CONSENT AGENDA
Supervisors Present: Burr Mosby –Chair; Kirstin Haugen – Vice Chair; Bill Knutson – Auditor; Jim Haack – Supervisor; Chris Porter - Supervisor

Associate Supervisors Present: None

Guests Present: Jean Fike – WSCC; Curtis Chambers – Inslee Best, District Legal; Eric Frimodt – Inslee Best, District Legal; Mark Hamilton – WFSE; Dick Ryon

Staff Present: Ava Souza, Josh Monaghan, Brady Reed, Deirdre Grace, Lindsey Davidson, Elizabeth Clark, Alex Martinsons, Jessica Saavedra, Megan Melick, Laura Redmond, Ellen Arnstein, Mike Lasecki, Brett Anderson, Mary Embleton, Kedija Awole, Zachary Bergen, Carrie King, Debbie Meisinger

Preliminary Matters:

Chairman Mosby called meeting to order at 4:04 pm. All attendees introduced themselves. Mosby asked for additions or corrections to the current agenda.

Knutsen moved: Haack seconded passed unanimously a motion to approve the agenda (5 ayes, 0 nays).

Consent Agenda:

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

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 – Haberzetle – Riparian Forest Buffer

c) Member Jurisdiction Grant Applications – None

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

“Promoting sustainable uses of natural resources through responsible stewardship”
Public Comment:

Ryon stated he was interested in the KCD budget and any shortfalls that have occurred due to the COVID-19 pandemic. Mosby replied that the Board will be addressing the budget later in the meeting.

Porter began to make a comment about his Black Lives Matter statement. After consulting with Chambers, the Board agreed to discuss the statement under Unfinished Business.

Pulled Consent Agenda Items: None

Presentations: None

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

Souza stated that because the Finance Sub-Committee meeting has moved the fourth Monday of the month, only the check register is available at this time. She continued more will be discussed in detail at the meeting later in the month.

Haugen asked how many consultants are currently on the check register and what contracts we have commitments to. Souza said she could provide a list to the Board.

Porter asked Souza has received all of the work plans needed to substantiate the budget. Souza stated that work plans for Operations, Finance, and Human Resources are completed, but she has not seen any other work plans. Porter requested all work plans be completed and brought to the next Finance meeting.

Knutsen moved: Porter seconded passed unanimously 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 (5 ayes, 0 nays).

b) Payroll Changes & Purchasing - Board

Porter stated as a reminder to the Board and staff that there is currently a hiring and purchasing freeze in place until the budget is completely analyzed and made whole. He continued that Souza still needs to reconcile all the numbers and make her recommendations to the Board before the budget is complete.

Porter motioned: Haugen seconded passed a motion to continue a hiring and purchasing freeze until the 2020 budget is analyzed further (4 ayes, 1 nay).
Porter brought forth a second motion that the Chief Operating Officer should have a clear, direct line to report financials directly to the Board.

There was a Board discussion with Chambers about his legal recommendation and the commonality in his experience with the Chief Operating Officer reporting to the Board instead of the Executive Director. Chambers stated ultimately it would be the Board’s decision.

Porter clarified that the motion would be to make the line permanent.

**Porter motioned; Haugen seconded passed a motion that the Chief Operating Officer will have a permanent and clear, direct line to report to the Board on Operating, Financial and Human Resource matters (3 ayes, 2 nays).**

**Unfinished Business:**

a) AI 20-041: Approval of 2019 Annual Report – Grace

Grace stated the copy of the Annual Report in front of the Board filled in the gaps that were in the previous meeting’s copy. She summarized that the purpose of the report is to wrap up the accomplishments of the previous year and ILA.

Porter asked who receives the report.

Graces confirmed county council and the Executive will receive a report formally that includes a presentation. She added it would also be made available on the website and other KCD social media accounts.

