatic area buffer sign, free of charge, and I agree that: JS (Initial Here)

- a. I will select a visible location on my property for display of the LIP sign and will install it.  
b. KCD will install the aquatic area buffer sign adjacent to the installed aquatic area enhancement project.  
c. I will maintain the signs and keep them free of visual barriers for at least five years after installation.  
d. I am not responsible for damage to the sign that is beyond my control (e.g. auto accident, storm damage, vandalism, etc.)

Jenna Smith

3/20/20

Signature of applicant

Date

Signature of Landowner (if applicant is Lessee)

Date

FOR KCD OFFICE USE

Approved for Award (KCD LIP Coordinator)	Date	
Approved for Funding (KCD Management)	Date	LIP ID:

### Scope of Work for:

King County Housing Authority c/o Jenna Smith  
9821 NE 122nd St Kirkland, WA 98034  
Date: 3/10/2020  
Name of Project: Casa Juanita



**Narrative Scope of Work:** The project will enhance 17,800 sq. ft. of riparian buffer along 275 linear feet of Juanita Creek (WRIA 8). The restored buffer will be an average of 70+ ft wide on the east side of the creek. Enhancement activities will involve the removal of invasive species followed by the installation of native trees, shrubs, and groundcovers.

	Days/Units/Hours	Cost Per	Subtotals
<b>Crew Days (Cost Share)</b>			
WCC Days: Site Prep	7	\$ 1,360.00	\$ 9,520.00
WCC Days: Planting	4	\$ 1,360.00	\$ 5,440.00
WCC Days: Mulching	3	\$ 1,360.00	\$ 4,080.00
			\$ 19,040.00
<b>Materials (Cost Share)</b>			
Plants - Trees (potted, spaced 18' on center)	21	\$ 7.00	\$ 147.00
Plants - Shrubs (potted, spaced 4' on center)	425	\$ 4.00	\$ 1,700.00
Plants - Stakes (spaced 2-3' on center)	400	\$ 1.00	\$ 400.00
Brush Disposal (per 7 cubic yard load)	6	\$ 65.00	\$ 390.00
Mulch (cubic yards)	30	\$ 20.00	\$ 600.00
Protex Pro/Gro Plant Protector Tube (blue, 18" tall)	425	\$ 0.85	\$ 361.25
Bamboo Stakes 3/8" x 3' (bundle of 500)	1	\$ 55.00	\$ 55.00
Conifer Deer Fencing (5'x100' roll - covers 12 trees)	2	\$ 110.00	\$ 220.00
5' T-Posts (2 per conifer cage for cedars and hemlocks)	42	\$ 5.00	\$ 210.00
			\$ 4,083.25
<b>Installation Total Est.</b>			<b>\$ 23,123.25</b>
<b>Landowner Cost Share Max</b>			<b>\$ 2,312.32</b>
<b>KCD Staff Time (Non Cost Share)</b>			
Ashley Planning	30	\$ 48.00	\$ 1,440.00
Ashley Implementation	40	\$ 48.00	\$ 1,920.00
			\$ 3,360.00
<b>3 Year Maintenance Estimate (Non Cost Share)</b>			
Crew Days in field:	6	\$ 1,200.00	\$ 7,200.00
Project Management	20	\$ 48.00	\$ 960.00
Materials (mulch, replanting)			\$ 200.00
			\$ 8,360.00
<b>Installation &amp; Maint. Total (Cost Share &amp; Non Cost Share)</b>			<b>\$ 29,060.00</b>
KCD Cost-share (90%)			\$ 20,810.93
Landowner Cost-share (10%)			\$ 2,312.32
<b>Total</b>			<b>\$ 23,123.25</b>

KCD/Other Funds (50%)	KCD LIP (40%)	Landowner funds (10%)
\$ 9,520.00	\$ 7,616.00	\$ 1,904.00
\$ 2,041.63	\$ 1,633.30	\$ 408.32
\$ 11,561.63	\$ 9,249.30	\$ 2,312.32
\$ 3,360.00		
\$ 8,360.00		



# JOB SHEET

## *Aquatic Area Buffer Planting- Riparian Forest Buffer*

Landowner: Casa Juanita (KCHA) c/o Jenna Smith	Lifetime of Practice: 15 years
--	--------------------------------

Purpose (check all that apply)	
<input checked="" type="checkbox"/> Create shade to lower or maintain water temperatures to improve habitat for aquatic organisms	<input type="checkbox"/> Improve forest health reducing the potential of damage from pests and moisture stress
<input checked="" type="checkbox"/> Create or improve riparian habitat and provide a source of detritus and large woody debris	<input checked="" type="checkbox"/> Restore natural riparian plant communities
<input type="checkbox"/> Reduce excess amounts of pollutants in surface runoff and reduce excess nutrients and chemicals in shallow groundwater flow	<input checked="" type="checkbox"/> Improve wildlife habitat
<input type="checkbox"/> Reduce pesticide drift entering water body	<input type="checkbox"/> Increase carbon storage in vegetation and soils, and increase biomass in soils

**Current Site Conditions** *Provide a summary of the resource management problems addressed by the BMP. Also note any other current conditions pertinent to the project (slopes, erosion, flow, drainage)*

The project site is located along Juanita Creek (WRIA 8) on a 2.2 acre multi-family residential parcel owned by the King County Housing Authority. Juanita Creek flows through the west side of the parcel. The Tilth Alliance completed a restoration project on the west side of the creek a few years ago. The east side of the creek has a considerable amount of bamboo, English ivy, and Himalayan blackberry. It is also infested with knotweed, laurel, morning glory, and reed canarygrass. The Department of Ecology's water quality assessment lists Juanita Creek as a category 5 waterbody due to violations of bacteria, dissolved oxygen, and temperature standards. Historically, chinook, coho, sockeye, winter steelhead, and cutthroat trout have been observed and documented in Juanita Creek.

**Riparian Forest Buffer Practice and Details** *Provide the following:*

- 1) a basic description of the proposed planting area
- 2) calculate and record the square footage (acreage) of the planting area, the number of trees and shrubs to be planted, the linear footage of stream enhanced, the average and minimum width of the buffer.
- 3) list any native plant species currently existing on site
- 4) list native trees and shrubs selected for the project
- 5) please attach your proposed planting plan

1) & 2) The project will enhance 17,800 square feet of riparian forest buffer along 275 linear feet of Juanita Creek. Since the west side of the creek has already been restored, KCD will only restore the east side at an average buffer width of 70+ feet. Approximately 846 native trees, shrubs, and groundcovers will be installed.

3) Black cottonwood, Indian plum, red alder, red osier dogwood, sword fern, thimbleberry

4) Sitka spruce, western red cedar, western hemlock, black twinberry, red elderberry, red osier dogwood, salmonberry, Sitka willow, Indian plum, oceanspray, snowberry, thimbleberry, vine maple, sword fern

5) Planting plan attached.

**Permits** *Are there any permits necessary for the project? If so, please list below and include a copy of the permit*

Washington State Department of Ecology and Washington State Department of Agriculture - Aquatic Noxious Weed General Permit: Permit #WAG993000.

City of Kirkland - Restoration Activities Near a Stream or Wetland Permit: Application in process.

**Type and Source of Plant Material** *Will you use potted plants, bareroot plants, b&b plants or a combination? Where will you get the plants from and when?*

Plant material will be native species adapted to the site to minimize maintenance and care.

King Conservation District, the contractor, will plant ½ - 2 gallon potted stock, live stakes, and/or bareroot material that have been sourced from the Puget Sound region. If additional plant material is purchased to augment the initial planting, that material can be bareroot, live stake, or potted nursery stock.

**Site Preparation** *List what method(s) of site preparation will be used, who will be doing the work, when will the work be done.*

Himalayan & Evergreen Blackberry Control –

- *Manual control:* Mow or cut the blackberry canes to less than 1 foot in height, then grub/dig out the roots attached to the cut canes. Thorough removal of blackberry roots in this manner, while labor intensive can reduce the blackberry population and cover in the prepared area by 90 – 95%. Monitor for re-growth in the following growing seasons; dig up any re-growth.
- *Chemical Control:* An alternative control method includes herbicide. One technique involves cutting/mowing the canes and swabbing the freshly cut canes with an approved herbicide. Foliar spray of blackberry is another effective control method. It is recommended that blackberry is mowed early in the summer and sprayed on the foliar re-growth the next fall (September/October). Do not spray planted seedlings. **Always follow label rates and instructions.**

English Ivy Control –

- *Manual Control:*
  - 1) Recommended manual methods include digging and pulling. First, remove any flowering or fruiting portion within reach and bag for removal from the site. Next, hand dig and pull out all accessible portions of plants including roots. Note that all cut stems/roots must be removed from soil contact. If composting on site, use cardboard or wood to create a raised platform. Consider wearing gloves and protective clothing as ivy sap is known to cause a reaction in some individuals. Mulching an area will significantly reduce re-growth of ivy. To properly mulch, apply an 8 inch thick mulch layer. Plants should be cut and removed and then mulched, preferably with a layer of cardboard below the mulch.
  - 2) Vertical ivy is controlled by girdling. To girdle vertical vines, cut the ivy vines at shoulder height and slightly above ground level. Remove the cut ivy section from the tree. This eliminates nutrient transport from the roots of ground ivy to the leaves and stems growing into the canopy of the tree. The lower cut section of ivy stems and roots must be pulled at least 6 feet away from tree. Root and stem fragments can re-grow and must be composted in a manner similar to ground ivy.
- *Chemical Control:* Ivy leaves are waxy so use of a surfactant is necessary. **Always follow label rates and instructions.**



#### Bohemian Knotweed/Japanese Knotweed Control –

- *Chemical Control:* Herbicide can be applied by foliar spray, wick wipe, cut and pour, or stem injection. Please see attached King County Knotweed Best Management Practice Factsheet for full details. **Always follow label rates and instructions.**

#### Holly & Laurel Control-

- *Manual Control:* Not recommended. Small plants can be dug up when the soil is moist. Regularly check area for re-growth. For larger plants cut stems and trunks as close to the ground as possible. Roots may be dug out. Be sure to stabilize soil if large quantities are disturbed. If roots are not dug up, break off any new stems as they grow back for multiple growing seasons.
- *Chemical Control:* Large Holly and Laurel trunks should be cut as close to the ground as possible. Immediately (within minutes) treat the cut stump with an application of glyphosate herbicide (such as Rodeo or Roundup). An alternate technique, called frilling, involves incising deep cuts through bark into trunks at a 45 degree angle. Immediately treat the frills by pouring glyphosate herbicide into the cuts. Best results are achieved during periods of active growth and after full leaf expansion. Monitor for re-growth (seedlings and re-sprouting) and treat accordingly. Do not spray herbicide directly on holly and laurel leaves, which have a waxy layer that prevents chemicals from being absorbed. **Always follow label rates and instructions.**

#### Morning Glory/Bindweed Control-

- *Manual Control:* Manual control of bindweed is difficult and must span many growing seasons. Bindweed has extensive root and rhizome systems that can live without light and re-sprout from small fragments, thus avoid digging or tilling soil around mature bindweed. Hand pulling of plant will eventually work if done regularly and over multiple years. Be sure to pull plant before it has produced seeds. Mowing is not recommended.
- *Chemical Control:* Chemical control of bindweed is difficult and must span multiple growing seasons. As bindweed grows around desirable plants, herbicides can be painted or brushed on foliage to reduce drift. Products with the active ingredient glyphosate are effective when applied in the summer and fall before the leaves die back. This product is non-selective and will kill other foliage and grass it comes into contact with. Other effective active ingredients include triclopyr and 2,4-D. Repeat applications of herbicide may be needed. **Always follow label rates and instructions.**

#### Reed Canary Grass Control –

- *Manual Control:*
  - 1) Mowing reed canary grass depletes carbohydrate root reserves, and if done repeatedly it will result in the thinning or death of the grass. The ideal time to mow is at or near the flowering stage. The grass should be cut as near to the ground as possible (1 inch or lower). Twice yearly mowing (in early-mid June and early October) has shown increased survivorship of native plants planted into reed canary.
  - 2) Shading is highly effective in reducing reed canary grass stands. A dense planting of conifers, once established, is ideal for shading. Faster growing deciduous trees and shrubs, especially those that develop foliage in the early spring, combined with an under-planting of conifers can be effective. Artificial methods of shading can be used in conjunction with native plantings. Sheets of thick cardboard or landscaping fabric placed around each individual plant should be secured to the ground by long staples or stakes and covered with 5-6 inches of mulch. The combination of sheeting and mulch provides temporary suppression of the grass, allowing the desirable vegetation to thrive without competition. *Not recommended for flood prone areas.*
- *Chemical Control:* Herbicide can be effective in elimination of Reed Canary grass when properly applied. Studies show that spraying Glyphosate (the active ingredient in products such as ®Rodeo) after a stand is mown or when the grass has the minimum available carbohydrate reserves (after flowering) is an effective control method. Follow-up spraying the next year may be necessary to eliminate the remaining grass. **Always follow label rates and instructions.**

## Bamboo

- *Combination manual and chemical control:* Cut down canes to soil level in late winter and then apply a glyphosate-based weed killer (e.g. Scotts Roundup Ultra, Bayer Tough Rootkill, Bayer Garden Super Strength Weedkiller or Doff Maxi Strength Glyphosate Weedkiller) to the young growth in late spring and early summer. Several treatments may be needed.  
**Always follow label rates and instructions.**
- Alternatively, cut canes to ground and treat with a stump and root killer containing glyphosate product (e.g. Scotts Roundup Tree Stump & Rootkiller, Bayer Tree Stump Killer, Doff Tree Stump & Tough Weedkiller and Westland Deep Root Ultra Tree Stump & Weedkiller) or triclopyr product (Vitax SBK Brushwood Killer). Treat foliage of any regrowth. **Always follow label rates and instructions.**

## **Care and Temporary Storage of Purchased Plant Material** *Upon receiving the plant material, where will you store it and how will you care for it?*

All plant material will be stored in a cool location and well-watered prior to planting. In the case of bareroot plants, inventory will be held in the source refrigerated facility as long as possible prior to planting. After removal from a temperature controlled environment, bareroot stock will be heeled-in to a soil bed or mulch pile until it is planted.

## **Installation** *Provide the following details: 1) Plant Installation Prescription: 2) Plant Protection Prescription: 3) Weed Suppression Prescription: 4) Erosion Control Prescription*

### *1) Plant Installation Prescription:*

Potted & Plug Inventory: Potted plant material will be shovel planted to the same depth that the plant grew in the pot. Plants will be well-watered prior to planting. The planting location will be prepared by removing grass sod within a 1.5 feet diameter circle. The hole for the container material will be twice the size of the plant's pot. The hole will be backfilled with native soil.

Bareroot Inventory: Bare root seedlings will be shovel planted to the same depth that they grew in the nursery fields. Roots will remain moist once they are removed from the shipping bundles until they are planted. Roots will be placed in a natural position in the soil without being crowded or turned up. Soil will be packed firmly around the root system, leaving no air pockets. Prior to digging a hole for the plant, the planting location will be prepared by removing all grass sod within a 1.5-foot diameter circle. The hole for the bareroot plant will be dug in the center of this cleared circle.

Live Stake Inventory: Live Stakes and whips will be installed using a planting bar. Stakes and whips will be 3 to 4 feet long and a minimum of ½ inch in diameter. Stakes will be stored in a bucket of water until planted. Care will be taken so buds face up in the bucket.

### *2) Plant Protection Prescription:*

Tree Protectors (for sites where deer browse/beaver activity is anticipated): Install fencing, 3 ft diameter and 5 ft high, on newly planted trees. Secure fencing with 5 ft t-posts or weave 6 foot bamboo stakes through fencing and shove at least 8 inches into the ground in order to stabilize.

Plant Protectors (for sites where vole/mouse herbivory is anticipated): Voles, mouse-like animals, are especially present in meadow and pasture areas and target trees and shrubs primarily in the winter when other food sources

are scarce. They will readily girdle small trees and shrubs and tunnel through and eat root systems. Vole damage is hard to catch before it occurs. If voles presence or vole activity is suspected or observed, plant protection tubes will be installed and secured with bamboo stakes. These protectors can plastic, mesh, or galvanized steel hardware cloth (1/4 or 3/8 inch). The bottom of the protector will be buried a few inches into the soil. Room will be left for growth. Recommended height is 12 inches.

**Fencing** *Is fencing going to be installed? If so, what type, who will install it and when?*

No fencing will be installed.

**Planting Project Maintenance and Monitoring** *The planting must be inspected periodically and protected from damage so proper function is maintained. The goal for the project is to reach 80% survival after 3 years. Please describe the maintenance and monitoring plan.*

**King CD will maintain the project for 3-5 growing seasons. Maintenance activities will include control of invasive species and replanting if survivorship falls below 80%. The landowner is responsible for maintaining the project and providing photo documentation of practice maintenance for the remaining 10-12 years of the practice. Photos must be submitted by September 1<sup>st</sup> of each year.**

Treatments will be inspected periodically so proper function is maintained and resource damage is minimized. Inspections will include assessment of insects, disease and other pests, storm damage, and damage by trespass. The results of inspections shall determine the need for additional treatment under this practice.

Dead or dying trees and shrubs will be replaced and competing vegetation will be controlled to support successful establishment. Large dead and dying trees will be kept for cavity nesting wildlife and bird species and as a source of downed wood in the understory and in adjacent or interior aquatic habitats.

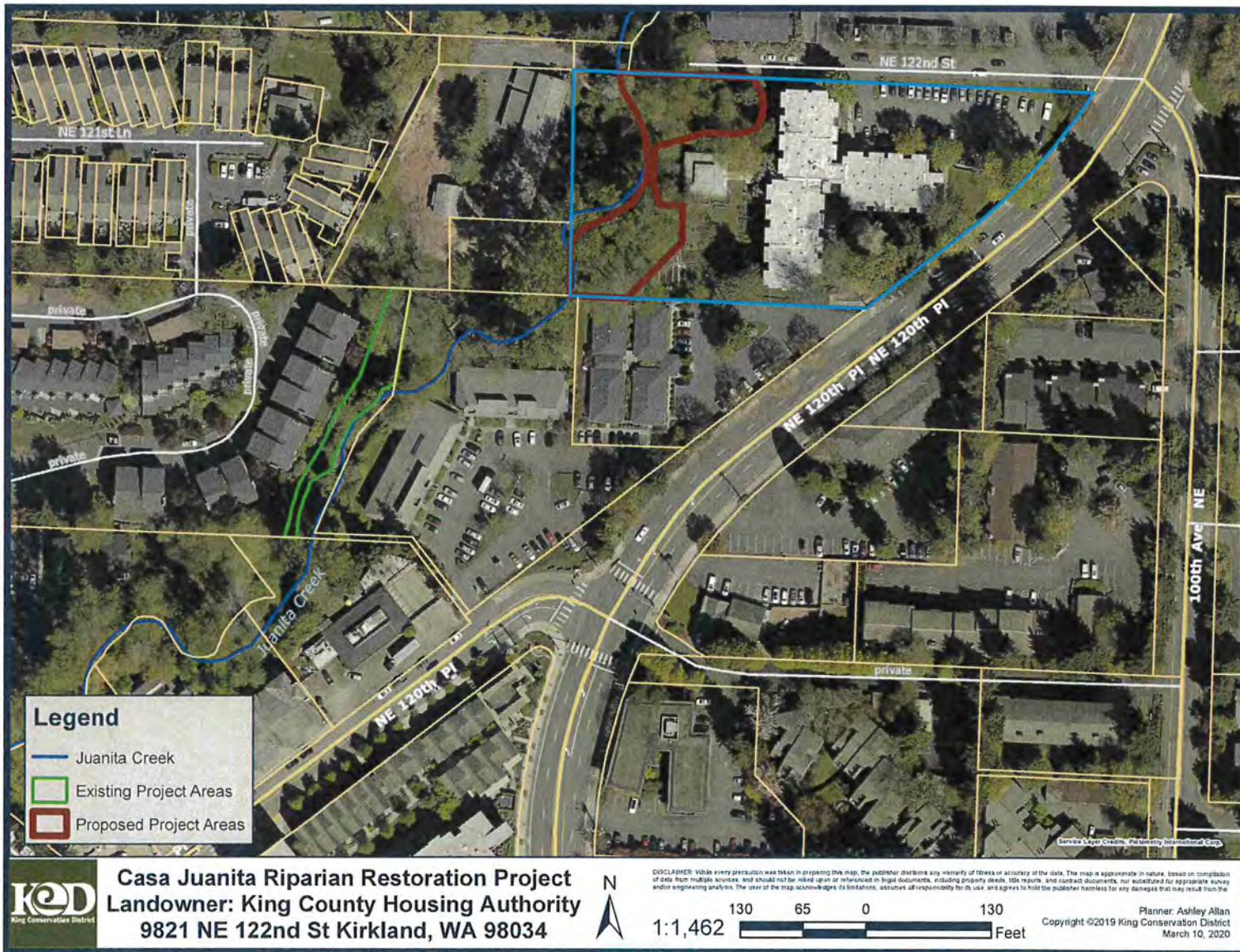
If droughty soils and hot growing conditions are anticipated, supplemental watering will be recommended. In such cases, the District recommends watering planted nursery stock for a minimum of 3 summers following planting. Young bare root, container, and ball/burlap plants have a reduced root system that hampers their ability to survive during the dry summer months (July through October). Watering a minimum of once every two weeks during the dry summer will promote greater rates of survival. Watering once per week is preferable.

Treatment areas will be monitored for re-growth of non-native/invasive species and will be controlled accordingly. Weed control techniques prescribed in the Site Preparation section of this document will be utilized. Species to monitor include of bamboo, English ivy, Himalayan blackberry, knotweed, laurel, morning glory, reed canarygrass, and any other listed King County Noxious weeds.

All plant protection materials, as well as any other non-biodegradable materials, installed on-site will be removed within the 3-5 year project maintenance window.

**Additional Specifications and Notes:**





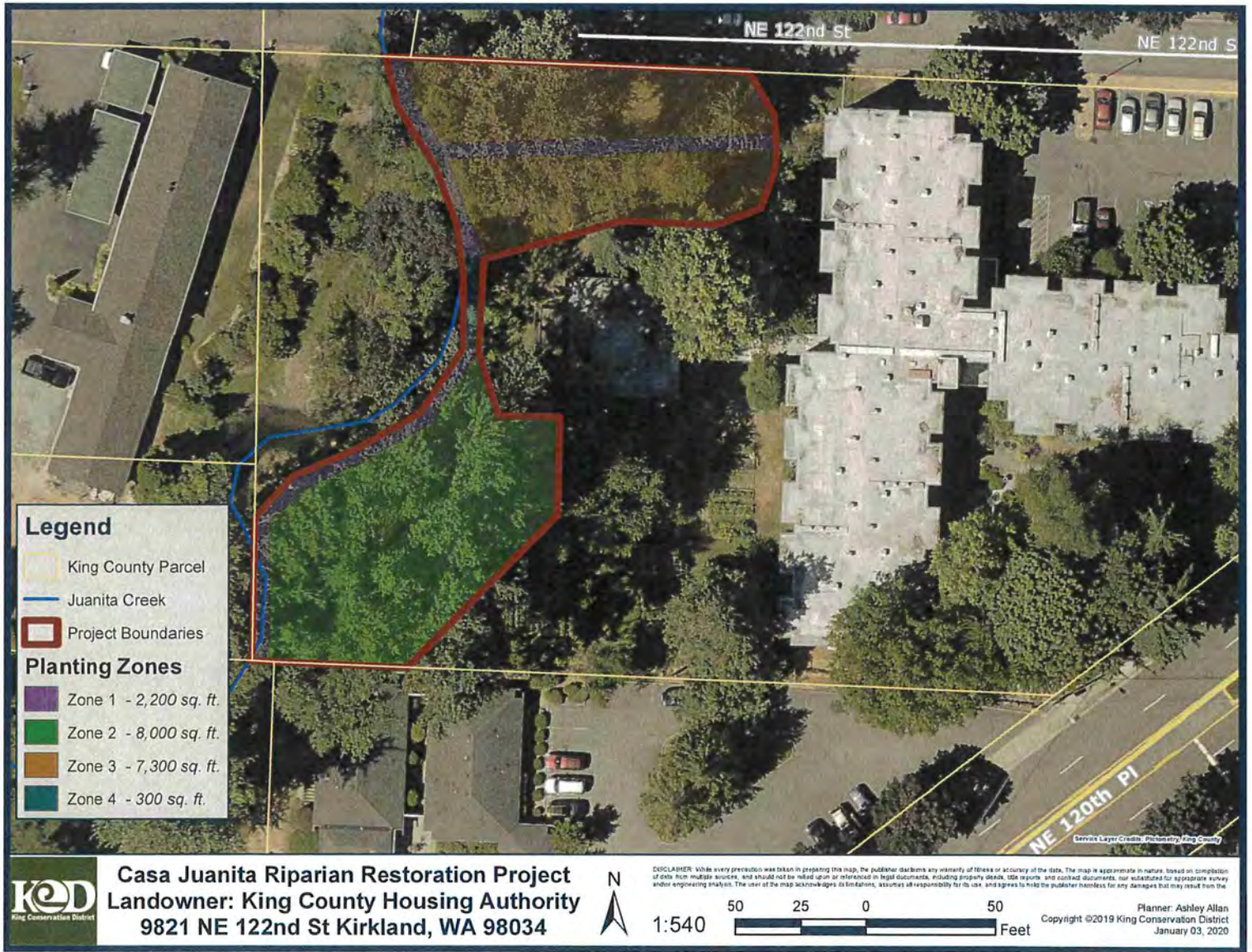
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## Project Implementation Timeline & Description

**Project Manager:** Ashley Allan  
King Conservation District

3/10/2020

**Landowners:** King County Housing Authority c/o Jenna Smith  
9821 NE 122nd St  
Kirkland, WA 98034  
Parcel: 3756900107

### Landowner and KCD Objectives:

To improve the riparian habitat and water quality of Juanita Creek through removal and control of invasive species followed by the installation and establishment of native plants.

### Project Summary:

The project will enhance 17,800 square feet of riparian area along 275 linear feet of Juanita Creek (WRIA 8). The restored buffer will be an average of 70+ ft wide on the east side of the creek. Enhancement activities will involve the removal of invasive species followed by the installation and establishment of 846 native trees, shrubs, and groundcovers. KCD will install the project and maintain it for a minimum of 3 growing seasons following installation. The landowners will then maintain the project for the remaining years of the project's 15-year design life.

### Other Considerations:

**Limited Disturbance:** No heavy equipment will be utilized during the installation of this project. All work will be completed by hand or with light hand-held tools. Soil will only be disturbed to remove invasive species roots or to install live stakes and 1/2 - 2 gal potted native plant material. No trees will be removed or killed.

**Location of Work:** No work will be performed within the Ordinary High Water Mark of the creek.

Planned		Description of Activities
Area	Season/Year	
All Zones - 17,800 sq ft	Summer/Fall 2020  5-7 Days	<b>Site Preparation</b> – King Conservation District (KCD) crews will remove and control invasive species present. Species to control include: Bamboo, English ivy, Himalayan blackberry, knotweed, morning glory, and reed canarygrass. Crews will use an integrated pest management (IPM) approach following King County Noxious Weeds Best Management Practices. Techniques will involve manual, mechanical, and chemical controls. Herbicide formulations will be aquatic approved and will be limited to the following active ingredients of triclopyr, imazapyr, or glyphosate. Herbicides will be applied by a WSDA Licensed Applicator with an Aquatic Endorsement. Knotweed, blackberry, ground ivy, and reed canarygrass will receive foliar herbicide applications. Bamboo will be manually cut and re-growth will receive a foliar spray treatment when it reaches 3 feet in height. Morning glory and ivy growing near and around other plants will be manually hand-pulled.
All Zones - 17,800 sq ft	Fall/Winter 2020  6-7 Days	<b>Planting &amp; Mulching</b> – Planting will occur following site preparation activities. KCD crews will install recommended tree, shrub, and groundcover species found on the attached planting plan. Plant stock will include live stakes and 1/2 - 2 gallon potted material. Overall planted density of trees and shrubs will be 4 feet on center. Trees shall be planted 18 feet from existing or planted trees. Each shrub will be protected through the installation of a plastic plant protector tube secured with a bamboo stake. Each tree will be protected through the installation of wire caging secured in place with 5' t-posts. Each potted plant installed may also receive a ring of mulch.
All Zones - 17,800 sq ft	Summers 2021-2023	<b>Maintenance</b> – KCD crews will provide 1-2 days of maintenance each summer for a minimum of the first 3 summers following installation. Maintenance will involve manual removal of invasive species that re-grow during each growing season. Plants installed by KCD will be maintained and replanted as needed to achieve 80% survivorship. Plant protector tubes will be removed at the end of KCD's maintenance cycle. The landowners will then maintain the project for the remaining years of the project's 15-year design life.

## Planting Plan - Casa Juanita

3/10/2020

**Project Description:** The project will enhance 17,800 sq. ft. of riparian buffer along 275 linear feet of Juanita Creek (WRIA 8). The restored buffer will be an average of 70+ ft wide on the east side of the creek. Enhancement activities will involve the removal of invasive species followed by the installation of native trees, shrubs, and groundcovers.

								Targets		
								Trees 18'oc	Shrub 4'oc	Live Stakes 2'oc
Zone 1: 2,200 sq. ft. (80% plantable or 1,760 sq. ft.): Primarily open canopy. Stream bank armored by rip rap. Minimal native cover. Invasive species include English ivy, Himalayan blackberry, bamboo, knotweed, and reed canary grass. Conditions are full sun and moist soil.								0	0	440
Zone 2: 8,000 sq. ft. (50% plantable or 4,000 sq. ft.): Deciduous canopy. Native species present include cottonwood, Indian plum, and sword fern. Invasive species include English ivy, Himalayan blackberry, and bamboo. Conditions are partial sun and moist to dry soil.								12	238	0
Zone 3: 7,300 sq. ft. (40% plantable or 2,920 sq. ft.): Deciduous canopy. Native species present include red osier dogwood and sword fern. Invasive species include English ivy, Himalayan blackberry, bamboo, and reed canary grass. Conditions are partial shade and wet to moist soil.								9	173	0
Zone 4: 300 sq. ft. (60% plantable or 180 sq. ft.): Zone contains a concrete pad and bench bordered by lawn. Native species cover little of the area, but include Indian plum, sword fern, and thimbleberry. Invasive species include creeping buttercup, English ivy, Himalayan blackberry, morning glory, and knotweed. Conditions are full sun and moist soil.								0	11	0
Type	Species	Total	Zone 1	Zone 2	Zone 3	Zone 4	Moisture/Sunlight	Size	Source	Spacing
Trees - Wetter										
	Sitka Spruce ( <i>Picea sitchensis</i> )	7	0	4	3	0	wet/moist, part shade/full sun	1 gal	TBD	18'oc
	Western Red Cedar ( <i>Thuja plicata</i> )	11	0	5	6	0	wet/moist, full shade/part sun	1 gal	TBD	18'oc
Trees - Drier										
	Western Hemlock ( <i>Tsuga heterophylla</i> )	3	0	3	0	0	moist, part shade/full sun	1 gal	TBD	18'oc
	Trees Total	21	0	12	9	0				
Shrubs - Wetter										
	Black Twinberry ( <i>Lonicera involucrata</i> )	50	0	25	25	0	wet/moist, part shade/part sun	1 gal	TBD	4'oc
	Red Elderberry ( <i>Sambucus racemosa</i> )	35	0	20	15	0	moist, shade/part sun	1 gal	TBD	4'oc
	Red Osier Dogwood ( <i>Cornus sericea</i> )	300	300	0	0	0	wet/moist, part shade/full sun	live stakes	TBD	4'oc
	Salmonberry ( <i>Rubus spectabilis</i> )	60	0	35	25	0	wet/moist, part shade/part sun	1 gal	TBD	4'oc
	Willow, Sitka ( <i>Salix sitchensis</i> )	100	100	0	0	0	wet, full sun	live stakes	TBD	4'oc
Shrubs - Drier										
	Indian plum ( <i>Oemleria cerasiformis</i> )	70	0	40	30	0	moist, shade/part sun	1 gal	TBD	4'oc
	Ocean Spray ( <i>Holodiscus discolor</i> )	40	0	25	15	0	dry/moist, part shade/part sun	1 gal	TBD	4'oc
	Snowberry ( <i>Symphoricarpos albus</i> )	85	0	50	35	0	moist/dry, part shade/full sun	1 gal	TBD	4'oc
	Thimbleberry ( <i>Rubus parviflorus</i> )	50	0	30	20	0	moist, full sun, some shade	1 gal	TBD	4'oc
	Vine Maple ( <i>Acer circinatum</i> )	25	0	15	10	0	moist, part shade/part sun	1 gal	TBD	4'oc
	Shrubs Total	815	400	240	175	0				
Groundcover										
	Sword Fern ( <i>Polystichum munitum</i> )	10	0	0	0	10	moist, full shade/part sun	1/2 gal	TBD	4'oc
	Groundcover Total	10	0	0	0	10				
	Grand Total	846	400	252	184	10				





# DEVELOPMENT SERVICES

BUILDING • FIRE • PLANNING • PUBLIC WORKS  
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## Restoration Activities Near a Stream or Wetland

Planning Department

Property Address 9821 NE 122nd St, Kirkland, WA 98034

Parcel # 3756900107

Property Zone JBD 6, Commercial

Current Use of Property Multi-Family Residential

Describe restoration activities and the nature of the project (attach additional pages, if necessary):

17,800 sq. ft. riparian vegetation enhancement project along Juanita Creek. See attached documentation for details.

### PRIMARY CONTACT (APPLICANT)

Name	<u>Ashley Allan, King Conservation District</u>	Cell	<u>+1 (425) 773-8017</u>
Address	<u>800 SW 39th St Suite 150</u>	Work	<u>+1 (425) 282-1919</u>
City	<u>Renton</u>	State	<u>WA</u>
	Zip Code <u>98057</u>	Email	<u>ashley.allan@kingcd.org</u>

### SECONDARY CONTACT (ORGANIZATION)

Name	<u>Jenna Smith, King County Housing Authority (property owner)</u>	Cell	
Address	<u>600 Andover Park W</u>	Work	<u>+1 (206) 826-5339</u>
City	<u>Tukwila</u>	State	<u>WA</u>
	Zip Code <u>98188</u>	Email	<u>JennaS@kcha.org</u>

### STATEMENT OF OWNERSHIP/DESIGNATION OF AGENT

The undersigned property owners, under penalty of perjury, each state that we are all of the legal owners of the property described in Exhibit A, which is attached as page 3 of this application.

Designated to act as our agent it with respects to this application: Ashley Allan, King Conservation District

### AUTHORITY TO ENTER

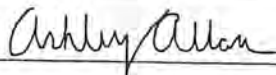
I/we acknowledge that by signing this application I/we are authorizing employees or agents of the City of Kirkland to enter onto the property which is the subject of this application during the hours of 7:00 a.m. to 5:00 p.m., Monday through Friday, for the sole purpose of making any inspection of the limited area of the property which is necessary to process this application. In the event the City determines that such an inspection is necessary during a different time or day, the applicant(s) further agrees that City employees or agents may enter the property during such other times and days as necessary for such inspection upon 24 hours' notice to applicant(s), which notice will be deemed received when given either verbally or in writing.

### HOLD HARMLESS AGREEMENT - READY CAREFULLY BEFORE SIGNING

The undersigned in making this application certifies under penalty of perjury, the truth and/or accuracy of all statements, designs, plans and/or specifications submitted with said application and hereby agrees to defend, pay, and save harmless the City of Kirkland, its officers, employees, and agents from any and all claims, including costs, expenses and attorney's fees incurred in investigation and defense of said claims whether real or imaginary which may be hereafter made by any person including the undersigned, his successors, assigns, employees, and agents, and arising out of reliance by the City of Kirkland, its officers, employees and agents upon any maps, designs, drawings, plans or specifications, or any factual statements, including the reasonable inferences to be drawn therefrom contained in said application or submitted along with said application.

I certify that I am the owner of this property or the owner's authorized agent. If acting as an authorized agent, I further certify that I have full power and authority to file this application and to perform, on behalf of the owner, all acts required to enable the jurisdiction to process and review such application. I have furnished true and correct information. I will comply with all provisions of law and ordinance governing this type of application. If the scope of work requires a licensed contractor to perform the work, the information will be provided prior to permit issuance.

### PRIMARY CONTACT (APPLICANT)

Name/Signature Ashley Allan 

### PROPERTY OWNER

Name/Signature Craig Volante, CEO 

### Alternate Formats: People with disabilities may request materials in alternate formats.

Title VI: Kirkland's policy is to fully comply with Title VI of the Civil Rights Act by prohibiting discrimination against any person on the basis of race, color, national origin or sex in the provision of benefits and services resulting from its programs and activities. Any person who believes his/her Title VI protection has been violated, may file a complaint with the City.

To request an alternate format, file a complaint or for questions about Kirkland's Title VI Program, contact the Title VI Coordinator at 425.587.3011 (TTY Relay: 711) or [titlevicoordinator@kirklandwa.gov](mailto:titlevicoordinator@kirklandwa.gov).



# King Conservation District

Local Food | Healthy Forests | Clean Water | Better Ground

The following are contract amendments to the King County Housing Authority's LIP applications for a Riparian Forest Buffer on parcel number 3026059096 and a Hedgerow on parcel number 3756900107 located in Kirkland, Washington.

*KCD agrees to indemnify, defend, and hold harmless KCHA, its elected or appointed officials, employees and agents, from all claims, alleged liability, damages, losses to or death of person or damage to property allegedly resulting from the negligent or intentional acts of KCD or any of its employees or agents which may occur during the course of KCD's performance of the installation of the BMP provided in connection with this Agreement.*

---

**Bea Covington**                      **Date**  
**Executive Director**  
**King Conservation District**

---

**Craig Violante**                      **Date**  
**Director of Finance**  
**King County Housing Authority**

*I/we acknowledge that by signing this application I/we are authorizing employees or agents of King Conservation District to enter onto the property which is the subject of this application during the hours of 7:00 a.m. to 5:00 p.m., Monday through Friday, for the sole purpose of restoring and/or inspecting the limited area of the property as defined in the application. KCD will provide a 24 hours' notice to applicant(s), which notice will be deemed received when given either verbally or in writing.*

---

**Bea Covington**                      **Date**  
**Executive Director**  
**King Conservation District**

---

**Craig Violante**                      **Date**  
**Director of Finance**  
**King County Housing Authority**

**King Conservation District Board of Supervisors Meeting 07/13/2020  
Agenda Action Briefing/Report AI 20-036**

**SUBJECT:**

Approve KCD Landowner Incentive Program cost-share application from Snoqualmie Valley Preservation Alliance, for Stream Crossing, in the amount of \$30,000.00.

**FISCAL IMPACT**

The current balance of cost-share funding for KCD LIP 2020 is summarized in the following table:

2020 LIP Cost-share Available	<b>\$291,756.30</b>
Current Request	<b>\$30,000.00</b>
Balance Remaining	<b>\$261,756.30</b>

**POLICY CONSIDERATION**

This proposed cost-share contract has been vetted through a staff approval committee and meets NRCS standards for the applicable best management practice (BMP). The application has been advanced for due pass by the Board of Supervisors.

**STAKEHOLDER INTERESTS**

- District cooperators working with District farm management, forestry and aquatic area enhancement programs
- King CD Board members and staff

**BACKGROUND**

The Snoqualmie Valley Preservation Alliance is partnering with a cattle farmer, Rick Devries, in the Snoqualmie River floodplain to implement a stream crossing approximately 1.6 miles west of the river. The farm is used for grazing & hay production. Cattle are excluded from the ditch by an existing electrified, barbed wire fence. The existing ditch is a trapezoidal channel approximately 20 to 25 feet wide at top of bank and 5 to 7 feet deep. The banks are densely vegetated with reed canary grass, which extends below the water line. Streambed sediments are silts and mud. The resource concerns are inadequate fish and wildlife habitat (fish passage) and excess water (functional drainage system) in part due to undersized 30" & 24" culverts. Replacement of the two, existing, undersized, culverts would address these resource concerns.

An ADAP project is proposed for summer 2020 requiring the replacement of two existing small-diameter culverts supporting farm access roads across the unnamed modified ditch. Each new crossing will be 20 feet long. An alternatives analysis/sizing memo addressing fish passable culverts was completed by ESA consulting engineers for the Snoqualmie Valley Watershed Improvement District (SVWID) in 2019. The SVWID worked with King County ADAP and the Washington Department of Fish and Wildlife engineer to confirm proposed culvert dimensions as permissible structures. Each pipe-arch culvert consists of two 15-foot sections that will be banded together. This ADAP project is a joint venture with King County ADAP, SVWID, KCD, and Mr. Devries.

**EFFECTIVE DATE**

The cost-share award will become effective upon approval by the Board of Supervisors and the LIP contract will become effective upon signature by a Board representative.



**King Conservation District Board of Supervisors Meeting 07/13/2020**  
**Agenda Action Briefing/Report AI 20-036**

**RECOMMENDATION**

Staff seeks Board approval of Landowner Incentive Program cost-share application from Snoqualmie Valley Preservation Alliance, for a Stream Crossing, in the amount of \$30,000.00.

**MOTION**

*\_\_\_\_\_ Moved, \_\_\_\_\_ Seconded; Passed a motion to Approve KCD Landowner Incentive Program cost-share application from the Snoqualmie Valley Preservation Alliance, for a Stream Crossing, in the amount of \$30,000.00.*

# KING CONSERVATION DISTRICT (KCD) LANDOWNER INCENTIVE PROGRAM APPLICATION

## Section 1. Applicant (If applicant is not the landowner, then landowner must also sign the agreement)

Applicant Name: <b>Snoqualmie Valley Preservation Alliance</b>		Farm/Business Name:	
Mailing Address: <b>PO Box 1148 Carnation, WA 98014</b>		Project Address: <b>19309 W SNOQUALMIE VALLEY RD NE</b>	
Phone (home): <b>425-549-0316 (office)</b>		Phone (work/mobile): <b>425-922-5725 (C. Krass)</b>	
Email Address: <b>erin@svpa.us</b>		KCD Staff: <b>J. Mirro</b>	
Parcel #(s): <b>0226069014</b>	<input type="checkbox"/> Incorporated <input type="checkbox"/> Unincorporated	Total Farm/Land Acreage: <b>70.96</b>	<input type="checkbox"/> T.A. <input type="checkbox"/> Farm Plan <input type="checkbox"/> Forest Plan
Is email an acceptable primary form of communication?	<input type="checkbox"/> Yes <input type="checkbox"/> No	Would you like to be added to our newsletter list?	<input type="checkbox"/> Yes <input type="checkbox"/> No

## Section 2. Project Information

<b>Best Management Practice (BMP):</b> <b>Stream Crossings</b>
<b>Project Completion Date (month and year):</b> <b>9/30/2020</b>
<p><b>Current Site Conditions</b> (Provide a brief summary of resource management problem addressed by BMP; also note if streams, wetlands, and steep slopes are near or within the project area):</p> <p>The resource concerns are inadequate fish and wildlife habitat (fish passage) and excess water (functional drainage system). Replacement of the two, existing, undersized, backwatered culverts would address these resource concerns.</p> <p>The property is located in unincorporated King County, northwest of the City of Duvall and is zoned agricultural and protected under the King County Farmland Preservation Program. It is currently used for grazing. Cattle are excluded from the ditch by electrified, barbed wire. The project is located in the floodplain of the Snoqualmie River, approximately 1.6 miles west of the river itself.</p> <p><b>Project Details</b> (Provide a brief summary of the project. Include acres treated, length of fence, dimensions of compost bin, types and numbers of plants, etc.):</p> <p>An alternatives analysis/sizing memo addressing fish passable culverts was completed by ESA consulting engineers for the SVWID in 2019 and is submitted with this application. The memo reviews several alternatives for culvert replacement in accordance with WDFW standards and provided a recommendation. The SVWID worked with ADAP and the WDFW engineer to confirm proposed culvert dimensions as permissible structures. The SVWID has a recent quote from Contech for two pipe-arch culverts (included). Each pipe-arch culvert consists of two 15-foot sections that will be banded together. Culvert details are on Sheet 13 of the ADAP plan set (included).</p>
<p><b>Maintenance Plan</b> (Summarize your plan to maintain the practice. Include frequency and scope of inspections, repairs anticipated, etc.):</p> <p>The landowner will inspect the culverts frequently as both culverts serve farm access roads. The SVWID continues to work in this basin and will monitor the lifespans of the culverts and any potential issues with beavers and flood-related damage.</p>

**Permits** (List all permits required to complete this project):

HPA

**Photos:** Before photos must be submitted with this application.

### Section 3. Cost-share Programs

A. Have you previously applied for cost-share through the KCD Landowner Incentive Program (LIP)?

☐ Yes

☒ No

If yes, please list contract number and BMP below:

B. Are you applying for (or received) funding (cost-share or grants) through other agencies or programs?

☒ Yes

☐ No

Please describe below:

**1. King County Cost-share**

Please list practices and date installed below:

**2. NRCS EQIP (Natural Resources Conservation Service's Environmental Quality Incentive Program)**

Please list practices and date installed below:

**3. Other**

Please list agency and describe project:

The SVWID has funding through the King County Flood Control District for any unfunded portion of the culvert replacement project at the DeVries property.

**Other Cost-Share History/Notes:**

### Section 4. Budget (attached as Exhibit A)

The cost-share application budget is the applicant's statement for how the KCD cost-share funds will be spent. Use the attached Excel document to detail the budget for the project. Reimbursement values are restricted by unit maximums as well as practice maximums. KCD will be unable to provide a budget that exceeds either maximum. The cost differential for practices installed at a higher standard or cost shall be the responsibility of the applicant. In cases where a budget for a cost-share award needs to be updated, submit a budget revision request for approval. In the absence of an approved budget revision, the cost differential shall be the responsibility of the applicant. Furthermore, receiving financial assistance for an approved Best Management Practices will be subject to inspection by KCD planners. Approval for reimbursement will be based on the satisfactory completion of the project to the minimum specifications detailed in this application.

Partial reimbursements are available on a limited basis and must be requested in advance. They will only be considered when the installation of a project can be phased to achieve the standard described in the attached job sheet when reimbursement is requested.

☐ Select this box if you intend to request partial reimbursement as the project is installed.

## Section 5. Education and Outreach

KCD encourages public education through demonstration projects. Demonstration projects are used to educate other landowners about innovative ways to address natural resource concerns. A demonstration project may be showcased in a guided tour, or featured in presentations or written fact sheets.

- Will you consider becoming a demonstration project?

☒ Yes ☐ No

## Section 6. Maintenance and Monitoring Expectations

The applicant is responsible to maintain the Best Management Practice (BMP) to standard as detailed in the attached Job Sheet for the lifetime of the BMP.

- ☒ A. I understand the lifetime of the BMP is 20 years.
- ☒ B. I understand KCD will work with me to verify proper maintenance of the installed BMP, which will include a combination of site visits with KCD staff and/or annual photo documentation submitted by me for the lifetime listed in Section 7A.
- ☒ C. I understand I am obligated to maintain and monitor the BMP for the lifetime listed in Section 6A.

## Section 7. Application and Agreement

I request financial assistance (cost-share) under the KCD LIP to install the Best Management Practice (BMP) described in this application and detailed in the attached *Job Sheet and Map*. This practice is needed to solve the natural resource problems described in Section 2 of this application. This Agreement expires if the project is not completed by the specified completion date in Section 2 or in an approved timeline revision request. CK (Initial Here)

I agree to ensure that all applicable local, state, and federal permits are obtained for installation of the BMP for which funds are requested. Furthermore, I understand that KCD must receive a copy of any applicable permit to process my cost-share reimbursement. CK (Initial Here)

I agree to work cooperatively with KCD to ensure the funded BMP is maintained consistent with the design life identified in the attached Job Sheet and in Section 6 of this application. CK (Initial Here)

I agree to indemnify, defend, and hold harmless KCD, its elected or appointed officials, employees and agents, from all claims, alleged liability, damages, losses to or death of person or damage to property allegedly resulting from the negligent or intentional acts of the applicant or any of its employees, agents, contractors or subcontractors in connection with this Agreement. CK (Initial Here)

I represent that the information provided in Section 3 of this application is a full disclosure of all other natural resource financial cost-share relationships in which I have or am participating. Furthermore, I agree to disclose if I am applying for or receive funding (cost-share or grants) for the BMP described in this application through other agencies or programs and to provide KCD with written documentation detailing this funding support. This may include copies of reimbursement checks or letters showing value of provided contribution. I understand that I must provide proof of reimbursement for alternate funding prior to receiving reimbursement through the KCD LIP. I acknowledge that KCD LIP funds cannot be used in combination with other funding sources to exceed 100% of project costs. I agree to allow communication between KCD and any other agency regarding the details of the project as well as funding details. CK (Initial Here)

I understand that LIP cost-share reimbursement is contingent upon installing the BMP to the minimum standard provided by KCD, and that KCD will verify standard compliance. Furthermore, I understand that changes to the installation details (attached *Job Sheet and Map*) must be approved through a *Scope of Work Revision Process*. Unapproved changes will not be eligible for reimbursement. CK (Initial Here)



OK [11:21:46] Here

and I have not been able to find any more. OK. I will try.

Удобрения для растений. ОК

Understand that this is a new subject, and inform me of the full report. See you on 11/15/14.

Understand that the **indicated** **150** **Watt** **Power** **Supply** **Is** **Not** **Required** **For** **Operation** **Of** **The** **Display** **Function** **CK** **Model** **Hand**

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Understand how to properly use your computer and Internet. OK (1/1/2012)

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## Rick DeVries

1995

新華日報社

Category	Sub-category	Value
Total	...	...
	...	...
...	...	...
	...	...
...	...	...
	...	...

1512

[illegible]



Budget Items	Units	Cost
Stream Crossing	40.00	\$44,000.00
Machinery Rental (not personally owned equipment)		\$0.00
	<b>Subtotal</b>	<b>\$44,000.00</b>

<b>Project Totals</b>		
<b>Total Cost</b> (Budget Items + In Kind Labor/Machinery)		<b>\$ 44,000.00</b>
Units	Linear Feet	40.00
Cost/Unit		\$ 1,100.00

**\$30,000.00**

Landowner: DeVries	Lifetime of Practice: 10 years
--------------------	--------------------------------

Purpose (check all that apply)	
<input type="checkbox"/> Reduce streambank and streambed erosion	<input checked="" type="checkbox"/> Provide crossing for access to another land unit
<input type="checkbox"/> Improve water quality by reducing sediment, nutrient, organic, and inorganic loading of the stream	<input checked="" type="checkbox"/> Remove a fish passage barrier in combination with installing fish passable crossing structure.

**Summarize the Project Proposal.** Provide the following: 1) describe project activities, including permitting, site prep, installation, and maintenance and monitoring; 2) describe the anticipated project outcome (e.g. fish and wildlife benefits, other environmental benefits); and 3) outline the project implementation time line.

An ADAP project is proposed for summer 2020 requires the replacement of two existing small-diameter culverts supporting farm access roads across the unnamed modified ditch. Each new crossing will be 20 long. The new culverts will each be a 30 ft wide 128" x 84" pipe arch. HPA from WDFW is being acquired. No County permit required as per ADAP agreement. Section of ditch around culverts, if wet, will be fish netted, defished, and pumped dry before construction. (This is typically ADAP procedure approve by King County and WDFW.) Culvert site will be prepped and installed with an excavator. Project will be monitored via during construction for proper installation. The banks are densely vegetated with reed canary grass, which extends below the water line. Streambed sediments are silts and mud. The resource concerns are inadequate fish and wildlife habitat (fish passage) and excess water (functional drainage system) in part due to undersized 30" & 24" culverts. Project outcomes will improve water flow and improve fish passage. Project will likely be completed in July / August 2020.

**Describe Project Area.** Provide the following: 1) extent of project area above and below ordinary high water mark; 2) dimensions of site; and 3) briefly describe the existing vegetation and habitat conditions.

Drainage ditch is typically dry in summer when work is being performed. See plans. Typically, new culvert will be ½ of drainage ditch, 4 feet, will be under ohwm. Total project area 100' x 30', area of road base that will need to be regraded. Culverts will be 30' in length. Each ditch crossing will be 20' in length. Ditch is dominated with reed canary grass.

**Name and type (S, F or N, wetland I, II, or III) of waterway to be crossed.**

Un Named drainage ditch. Low-Modified ADAP waterway. A fish assessment conducted on 6/2/2020 indicated no salmonids and very low presence of other fish species (stickleback, mudminnow, pumpkinseed) tolerant of very low dissolved oxygen conditions.

**Land Uses and Associated Impacts.** *Provide the following: 1) describe how the property is used (e.g., residential, commercial, recreational); 2) describe adjacent properties, including land uses and any potential adverse impacts to adjacent properties associated with the proposed project.*

Entire property is farmed. Cattle and hay. Project is located in the Agricultural Production District of King County and is farmed. Only potential off property impact is improved drainage.

**List the intended use (people, livestock, equipment, or vehicles). Also include the stream crossing dimensions and project materials. Please attach an engineer approved design.**

Replacement culverts will be used to allow for people, livestock, and farm equipment to cross the drainage ditch. Culverts are 30 feet long. Access drives will be about 16' wide and 20' long, plus any approach that is needed.

**Grading and Demolition Activities.** *Describe the plan to remove structures (failing culvert, etc.) and grade project areas, including specific construction methods and equipment to be used.*

Existing culvert and fill will be removed with excavator.

**Habitat Restoration Activities.** *Provide the following that apply: 1) describe site preparation activities (e.g. weed control, substrate to be applied, soil amendment to used); 2) identify the type and source of plant materials (e.g. potted, bareroot, ball and burlap and native plant nurseries providing plant material; 3) describe the care and temporary storage of plant materials; 4) describe installation plan (e.g. planting plan, installation techniques, sheet mulching, etc.); 5) describe maintenance and monitoring plan (e.g. number of years to be conducted, survival data collection, etc.).*

Restoration planting for the culverts will be done on the farm as part of a larger restoration project. Planting Plan: The proposed planting will install plants at a 1:1 ratio with the amount that would otherwise be required under the default planting requirements of the ADAP bmp's. The default plan would require channels 1,2 and 5 be planted 2 rows on each bank, plants spaced 3 feet on-center. Channel 3 and 4 do not require planting. This equates to a total of 4,230 plants. The proposed planting areas will be approximately as follows to satisfy the planting requirements for maintenance along channels 1,2 and 5:



ID	Rows	No. of Plants	Notes
1	8-10	1,964	Both banks, within E fenceline
2	6-9	786	W bank only
3	16	1,480	Leave 12 feet between middle rows.

Total = 4,230

This planting plan prioritizes installing a much wider planting zone around channel 1. It has the most consistent perennial flow of channels 1-5 during the low-flow summer months. It is the most likely channel to have conditions to support resident fish during the dry-summer months, and planting an approximate 30 ft planting zone will greatly enhance the cover and food sources for summer fish populations as well as reduce the solar radiation that would otherwise raise the water temperature. Dissolved oxygen monitoring from 8/29/19-9/11/19 documented dissolved oxygen averaging approximately 5 mg/L in channel 1, with a maximum of 8 mg/L, whereas channel 5 was documented as having dissolved oxygen averaging 0.25 mg/L, with a maximum of 0.5 mg/L. Channel 5 does not have a consistent flow of water in the summer months, leading to variable conditions that are in-hospitable to fish life. Planting area 3 will provide off-channel shelter options for fish that would otherwise be confined to a straightened, higher velocity drainage channel during high-flow drainage conditions. The water source for Channel 2 is attributed to toe-of-slope drainage. This channel is usually dry during low-flow conditions, but if any seasonal ponding exists, it's going to occur along the base of the slope. Any water flowing downstream from there has been observed to drain sub-surface, resulting in a dry ditch downstream. The channel 2 profile shows this very condition during the May 2016 survey. It would be in the upper reaches where food sources, shade and protective cover from this planting would have the most benefit to any resident fish that will try to survive through the summer in a wetter year, when ponding has a chance to occur all summer, or during spring/summer when the upper reach is cut-off, but a subsequent rainstorm provides the flow necessary to let the resident fish move out. Both planting areas along channel 1 and 2 are located to provide maximum run-off interception along steep slopes from uphill agricultural operations. Run-off in these areas is more prone to causing erosion along steep banks, and the expanded width of planting will provide more stabilization to prevent erosion and encourage infiltration.

**Permits.** *Provide the following: 1) a list of all permits necessary for approval of project; 2) copies of all permits secured to date.*

WDFW HPA is being applied for.

**Operation and Maintenance.** *According to the following Washington State laws, WAC 220-110-070 and RCW 77.55.060, the owner of a road culvert, or ford that is a fish passage facility is responsible for maintaining its fish passage functions as well as maintenance of the structure. For example, The stream crossing, appurtenances, and associated fence should be inspected after each major storm event, with repairs made as needed.*

The landowner will inspect the culverts frequently as both culverts serve farm access roads. The SVWID continues to work in this basin and will monitor the lifespans of the culverts and any potential issues with beavers and flood-related damage.

**Additional Specifications and Notes:**

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# DEVRIES AGRICULTURAL WATERWAY MAINTENANCE PLAN KING COUNTY AGRICULTURAL DRAINAGE ASSISTANCE PROGRAM

VICINITY MAP

INDEX



SHEET TITLE

SHEET NUMBER

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Planting Plan	14

FIELD BOOK		APPROVED	 Know what's below. Call before you dig. (UNDERGROUND UTILITY LOCATING AND APPROVAL)	 King County Department of Natural Resources and Parks Water and Land Resources Division Stormwater Services Section Christine Erue, Director	COVER PAGE	SHEET 1 OF 14 SHEETS 5/11/2020
SURVEYED		PROJECT MANAGER: FREDERICK L. BECK, P.E.			DEVRIES ADAP	
SURVEY BASE MAP		DESIGNED: FREDERICK L. BECK, P.E.			19309 W SNOQUALMIE VALLEY RD NE	
CHECKED		DRAINAGE INVESTIGATION NO.			DUVALL, WA 98019	
FILE	REVISION	BY	DATE			

## Notes:

- Total proposed maintenance length of is approximately as follows:

Waterway Classification	Length	Note
Moderate Modified	748	
Low Modified	1,180	
Low Modified (DRY)	1,245	No expected water – no fish relocation
Low Artificial (DRY)	2,178	No expected water – no fish relocation
TOTAL	5,351	Portion of Total that is DRY: 3,423 ft

Total proposed culvert replacements are approximately as follows:

Waterway Classification	No. Culverts	Note
Low Modified	2	Replace with Fish-Passable Culverts

Actual length may be more or less than total listed, and will be based on assessments made onsite at the time of excavation. The landowner is under no obligation to perform the work shown in this plan in part or whole.

- Estimated dredge volume: approximately 1,050 cubic yards (yd<sup>3</sup>)
- All work shall be performed in accordance with King County's agreement for best management practices for maintenance of agricultural waterways (BMPs), the Washington Department of Fish and Wildlife (WDFW) Hydraulic Project Approval (HPA), and the King Conservation District (KCD) farm plan.
- In-channel work will occur within the time frame allowed by the HPA.
- Spoils may be spread on farm fields to a depth no greater than 6 inches or removed from the site and disposed of in a legal manner.
- Fish relocation may be performed by King County, at the direction of the KC ADAP representative and with coordination by the maintenance contractor or landowner. Staffing shortages, health restrictions and other conditions may extend the timeline the county can reasonably provide resources.
- A 1-hour pre-construction meeting, including the landowner or landowner's representative, the maintenance contractor and a King County ADAP employee, is required prior to the start of any maintenance activities.
- It is the contractor's responsibility to monitor excavation and ensure that maintenance dredging does not exceed historical-channel extents.
- Native vegetation should be protected to the extent practicable.
- The landowner is responsible for protecting the installed planting from livestock grazing and all farm activities.
- No utilities have been located. It is the responsibility of the excavator contractor (or landowner, if no contractor is used) to locate utilities.

## Legend

### Plan Views

- ADAP Channel Class (CL)
- Moderate Modified
- Low Modified
- Low Artificial
- Agricultural Waterway (Class not shown)
- Existing Farm Road
- Existing Bridge
- Overbank Flood Extent
- T/DO Sample Site (approx.)
- Turbidity Sample Site (approx.)
- Turbidity Sample Site Offset to Distance (approx.)
- Fish Relocation Release Site (approx.)
- Parcel Boundary (KC GIS Data)

### Profile and Section Views

- Existing Ground
- Existing Farm Road
- Existing Culvert
- Water Surface
- Approximate Dredge Extent
- Proposed Farm Road
- Proposed Culvert

NOTE: Items specific to one sheet may not be included on this legend. See sheet specific legend

FIELD BOOK: _____ SURVEYOR: _____ SURVEY DATE: _____ DIVERSITY: _____	APPROVED: _____ PROJECT MANAGER: FREDERICK L. BECK, P.E. DESIGNER: FREDERICK L. BECK, P.E. DRAINAGE INVESTIGATION NO.: _____	 Know what's below. Call before you dig. (UNDERGROUND UTILITY LOCATIONS ARE APPROX.)	 King County Department of Natural Resources and Parks Water and Land Resources Division Stormwater Services Section Oneida Park, Bellevue	NOTES (1 of 2) DEVRIES ADAP 18309 W SNOQUALMIE VALLEY RD NE DUVALL, WA 98019	SHEET 2 OF 14 SHEETS 5/11/2020
--	---	--	--	---	---



**Site History:** King County ADAP has no known history of previous maintenance activity at this project site. A 2015 ADAP project performed maintenance on multiple waterways on the property immediately south.

**Fish Relocation:** Fish relocation will occur at the following locations, listed in order of preference: upstream, adjacent tributary, nearby stream, river, downstream. Primary expected release sites, which will be considered first, have been identified on the plan map and described below. Olympic Mudminnow will only be relocated upstream or downstream of the project site. Resilient fish species, such as Stickleback and Sculpin, may be captured and released in conditions that would not be deemed acceptable for capture/release of salmonids, with consultation and oversight by the ADAP fish relocation lead fish scientist.

FISH RELEASE SITES	
Site	Description
1	Upstream of Project Reach
2	Pearson Eddy Channel*

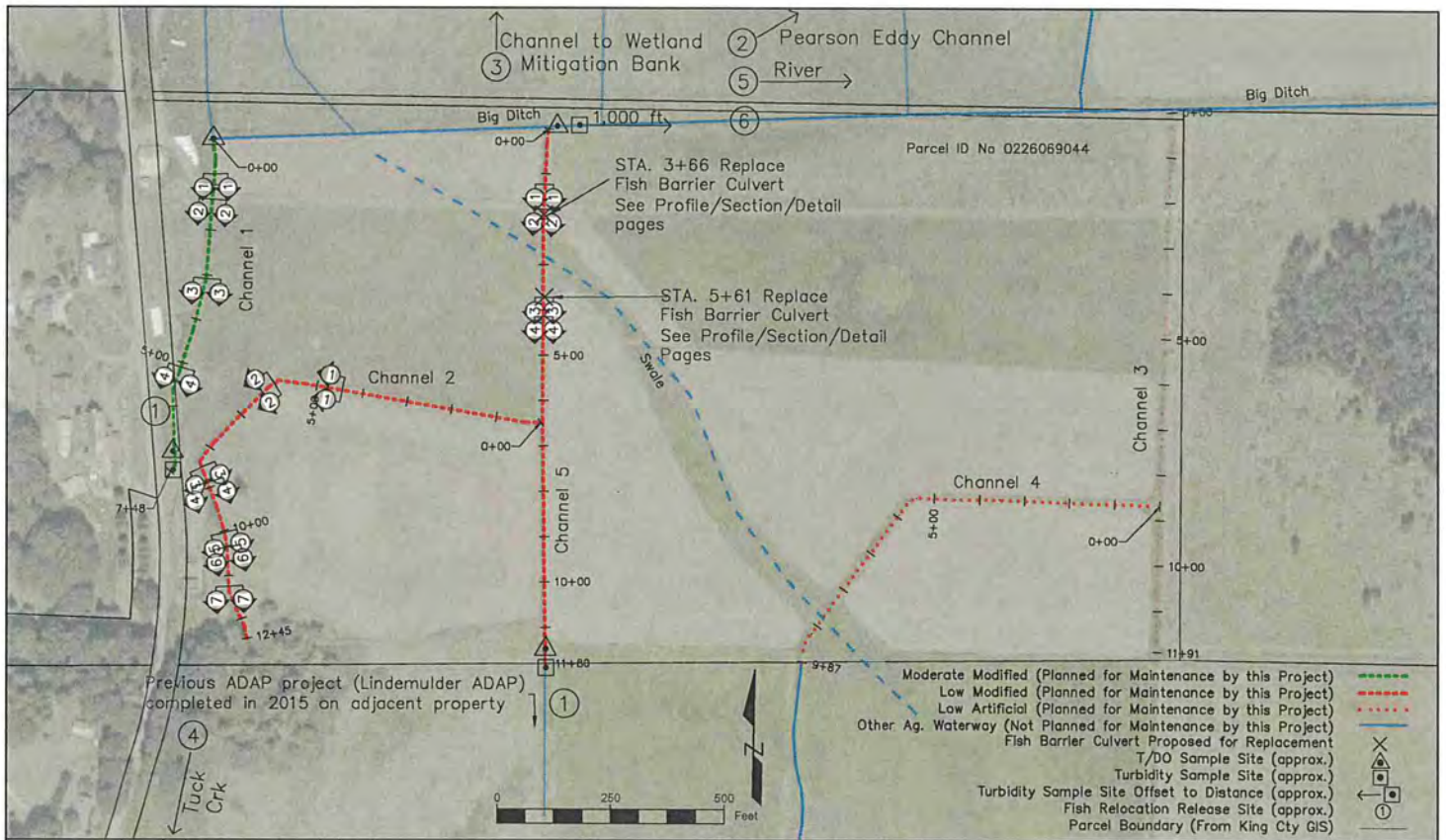
3	Drainage to Wetland Mitigation Bank*
4	Tuck Creek Near WoodInville-Duvall Road & West Snoqualmie Valley Rd.
5	Snoqualmie River*
6	Downstream of Project

*	Access through adjoining landowner.
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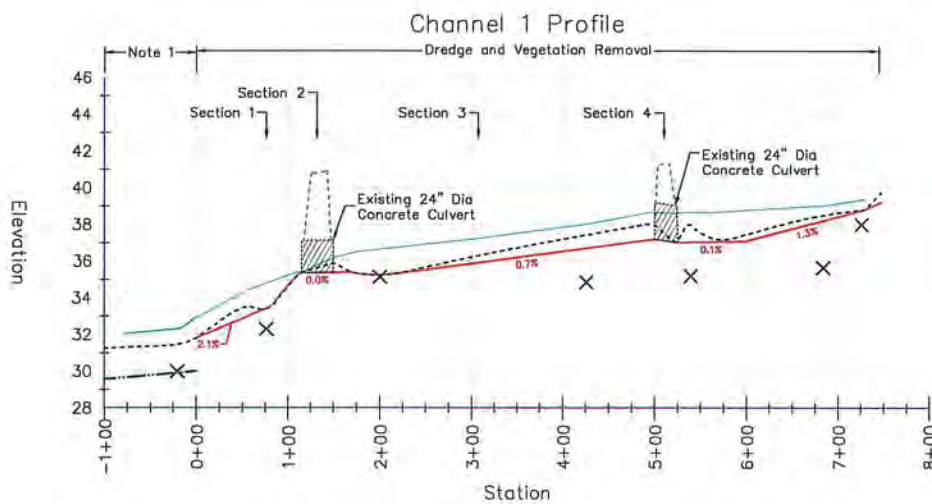
## Expected Hydrology

Segment	Length (ft)	DRY?	Hydrology	Mapped Classification	Expected Fish Use
Channel 1	748		Minor flow est < 1 cfs in summer. Drainage from valley wall.	Moderate Modified	Flow is very low in summer but is not expected to stop flowing except under very dry conditions. Pre-project measurements from 8/29/19-9/12/19 recorded an average water temperature of approximately 15 degrees celsius and Dissolved oxygen of 5 mg/L (max of 8 mg/L). These conditions indicate presence of fish should be anticipated.
Channel 2	1245	DRY	DRY. Water source is base of valley wall drainage.	Low Modified	No expected fish use. This waterway has been observed to be dry multiple times over multiple years. A portion of this channel was observed to be dry during a May, 2016 survey.
Channel 3	1191	DRY	DRY. This channel drains surface water from floods and surface run-off.	Low Artificial	No expected fish use. This waterway has been observed to be dry.
Channel 4	987	DRY	DRY. This channel drains surface water from floods and surface run-off.	Low Artificial	No expected fish use. This waterway has been observed to be dry.
Channel 5	1180		Extremely low flow in summer. Sometimes no flow, but with ponding. This channel transports water that originates from the valley wall.	Low Modified	Flow can vary between extremely low, and ponding only. The upstream 2015 ADAP project encountered a no-flow condition in the same channel, but encountered Olympic Mudminnow stranded in small remaining ponding. Pre-project measurements from 8/29/19-9/12/19 observed a very small, but constant flow in the channel. These measurements recorded an average water temperature of 16 degrees celsius, and an average Dissolved Oxygen concentration of less than 0.5 mg/L. The low DO concentration makes it unlikely salmonids will be found, unless they remain onsite due to stranding in ponded areas. Due to the presence of Olympic Mudminnow found upstream in 2015 under extremely in-hospitable conditions, it is expected that stranded, and very hardy fish, could be found in this channel.

FIELD BOOK SURVEYED SURVEY BASE MAP CHECKED	APPROVED PROJECT MANAGER DESIGNER DRAINAGE INVESTIGATION NO.	 Know what's below. Call before you dig. (UNDERGROUND UTILITY LOCATIONS ARE APPROX.)	 King County Department of Natural Resources and Parks Water and Land Resources Division Electromechanical Services Section Christine Toss, Director	NOTES (2 of 2) DEVRIES ADAP 19309 W SNOQUALMIE VALLEY RD NE DUVALL, WA 98019	SHEET 3 OF 14 SHEETS 5/11/2020
--	---	--	--	---	---



FIELD BOOK		APPROVED		<p>Know what's below. Call before you dig. (UNDERGROUND UTILITY LOCATIONS ARE APPROX.)</p>	<p>King County Department of Natural Resources and Parks Water and Land Resources Division Stormwater Services Section Christine Trice, Director</p>	<p><b>PLAN VIEW</b></p> <p>DEVRIES ADAP 19309 W SNOQUALMIE VALLEY RD NE DUVALL, WA 98019</p>	<p>SHEET 4 OF 14 SHEETS 5/11/2020</p>
SURVEYED		PROJECT MANAGER	FREDERICK L. BECK, P.E.				
SURVEY BASE MAP		DESIGNED	FREDERICK L. BECK, P.E.				
CHECKED		DRAINAGE INVESTIGATION HELD					
DATE		REVISION	BY	DATE			



#### Legend

- Existing Channel Bottom ----
- Existing Farm Road ----
- Existing Culvert
- Water Surface (May 2016) ———
- Sediment Depth (At Probe Resistance) X
- Proposed Dredge Extent & % slope
- Big Ditch Future Dredge Extent (Note 1) - - - -

#### Notes:

1. Future maintenance of the Big Ditch (not part of this project) will maintain the channel bottom approximately as shown from -1+00 to 0+00. When that occurs, blend the channel bottom along this tributary from approximately 0+00 to 1+00 to match grades.
2. Culvert replacement along this tributary is not part of this plan. However, if the landowner decides to pursue culvert replacement on this tributary, crossing design requirements and the potential for a plan revision and permit updates can be discussed with the ADAP project manager.

FIELD BOOK					APPROVED	
SURVEYED					PROJECT MANAGER	FREDERICK L. BECK, P.E.
SURVEY BASE MAP					DESIGNED	FREDERICK L. BECK, P.E.
CHECKED					DRAWN	INTEGRATION INC.
	FILE	REVISION	BY	DATE		

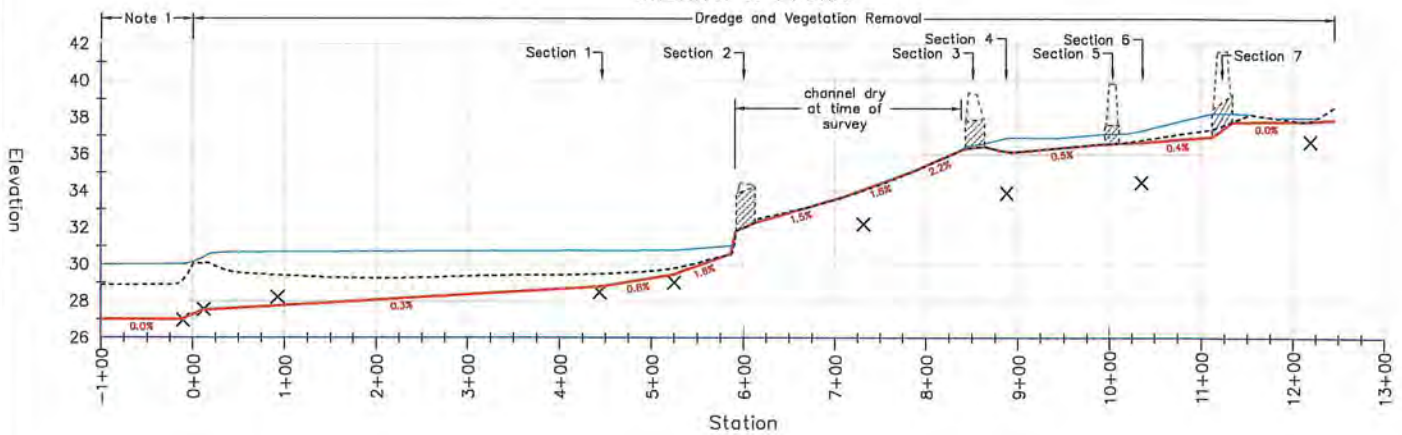


Channel 1 Profile View	SHEET 5 OF 14 SHEETS
DEVRIES ADAP 19309 W SNOQUALMIE VALLEY RD NE DUVALL, WA 98019	5/11/2020





# Channel 2 Profile



## Notes:

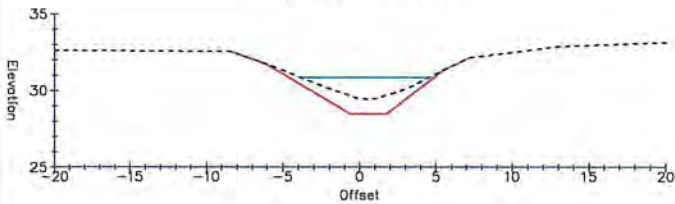
1. A portion of Channel 5 and its proposed maintenance is shown between -1+00 to 0+00 on this profile. Blend the channel bottom along Channel 2 from approximately 0+00 to 1+00 to match grades.
2. Culvert replacement along this tributary is not part of this plan. However, if the landowner decides to pursue culvert replacement on this tributary, crossing design requirements and the potential for a plan revision and permit updates can be discussed with the ADAP project manager.

## Legend

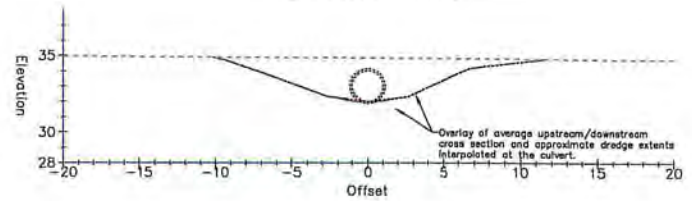
- Existing Channel Bottom ----
- Existing Farm Road ----
- Existing Culvert ----
- Water Surface (May 2016) —
- Sediment Depth (At Probe Resistance) X
- Approx Dredge Extent & % slope —X—

FIELD BOOK					APPROVED	 <p>Know what's below. Call before you dig. (UNDERGROUND UTILITY LOCATIONS ARE APPROX.)</p>	 <p>King County Department of Natural Resources and Parks Water and Land Resources Division Stormwater Services Section Christine Fisk, Designer</p>	<p>Channel 2 Profile View</p> <p>DEVRIES ADAP 19309 W SNOQUALMIE VALLEY RD NE DUVALL, WA 98019</p>	<p>SHEET 7 OF 14 SHEETS</p> <p>5/11/2020</p>
SURVEYED					PROJECT MANAGER				
SURVEY DATE					DESIGNED				
CHECKED					DRAWING INTERVIEWER				
	NAME	REVISION	BY	DATE					

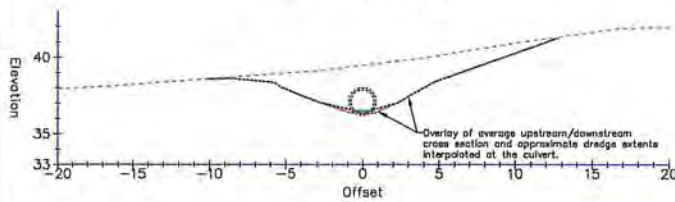
Section 1 (4+46)



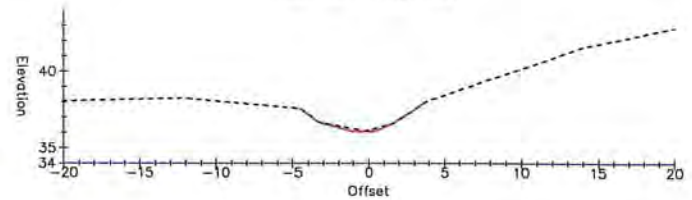
Section 2 (6+00)



Section 3 (8+51)



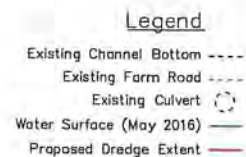
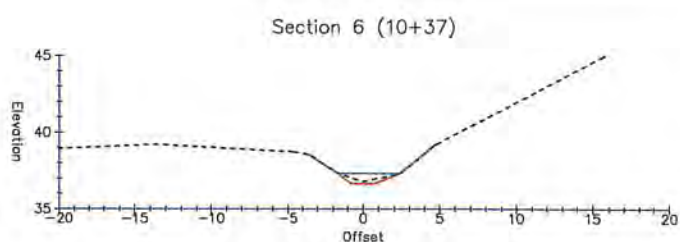
Section 4 (8+88)



Legend

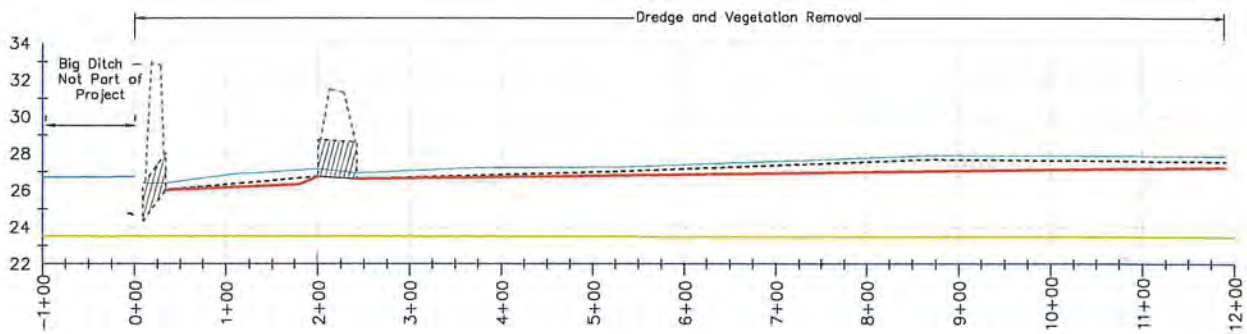
- Existing Channel Bottom - - - -
- Existing Farm Road - - - -
- Existing Culvert - - - -
- Water Surface (May 2016) ———
- Proposed Dredge Extent ———

FIELD BOOK:		APPROVED:		 <p>Know what's below. Call before you dig. (SHOULDER WIDTH LOCATIONS ARE APPROX.)</p>	 <p>King County Department of Natural Resources and Parks Water and Land Resources Division Shoreline Sewerage Section Christy, Tina, Director</p>	<p>Channel 2 Section View (1 of 2) DEVRIES ADAP 19309 W SNOQUALMIE VALLEY RD NE DUVALL, WA 98019</p>	<p>SHEET 8 OF 14 SHEETS 5/11/2020</p>
SURVEYED:		PROJECT MANAGER:	FREDERICK L. BECK, P.E.				
SURVEY BASE MAP:		DESIGNED:	FREDERICK L. BECK, P.E.				
CHECKED:		DRAWING REVISIONS:					
DATE:		DATE:					

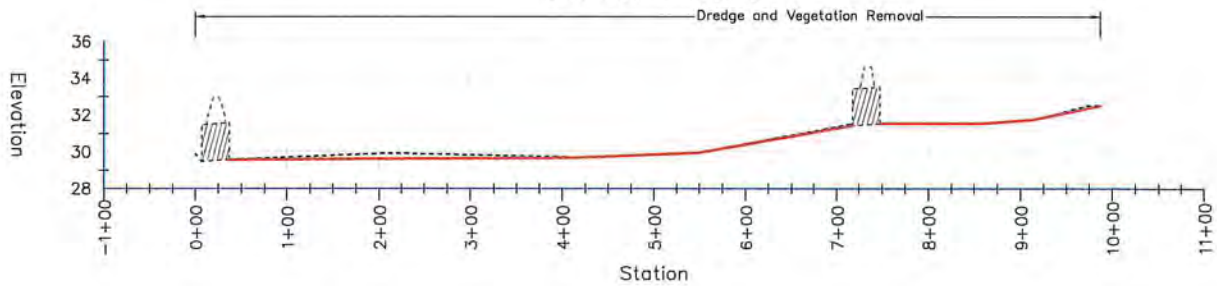


FIELD BOOK:		APPROVED:		Channel 2	SHEET
SURVEY:		PROJECT MANAGER:	FREDERICK L. BECK, P.E.	Section View (2 of 2)	9
SURVEY DATE: MM/DD		DESIGNED BY:	FREDERICK L. BECK, P.E.	DEVRIES ADAP	OF
CHECKED:		SHAWNEE INVESTIGATION NO.:		19309 W SNOQUALMIE VALLEY RD NE	14
				DUVALL, WA 98019	SHEETS
				5/11/2020	

### Channel 3 Profile



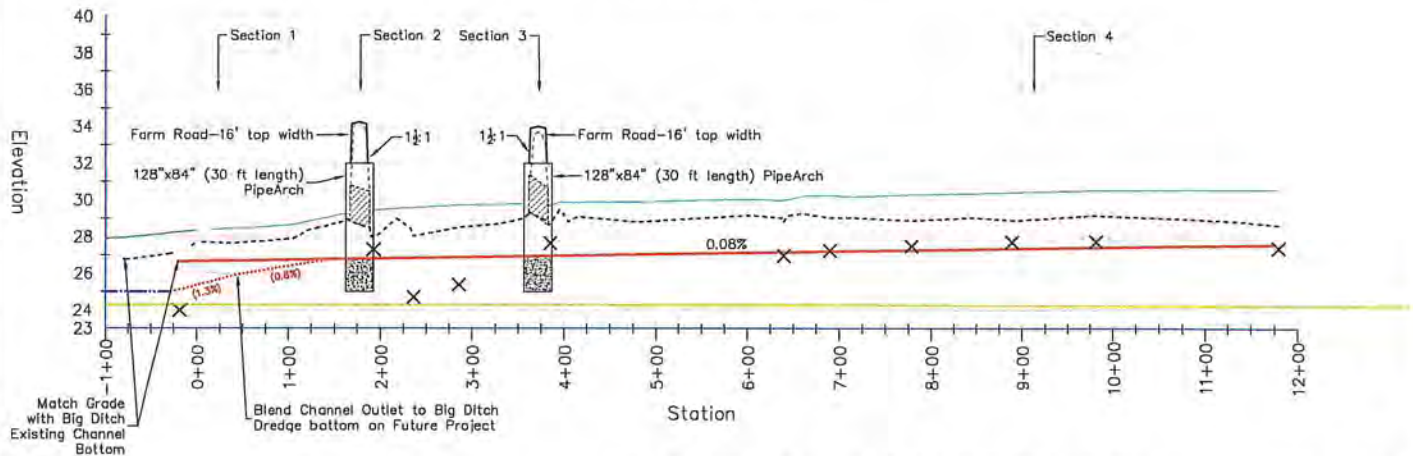
### Channel 4 Profile



FIELD BOOK					APPROVED		 Know what's below. Call before you dig. <small>(UNDERGROUND UTILITY LOCATIONS ARE APPROX.)</small>	 King County <small>Department of Natural Resources and Parks            Water and Land Resources Division            Stormwater Services Section            Christine Zink, Director</small>	<b>Channel 3 &amp; 4            Profile View</b> DEVRIES ADAP 19309 W SNOQUALMIE VALLEY RD NE DUVALL, WA 98019	SHEET <b>10</b> OF <b>14</b> SHEETS 5/11/2020
SURVEYED					PROJECT	FREDERICK L. BECK, P.E.				
SURVEY BASE MAP					DRAWN BY	FREDERICK L. BECK, P.E.				
CHECKED					GRANDFIRE INVESTIGATION NO.					
	NAME	REVISION	BY	DATE						



## Channel 5 Profile





Notes:

1. Supplemental design information is provided by the Snoqualmie Valley Watershed Improvement District (WID) for the stream simulation design documentation.
2. Material and installation specifications to be provided by others for the two pipe-arch installations. Coordinate with the Snoqualmie Valley Watershed Improvement District for these materials.
3. Structural plans and installation instructions to be provided by others.
4. Future maintenance of the Big Ditch (not part of this project) will maintain the channel bottom approximately as shown from +100 to

4. 0+00. When that occurs, blend the channel bottom along this tributary from approximately 0+00 to 1+50 to match grades.  
One or both culverts may be installed immediately adjacent to the existing crossings. If this occurs, the entirety of the existing crossing will be removed and banks blended to the downstream/upstream channel immediately after the crossing installation is complete.

Legend

the crossing will	Existing Channel Bottom	----
channel	Existing Farm Road	----
	Existing Culvert	
	Water Surface (May 2016)	—
Sediment Depth (Al Probe Resistance)		X
Proposed Dredge Extent & % slope		
Big Ditch Future Dredge Extent (Note 1)		

[illegible]

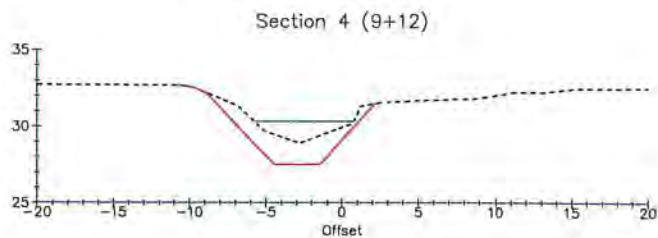
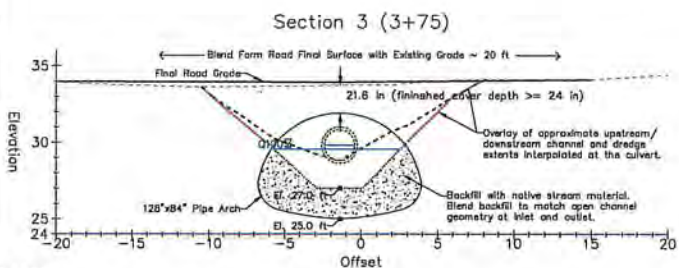
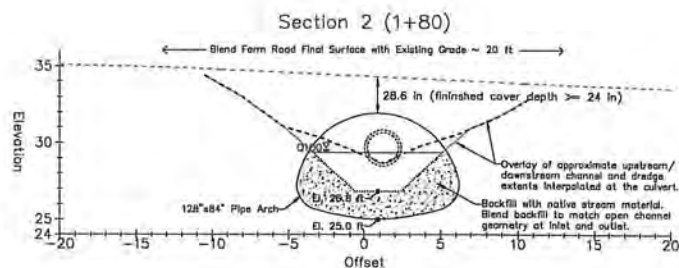
Know what's below.  
Call before you dig.  
(UNDERGROUND UTILITY LOCATIONS ARE APPROX.)



**King County**  
Department of Natural Resources and Parks  
Water and Land Resources Division  
Stormwater Services Section  
Christie Trice, Director

Channel 5  
Profile View  
DEVRIES ADAP  
19309 W SNOQUALMIE VALLEY RD NE  
DUVALL, WA 98019



SHEET  
11  
OF  
14  
SHEETS



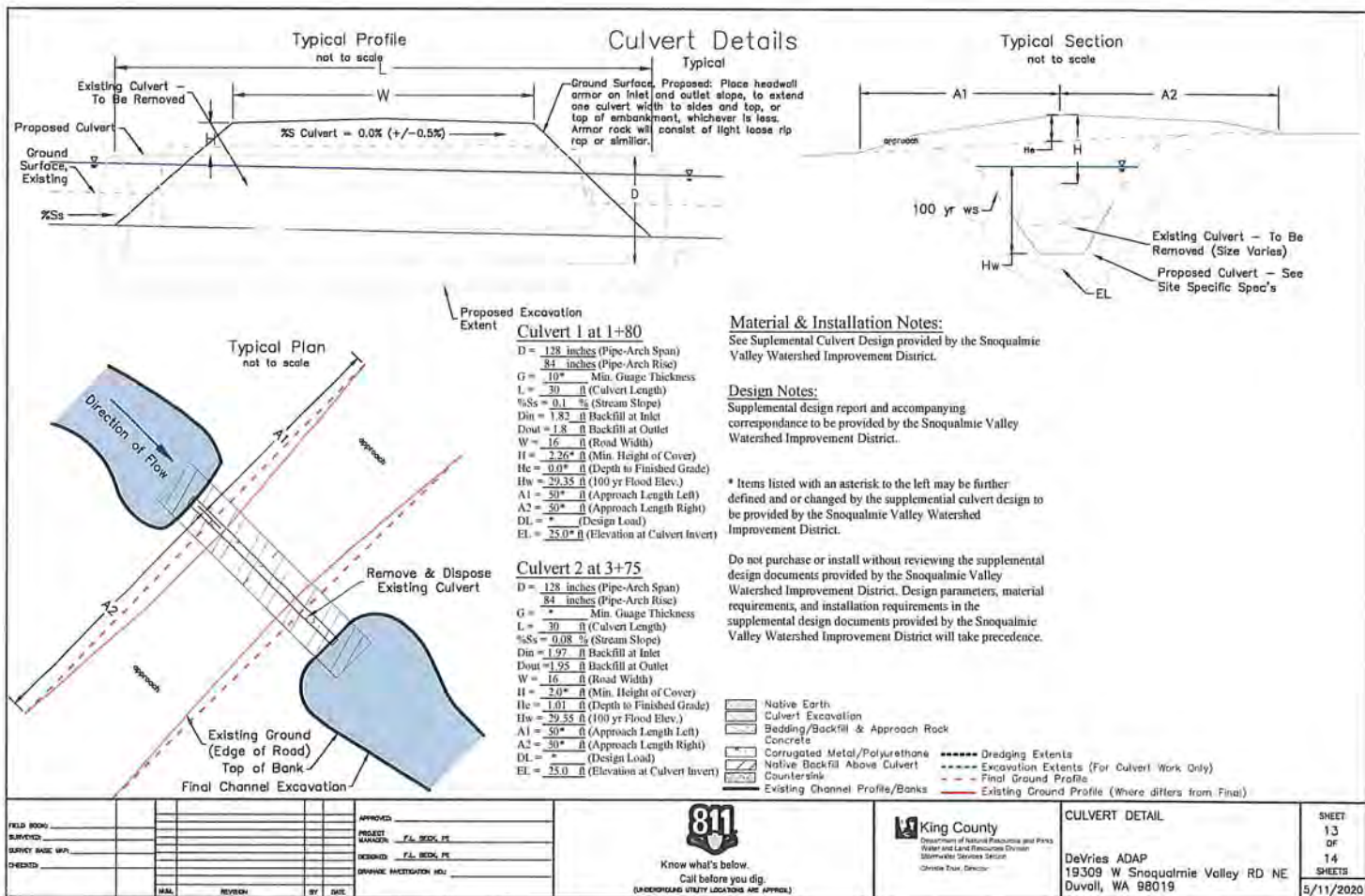
Notes:

1. Material and installation specifications to be provided by others for the 2 pipe-arch installations. Coordinate with the Snoqualmie Valley Watershed Improvement District for these materials.
2. The existing culverts are perched because they were not installed at the historic channel bottom. The indicated dredge depth in the maintenance plan references the bottom of the surveyed sediment at resistance as the historic channel bottom.