**Haugen moved; Porter seconded passed unanimously AI 20-041 a motion approving the submission of the 2019 King Conservation District Annual Report (5 ayes, 0 nays)**

b) ESJ Statement

Porter expressed his dissatisfaction in the way his Black Lives Matter statement was handled and the delay in posting it on the website.

Knutson apologized to Porter that he felt misrepresented. He added that a statement from the Board should come from a unified voice that reflects all Board members.

Porter continued that his point of contention was that legal was consulted before having a conversation with him. He stated he felt ignored and that his position as a Board member was diminished. Porter then asked how much the District pays in legal fees for issues like this.

Souza gave Porter hourly estimates but added it depends on what the matter is, and the amount of work and research involved.

Chambers confirmed that it is case by case basis.
Haugen asked if there could be an interim process to limit calls going to legal counsel to minimize spending.

Souza stated her directive from Covington was to review the bill and report to her initiated calls and Covington would determine if a matter or question could be handled internally to cut costs.

The Board discussed having a process to handle legal matters in the interim. Souza said she could email the Board the monthly bill and they can decide when to reel in expenses. Frimodt added he typically works with the Board, the Executive Director, and the Chief Operating Officer the most, but it doesn’t matter to him and it would be a decision of the Board.

New Business:

a) AI 20-042: Pine Brook Meadows HOA - Forest Health Management Application - Lasecki
b) Office Opening – Mosby/Board
c) Strategic Initiatives- Reed
d) AI 20-043: FSA Plan -Souza
e) Grant Programs Updates- Haugen/ Mosby
f) Discussion Interim Management

Lasecki explained that the application is a forest health management and implementation project for a HOA-owned forest parcel. He added this project would be similar to the Talus Community HOA project that was approved by the Board a few months ago. Lasecki confirmed the project would be funded through Working Land Initiatives 2020 program of work.

Knutsen moved; Porter seconded passed unanimously AI 20-042 a motion to approve Forest Health Management Application with Pine Brook Meadows HOA (5 ayes, 0 nays).

b) Office Opening – Mosby/Board

Mosby stated the KCD office will be opening starting tomorrow, July 14th, 2020. He commended Covington on doing a great job in ensuring personal protective equipment is available to staff and social distancing protocols are in place. He continued there are legal-reviewed standard operating procedures for the office, site visits, and using the KCD fleet vehicles. Mosby added that he understands the possibility of needing to re-close the office if Governor Inslee pushes back to Phase 1, but for now the District is open for business.

Porter asked about the work plan in the absence of an Executive Director. Mosby stated that the staff should continue to manage and work only in their areas of expertise. Mosby continued that the District has great department heads and employees, so he expects no issues in continuing a high level of professionalism.

Frimodt confirmed that Covington sent several sets of standard operating procedures that were reviewed but would have to confirm if there was a final approval. He emphasized the importance
of communication with staff and in parallel to the office opening, there needs to be clarity on the expectations and processes in place.

Souza asked Monaghan if the standard operating procedures have been shared with staff, since she wasn’t involved in the process.

Monaghan answered that Covington was the owner of the procedures and needed to make a final copy for legal review after receiving input from the Mid-Level Leadership team and staff. He suggested there should be a new owner now to reach out to staff as procedures are updated. Souza agreed the Operations team would take ownership with Davidson as the lead.

King asked if there would be any exceptions or schedule adjustments for those employees that are autoimmune-compromised or have children not in school or daycare.

Frimodt stated the recommendation is to follow state guidelines issued by Governor Inslee and public health entities. He continued the current guidelines strongly encourage working from home if possible if you are high-risk. He added it would be a Board decision to create and approve a policy about childcare.

Hamilton stated via Zoom Chat that on 6/22 Covington shared the standard operating procedures with WFSE. On 6/23 in response to WFSE’s questions related to the return to office procedures, Covington replied, "Hi Mark- we will continue to encourage, and support telework. This is for if/when staff need to be in the office."