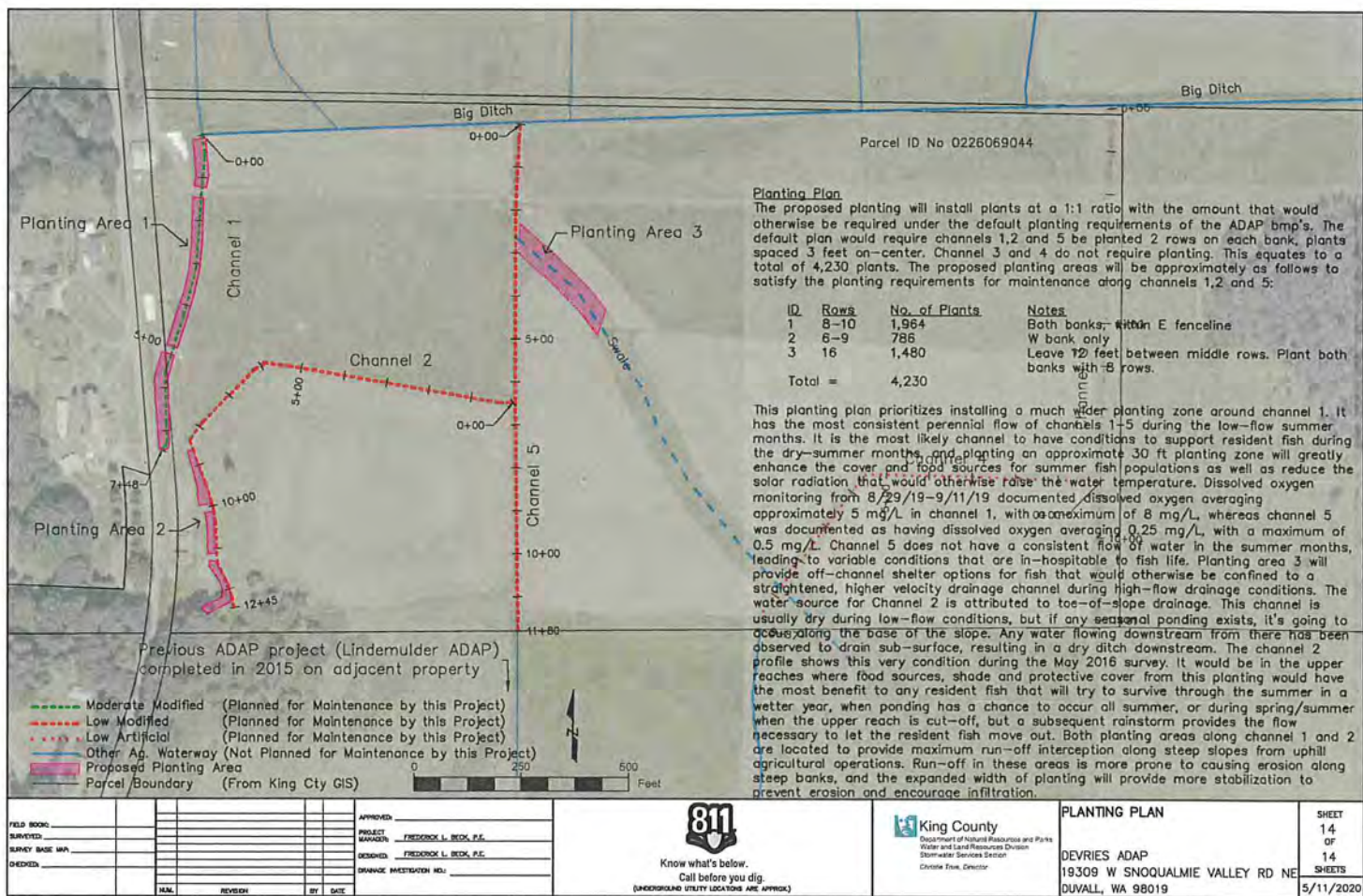
Legend

- Existing Channel Bottom ----  
Existing Farm Road - - - -  
Existing Culvert   
Water Surface (May 2016) \_\_\_\_\_  
Approximate Dredge Extent ————  
Proposed Pipe Arch   
Proposed Farm Road \_\_\_\_\_

FIELD BOOK: _____		APPROVED: _____		 <p>Know what's below. Call before you dig. (UNDERGROUND UTILITY LOCATIONS ARE APPROX.)</p>	 <p>King County Department of Natural Resources and Parks River and Land Resources Division Stormwater Services Section CONVEX TOWN, IDAHO</p>	<p>Channel 5 Section View</p> <p>DEVRIES ADAP 19309 W SNOQUALMIE VALLEY RD NE DUWALL, WA 98019</p>	<p>SHEET 12 OF 14 SHEETS</p> <p>5/11/2020</p>
SURVEYED: _____		PROJECT MANAGER: FREDERICK L. BECK, P.E.					
SURVEY DATE: MAY _____		DESIGNED: FREDERICK L. BECK, P.E.					
CHECKED: _____		DRAWING MODIFICATION NO.: _____					
REAL	DESIGN	BY	DATE				









Quote # QUO-365357-Q5B2N4					
Date	5/18/2020	Account Name	Snoqualmie Valley Watershed Improvement District	Reply-To	
Quote #	QUO-365357-Q5B2N4	Contact Name	Erin Ericson	Contech Rep.	Steven Costello
Revision #	1	Phone	(425) 549-0316	Address	6523 188th St. N.E., Arlington, WA, 98223
Quote Name	Agricultural Crossing	Fax		Phone	206-730-8090
		Email	erin@svwid.com	Fax	800-561-1271
Project City/State	Duvall, WA			Email	SCostello@conteches.com

Contech's offer to sell the products described in this quotation is expressly conditioned upon Buyer's assent to the Contech Conditions of Sale ("Contech COS") included herewith and/or viewable at [www.conteches.com/cos](http://www.conteches.com/cos). A valid tax exemption certificate must be issued to Contech or sales tax will be added.

Item #	Description	Pieces	Quantity	Extended Unit Price	Unit	Unit Total
	H/C ARCH 5X1 ALT2 LS 10G 142x91IN - Length : 15	4.00	60.00	\$326.12	FT	\$19,567.20
	CSP BD 10-C RVTD Arch AL T2 14GA 120" 3PC	2.00	2.00	\$557.73	EA	\$1,115.46
	LIFT LUG ATTACHED 3X1 - Notes for Quote : Lifting lugs. 4 per piece of pipe - if needed.	16.00	16.00	\$30.00	EA	\$480.00
					Total	\$21,162.66
					Freight	\$1,626.50
(Tax not included)					Net Total	\$22,789.16

#### Standard Notes

- 1.All orders must be shipped within 30 days of manufacture or a storage charge applies equal to a maximum of 5% per month of the selling price of the stored material.
- 2.Allowable unloading time for delivery trucks is one (1) hour. Demurrage charges of \$75.00 per hour thereafter will be added.
- 3.Construction loadings typically exceed the intended post-construction live load used for design. Contact your Contech representative for specific guidelines and limitations based on the construction live loads anticipated.
- 4.Flexible structures of the type on this project are reliant on the type of structural backfill used, the compaction of that material and the balanced placement of structural backfill. Contact your Contech representative for specific information.
- 5.For CMP (corrugated metal pipe), this quotation expires 15 days from the date shown. Prices are firm for shipment within 60 days of the date of quotation and are subject to a maximum escalation of 8% for each 30 days thereafter.
- 6.Prices are based on standardized loading to achieve full truckloads. If special loading requirements are needed additional freight charges will be added.
- 7.Quotation is based upon estimated (not guaranteed) quantities. Buyer must verify final quantities needed prior to commencement of work by Contech. If Buyer elects to purchase from Seller only a portion of the material quoted, Seller retains the right to adjust its prices.
- 8.The estimated manufacturing lead time for this material is 2-4 weeks from the receipt of approved submittal documents.
- 9.This material will be manufactured for this particular project and is not subject to cancellation. See Section 19 of the Contech COS.

#### Scope Of Work

##### Hel-Cor Pipe Arch

Corrugated Metal Pipe (Hel-Cor Pipe Arch) will be provided in standard lengths. Special lengths may be provided at an additional charge and are subject to manufacturing tolerances and shipping limitations.  
Prices quoted are based on nesting diameters whenever possible. If un-nested loads are required additional freight charges will be added.

PAYMENT TERMS ARE 1/2%-10, NET 30 DAYS FROM DATE OF INVOICE UNLESS MATERIAL IS OTHERWISE NOTED AS NON-STANDARD ABOVE. IF NON-STANDARD, PAYMENT TERMS ARE 1/3 AT ORDER ACCEPTANCE AND PRIOR TO START OF PRODUCTION, 2/3 NET 30 DAYS FROM DATE OF INVOICE. THIS OFFER IS SUBJECT TO CREDIT APPROVAL. PRICES QUOTED APPLY ONLY TO THE REFERENCED PROJECT AND ARE IN EFFECT FOR 30 DAYS FROM THE DATE OF QUOTATION. SELLER RESERVES THE RIGHT TO ADJUST PRICES AFTER 30 DAYS FROM THE DATE OF QUOTATION BUT THE CONTECH COS REMAIN APPLICABLE. PRICES ARE BASED ON ESTIMATED QUANTITIES SHOWN. IF A DIFFERENT QUANTITY IS PURCHASED, CONTECH RESERVES THE RIGHT TO ADJUST THE PRICES. THIS QUOTATION CONTAINS THE ENTIRE AGREEMENT WITH RESPECT TO PURCHASE AND SALE OF PRODUCTS DESCRIBED AND SUPERSEDES ALL PREVIOUS COMMUNICATIONS. BUYER'S SIGNATURE BELOW, DIRECTION TO MANUFACTURE, OR ACCEPTANCE OF DELIVERY OF GOODS DESCRIBED ABOVE, SHALL BE DEEMED AN ACCEPTANCE OF THE CONTECH COS. SELLER EXPRESSLY REJECTS ANY OTHER TERMS AND CONDITIONS. PRICES ARE F.O.B. ORIGIN WITH FREIGHT ALLOWED TO THE JOBSITE WITH UNLOADING BY OTHERS AT A TRUCK ACCESSIBLE LOCATION. THIS QUOTATION IS ISSUED BY CONTECH ENGINEERED SOLUTIONS LLC FOR ITSELF AND/OR ON BEHALF OF ONE OR MORE OF ITS SUBSIDIARIES, INCLUDING BUT NOT LIMITED TO KEYSTONE RETAINING WALL SYSTEMS LLC.

Acceptance	Contech Engineered Solutions LLC.
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Quote # QUO-365357-Q5B2N4		
WE HEREBY ORDER THE DESCRIBED MATERIAL SUBJECT TO ALL TERMS AND CONDITIONS OF THIS QUOTATION AND IN THE Contech COS INCLUDED HEREWITH AND VIEWABLE AT <a href="http://www.conteches.com/cos">www.conteches.com/cos</a>		By Steven Costello
Company	(O)	206-730-8090
By	(F)	800-561-1271
Title	(Cell)	
Date	Title	



Quote # QUO-365357-Q5B2N4

**Contech - CONDITIONS OF SALE**

1. **ACCEPTANCE.** This quotation is an offer to sell to potential customer(s). BUYER'S RIGHT TO ACCEPT THIS OFFER IS LIMITED TO BUYER'S ASSENT TO THE TERMS AND CONDITIONS PRINTED HEREON AND THE ATTACHED OR ACCOMPANYING QUOTE, AND NO TERMS ADDITIONAL TO OR DIFFERENT FROM THOSE IN THIS OFFER ARE BINDING ON SELLER. THERE ARE NO UNDERSTANDINGS, TERMS, CONDITIONS OR WARRANTIES NOT FULLY EXPRESSED HEREIN.

2. **LIMITED WARRANTIES.** Seller warrants that it can convey good title to the products sold under this contract and that they are free of liens and encumbrances. Seller also warrants that the products sold under this contract are substantially free from defects in material and workmanship for a period of one year after the date of delivery. There are no express or implied warranties with respect to products sold hereunder which are misused, abused or used in conjunction with mechanical equipment improperly designed, used or maintained, or which are used, supplied for use or made available for use in any nuclear application of which Seller has not been notified in writing by Buyer at the time of order for the products sold hereunder. SELLER MAKES NO OTHER WARRANTY WHATSOEVER, EXPRESS OR IMPLIED. ALL IMPLIED WARRANTIES OF MERCHANTABILITY AND ALL IMPLIED WARRANTIES OF FITNESS FOR ANY PARTICULAR PURPOSE ARE DISCLAIMED BY SELLER AND EXCLUDED FROM THIS CONTRACT.

3. **LIMITATION OF BUYERS REMEDIES AND SELLER'S LIABILITY.** Seller's liability hereunder shall be limited to the obligation to repair or replace only those products proven to have been defective in material or workmanship at the time of delivery, or allow credit, at its option. Seller's total cumulative liability in any way arising from or pertaining to any product or service sold or required to be sold under this contract shall NOT in any case exceed the purchase price paid by Buyer for such products or services. IN NO EVENT SHALL SELLER HAVE ANY LIABILITY FOR COMMERCIAL LOSS, LOST PROFITS, CLAIMS FOR LABOR, OR CONSEQUENTIAL, SPECIAL, PUNITIVE OR INCIDENTAL DAMAGES OF ANY TYPE, WHETHER BUYERS CLAIM BE BASED IN CONTRACT, TORT, WARRANTY, STRICT LIABILITY, NEGLIGENCE, OR OTHERWISE. IT IS EXPRESSLY AGREED THAT BUYER'S REMEDIES EXPRESSED IN THIS PARAGRAPH ARE BUYER'S SOLE AND EXCLUSIVE REMEDIES.

4. **LIMITATION OF BUYER'S REMEDIES AND SELLER'S LIABILITY FOR FAILURE OR DELAY IN DELIVERY.** NO DELIVERY DATES ARE GUARANTEED. BUYER'S SOLE AND EXCLUSIVE REMEDIES AND SELLER'S ONLY LIABILITY FOR ANY DELAY IN DELIVERY SHALL BE LIMITED AS SET FORTH IN PARAGRAPH 3 OF THIS CONTRACT.

5. **FORCE MAJEURE.** In any event and in addition to all other limitations stated herein, Seller shall not be liable for any act, omission, result or consequence, including but not limited to any delay in delivery or performance, which is (i) due to any act of God, the performance of any government order, any order bearing priority rating or order placed under any allocation program (mandatory or voluntary) established pursuant to law, local labor shortage, fire, flood or other casualty, governmental regulation or requirement, shortage or failure of raw material, supply, fuel, power or transportation, breakdown of equipment, or any cause beyond Seller's reasonable control whether of similar or dissimilar nature to those above enumerated, or (ii) due to any strike, labor dispute, or difference with workers, regardless of whether or not Seller is capable of settling any such labor problem.

6. **BUYER'S OBLIGATION TO PASS ON LIMITATION OR WARRANTIES AND REMEDIES.** In order to protect Seller against claims by Buyer's buyer, if Buyer resells any of the products purchased under this agreement, Buyer shall include the language contained in paragraphs 2 and 3 of this agreement, dealing with Seller's limitations of warranties and remedies, in an enforceable agreement with Buyer's buyer, or otherwise include language in an enforceable agreement with its buyer that makes Seller's limitation of warranties and remedies binding on its buyer. Buyer shall also include a provision in its agreement with its buyer applying Ohio law to any claims its buyer might assert against Seller with respect to products manufactured by Seller, and requiring its buyer to bring any such action against Seller either in federal district court in Cincinnati, Ohio or the common pleas court for Butler County, Ohio. Buyer shall defend, indemnify and hold Seller harmless from any and all claims, causes of action, damages, losses or expenses (including reasonable attorneys' fees) that Seller incurs by reason of Buyer's failure to comply with this paragraph.

7. **PASSAGE OF TITLE.** Title to the products sold hereunder shall pass upon delivery to the carrier at the point of shipment. Neither

Buyer nor the consignee shall have the right to divert or reassign such shipment to any destination other than specified in the bill of lading without permission of the Seller. Unless otherwise agreed Seller reserves the right to select the mode of transportation.

8. **PAYMENTS AND LATE CHARGES ON PAST DUE ACCOUNTS.** Buyer represents that Buyer is solvent and can and will pay for the products sold to Buyer in accordance with the terms hereof. If Buyer shall fail to comply with any provision or to make payments in accordance with the terms of this contract or any other contract between Buyer and Seller, Seller may at its option defer shipments or, without waiving any other rights it may have, terminate this contract. All deliveries shall be subject to the approval of Seller's Credit Department. Seller reserves the right, before making any delivery, to require payment in cash or security for payment, and if Buyer fails to comply with such requirement, Seller may terminate this contract. A late charge of 1-1/2% monthly (18% annual rate) or the maximum allowed by state law, if less, will be imposed on all past due accounts, and Buyer is responsible for all costs of collection including without limitation reasonable attorneys' fees and court costs.

9. **TRANSPORTATION CHARGES.** Delivered prices or prices involving competitive transportation adjustments shall be subject to appropriate adjustment to reflect changes in transportation charges.

10. **CLAIMS BY BUYER.** Buyer shall thoroughly inspect products sold under this contract immediately upon receipt to verify conformance with the specifications of the contract. Buyer must notify Seller of claims for failure or delay in delivery within 30 days after the scheduled delivery date. Buyer must notify Seller of any claims for nonconforming or defective products within 30 days after the nonconformity or defect was or should have been discovered. In addition, Seller must be given an opportunity to investigate the claim before Buyer disposes of the material, or else Buyer's claim will be barred. Seller shall incur no liability for damage, shortages, or other cause alleged to have occurred or existed at or prior to delivery to the carrier unless the Buyer shall have entered full details thereof on its receipt to the carrier.

11. **MECHANICAL PROPERTIES; CHEMICAL ANALYSES.** Data referring to mechanical properties or chemical analysis are the result of tests performed on specimens obtained from specific locations of the product(s) in accordance with prescribed sampling procedures; any warranty thereof is limited to the values obtained at such locations and by such procedures. There is no warranty with respect to values of the materials at other locations.

12. **PATENTS.** Seller shall indemnify Buyer against attorneys' fees and any damages or costs awarded against Buyer in the event any legal proceeding is brought against Buyer by a third person claiming the material delivered hereunder in itself constitutes an infringement of any U.S. patent, provided Buyer gives Seller prompt notice of any such suit being brought, gives Seller the opportunity to defend any such suit, and cooperates with Seller with respect to any such defense, unless the material is made in accordance with material designs, or specifications required by Buyer, in which case Buyer shall similarly indemnify Seller.

13. **PERMISSIBLE VARIATIONS.** The products sold hereunder shall be subject to Seller's standard manufacturing variations, tolerances and classifications.

14. **TECHNICAL ADVICE.** Buyer represents that it has made its own independent determination that the products it is purchasing under this contract meet the design requirements of Buyer's project and are suitable for Buyer's intended application. Buyer further represents that it has not relied in any respect on any written or oral statements or advice from Seller, other than the standard product specifications set forth in the most recent addition of Seller's published product brochures, in making that determination.

15. **TAXES.** No taxes imposed with respect of the sale of the products or services sold hereunder are included in any quotation by Seller. All applicable taxes shall be added and paid by Buyer in addition to the purchase price.

16. **BUYER'S RIGHT OF TERMINATION.** Buyer may terminate this contract in whole or in part upon notice in writing to Seller. Seller shall thereupon cease work and transfer to Buyer title to all completed and partially completed products and to any raw materials or supplies acquired by Seller especially for the purpose of performing this contract, and Buyer shall pay Seller the sum of the following:

- (1) the contract price for all products which have been completed prior to termination;
- (2) the cost to Seller of the material or work in process as shown on the books of Seller in accordance with the accounting practice

consistently maintained by Seller plus a reasonable profit thereon, but in no event more than the contract price;

- (3) the cost f.o.b. Seller's plant of materials and supplies acquired especially for the purpose of performing this contract; and
- (4) reasonable cancellation charges, if any, paid by Seller on account of any commitment(s) made hereunder.

17. **SELLER'S RIGHT OF TERMINATION.** In addition to the other rights of termination provided for in this contract, and if this contract is made pursuant to any governmental rule or regulation, plan, order or other directive, upon the directive, effected or impaired termination thereof, Seller shall have the option of canceling this contract in whole or in part.

18. **WAIVER.** Failure or inability of either party to enforce any right hereunder shall not waive any right in respect to any other or future rights or occurrences.

19. **DELIVERY.** Unless otherwise agreed to in writing by the Seller, the Buyer hereby agrees to take delivery of the materials on this order within the later of thirty (30) days after the wanted date shown on the face of the order or within thirty (30) days after notification, oral or written, that the materials are ready for shipment. In the event that the Buyer does not arrange to take delivery of the materials in accordance with this Contract, Seller, at Seller's option, may:

- (a) invoice the Buyer for the materials less freight if applicable; store the material in Seller's yard for a period not to exceed sixty (60) days from the date of invoice; charge a storage fee not to exceed 5% per month or fraction thereof of the selling price of the stored materials; add any applicable price increases listed on the face of the order; charge for any repair work to protective coatings harmed by weathering while such material is being stored; and charge applicable freight when shipment to the Buyer is made. Materials remaining in storage after sixty (60) days from the invoice date shall become the property of the Seller for disposition at the Seller's discretion. In that event, Buyer shall not be liable for the invoice price of the materials, but shall be liable for the storage fee and any repair work to protective coatings; or
- (b) cancel the order and invoice the Buyer for cancellation charges, which shall be 25% of the selling price of the materials if the materials are standard, in-stock material, or the full selling price if the materials are special or nonstandard in nature and were especially fabricated for the Buyer.

20. **PERIOD OF LIMITATIONS.** Buyer and Seller agree that any action by Buyer against Seller relating to this contract or the products sold hereunder, including, without limitation, any action for breach of contract or warranty, or otherwise in connection with the products sold under this contract, must be commenced by Buyer against Seller within one year after the cause of action therefore accrues or one year of delivery of the products sold hereunder, if less.

21. **CONFLICTING PROVISIONS OFFERED BY BUYER.** Any terms and conditions of any purchase order or other instrument issued by the Buyer, in connection with the subject matter of this document, which are in addition to or inconsistent with the terms and conditions expressed herein, will not be binding on Seller in any matter whatsoever unless accepted by Seller in writing.

22. **SEVERABILITY.** In case any provision of this contract shall be declared invalid, illegal or unenforceable, the validity, legality and enforceability of the remaining provisions shall not in any way be affected or impaired.

23. **APPLICABLE LAW.** This contract shall be governed by, and construed and enforced in accordance with, the laws of Ohio. Buyer and Seller specifically agree that any legal action brought relating to this contract shall be brought and tried exclusively in the federal district court in Cincinnati, Ohio, or, in the absence of jurisdiction, the Butler County Court of Common Pleas in Hamilton, Ohio.

REV. 03/15



# memorandum

date May 15, 2019

to Erin Ericson, Snoqualmie Valley Watershed Improvement District

from Eleanor S. Bartolomeo, PE

subject Devries Property Fish Passage Analysis

ESA is working with the Snoqualmie Valley Watershed Improvement District (SVWID) to provide recommendations for sizing two fish passable structures on agricultural property belonging to Rick DeVries. The property is located in unincorporated King County, northwest of the City of Duvall and is zoned agricultural and protected under the King County Farmland Preservation Program. It is currently used for grazing. Cows are excluded from the ditch by electrified, barbed wire. The project is located in the floodplain of the Snoqualmie River, approximately 1.6 miles west of the river itself.

This analysis is part of a larger sediment removal project designed and permitted by the King County Agricultural Drainage Assistance Program (ADAP) and implemented by the landowner. The drainage improvements will widen and deepen the channel and will necessitate removing and replacing two existing culverts. This report provides recommendations for sizing the replacement structures so that the crossing meet fish passage criteria.

## Site Description

### *Existing Channel Conditions*

The existing structures are small-diameter culverts that carry farm roads across an unnamed, man-made ditch. The ditch is part of a larger ditch network that connects to Pearson Eddy Creek and multiple points on the Snoqualmie River. ADAP estimated that the ditch receives drainage from approximately 180 acres, most of it pasture (ADAP 2018a).

ESA conducted a site visit on a rainy day in April 2019. At the time of the site visit, both culverts were backwatered with 8 to 12 inches of water. Groundwater elevations are likely to be the primary control on water surface elevations in this system. It is also likely that groundwater elevations are strongly tied to water levels in the Snoqualmie River. The water in the ditch was clear with little to no suspended sediment. Flow velocity was not measured, but there was visible movement of water through the culverts. ADAP surveyed the reach and found highly variable bed elevations and a very low channel slope, see Appendix A (ADAP 2018).

The two existing culverts are shown in Images 1 & 2. The downstream culvert, Culvert 1, is a 30-inch corrugated metal pipe and approximately 21-feet long. Culvert 2 is a 24-inch corrugated metal pipe and approximately 20



feet long. Culvert 2 is located approximately 175 feet upstream of Culvert 1. Less than 2 inches of sand and silt was present in both culverts. The existing ditch is a trapezoidal channel approximately 21 to 25 feet wide at top of bank and 5 to 7 feet deep. The banks are densely vegetated with reed canarygrass, which extends below the water line. Streambed sediments are silts and mud.

The road that crosses Culvert 1 is surfaced with a mix of dirt and gravel and is approximately 10 feet wide. It serves both the DeVries pastures and the neighboring property, which is used for timber production. The road 1 surface is 5.5 feet higher than the invert elevation of Culvert 1. Traffic on this road includes agricultural vehicles, such as tractors and small trucks, and logging trucks.

The road that crosses Culvert 2 is mostly grassed, with some patches of exposed dirt and is approximately 8 feet wide. The road 2 surface is approximately 5.4 feet higher than the invert elevation of Culvert 2. This road serves only a single pasture which is inaccessible by any other route. Traffic on this road includes only agricultural vehicles such as tractors and small trucks.

**Image 1: Culvert 1 Inlet**



**Image 2: Culvert 2 Inlet**

At a second site visit on May 7, 2019, ESA and Washington Department of Fish and Wildlife (WDFW) staff measured bankfull width (BFW) at multiple locations in the system for an average bankfull width of 3.18 meters (10.4 feet). Measurements and approximate locations are listed in Table 1 and shown graphically in Figure 1.

**Table 1: Bankfull Width Measurements**

Number	BFW (m)	Approx. Location
1	3.3	100' downstream of culvert 1
2	3.3	50' downstream of culvert 1
3	3.0	15' upstream of culvert 1
4	3.0	20' downstream of culvert 2
5	3.3	50' upstream of culvert 2
<b>Average</b>	<b>3.18</b>	

Since this is a constructed system, it was difficult to identify the usual markers of bankfull width. We identified bankfull width within the ditch's top of bank based on relatively subtly changes in the channel side slopes that could represent areas of sediment deposition. Channel geometry in this system is much more dependent on the desired level of drainage and the reach of an excavator than on natural processes.

Because of the structure's pastoral setting, there is a very low potential for large logs or other debris to block the culvert. There was some evidence of past sediment deposition in the ditch in the form of lower benches of softer material near the water line, but they were thoroughly grassed-over and showed no evidence of recent activity.

The fact that ditch maintenance is required indicates that sedimentation is likely an issue in this reach, and the crossing structures should be sized to accommodate that. Because the entire floodplain is inundated under several feet of water during the 100-year flow event (FEMA 1995), it is not necessary (or possible) for these culverts be sized to pass large flood events.

ADAP also used the bankfull width equation from the Stream Crossing Guidelines to estimate the bankfull width from the drainage area: Bankfull width =  $0.95 \times \text{watershed area}^{0.45} \times \text{average annual precipitation}^{0.61}$  (WDFW 2013). This yields a bankfull width of 5.75 feet. We used the measured bankfull width as the more conservative estimate.

### ***Future Channel Conditions***

ADAP is proposing to perform agricultural ditch maintenance through the project reach. This work will occur below the existing top of bank and will deepen the channel by one to two feet to produce an even 0.07% slope through this reach. At Culvert 1, the new channel invert will be approximately 2 feet below the existing culvert invert and 7.5 feet below the road surface. At Culvert 2, the new channel invert will be approximately 1.5 feet below the existing culvert inlet and approximately 7 feet below the road surface (ADAP 2018). ADAP's plans are included in Appendix A.

### ***Soils***

The Natural Resources Conservation Services (NRCS) maps the soils in the project area as Seattle Muck, Puget Silty Clay Loam, and Shalcar Muck (Appendix B). These are all organic-rich soils commonly found on floodplains and can be prime agricultural land when drained (NRCS 2016). These soils are fine grained and display poor drainage. They can also be highly compressible and have poor bearing capacity. If a bridge or a bottomless structure is selected for this location, SVWID will arrange for a consultant to prepare a full geotechnical report.

## ***Analysis***

### ***Fish Passage Methodology***

The Washington Department of Fish and Wildlife (WDFW) *Water Crossing Design Guidelines* ranks preference for fish passage repair approaches as follows:

- Abandon and remove the crossing
- Cross the stream with a floodplain spanning bridge
- Cross the stream with a smaller bridge
- Cross the stream with a Stream Simulation culvert
- Cross the stream with a No-Slope culvert
- Cross the stream with a Hydraulic Design culvert

Abandonment is not an option for either crossing as access is required to both pastures and a large wetland prevents overland access on the eastern side of the ditch (Figure 1). Because the ditch and the pastures are located in the middle of a very large floodplain, a floodplain spanning bridge would not be appropriate. Given the extremely soft soils and potential need for substantial footings a smaller bridge is not recommended.



The stream simulation approach uses the equation:  $1.2 \times \text{BFW} + 2$  feet to produce a culvert span that allows space for natural stream processes like meandering of the channel and overbank flows (WDFW 2013). In this system, a stream simulation structure would have a minimum span of 15 feet. However, these natural processes aren't functioning in this highly artificial, constrained system and could not be restored exclusively with a larger diameter culvert. Consequently, we suggest that the additional cost of larger structures is not justified in this location.

We recommend designing the structures using the no-slope culvert design guidelines. A no-slope culvert is the same span as the bankfull width of the stream and set at 0% slope. They are generally recommended for smaller streams (BFW less than 10 feet) and culvert lengths less than 75 feet in low gradient channels (WDFW 2013). The project ditch meets that design guidance. For this system, a culvert designed to meet no-slope criteria would have a minimum span of 10.4 feet at the culvert bed, and be countersunk 20% to 40% of its rise.

### ***Fish Passage Structure Design & Recommendations***

For cost and installation efficiency, the two crossing structures will be identical and will use pre-fabricated, commercially available structures. Proposed culvert lengths of 20 feet are suggested for both crossings to match existing structures. Per the discussion above, the proposed structure span at the channel bed is a minimum of 10.4 feet.

The required distance from the channel bed to the road surface is 7.0 to 7.5 feet. For metal culverts, some minimum depth of cover will be required between the top of the structure and the road surface. Cover requirements vary by structure shape and material, but for the span range under consideration, we estimate a required depth of cover in the 1- to 3-foot range. No-slope culvert design requires embedment depths of 20% to 40% of the structure's rise. Assuming that the structure needs to protrude approximately 5 feet above the channel bed to achieve the appropriate road elevations, the structure will need a total rise of 6.25 to 8.33 feet. Because the span of a pipe arch culvert is measured at its widest point, depending on the embedment depth, the culvert span may have to be wider than 10.4 feet to achieve the appropriate widths at the channel bed.

To achieve these dimensions, the structure could be an elliptical pipe, a pipe-arch, a box, a bridge, or a bottomless arch structure. (A round pipe would be too tall and would require excessive embedment.) As previously discussed, concrete bridges or other concrete structures are not recommended due to the poor bearing capacity of the site soils. Corrugated metal pipe is likely to be the most cost efficient, versatile, and readily available material in this size range. While the final structure dimensions will be defined while working with the fabricator based on their products, load capacity, and cover requirements, we recommend a structure with a span of approximately 11 feet and a rise of 7 feet. A sample, commercially pipe-arch structure that may be suitable for this site is shown in Appendix C.

If a bridge is selected as the crossing structure of choice, it would need to be long enough to span the ditch top of bank width and wide enough to carry the road with some factor of safety. ADAP's initial plans showed 25- to 30-foot bridge long spans with a width of 12 feet. Their bridge design also includes 10- to 20-foot long earthen approach ramps on each end to accommodate ground elevation differences across the ditch.

Stream substrate placed within the structure should be similar to that in the bed of the adjacent channel and should be stable at the design flow. The existing streambed is sand and silt. Sediment size was estimated using the Bathurst Method:  $D_{84} = 3.54 S^{0.747} (1.25 q_c)^{2/3} / g^{1/3}$  (WDFW 2013), which yields a  $D_{84}$  of 0.23 inches. We



recommend substituting the WSDOT “Streambed Sediment” mix with a  $D_{100}$  of 2.5 inches ( $D_{50}$  of 1 inch) and a well-graded distribution of finer particles. It is widely available in a consistent mix and designed for use in fish-bearing streams.

### **Culvert Hydraulics**

To ensure fish passability, WDFW recommends a maximum velocity of 4 feet/second at the 10% exceedance flow (10-year event) in January and May for structures less than 100 feet long. There are also minimum depth requirements of 0.8 feet for culverts without sediment in the bottom. While we do not intend to base our design on the hydraulic method, we reference it as an additional check on the passability of the design structures.

ADAP produced the following calculations of fish passage flow ( $Q_{fp}$ ) in cfs for this system (ADAP 2018):

A = Basin	0.28	square miles				
P = Precipitation	49	inches/year				
			a	b	c	Standard Error
January	$Q_{fp} = aA^bP^c$		0.125	0.93	1.15	48.6%
May	$Q_{fp} = aA^bP^c$		0.001	1.09	2.07	75%
				High (cfs)	Low (cfs)	
January	$Q_{fp} = 3.36$ cfs			4.99	1.73	
May	$Q_{fp} = 0.79$ cfs			1.38	0.20	

Based on these calculations, we selected a high flow fish passage design flow of 5 cfs and a low flow fish passage design flow of 0.2 cfs. To check the hydraulics of the proposed structure, we ran the Federal Highway Administration (FHWA) HY8 culvert simulation model for a 11-foot-diameter, round culvert embedded 40% of its rise (HY8 only has pipe arch options for spans of 17 feet or greater) and found a velocity of 2.6 feet/second at the design flow at a flow depth of 0.25 feet (not accounting for backwater effects). These results demonstrate that the proposed structure meets the hydraulic requirements for fish passage (depth requirements are not applicable for structures containing substrate).

### **Structure Selection**

#### **Costs & Lead Time**

The following table estimates approximate costs and lead times for structures similar to those discussed in this document. This is not a definitive summary of all of the suppliers and products that may be appropriate for this site. We recommend the pipe-arch culvert listed at the top of the table. The product specifications and pricing will be further refined in the procurement process.

**Table 2: Structure Costs**

Structure	Supplier	Cost (per each)	Lead Time
10.7' x 6.9' x 20' aluminized steel pipe-arch culvert	Contech Engineered Solutions	\$11,000 - \$15,000	3 to 6 weeks
30' x 12' concrete bridge	Pacific Bridge Company	\$45,000 to \$60,000 (not including footings)	7 to 13 weeks
30' x 13' railcar bridge	Rick Franklin Corp.	\$19,500 to \$22,000 (not including footings or delivery)	4 to 6 weeks
12' x 8' concrete box culvert with lid	Oldcastle Concrete	\$35,000 to \$55,000	16 to 20 weeks

Additional costs associated with the project will include:

**Table 3: Additional Costs**

Item	Cost per culvert
Streambed Sediment	\$1,800 to \$2,500
Bedding	\$500 to \$800
Installation	\$5,000 to \$15,000

The installation costs reflect the level of effort expected to install a corrugated metal culvert. These costs do not include dewatering or erosion control because we assume those activities have been scoped and paid for as part of the larger dredging project. Bridge or concrete culvert installation costs would be higher due to the additional equipment needs and the cost of designing and installing appropriate footings.

## References

ADAP, 2018a. Unpublished data.

ADAP, 2018b. DeVries ADAP Waterway Maintenance Plan.

FEMA, 1995. Effective FIS Report.

NRCS, 2016. Web Soil Survey. <https://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx>. Accessed 4/30/2019.

WDFW 2013. Water Crossing Design Guidelines.  
<https://wdfw.wa.gov/sites/default/files/publications/01501/wdfw01501.pdf>

**King Conservation District Board of Supervisors Meeting 07/13/2020  
Agenda Action Briefing/Report AI 20-037**

**SUBJECT:**

Approve KCD Landowner Incentive Program cost-share application from Jason Ritter and Hyeyoung Moon, for Riparian Forest Buffer, in the amount of \$5,971.00.

**FISCAL IMPACT**

The current balance of cost-share funding for KCD LIP 2020 is summarized in the following table:

2020 LIP Cost-share Available	<b>\$261,756.30</b>
Current Request	<b>\$5,971.00</b>
Balance Remaining	<b>\$255,785.30</b>

**POLICY CONSIDERATION**

This proposed cost-share contract has been vetted through a staff approval committee and meets NRCS standards for the applicable best management practice (BMP). The application has been advanced for due pass by the Board of Supervisors.

**STAKEHOLDER INTERESTS**

- District cooperators working with District farm management, forestry and aquatic area enhancement programs
- King CD Board members and staff

**BACKGROUND**

Jason Ritter and Hyeyoung Moon have a residential property along the south bank Snoqualmie River just below Snoqualmie Falls. Their house is set well back several hundred feet from the bank with a gentle slope leading down to the river. Mr. Ritter expressed concern with bank erosion along his stretch of Snoqualmie River and has observed several feet of bank loss in recent years. KCD's engineer looked at this issue and deemed it to be a natural process of river migration posing no risk to existing structures. Mr. Ritter, Ms. Moon and KCD agree that installation of mature native vegetation will give some level of increased bank stabilization and also provide better shade and fish and wildlife habitat along the Snoqualmie River.

The proposed project area is in a natural space unmaintained area of their yard. The area has a moist seep running through it and there is a 7 foot vertical eroding bank leading down to the Snoqualmie. Previous clearing and mowing has occurred to maintain river view corridors from the house. The project area is mixed with some natives but mainly non-native noxious weeds. Existing native plants include 3-4 mid aged conifers (Cedar, Douglas Fir, Hemlock) highly limbed up (not topped) for views, as well as willow, Red Osier Dogwood, Vine Maple, and ferns. Most of the site (especially closer to the water) is dominated by Blackberry, Reed Canary Grass, and Morning Glory.

The proposed project area encompass the full length of the landowner's shoreline along the south bank of the Snoqualmie River. The project area dimensions are a 9,965 square foot area along 135 feet of shoreline on south bank Snoqualmie River. The buffer width will be at minimum 35 feet and extend up to a 100 feet in width in other places. KCD will install approximately 800 native plants including trees, shrubs and ground cover. The cooperator will maintain a small walking path through the project down to the bank.

**King Conservation District Board of Supervisors Meeting 07/13/2020**  
**Agenda Action Briefing/Report AI 20-037**

**EFFECTIVE DATE**

The cost-share award will become effective upon approval by the Board of Supervisors and the LIP contract will become effective upon signature by a Board representative.

**RECOMMENDATION**

Staff seeks Board approval of Landowner Incentive Program cost-share application from Jason Ritter and Hyeyoung Moon, for a Riparian Forest Buffer, in the amount of \$5,971.00.

**MOTION**

*\_\_\_\_\_ Moved, \_\_\_\_\_ Seconded; Passed a motion to Approve KCD Landowner Incentive Program cost-share application from Jason Ritter and Hyeyoung Moon, for a Riparian Forest Buffer, in the amount of \$5,971.00.*



# KING CONSERVATION DISTRICT (KCD) LANDOWNER INCENTIVE PROGRAM APPLICATION

## Aquatic Area Enhancement Project

### Section 1. Applicant (If applicant is not the landowner, then landowner must also sign the agreement)

Applicant Name: Jason Ritter and Hyeyoung Moon		Farm/Business Name: none	
Mailing Address: 34902 SE David Powell Rd Fall City, WA 98024		Project Address: Same	
Phone (home):		Phone (work/mobile): 425.503.8286	
Email Address: ritterjason1@comcast.net		KCD Staff: Jacobus Saperstein	
Parcel #(s): 2324079035	<input type="checkbox"/> Incorporated <input checked="" type="checkbox"/> Unincorporated	Total Farm/Land Acreage: 2	<input checked="" type="checkbox"/> T.A. <input type="checkbox"/> Farm Plan <input type="checkbox"/> Forest Plan
Is email an acceptable primary form of communication?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Would you like to be added to our newsletter list?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

### Section 2. Project Information

Best Management Practice (BMP): Riparian Forest Buffer
Project Completion Date (month and year): June 2021
<p><b>Current Site Conditions</b> <i>(Provide a brief summary of resource management problem addressed by BMP: note streams, wetlands, and steep slopes near or within the project area):</i></p> <p>Residential property along the south bank Snoqualmie River just below Snoqualmie Falls. House is set well back several hundred feet from the bank with a gentle slope leading down to the river. Landowner is very concerned with bank erosion along his stretch of Snoqualmie river and has observed several feet of bank loss in recent years. KCD's engineer (Pete Landry) looked at this issue and deemed to be a natural process of river migration with no reasonable engineering solution or need (no structures in harm's way). Landowner and KCD agree that installation of mature native vegetation will give some level on increased bank stabilization and also provide better shade and habitat along the Snoqualmie River.</p>
<p><b>Project Details</b> <i>(Provide a brief summary of the project. Include acres treated, linear feet of stream enhanced, length of fence, types and numbers of plants, etc.):</i></p> <p>Project area is in a natural space unmaintained area of their yard. Previous clearing/mowing has occurred to maintain river view corridors from the house. The project area is mixed with some natives but mainly non-native noxious weeds. Project area has a moist seep running through it and there is a 7' vertical eroding bank leading down to the Snoqualmie. Landowner will maintain a small walking path through our project down to the bank. Most of the site (especially closer to the water) is dominated by Blackberry, Reed Canary Grass, and Morning Glory.</p> <p>Project will encompass 9,965sq. ft. project area along 135' shoreline on South bank Snoqualmie River, this is the full length of landowner's shoreline. Plantings will be a minimum 35' wide and in some places extend to 100' in width.</p> <p><b>Maintenance Plan:</b></p> <p>King CD will maintain the project for 3-5 growing seasons. Activities will include control of invasive species and replanting if survivorship falls below 80%. The landowner is responsible for maintaining the project and providing photos for the remaining 10-12 years of the practice. Photos must be submitted by 9/1 of each year.</p>

Permits (List all permits required to complete this project):

Yes, Aquatic Noxious Weed General Permit has been obtained from the Washington State Department of Ecology and Washington State Department of Agriculture: Permit

**Photos:** KCD Resource Planner must submit before photos with this application.

### Section 3. Cost-share Programs

A. Have you previously applied for cost-share through the KCD Landowner Incentive Program (LIP)?

☐ Yes ☒ No

If yes, please list contract number and BMP below:

B. Are you applying for (or received) funding (cost-share or grants) through other agencies or programs?

☐ Yes ☒ No

Please describe below:

1. **King County Cost-share**

Please list practices and date installed below:

2. **NRCS EQIP (Natural Resources Conservation Service's Environmental Quality Incentive Program)**

Please list practices and date installed below:

3. **Other**

Please list agency and describe project:

**Other Cost-Share History/Notes:**

### Section 4. Budget (attached as Exhibit A)

KCD will plan and install the Best Management Practice (BMP) on behalf of the Applicant. A detail of the project budget with line items for planning, installation, maintenance and cost-share ratios are attached as Exhibit A. Upon BMP installation, KCD will invoice the Applicant for the Applicant Cost-share listed in the following table. Applicant cost-share is due 30 days after receipt of a KCD invoice.

Program Cost-share	Cost-share Ratio	Amount
King CD Landowner Incentive Program	50%	\$ 5,971.00
King CD Aquatic Area Enhancement Program	40%	\$ 4,776.80
Washington State Conservation Commission	%	\$ 0.00
Other (specify) -	%	\$ 0.00
Other (specify) -	%	\$ 0.00
Applicant Cost-share	10%	\$ 1,194.20
TOTAL	100%	\$ 11,942.00

## Section 5. Education and Outreach

KCD encourages public education through demonstration projects. Demonstration projects are used to educate other landowners about innovative ways to address natural resource concerns. A demonstration project may be showcased in a guided tour, or featured in presentations or written fact sheets.

A. Will you consider becoming a demonstration project?

☐ Yes ☒ No

## Section 6. Maintenance and Monitoring Expectations

The applicant is responsible to maintain the Best Management Practice (BMP) to standard as detailed in the attached Job Sheet for the lifetime of the BMP.

- ☒ A. I understand the lifetime of the BMP is **15** years.
- ☒ B. I understand KCD will coordinate and conduct maintenance and replanting for the first three years of the lifetime of the BMP. After that, KCD will work with the Applicant to verify proper maintenance of the installed BMP. Verification of maintenance includes a combination of site visits with KCD staff members who will take photos of the project, and annual photo documentation submitted by the applicant for the lifetime listed in Section 6A.
- ☒ C. I understand I am obligated to maintain and monitor the BMP **for the lifetime listed in Section 6A.**

## Section 7. Application and Agreement

I request financial assistance (cost-share) under the KCD LIP to install the Best Management Practice (BMP) described in this application and detailed in the attached *Job Sheet and Map*. This practice is needed to solve the natural resource problems described in Section 2 of this application. This Agreement expires if the project is not completed by the specified completion date in Section 2 or in an approved timeline revision request. JR/HM (Initial Here)

I authorize KCD to secure the applicable local, state and federal permits and to install the BMP on my behalf, and I agree to work cooperatively with KCD to obtain these permits. JR/HM (Initial Here)

I agree to work cooperatively with KCD to ensure the funded BMP is maintained consistent with the design life identified in the attached Job Sheet and in Section 6 of this application. JR/HM (Initial Here)

I agree to indemnify, defend, and hold harmless KCD, its elected or appointed officials, employees and agents, from all claims, alleged liability, damages, losses to or death of person or damage to property allegedly resulting from the negligent or intentional acts of the applicant or any of its employees or agents which may occur during the course of KCD's performance of the installation of the BMP provided in connection with this Agreement. JR/HM (Initial Here)

I represent that the information provided in Section 3 of this application is a full disclosure of all other natural resource financial cost-share relationships in which I have or am participating. JR/HM (Initial Here)

I understand that LIP cost-share is contingent upon installing the BMP to the minimum standard planned by KCD, and that KCD will verify and photo document standard compliance through its coordination of BMP installation. JR/HM (Initial Here)

I understand that in cases where I become the recipient of a KCD LIP cost-share reimbursement there may be federal tax liability associated with the reimbursement. When this occurs, KCD will issue a 1099-G for reimbursements made through the LIP. I understand that KCD cannot provide advice with respect to the tax liability associated with LIP cost-share reimbursements. JR/HM (Initial Here)

I understand that I am applying for public funding and am responsible for notifying a buyer upon sale or loss of the property of the installed BMP. If I sell or lose control of the property covered by this Agreement and the new owner or transferee does not assume responsibility for maintaining the installed BMP as required by this Agreement, I may be required to refund all or a portion of cost-share reimbursements received through this Agreement. In the event litigation is commenced by KCD to recover a refund of any cost-share reimbursements received through this Agreement, attorney's fees and costs incurred by the prevailing party in such action shall be paid by the non-prevailing party. JR/HM (Initial Here)

I give permission to KCD to photograph my property to document the site conditions and/or the implementation and maintenance of the funded practice. In the event that I or any of my family members or dependents choose to be photographed in a setting that reflects the assistance provided by KCD, I give KCD permission to publish such photographs in KCD promotional literature, advertising, social media, and other public displays. The photographs will be the property of KCD and may be used by KCD at any time, in the manner described above, without my additional consent. JR/HM (Initial Here)

I understand that this Agreement is subject to disclosure under the Public Records Act, Chapter 42.56 RCW. JR/HM (Initial Here)

I understand that I will no longer be eligible for KCD cost-share funds if one or more of the following occurs: JR/HM (Initial Here)

a. The KCD funded BMP fails within its design life due to circumstances within my control (e.g., neglect, failure to maintain the BMP, destruction of the BMP before expiration of the design life, or other actions which cause the KCD funded BMP to become non-viable).

*Note: Landowners are not responsible for BMP failure caused by circumstances beyond their control (e.g. fire, flood, storm damage, etc.)*

b. I relinquish or lose ownership of equipment purchased with KCD cost-share.

c. The KCD funded BMP is not being used for the intended purpose (e.g. cross fencing purchased with KCD funding, but no animals on property).

d. I cancel two cost-share contracts awarded through the KCD Landowner Incentive Program.

e. I deny KCD staff access to my property to verify BMP maintenance.

I understand KCD will provide two signs, an LIP sign and aquatic area buffer sign, free of charge, and I agree that: JR/HM (Initial Here)

a. I will select a visible location on my property for display of the LIP sign and will install it.

b. KCD will install the aquatic area buffer sign adjacent to the installed aquatic area enhancement project.

c. I will maintain the signs and keep them free of visual barriers for at least five years after installation.

d. I am not responsible for damage to the sign that is beyond my control (e.g. auto accident, storm damage, vandalism, etc.)

Hyeyoung Moon

*Jason Ritter*  
Signature of applicant

06/22/20

Date

Hyeyoung Moon

*Hyeyoung Moon*  
Signature of Landowner (If applicant If Lessee)

06/22/20

Date

FOR KCD OFFICE USE

Approved for Award (KCD LIP Coordinator)

Date

Approved for Funding (KCD Management)

Date

LIP ID:



## Scope of Work for:

Jason Ritter and Hyeyoung Moon

34902 SE David Powell Rd, Fall City 98024

Date: 5/14/2020

Name of Project: Ritter,J\_2020



**Narrative Scope of Work:** 9,965sq. ft. project area along 135' shoreline on South bank Snoqualmie River. Project will focus on removal of non-native noxious weeds onsite (primarily blackberry) followed by the installation of dense native plantings of trees and shrubs. Special attention will be given to placement of coniferous trees to allow for the maintenance of a sightline view corridor to the river from home. Plantings will have a minimum width of 35' but where possible extend 100' in width.

	Days/Units/Hours	Cost Per	Subtotals	
WCC Days: Site Prep	3	\$ 1,360.00	\$ 4,080.00	
WCC Days: Planting	3	\$ 1,360.00	\$ 4,080.00	
WCC Days: Plant protection	1	\$ 1,360.00	\$ 1,360.00	
			\$ 9,520.00	
<b>Materials (10% Landowner cost share)</b>				
Plants - Trees 18'oc	31	\$ 7.00	\$ 217.00	
Plants - Shrubs 4'oc	390	\$ 3.50	\$ 1,365.00	
Plants - Willow Stakes 4'oc	400	\$ 1.00	\$ 400.00	
Tree protection - Protex Pro/Gro (blue 18")	800	Donated	\$ -	
Bamboo Stakes 3/8" x 3' (500)	2	\$ 60.00	\$ 120.00	
Wood Stakes 2" x 2" x 48' (50)	1	\$ 100.00	\$ 100.00	
Conifer Deer Fencing (5'x100' roll covers 12 trees	2	\$ 110.00	\$ 220.00	
			\$ 2,422.00	
<b>Cost Share Estimate</b>			<b>\$ 11,942.00</b>	
<b>10% Landowner Cost Share</b>			<b>\$ 1,194.20</b>	
<b>KCD Staff Time (non cost share)</b>				
Jacobus Planning	20	\$ 62.00	\$ 1,360.00	
Jacobus IMPL	20	\$ 62.00	\$ 1,360.00	
			\$ 2,720.00	
<b>Installation Total Estimate</b>			<b>\$ 14,662.00</b>	
<b>Task 4: 3 Year Maintenance Estimate (free)</b>				
Crew Days in field:	5	\$ 1,400.00	7,000.00	
Project Management	20	\$ 62.00	1,240.00	
Materials (mulch, replanting)			200.00	
			8,440.00	
<b>Project Grand Total Est.</b>			<b>\$ 23,102.00</b>	
<b>Cost Share Breakout</b>	<b>WSCC Funds (0%)</b>	<b>KCD (90%)</b>	<b>Landowner funds (10%)</b>	<b>Total</b>
Labor		\$ 8,568.00	\$ 952.00	\$ 9,520.00
Materials		\$ 2,179.80	\$ 242.20	\$ 2,422.00
Total	\$ -	\$ 10,747.80	\$ 1,194.20	\$ 11,942.00



# JOB SHEET

## *Aquatic Area Buffer Planting- Riparian Forest Buffer*

Landowner: Jason Ritter and Hyeyoung Moon	Lifetime of Practice: 15 years
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<b>Purpose (check all that apply)</b>	
<input checked="" type="checkbox"/> Create shade to lower or maintain water temperatures to improve habitat for aquatic organisms	<input type="checkbox"/> Improve forest health reducing the potential of damage from pests and moisture stress
<input checked="" type="checkbox"/> Create or improve riparian habitat and provide a source of detritus and large woody debris	<input checked="" type="checkbox"/> Restore natural riparian plant communities
<input type="checkbox"/> Reduce excess amounts of pollutants in surface runoff and reduce excess nutrients and chemicals in shallow groundwater flow	<input checked="" type="checkbox"/> Improve wildlife habitat
<input type="checkbox"/> Reduce pesticide drift entering water body	<input checked="" type="checkbox"/> Increase carbon storage in vegetation and soils, and increase biomass in soils

<b>Current Site Conditions</b> <i>Provide a summary of the resource management problems addressed by the BMP. Also note any other current conditions pertinent to the project (slopes, erosion, flow, drainage)</i>
<p>Residential property along the south bank Snoqualmie River just below Snoqualmie Falls. House is set well back several hundred feet from the bank with a gentle slope leading down to the river. Landowner is very concerned with bank erosion along his stretch of Snoqualmie river and has observed several feet of bank loss in recent years. KCD's engineer (Pete Landry) looked at this issue and deemed to be a natural process of river migration with no reasonable engineering solution or need (no structures in harm's way). Landowner and KCD agree that installation of mature native vegetation will give some level on increased bank stabilization and also provide better shade and habitat along the Snoqualmie River.</p>

<b>Riparian Forest Buffer Practice and Details</b> <i>Provide the following:</i>
<ol style="list-style-type: none"> <li>1) a basic description of the proposed planting area</li> <li>2) calculate and record the square footage (acreage) of the planting area, the number of trees and shrubs to be planted, the linear footage of stream enhanced, the average and minimum width of the buffer:</li> <li>3) list any native plant species currently existing on site</li> <li>4) list native trees and shrubs selected for the project</li> <li>5) please attach your proposed planting plan</li> </ol>
<p>1) Project area is in a natural space unmaintained area of their yard. Previous clearing/mowing has occurred to maintain river view corridors from the house. The project area is mixed with some natives but mainly non-native noxious weeds. Project area has a moist seep running through it and there is a 7' vertical eroding bank leading down to the Snoqualmie. Landowner will maintain a small walking path through our project down to the bank. Most of the site (especially closer to the water) is dominated by Blackberry, Reed Canary Grass, and Morning Glory.</p> <p>2) Project will encompass 9,965sq. ft. project area along 135' shoreline on South bank Snoqualmie River, this is the full length of landowner's shoreline. Plantings will be a minimum 35' wide and in some places extend to 100' in width.</p>

3) 3-4 mid aged conifers (Cedar, Douglas Fir, Hemlock) highly limbed up (not topped) for views, these are more on project upper edge and not really in our project site. Other natives include willow, Red Osier Dogwood, Vine Maple, and ferns.

4) Sitka Spruce, Western Red Cedar, Douglas Fir, Pacific Ninebark, Red Osier Dogwood, Salmonberry, Sitka Willow, Mock Orange, Nootka Rose, Oceanspray, Red Flowering Currant, Serviceberry, Snowberry, Tall Oregon Grape, Vine Maple

5) See attachments

**Permits** *Are there any permits necessary for the project? If so, please list below and include a copy of the permit*

Yes, Aquatic Noxious Weed General Permit has been obtained from the Washington State Department of Ecology and Washington State Department of Agriculture: Permit #WAG993000.

**Type and Source of Plant Material** *Will you use potted plants, bareroot plants, b&b plants or a combination? Where will you get the plants from and when?*

Plant material will be native species adapted to the site to minimize maintenance and care.

King Conservation District, the contractor, will plant 1 and 2 gallon containers, live stakes, and/or bareroot material that have been sourced from the Puget Sound region. If additional plant material is purchased to augment the initial planting, that material can be bareroot, live stake, or potted nursery stock. There are a number of local native plant nurseries where native trees, shrubs and emergents can be purchased. Refer to the attached list of native plant nurseries for local King County sources of native plant material as well as sources in the greater Puget Sound region.

**Site Preparation** *List what method(s) of site preparation will be used, who will be doing the work, when will the work be done.*

Specific weed control prescriptions are detailed below. If brush and debris are removed from the stand, all material will be hauled off-site or masticated /chipped in a staging area. If masticated material is intended for use as mulch on the site, invasive species should not be included in the masticating/chipping process.

*Weed Control Prescriptions:*

Himalayan & Evergreen Blackberry Control –

- *Manual control:* Mow or cut the blackberry canes to less than 1 foot in height, then grub/dig out the roots attached to the cut canes. Thorough removal of blackberry roots in this manner, while labor intensive can reduce the blackberry population and cover in the prepared area by 90 – 95%. Monitor for re-growth in the following growing seasons; dig up any re-growth.
- *Chemical Control:* An alternative control method includes herbicide. One technique involves cutting/mowing the canes and swabbing the freshly cut canes with an approved herbicide. Foliar spray of blackberry is another effective control method. It is recommended that blackberry is mowed early in the summer and sprayed on the foliar re-growth the next fall (September/October). Do not spray planted seedlings. **Always follow label rates and instructions.**

Reed Canary Grass Control –

- *Manual Control:*

- 1) Mowing reed canary grass depletes carbohydrate root reserves, and if done repeatedly it will result in the thinning or death of the grass. The ideal time to mow is at or near the flowering stage. The grass should be cut as near to the ground as possible (1 inch or lower). Twice yearly mowing (in early-mid June and early October) has shown increased survivorship of native plants planted into reed canary.
  - 2) Shading is highly effective in reducing reed canary grass stands. A dense planting of conifers, once established, is ideal for shading. Faster growing deciduous trees and shrubs, especially those that develop foliage in the early spring, combined with an under-planting of conifers can be effective. Artificial methods of shading can be used in conjunction with native plantings. Sheets of thick cardboard or landscaping fabric placed around each individual plant should be secured to the ground by long staples or stakes and covered with 5-6 inches of mulch. The combination of sheeting and mulch provides temporary suppression of the grass, allowing the desirable vegetation to thrive without competition. *Not recommended for flood prone areas.*
- *Chemical Control:* Herbicide can be effective in elimination of Reed Canary grass when properly applied. Studies show that spraying Glyphosate (the active ingredient in products such as ®Rodeo) after a stand is mown or when the grass has the minimum available carbohydrate reserves (after flowering) is an effective control method. Follow-up spraying the next year may be necessary to eliminate the remaining grass. **Always follow label rates and instructions.**

#### Morning Glory/Bindweed Control-

- *Manual Control:* Manual control of bindweed is difficult and must span many growing seasons. Bindweed has extensive root and rhizome systems that can live without light and re-sprout from small fragments, thus avoid digging or tilling soil around mature bindweed. Hand pulling of plant will eventually work if done regularly and over multiple years. Be sure to pull plant before it has produced seeds. Mowing is not recommended.
- *Chemical Control:* Chemical control of bindweed is difficult and must span multiple growing seasons. As bindweed grows around desirable plants, herbicides can be painted or brushed on foliage to reduce drift. Products with the active ingredient glyphosate are effective when applied in the summer and fall before the leaves die back. This product is non-selective and will kill other foliage and grass it comes into contact with. Other effective active ingredients include triclopyr and 2,4-D. Repeat applications of herbicide may be needed. **Always follow label rates and instructions.**

#### **Care and Temporary Storage of Purchased Plant Material** *Upon receiving the plant material, where will you store it and how will you care for it?*

All plant material should be stored in a cool location and well watered prior to planting. In the case of bare root plants, inventory should be held in the source refrigerated facility as long as possible prior to planting. Bare root plants can be stored in the field for up to one to three weeks prior to planting by placing them in a shaded location where they will remain cool. Such a location should prevent freezing as well as exposure to warm temperatures. Additionally, bareroot inventory should be covered with a tarp to prevent drying. Bareroot stock that is expected to emerge from dormancy prior to planting should be "healed" into a soil bed. To heal-in, dig a v-shaped trench to a depth that accommodates covering the seedling roots when back-filled with soil.

#### **Installation** *Provide the following details: 1) Plant Installation Prescription: 2) Plant Protection Prescription: 3) Weed Suppression Prescription: 4) Erosion Control Prescription*

##### *1) Plant Installation Prescription:*

Live Stake Inventory: Live Stakes and whips should be planted using a planting bar. Stakes and whips are to be 3 to 4 feet long, and a minimum of ½ inch in diameter. Stakes should be stored in a bucket of water until planted.



Buds should face up in the bucket. Soaking before planting greatly increases the survival of live stakes and whips. Refer also to the attached planting instructions in *Planting Live Hardwood Stakes*.

Potted & Plug Inventory: Potted plant material should be shovel planted to the same depth that they grew in the pot. Plants will be well watered prior to planting. Prior to digging a hole for the plant, prepare the planting location by removing a grass sod within a 1.5 feet diameter circle, being careful to remove roots as well as above ground portions of the plant. Dig a hole for the container in the center of this cleared circle twice the size of the plant's pot. Backfill the hole with soil while using care to avoid leaving air pockets in the soil. Refer also to the attached planting instructions in *Planting Container Trees and Shrubs*.

Bareroot Inventory: Bare root seedlings should be shovel planted to the same depth that they grew in the nursery fields. Roots will remain moist once they are removed from the shipping bundles until they are planted. Roots will be placed in a natural position in the soil without being crowded or turned up. Soil will be packed firmly around the root system, leaving no air pockets. Prior to digging a hole for the plant, prepare the planting location by removing all grass sod within a 1.5-foot diameter circle, being careful to remove roots as well as above ground grass. Dig a hole for the bare root plant in the center of this cleared circle. Refer also to the attached planting instructions in *Planting Bare Root Trees and Shrubs*.

## 2) Plant Protection Prescription:

Tree Protectors (for sites where deer/elk browse is anticipated): Install fencing, 3 foot diameter and 5 feet high, on newly planted Western Red Cedar to protect trees from deer browsing. Weave 6 foot bamboo stakes fencing and shove at least 8 inches into the ground in order to stabilize.

Basal Wrapping & Tree Protectors (for sites where vole/mouse herbivory is anticipated): Voles, mouse-like animals, are especially present in meadow and pasture areas and target trees and shrubs primarily in the winter when other food sources are scarce. They will readily girdle small trees and shrubs and tunnel through and eat root systems. Vole damage is hard to catch before it occurs. If voles or vole activity have been seen at a site, steps must be taken to protect young plants directly after they are planted. Start by managing other vegetation near the plant by weeding or mowing and not leaving vegetation as thatch. Be sure that mulch is not too close to the base of the plant as loose mulch may encourage voles. Plant protectors and basal wrappings may also be installed. These protectors can plastic, mesh, or galvanized steel hardware cloth (1/4 or 3/8 inch). Circle the base of the plant with the material and create a tube by securing the material to itself. Be sure to leave room for growth. Then bury the bottom a few inches into the soil. Recommended height is 12 inches.

**Fencing** *Is fencing going to be installed? If so, what type, who will install it and when?*

**Site does not need any fencing. No farm animals on site.**

**Planting Project Maintenance and Monitoring** *The planting must be inspected periodically and protected from damage so proper function is maintained. The goal for the project is to reach 80% survival after 3 years. Please describe the maintenance and monitoring plan.*

**King CD will maintain the project for 3-5 growing seasons. Maintenance activities will include control of invasive species and replanting if survivorship falls below 80%. The landowner is responsible for maintaining the project and providing photo documentation of practice maintenance for the remaining 10-12 years of the practice. Photos must be submitted by 9/1 of each year.**

Treatments must be inspected periodically and protected from damage so proper function is maintained and resource damage is minimized, including assessment of insects, disease and other pests, storm damage, and damage by trespass. The results of inspections shall determine the need for additional treatment under this practice.

Replace dead or dying trees and shrubs and control competing vegetation to support successful establishment. Periodic application of mulch may be needed to maintain plant vigor. Periodic harvest of trees and shrubs (thinning and brushing) may be necessary to maintain the health and vigor of the stand and support its development toward more mature stand conditions. Keep large dead and dying trees for cavity nesting wildlife and bird species and as a source of downed wood in the forest understory and in adjacent or interior aquatic habitats.

If areas were brushed in order to plant trees, maintain these openings until the leader of the tree surpasses the height of the surrounding vegetation.

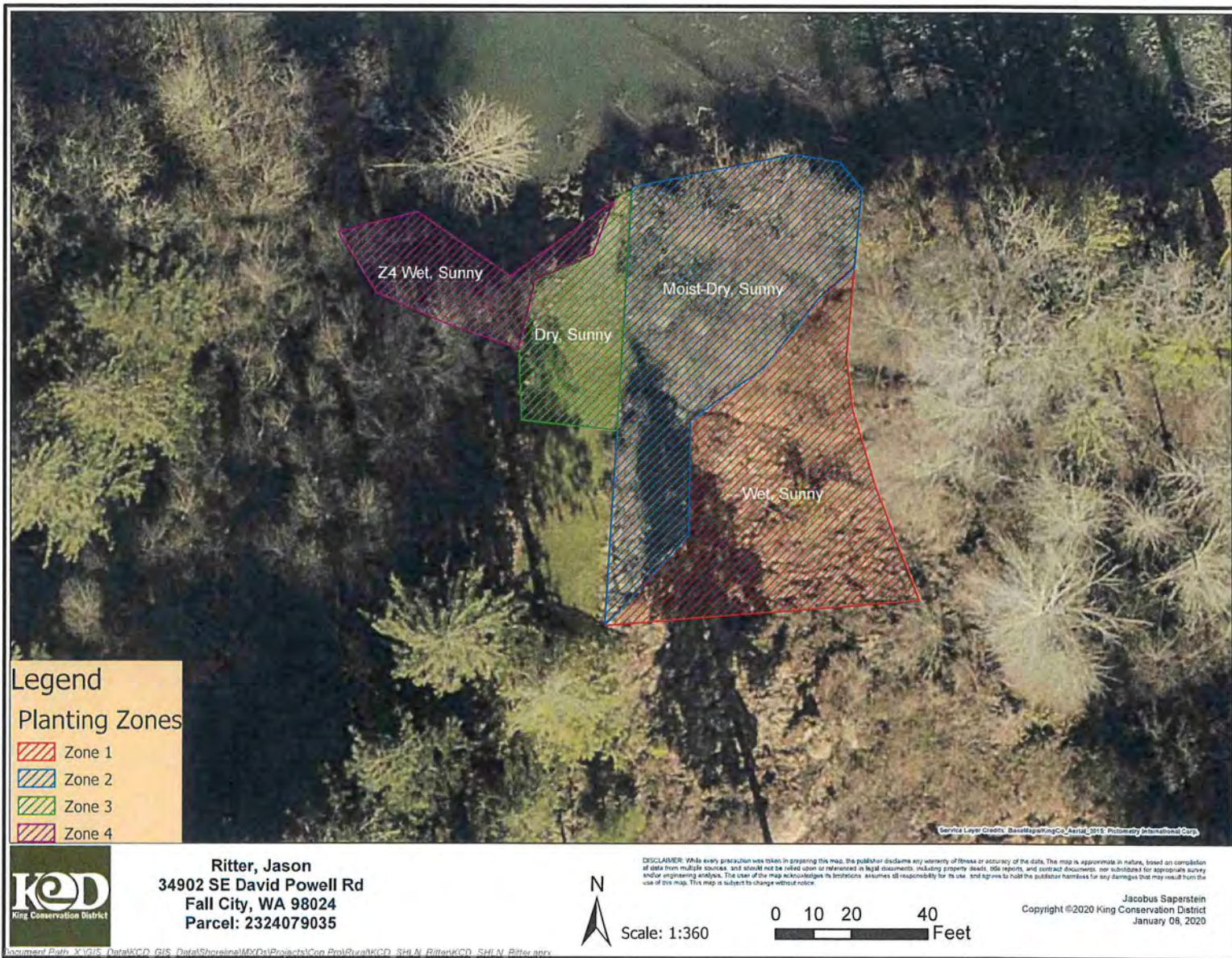
Where droughty soils and hot growing conditions are anticipated, supplemental watering is recommended. In such cases the District recommends watering planted nursery stock for a minimum of 3 summers following planting. Young bare root, container, and ball/burlap plants have a reduced root system that hampers their ability to survive during the dry summer months (July through October). Watering a minimum of once every two weeks during the dry summer will promote greater rates of survival. Watering once per week is preferable.

Monitor treatment areas for re-growth of non-native/invasive species and control accordingly. Utilize weed control techniques prescribed in the Site Preparation section of the Job Sheet. Species to monitor include Blackberry, Reed Canary Grass, Morning Glory and any listed King County Noxious weeds.

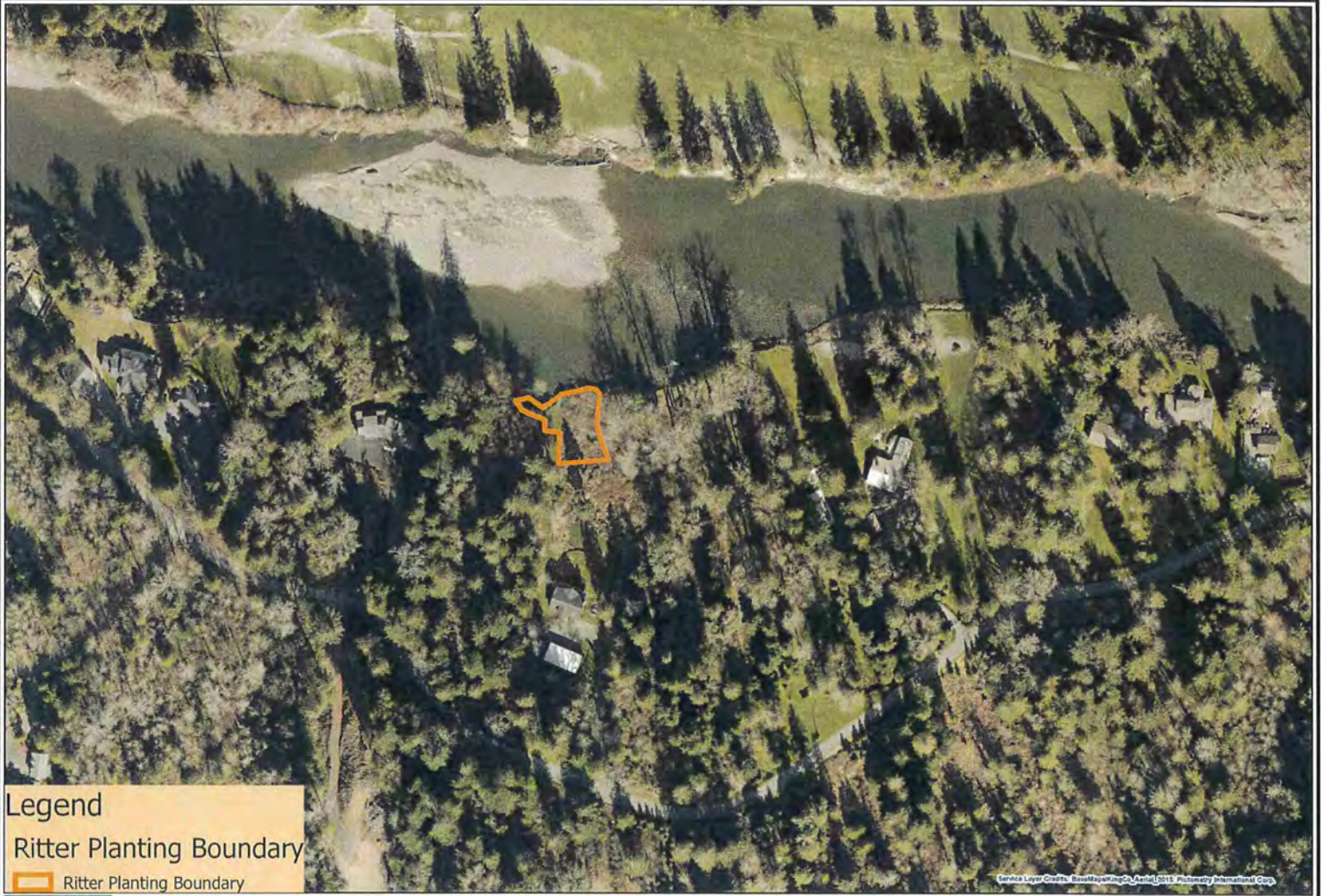
All plant protection materials as well as any other non-biodegradable materials installed on-site will be removed within the 3-5 year project maintenance window.

**Additional Specifications and Notes:**

Other than plantings, no erosion control efforts or materials are included in this project.







**Legend**

Ritter Planting Boundary

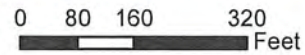
 Ritter Planting Boundary



**Ritter, Jason**  
**34902 SE David Powell Rd**  
**Fall City, WA 98024**  
**Parcel: 2324079035**



Scale: 1:2,400



DISCLAIMER: While every precaution was taken in preparing this map, the publisher disclaims any warranty of fitness or accuracy of the data. This map is approximate in nature, based on compilation of data from multiple sources, and should not be relied upon or referenced in legal documents, including property deeds, title reports, and contract documents, nor substituted for appropriate survey and/or engineering analysis. The user of this map acknowledges its limitations, assumes all responsibility for its use, and agrees to hold the publisher harmless for any damages that may result from the use of this map. This map is subject to change without notice.

Jacobus Saperstein  
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January 08, 2020



## Planting Plan Ritter

Updated 2/4/20

**Project Description:** 9,965sq. ft. project area along 135' shoreline on South bank Snoqualmie River. Project will focus on removal of non-native noxious weeds onsite (primarily blackberry) followed by the installation of dense native plantings of trees and shrubs. Special attention will be given to placement of coniferous trees to allow for the maintenance of a sightline view corridor to the river from home. Plantings will have a minimum width of 35' but where possible extend 100' in width.

**Soil Type:** Edgewick Silt loam - Alluvium Terraces. Well drained, available water storage Moderate (6"), no restrictive feature

Soil Type: Edgewick Silt loam - Alluvium Terraces. Well drained, available water storage Moderate (6"), no restrictive feature								Targets	
								Trees	Shrubs
Soil and Light Conditions								18'oc	4' oc
Zone 1:	Wet and Sunny						Square Feet	11	214
Zone 2:	Moist-Dry and Sunny						3600	13	241
Zone 3:	Dry and Sunny						4050	4	71
Zone 4:	Wet and Sunny						1190	3	67
							1125		
type	Species	Total	Zone 1	Zone 2	Zone 3	Zone 4	Moisture, Sunlight	Source	Notes
Trees - Wetter									
	Sitka Spruce ( <i>Picea sitchensis</i> )	10	5	3		2	Wet/moist, part shade/full sun		
	Western Red Cedar ( <i>Thuja plicata</i> )	11	6	4		1	Wet/moist, full shade/part sun		
Trees - Drier									
	Douglas fir ( <i>Pseudotsuga menziesii</i> )	10		6	4		Moist/dry, sun/shade		
	Trees Total	31	11	13	4	3			
Shrubs - Wetter									
	Pacific ninebark ( <i>Physocarpus capitatus</i> )	130	50	50		30	Wet/moist, full sun		
	Red Osier Dogwood ( <i>Cornus sericea</i> )	105	50	25		30	Wet/moist, part shade/full sun		
	Salmonberry ( <i>Rubus spectabilis</i> )	14	14				Wet/moist, part shade/part sun		
	Willow, Sitka ( <i>Salix sitchensis</i> )	400	100	100	100	100	Wet, full sun		
	Wet Sub Total		214	175	100	160			
Shrubs - Drier									
	Mock Orange ( <i>Phyladelphus lewisii</i> )	20			20		Moist, part shade/part sun		
	Nootka Rose ( <i>Rosa nutkana</i> )	27		16	11		Moist/dry, full sun		
	Oceanspray ( <i>Holodiscus discolor</i> )	10		10			Dry/Moist, part shade/part sun		
	Red Flowering Currant ( <i>Ribes sanguineum</i> )	30		10	20		Dry/Moist, part shade/full sun		
	Serviceberry ( <i>Amalanchier alnifolia</i> )	20			20		Moist/Dry, full sun		
	Snowberry ( <i>Symphoricarpos albus</i> )	10		10			Moist/dry, part shade/full sun		
	Tall Oregon Grape ( <i>Mahonia aquilifolia</i> )	10		10			Dry/Moist, part shade/full sun		
	Vine Maple ( <i>Acer circinatum</i> )	10		10			Moist, part shade/part sun		
	Dry Sub Total		0	66	71	0			
	Shrubs Total	786	214	241	171	160			

## Project Implementation Timeline

**Cooperator:** Jason Ritter and Hyeyoung N  
34902 SE David Powell Rd  
Fall City, WA 98024  
Parcel: 2324079035

Date: 5/14/2020

### Landowner and KCD Objectives:

Landowner is very concerned with bank erosion along his stretch of Snoqualmie river. KCD's engineer (Pete Landry) looked at this issue and deemed to be a natural process of river migration with no reasonable engineering solution or need (no structures in harm's way). Landowner and KCD agree that installation of mature native vegetation will give some level on increased bank stabilization and at least provide better shade and habitat over the Snoqualmie River. Project will encompass 9,965sq. ft. project area along 135' shoreline on South bank Snoqualmie River, this is the full length of landowner's shoreline. Project will focus on removal of non-native noxious weeds onsite (primarily blackberry) followed by the installation of dense native plantings of trees and shrubs. Special attention will be given to placement of coniferous trees to allow for the maintenance of a sightline view corridor to the river from home. Plantings will have a minimum width of 35' but where possible extend 100' in width.

### Other Considerations:

No heavy equipment will be used during the installation of the project. Only hand tools and hand held brushcutters will be used. Washington State Aquatic Herbicide permit will be obtained before any herbicide is sprayed on site.

Land Use: 2 acre Residential Home			
Zones	Planned		Description of Activities
	Area	Month/Year	
All Zones 1-4	9,965 sq. ft.	Summer 2020	<b>Site Prep</b> - KCD will spray noxious weeds (mainly blackberry, reed canary grass, and morning glory) 1-2 times throughout summer. Herbicides used will be aquatic approved and sprayed with appropriate permits and applicator licenses. Brushcutting weeds will be a part of this process too.
All Zones 1-4	9,965 sq. ft.	Fall 2020	<b>Planting</b> - KCD crews will plant whole project site with 1-2 gallon potted plants and 3' willow stakes per approved planting plan. Trees that deer like to browse will be protected with wire cages. Overall planting density seek to achieve 4'oc with trees spaced about 18'oc.
All zones 1-4	9,965 sq. ft.	Summer 2021 - 2023	<b>Maintenance</b> - KCD crews will maintain the plantings for a minimum of 3 consecutive growing seasons following installation. Maintenance will involve removal and control of invasive species that re-grow during each growing season. Techniques will include manual, and mechanical. No herbicide will be allowed. Plants will be maintained and replanted as needed to achieve 80% survivorship.

**King Conservation District Board of Supervisors Meeting 07/13/2020  
Agenda Action Briefing/Report AI 20-038**

**SUBJECT:**

Approve KCD Landowner Incentive Program cost-share application from Amy and Don Joss, for Riparian Forest Buffer, in the amount of \$9,524.50.

**FISCAL IMPACT**

The current balance of cost-share funding for KCD LIP 2020 is summarized in the following table:

2020 LIP Cost-share Available	<b>\$255,785.30</b>
Current Request	<b>\$9,524.50</b>
Balance Remaining	<b>\$246,260.80</b>

**POLICY CONSIDERATION**

This proposed cost-share contract has been vetted through a staff approval committee and meets NRCS standards for the applicable best management practice (BMP). The application has been advanced for due pass by the Board of Supervisors.

**STAKEHOLDER INTERESTS**

- District cooperators working with District farm management, forestry and aquatic area enhancement programs
- King CD Board members and staff

**BACKGROUND**

Amy and Don Joss have a residential property with a personal hobby farm consisting of chickens, a goat, and a vegetable garden. A tributary to Taylor Creek (WRIA 8) runs through the east side of property and is host to Coho, Fall Chinook, Sockeye, and Winter Steelhead. Conditions are very different on each side of creek. The east side is largely an intact native forested wetland that lacks conifers. The west side, where the farm and house are located, is primarily covered with invasive blackberry and some holly. Both sides have good shade over the creek thanks to mature Alder and Cottonwood trees. The project area's main resource concern is a degraded riparian buffer habitat for terrestrial wildlife, and a lack of secondary succession forest species of conifers. There are no steep slopes in this project area.

This project will establish a riparian buffer of diverse native trees and shrubs along the west bank as well as plant conifers in areas on the east bank where there is already an established native forest that lacks conifers. This project will focus on eradicating invasive blackberry, holly, and any other noxious weeds found, followed by planting over 1500 plants and 22 different species. This project will enhance a total of a 100,000 square feet along 1,100 linear shoreline feet. 37,000 square feet will be restored on the west side, and 63,000 square feet will be restored the east side. Plantings on the west side will be a minimum 35' wide but extend much wider in other areas.

**EFFECTIVE DATE**

The cost-share award will become effective upon approval by the Board of Supervisors and the LIP contract will become effective upon signature by a Board representative.

**King Conservation District Board of Supervisors Meeting 07/13/2020**  
**Agenda Action Briefing/Report AI 20-038**

**RECOMMENDATION**

Staff seeks Board approval of Landowner Incentive Program cost-share application from Amy and Don Joss, for a Riparian Forest Buffer, in the amount of \$9,524.50.

**MOTION**

                   Moved,                    Seconded; *Passed a motion to Approve KCD Landowner Incentive Program cost-share application from Amy and Don Joss, for a Riparian Forest Buffer, in the amount of \$9,524.50.*



# KING CONSERVATION DISTRICT (KCD) LANDOWNER INCENTIVE PROGRAM APPLICATION

## Aquatic Area Enhancement Project

### Section 1. Applicant (If applicant is not the landowner, then landowner must also sign the agreement)

Applicant Name: Don and Amy Joss		Farm/Business Name: None	
Mailing Address: 20416 244th Ave SE Maple Valley, WA 98038		Project Address: Same	
Phone (home):		Phone (work/mobile): 425.413.0464	
Email Address: ps127mommy@gmail.com dj@djssportscards.com		KCD Staff: Jacobus Saperstein	
Parcel #(s): 0222069064	<input type="checkbox"/> Incorporated <input checked="" type="checkbox"/> Unincorporated	Total Farm/Land Acreage: 5.2	<input checked="" type="checkbox"/> T.A. <input type="checkbox"/> Farm Plan <input type="checkbox"/> Forest Plan
Is email an acceptable primary form of communication?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Would you like to be added to our newsletter list?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

### Section 2. Project Information

Best Management Practice (BMP):	Riparian Forest Buffer
Project Completion Date (month and year): June 2021	
<p><b>Current Site Conditions</b> (Provide a brief summary of resource management problem addressed by BMP: note streams, wetlands, and steep slopes near or within the project area):</p> <p>Joss property is a residential property with a personal hobby farm consisting of chickens, a goat, and a veggie garden. A tributary to Taylor Creek (WRIA 8) runs through the east side of property and is host to Coho, Fall Chinook, Sockeye, and Winter Steelhead. Conditions are very different on each side of creek. East side is largely an intact native forested wetland that lacks conifers. The west side (farm/house side) has about 20% existing natives but the rest is covered with invasive blackberry (some holly). West and east side have good shade over the creek thanks to mature Alder and Cottonwood. Main resource concern is degraded riparian buffer habitat for terrestrial wildlife, and lack of secondary succession forest species of conifers. There are no steep slopes in this project area.</p>	
<p><b>Project Details</b> (Provide a brief summary of the project. Include acres treated, linear feet of stream enhanced, length of fence, types and numbers of plants, etc.):</p> <p>KCD plans to establish a riparian buffer of diverse native trees and shrubs along the west bank of tributary to Taylor Creek (WRIA 8). KCD also intends to plant conifers only on the east side of creek where there is already an established native forest that lacks conifers. Project will enhance a total of 100,000sq.ft (2.3 acres); 37,000sq.ft on the west side, and 63,000sq.ft. on the east side. Project will enhance all shorelines on this property totaling 1,100 linear shoreline feet. Plantings on west side will be a minimum 35' wide but extend much wider in other areas. Project will focus on eradicating invasive blackberry, holly, and any other noxious weeds found, followed by planting over 1500 plants and 22 different species (see attached planting plan for more details).</p>	
<p><b>Maintenance Plan:</b></p> <p>King CD will maintain the project for 3-5 growing seasons. Activities will include control of invasive species and replanting if survivorship falls below 80%. The landowner is responsible for maintaining the project and providing photos for the remaining 10-12 years of the practice. Photos must be submitted by 9/1 of each year.</p>	

**Permits** (List all permits required to complete this project): Yes, Aquatic Noxious Weed General Permit has been obtained from the Washington State Department of Ecology and Washington State Department of Agriculture: Permit

**Photos:** KCD Resource Planner must submit before photos with this application.

### Section 3. Cost-share Programs

A. Have you previously applied for cost-share through the KCD Landowner Incentive Program (LIP)? ☐ Yes ☒ No  
If yes, please list contract number and BMP below:

B. Are you applying for (or received) funding (cost-share or grants) through other agencies or programs? ☐ Yes ☒ No  
Please describe below:

1. **King County Cost-share**

Please list practices and date installed below:

2. **NRCS EQIP (Natural Resources Conservation Service's Environmental Quality Incentive Program)**

Please list practices and date installed below:

3. **Other**

Please list agency and describe project:

**Other Cost-Share History/Notes:**

### Section 4. Budget (attached as Exhibit A)

KCD will plan and install the Best Management Practice (BMP) on behalf of the Applicant. A detail of the project budget with line items for planning, installation, maintenance and cost-share ratios are attached as Exhibit A. Upon BMP installation, KCD will invoice the Applicant for the Applicant Cost-share listed in the following table. Applicant cost-share is due 30 days after receipt of a KCD invoice.

Program Cost-share	Cost-share Ratio	Amount
King CD Landowner Incentive Program	50%	\$ 9,524.50
King CD Aquatic Area Enhancement Program	40%	\$ 7,619.60
Washington State Conservation Commission	%	\$ 0.00
Other (specify) -	%	\$ 0.00
Other (specify) -	%	\$ 0.00
Applicant Cost-share	10%	\$ 1,904.90
TOTAL	100%	\$ 19,049.00

## Section 5. Education and Outreach

KCD encourages public education through demonstration projects. Demonstration projects are used to educate other landowners about innovative ways to address natural resource concerns. A demonstration project may be showcased in a guided tour, or featured in presentations or written fact sheets.

A. Will you consider becoming a demonstration project?

☐ Yes ☐ No

## Section 6. Maintenance and Monitoring Expectations

The applicant is responsible to maintain the Best Management Practice (BMP) to standard as detailed in the attached Job Sheet for the lifetime of the BMP.

- ☒ A. I understand the lifetime of the BMP is 15 years.
- ☒ B. I understand KCD will coordinate and conduct maintenance and replanting for the first three years of the lifetime of the BMP. After that, KCD will work with the Applicant to verify proper maintenance of the installed BMP. Verification of maintenance includes a combination of site visits with KCD staff members who will take photos of the project, and annual photo documentation submitted by the applicant for the lifetime listed in Section 6A.
- ☒ C. I understand I am obligated to maintain and monitor the BMP for the lifetime listed in Section 6A.

## Section 7. Application and Agreement

I request financial assistance (cost-share) under the KCD LIP to install the Best Management Practice (BMP) described in this application and detailed in the attached Job Sheet and Map. This practice is needed to solve the natural resource problems described in Section 2 of this application. This Agreement expires if the project is not completed by the specified completion date in Section 2 or in an approved timeline revision request. DAJ (Initial Here)

I authorize KCD to secure the applicable local, state and federal permits and to install the BMP on my behalf, and I agree to work cooperatively with KCD to obtain these permits. DAJ (Initial Here)

I agree to work cooperatively with KCD to ensure the funded BMP is maintained consistent with the design life identified in the attached Job Sheet and in Section 6 of this application. DAJ (Initial Here)

I agree to indemnify, defend, and hold harmless KCD, its elected or appointed officials, employees and agents, from all claims, alleged liability, damages, losses to or death of person or damage to property allegedly resulting from the negligent or intentional acts of the applicant or any of its employees or agents which may occur during the course of KCD's performance of the installation of the BMP provided in connection with this Agreement. DAJ (Initial Here)

I represent that the information provided in Section 3 of this application is a full disclosure of all other natural resource financial cost-share relationships in which I have or am participating. DAJ (Initial Here)

I understand that LIP cost-share is contingent upon installing the BMP to the minimum standard planned by KCD, and that KCD will verify and photo document standard compliance through its coordination of BMP installation. DAJ (Initial Here)

I understand that in cases where I become the recipient of a KCD LIP cost-share reimbursement there may be federal tax liability associated with the reimbursement. When this occurs, KCD will issue a 1099-G for reimbursements made through the LIP. I understand that KCD cannot provide advice with respect to the tax liability associated with LIP cost-share reimbursements. DAJ (Initial Here)

I understand that I am applying for public funding and am responsible for notifying a buyer upon sale or loss of the property of the installed BMP. If I sell or lose control of the property covered by this Agreement and the new owner or transferee does not assume responsibility for maintaining the installed BMP as required by this Agreement, I may be required to refund all or a portion of cost-share reimbursements received through this Agreement. In the event litigation is commenced by KCD to recover a refund of any cost-share reimbursements received through this Agreement, attorney's fees and costs incurred by the prevailing party in such action shall be paid by the non-prevailing party. DAJ (Initial Here)

I give permission to KCD to photograph my property to document the site conditions and/or the implementation and maintenance of the funded practice. In the event that I or any of my family members or dependents choose to be photographed in a setting that reflects the assistance provided by KCD, I give KCD permission to publish such photographs in KCD promotional literature, advertising, social media, and other public displays. The photographs will be the property of KCD and may be used by KCD at any time, in the manner described above, without my additional consent. DAJ (Initial Here)

Don and Amy Joss

Page 3 of 4

I understand that this Agreement is subject to disclosure under the Public Records Act, Chapter 42.56 RCW. AKJ (Initial Here)

I understand that I will no longer be eligible for KCD cost-share funds if one or more of the following occurs: AKJ (Initial Here)

a. The KCD funded BMP fails within its design life due to circumstances within my control (e.g., neglect, failure to maintain the BMP, destruction of the BMP before expiration of the design life, or other actions which cause the KCD funded BMP to become non-viable).  
Note: Landowners are not responsible for BMP failure caused by circumstances beyond their control (e.g. fire, flood, storm damage, etc.)

b. I relinquish or lose ownership of equipment purchased with KCD cost-share.

c. The KCD funded BMP is not being used for the intended purpose (e.g. cross fencing purchased with KCD funding, but no animals on property).

d. I cancel two cost-share contracts awarded through the KCD Landowner Incentive Program.

e. I deny KCD staff access to my property to verify BMP maintenance.

I understand KCD will provide two signs, an LIP sign and aquatic area buffer sign, free of charge, and I agree that: AKJ (Initial Here)

a. I will select a visible location on my property for display of the LIP sign and will install it.


b. KCD will install the aquatic area buffer sign adjacent to the installed aquatic area enhancement project.

c. I will maintain the signs and keep them free of visual barriers for at least five years after installation.

d. I am not responsible for damage to the sign that is beyond my control (e.g. auto accident, storm damage, vandalism, etc.)

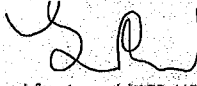
  
Signature of applicant

06/23/2020  
Date

  
Signature of Landowner (If applicant If Lessee)

06/23/2020  
Date

FOR KCD OFFICE USE

	07/01/2020	
Approved for Award (KCD LIP Coordinator)	Date	
Approved for Funding (KCD Management)	Date	LIP ID:



## Scope of Work for:

Don and Amy Joss

20416 244th Ave SE, Maple Valley WA 98038

Date: 6/1/2020

Name of Project: Joss\_2020



**Narrative Scope of Work:** Implement NRCS Riparian Forest Buffer #391 along 1,100 shoreline feet of a tributary to Taylor Creek. Project will enhance 100,000sq.ft. (2.3 acres) of riparian habitat through removal of invasive plants (mainly blackberry and English Holly) and replanting with a diversity of native trees and shrubs. Project will also seek to establish an understory planting of shade tolerant conifers in NE corner of property east of stream. This area is currently dominated by Alder and Cottonwood. This conifer understory planting on east side of creek covers 63,000sq.ft and has very minor blackberry along with a native understory of shrubs.