Haugen asked to clarify if we are still encouraging staff to work from home if able, but the office is open for those who need or want access.

Mosby confirmed that the office is open. He continued that if a staff person is caring for someone or is autoimmune compromised, they can continue to work remotely. Mosby asked Frimodt what happens in Phase 3.

Frimodt stated that their office is open and operating on split shifts, as in certain days and hours are blocked off to allow rotation. He continued that Phase 3 states customer-facing business can occur but telework remains strongly encouraged in Phases 2 and 3.

c) Strategic Initiatives – Reed

Reed summarized her past work and accomplishments with prior and current strategic initiatives. She explained this work is primarily done to increase the District’s capacity to go above and beyond the normal scope of work and extend the reach of rates and charges funding. Reed reviewed seven current pilot/strategic initiative projects that are currently active – Promoting Stormwater Benefits from Urban Canopy Cover in Puget Sound (Phase 1 and 2), Urban Tree Canopy and Forest Cover Toolkit, Shore Friendly, PSCD Caucus Area Forester Pilot, Sound Transit Project, and Third WCC Crew Capacity.

Porter asked if the Forestry Manager position just hired will be involved in the above work.
Reed stated there is a position for this work, but it is additive, and the position hired is already working on other programmatic work.

Haack asked about the timeline for these projects. Reed stated it’s dependent on the capacity of KCD and other organizations to take on the work. She noted that some don’t have the resources to fund the other foresters needed for the project. Reed added she wants to advertise the position as soon as possible and have the Board review and approve the agreed upon memorandum with the five other local interagencies soon.

Haack asked if the initiatives are in the current 2020 budget. Reed stated that this is new work and new contracted money and that none of these projects were pitched, framed, or negotiated as replacement funding for rates and charges work.

Haack commended Reed for the extraordinarily innovative work she does for the District.

d) AI 20-043: FSA Plan - Souza

Souza stated that Governor Inslee passed a mandate that would allow employees to make changes to their daycare or healthcare FSA if they are paying into it with their own money. She continued that the open enrollment deadline is July 31st and changes would be effective until December 31st 2020. If the Board made a motion to pass the amendment, it would become effective on the August payroll. Souza added that the change cannot be retroactive. She proceeded to give the Board an example of how it would work.

Mosby asked if it could be changed back later. Souza stated that regular open enrollment would still occur in November and any new changes would become effective January 2021. She added it would not cost the District any money except for Souza’s administrative time to make the changes.

Porter moved; Haugen seconded passed unanimously AI 20-043 a motion to authorize the Chief Operating Officer to make an amendment to the current cafeteria plan allowing changes through July 31, 2020 (5 ayes, 0 nays).

Haugen asked Souza when an amended budget will come to the Board. Souza replied it can be discussed in detail at the Finance Sub-Committee meeting, but it will take some time to match the ILA with the couple of roadblocks already brought to the Board’s attention. Souza added that a motion will need to be made by the Board to reallocate some funds to make the programs with grants whole.

The Board asked for two difference versions of the budget that total $8.8 million and $7.9 million.

Souza stated again that she could bring her recommendations to the next Finance Sub-Committee meeting and start that work after the amendment is approved but it will take more time. She agreed to work on a budget and present progress reports as things are moving.

Haack requested the scope of work needs to be detailed on each budget line item.
Haugen requested the next Finance Sub-Committee meeting be a full meeting. The Board agreed.

Souza stated to the Senior Leadership team members in the meeting that in order to complete the Board’s ask she will need to have contract copies of any grants or commitments in any of the accounts.

e) Grant Program Updates — Haugen/ Mosby

Haugen stated the Board is requesting monthly reports for all grants to better understand how many grants are left open and where they are in the process. Mosby added the Board is asking for more details on progress.

Knutsen agreed this has been an ongoing issue and there needs to be stronger enforcement and better tracking to ensure grantees are meeting deliverables on the agreed upon timeline. Mosby stated that the Board asked Covington about better tracking a couple of months ago. Knutsen continued that the Board is not asking one person to hold all the responsibility, but that this should be a priority of the District.