		Days/Units/Hours	Cost Per	Subtotals
<b>Crew Days (10% Landowner cost share)</b>				
WCC Days: Site Prep	3	\$	1,360.00	\$ 4,080.00
WCC Days: Planting	5	\$	1,360.00	\$ 6,800.00
WCC Days: Plant Protection and Mulch	1	\$	1,360.00	\$ 1,360.00
				\$ 12,240.00
<b>Materials (10% Landowner cost share)</b>				
Plants - Trees 1-2 gallon	301	\$	4.00	\$ 1,204.00
Plants - Shrubs 1 gallon	1290	\$	3.50	\$ 4,515.00
Mulch Rings (25yds covers 400 plants)	15	\$	20.00	\$ 300.00
Tree protection - Protex Pro/Gro (blue 18")	1591		Donated	\$ -
Bamboo Stakes 3/8" x 3' (500)	3	\$	75.00	\$ 225.00
Wood stakes for Cedar tree fencing (2"x2"x3')	100	\$	1.25	\$ 125.00
Cedar Tree Deer Fencing (5'x100' roll covers 12 trees)	4	\$	110.00	\$ 440.00
				\$ 6,809.00
<b>Cost Share Estimate</b>				<b>\$ 19,049.00</b>
<b>10% Landowner Cost Share</b>				<b>\$ 1,904.90</b>
<b>KCD Staff Time (non cost share)</b>				
Jacobus Planning	20	\$	62.00	\$ 1,360.00
Jacobus IMPL	20	\$	62.00	\$ 1,360.00
				\$ 2,720.00
<b>Installation Total Estimate</b>				<b>\$ 21,769.00</b>
<b>Task 4: 3 Year Maintenance Estimate (free)</b>				
Crew Days in field:	5	\$	1,400.00	7,000.00
Project Management	20	\$	62.00	1,240.00
Materials (mulch, replanting)				200.00
				8,440.00
<b>Project Grand Total Est.</b>				<b>\$ 30,209.00</b>
<b>Cost Share Breakout</b>	<b>WCC Funds (0%)</b>	<b>KCD LIP (90%)</b>	<b>Landowner funds (10%)</b>	<b>Total</b>
Labor		\$ 11,016.00	\$ 1,224.00	\$ 12,240.00
Materials		\$ 6,128.10	\$ 680.90	\$ 6,809.00
Total	\$ -	\$ 17,144.10	\$ 1,904.90	\$ 19,049.00



# JOB SHEET

## *Aquatic Area Buffer Planting- Riparian Forest Buffer*

Landowner: Don and Amy Joss	Lifetime of Practice: 15 years
-----------------------------	--------------------------------

Purpose (check all that apply)	
<input type="checkbox"/> Create shade to lower or maintain water temperatures to improve habitat for aquatic organisms	<input checked="" type="checkbox"/> Improve forest health reducing the potential of damage from pests and moisture stress
<input checked="" type="checkbox"/> Create or improve riparian habitat and provide a source of detritus and large woody debris	<input checked="" type="checkbox"/> Restore natural riparian plant communities
<input type="checkbox"/> Reduce excess amounts of pollutants in surface runoff and reduce excess nutrients and chemicals in shallow groundwater flow	<input checked="" type="checkbox"/> Improve wildlife habitat
<input type="checkbox"/> Reduce pesticide drift entering water body	<input type="checkbox"/> Increase carbon storage in vegetation and soils, and increase biomass in soils

**Current Site Conditions** *Provide a summary of the resource management problems addressed by the BMP. Also note any other current conditions pertinent to the project (slopes, erosion, flow, drainage)*

Joss property is a residential property with a personal hobby farm consisting of chickens, a goat, and a veggie garden. A tributary to Taylor Creek (WRIA 8) runs through the east side of property and is host to Coho, Fall Chinook, Sockeye, and Winter Steelhead. Conditions are very different on each side of creek. East side is largely an intact native forested wetland that lacks conifers. The west side (farm/house side) has about 20% existing natives but the rest is covered with invasive blackberry (some holly). West and east side have good shade over the creek thanks to mature Alder and Cottonwood. Main resource concern is degraded riparian buffer habitat for terrestrial wildlife, and lack of secondary succession forest species of conifers. There are no steep slopes in this project area.

**Riparian Forest Buffer Practice and Details** *Provide the following:*

- 1) a basic description of the proposed planting area
- 2) calculate and record the square footage (acreage) of the planting area, the number of trees and shrubs to be planted, the linear footage of stream enhanced, the average and minimum width of the buffer.
- 3) list any native plant species currently existing on site
- 4) list native trees and shrubs selected for the project
- 5) please attach your proposed planting plan

1) KCD plans to establish a riparian buffer of diverse native trees and shrubs along the west bank of tributary to Taylor Creek (WRIA 8). KCD also intends to plant conifers only on the east side of creek where there is already an established native forest that lacks conifers.

2) Project will enhance a total of 100,000sq.ft (2.3 acres); 37,000sq.ft on the west side, and 63,000sq.ft. on the east side. Project will enhance all shorelines on this property totaling 1,100 linear shoreline feet. Project will plant over 1500 native trees and shrubs with 22 different species (see attached planting plan for more details).

3) Black Cottonwood, Red Alder, Western Red Cedar, Red Elderberry, Red Osier Dogwood, Salmonberry, Vine Maple, Twinberry, Sword Fern, Lady Fern, and Deer fern.

4&5) See attached planting plan for details.

**Permits** *Are there any permits necessary for the project? If so, please list below and include a copy of the permit*

Yes, Aquatic Noxious Weed General Permit has been obtained from the Washington State Department of Ecology and Washington State Department of Agriculture: Permit #WAG993000. No other permits required

**Type and Source of Plant Material** *Will you use potted plants, bareroot plants, b&b plants or a combination? Where will you get the plants from and when?*

Plant material will be native species adapted to the site to minimize maintenance and care.

King Conservation District, the contractor, will plant 1 and 2 gallon containers, live stakes, and/or bareroot material that have been sourced from the Puget Sound region. If additional plant material is purchased to augment the initial planting, that material can be bareroot, live stake, or potted nursery stock. There are a number of local native plant nurseries where native trees, shrubs and emergents can be purchased. Refer to the attached list of native plant nurseries for local King County sources of native plant material as well as sources in the greater Puget Sound region.

**Site Preparation** *List what method(s) of site preparation will be used, who will be doing the work, when will the work be done.*

Specific weed control prescriptions are detailed below. If brush and debris are removed from the stand, all material will be hauled off-site or masticated /chipped in a staging area. If masticated material is intended for use as mulch on the site, invasive species should not be included in the masticating/chipping process.

*Weed Control Prescriptions:*

Himalayan & Evergreen Blackberry Control –

- *Manual control:* Mow or cut the blackberry canes to less than 1 foot in height, then grub/dig out the roots attached to the cut canes. Thorough removal of blackberry roots in this manner, while labor intensive can reduce the blackberry population and cover in the prepared area by 90 – 95%. Monitor for re-growth in the following growing seasons; dig up any re-growth.
- *Chemical Control:* An alternative control method includes herbicide. One technique involves cutting/mowing the canes and swabbing the freshly cut canes with an approved herbicide. Foliar spray of blackberry is another effective control method. It is recommended that blackberry is mowed early in the summer and sprayed on the foliar re-growth the next fall (September/October). Do not spray planted seedlings. **Always follow label rates and instructions.**

Holly & Laurel Control-

- *Manual Control:* Not recommended. Small plants can be dug up when the soil is moist. Regularly check area for re-growth. For larger plants cut stems and trunks as close to the ground as possible. Roots may be dug out. Be sure to stabilize soil if large quantities are disturbed. If roots are not dug up, break off any new stems as they grow back for multiple growing seasons.
- *Chemical Control:* Large Holly and Laurel trunks should be cut as close to the ground as possible. Immediately (within minutes) treat the cut stump with an application of glyphosate herbicide (such as Rodeo or Roundup). An alternate technique, called frilling, involves incising deep cuts through bark into trunks at a 45 degree angle. Immediately treat the frills by pouring glyphosate herbicide into the cuts. Best results are achieved during periods of active growth and after full leaf expansion. Monitor for re-growth (seedlings and re-sprouting) and treat accordingly. Do not spray herbicide directly holly and laurel leaves, which have a waxy layer that prevents chemicals from being absorbed. **Always follow label rates and instructions.**

**Care and Temporary Storage of Purchased Plant Material** *Upon receiving the plant material, where will you store it and how will you care for it?*

All plant material should be stored in a cool location and well watered prior to planting. In the case of bare root plants, inventory should be held in the source refrigerated facility as long as possible prior to planting. Bare root plants can be stored in the field for up to one to three weeks prior to planting by placing them in a shaded location where they will remain cool. Such a location should prevent freezing as well as exposure to warm temperatures. Additionally, bareroot inventory should be covered with a tarp to prevent drying. Bareroot stock that is expected to emerge from dormancy prior to planting should be "healed" into a soil bed. To heal-in, dig a v-shaped trench to a depth that accommodates covering the seedling roots when back-filled with soil.

**Installation** *Provide the following details: 1) Plant Installation Prescription: 2) Plant Protection Prescription: 3) Weed Suppression Prescription. 4) Erosion Control Prescription*

*1) Plant Installation Prescription:*

Live Stake Inventory: Live Stakes and whips should be planted using a planting bar. Stakes and whips are to be 3 to 4 feet long, and a minimum of ½ inch in diameter. Stakes should be stored in a bucket of water until planted. Buds should face up in the bucket. Soaking before planting greatly increases the survival of live stakes and whips. Refer also to the attached planting instructions in *Planting Live Hardwood Stakes*.

Potted & Plug Inventory: Potted plant material should be shovel planted to the same depth that they grew in the pot. Plants will be well watered prior to planting. Prior to digging a hole for the plant, prepare the planting location by removing a grass sod within a 1.5 foot diameter circle, being careful to remove roots as well as above ground portions of the plant. Dig a hole for the container in the center of this cleared circle twice the size of the plant's pot. Backfill the hole with soil while using care to avoid leaving air pockets in the soil. Refer also to the attached planting instructions in *Planting Container Trees and Shrubs*.

Bareroot Inventory: Bare root seedlings should be shovel planted to the same depth that they grew in the nursery fields. Roots will remain moist once they are removed from the shipping bundles until they are planted. Roots will be placed in a natural position in the soil without being crowded or turned up. Soil will be packed firmly around the root system, leaving no air pockets. Prior to digging a hole for the plant, prepare the planting location by removing all grass sod within a 1.5-foot diameter circle, being careful to remove roots as well as above ground grass. Dig a hole for the bare root plant in the center of this cleared circle. Refer also to the attached planting instructions in *Planting Bare Root Trees and Shrubs*.

*2) Plant Protection Prescription:*

Tree Protectors (for sites where deer/elk browse is anticipated): Install fencing, 3 foot diameter and 5 feet high, on newly planted Western Red Cedar to protect trees from deer browsing. Weave 6 foot bamboo stakes fencing and shove at least 8 inches into the ground in order to stabilize.

Basal Wrapping & Tree Protectors (for sites where vole/mouse herbivory is anticipated): Voles, mouse-like animals, are especially present in meadow and pasture areas and target trees and shrubs primarily in the winter when other food sources are scarce. They will readily girdle small trees and shrubs and tunnel through and eat root systems. Vole damage is hard to catch before it occurs. If voles or vole activity have been seen at a site, steps must be taken to protect young plants directly after they are planted. Start by managing other vegetation near the plant by weeding or mowing and not leaving vegetation as thatch. Be sure that mulch is not too close to the base of the plant as loose mulch may encourage voles. Plant protectors and basal wrappings may also be installed. These protectors can plastic, mesh, or galvanized steel hardware cloth (1/4 or 3/8 inch). Circle the base of the plant with the material and create a tube by securing the material to itself. Be sure to leave room for growth. Then bury the bottom a few inches into the soil. Recommended height is 12 inches.



### 3) Weed Suppression Prescription

**Mulching:** In locations where ongoing weed suppression is a concern, prepare the area around each plant by placing a barrier of cardboard around the plant. After placing the barrier, apply a layer of mulch over the weed barrier to a depth of 4-6 inches. Mulching options include wood chips, fully composted organic material such as a commercial compost product or weed free straw. Mulch should be weed free, if possible, to avoid introducing new weeds to the project site. Mulch is not necessary in the emergent plant zones.

#### **Fencing** *Is fencing going to be installed? If so, what type, who will install it and when?*

Field fencing is installed adjacent to buffer project, but landowner is looking to replace this with a more sufficient livestock exclusion fence which could then allow grazing in this area. Currently goat on property has a separate fenced area well away from project.

#### **Planting Project Maintenance and Monitoring** *The planting must be inspected periodically and protected from damage so proper function is maintained. The goal for the project is to reach 80% survival after 3 years. Please describe the maintenance and monitoring plan.*

**King CD will maintain the project for 3-5 growing seasons. Maintenance activities will include control of invasive species and replanting if survivorship falls below 80%. The landowner is responsible for maintaining the project and providing photo documentation of practice maintenance for the remaining 10-12 years of the practice. Photos must be submitted by 9/1 of each year.**

Treatments must be inspected periodically and protected from damage so proper function is maintained and resource damage is minimized, including assessment of insects, disease and other pests, storm damage, and damage by trespass. The results of inspections shall determine the need for additional treatment under this practice.

Replace dead or dying trees and shrubs and control competing vegetation to support successful establishment. Periodic application of mulch may be needed to maintain plant vigor. Periodic harvest of trees and shrubs (thinning and brushing) may be necessary to maintain the health and vigor of the stand and support its development toward more mature stand conditions. Keep large dead and dying trees for cavity nesting wildlife and bird species and as a source of downed wood in the forest understory and in adjacent or interior aquatic habitats.

If areas were brushed in order to plant trees, maintain these openings until the leader of the tree surpasses the height of the surrounding vegetation.

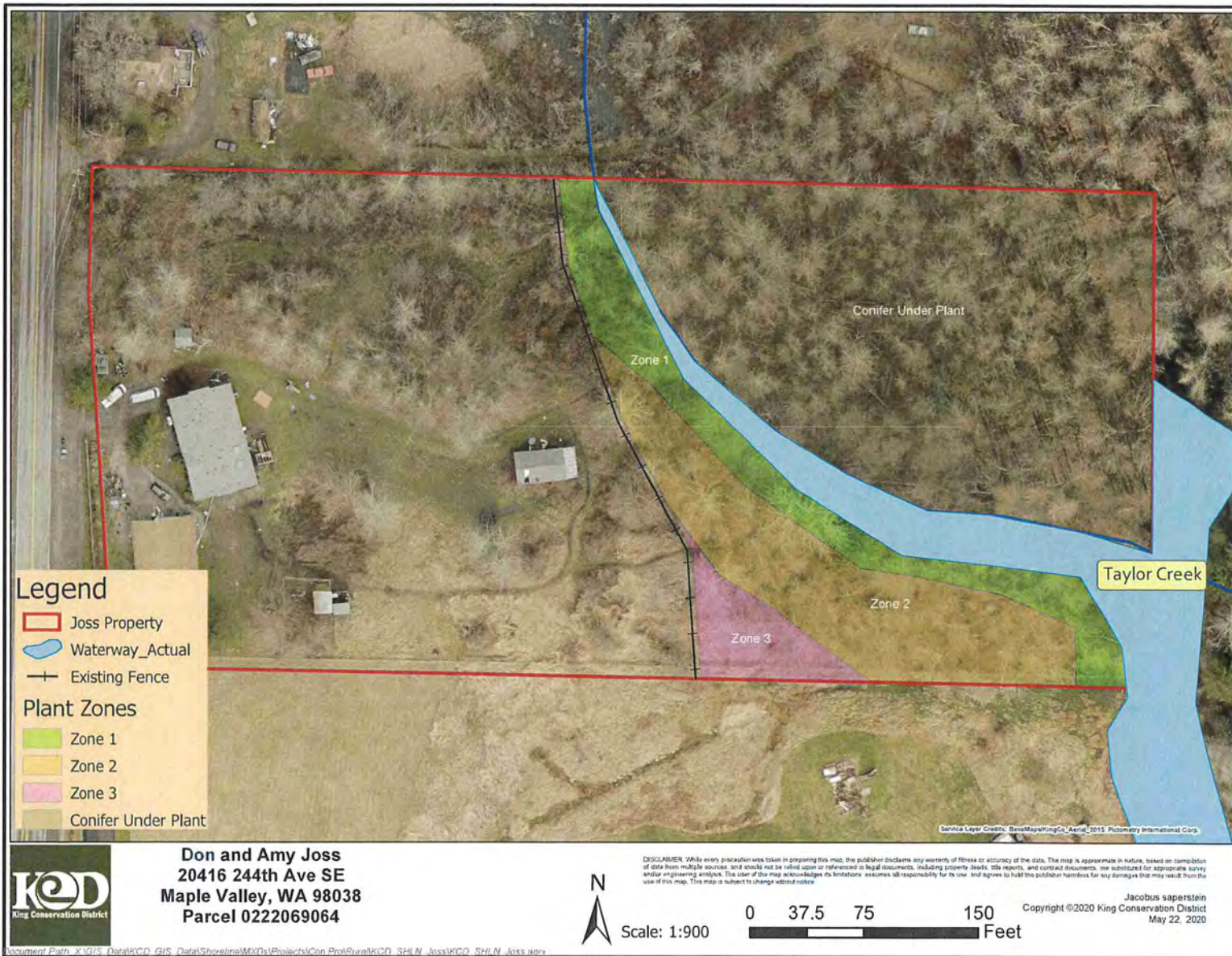
Where droughty soils and hot growing conditions are anticipated, supplemental watering is recommended. In such cases the District recommends watering planted nursery stock for a minimum of 3 summers following planting. Young bare root, container, and ball/burlap plants have a reduced root system that hampers their ability to survive during the dry summer months (July through October). Watering a minimum of once every two weeks during the dry summer will promote greater rates of survival. Watering once per week is preferable.

Monitor treatment areas for re-growth of non-native/invasive species and control accordingly. Utilize weed control techniques prescribed in the Site Preparation section of the Job Sheet. Species to monitor include Himalayan Blackberry, English Holly, and any listed King County Noxious weeds.

All plant protection materials as well as any other non-biodegradable materials installed on-site will be removed within the 3-5 year project maintenance window.

#### **Additional Specifications and Notes:**





## Project Implementation Timelin

**Cooperator:** Don and Amy Joss  
20416 244th Ave SE  
Maple Valley WA 98038  
Parcel: 0222069064

### Landowner and KCD Objectives:

Implement NRCS Riparian Forest Buffer #391 along 100,000sq.ft. (2.3 acres) of riparian habitat through replanting with a diversity of native trees and shrub tolerant conifers in NE corner of property east of str conifer understory planting on east side of creek co understory of shrubs.

### Other Considerations:

Aquatic Noxious Weed General Permit has been obt State Department of Agriculture: Permit #WAG993C during the installation of the project. Only hand too

Land Use: Residential with small hobby farm		
Zones	Planned	
	Area	Month/Year
All Zones	100,000sq.ft.	Summer 2020
Zones 1,2,3	37,000sq.ft.	Fall 2020
Conifer Understory Plantings	63,000sq.ft.	Winter 2021
Zone 3	4,800sq.ft.	Spring 2021
All Zones	100,000sq.ft.	Summer 2021 - 2023



ie

Date: 6/1/2020

1,100 shoreline feet of a tributary to Taylor Creek. Project will enhance removal of invasive plants (mainly blackberry and English Holly) and s. Project will also seek to establish an understory planting of shade team. This area is currently dominated by Alder and Cottonwood. This vers 63,000sq.ft and has very minor blackberry along with a native

tained from the Washington State Department of Ecology and Washington 000. No other permits are required. No heavy equipment will be used ls and hand held brushcutters will be used.

Description of Activities
<b>Site Prep</b> - KCD will use of combination of chemical and manual control techniques to eradicate as much Himalayan Blackberry, Holly and any other noxious wek. Herbicides used will be aquatic approved and sprayed with appropriate permits and applicator licenses.
<b>Planting</b> - KCD crews will plant west side of Taylor Creek with 1-2 gallon potted plant stock per approved planting plan. Cedar trees that deer like to browse will be protected with wire cages. Over all planting density seek to achieve 4-5'oc with trees spaced about 16'oc.
<b>Planting</b> - KCD crews will plant bareroot conifer trees throughout deciduous forest on east side of Taylor Creek. Trees on this side will only be marked with high visibility flagging with no other browse protections.
<b>Mulching</b> - KCD crews will install mulch rings around new plantings in this zone as it has the hottest and driest conditions. Any additional mulch will be added to plants in Zone 2.
<b>Maintenance</b> - KCD crews will maintain the plantings for a minimum of 3 consecutive growing seasons following installation. Maintenance will involve removal and control of invasive species that re-grow during each growing season. Techniques will include manual, and mechanical. No herbicide will be allowed. Plants will be maintained and replanted as needed to achieve 80% survivorship.

## Planting Plan - Joss

Updated 6/1/2020

**Project Description:** Install NRCS Practice Riparian Forest Buffer along 1,100 shoreline feet of a tributary to Taylor Creek (WRIA 8). Project plans to focus planting efforts on west side of stream (house and farm side) as this side is more degraded with blackberry and lacks a native understory. East side will receive only conifer plantings to attempt to establish a coniferous understory to establish long term forest succession. Native plants observed onsite: Alder, Cottonwood, Red Elderberry, Red Osier

### Soil Type:

Shrub/Tree	Quantity	
	Trees	Shrubs
Spacing Square Feet		
4'oc/16'oc 12,415	48	572
5'oc/16'oc 19,400	76	545
5'oc/16'oc 4,800	19	173
20'oc 63,000	158	

**Zone 1:** Wet - Moist soils along stream banks with full shade conditions thanks to mature Alder and Cottonwoods. Has 20% existing native plants

**Zone 2:** Moist - Dry soils with full shade thanks to mature Alder and Cottonwood. Has 20% existing native plants

**Zone 3:** Dry soils with full sun. Has no existing native vegetation

**Conifer Understory:** Wet - Moist forested wetland that has dense native shrubs and deciduous canopy of mature Alder and Cottonwood. 2 mature Cedar trees and sparse Blackberry

type	Species	Total	Zone 1	Zone 2	Zone 3	Conifer Understory	Moisture, Sunlight	Source	Notes
<b>Trees - Wetter</b>									
	Sitka Spruce ( <i>Picea sitchensis</i> )	21	10	11			Wet/moist, part shade/full sun		
	Western Red Cedar ( <i>Thuja plicata</i> )	150	25	25		100	Wet/moist, full shade/part sun		
<b>Trees - Drier</b>									
	Douglas fir ( <i>Pseudotsuga menziesii</i> )	10			10		Moist/dry, sun/shade		
	Grand Fir ( <i>Abies grandis</i> )	54	5	20		29	Moist/Dry, part shade/full sun		
	Shore Pine ( <i>Pinus contorta</i> )	9			9		Dry, full sun		
	Western Hemlock ( <i>Tsuga heterophylla</i> )	57	8	20		29	Moist, part shade/full sun		
	<b>Trees Total</b>	<b>301</b>	<b>48</b>	<b>76</b>	<b>19</b>	<b>158</b>			
<b>Shrubs - Wetter</b>									
	Black Twinberry ( <i>Lonicera involucrata</i> )	200	200				Wet/moist, part shade/part sun		
	Red Osier Dogwood ( <i>Cornus sericea</i> )	172	122	50			Wet/moist, part shade/full sun		
	Black Gooseberry ( <i>Ribes lacustre</i> )	25	25				Moist, part shade/full sun		
	Wild Gooseberry ( <i>Ribes diversifolium</i> )	25	25				Moist, part shade/full sun		
	Salmonberry ( <i>Rubus spectabilis</i> )	150	100	50			Wet/moist, part shade/part sun		
	<b>Wet Sub Total</b>	<b>472</b>	<b>472</b>	<b>100</b>	<b>0</b>	<b>0</b>			
<b>Shrubs - Drier</b>									
	Evergreen Huckleberry ( <i>Vaccinium ovatum</i> )	25		25			Dry/Moist, shade/part sun		
	Hazelnut ( <i>Corylus cornuta</i> )	33		25	8		Moist/Dry, part shade/part sun		
	Indian plum ( <i>Oemleria cerasiformis</i> )	175	75	100			Moist, shade/part sun		
	Mock Orange ( <i>Phyladelphus lewisii</i> )	30			30		Moist, part shade/part sun		
	Oceanspray ( <i>Holodiscus discolor</i> )	100		50	50		Dry/Moist, part shade/part sun		
	Red Flowering Currant ( <i>Ribes sanguineum</i> )	50			50		Dry/Moist, part shade/full sun		
	Pacific Rhododendron ( <i>Rhododendron macrophyllum</i> )	20		20			Moist, shade/part sun		
	Snowberry ( <i>Symphoricarpos albus</i> )	100		100			Moist/dry, part shade/full sun		
	Tall Oregon Grape ( <i>Mahonia aquilifolia</i> )	35			35		Dry/Moist, part shade/full sun		
	Thimbleberry ( <i>Rubus parviflorus</i> )	100		100			Moist, full sun, some shade		
	Vine Maple ( <i>Acer circinatum</i> )	50	25	25			Moist, part shade/part sun		
	<b>Dry Sub Total</b>	<b>100</b>	<b>100</b>	<b>445</b>	<b>173</b>	<b>0</b>			
	<b>Shrubs Total</b>	<b>1290</b>	<b>572</b>	<b>545</b>	<b>173</b>	<b>0</b>			





















**King Conservation District Board of Supervisors Meeting 07/13/2020  
Agenda Action Briefing/Report AI 20-039**

**SUBJECT:**

Approve KCD Landowner Incentive Program cost-share budget revision request from Joe Haberzette, for a Riparian Forest Buffer, in the amount of \$10,125.00.

**FISCAL IMPACT**

The current balance of cost-share funding for KCD LIP 2020 is summarized in the following table:

2020 LIP Cost-share Available	<b>\$246,260.80</b>
Current Request	<b>\$10,125.00</b>
Balance Remaining	<b>\$236,135.80</b>

**POLICY CONSIDERATION**

This proposed cost-share contract has been vetted through a staff approval committee and meets NRCS standards for the applicable best management practice (BMP). The application has been advanced for due pass by the Board of Supervisors.

**STAKEHOLDER INTERESTS**

- District cooperators working with District farm management, forestry and aquatic area enhancement programs
- King CD Board members and staff

**BACKGROUND**

Joe Haberzette has an open LIP Contract for a Riparian Forest Buffer on his 40-acre farm along 2,200 linear feet of the Snoqualmie River. The project is being co-funded through the Conservation Reserve and Enhancement Program (CREP). Additional funds requested are to meet the site's needs through adaptive management. During the site prep process, a larger than previously understood patch of knotweed was observed. In order to restore this area to its habitat potential, additional work will be required. This budget revision would cover the additional site prep needed in this knotweed area, plant donated nursery stock in the fall and ensure the area remains knotweed free through the plant establishment phase.

A copy of the original signed contract is attached along with the proposed revised budget sheet and Budget Revision Request form.

**EFFECTIVE DATE**

The cost-share award will become effective upon approval by the Board of Supervisors and the LIP contract will become effective upon signature by a Board representative.

**RECOMMENDATION**

Staff seeks Board approval of Landowner Incentive Program cost-share budget revision request from Joe Haberzette, for a Riparian Forest Buffer, in the amount of \$10,125.00.

**MOTION**

\_\_\_\_\_ Moved, \_\_\_\_\_ Seconded; Passed a motion to Approve KCD Landowner Incentive Program cost-share budget revision request from Joe Haberzette, for a Riparian Forest Buffer, in the amount of \$10,125.00.





## Landowner Incentive Program Request for Budget Revision

Name:	Joe Haberzette
Address:	324 32nd Ave. E Seattle, WA 98112
Phone:	(206)284-9817
Funded Practice:	Aquatic Area Buffer
LIP ID:	2019-33
Revision Request No:	1

Why will your project require a budget revision?

Additional funds requested are to meet the site's needs through adaptive management. During the site prep process, a larger than previously understood patch of J. knotweed was observed. In order to restore this area to its habitat potential additional work will be required. The request is to cover the site prep of the knotweed area, plant donated nursery stock in the fall, mark those plants, plus some previously installed plants, and maintain that area so that it remains J. knotweed free through the plant establishment phase.

What was the original approved budget and what is your new proposed budget? Please provide the project total and the amount eligible for reimbursement for the original and new proposed budget.

Original Budget: \$15,845.00

New Proposed Budget: \$25,970.00

Please attach the Excel files of your approved budget and new proposed budget

  
Signature of Applicant

06/20/20  
Date

FOR OFFICE USE

Approval Signature

Date

LIP ID

Scope of Work for:  
 Name of Project: Haberzette  
 Date: 09/17/2019  
 Revised Date: 06/20/20



**Narrative Scope of Work:** Project Description: The Haberzette project will consist of 4.77 acres of restored buffer on 2200 linear feet of the Snoqualmie River, its confluence with Griffen Creek, and the unnamed tributary. The buffer will average 95 feet in width along the river and 125 feet in width along the unnamed creek and will be planted at a density of 1400 stems per acre to achieve the goal of 2400 stems per acre (five feet on center). CREP will fund the installation of 400 stems per acre and with LIP match funds contributing another 1000 stems per acre.

**BUDGET REVISIONS ARE GREEN ROWS.** Additional funds requested are to meet the site's needs through adaptive management. During the site prep process, a larger than previously understood patch of J. knotweed was observed. In order to restore this area to its habitat potential additional work will be required. The request is to cover the site prep of the knotweed area, plant donated nursery stock in the fall, mark those plants, plus some previously installed plants, and maintain that area so that it remains J. knotweed free through the plant establishment phase.

Haberzette	Unit Type	Unit Number	Unit Cost	Total Costs	WSCC Funds	FSA/ P.I.P. Funds	LIP Request
<b>Contracted Services</b>							
Site Prep - Hand Mow/ Cut	ac	2.38	\$1,850.00	\$4,403.00			
Site Prep - Backpack Spot or Area Spray	ac	4.77	\$300.00	\$1,431.00			
Site Prep - Hand Mow/ Cut	ac	1.50	\$1,850.00	\$2,775.00			
Site Prep - Backpack Spot or Area Spray	ac	1.50	\$300.00	\$450.00			
Maintenance Years 1-5 est.	ac	1.50	\$300.00	\$2,250.00			
			<b>Site Prep Total</b>	<b>\$11,309.00</b>	<b>\$251.00</b>	<b>\$2,263.00</b>	<b>\$8,795.00</b>
Planting	ea	4,175	\$1.50	\$6,262.50			
			<b>Planting Total</b>	<b>\$6,262.50</b>			<b>\$6,262.50</b>
<b>Materials and Supplies</b>							
Bare Root Plants	ea	4,175	\$1.50	\$6,262.50			
Labor for Planting Additional Plants	ea	300	\$8.00	\$2,400.00			
Marking/ Tubing Plants/ Supplies and Labor	ea	500	\$4.50	\$2,250.00			
			<b>Materials Total</b>	<b>\$10,912.50</b>			<b>\$10,912.50</b>

<b>CREP Funded Activities</b>							
<b>Materials and Supplies</b>							
Bare Root Plants	ea	2,250		\$2,729.00	\$273.00	\$2,456.00	\$0.00
Planting (Contracted Services)	ea	2,250		\$1,799.86	\$180.00	\$1,619.86	\$0.00
			<b>Total</b>	<b>\$4,528.86</b>	<b>\$453.00</b>	<b>\$4,075.86</b>	<b>\$0.00</b>

Installation Total Est.	\$33,012.86	\$704.00	\$6,338.86	\$25,970.00
Landowner Cost Share Max				\$0.00
LIP Request				\$15,845.00
Revised LIP Request				\$25,970.00

<b>CREP Funded Activities (Other)</b>							
Maintenance Years 1-5 est.	ac	4.77	\$2,350.00	\$11,209.50	\$11,209.50	\$0.00	\$0.00
Midcontract Management 7-9 est.	ac	4.77		\$1,192.50	\$596.00	\$596.50	\$0.00
KCD Staff Time (Non Cost Share) est.	hr	40	\$60.00	2,400.00	2,400.00	\$0.00	\$0.00
			<b>Project Total Est.</b>	<b>\$42,218.72</b>	<b>\$15,815.50</b>	<b>\$15,087.08</b>	<b>\$31,690.00</b>

<b>Project Installation Summary</b>	
CREP	\$7,042.86
LIP	\$25,970.00
Landowner	\$0.00
<b>Total</b>	<b>\$33,012.86</b>

# KING CONSERVATION DISTRICT (KCD) LANDOWNER INCENTIVE PROGRAM APPLICATION

## Aquatic Area Enhancement Project

### Section 1. Applicant (If applicant is not the landowner, then landowner must also sign the agreement)

Applicant Name: Joe Haberzette		Farm/Business Name:	
Mailing Address: 324 32nd Ave. E Seattle, WA 98112		Project Address: 1927 Fall City Carnation Rd NE 98014 Carnation, 98014	
Phone (home): (206)284-9817		Phone (work/mobile): (425)709-4848	
Email Address: jhaberzette@yahoo.com		KCD Staff: Zachary Bergen	
Parcel #(s): Parcel #2825079007	<input type="checkbox"/> Incorporated <input checked="" type="checkbox"/> Unincorporated	Total Farm/Land Acreage: 40 acres	<input checked="" type="checkbox"/> T.A. <input type="checkbox"/> Farm Plan <input type="checkbox"/> Forest Plan
Is email an acceptable primary form of communication?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Would you like to be added to our newsletter list?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

### Section 2. Project Information

Best Management Practice (BMP): Riparian Forest Buffer
Project Completion Date (month and year): 12/2032
<p><b>Current Site Conditions</b> <i>(Provide a brief summary of resource management problem addressed by BMP: note streams, wetlands, and steep slopes near or within the project area):</i></p> <p>The Haberzette property is a 40-acre farm which has been in the family since the early 1970's and used for quarter horses, cattle, and other livestock. Joe Haberzette is a participant in the Conservation Reserve and Enhancement Program (CREP) and has enrolled 4.77 acres of the farm's riparian area in the program to be restored and protected. For management purposes the acreage has divided into four management areas including a hedgerow perimeter, upland bench (tree_zone_1), a mixed riparian forest (tree_zone_2), and a flood plain bench (tree_zone_3). The upland bench is primarily Rubus armeniacus (Himalayan blackberry). The mixed riparian forest is primarily Alnus rubra (red alder), Acer macrophyllum (big leaf maple), and Pseudotsuga menziesii (Douglas fir) with an under-story of Rubus armeniacus. The flood plain bench is primarily Phalaris</p>
<p><b>Project Details</b> <i>(Provide a brief summary of the project. Include acres treated, linear feet of stream enhanced, length of fence, types and numbers of plants, etc.):</i></p> <p>The Haberzette project will consist of 4.77 acres of restored buffer on 2200 linear feet of the Snoqualmie River, its confluence with Griffen Creek, and the unnamed tributary. The buffer will average 95 feet in width along the river and 125 feet in width along the unnamed creek. The goal of this project is to reach a plant density of approximately 2400 stems per acre (4 feet on center). Through aerial photography and site visits it has been estimated that current densities are approximately 1000 stems per acre. Therefore, to achieve the goal, 1400 stems per acre will be planted. CREP will fund the installation of 400 stems per acre and LIP will fund another 1000 stems per acre.</p>
<p><b>Maintenance Plan:</b></p> <p>Paid for through the CREP program with no LIP request.</p> <p>Restoration contractors will maintain the project for 3-5 growing seasons. Activities will include control of non-desirable vegetation to promote plant establishment.</p>

Permits (List all permits required to complete this project): N/A

Photos: KCD Resource Planner must submit before photos with this application.

### Section 3. Cost-share Programs

- A. Have you previously applied for cost-share through the KCD Landowner Incentive Program (LIP)? ☐ Yes ☒ No  
If yes, please list contract number and BMP below:

- B. Are you applying for (or received) funding (cost-share or grants) through other agencies or programs? ☒ Yes ☐ No  
Please describe below:

1. **King County Cost-share**

Please list practices and date installed below:

2. **NRCS EQIP (Natural Resources Conservation Service's Environmental Quality Incentive Program)**

Please list practices and date installed below:

3. **Other**

Please list agency and describe project:

This project is receiving funding through the CREP program which includes funds from WSCC and FSA.

Other Cost-Share History/Notes:

### Section 4. Budget (attached as Exhibit A)

KCD will plan and install the Best Management Practice (BMP) on behalf of the Applicant. A detail of the project budget with line items for planning, installation, maintenance and cost-share ratios are attached as Exhibit A. Upon BMP installation, KCD will invoice the Applicant for the Applicant Cost-share listed in the following table. Applicant cost-share is due 30 days after receipt of a KCD invoice.

Program Cost-share	Cost-share Ratio	Amount
King CD Landowner Incentive Program	10%	\$ 15,845.00
King CD Aquatic Area Enhancement Program	0%	\$ 0.00
Washington State Conservation Commission	0%	\$ 704.00
Other (specify) -	0%	\$ 6,338.86
Other (specify) -	0%	\$ 0.00
Applicant Cost-share	10%	\$ 0.00
TOTAL	100%	\$ 22,887.86



## Section 5. Education and Outreach

KCD encourages public education through demonstration projects. Demonstration projects are used to educate other landowners about innovative ways to address natural resource concerns. A demonstration project may be showcased in a guided tour, or featured in presentations or written fact sheets.

A. Will you consider becoming a demonstration project?

☐ Yes ☒ No

## Section 6. Maintenance and Monitoring Expectations

The applicant is responsible to maintain the Best Management Practice (BMP) to standard as detailed in the attached Job Sheet for the lifetime of the BMP.

- ☐ A. I understand the lifetime of the BMP is 15 years.
- ☐ B. I understand KCD will coordinate and conduct maintenance and replanting for the first three years of the lifetime of the BMP. After that, KCD will work with the Applicant to verify proper maintenance of the installed BMP. Verification of maintenance includes a combination of site visits with KCD staff members who will take photos of the project, and annual photo documentation submitted by the applicant for the lifetime listed in Section 6A.
- ☐ C. I understand I am obligated to maintain and monitor the BMP for the lifetime listed in Section 6A.

## Section 7. Application and Agreement

I request financial assistance (cost-share) under the KCD LIP to install the Best Management Practice (BMP) described in this application and detailed in the attached *Job Sheet and Map*. This practice is needed to solve the natural resource problems described in Section 2 of this application. This Agreement expires if the project is not completed by the specified completion date in Section 2 or in an approved timeline revision request. \_\_\_\_\_(Initial Here)

I authorize KCD to secure the applicable local, state and federal permits and to install the BMP on my behalf, and I agree to work cooperatively with KCD to obtain these permits. \_\_\_\_\_(Initial Here)

I agree to work cooperatively with KCD to ensure the funded BMP is maintained consistent with the design life identified in the attached Job Sheet and in Section 6 of this application. \_\_\_\_\_(Initial Here)

I agree to indemnify, defend, and hold harmless KCD, its elected or appointed officials, employees and agents, from all claims, alleged liability, damages, losses to or death of person or damage to property allegedly resulting from the negligent or intentional acts of the applicant or any of its employees or agents which may occur during the course of KCD's performance of the installation of the BMP provided in connection with this Agreement. \_\_\_\_\_(Initial Here)

I represent that the information provided in Section 3 of this application is a full disclosure of all other natural resource financial cost-share relationships in which I have or am participating. \_\_\_\_\_(Initial Here)

I understand that LIP cost-share is contingent upon installing the BMP to the minimum standard planned by KCD, and that KCD will verify and photo document standard compliance through its coordination of BMP installation. \_\_\_\_\_(Initial Here)

I understand that in cases where I become the recipient of a KCD LIP cost-share reimbursement there may be federal tax liability associated with the reimbursement. When this occurs, KCD will issue a 1099-G for reimbursements made through the LIP. I understand that KCD cannot provide advice with respect to the tax liability associated with LIP cost-share reimbursements. \_\_\_\_\_(Initial Here)

I understand that I am applying for public funding and am responsible for notifying a buyer upon sale or loss of the property of the installed BMP. If I sell or lose control of the property covered by this Agreement and the new owner or transferee does not assume responsibility for maintaining the installed BMP as required by this Agreement, I may be required to refund all or a portion of cost-share reimbursements received through this Agreement. In the event litigation is commenced by KCD to recover a refund of any cost-share reimbursements received through this Agreement, attorney's fees and costs incurred by the prevailing party in such action shall be paid by the non-prevailing party. \_\_\_\_\_(Initial Here)

I give permission to KCD to photograph my property to document the site conditions and/or the implementation and maintenance of the funded practice. In the event that I or any of my family members or dependents choose to be photographed in a setting that reflects the assistance provided by KCD, I give KCD permission to publish such photographs in KCD promotional literature, advertising, social media, and other public displays. The photographs will be the property of KCD and may be used by KCD at any time, in the manner described above, without my additional consent. . \_\_\_\_\_(Initial Here)

I understand that this Agreement is subject to disclosure under the Public Records Act, Chapter 42.56 RCW. \_\_\_\_\_(Initial Here)

I understand that I will no longer be eligible for KCD cost-share funds if one or more of the following occurs: \_\_\_\_\_(Initial Here)

- a. The KCD funded BMP fails within its design life due to circumstances within my control (e.g., neglect, failure to maintain the BMP, destruction of the BMP before expiration of the design life, or other actions which cause the KCD funded BMP to become non-viable).

*Note: Landowners are not responsible for BMP failure caused by circumstances beyond their control (e.g. fire, flood, storm damage, etc.)*

- b. I relinquish or lose ownership of equipment purchased with KCD cost-share.  
c. The KCD funded BMP is not being used for the intended purpose (e.g. cross fencing purchased with KCD funding, but no animals on property).  
d. I cancel two cost-share contracts awarded through the KCD Landowner Incentive Program.  
e. I deny KCD staff access to my property to verify BMP maintenance.

I understand KCD will provide two signs, an LIP sign and aquatic area buffer sign, free of charge, and I agree that: \_\_\_\_\_(Initial Here)

- a. I will select a visible location on my property for display of the LIP sign and will install it.  
b. KCD will install the aquatic area buffer sign adjacent to the installed aquatic area enhancement project.  
c. I will maintain the signs and keep them free of visual barriers for at least five years after installation.  
d. I am not responsible for damage to the sign that is beyond my control (e.g. auto accident, storm damage, vandalism, etc.)

Signature of applicant

Date

Signature of Landowner (If applicant If Lessee)

Date

FOR KCD OFFICE USE

Approved for Award (KCD LIP Coordinator)	Date	
Approved for Funding (KCD Management)	Date	LIP ID:

**Scope of Work for:**

Name of Project: Haberzette

Date: 09/17/2019



Narrative Scope of Work: Project Description: The Haberzette project will consist of 4.77 acres of restored buffer on 2200 linear feet of the Snoqualmie River, its confluence with Griffen Creek, and the unnamed tributary. The buffer will average 95 feet in width along the river and 125 feet in width along the unnamed creek and will be planted at a density of 1400 stems per acre to achieve the goal of 2400 stems per acre (five feet on center). CREP will fund the installation of 400 stems per acre and with LIP match funds contributing another 1000 stems per acre.

Haberzette	Unit Type	Unit Number	Unit Cost	Total Costs	WSCC Funds	FSA/P.I.P. Funds	LIP Request
<b>Contracted Services</b>							
Site Prep - Hand Mow/ Cut	ac	2.38	\$1,850.00	\$4,403.00			
Site Prep - Backpack Spot or Area Spray	ac	4.77	\$300.00	\$1,431.00			
			Site Prep Total	\$5,834.00	\$251.00	\$2,263.00	\$3,320.00
Planting	ea	4,175	\$1.50	\$6,262.50			
			Planting Total	\$6,262.50			\$6,262.50
<b>Materials and Supplies</b>							
Bare Root Plants	ea	4,175	\$1.50	\$6,262.50			
			Materials Total	\$6,262.50			\$6,262.50

<b>CREP Funded Activities</b>							
<b>Materials and Supplies</b>							
Bare Root Plants	ea	2,250		\$2,729.00	\$273.00	\$2,456.00	\$0.00
Planting (Contracted Services)	ea	2,250		\$1,799.86	\$180.00	\$1,619.86	\$0.00
			Total	\$4,528.86	\$453.00	\$4,075.86	\$0.00

Installation Total Est.	\$22,887.86	\$704.00	\$6,338.86	\$15,845.00
Landowner Cost Share Max				\$0.00
LIP Request				\$15,845.00

<b>CREP Funded Activities (Other)</b>							
Maintenance Years 1-5 est.	ac	4.77	\$2,350.00	\$11,209.50	\$11,209.50	\$0.00	\$0.00
Midcontract Management 7-9 est.	ac	4.77		\$1,192.50	\$596.00	\$596.50	\$0.00
KCD Staff Time (Non Cost Share) est.	hr	40	\$60.00	2,400.00	2,400.00	\$0.00	\$0.00
			Project Total Est.	\$42,218.72	\$15,815.50	\$15,087.08	\$31,690.00

<b>Project Installation Summary</b>	
CREP	\$7,042.86
LIP	\$15,845.00
Landowner	\$0.00
Total	\$22,887.86



# JOB SHEET

## Aquatic Area Buffer Planting- Riparian Forest Buffer

Landowner: Joe Haberzetle	Lifetime of Practice: 15 years

Purpose (check all that apply)	
<input checked="" type="checkbox"/> Create shade to lower or maintain water temperatures to improve habitat for aquatic organisms	<input type="checkbox"/> Improve forest health reducing the potential of damage from pests and moisture stress
<input checked="" type="checkbox"/> Create or improve riparian habitat and provide a source of detritus and large woody debris	<input checked="" type="checkbox"/> Restore natural riparian plant communities
<input type="checkbox"/> Reduce excess amounts of pollutants in surface runoff and reduce excess nutrients and chemicals in shallow groundwater flow	<input checked="" type="checkbox"/> Improve wildlife habitat
<input type="checkbox"/> Reduce pesticide drift entering water body	<input checked="" type="checkbox"/> Increase carbon storage in vegetation and soils, and increase biomass in soils

Current Site Conditions <i>Provide a summary of the resource management problems addressed by the BMP. Also note any other current conditions pertinent to the project (slopes, erosion, flow, drainage).</i>
<p>The Haberzetle property is a 40-acre farm which has been in the family since the early 1970's and used for quarter horses, cattle, and other livestock. Joe Haberzetle is a participant in the Conservation Reserve and Enhancement Program (CREP) and has enrolled 4.77 acres of the farm's riparian area in the program to be restored and protected. For management purposes the acreage has divided into four management areas including a hedgerow perimeter, upland bench (tree_zone_1), a mixed riparian forest (tree_zone_2), and a flood plain bench (tree_zone_3). The upland bench is primarily <i>Rubus armeniacus</i> (Himalayan blackberry). The mixed riparian forest is primarily <i>Alnus rubra</i> (red alder), <i>Acer macrophyllum</i> (big leaf maple), and <i>Pseudotsuga menziesii</i> (Douglas fir) with an under-story of <i>Rubus armeniacus</i>. The flood plain bench is primarily <i>Phalaris arundinacea</i> (reed canarygrass). All four areas would benefit from activities that concentrated on returning the site to baseline conditions.</p>

Riparian Forest Buffer Practice and Details <i>Provide the following:</i>
<ol style="list-style-type: none"> <li>1) a basic description of the proposed planting area</li> <li>2) calculate and record the square footage (acreage) of the planting area, the number of trees and shrubs to be planted, the linear footage of stream enhanced, the average and minimum width of the buffer:</li> <li>3) list any native plant species currently existing on site</li> <li>4) list native trees and shrubs selected for the project</li> <li>5) please attach your proposed planting plan</li> </ol>
<p>1) &amp; 2) The project will enhance 4.77 acres of riparian forest buffer along 2200 linear feet of the Snoqualmie River, Griffen Creek, and the unnamed tributary. The average buffer width is 110 feet. A total of 6,425 native trees and shrubs will be installed.</p> <p>3) <i>Alnus rubra</i> (red alder), <i>Acer macrophyllum</i> (big leaf maple), <i>Populus trichocarpa</i> (black cottonwood), <i>Thuja plicata</i> (western red cedar), <i>Tsuga heterophylla</i> (western hemlock), <i>Picea sitchensis</i> (Sitka spruce), <i>Pseudotsuga menziesii</i> (Douglas Fir), <i>Salix sitchensis</i> (Sitka willow), <i>Rhamnus purshiana</i> (cascara), <i>Cornus sericea</i> (red osier dogwood), <i>Rubus spectabilis</i> (salmonberry),</p>



Symphoricarpos albus (snowberry), Sambucus racemosa (red elderberry), Oemleria cerasiformis (indian plum), Corylus cornuta (hazelnut), and Acer circinatum (vine maple).

4) Lonicera involucrata (black twinberry), Physocarpus capitatus (Pacific ninebark), Crataegus douglasii (black hawthorn), Malus fusca (Pacific crabapple), Ribes sanguineum (red flowering currant), Rosa nutkana (nootka rose), Sambucus racemosa (red elderberry), Amelanchier alnifolia (serviceberry), Holodiscus discolor (ocean spray), Oemleria cerasiformis (Indian plum), Philadelphus lewisii (mock orange), Pseudotsuga menziesii (Douglas fir), Abies grandis (grand fir), Picea sitchensis (Sitka spruce), Thuja plicata (Western red cedar), Fraxinus latifolia (Oregon ash), Corylus cornuta (hazelnut), Cornus sericea (red osier dogwood), Oemleria cerasiformis (indian plum), Ribes sanguineum (red flowering current), Physocarpus capitatus (Pacific ninebark), Acer circinatum (vine maple), and Sambucus racemosa (red elderberry).

5) Planting plan attached.

**Permits** *Are there any permits necessary for the project? If so, please list below and include a copy of the permit*

**Yes, Aquatic Noxious Weed General Permit has been obtained from the Washington State Department of Ecology and Washington State Department of Agriculture: Permit #WAG993000.**

Contractor will have secured all necessary permits and licenses.

**Type and Source of Plant Material** *Will you use potted plants, bareroot plants, b&b plants or a combination? Where will you get the plants from and when?*

Plant material will be native species adapted to the site to minimize maintenance and care.

Timberline Silvics, the contractor, will plant bareroot material that have been sourced from the Puget Sound region. If additional plant material is purchased to augment the initial planting, that material can be bareroot, live stake, or potted nursery stock. There are a number of local native plant nurseries where native trees, shrubs and emergents can be purchased. Refer to the attached list of native plant nurseries for local King County sources of native plant material as well as sources in the greater Puget Sound region.

**Site Preparation** *List what method(s) of site preparation will be used, who will be doing the work, when will the work be done.*

Specific weed control prescriptions are detailed below. If brush and debris are removed from the stand, all material will be hauled off-site or masticated /chipped in a staging area. If masticated material is intended for use as mulch on the site, invasive species should not be included in the masticating/chipping process.

*Weed Control Prescriptions:*

Himalayan & Evergreen Blackberry Control –

- **Manual control:** Mow or cut the blackberry canes to less than 1 foot in height, then grub/dig out the roots attached to the cut canes. Thorough removal of blackberry roots in this manner, while labor intensive can reduce the blackberry population and cover in the prepared area by 90 – 95%. Monitor for re-growth in the following growing seasons; dig up any re-growth.
- **Chemical Control:** An alternative control method includes herbicide. One technique involves cutting/mowing the canes and swabbing the freshly cut canes with an approved herbicide. Foliar spray of blackberry is another effective control method. It is recommended that blackberry is mowed early in the summer and sprayed on the foliar re-growth the next fall (September/October). Do not spray planted seedlings. **Always follow label rates and instructions.**

English Ivy Control –

- *Manual Control:*
  - 1) Recommended manual methods include digging and pulling. First, remove any flowering or fruiting portion within reach and bag for removal from the site. Next, hand dig and pull out all accessible portions of plants including roots. Note that all cut stems/roots must be removed from soil contact. If composting on site, use cardboard or wood to create a raised platform. Consider wearing gloves and protective clothing as ivy sap is known to cause a reaction in some individuals. Mulching an area will significantly reduce re-growth of ivy. To properly mulch, apply an 8 inch thick mulch layer. Plants should be cut and removed and then mulched, preferably with a layer of cardboard below the mulch.
  - 2) Vertical ivy is controlled by girdling. To girdle vertical vines, cut the ivy vines at shoulder height and slightly above ground level. Remove the cut ivy section from the tree. This eliminates nutrient transport from the roots of ground ivy to the leaves and stems growing into the canopy of the tree. The lower cut section of ivy stems and roots must be pulled at least 6 feet away from tree. Root and stem fragments can re-grow and must be composted in a manner similar to ground ivy.
- *Chemical Control: Not Recommended.* Ivy leaves are waxy and difficult to penetrate with herbicides. Research on the best herbicide and surfactant to use is on-going. Talk to KCD Staff about this option. **Always follow label rates and instructions.**

#### Reed Canary Grass Control –

- *Manual Control:*
  - 1) Mowing reed canary grass depletes carbohydrate root reserves, and if done repeatedly it will result in the thinning or death of the grass. The ideal time to mow is at or near the flowering stage. The grass should be cut as near to the ground as possible (1 inch or lower). Twice yearly mowing (in early-mid June and early October) has shown increased survivorship of native plants planted into reed canary.
  - 2) Shading is highly effective in reducing reed canary grass stands. A dense planting of conifers, once established, is ideal for shading. Faster growing deciduous trees and shrubs, especially those that develop foliage in the early spring, combined with an under-planting of conifers can be effective. Artificial methods of shading can be used in conjunction with native plantings. Sheets of thick cardboard or landscaping fabric placed around each individual plant should be secured to the ground by long staples or stakes and covered with 5-6 inches of mulch. The combination of sheeting and mulch provides temporary suppression of the grass, allowing the desirable vegetation to thrive without competition. *Not recommended for flood prone areas.*
- *Chemical Control:* Herbicide can be effective in elimination of Reed Canary grass when properly applied. Studies show that spraying Glyphosate (the active ingredient in products such as ®Rodeo) after a stand is mown or when the grass has the minimum available carbohydrate reserves (after flowering) is an effective control method. Follow-up spraying the next year may be necessary to eliminate the remaining grass. **Always follow label rates and instructions.**

#### Bittersweet Nightshade Control-

- *Manual Control:* Hand pull stems that are close to the ground and pull or dig up roots. Take care not to break roots apart as small root or stem fragments left behind can re-sprout. For larger, more mature stands, dig out with a shovel or spade.
- *Chemical Control:* Two herbicide formulas are effective. Products containing glyphosate can be applied after berries have formed or in the early summer after plants have fully leafed out, but before they have flowered. Glyphosate is absorbed through leaves, but is “non-selective” and will damage other foliage it contacts. Products containing imazapyr are absorbed through leaves and woody stems. Apply the chemical when plants are actively growing, early to mid-summer is best. This herbicide is also non-selective. **Always follow label rates and instructions.**

#### Bohemian Knotweed/Japanese Knotweed Control –

- *Manual Control:* Manual control is extremely difficult.
  1. CUT: stems close to ground TWICE A MONTH or more between April and August, and then once a month until first frost, over 3-5 consecutive years.
    - Keep plants below 6 inches
    - Cut stems to surface of ground. DO NOT scatter stems or root fragments or allow them to enter waterways.
    - Rake and pile stems to where they will dry out. Place a barrier down so stems don't have contact with the bare ground. DO NOT COMPOST.
  2. DIG: up as much root as possible during the month of August for 3 consecutive years.
    - Uproot any new sprouts
    - Carefully dry or dispose of roots. Do not compost.
    - Search at least 20 feet from original patch for sprouts.
  3. COVER: with heavy duty geo-textile fabric or black plastic.
    - Works best on isolated patches in open terrain.
    - Leave the plant covered for 3-5 growing seasons.
    - Start by cutting plant to ground surface. Cover entire area and at least 7 feet beyond outside stems. Install materials loosely and weigh down with heavy rocks or cement blocks. Watch for holes in the fabric and perimeter growth. Stomp down re-growth every 2-4 weeks.
    - DO NOT COVER in flood prone areas
- *Chemical Control:* Herbicide can be applied by foliar spray, wick wipe, cut and pour, or stem injection. Please see attached King County Knotweed Best Management Practice Factsheet for full details. **Always follow label rates and instructions.**

#### Holly & Laurel Control-

- *Manual Control:* Not recommended. Small plants can be dug up when the soil is moist. Regularly check area for re-growth. For larger plants cut stems and trunks as close to the ground as possible. Roots may be dug out. Be sure to stabilize soil if large quantities are disturbed. If roots are not dug up, break off any new stems as they grow back for multiple growing seasons.
- *Chemical Control:* Large Holly and Laurel trunks should be cut as close to the ground as possible. Immediately (within minutes) treat the cut stump with an application of glyphosate herbicide (such as Rodeo or Roundup). An alternate technique, called frilling, involves incising deep cuts through bark into trunks at a 45 degree angle. Immediately treat the frills by pouring glyphosate herbicide into the cuts. Best results are achieved during periods of active growth and after full leaf expansion. Monitor for re-growth (seedlings and re-sprouting) and treat accordingly. Do not spray herbicide directly holly and laurel leaves, which have a waxy layer that prevents chemicals from being absorbed. **Always follow label rates and instructions.**

#### Morning Glory/Bindweed Control-

- *Manual Control:* Manual control of bindweed is difficult and must span many growing seasons. Bindweed has extensive root and rhizome systems that can live without light and re-sprout from small fragments, thus avoid digging or tilling soil around mature bindweed. Hand pulling of plant will eventually work if done regularly and over multiple years. Be sure to pull plant before it has produced seeds. Mowing is not recommended.
- *Chemical Control:* Chemical control of bindweed is difficult and must span multiple growing seasons. As bindweed grows around desirable plants, herbicides can be painted or brushed on foliage to reduce drift. Products with the active ingredient glyphosate are effective when applied in the summer and fall before the leaves die back. This product is non-selective and will kill other foliage and grass it comes into contact with. Other effective active ingredients include triclopyr and 2,4-D. Repeat applications of herbicide may be needed. **Always follow label rates and instructions.**

#### Yellow Flag Iris Control –

- *Manual control:* Control is feasible for individual plants or small stands. Dig out mature plants, taking care to remove all the rhizome. If you do not get all the rhizome, more plants will be produced. Keep watching the location after you have removed the plants, and new leaves will show you where you missed any sections of rhizome. Continue to remove the rhizome, until the patch is controlled. Dispose of all plant pieces away from wet sites. Composting is not recommended. Protect skin when performing this work as resins in plant can cause irritation. Check local regulations for removal of vegetation in a critical area.
- *Mechanical Control:* Repeated mowing or cutting within a growing season may keep Yellow Flag Iris contained and can potentially kill it by depleting the energy in the rhizomes after several years of intensive mowing. It is important to cut the plant in the spring before it flowers. Only hand held mowers or cutting tools should be used. Check local regulations for removal of vegetation in a critical area.
- *Chemical Control:* Yellow Flag Iris is a monocot; only non-selective herbicides are effective. Apply herbicide to actively growing plants in late spring or early summer. Apply directly to foliage, or apply immediately to freshly cut leaf and stem surfaces. Often a second treatment is needed a few weeks after the initial treatment to get complete coverage. **Always follow label rates and instructions.**

#### **Care and Temporary Storage of Purchased Plant Material** *Upon receiving the plant material, where will you store it and how will you care for it?*

All plant material should be stored in a cool location and well-watered prior to planting. In the case of bare root plants, inventory should be held in the source refrigerated facility as long as possible prior to planting. Bare root plants can be stored in the field for up to one to three weeks prior to planting by placing them in a shaded location where they will remain cool. Such a location should prevent freezing as well as exposure to warm temperatures. Additionally, bareroot inventory should be covered with a tarp to prevent drying. Bareroot stock that is expected to emerge from dormancy prior to planting should be “healed” into a soil bed. To heal-in, dig a v-shaped trench to a depth that accommodates covering the seedling roots when back-filled with soil.

#### **Installation** *Provide the following details: 1) Plant Installation Prescription: 2) Plant Protection Prescription: 3) Weed Suppression Prescription: 4) Erosion Control Prescription*

##### *1) Plant Installation Prescription:*

**Bareroot Inventory:** Bare root seedlings should be shovel planted to the same depth that they grew in the nursery fields. Roots will remain moist once they are removed from the shipping bundles until they are planted. Roots will be placed in a natural position in the soil without being crowded or turned up. Soil will be packed firmly around the root system, leaving no air pockets. Prior to digging a hole for the plant, prepare the planting location by removing all grass sod within a 1.5-foot diameter circle, being careful to remove roots as well as above ground grass. Dig a hole for the bare root plant in the center of this cleared circle. Refer also to the attached planting instructions in *Planting Bare Root Trees and Shrubs*.

##### *2) Plant Protection Prescription:*

**Tree Protectors (for sites where deer/elk browse is anticipated):** Install fencing, 3 foot diameter and 5 feet high, on newly planted Western Red Cedar to protect trees from deer browsing. Weave 6 foot bamboo stakes fencing and shove at least 8 inches into the ground in order to stabilize.



**Seeding:** In areas that will not be planted immediately seeding with an erosion control seed mix will prevent soil erosion. A sterile wheat product called ®Regreen or a native seed mix may be used. ®Regreen is a commercial brand of sterile wheat that will form a cover crop and die back within approximately one year to three years. ®Regreen shall be applied a rate of 60 lbs per acre when hydro seeded, and 120 lbs per acre when broadcast seeded. The best time to seed is April 1 to June 30 and September 1 through October 15; however irrigation may be required to grow adequate cover.

**Fencing** *Is fencing going to be installed? If so, what type, who will install it and when?*

Fencing was installed in 2018.

**Planting Project Maintenance and Monitoring** *The planting must be inspected periodically and protected from damage so proper function is maintained. The goal for the project is to reach 80% survival after 3 years. Please describe the maintenance and monitoring plan.*

**Restoration contractors will maintain the project for 5 growing seasons which includes the control of invasive species.**

Treatments must be inspected periodically and protected from damage so proper function is maintained and resource damage is minimized, including assessment of insects, disease and other pests, storm damage, and damage by trespass. The results of inspections shall determine the need for additional treatment under this practice.

Replace dead or dying trees and shrubs and control competing vegetation to support successful establishment. Periodic application of mulch may be needed to maintain plant vigor. Periodic harvest of trees and shrubs (thinning and brushing) may be necessary to maintain the health and vigor of the stand and support its development toward more mature stand conditions. Keep large dead and dying trees for cavity nesting wildlife and bird species and as a source of downed wood in the forest understory and in adjacent or interior aquatic habitats.

If areas were brushed in order to plant trees, maintain these openings until the leader of the tree surpasses the height of the surrounding vegetation.

Where droughty soils and hot growing conditions are anticipated, supplemental watering is recommended. In such cases the District recommends watering planted nursery stock for a minimum of 3 summers following planting. Young bare root, container, and ball/burlap plants have a reduced root system that hampers their ability to survive during the dry summer months (July through October). Watering a minimum of once every two weeks during the dry summer will promote greater rates of survival. Watering once per week is preferable.

Monitor treatment areas for re-growth of non-native/invasive species and control accordingly. Utilize weed control techniques prescribed in the Site Preparation section of the Job Sheet. Species to monitor include \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_ and any listed King County Noxious weeds.

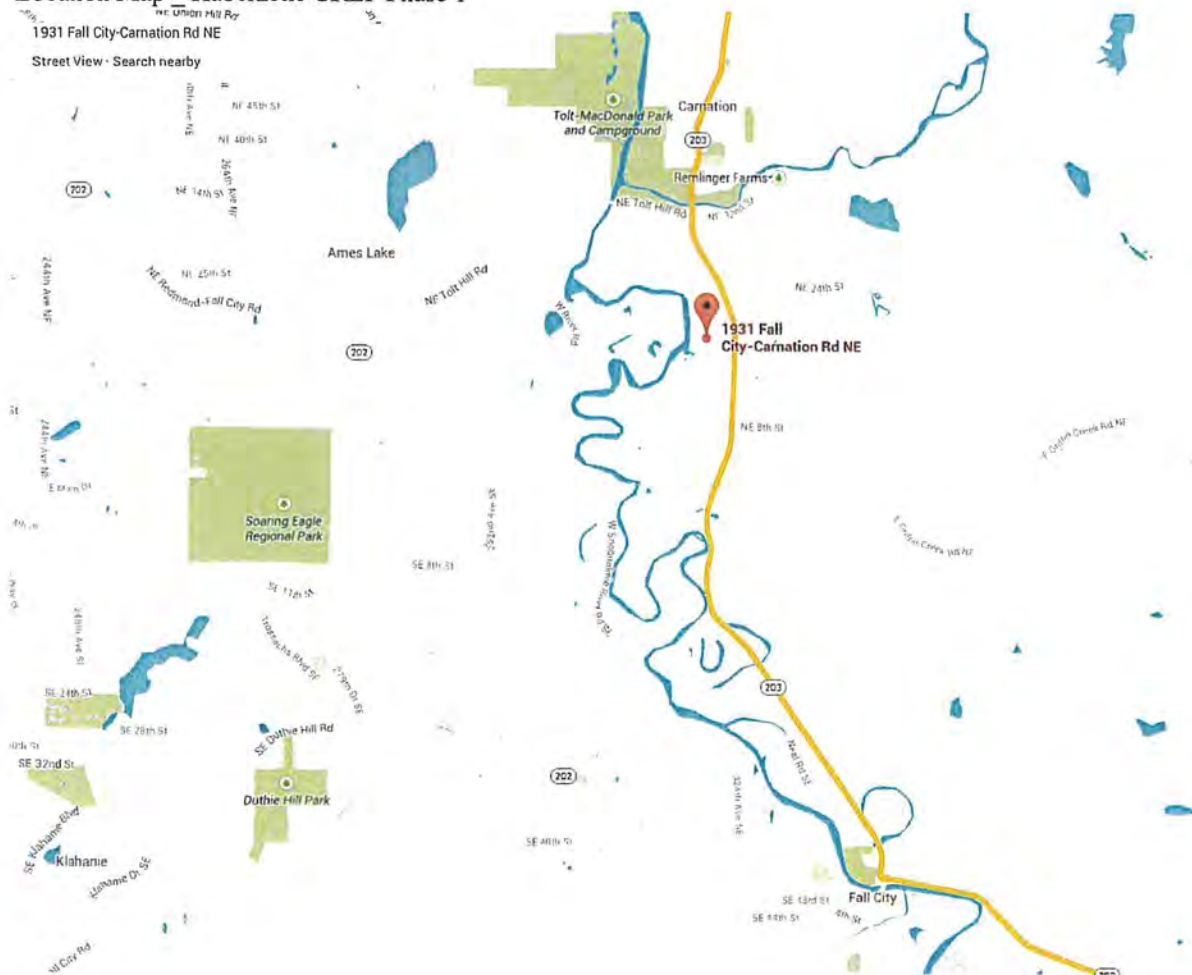
All plant protection materials as well as any other non-biodegradable materials installed on-site will be removed

**Additional Specifications and Notes:**

## Location Map\_Haberzette CREP Phase 1

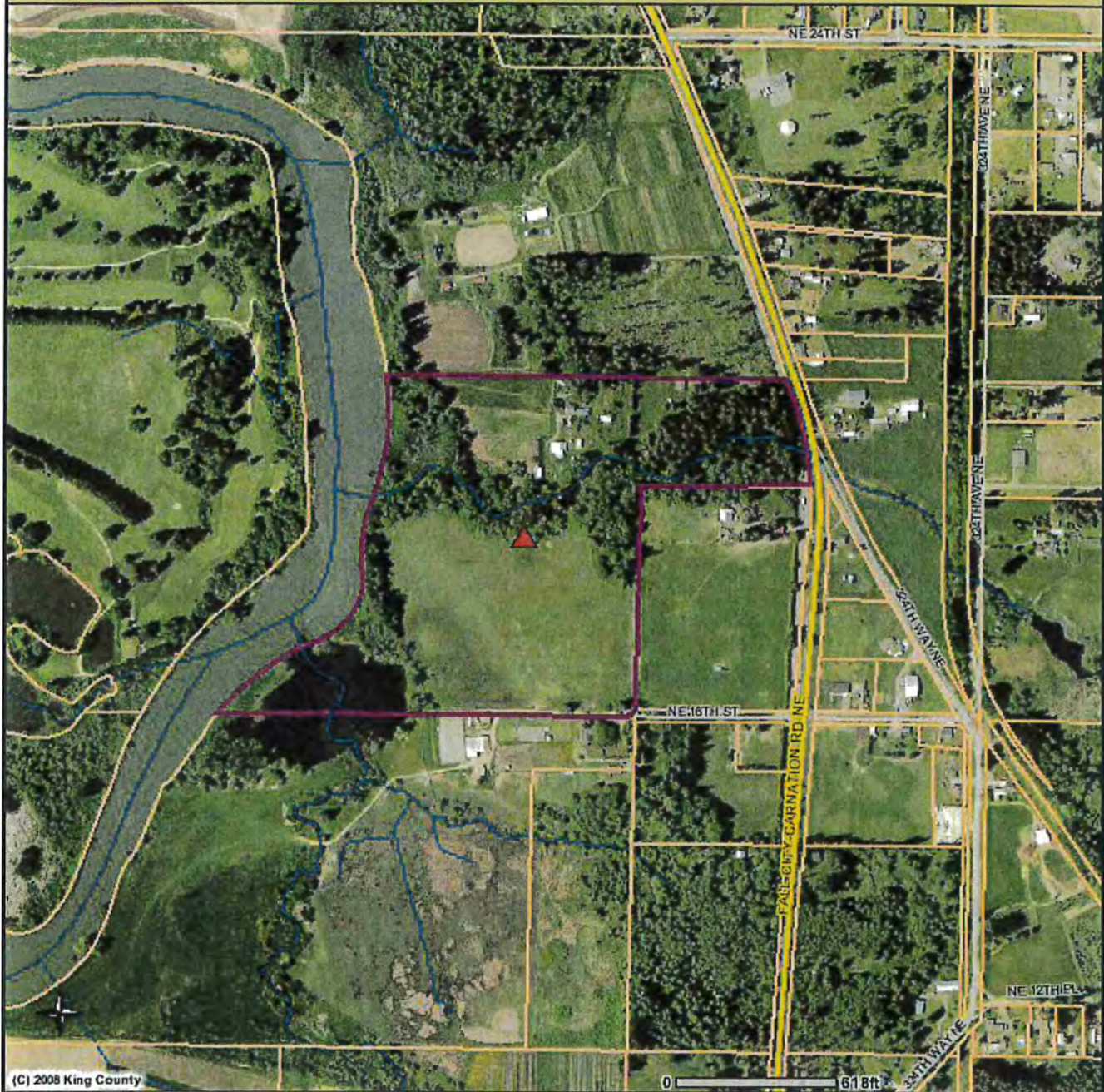
1931 Fall City-Carnation Rd NE

Street View · Search nearby





# Haberzelle CREP Phase 1 - Aerial Photo



(C) 2008 King County

## Legend



**Selected Parcels**



**County Boundary**



**Highways**

**Streets**

**(cont)**



**Highway**



**Arterials**



**Local**



**Parcels**



**Streams**

**2009 Color Aerial Photos (6in)**

**2009 Color Aerial Photos (12in)**

COMMENTS: Parcel # 28 25 07 9007

The information included on this map has been compiled by King County staff from a variety of sources and is subject to change without notice. King County makes no representations or warranties, express or implied, as to accuracy, completeness, timeliness, or rights to the use of such information. This document is not intended for use as a survey product. King County shall not be liable for any general, special, indirect, incidental, or consequential damages including, but not limited to, lost revenues or lost profits resulting from the use or misuse of the information contained on this map. Any sale of this map or information on this map is prohibited except by written permission of King County.

Date: 1/6/2015 Source: King County IMAAP - Sensitive Areas (<http://www.metrokc.gov/GIS/IMAP>)



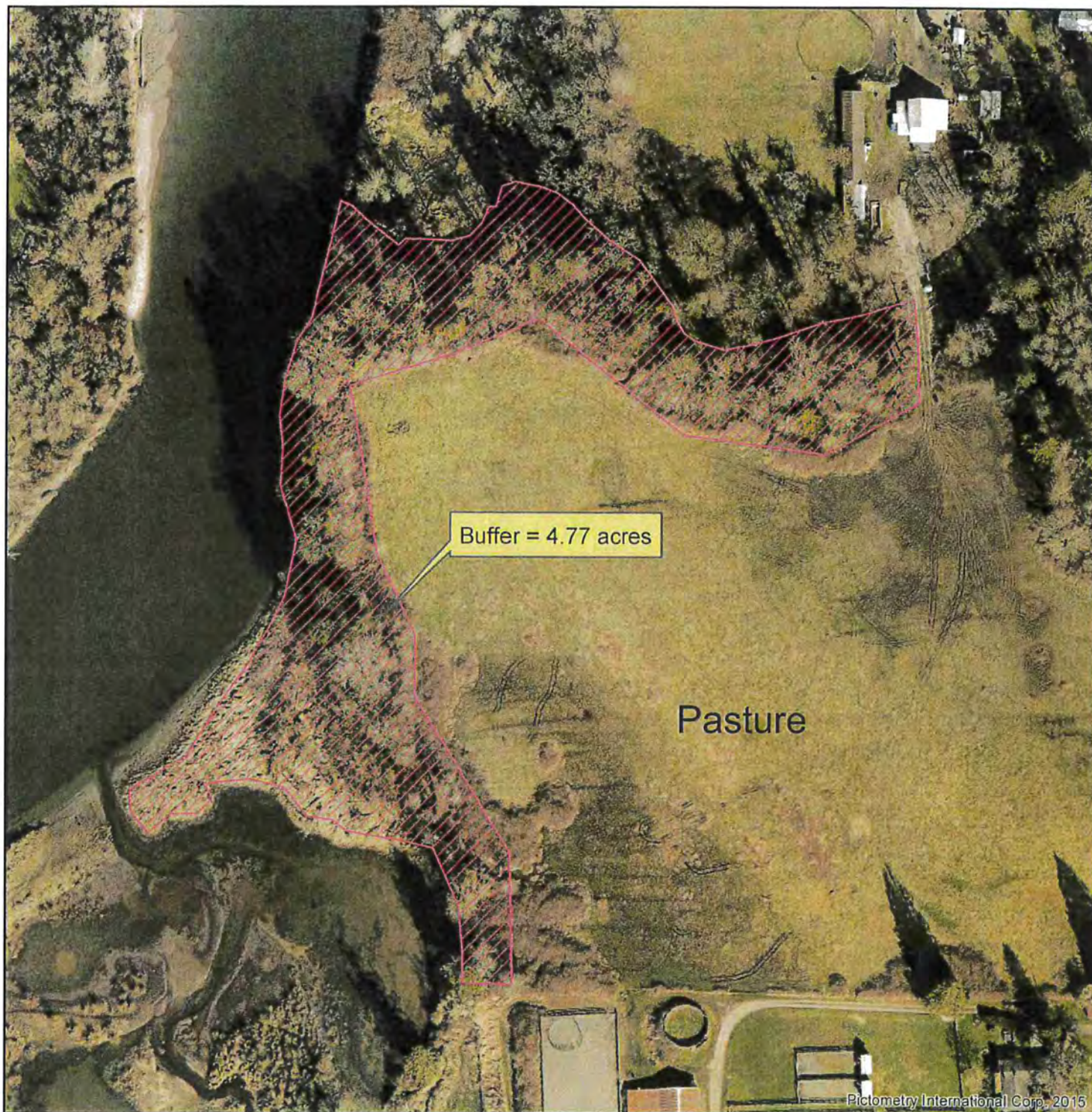
**King County**



1931 Fall City-  
Carnation Rd. NE  
Carnation, WA 98014

## Haberzette CREP Phase 1 Buffer Area


King Conservation District  
Renton, King County, WA  
September 22, 2016



Pictometry International Corp. 2015

NE 1/4 of Section 28 Township 25N Range 7E

### Legend

 BufferOutline\_FSA

0 90 180 360 Feet 1:1,925



Data Source:  
KingCo\_ 2015.  
For general  
and planning  
purposes only.



1931 Fall City-  
Carnation Rd. NE  
Carnation, WA 98014

# Haberzette CREP Phase 1 Planting Zones

King Conservation District  
Renton, King County, WA  
August 2017



## Legend

- Buffer\_Fence
- Hedgerow\_Perimeter
- Tree\_Zone\_1
- Tree\_Zone\_2
- Tree\_Zone\_3

NE 1/4 of Section 28 Township 25N Range 7E

0 75 150 300 Feet

1:1,622



Data Source:  
KingCo\_2013.  
For general  
and planning  
purposes only.



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KING CONSERVATION DISTRICT LANDOWNER INCENTIVE PROGRAM  
APPLICATION

---

Pre-Implementation Photo Points  
Haberzette



Photo 1-  
Located in the north-east  
corner of the project, near  
access gate looking straight  
south.



Photo 2 -  
Located near the third gate  
looking east at Tree\_Zone\_1



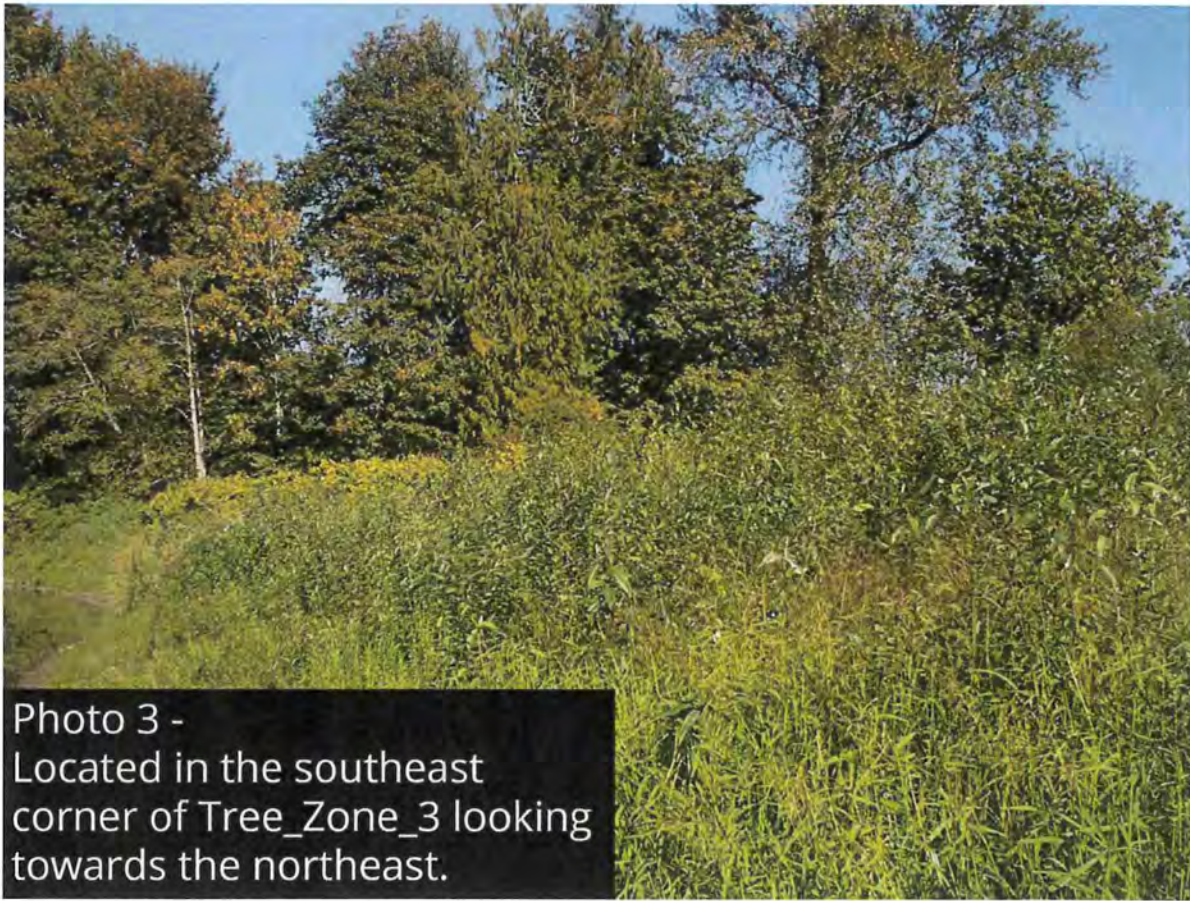


Photo 3 -  
Located in the southeast  
corner of Tree\_Zone\_3 looking  
towards the northeast.





Photo 4 -  
Located near the southeast  
corner of Tree\_Zone\_3 looking  
to the southeast.

# FINANCE

Check/Voucher Register - Monthly Check, EFTs, Payroll, and Fee Register  
1000 - Cash (Checking Ops / BoA / x0408)  
From 6/1/2020 through 6/30/2020

AI 20-040

Document Number	Vendor	Date	Amount
22670	ACF West Inc.	6/22/2020	-952.99
22671	Alliance Printing Inc.	6/22/2020	-1,757.38
22672	WEX Bank	6/22/2020	-250.00
22673	Elizabeth Clark	6/22/2020	-28.92
22674	Dept of Ecology	6/22/2020	-2,408.33
22675	Delridge Neighborhoods Development Association	6/22/2020	-1,913.51
22676	Environmental Coalition of South Seattle (ECOSS)	6/22/2020	-6,137.54
22677	Health Care Authority	6/22/2020	-30,626.45
22678	Highline College	6/22/2020	-906.25
22679	Integrated Computer Systems Support, Inc.	6/22/2020	-6,278.25
22680	Peter Landry	6/22/2020	-192.21
22681	Llewellyn Lighting Solutions	6/22/2020	-4,525.50
22682	McCaffrey Consulting LLC	6/22/2020	-1,538.00
22683	Melrose Properties LLC	6/22/2020	-2,048.53
22684	Mobile Auto Spa	6/22/2020	-1,500.00
22685	Office Team	6/22/2020	-2,000.00
22686	Pacific Topsoils Inc.	6/22/2020	-349.27
22687	Darcey Peterson	6/22/2020	-2,737.50
22688	Pike Place Market Foundation	6/22/2020	-9,474.90
22689	Renton Office Park LLC	6/22/2020	-32,005.54
22690	Shared Soil LLC	6/22/2020	-3,045.05
22691	State Auditor's Office	6/22/2020	-565.50
22692	T-Mobile USA, Inc.	6/22/2020	-1,456.69
22693	Tukwila Self-Storage	6/22/2020	-462.00
22694	University of Washington	6/22/2020	-2,718.76
22695	U.S. Bank Equipment Finance	6/22/2020	-2,956.47
22696	Grow Food dba Viva Farms	6/22/2020	-6,973.48
22697	Washington Water Trust	6/22/2020	-928.50
22698	Wilbur-Ellis	6/22/2020	-891.50
22699	Spoiled/Voided Check	6/22/2020	0.00
22700	Spoiled/Voided Check	6/22/2020	0.00
22701	Spoiled/Voided Check	6/22/2020	0.00
22702	Spoiled/Voided Check	6/22/2020	0.00
22703	Spoiled/Voided Check	6/22/2020	0.00
22704	Spoiled/Voided Check	6/22/2020	0.00
22705	Association of Washington Cities	6/8/2020	7,150.00
22706	Marinn Carpenter	6/8/2020	3,153.78
22707	City of Renton Utility Division	6/8/2020	101.22
22708	Claremont Forest LLC	6/8/2020	1,260.00
22709	Comcast Business	6/8/2020	218.08
22710	Comcast Business - PA	6/8/2020	398.00
22711	Dept of Ecology	6/8/2020	2,083.33
22712	Fourth Corner Nurseries	6/8/2020	140.24
22713	Global to Local	6/8/2020	5,209.27
22714	Hansen Architecture, PLLC	6/8/2020	7,960.00
22715	Integrated Computer Systems Support, Inc.	6/8/2020	1,449.40
22716	King County Office of Finance	6/8/2020	52,991.51
22717	Marc Bolan Consulting	6/8/2020	600.00
22718	McCaffrey Consulting LLC	6/8/2020	1,538.00
22719	Jason Mirro	6/8/2020	30.35



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From 6/1/2020 through 6/30/2020

AI 20-040

Document Number	Vendor	Date	Amount
22720	Mountain Mist	6/8/2020	65.89
22721	National Construction Rentals	6/8/2020	162.80
22722	Office Team	6/8/2020	1,326.00
22723	Pitney Bowes Global Financial Services	6/8/2020	248.59
22724	Rani Souza	6/8/2020	150.00
22725	The Keystone Concept	6/8/2020	11,225.00
22726	US Bank VISA	6/8/2020	7,113.28
22727	WACD Plant Materials Center	6/8/2020	493.24
22728	Young Women Empowered	6/8/2020	16,466.06
22729	ACF West Inc.	6/22/2020	952.99
22730	Alliance Printing Inc.	6/22/2020	1,757.38
22731	WEX Bank	6/22/2020	250.00
22732	Elizabeth Clark	6/22/2020	28.92
22733	Dept of Ecology	6/22/2020	2,408.33
22734	Delridge Neighborhoods Development Association	6/22/2020	1,913.51
22735	Environmental Coalition of South Seattle (ECOSS)	6/22/2020	6,137.54
22736	Health Care Authority	6/22/2020	30,626.45
22737	Highline College	6/22/2020	906.25
22738	Integrated Computer Systems Support, Inc.	6/22/2020	6,278.25
22739	Peter Landry	6/22/2020	192.21
22740	Llewellyn Lighting Solutions	6/22/2020	4,525.50
22741	McCaffrey Consulting LLC	6/22/2020	1,538.00
22742	Melrose Properties LLC	6/22/2020	2,048.53
22743	Mobile Auto Spa	6/22/2020	1,500.00
22744	Office Team	6/22/2020	2,000.00
22745	Pacific Topsoils Inc.	6/22/2020	349.27
22746	Darcey Peterson	6/22/2020	2,737.50
22747	Pike Place Market Foundation	6/22/2020	9,474.90
22748	Renton Office Park LLC	6/22/2020	32,005.54
22749	Shared Soil LLC	6/22/2020	3,045.05
22750	State Auditor's Office	6/22/2020	565.50
22751	T-Mobile USA, Inc.	6/22/2020	1,456.69
22752	Tukwila Self-Storage	6/22/2020	462.00
22753	University of Washington	6/22/2020	2,718.76
22754	U.S. Bank Equipment Finance	6/22/2020	2,956.47
22755	Grow Food dba Viva Farms	6/22/2020	6,973.48
22756	Washington Water Trust	6/22/2020	928.50
22757	Wilbur-Ellis	6/22/2020	891.50
22758	John P. Bethel	6/30/2020	2,250.00
22759	Greenbelt Consulting	6/30/2020	6,600.00
22760	Mid Puget Sound Fisheries Enhancement Grp	6/30/2020	2,057.77
22761	Washington Alarm, Inc	6/30/2020	367.29
Total Checks			260,438.12
22602	Global to Local	6/2/2020	-5,353.95
22670	ACF West Inc.	6/22/2020	-952.99
22671	Alliance Printing Inc.	6/22/2020	-1,757.38
22672	WEX Bank	6/22/2020	-250.00
22673	Elizabeth Clark	6/22/2020	-28.92



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22696	Grow Food dba Viva Farms	6/22/2020	-6,973.48
22697	Washington Water Trust	6/22/2020	-928.50
22698	Wilbur-Ellis	6/22/2020	<u>-891.50</u>
<b>Total Void Checks</b>			<b>-132,982.97</b>
060520-Navia	Navia Benefit Solutions	6/5/2020	10.00
061220-Navia	Navia Benefit Solutions	6/12/2020	394.60
061920-Navia	Navia Benefit Solutions	6/19/2020	<u>165.06</u>
<b>Total EFT</b>			<b>569.66</b>
061120-WireFee	Bank of America	6/11/2020	15.00
062420-WireFee	Bank of America	6/24/2020	15.00
063020-CkImFee	Bank of America	6/30/2020	<u>3.00</u>
<b>Total Bank Fees</b>			<b>33.00</b>
2006 01	June 2020 Payroll	6/30/2020	139,381.23
063020-DRS	Dept of Retirement Systems	6/30/2020	43,691.23
063020-PRTaxes	QuickBooks Payroll Service	6/30/2020	50,265.23
063020b-QBFees	QuickBooks Payroll Service	6/30/2020	<u>232.13</u>
<b>Total Payroll</b>			<b>233,569.82</b>
<b>Report Total</b>			<b>494,610.60</b>

# UNFINISHED BUSINESS



2019 Annual Report

# BETTER GROUND

Replenishing Our Region





# WHO WE ARE, HOW WE WORK

At King Conservation District, we work to build better ground. From better food to better backyards to better farms, we are here for you.

KCD was established in 1949 by the Washington Conservation Commission to empower landowners and managers to steward those lands in the public's interest. Conservation districts were created to address our nation's first environmental crisis – the Dust Bowl.

KCD is a metropolitan conservation district serving 34 cities and unincorporated King County with a total population of over two million people. Our funding comes primarily from a small per-parcel rate and charge. We are able to leverage these local dollars with state, federal, and foundation funds to partner with farmers, rural landowners, urban residents, volunteers, community-based organizations and our municipal partners.

Conservation districts are non-regulatory and work with people who are ready to implement best management practices (BMPs) on their property or in their communities. For our region to be resilient in the face of climate change, population growth, and other pressures, we must work together to re-build the natural resources that mitigate the demands of the built environment and support a vibrant and equitable local economy.

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# FAREWELL AND THANK YOU

## Letter from the Chair



It is a bittersweet moment for me, writing this introductory letter to King Conservation District's 2019 Annual Report. 2019 marks the end of KCD's 2015 5-year work plan, brought about through intensive regional collaboration, and it marks

my final year of serving on this Board of Supervisors.

As a member of the Rural Forest Commission, I was invited to serve on the King Conservation District-King County Task Force in 2013 and became part of the coalition that helped shepherd in the organization's new role in the region. I stayed on as a member of

its Advisory Committee to help draft our actual work plan, and then moved to the Board and, eventually, the role of Chair.

It has been an honor and a privilege to work with the dedicated and excellent staff at KCD and to help build the bridges with our partners that ensure a brighter future for not only this organization but the larger place we all call home. I breathe easy in the knowledge that both are in good hands and many will benefit from the groundwork we've laid.

Thank you all – keep up the good work!

A handwritten signature in black ink, appearing to read 'Dick Ryon'.

Dick Ryon, Board Chair, 2019  
King Conservation District

# BUILDING ON A SOLID FOUNDATION

## Letter from the Executive Director



Closing one door – and opening another. That is the context we find ourselves in at KCD as we close out our 2015 5-year program of work and look ahead to the next five years. This KCD 2019 Annual Report not only outlines the

accomplishments and challenges of this past year, but summarizes the cumulative body of work that officially wraps up with the end of 2019.

Stepping into 2020 is stepping into a future that builds on the solid foundation of this recent past, stepping

into uncertainty as a pandemic rages around us, stepping into innovation for delivering high quality service and programs in the face of unprecedented challenges.

But, we are ready. Conservation districts have always been innovators. Agile, dedicated, and people-centric, we are entering our next chapter fully prepared to bring our expertise, tools, and creativity to the critical need of ensuring that the residents of King County and Puget Sound live in an environmentally healthy, equitable, and resilient place.

A handwritten signature in black ink, appearing to read 'Bea Covington'.

Bea Covington, Executive Director  
King Conservation District

At King Conservation District, we're all about better ground. Better ground means taking important stewardship actions at home and in our communities to create healthy soil and water, to provide healthy food, and to conserve land, water, forests, wildlife and related natural resources. And you don't have to go it alone. You have a partner, your local conservation district.

## 2019 ACCOMPLISHMENTS

**49,719**

Native Trees & Shrubs Planted

**3 CITIES**

Partnered with to Improve Urban Tree Canopy

**1,925**

Volunteer Hours Donated

**68,355**

Native Plants Distributed through Native Plant

Sale

**10+**

Communities Partnered with to Reduce Wildfire

Risks

**400+**

Stewards Educated

**18**

Acres Rural Forest Stewarded

**\$560,000**

Awarded to Bolster Our Regional  
Food System

**181**

Farmers Served

**1.21 MILES**

Shorelines Habitat Improved

**178**

Acres Farmland Production Improved  
& Renewed

**>\$1.5 MILLION**

Awarded to Member Jurisdictions

## 2015-2019 ACCOMPLISHMENTS

**327,068**

Native Trees & Shrubs Planted

**31 CITIES**

Partnered with to Improve Urban Tree Canopy

**12,432**

Volunteer Hours Donated

**295,207**

Native Plants Distributed through Native Plant

Sale

**40+**

Communities Partnered with to Reduce Wildfire

Risks

**3,000+**

Stewards Educated

**338**

Acres Rural Forest Stewarded

**>\$4 MILLION**

Awarded to Bolster Our Regional  
Food System

**1154**

Farmers Served

**9.93 MILES**

Shorelines Habitat Improved

**1125**

Acres Farmland Production Improved  
& Renewed

**>\$6.5 MILLION**

Awarded to Member Jurisdictions



# FIVE YEAR ACCOMPLISHMENTS

In 2013, King Conservation District and King County convened a regional task force to explore KCD's unique role and capacity in King County. The opportunities identified through the task force informed KCD's 2015-2019 Program of Work, officially laid out in the KCD Implementation Plan and 5-year Interlocal Agreement (ILA) entered into with King County. These opportunities included expanding existing services and developing new programs to reduce barriers to local food, expand urban tree canopy and protect rural forests, and improve water quality in urban areas.

## Accomplishments

Over the last five years, KCD has successfully developed robust programs around these needs. Our programming offers education, technical assistance, and funding to help individuals and communities steward their natural resources. KCD staff also contribute their technical knowledge to regional concerns through working groups, commissions, and partnerships.

We have educated over 3000 people on how they can develop cleaner water, healthier forests, and better agricultural practices on their lands and in their communities. Volunteers have donated over 12,000 hours to help KCD implement natural resource projects and engage the public at more than 400 events.

Through the Member Jurisdiction and Regional Food Grants programs, KCD has reinvested \$10.5 million dollars to bolster our regional food system and support community-driven conservation and equity programs across King County.

Rural services, including farm planning and equipment loans, has helped more than 1000 farmers and livestock owners plan and implement practices to improve water quality, soil health, and wildlife habitat.

KCD's Agricultural Drainage Assistance Program has worked with King County to improve and renew farmland production on 1,125 acres. Meanwhile, our Community Agriculture Program has helped dozens of new and fledgling community gardens take root and thrive.

Nearly 10 miles and 70 acres of shorelines and riparian habitat have been improved through 100 projects leading to healthier streams and other water bodies that promote fish and wildlife.

Our forest services have partnered with over 40 communities to reduce wildfire risk, engaged roughly 300 small lot forest landowners in planning and implementing best management practices, and partnered with almost every city in our jurisdiction on projects to improve urban tree canopy.

## Challenges

The 2015-2019 program of work laid out ambitious goals for KCD programs. In many cases, goals that were known from the outset to depend on funding and resources not allocated or accounted for in 2015. Looking through this report, you can see where we were able to meet targets, and where we fell short. We carry with us into our next 5-year program of work the strong programmatic foundations laid, lessons learned, and perhaps most importantly - secured funding for all of our planned body of work.

## What's Next

In 2019, KCD again worked with the KCD Advisory Committee, partners, stakeholders, and local governments to renew our priorities and enter into a new 2020-2024 ILA with King County. In a 9-0 vote, the King County Council affirmed KCD's unique role in the region and approved secure funding that provides the funding needed to ensure the successful implementation of our programs.





## OUTREACH AND EDUCATION

KCD Outreach and Education Programs work to empower King County residents to become better stewards of their natural resources by building awareness of beneficial conservation practices and connecting people with KCD programs and resources.

### Orca Recovery Day

In 2019, Conservation Districts spearheaded the 2<sup>nd</sup> Annual Orca Recovery Day, coordinating 109 partner organizations to hold more than 70 events across Washington, Oregon, California, and British Columbia to educate, implement, and connect people with conservation practices that increase water quality and benefit struggling Orca Populations in the Puget Sound and across the West. In total, these events planted nearly 17,000 native plants over 33 acres of vital habitat.

KCD led two Orca Recovery Day events, one on the City of Bothell's Parr Creek and another on a tributary of Longfellow Creek in West Seattle. 63 volunteers helped KCD and our partners remove blackberry, ivy, bamboo, and other invasive species and plant several hundred native trees and shrubs along the streams that will increase water quality and habitat health.

### Northwest Flower & Garden Show

KCD staff and volunteers host informational tables at events across King County to raise awareness of beneficial conservation practices and connect people with our services. Tabling typically engages several hundred people at a large event. In 2019, KCD embarked on the ambitious undertaking of building a model show garden at the Northwest Flower and Garden Show. These show gardens are the highlight of the festival and are seen by its more than 60,000 attendees. Our 'Better Ground Garden' highlighted approachable, environmentally friendly practices that people can enact such as utilizing native plants, practices for soil conservation and nutrient retention,





erosion prevention, and rainwater catchment and increased the visibility of these practices and conservation district services.

## Education Workshops, and Tours

KCD education programs include service learning and volunteer opportunities and classes, workshops, tours and other field-based learning opportunities that focus on water quality protection, soil conservation, livestock management, shoreline habitat improvement, and fish and wildlife habitat enhancement. Audiences served by KCD education programs include adult livestock owners, agriculture operators, and rural, urban, and suburban landowners, as well as youth and children.

Engagement and Education	2019 Actual	2015-2019
Volunteers	528 Volunteers 40+ Events 1,925 Volunteer Hours	3,687 Volunteers 447 Events 12,432 Volunteer Hours
K-12 Field Days / Carpentry for Critters	1 Event ### Students	9 Events 1,753 Students
K-12 Stormwater Education	0 Students	1,112 Students
Farm Tours and Special Agricultural Classes	4 Tours; 89 Participants 5 Classes; 71 Participants	35 Tours; 820 Participants 36 Classes; 509 Participants
Land & Water Stewardship Workshops	0 Workshops; 0 Participants	32 Workshops; 284 Participants



## Envirothon

Envirothon is a nationwide environmental literacy competition for high school youth. KCD participates in the Washington State Envirothon program by recruiting high school teams from King County to participate in the Northwest regional, state, and national Envirothon competitions.

## Volunteer

KCD's Volunteer Program supports KCD engagement activities as well as implementation of conservation efforts. It increases public awareness of all KCD programs and services and offers volunteers knowledge about local natural resource management, such as restoration of watershed functions, and hands-on experience implementing practices to address those concerns. Program goals focus on recruiting and connecting new volunteers to project-based learning opportunities and building partnerships with agencies and organizations to address mutual service-learning goals.

**40  
EVENTS**

**528  
VOLUNTEERS**

**1,925  
HOURS  
DONATED**





## GRANTS TO HELP REPLENISH OUR REGION

KCD sets aside a portion of collected rates and charges funds (as a proportion of the total amount paid by the jurisdiction) to be utilized directly by the jurisdictions for conservation projects within their boundaries. Jurisdictions may elect to receive the funds directly in order to use them for engaging third party contractors to implement projects or to contract directly with KCD to deliver project services.

Jurisdictions may accrue funds from year-to-year in order to support larger projects and they may also partner with each another to leverage resources to implement conservation projects.

### **Algona - \$6,400**

Futurewise - Algona Wetland Education & Enhancement Project

### **Auburn - \$20,000**

2019 Auburn International Farmers Market for Marketing and Demonstrations

### **Bellevue - \$20,000**

Lewis Creek Park Interpretive Signage

### **Bellevue - \$20,000**

Coal Creek Natural Area Phase 2 Interpretive Signage

### **Bellevue - \$25,000**

Native Discovery Garden Enhancement Project Phase 2

### **Bellevue - \$50,000**

Bellevue Parks Open Space Forest Health Assessment

### **Burien - \$52,600**

EarthCorps - 2019 to 2020 Seahurst Park Shoreline & Forest Vegetation Stewardship

### **Burien - \$29,300**

Coastal Geologic Services, Inc. - 2019 Seahurst Park South and North Beach Monitoring

### **Clyde Hill - \$2,200**

2017 Arbor Day Celebration





**Clyde Hill - \$1,900**

2018 Arbor Day Celebration

**Des Moines - \$40,000**

Des Moines Area Food Bank - On-the-Grow Learning Garden Truck 2019-20

**Des Moines - \$13,000**

2019 Low Income Senior Healthy Eating Initiative

**Issaquah - \$80,000**

Green Issaquah City-Wide Forest Health Assessment

**Kent - \$143,700**

Urban-Natural Area Management Plan (Phase 1 & 2) Development

**Kirkland - \$12,800**

Pet Waste Bacteria Monitoring, Education, and Outreach

**Newcastle - \$15,000**

Newcastle Citizen Survey: Stormwater Awareness, Attitudes, and Behavior

**Renton - \$16,900**

2019 Renton Farmers Market

**Renton - \$12,900**

Environmental Coalition of South Seattle (ECOSS) - Renton Spill Kit Incentive Program

**Sammamish - \$29,900**

2019 Stormwater Outreach

**Seattle - \$74,200**

Duwamish Tribal Services - "Duwamish Ridge to River" Linked Trail System with Associated Water Quality Monitoring (Puget Creek)

**Seattle - \$60,000**

EarthCorps - Yes Farm - Farm Manager

**Seattle - \$70,000**

Food Empowerment Education Sustainability Team (FEEST) - Youth-led Healthy Food in Seattle Schools

**Seattle - \$75,000**

InterIm Community Development Association - Youth Development Support for Environmental Justice

**Seattle - \$70,000**

Rainier Valley Corps dba Rainier Beach Action Coalition - Food Justice Fellowship

**Seattle - \$75,000**

Young Women Empowered - Y-WE Nature Connections

**Seattle - \$58,900**

YouthCare - YouthGrow Garden Program

**Shoreline - \$27,300**

2019 Richmond Beach Saltwater Park Habitat Restoration

**Shoreline - \$37,000**

Master Native Plant Stewards Ecological Restoration

**King County - \$210,000**

2019 Keeping Farmers Farming, King County Agriculture Program

**Multiple (Auburn, Des Moines, Kent, Tukwila, Normandy Park, Renton and Burien) - \$27,200**

Environmental Science Center - Environmental Heroes: Improving Watershed Health and Salmon Habitat through Education and Outreach

<sup>1</sup> Rounded to the nearest \$100.





# BETTER WATER

KCD provides education, technical services and financial assistance to help landowners and land managers implement natural resource management practices that protect water quality, conserve soil and enhance fish and wildlife habitat on freshwater and marine shoreline properties in King County.

## RIPARIAN LAND STEWARDSHIP

KCD works with our member jurisdictions and other local and regional partners to increase the amount of freshwater and marine shoreline enhanced on private lands. This is done by educating and empowering landowners through workshops, one-on-one education and technical assistance to steward natural resources. KCD's education prioritizes residents across King County whose properties include or

abut water bodies that are important to the health of Puget Sound and salmon. Workshops are structured to empower marine landowners, streamside property owners, urban residents and rural land and farm owners.

### Program Highlights

Shorelines and Riparian Habitat	5-Year Plan	2019	2015-2019
Where the Water Begins - Marine Shoreline Landowner Education	Engage 600 Marine Shoreline Aquatic Area Landowners in Workshops	3 Workshops; 59 Participants	15 Workshops; 375 Participants
Our Land/Our Water and Beautify & Care for Your Streamside Property	Engage 1,100 Freshwater Aquatic Area Landowners in Workshops	11 Workshop; 178 Participants	50 Workshops; 623 Participants



**14**  
WORKSHOPS

**237**  
PARTICIPANTS



# RURAL LAND STEWARDSHIP

Farmers are the stewards of over 60,000 acres in King County. Enabling their stewardship of shared water, soil and habitat resources requires supporting those efforts in meaningful ways.

Rural Land Stewardship provides natural resource technical assessments, recommendations and farm conservation planning services to farm and livestock owners. A whole-farm natural resource assessment is the foundational step in determining opportunities and priorities for conservation actions to improve water quality, soil health, and wildlife habitat.



## Program Highlights

Rural Agriculture	5 Year Plan <sup>1</sup>	2019	2015-2019
Farm Planning Services	750 Farm Service Customers 340 Farm Conservation Plans 10 Dairy Nutrient Management Plans	181 Farm Service Customers 45 Farm Conservation Plans 0 Dairy Nutrient Management Plan(s)	1,154 Farm Service Customers 292 Farm Conservation Plans 5 Dairy Nutrient Management Plans
Site Visits	...	99 Site Visits	715 Site Visits
Follow Ups	750 Farm Plan Follow-Up Visits	9 Farm Plan Follow-Up Visits	825 Farm Plan Follow-Up Visits
Equipment Loans	250 Landowners	## Landowners	178 Landowners
Landowner Incentive Program (LIP)	\$1,218,750 in cost share to implement best management practices	\$77,090	\$1,033,213

<sup>1</sup> Based on "Benchmarks" as outlined on page 6 of the adopted Implementation Plan for 2015-2020.

## INTENSIVE ROTATIONAL GRAZING FIELD DAY

KCD staff coordinated a tour of Wild Canary Farm (formerly K-T Cattle Company) to learn how King Conservation District (KCD) Board Supervisor Jim Haack and his wife Katie raise Animal Welfare Approved and Certified Grass Fed beef through intensive rotational grazing.

The Haack's highlighted pasture health best management practices and KCD staff demonstrated equipment available to farmers and landowners through our Equipment Loan Program including a manure spreader, drop spreader, no-till seed drill, hay probe and weed wrench.

Participants were treated to a locally prepared lunch, partially sponsored by King-Pierce Farm Bureau.

Each year, KCD coordinates events introducing new farmers and rural landowners to conservation best management practices and connects them with KCD services.





## RIPARIAN RESTORATION/IMPROVEMENT

Jurisdictions and agencies cannot restore the health of Puget Sound alone. Efforts to restore the health of our orcas and Puget Sound need the participation of private landowners who collectively control two-thirds of its shores. Landowners who want to be good stewards face many barriers. KCD works with these residents to identify and provide the resources and assistance they need to improve habitat.

### COOPERATOR SPOTLIGHT: TRISH AND LEE

**KCD Cooperators Trish Borden and Lee Valenta partnered with KCD in 2019 to do a streamside enhancement project through KCD's Urban Shorelines Program. The project resulted in the removal of invasive weeds, such as yellow flag iris and Himalayan blackberry, and planting of nearly 700 native trees and shrubs along their reach of Bowman Creek.**

**In the same year, Trish and Lee also completed WSU Extension's Forest Stewardship Coached Planning course and wrote a Forest Stewardship Plan with assistance from KCD's Forest Stewardship Program.**

### Program Highlights

Shorelines and Riparian Habitat	5-Year Plan <sup>1</sup>	2019	2015-2019
Rural and Urban Freshwater Shorelines Protection & Enhancement Services	18 Miles of Shoreline Replanted and Enhanced	1.21 Miles <sup>2</sup>	9.93 Miles <sup>2</sup>
Conservation Reserve Enhancement Program	235 Acres of Riparian Corridor Replanted and Enhanced	11.77 Acres <sup>2</sup>	71.74 Acres <sup>2</sup>
Marine Shorelines	575,500 Native Trees & Shrubs Planted	21,559 Native Trees and Shrubs <sup>2</sup>	151,445 Native Trees and Shrubs <sup>2</sup>
Wetland Plant Cooperative Bareroot Plant Sale			
Rural and Urban Shorelines and Riparian Habitat Improvement Projects	100 Aquatic Area Projects Planned and Implemented (25 Acres/9 Miles Freshwater Aquatic Area)	13 Projects <sup>3</sup> 8.56 Acres <sup>3</sup> 1.21 Miles <sup>3</sup>	97 Projects <sup>3</sup> 52.08 Acres <sup>3</sup> 8.68 Miles <sup>3</sup>
Conservation Reserve Enhancement Program (CREP)	20-40 CREP Projects (30 Acres/7.5 Miles) Planned and Implemented	0 Projects Implemented <sup>1</sup> Planning Year	4 Projects 8.51 Acres 1.25 Miles
Landowner Incentive Program (LIP)	\$562,500 to Implement Freshwater and Marine Aquatic Area Shoreline Improvement and Enhancement	\$130,854 <sup>4</sup>	\$700,771.60 <sup>4</sup>

<sup>1</sup> Based on "Benchmarks" as outlined on page 22 of the adopted Implementation Plan for 2015-2020.

<sup>2</sup> Portions of this metric are also expressed in the Rural and Urban Freshwater Shorelines and CREP figures

<sup>3</sup> Based on Rural and Urban Freshwater Shorelines, CREP, Marine and LIP figures

<sup>4</sup> Based on Rural and Urban Freshwater Shorelines and LIP figures

<sup>5</sup> Based on contract awards in conjunction with LIP





## **MERCER ISLAND STUDENTS HELP ENHANCE PINE CREEK**

**Students from the City of Mercer Island VOICE Program volunteered their time to support a KCD Urban Shoreline project in Sammamish. The students carefully laid out cardboard and mulch around young native plants along Pine Lake Creek to suppress the tall grasses and help retain moisture. They learned about the many functions**

**of native plant buffers along shorelines and the importance of native plants. During the event, we were visited by the community leader with the Home Owners Association that KCD partnered with to implement the project. She shared her story about organizing her neighbors to work with KCD and how the site used to be covered in sprawling blackberry brambles and English Ivy overtaking the tall trees along the creek. The team made it through 10 cubic yards of mulch protecting the many types of native trees and shrubs that will make this site a more healthy and resilient ecosystem.**





## WILDFIRE PREPAREDNESS

As climate change and population growth pressures mount, Pacific Northwest forests are threatened. Individual jurisdictions and agencies do not have the resources to adequately protect our forests without mobilizing private landowners. Demand to train and support owners of small forest properties to safeguard our regional forest resources is critical. Collectively, small properties comprise over 40,000 forested acres in King County.

KCD provides wildfire risk assessments to small residential forest landowners, and risk assessments

and fire-adapted planning services to whole communities. Community wildfire risk assessments are provided to communities pursuing recognition as a new Firewise USA Community or to Firewise USA Communities that are pursuing an update to their action plan.

After the risk planning assessment, cooperators can engage with KCD to develop a Firewise Community Action Plan and enter into a public/private partnership with KCD to become a Fire-Adapted Community. This helps implement wildfire risk reduction projects focused on reducing ground and ladder fuels in home ignition zones and around other infrastructure assets.

Wildfire Services Provide	2019	2015-2019
Chipper Days	1 Events Including 35 Homes	12 Events Including 345 Homes
Community Outreach/Education Presentation	8 Event With 174 Attendees	18 Event With 300 Attendees
Firewise Community Check-In	1 Community With 20 Homes	4 Communities With 90 Homes
Fuels Reduction Projects	0 Projects	3 Project Covering 2.15 Acres
New Community Firewise Plan	1 Community Firewise Plan Including 25 Homes	4 Community Firewise Plan Including 101 Homes
Neighborhood Wildfire Hazard Evaluation	1 Evaluations Including 25 Homes	5 Evaluations Including 105 Homes

**300**  
COMMUNITY  
MEMBERS

**641**  
HOMES

**13**  
COMMUNITIES  
ENGAGED

# URBAN FOREST STEWARDSHIP

Urban forests' contribution to health, economic and social well-being is now well-documented. Healthy urban forests also provide resilience and mitigate the impacts of severe weather in the face of climate change.

A regional approach to expanding tree canopy across King County's urban landscapes is critical to climate change resilience, especially in south King County. These cities and communities have a dramatic lack of canopy while their residents suffer from the county's highest levels of pollution and illness.

KCD's Urban Forestry Program partners with member jurisdictions to extend its traditional reach and work in the backyards, public easements, parks and open spaces in the incorporated landscapes of the 34 cities in KCD's service area.

From 2015-2019, KCD will have completed 37 Urban Forest Stewardship Projects in 31 of our 34 member jurisdictions. 2019 projects include

- 1 SeaTac - Community Forest Stewardship at North SeaTac Park
- 2 Lake Forest Park - Private Landowner and Community Forest Stewardship.
- 3 Snoqualmie - Quantifying Stormwater Benefit of Publicly-Managed Forest

## Program Highlights

5-Year Plan <sup>1</sup>	2019	2015-2019
70 Acres of Urban Forest/Upland Treated and Planted	9.92 Acres Treated/Planted	76.32 Acres Treated/Planted
172,000 Native Trees & Shrubs Planted	25,829 Trees and Shrubs Planted	111,993 Trees and Shrubs Planted
Engage 15 Jurisdictions in Urban Forest Retention and Restoration Initiatives	3 Jurisdictions Engaged 3 New Jurisdictions Engaged	31 Jurisdictions Engaged through 37 Projects
15 Round Tables Facilitated	1 Body Engaged 4 Times (4 Urban Forest Initiative Working Group)	3 Bodies Engaged 27 Times (UFIWG Engaged 18 Times, Regional TCA Round Table 4 Times, K4C Engaged 5 times)
\$750,000 in project funding	\$150,000	\$757,678.50

<sup>1</sup> Based on "Benchmarks" as outlined on page 6 of the adopted Implementation Plan for 2015-2019.



## SMALL LOT FOREST STEWARDSHIP

Over 40,000 acres of the nearly 782,000 total forested acres outside King County's Agriculture Production Districts are held by owners of woods smaller than 5 acres. Collectively, they represent a vast resource that contributes to the overall health of our community and offer an opportunity to proactively engage private landowners in stewardship. These small, non-commercial forested lands fall outside the capacity of King County's forestry program to support. KCD's Small Lot Forest Stewardship Program partners with landowners to improve forest health and increase canopy cover by empowering them to become successful stewards of their forests. It provides landowners with educational opportunities, on-site technical assistance, stewardship planning assistance, cost-share project planning assistance, wildfire risk assessments and fire-adapted community planning.

### Program Highlights

5-Year Plan <sup>1</sup>	2019 Actual	2015-2019
1125 Acres of Rural Forest/Woodlot Treated and Planted	18.20 Acres Treated and Planted, Additional 61.95 Contracted <sup>2</sup>	337.65 Acres Treated and Planted, additional 61.95 acres Contracted
90,000-180,000 Native Trees and Shrubs Planted	3,463 Trees & Shrubs Planted <sup>3</sup>	64,763 Native Trees & Shrubs Planted
Engage 90 Small Forest Landowners in Planning and Implementing BMPs	138 Landowners Engaged	269 Landowners Engaged
5 WSU Coached Forest Stewardship Courses	3 in Person and 1 Online Courses	7 in Person and 5 Online Courses
\$750,000 in cost share with small acreage rural forest landowners	\$126,801.03	\$765,988.77

<sup>1</sup> Based on "Benchmarks" as outlined on page 6 of the adopted Implementation Plan for 2015-2019.

<sup>2</sup> Based on acres reported in conjunction with LIP.

<sup>3</sup> Based on plants reported in conjunction with LIP.



## LAKE ALICE COMMUNITY

On a beautiful Saturday morning, Lake Alice community members were geared up and ready to go. The community had organized a chipper day to reduce fuels on their properties. Stacks of fire-prone understory brush and downed tree limbs located near homes had been cleared out and piled up on the roadside; Devoted Tree Solutions provided an industrial chipper, truck, and a crew to work them; while a team of community members assisted the professionals, hauling armloads of woody debris that would be turned into woodchips and reused in community landscaping projects.

Communities like Lake Alice are taking charge of their wildfire preparedness with the help of resources and support from King Conservation District's wildfire planning services. KCD can help you, and your community, complete wildfire risk assessments and develop wildfire community action plans.





## BETTER FOOD

### REGIONAL FOOD SYSTEM

KCD's Regional Food System program was launched in 2015 in response to stakeholder and regional partner input. It responds to findings and recommendations of the Puget Sound Regional Council's Food Policy Blueprint, the City of Seattle Food Action Plan, and King County's Local Food Initiative.

Three key areas address the need to build a robust, thriving, and resilient local and regional food system:

- 1 Increased production through both more acres in production and more producers.
- 2 Expanded demand for local food products by a broader pallet of local consumers.
- 3 Better access to locally-grown, healthy foods by

front-line communities.

In the 2019 grant round, KCD awarded \$600,000<sup>1</sup> in competitive grants to innovative and diverse projects across King County.

#### Competitive Grants

##### **King County Department of Natural Resources and Parks Agriculture Program - \$70,000**

Irrigation Water Needs Assessment (and Solutions for Unmet current and Future Demand)

##### **New Start Community Garden - \$10,000**

Garden Produce for School Lunches

##### **PCC Farmland Trust - \$100,000**

Working Farmland Partnership

##### **Seattle Good Business Network - \$100,000**

Building Local Food Connections:  
Conference, Events, Communication

##### **SnoValley Tilth - \$94,335**

Sound Tenure Alternatives for Small Farms

##### **South King County Food Coalition - \$100,000**

Food Access and Aggregation Community  
Team Site Exploration

#### Program Outcomes 2015–2019

**Awarded 66 grants totalling \$4,173,480 leveraging \$2,291,062 of matching funds and \$931,210 of in-kind contributions.**

#### Program Outcomes 2019

**Awarded 9 grants totalling \$559,605 leveraging \$253,162 of matching funds and \$306,443 of in-kind contributions.**

<sup>1</sup> Values rounded to nearest \$1,000. Grant conditionals may lead to total awarded differing from total funded.



**Vashon-Maury Island Land Trust - \$6,000**

Matsuda Farm to Vashon Schools.

**World Relief Seattle - \$99,999**

Teaching and Commercial Kitchen

**Strategic Initiatives**

KCD's Regional Food System funds and engages in Strategic Initiatives to address challenges specifically identified by food system partners and stakeholders as ongoing, chronic barriers to a more robust food economy. These barriers include infrastructure and capacity inadequacies, sector under-investment, and lack of common metrics to measure baselines and progress. In 2019, KCD supported the following Strategic Initiatives:

**King County Infrastructure Study - 2019 Funding \$30,000**

Provide recommendations for development of a multi-function food facility or facilities, including mix of attributes, locations, financial feasibility, ownership, and organizational structures for operation, and sources of capital and financing approaches..

**Dairy Support Phase 1- 2017 Funding \$55,000**

Develop and implement a strategy for a comprehensive survey of dairy farms in King County with the intention of developing future technical assistance, resources, marketing, research and education programs to support their continued economic viability and health.

**KCD Regional Food System Program Response to Covid 19- 2019 Funding \$100,000**

Utilization of Regional Food System Program Strategic Initiative Grant funding to support expanded farm to food bank efforts, specifically, Harvest Against Hungers' (HAH) King County Farmers Share (KCFS) project.

## AGRICULTURAL DRAINAGE ASSISTANCE

King County has an estimated 1,800 farms on over 47,000 acres of land, with annual sales of \$121 million. More than 3000 acres of some of King County's most productive lands are now deemed "too wet to farm," and production is diminished on hundreds of additional acres. Poor drainage doesn't just impact production and food availability, it poses a stormwater management threat as suburban developments increasingly coexist in proximity to agricultural production. Poorly drained fields near developed areas may flood residential neighbors.

Since 2014, KCD has partnered with King County Department of Natural Resources and Parks to support the restoration and maintenance of agricultural drainage ditches in key areas of the county. Because of KCD's work, annual farm drainage projects have increased from restoring ½ mile of ditch per year to over 2 miles per year. KCD's participation in this partnership has been underwritten by a combination of grant funding streams, including funds from the King County Flood Control District. These funds are highly variable and some will be exhausted or permanently extinguished at the end of 2019.

**Program Highlights**

From 2015 to 2019, KCD used Flood Control District funds to work with over thirty farmers to implement dredging projects, replace culverts, and install bridges. In 2019, a total of 15,331 linear feet (2.9 miles) were dredged bringing 45.6 new acres into production and improving production on another 132.4 acres. From 2015 to 2019, these efforts renewed production on 383.6 acres and improved production on 741.4 acres.<sup>1</sup>

<sup>1</sup> Some acre designations have been changed and production totals have been updated to reflect these changes.



# COMMUNITY AGRICULTURE

An equitable and resilient local food economy includes urban food production, both commercial and personal. Urban farmers and gardeners have unique needs for land stewardship guidance to ensure a viable, diverse local food system that cares for our soils and waters for future generations.

Existing urban agricultural organizations lack access to land, funds, and technical support to meet the demand for sustainable urban small-lot food production for low-income and immigrant populations, who benefit most from expanded urban agricultural opportunities. Part of the solution is to strengthen farms across King County and develop better transportation, storage, and processing infrastructure. Another part of a healthy local food system is to develop opportunities to grow fresh food in dense urban neighborhoods, especially in communities that are transit-dependent, low-income, or comprised of primarily immigrant populations.

## Program Highlights

5-Year Plan <sup>1</sup>	2019	2015-2019
Expand Soil Nutrient Testing Program By 1000 New Users	1,481 Tests	7,473 Tests
Engage 500 New Gardeners	Engaged 200 New Gardeners	Engaged 1,790 New Gardeners
Cover Crop Seed Give Away	200 Gardeners Educated And Given Cover Crop Seeds	635 Gardeners Educated And Given Cover Crop Seeds
100 New Technical Assists	4 New Assists & Continuing Support For Previous Projects	27 New Assists & Continuing Support For Previous Projects
Yards Groco® Compost Distributed	156.1 Yards Of Groco® Compost Distributed To 15 Community Gardens	486.1 Yards Of Groco® Compost Distributed To >36 Community Gardens

<sup>1</sup> KCD's Community Agriculture program was initially tasked with helping cities develop community agriculture friendly policies. As KCD entered this space, it was determined that cities already had the opportunity for policy help through the Puget Sound Regional Council and was determined that on-the-ground assistance was in greater need. Some challenges faced by municipal codes is addressed in the KCD Community Agriculture Conservation Guide.



## CITY SOIL FARM

**City Soil Farm is a 1.5 acre demonstration farm partnership between King Conservation District, King County Wastewater Treatment Division, DIRTCorps, and White Center Food Bank. The farm hosts school tours, youth programs, and public education events.**

**In 2019, KCD worked with Carnation Farms' Rooted Teens program to bring 10 farmers- in-training out to the farm 1-2 times per month to help with projects and get hands-on training.**

**Along with educational offerings, City Soil prioritizes planting crops based on the needs of White Center Food Bank. In 2019, the farm produced over 3,000 pounds of food to the food bank.**





## BETTER BACKYARDS LANDOWNER INCENTIVE PROGRAM

KCD's Landowner Incentive Program (LIP) promotes stewardship of natural resources on private property by providing cost-share funding to help landowners implement natural resource management practices.

The Landowner Incentive Program's goal is to promote the implementation of natural resource management practices detailed in KCD prepared technical assistance and management plans such as Farm Conservation Plans and Forest Health Management Plans.

KCD Reimburses from 50%-90% of approved projects depending on the natural resource management practice.

### Program Highlights

In 2019, the Landowner Incentive Program awarded 43 new contracts for \$599,573, including \$150,000 in project funding for KCD Urban Forestry projects.

Best Management Practice	Contracts Awarded	Acres	Linear Feet	Funding Level
Agricultural and Livestock Management	15	193.35	50	\$77,089.50
Rural Forest Health Management	8	See Better Forests - Small Lot Forest Stewardship for Metrics	N/A	\$126,801.03
Urban Forest Health Management	N/A	See Better Forests - Urban Forest Stewardship Section for Metrics	N/A	\$150,000
Freshwater Aquatic Area Enhancement	20	See Better Water - Riparian Restoration/Improvement Section for Metrics	N/A	\$245,682.91
<b>TOTALS</b>	<b>43</b>	<b>193.35</b>	<b>50</b>	<b>\$599,573.44</b>

Landowner Incentive Program <sup>1</sup>	5-Year Plan	2019	2015-2019 Actual
Agricultural & Livestock Management	\$1,218,750	\$77,089.50	\$1,033,213.27
Forest Health Management	\$1,500,000 <sup>2</sup>	\$276,801.03 <sup>3&amp;4</sup>	\$1,493,826.27
Freshwater Aquatic Area Enhancement	\$562,000	\$245,682.91	\$832,527.96
<b>TOTALS</b>	<b>\$3,280,750</b>	<b>\$599,573.44</b>	<b>\$3,359,567.50<sup>5</sup></b>

<sup>1</sup> Based on "Benchmarks" as outlined on page 22 of the adopted Implementation Plan for 2015-2020.

<sup>2</sup> \$750,000 for Rural Forest Health Management cost-share contracts, and \$750,000 for Urban Forest Health Management projects planned and implemented by KCD in partnership with member jurisdictions.

<sup>3</sup> \$150,000 for rural forest health management cost-share contracts.

<sup>4</sup> \$150,000 urban forest health management projects planned and implemented by KCD in partnership with member jurisdictions.

<sup>5</sup> 2015-2019 total includes reallocated funds from cost-share awarded prior to 2015 and therefore increases the total award for the roll-up period beyond the annual cost-share budget for each of the 5 years in the 5-year period. It is anticipated that by the end of 2019 KCD will have awarded \$3,280,750 in new cost-share contracts plus reallocated any additional cost-share released from pre-2015 awards.





## NATIVE PLANT SALE

King County residents love native plants because they're hardy, beautiful, and easy to maintain. KCD's Native Bareroot Plant Sale provides landowners, organizations, schools and government agencies with low-cost bareroot native plant material to improve habitat and landscape naturally. In addition, plant sale customers receive assistance on species selection, information on installing and maintaining plants and recommendations related to habitat enhancement.

### Program Highlights

The 2019 Bareroot Plant Sale Program provided over 68,000 native trees and shrubs to 1,102 customers, establishing 9.42 acres of enhanced upland and 3.14 acres of enhanced shoreline. KCD's Native Plant Sale has provided over 295,000 native trees and shrubs to over 4,500 customers from 2015-2019.

## KCD NATIVE PLANT NURSERY

KCD's Native Plant Nursery grows native trees, shrubs, herbs and wetland plants for habitat enhancement projects. Partners volunteer at the nursery in trade for technical services and plant material. In particular, community groups benefit by volunteering to gain assistance on planning and implementing habitat enhancement projects.

The nursery is sustained largely by KCD AmeriCorps members, Washington Conservation Corps restoration crew members, and volunteers. This arrangement allows the nursery to provide cost-effective plants for restoration projects.



## KCD NATIVE PLANTS

**Andy and Mandy Gregory used plants from the KCD Native Plant Sale and City of Shoreline's Soak It Up rebate program to install this beautiful rain garden on their property.**



**Jeanne Hannah has spent the last four decades working to create a streamside wildlife sanctuary at her home in Cottage Lake Creek in Woodinville. Jeanne has relied on the KCD Native Plant Sale for many years to help install the thousands of plants that make up her streamside buffer. Jeanne has seen the return of sockeye, chinook, trout and other wildlife to the stream.**



# BUDGET

	2019 Adopted Plan of Work	2019 Year End Actual (Rates & Charges)	2019 Year End Total (including operations and overhead) <sup>1</sup>	Difference Between Plan of Work and Actual <sup>2</sup>
<b>Local Food</b>				
Local Food System	\$1,285,392	\$1,018,158	\$1,258,868	\$(26,523)
Rural Farm Planning Services	\$906,608	\$605,325	\$748,434	\$158,174
Urban Farm Planning Services	\$75,873	\$86,705	\$107,204	\$(31,331)
<b>Healthy Forests</b>				
Urban and Rural Forest Services	\$560,238	\$618,317	\$764,498	\$(204,260)
<b>Clean Water</b>				
Shoreline and Riparian Services	\$1,774,274	\$1,311,242	\$1,621,242	\$153,032
Landowner Incentive Program	\$720,834	\$597,483	\$738,738	\$(17,904)
Outreach and Community Engagement	\$627,832	\$463,851	\$573,513	\$54,319
Member Jurisdiction	\$1,589,974	\$1,279,660	\$1,582,194	\$7,780
<b>Total</b>	<b>\$7,541,025</b>	<b>\$5,980,741</b>	<b>\$7,394,692</b>	<b>\$146,333</b>

<sup>1</sup> In accordance with guidelines, best practices and standards recommended by the Washington Municipal Research and Services Center <<http://mrsc.org/Home/Explore-Topics/Finance/Accounting-and-Internal-Controls/Cost-Allocation.aspx>>; the State Auditors Office <[https://www.sao.wa.gov/bars\\_guap/accounting/interfund-activities-overhead-cost-allocation/](https://www.sao.wa.gov/bars_guap/accounting/interfund-activities-overhead-cost-allocation/)> and Government finance Officers Association <<https://www.gfoa.org/cost-direct-cost-allocation>> King Conservation District allocates operations and overhead indirect costs such as desks, computers, internet software, cell phones, printing, board operations and employee supplies on a per FTE basis. Operations and overhead includes board, rent, supplies, IT and all non-program specific expenses. It is allocated across program areas on a per FTE basis.

<sup>2</sup> In programs where the 2019 actual expenses exceed 2019 Plan of Work budgeted expenses, the difference is covered through grants, additional revenue, or funds drawn from KCD reserves.

## BOARD OF SUPERVISORS

King Conservation District is led by an all-volunteer, five-member board of supervisors. Three of the members are elected while the other two are appointed by the Washington State Conservation Commission, an agency created to assist and guide conservation district activities in Washington State.

By statute, KCD elections occur annually during the first quarter of each year. Elections are conducted pursuant to guidelines established by RCW 89.08 with oversight from the Washington State Conservation Commission.

Board members contribute local perspectives on important natural resource management and conservation issues, seek feedback about conservation programs from residents, set policy, and direct KCD's work plan and budget.





**Dick Ryon, Chair** - Elected to KCD's Board in 2014, Dick brings 20 years of experience as a Professional Forester and Land Use Manager with the Weyerhaeuser Company in Snohomish, King, Pierce and Lewis Counties. Dick also serves on the King County Rural Forest Commission. Dick offers continuity of regional natural resource priorities from his participation on the 2013 King County/KCD Task Force/Conservation Panel and continues to seek collaboration opportunities on those priorities with partner organizations.



**Burr Mosby, Vice-Chair** - A first generation farmer, Burr started farming in 1977. Today Mosby Farms grows vegetables on 350 acres in the valleys of Auburn, Sumner and Orting and supplies produce houses, grocery chains and restaurants in the Pacific Northwest, as well as donating to area food banks. Being a good steward of the land is of utmost priority for the future of agriculture, and Burr shares his knowledge from a farmer's perspective.



**Bill Knutsen, Secretary/Auditor** - Bill is a now-retired third generation dairy farmer. He graduated from Northshore schools and earned his bachelor's degree from Central Washington College School of Business. Bill is married, with a son and a daughter and six grandchildren. He ran a thriving dairy business with his family in the Bothell area for many years. He has also been a King County Ag Commissioner and was president of the Dairy Herd Improvement Association which was charged with helping farmers operate profitably.



**Jim Haack, Supervisor** - Jim joined KCD Advisory Committee in 2014 to chart KCD's future in supporting conservation across the region. His role with numerous other dedicated stakeholders helped guide the implementation of the KCD/King County Conservation Panel and Task Force recommendations. Jim's boyhood experiences in the Ozark hills built his conservation values, including passion for land and livestock. Jim and his wife moved their young family to the Snoqualmie Valley 15 years ago.



**Kirstin Haugen, Supervisor** - Kirstin joined the Board of Supervisors in 2019. She is passionate about saving our Southern Resident orcas, salmon conservation, and combating climate change. Kirstin is a dedicated community volunteer and served as a Cascadia College trustee, 4Culture board member, and King County Charter Review Commissioner. She previously worked on public policy at the King County Council and a public affairs firm. Kirstin received her Master of Public Administration from the University of Washington.



**Rachel Molloy, Associate Supervisor** - Rachel is dedicated to ensuring our farmlands, communities and natural resources are maintained and supported. She believes that a focus on resiliency and adaptation, accessibility of quality vetted information, effective resource deployment, efficiency and conservation of resources can safeguard and future-proof lands in King County. She brings over 20 years of experience in farm-based biofuels, energy, climate, composting



**Chris Porter, Associate Supervisor** - Chris is a beekeeper who recognizes that a cleaner, healthier environment for the survival of bees is necessary. Bees are a critical component in sustaining our food chain and are also like the "canary in the coal mine". Their survival is at great risk, along with the fruit grown on trees, vegetables planted in gardens and crops farmers plant and harvest to feed all. More than one of three bites of food eaten is there because of pollinators.





## OPERATIONS

KCD's Operations Program focuses on managing the processes to produce and distribute products and services to internal and external partners, including managing purchases, inventory control, quality control, storage, logistics and evaluation of processes. The flow of information among human resources, accounting, inventory control, and other assets, planning and decision making is made easier by facilitation of efficiency and effectiveness of processes. Operations management includes measurement and analysis of internal processes and the makes recommendations to and works collaboratively with the Board of Supervisors and staff on projects.

### General Overhead

KCD's Annual Budget includes expenses for general overhead. Although these do not constitute expenses with specific program deliverables, they provide the operational infrastructure and support for KCD staff to implement on-the-ground work. These expenses are currently referred to as Tier 1 overhead items. Largest expenses in this category are rent, utilities, office equipment, information technology and vehicles.

### Finance

KCD's Finance team consists of a cross-functional working group that provides all accounting related functions for the organization. These functions include, but are not limited to, annual reporting, audit, budgeting, financial reporting to Board of Supervisors and Executive Director, and external partners accounts payable and receivable, grant funding, contracting and payroll.

### Human Resources

Human Resources recommends strategies for employee recruitment, development, growth and retention. Priorities are as follows: compensation, HRIS technology, planning, performance, professional development, recruitment, strategic planning and work culture enhancement.

HR works closely with KCD's Board and Executive Director to update the salary schedule and performance-based compensation system, update personnel policy and employee benefit programs, review employee career development and training programs, and maintain KCD's employee records.

### Legal and Related

KCD's Executive Director and Director of Operations and Human Resources oversee the day-to-day contracting and regulatory interpretation as well as respond to and monitor all legal actions that impact the organization. KCD maintains outside legal counsel to handle issues that arise with KCD's unique and collaborative grant program and contracting responsibilities.

Get Involved

**IT STARTS WITH YOU,  
KCD CAN HELP**

[kingcd.org](http://kingcd.org)

P 425-282-1900

F 425-282-1898

[district@kingcd.org](mailto:district@kingcd.org)

800 SW 39th St, Suite 150

Renton, WA 98057



**CONSERVATION DISTRICTS**  
OF WASHINGTON STATE  
*your window to healthy lands*

**Local Food, Healthy Forests, Clean Water, Better Ground**



# NEW BUSINESS

**King Conservation District Board of Supervisors Meeting**  
**Agenda Action Briefing/Report**  
**Meeting Date: July 13<sup>th</sup>, 2020**

**AI 20-042**

**SUBJECT:**

A motion approving KCD Forest Health Management cost-share application from Pine Brook Meadows HOA, funded by Working Lands Initiative - Forestry, in the amount of \$16,560.39.

**FISCAL IMPACT**

The current balance of cost-share funding for 2020 KCD WLI Forestry is summarized in the following table:

2020 WLI Forestry Cost-share Available	<b>\$54,360.00</b>
Current Request	<b>\$16,560.39</b>
Balance Remaining	<b>\$37,799.61</b>

**POLICY CONSIDERATION**

This proposed cost-share application has been vetted through a staff approval committee and meets NRCS standards for the applicable best management practice. The cost-share application has been advanced for due pass by the Board of Supervisors.

**STAKEHOLDER INTERESTS**

- District cooperators working with District farm management, forestry and aquatic area enhancement programs
- Member jurisdiction
- King CD Board members and staff

**BACKGROUND**

*Application Information & Details*

The community forest in the Pine Brook Meadows neighborhood is focused around a series of hydrologically sensitive sites, including the Southwestern shoreline of Pine Lake, several seasonal streams that feed into the lake from the Southwest, and a large wetland also to the Southwest of Pine Lake. The forest is primarily dominated by a stand of 50 – 60 year old black cottonwood, but many other species of hardwoods and conifers are also growing throughout the forest, including: Western hemlock, western red cedar, Douglas fir, Oregon ash, Pacific madrone, bitter cherry, red alder and big leaf maple. Some of these conifers and hardwoods are of a comparable age to the cottonwoods, but many others have been seeding into the understory for the past 20 – 30 years and some conifers have also been planted by residents.

This project will focus mainly on treating invasive weed populations across the project area in FMU 1. Invasive weed species listed on jobsheet will be targeted for control. In addition to controlling invasive weed populations some areas in FMU 1 are beginning to vigorously re-sprout suckers from cottonwood stumps and logs. In Zone A these sucker re-sprouts will also be targeted for control to allow for other tree species to successfully establish and grow.

Planting of native conifer trees will occur post invasive species control in Zones A, B, and C. Approximately 50 trees will be planted in these zones at an approximate spacing of 10 feet x 10 feet.

AI 20-042

**King Conservation District Board of Supervisors Meeting**  
**Agenda Action Briefing/Report**  
**Meeting Date: July 13<sup>th</sup>, 2020**

Approximate total area that will receive invasive species control will be 1.5 acres and approximate area that will be replanted with native conifer trees will be 8,000 square feet. Approximately 50 native conifer trees and 50 native shrubs will be planted as part of this project.

**EFFECTIVE DATE**

The application will become effective upon approval by the Board of Supervisors and the Cost-share contract will become effective upon signature by a Board representative.

**RECOMMENDATION**

Staff seeks Board approval of Cost-share Application from Pine Brook Meadows HOA for Forest Health Management, in the amount of \$16,560.39.

**MOTION**

\_\_\_\_\_ Moved, \_\_\_\_\_ Seconded; Passed a motion to Approve KCD Cost-share Application from Talus Community Association, for Forest Health Management, in the amount of \$16,560.39.



# KING CONSERVATION DISTRICT (KCD) FOREST HEALTH MANAGEMENT APPLICATION

## Section 1. Applicant (If applicant is not the landowner, then landowner must also sign the agreement)

Applicant Name: <b>Judy Adams</b>		Farm/Business Name: <b>Pine Brook Meadows HOA</b>	
Mailing Address: <b>21246 SE 28th Street Sammamish, WA</b>		Project Address: <b>Just west of 21252 SE 28th St, Sammamish WA 98075</b>	
Phone (home): <b>Judy: 206-618-1655</b>		Phone (work/mobile): <b>Elizabeth: 425-677-4923</b>	
Email Address: <b>bruceandjudy1986@comcast.net, eli:</b>		KCD Staff: <b>Mike Lasecki</b>	
Parcel #(s): <b>6790700460</b>	<input checked="" type="checkbox"/> Incorporated <input type="checkbox"/> Unincorporated	Total Farm/Land Acreage: <b>1.84 acres</b>	<input type="checkbox"/> T.A. <input type="checkbox"/> Farm Plan <input checked="" type="checkbox"/> Forest Plan
Is email an acceptable primary form of communication?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Would you like to be added to our newsletter list?	<input type="checkbox"/> Yes <input type="checkbox"/> No

## Section 2. Project Information

<b>Best Management Practice (BMP):</b> <b>Forest Health Management</b>
<b>Project Completion Date (month and year):</b> <b>December 2023</b>
<b>Current Site Conditions</b> (Provide a brief summary of resource management problem addressed by BMP; also note if streams, wetlands, and steep slopes are near or within the project area):  <p>The community forest in the Pine Brook Meadows neighborhood is focused around a series of hydrologically sensitive sites, including the Southwestern shoreline of Pine Lake, several seasonal streams that feed into the lake from the Southwest, and a large wetland also to the Southwest of Pine Lake. The forest is primarily dominated by a stand of 50 – 60 year old black cottonwood, but many other species of hardwoods and conifers are also growing throughout the forest, including: Western hemlock, western red cedar, Douglas fir, Oregon ash, Pacific madrone, bitter cherry, red alder and big leaf maple. Some of these conifers and hardwoods are of a comparable age to the cottonwoods, but many others have been seeding into the understory for the past 20 – 30 years and some conifers have also been started by residents. The primary resource concerns facing this forest that will be</p>
<b>Project Details</b> (Provide a brief summary of the project. Include acres treated, length of fence, dimensions of compost bin, types and numbers of plants, etc.):  <p>This project will focus mainly on treating invasive weed populations across the project area in FMU 1. Weed species listed above will be targeted for control. In addition to controlling invasive weed populations some areas in FMU 1 are beginning to vigorously re-sprout suckers from cottonwood stumps and logs. In Zone A these sucker re-sprouts will also be targeted for control to allow for other tree species to successfully establish and grow.</p> <p>Planting of native conifer trees will occur post invasive species control in Zones A, B, and C. Approximately 50 trees will be planted in these zones at an approximate spacing of 10 feet x 10 feet.</p> <p>Approximate total area that will receive invasive species control will be 1.1 acres and approximate area that will be replanted with native conifer trees will be 8,000 square feet. Approximately 50 native conifer trees and 50 native</p>
<b>Maintenance Plan</b> (Summarize your plan to maintain the practice. Include frequency and scope of inspections, repairs anticipated, etc.):  <p>The contractor will perform maintenance for the first three years after initial project implementation. The community will be responsible for the remaining 12 years of required monitoring and maintenance of project with technical assistance provided by KCD staff.</p>

**Permits** (List all permits required to complete this project):

City of Sammamish clearing/grading (Restoration) permit  
Aquatic Noxious Weed General Permit: EarthCorps Permit #WAG 412020

**Photos:** Before photos must be submitted with this application.

### Section 3. Cost-share Programs

A. Have you previously applied for cost-share through the KCD Landowner Incentive Program (LIP)?

☐ Yes

☒ No

If yes, please list contract number and BMP below:

B. Are you applying for (or received) funding (cost-share or grants) through other agencies or programs?

☐ Yes

☒ No

Please describe below:

1. King County Cost-share

Please list practices and date installed below:

2. NRCS EQIP (Natural Resources Conservation Service's Environmental Quality Incentive Program)

Please list practices and date installed below:

3. Other

Please list agency and describe project:

**Other Cost-Share History/Notes:**

### Section 4. Budget (attached as Exhibit A)

The cost-share application budget is the applicant's statement for how the KCD cost-share funds will be spent. Use the attached Excel document to detail the budget for the project. Reimbursement values are restricted by unit maximums as well as practice maximums. KCD will be unable to provide a budget that exceeds either maximum. The cost differential for practices installed at a higher standard or cost shall be the responsibility of the applicant. In cases where a budget for a cost-share award needs to be updated, submit a budget revision request for approval. In the absence of an approved budget revision, the cost differential shall be the responsibility of the applicant. Furthermore, receiving financial assistance for an approved Best Management Practices will be subject to inspection by KCD planners. Approval for reimbursement will be based on the satisfactory completion of the project to the minimum specifications detailed in this application.

Partial reimbursements are available on a limited basis and must be requested in advance. They will only be considered when the installation of a project can be phased to achieve the standard described in the attached job sheet when reimbursement is requested.

☒ Select this box if you intend to request partial reimbursement as the project is installed.

## Section 5. Education and Outreach

KCD encourages public education through demonstration projects. Demonstration projects are used to educate other landowners about innovative ways to address natural resource concerns. A demonstration project may be showcased in a guided tour, or featured in presentations or written fact sheets.

- Will you consider becoming a demonstration project?

☒ Yes ☐ No

## Section 6. Maintenance and Monitoring Expectations

The applicant is responsible to maintain the Best Management Practice (BMP) to standard as detailed in the attached Job Sheet for the lifetime of the BMP.

- ☒ A. I understand the lifetime of the BMP is 15 years.
- ☒ B. I understand KCD will work with me to verify proper maintenance of the installed BMP, which will include a combination of site visits with KCD staff and/or annual photo documentation submitted by me for the lifetime listed in Section 7A.
- ☒ C. I understand I am obligated to maintain and monitor the BMP for the lifetime listed in Section 6A.

## Section 7. Application and Agreement

I request financial assistance (cost-share) to install the Best Management Practice (BMP) described in this application and detailed in the attached *Job Sheet and Map*. This practice is needed to solve the natural resource problems described in Section 2 of this application. This Agreement expires if the project is not completed by the specified completion date in Section 2 or in an approved timeline revision request.

(Initial Here) SKA

I agree to ensure that all applicable local, state, and federal permits are obtained for installation of the BMP for which funds are requested. Furthermore, I understand that KCD must receive a copy of any applicable permit to process my cost-share reimbursement.

SKA (Initial Here)

I agree to work cooperatively with KCD to ensure the funded BMP is maintained consistent with the design life identified in the attached Job Sheet and in Section 6 of this application.

SKA (Initial Here)

I agree to indemnify, defend, and hold harmless KCD, its elected or appointed officials, employees and agents, from all claims, alleged liability, damages, losses to or death of person or damage to property allegedly resulting from the negligent or intentional acts of the applicant or any of its employees, agents, contractors or subcontractors in connection with this Agreement.

SKA (Initial Here)

I represent that the information provided in Section 3 of this application is a full disclosure of all other natural resource financial cost-share relationships in which I have or am participating. Furthermore, I agree to disclose if I am applying for or receive funding (cost-share or grants) for the BMP described in this application through other agencies or programs and to provide KCD with written documentation detailing this funding support. This may include copies of reimbursement checks or letters showing value of provided contribution. I understand that I must provide proof of reimbursement for alternate funding prior to receiving reimbursement through KCD cost-share. I acknowledge that KCD cost-share funds cannot be used in combination with other funding sources to exceed 100% of project costs. I agree to allow communication between KCD and any other agency regarding the details of the project as well as funding details.

SKA (Initial Here)

I understand that KCD cost-share reimbursement is contingent upon installing the BMP to the minimum standard provided by KCD, and that KCD will verify standard compliance. Furthermore, I understand that changes to the installation details (attached *Job Sheet and Map*) must be approved through a *Scope of Work Revision Process*. Unapproved changes will not be eligible for reimbursement.

SKA (Initial Here)



I understand that there may be federal tax liability associated with a KCD cost-share reimbursement, and that KCD will issue a 1099-G for reimbursements made through KCD cost-share. Furthermore, I understand that KCD cannot provide advice with respect to the tax liability associated with KCD cost-share reimbursements and that I have been advised to consult with my own tax professional.

JKA (Initial Here)

I understand that I am applying for public funding and am responsible for notifying a buyer upon sale or loss of the property of the installed BMP. If I sell or lose control of the property covered by this Agreement and the new owner or transferee does not assume responsibility for maintaining the installed BMP as required by this Agreement, I may be required to refund all or a portion of the cost-share received through this Agreement. In the event of litigation arising from or related to this Agreement, attorney's fees and costs incurred by the prevailing party shall be paid by the non-prevailing party.

JKA (Initial Here)

I give permission to KCD to photograph my property to document the site conditions and/or the implementation and maintenance of the funded practice. In the event that I or any of my family members or dependents choose to be photographed in a setting that reflects the assistance provided by KCD, I give KCD permission to publish such photographs in KCD promotional literature, advertising, social media, and other public displays. The photographs will be the property of KCD and may be used by KCD at any time, in the manner described above, without my additional consent.

JKA (Initial Here)

I understand that this Agreement is subject to disclosure under the Public Records Act, Chapter 42.56 RCW.

JKA (Initial Here)

I understand that I will no longer be eligible for KCD cost-share funds if one or more of the following occurs: \_\_\_\_\_ (Initial Here)

- The KCD funded BMP fails within its design life due to circumstances within my control (e.g., neglect, failure to maintain the BMP, destruction of the BMP before expiration of the design life, or other actions which cause the KCD funded BMP to become non-viable). *Note: Landowners are not responsible for BMP failure caused by circumstances beyond their control (e.g. fire, flood, storm damage, etc.).*
- I relinquish or lose ownership of equipment purchased with KCD cost-share.
- The KCD funded BMP is not being used for the intended purpose (e.g. cross fencing purchased with KCD funding, but no animals on property).
- I cancel 2 cost-share contracts awarded through the KCD Landowner Incentive Program.
- I deny KCD staff access to my property to verify BMP installation and maintenance.

I understand KCD will provide a sign free of charge after completion of a project, and I agree that:

JKA (Initial Here)

- I will select a visible location on my property for display of the sign and will install it.
- I will maintain the sign and keep it free of visual barriers for at least five years after installation.
- I am not responsible for damage to the sign that is beyond my control (e.g. auto accident, storm damage, vandalism, etc.)

Judy Adams

Judy Adams

6/1/20

Signature of applicant

Date

Signature of Landowner (if applicant is Lessee)

Date

FOR KCD OFFICE USE

Approved for Award (KCD Director of Stewardship Programs) Date

Approved for Funding (KCD Board of Supervisors Chair) Date



## KCD Cost-Share Applicant Budget

Cooperator: Pine Brook Meadows

Budget Items	Units	Cost
Contractor Labor 2020		\$10,632.66
Restoration Materials 2020		\$876.57
Contractor Labor 2021-2023 Maintenance Period		\$10,016.29
Restoration Materials 2021-2023		\$55.00
Contingency erosion control materials and labor		\$500.00
Machinery Rental (not personally owned equipment)		\$0.00
	<b>Subtotal</b>	<b>\$22,080.52</b>

In-Kind Labor/Machinery	# hours	Cost
Manual labor		\$ -
Person with power equipment (i.e. chainsaw)		\$ -
Small Tractor (up to 40 hp)		\$ -
Medium Tractor (40-70 hp)		\$ -
Large Tractor (71 or above hp)		\$ -
Excavator (up to 100 hp)		\$ -
Excavator (over 100 hp)		\$ -
D-4 Cat or equivalent		\$ -
D-6 Cat or equivalent		\$ -
D-7 Cat or equivalent		\$ -
Backhoe		\$ -
Truck (under 2 tons)		\$ -
Truck (2 tons or over)		\$ -
Bobcat		\$ -
4-wheeler or side-by-side		\$ -
<b>Subtotal</b>	<b>0.00</b>	<b>\$ -</b>

Project Totals		
<b>Total Cost</b> (Budget Items + In Kind Labor/Machinery)		<b>\$ 22,080.52</b>
Units		1.00
Cost/Unit		\$ 22,080.52

Conservation Practice	select BMP (x)	Cost Share Amount
Animal Trails & Walkways		
Aquatic Area Buffer		
Aquatic Area Buffer (WCC)		
Buffer Fencing		
Building Relocation for Aquatic Area/Buffer		
Bulkhead Removal (Freshwater, Marine)		
Cover Crops		
Cross Fencing		
Forest Health Management	x	\$ 16,560.39
Heavy Use Area Protection		
Pasture & Hay Planting		
Roof Runoff Management		
Stream Crossing		
Subsurface Drain		
Upland Wildlife Habitat Management		
Waste Storage Facility		
Watering Facility		

**Amount eligible for reimbursement**  
(based on 2015 rates)

**\$16,560.39**



# JOB SHEET

## *Forest Stand Improvement Tree/Shrub Site Prep & Establishment (Forest Management)*

Landowner: Pine Brook Meadows HOA (Contact: Elizabeth Fuchs and Judy Adams)	Lifetime of Practice: 15 years
--	--------------------------------

**\*This Job sheet must be attached to your completed application**

Purpose (check all that apply)	
<input checked="" type="checkbox"/> Site preparation	<input checked="" type="checkbox"/> Tree/Shrub establishment
<input checked="" type="checkbox"/> Tree/Shrub stand improvement	<input checked="" type="checkbox"/> Restore native plant communities
<input type="checkbox"/> Long-term erosion control and improvement of water quality	<input type="checkbox"/> Increase the quantity and quality of forest products
<input type="checkbox"/> Wildlife habitat enhancement	<input type="checkbox"/> Other

**Forest Management Practice and Details** *Provide the following: 1) attach a map delineating prescription area and sub-treatment areas if applicable; provide name and acreage features for treatment areas 2) descriptions of current stand location and conditions, stand treatment plan, plant species to be used, plant spacing, and site preparation; 3) a project management timeline from your approved Forest Stewardship Plan.*

- 1) See attached map  
 Project Area: ~1.5 acres  
 Zone A: ~2,000 sq ft  
 Zone B: ~4,000 sq ft  
 Zone C: ~2,000 sq ft

2, 3) See attached Scope of Work document

**Permits** *Are there any permits necessary for the project? If so, please list below and include a copy of the permit.*

Yes,  
 HOA representative will acquire necessary clearing/grading (Restoration) permit from City of Sammamish prior to project work starting.

Aquatic Noxious Weed General Permit has been obtained by contractor from the Washington State Department of Ecology and Washington State Department of Agriculture: EarthCorps Permit #WAG 412020

Landowner must comply with local, state and federal regulations and permitting requirements.

1) Forest landowners may need a permit from the WA State DNR for forest management activities  
<http://www.dnr.wa.gov/businesspermits/forestpractices/Pages/Home.aspx>

Or

From through the Forest Practices Rules, see the King County specifics here:  
<http://www.co.king.wa.us/property/permits/info/SiteSpecific/forest.aspx>

2) There may be permits needed to apply herbicide near aquatic areas or their buffer. See the WA State Department of Ecology website for further details: <http://www.ecy.wa.gov/programs/wq/pesticides/>



**Type and Source of Plant Material** *Will you use potted plants, bareroot plants, b&b plants or a combination? Where will you get the plants from and when?*

Plant material will be native species adapted to the site to minimize maintenance and care.

EarthCorps, the contractor, will plant a combination of bareroot plants, potted plants, and plugs that have been sourced from the Puget Sound. If additional plant material is purchased to augment the Winter 2020 planting, that material can be bareroot, live stake, potted nursery stock or ball and burlap inventory. There are a number of local native plant nurseries where native trees, shrubs and groundcovers can be purchased. A list of native plant nurseries for local King County sources of native plant material as well as sources in the greater Puget Sound region can be provided by KCD staff upon request.

**Site Preparation** *List what method(s) of site preparation will be used, who will be doing the work, when will the work be done.*

Site preparation will include a combination of invasive species control, control of black cottonwood suckers and creation of planting spots for native conifer trees, native shrubs, and native groundcovers. Non-native/invasive species control will target invasive blackberry, English holly, Cherry laurel, English ivy, yellow flag iris, reed canary grass, Norway maple trees and European mountain ash trees. Specific weed control prescriptions are detailed below.

The contractor, Earthcorps, will perform all site preparation activities described and timing of activities will occur as described in attached project scope of work document. Note: An aquatic noxious weed management general permit may be required when performing invasive species control using herbicides in or near an aquatic areas and their buffers.

*Invasive Plant Species Control Prescriptions:*

Himalayan & Evergreen Blackberry Control –

- *Manual control:* Mow or cut the blackberry canes to less than 1 foot in height, then grub/dig out the roots attached to the cut canes. Thorough removal of blackberry roots in this manner, while labor intensive can reduce the blackberry population and cover in the prepared area by 90 – 95%. Monitor for re-growth in the following growing seasons; dig up any re-growth.
- *Chemical Control:* An alternative control method includes herbicide. One technique involves cutting/mowing the canes and swabbing the freshly cut canes with an approved herbicide. Foliar spray of blackberry is another effective control method. It is recommended that blackberry is mowed early in the summer and sprayed on the foliar re-growth the next fall (September/October). Do not spray planted seedlings. Always follow label rates and instructions.

English Holly & Cherry Laurel Control-

- *Manual Control: Not recommended.* Small plants can be dug up when the soil is moist. Regularly check area for re-growth. For larger plants cut stems and trunks as close to the ground as possible. Roots may be dug out. Be sure to stabilize soil if large quantities are disturbed. If roots are not dug up, break off any new stems as they grow back for multiple growing seasons.
- *Chemical Control:* Large Holly and Laurel trunks should be cut as close to the ground as possible. Immediately (within minutes) treat the cut stump with an application of glyphosate herbicide (such as Rodeo or Roundup). An alternate technique, called frilling, involves incising deep cuts through bark into trunks at a 45 degree angle. Immediately treat the frills by pouring glyphosate herbicide into the cuts. Best results are achieved during periods of active growth and after full leaf expansion. Monitor for re-growth (seedlings and re-sprouting) and treat accordingly. Do not spray herbicide directly holly and laurel leaves, which have a waxy layer that prevents chemicals from being absorbed. Always follow label rates and instructions.

### English Ivy Control –

- *Manual Control:*

- 1) Recommended manual methods include digging and pulling. First, remove any flowering or fruiting portion within reach and bag for removal from the site. Next, hand dig and pull out all accessible portions of plants including roots. Note that all cut stems/roots must be removed from soil contact. If composting on site, use cardboard or wood to create a raised platform. Consider wearing gloves and protective clothing as ivy sap is known to cause a reaction in some individuals. Mulching an area will significantly reduce re-growth of ivy. To properly mulch, apply an 8 inch thick mulch layer. Plants should be cut and removed and then mulched, preferably with a layer of cardboard below the mulch.
- 2) Vertical ivy is controlled by girdling. To girdle vertical vines, cut the ivy vines at shoulder height and slightly above ground level. Remove the cut ivy section from the tree. This eliminates nutrient transport from the roots of ground ivy to the leaves and stems growing into the canopy of the tree. The lower cut section of ivy stems and roots must be pulled at least 6 feet away from tree. Root and stem fragments can re-grow and must be composted in a manner similar to ground ivy.

### Yellow Flag Iris Control –

- *Manual Control:* Hand removal with the use of hand tools is allowable in all critical areas in unincorporated King County. Check with the local jurisdiction for regulations in other areas. Manual control is feasible for individual plants or small stands. You can easily pull seedlings in damp or wet soil. Dig out mature plants, taking care to remove all the rhizome. Keep watching the location after initial removal of the plants, and new leaves will show where you missed any sections of rhizome. Continue to remove the rhizome, and be sure to dispose of any removed pieces of rhizome away from wet sites.
- *Chemical Control:* If manual control is not possible due to site conditions or available labor, apply appropriate herbicide by spot spray, stem-injection or wick-wiper to minimize off target injury. Herbicides should only be applied at the rates and for the site conditions and/or land usage specified on the label. Follow all label directions.

Glyphosate (e.g. Rodeo™ or Aquamaster™) may be used for control of yellow flag iris. This is the most frequently used chemical for controlling yellow-flag iris. Apply to actively growing plants in late spring or early summer. Apply directly to foliage or apply immediately to freshly cut leaf and stem surfaces. Follow the label for recommended rates for yellow-flag iris since higher rates may provide better results.

Imazapyr (e.g. Habitat™) may be used for control of yellow flag iris. Research studies have found that 1% imazapyr (with 1% non-ionic surfactant) sprayed in the fall resulted in good control. Imazapyr sprayed in the spring, or a combination of imazapyr (1%) and glyphosate (2.5%) sprayed in fall both result in good control, but slightly less effective than imazapyr alone. Note that imazapyr has been shown to have some residual soil activity, so care should be taken to avoid spraying in the root zone of desirable plants, and do not replant the treated area for several months after application.

The above listed herbicides require the addition of an approved surfactant. Follow label directions for selecting the correct type of surfactant. Be sure that the selected surfactant is approved for aquatic use. The mention of a specific product brand name in this document is not, and should not be construed as an endorsement or as a recommendation for the use of that product.

### Reed Canary Grass –

- *Manual Control:*

- 1) Mowing reed canary grass depletes carbohydrate root reserves, and if done repeatedly it will result in the thinning or death of the grass. The ideal time to mow is at or near the flowering stage. The grass should be cut as near to the ground as possible (1 inch or lower). Twice yearly mowing (in early-mid June and early October) has shown increased survivorship of native plants planted into reed canary.

2) Shading is highly effective in reducing reed canary grass stands. A dense planting of conifers, once established, is ideal for shading. Faster growing deciduous trees and shrubs, especially those that develop foliage in the early spring, combined with an under-planting of conifers can be effective. Artificial methods of shading can be used in conjunction with native plantings. Sheets of thick cardboard or landscaping fabric placed around each individual plant should be secured to the ground by long staples or stakes and covered with 5-6 inches of mulch. The combination of sheeting and mulch provides temporary suppression of the grass, allowing the desirable vegetation to thrive without competition. Not recommended for flood prone areas.

- *Chemical Control:* Herbicide can be effective in elimination of Reed Canary grass when properly applied. Studies show that spraying Glyphosate (the active ingredient in products such as ®Rodeo) after a stand is mown or when the grass has the minimum available carbohydrate reserves (after flowering) is an effective control method. Follow-up spraying the next year may be necessary to eliminate the remaining grass. **Always follow label rates and instructions.**

#### Norway Maple Tree Control –

- *Manual Control:* Small seedlings should be hand pulled or young trees can be dug up and left to desiccate and decompose on site or removed and disposed of at transfer station facility that accepts compostable yard waste.
- *Chemical Control:* Norway maple trees can be effectively controlled using several readily available general use herbicides that contain the active ingredients triclopyr or glyphosate. Herbicides can be applied on foliage, on cut stems, as an injection, or as a basal spray directed to the bark of uncut stems. Repeat applications may be necessary to reduce densities. Always follow label rates and instructions.

#### European Mountain Ash Tree Control-

- *Manual Control:* Small seedlings should be hand pulled or young trees can be dug up and left to desiccate and decompose on site or removed and disposed of at transfer station facility that accepts compostable yard waste.
- *Chemical Control:* European mountain ash trees can be effectively controlled using several readily available general use herbicides that contain the active ingredients triclopyr or glyphosate. Herbicides can be applied on foliage, on cut stems, as an injection, or as a basal spray directed to the bark of uncut stems. Repeat applications may be necessary to reduce densities. Always follow label rates and instructions.

#### *Black Cottonwood Sucker Control Prescriptions:*

Black cottonwood re-sprouts from stumps and logs in Zone A will be treated using a herbicide application. Application method may include a combination of EZ-ject injections of herbicide on large stumps/snags and/or a cut and paint herbicide application on stems under 1 inch to control the amount of cottonwood regeneration occurring in this area of forest management unit.

#### *Planting Area Preparation Prescriptions:*

Post invasive species control in project zones that will be planted with native plants, planting areas should be prepared by mowing or cutting back any competitive vegetation in a 4-foot diameter circle where native tree seedlings, shrubs, or groundcovers will be planted.

#### **Care and Temporary Storage of Purchased Plant Material** *Upon receiving the plant material, where will you store it and how will you care for it?*

All plant material should be stored in a cool location and well watered prior to planting. In the case of bare root plants, inventory should be held in the source refrigerated facility as long as possible prior to planting. Bare root plants can be stored in the field for up to one to three weeks prior to planting by placing them in a shaded location where they will remain cool. Such a location should prevent freezing as well as exposure to warm



temperatures. Additionally, bareroot inventory should be covered with a tarp to prevent drying. Bareroot stock that is expected to emerge from dormancy prior to planting should be “healed” into a soil bed. To heal-in, dig a v-shaped trench to a depth that accommodates covering the seedling roots when back-filled with soil.

**Installation** Provide the following details: 1) *Plant Installation Prescription*: 2) *Plant Protection Prescription*: 3) *Weed Suppression Prescription*: 4) *Erosion Control Prescription*

*1) Plant Installation Prescription:*

Potted & Plug Inventory: Potted plant material should be shovel planted to the same depth that they grew in the pot. Plants will be well watered prior to planting. Prior to digging a hole for the plant, prepare the planting location by removing any grass sod within a 1.5 feet diameter circle, being careful to remove roots as well as above ground portions of the plant. Dig a hole for the container in the center of this cleared circle twice the size of the plant’s pot. Backfill the hole with soil while using care to avoid leaving air pockets in the soil. Refer also to the attached planting instructions in *Planting Container Trees and Shrubs*.

Bareroot Inventory: Bare root seedlings should be shovel planted to the same depth that they grew in the nursery fields. Roots will remain moist once they are removed from the shipping bundles until they are planted. Roots will be placed in a natural position in the soil without being crowded or turned up. Soil will be packed firmly around the root system, leaving no air pockets. Prior to digging a hole for the plant, prepare the planting location by removing all grass sod within a 1.5-foot diameter circle, being careful to remove roots as well as above ground grass. Dig a hole for the bare root plant in the center of this cleared circle. Refer also to the attached planting instructions in *Planting Bare Root Trees and Shrubs*.

*2) Plant Protection Prescription:*

Tree Protectors (for sites where deer/elk browse is anticipated): Install Plastic Mesh or netted deer sleeves on newly planted Western Red Cedar to protect trees from deer browsing. Weave 6 ft bamboo stakes through each tube and shove at least 8 inches into the ground in order to stabilize the mesh tubes and keep them on trees. The tube must be tall enough to protect terminal bud; be sure that the terminal bud is a couple inches lower than the top of the tube. Each year the tube should be pulled up to cover the terminal bud as the tree grows. Keep tubes on until terminal bud is above the deer browse level, approximately 5 feet tall. Make sure side branches within the tube are positioned vertically to allow for successful growth.

As the trees mature, inspect them periodically for damage from deer rubbing. If rub is occurring, steps must be taken to protect trees. Effective techniques include temporarily fencing trees with woven fencing or chicken wire or installing one or two steel posts next to a tree. Flared bases on posts should be set in-line with the trunk to reduce root damage when driven in. Posts are especially effective in protecting smaller trees, and light gauge steel types 4 to 6 feet long can be used.

*3) Weed Suppression Prescription*

No need for weed suppression is anticipated for this project beyond planned contractor maintenance activities in 2021-2023, and continued maintenance activities by HOA members after this period.

*4) Erosion Control Prescription*

Project area is flat and ground will not be disturbed in project areas beyond where manual removal of dispersed individual invasive plants occurs and digging of planting holes for native trees, shrubs, and ground covers occurs. Disturbed soils in these locations will be replaced and/or replanted with native vegetation.

If City permitting process requires installation of erosion control, contractor will install erosion control where necessary.

**Planting Project Maintenance and Monitoring** *The planting must be inspected periodically and protected from damage so proper function is maintained. The goal for the project is to reach 80% survival after 3 years. Please describe the maintenance and monitoring plan.*

**The contractor, EarthCorps, will maintain the project for 3 growing seasons 2021-2023. Maintenance activities will include control of invasive species and replanting if survivorship falls below 80%. The HOA is responsible for maintaining the project for the remaining 12 years of the practice. Photos must be submitted by 9/1 of each year documenting maintenance of project by HOA or an inspection by KCD staff must occur.**

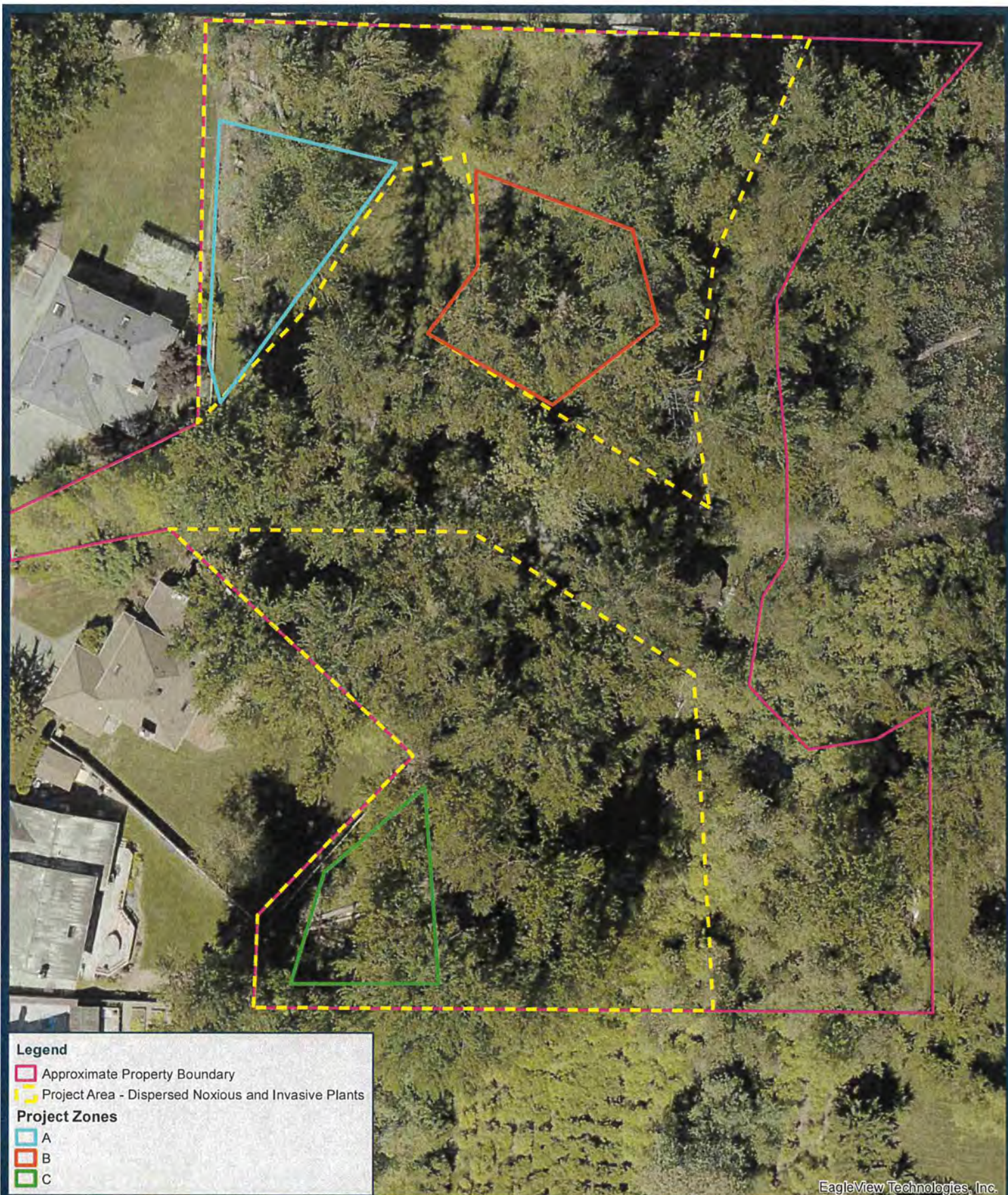
Treatments must be inspected periodically and protected from damage so proper function is maintained and resource damage is minimized, including assessment of insects, disease and other pests, storm damage, and damage by trespass. The results of inspections shall determine the need for additional treatment under this practice.

Replace dead or dying trees and shrubs and control competing vegetation to support successful establishment. Periodic application of mulch may be needed to maintain plant vigor. Periodic harvest of trees and shrubs (thinning and brushing) may be necessary to maintain the health and vigor of the stand and support its development toward more mature stand conditions. Keep large dead and dying trees for cavity nesting wildlife and bird species and as a source of downed wood in the forest understory and in adjacent or interior aquatic habitats.

Where droughty soils and hot growing conditions are anticipated, supplemental watering is recommended. In such cases the District recommends watering planted nursery stock for a minimum of 3 summers following planting. Young bare root, container, and ball/burlap plants have a reduced root system that hampers their ability to survive during the dry spring or summer months. Watering a minimum of once every two weeks during the dry summer will promote greater rates of survival. Watering once per week is preferable.

Monitor treatment areas for re-growth of non-native/invasive species and control accordingly. Utilize weed control techniques prescribed in the Site Preparation section of the Job Sheet. Species to monitor include all listed invasive species in previous section and any listed King County Noxious weeds that are newly discovered in project area.





#### Legend

- Approximate Property Boundary
- Project Area - Dispersed Noxious and Invasive Plants
- Project Zones**
- A
- B
- C

EagleView Technologies, Inc.



## Pine Brook Meadows HOA FMU 1 - Native Plant Restoration Plan Map

### Parcel #: 6790700470



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KCD Planner: Mike Lasecki  
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May 27, 2020



## Forest Health Management Project Scope of Work- King Conservation District

**Cooperator:** Pine Brook Meadows HOA – Judy Adams & Elizabeth Fuchs

**Date Prepared:** 4/1/2020

**Plan Preparer:** Mike Lasecki

**Project Address:** FMU 1: Just west of 21252 SE 28<sup>th</sup> St, Sammamish WA 98075

Parcel: 6790700460 (FMU 1)

**Contact Information:** Judy Adams - [bruceandjudy1986@comcast.net](mailto:bruceandjudy1986@comcast.net) or 206-618-1655

Elizabeth Fuchs – [Elizabeth.jean.fuchs@gmail.com](mailto:Elizabeth.jean.fuchs@gmail.com), 425-677-4923

**Project Description:** [GENERAL FOREST DESCRIPTION: acreage, canopy species, canopy cover, stocking levels, average size of trees, understory vegetation density]. The community forest in the Pine Brook Meadows neighborhood is focused around a series of hydrologically sensitive sites, including the Southwestern shoreline of Pine Lake, several seasonal streams that feed into the lake from the Southwest, and a large wetland also to the Southwest of Pine Lake. The forest is primarily dominated by a stand of 50 – 60 year old black cottonwood, but many other species of hardwoods and conifers are also growing throughout the forest, including: Western hemlock, western red cedar, Douglas fir, Oregon ash, Pacific madrone, bitter cherry, red alder and big leaf maple. Some of these conifers and hardwoods are of a comparable age to the cottonwoods, but many others have been seeding into the understory for the past 20 – 30 years and some conifers have also been planted by residents. The primary resource concern facing this forest that will be addressed by this project is invasive, non-native plant species.

The project area in forest management unit 1 is approximately 1.1 acres, cottonwood trees are fairly dense across most of the site, averaging 280 trees per acre (TPA) or approximately one tree every 12'. Diameters of the cottonwood vary significantly, ranging from 7" – 29" in diameter at breast height (DBH). The trees are very tall and appear to still be growing vigorously, with many exceeding 140' – 160' in height. Tree species also present in stand include Oregon ash, red alder, bitter cherry, Pacific madrone, western hemlock, western redcedar, and Douglas-fir. Shrub layer of forest is dense and contains sword fern, Indian plum, salmonberry, honeysuckle, Nootka rose, red huckleberry, and bracken fern. Non-native shrubs are also present in shrub layer including English ivy, holly and laurel, Himalayan blackberry, reed canary grass and yellow flag iris. Also in this unit are areas of vigorous re-sprouting black cottonwood tree suckers from logs and stumps.

**[INVASIVE SPECIES: species present, approx. level of infestation, approx. locations].** Invasive species density in the understory varies across forest management unit 1. English holly, laurel, and European mountain ash are scattered at low levels. English ivy is also present in some isolated areas as dense ground cover, scattered ground ivy, and climbing trees. Himalayan blackberry is scattered across both units and in some areas has started to form denser patches where it's sunnier.

A few Norway maples and yellow flag iris are also present in the understory of FMU 1. This project won't address the dense patch of yellow flag iris growing along the shoreline of Pine Lake but will treat those plants that are growing in the more upland forested areas away from the shoreline. A patch of reed canary grass is also present in Zone A of FMU 1.

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**[PROJECT SUMMARY: Main tasks performed, approx. tree/shrub numbers].** This project will focus mainly on treating invasive weed populations across the project area in FMU 1. Weed species listed above should be targeted for control. In addition to controlling invasive weed populations some areas in FMU 1 are beginning to vigorously re-sprout suckers from cottonwood stumps and logs. In Zone A these sucker re-sprouts will also be targeted for control to allow for other tree species to successfully establish and grow.

Planting of native conifer trees will occur post invasive species control in Zones A, B, and C. Approximately 50 trees and 50 native shrubs and groundcovers will be planted in these zones at an approximate spacing of 10 feet x 10 feet for trees and 3-5 foot spacing between native shrubs and groundcovers.

If city permit process determines that erosion control must be installed in any project zones or project area contractor will acquire and apply woodchip mulch to any project areas that permit requires such treatment.

**Soil type:** 3 Soil Types are present across the project area: Seattle Muck (Sk), Alderwood gravelly sandy loam (AgC), 8-15% slope, and Norma sandy loam (No).

<b>Zones</b>	<b>Amount</b>	<b>Season and year</b>	<b>Invasive Species Present</b>	<b>Prescription</b>
FMU 1 Project Area	~1.1 acres	Spring/Summer 2020	English holly English laurel  Norway maple European mtn ash  invasive blackberry   English Ivy	<p><b>Invasive Species Treatment:</b></p> <p>English holly and laurel are present at low levels throughout the project area. Larger holly and laurel plants will be treated with herbicide through injection pellets, frill and squirt, or cut and paint methods where appropriate. Smaller holly and laurel seedlings should be pulled or dug out where possible.</p> <p>Norway maple and European mountain ash also are present at low levels throughout project area. Larger plants will be treated with herbicide through injection pellets, basal bark application, or cut and paint methods where appropriate. Smaller tree seedlings should be pulled or dug out where possible.</p> <p>Invasive blackberry should be manually removed by grubbing or digging where feasible. Plant crowns and rootballs should be collected and discarded with yard waste, taken to a transfer station for disposal, or left on site not in contact with ground to desiccate.</p> <p>An alternative treatment method that may be applied is using herbicides to treat freshly cut stems of blackberry. Dense blackberry patches may also be mowed first and then a targeted foliar application of herbicide can be applied to regrowth.</p> <p>English ivy is present in zone as scattered ground ivy and climbing up trees. Ground ivy located in forested areas should be manually removed by pulling and may</p>

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			yellow flag iris	<p>be disposed of off site or left on site not in contact with ground to desiccate.</p> <p>English Ivy climbing up trees should be treated manually through creation of "survival rings" around trees.</p> <p>Do not target ground ivy growing as islands surrounded by lawn, HOA volunteers will maintain these areas.</p> <p>Yellow flag iris is present in the upland forested area away from the lake shoreline as scattered individual plants and small clumps of plants. Remove yellow flag iris by hand or with the aid of hand tools taking care to remove all the rhizome. Dispose of pulled and dug out plants with yard waste, take to a transfer station for disposal, or leave on site not in contact with ground to desiccate.</p> <p>An alternative treatment method that may be applied is using aquatic approved herbicides to spot spray, stem-inject, or wick-wipe yellow flag iris plants where manual removal is not feasible.</p> <p>All invasive species management should follow King County Noxious Weeds Best Management Practices. Herbicides should only be applied at the rates and for the site conditions and/or land usage specified on the label. Follow all label directions.</p>
Zone A	~2,000 sq ft	Spring/Summer 2020	Reed canary grass Invasive blackberry	<p><b>Site Prep/Invasive Species Treatment:</b></p> <p>Reed canary grass in this zone will be treated with a foliar herbicide application that follows king county noxious weeds BMP for reed canary grass monocultures.</p> <p><b>Black Cottonwood Sprouts Treatment:</b></p> <p>Black cottonwood re-sprouts from stumps and logs in this zone will be treated using an herbicide application. Application method may include a combination of EZ-ject injections of herbicide on large stumps/snags</p>

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		Fall/Winter 2020		<p>and/or a cut and paint herbicide application on stems under 1 inch to control the amount of cottonwood regeneration occurring in this area of unit.</p> <p><b>Planting:</b> Along outer edges of zone mixed conifer seedlings should be planted through landscape fabric in reed canary grass treatment area and where planting sites are available outside of reed canary grass treatment area.</p> <p>Create plantable spaces by mowing or cutting back any competing vegetation in a 4-foot diameter circle where tree seedlings will be planted. Tree seedlings should be planted at 10 feet on center from each other.</p> <p>Approximately 10 trees will be needed for this zone, subject to revision post contractor inspection of project area. Tree species planted should consist of western redcedar, Sitka spruce, and western hemlock.</p> <p><b>Tree Protection:</b> All western redcedar will be protected with Vexar tubing and bamboo stakes, ensuring that the tube protects the terminal leader (topmost growth) until it is above deer browse height (4-5' tall).</p>
Zone B	~4,000 sq ft	Spring/Summer 2020	Invasive blackberry	<p><b>Site Prep/Planting:</b> This zone will also be planted with the same mix of conifer tree species as zone A.</p> <p>Post invasive species removal in this zone prepare for planting by mowing or cutting back any competitive vegetation in a 4-foot diameter circle where tree seedlings will be planted.</p> <p>Tree seedlings should be planted at 10 feet on center from each other. Approximately 20 trees will be needed for this zone, subject to revision post contractor inspection of project area. Tree species planted should consist of western redcedar, Sitka spruce, and western hemlock.</p> <p><b>Tree Protection:</b> All western redcedar will be protected with Vexar tubing and bamboo stakes, ensuring that the tube protects the terminal leader (topmost growth) until it is above deer browse height (4-5' tall).</p>
		Fall/Winter 2020		

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Zone C	~2,000 sq ft	Spring/Summer 2020  Fall/Winter 2020	Invasive blackberry English holly European Mtn Ash	<p><b>Site Prep/Planting:</b></p> <p>This zone will also be planted with a mix of conifer tree species.</p> <p>Post invasive species removal in this zone prepare for planting by mowing or cutting back any competitive vegetation in a 4-foot diameter circle where tree seedlings will be planted.</p> <p>Tree seedlings should be planted at 10 feet on center from each other. Approximately 20 trees will be needed for this zone, subject to revision post contractor inspection of project area. Tree species planted should consist of western redcedar, grand fir, and western hemlock.</p> <p><b>Tree Protection:</b></p> <p>All western redcedar will be protected with Vexar tubing and bamboo stakes, ensuring that the tube protects the terminal leader (topmost growth) until it is above deer browse height (4-5' tall).</p>
Project Area	1.1 acres	Summer-Fall 2021, 2022, 2023		<p><b>Maintenance:</b></p> <p>Maintain entire project area in FMU 1 to achieve reduction in invasive species populations and a target of 80% survivorship of planted trees and shrubs. This may be completed through a variety of methods including manual, mechanical, or herbicide treatments and re-planting trees and shrubs.</p> <p>It is required that the contractor perform maintenance for the first three years after initial planting to achieve the above percentage of seedling survival and establish invasive control. Each technique should follow King County Noxious Weeds BMPs for appropriate species.</p>

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## Pine Brook Meadows HOA



*Prepared for:*

**Pine Brook Meadows HOA**

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## NARRATIVE SCOPE OF WORK

Two Forest Management Units have been identified by the King Conservation District within the community forest of the Pine Brook Meadows neighborhood. The forest management units are adjacent to Pine Lake that contains hydrologically sensitive sites including a large wetland that provides habitat for a large diversity of plants and animals. The forests are dominated by a stand of 50- 60 year old black cottonwoods, with other species of hardwoods and conifers also growing throughout the forest. Invasive plant groundcover and tree species are prevalent throughout the project areas. Controlling invasive plant populations will allow the forest to develop a healthy understory that will be vital to the resilience of the ecosystem as the forest progresses. King Conservation District prepared a *Forest Health Management Project Scope of Work* which states that Pine Brook Meadows HOA should focus on treating invasive weed populations in addition to other activities to allow for other tree species to successfully establish and grow.

### Forest Management Unit 1

Forest Management Unit 1 (FMU1) is about 1.5 acres and contains three Zones (A, B, C) identified by KCD's *Forest Health Management Project Scope of Work*. Within the entire Project Area of FMU 1, manual removal of invasive plants including Himalayan Blackberry, English Ivy, small invasive trees (English Holly, Cherry Laurel, European Mountain Ash), and small populations of Yellow Flag Iris will occur. Herbicide will also be used to treat invasive reed canary grass, large invasive trees, and re-sprouting of black cottonwood logs and stumps. All herbicide application is conducted by a licensed WA Department of Agriculture applicator following best management practices outlined by King County Noxious Weed to ensure the safe use of herbicide when controlling invasive plants.

In addition to these activities, Zones A, B, and C have site preparation activities and invasive species treatments outlined by KCD to prepare the areas for tree plantings:

Zone A is ~2,000 ft<sup>2</sup> and will have Himalayan Blackberry removed by hand, and Reed Canary Grass and Black Cottonwood re-sprouting treated by herbicide.

Zone B is ~4,000 ft<sup>2</sup> and will have Himalayan Blackberry removed by hand.

Zone C is ~2,000 ft<sup>2</sup> will have Himalayan Blackberry and small invasive trees removed by hand, and larger invasive trees treated by herbicide.

A total of 50 trees consisting of Western Red Cedar, Sitka Spruce, Western Hemlock, and Grand Firs will be planted in these zones 10 feet on center from each other, with a 4 foot clearing of competing vegetation, and MycoGrow tablets. Western Red

Cedars will be protected with Vexar tubing and bamboo stakes for protection from animal browsing. 50 native shrubs/groundcovers will also be planted in the site, 3 to 5 feet on center in clumps depending on the species. The presence of native shrubs and groundcovers in the site will help outcompete the invasive species we are removing and aid our attempts to suppress them.

### Forest Management Unit 2

Forest Management Unit 2 (FMU2) is about 1.3 acres and borders a large wetland to the west. Invasive species treatment will follow the same methods as described in FMU1. In addition, a large patch of Yellow Archangel is located in the northern section of this project area and will be treated with a targeted foliar application of herbicide. 10 trees consisting of Western Red Cedar, Sitka Spruce, Western Hemlock, and Grand Firs will be planted, as needed, in areas that have little to no understory trees where invasive species removal has occurred using the same methods described in FMU1.

### Follow Up Maintenance

The entire project area (FMU1 and FMU2) will be maintained for 3 years after initial stewardship and planting to achieve a reduction in invasive species populations and a target of 80% survivorship of planted plants. For the 1<sup>st</sup> and 2<sup>nd</sup> year, each Forest Management Unit will receive 2 days of maintenance for a total of 8 days. For the 3<sup>rd</sup> year, each Forest Management Unit will receive 1 day of maintenance for a total of 2 days.

All plant material created during invasive removal in FMU 1 and 2 and during maintenance will be composted on site.

### **EarthCorps will provide the following:**

- Project management oversight that includes project planning, communication with agency personnel, material acquisition and onsite management of crews to ensure project goals/ objectives are met.
- A Washington State Pesticide Licensed Applicator, appropriate herbicide and herbicide application equipment in order to provide chemical control for onsite invasive species.
- Crew with crew leader, 3-person crew of specialists, transportation, basic hand tools, access to power equipment and herbicide application equipment as necessary.
- Training and education in ecological restoration best management practices, ecology, leadership and community outreach.
- Workers' compensation, health insurance, and related taxes.
- Washington Labor & Industries documentation
- Administrative/ payroll and human resource services

**Agency will provide the following:**

- Necessary permits to conduct the stated work
- Access to the site
- Necessary site history, photo points or documentation to carry out monitoring

**SCHEDULE**

	FMU 1	FMU 2
<b>2020</b>		
Spring/Summer	5 days (invasive treatment)	4 days (invasive treatment)
Fall/Winter	.75 days (planting)	.25 day (planting)
<b>2021</b>	2 days (maintenance -season TBD)	2 days (maintenance – season TBD)
<b>2022</b>	2 days (maintenance -season TBD)	2 days (maintenance -season TBD)
<b>2023</b>	1 day (maintenance – season TBD)	1 day (maintenance – season TBD)

**BUDGET**

**FMU 1 (2020)**

Labor			\$ 9,721.25
Materials			\$ 796.88
Materials & Handling Fee (10% of Materials)			\$ 79.69
		TOTAL FEE	\$ 10,597.82
Sales Tax (8.6%)			\$ 911.41
		TOTAL PAYABLE	\$ 11,509.23



**FMU 1 (2021-2023)**

Labor			\$ 9,218.75
Materials			\$ 50.00
Materials & Handling Fee (10% of Materials)			\$ 5.00
		<b>TOTAL FEE</b>	\$ 9,273.75
Sales Tax (8.6%)			\$ 797.54
		<b>TOTAL PAYABLE</b>	\$ 10,071.29

**FMU 2 (5 years)**

Labor			\$ 16,647.75
Materials			\$ 157.45
Materials & Handling Fee (10% of Materials)			\$ 15.75
		<b>TOTAL FEE</b>	\$ 16,820.95
Sales Tax (8.6%)			\$ 1,446.60
		<b>TOTAL PAYABLE</b>	\$ 18,267.55

**EARTHCORPS BACKGROUND**

EarthCorps is a non-profit organization founded in 1993 with a mission to build a global community of leaders through local environmental service. EarthCorps provides a year-long intensive program for young adults from the US and 80 other countries to learn best practices in community-based environmental restoration and develop their leadership skills as they supervise more than 10,000 volunteers each year.

Location Restoration

EarthCorps' core expertise is community-based environmental restoration. We regard restoration as a process of reestablishing healthy habitat: returning a polluted or degraded environment as closely as possible to a thriving, self-sustaining ecosystem. As restoration practitioners, our goal is to expedite natural processes in rebuilding a functioning natural ecosystem.

Environmental service is a uniquely effective way to build community. When people put their hands into the dirt together and see their efforts transform a threatened area into a more vibrant landscape, they forge a special bond, empowering themselves and their community.

#### Global Leadership

Based in Seattle, Washington, EarthCorps brings together emerging environmental leaders from more than 60 countries to work on projects in the Puget Sound region and Cascade Mountains. As part of EarthCorps' intensive hands-on curriculum, they learn multiple restoration techniques, try out project design and management, develop leadership and team-building skills, and help manage thousands of local volunteers on projects.

#### **EARTHCORPS STAFF:**

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