Grace reported that they have a lot more accountability and have better tracking on current grants. She added the software Foundant has been a huge help. She agreed that there are still problems that lie in the “legacy” grants, or ones that are much older. Clark added on the Zoom chat that Regional Food System grants have similar challenges and need similar support.

Haack asked about tools for meeting outcomes and deliverables. Grace confirmed tools are being developed.

Saavedra stated she will review at the next Grant Sub-Committee meeting all of the grants since the beginning of the program.

f) Discussion of Interim Management

Mosby reiterated his previous statement that the Senior Leadership team will manage and work only in their areas of expertise. He continued he was open to the idea of creating an Executive team for Senior Leadership to report to two or three Board members.

Haugen summarized that the Board will have to make decisions on the current situation, the interim, and the hiring process for the Executive Director. There was Board discussion about how to handle the interim process and the pros and cons of hiring an interim Executive Director.

Frimodt stated that from a process standpoint, if the Board wanted to discuss qualifications of interim management that it should be done in Executive Session. After further discussion, the Board agreed to enter Executive session. Mosby adjourned the Board to Executive session for 15 minutes to be facilitated by Frimodt at 7:00 pm. The Board requested an additional 5 minutes be added to the Executive Session at 7:15pm. The Board requested an additional 5 minutes be added to the Executive Session at 7:20pm. The Board requested an additional 5 minutes be added to the
Executive Session at 7:30pm. The Executive Session was adjourned at 7:35pm and the regular meeting was reconvened.

Knutsen moved; Haack seconded passed a motion to contact a third-party contractor to assist in finding an interim Executive Director for King Conservation District (5 ayes, 0 nays).

Clark thanked the Board for their service and expressed appreciation for all they do for staff and the general public. The Board returned the sentiment.

There was no more business before the Board.

Knutsen moved; Haugen seconded passed unanimously a motion to adjourn the meeting at 7:41pm.

__________________________________________
Authorized Signature Date

Summary of Motions

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

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

Knutsen moved; Porter seconded passed unanimously 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 (5 ayes, 0 nays).

Porter motioned; Haugen seconded passed a motion to continue a hiring and purchasing freeze until the 2020 budget is analyzed further (4 ayes, 1 nay).

Porter motioned; Haugen seconded passed a motion that the Chief Operating Officer will have a permanent and clear, direct line to report to the Board on Operating, Financial and Human Resource matters (3 ayes, 2 nays).

Haugen moved; Porter seconded passed unanimously AI 20-041 a motion approving the submission of the 2019 King Conservation District Annual Report (5 ayes, 0 nays)
Knutsen moved; Porter seconded passed unanimously AI 20-042 a motion to approve Forest Health Management Application with Pine Brook Meadows HOA (5 ayes, 0 nays).

Porter moved; Haugen seconded passed unanimously AI 20-043 a motion to authorize the Chief Operating Officer to make an amendment to the current cafeteria plan allowing changes through July 31, 2020 (5 ayes, 0 nays).

Knutsen moved; Haack seconded passed a motion to contact a third-party contractor to assist in finding an interim Executive Director for King Conservation District (5 ayes, 0 nays).

Knutsen moved; Haugen seconded passed unanimously a motion to adjourn the meeting at 7:41pm.
KING CONSERVATION DISTRICT

Board of Supervisors
Finance Sub-Committee
Meeting Minutes

July 27, 2020

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

3 Associate Supervisors Present: None

4 Guests Present: Jean Fike - WSCC

5 Staff Present: Ava Souza, Josh Monaghan, Brandy Reed, Lindsey Davidson, Carrie King, Alex
Martinsons, Jessica Saavedra, Kedija Awole, Liz Clark, Mike Lasecki, Jacobus Saperstein,
Zachary Bergen

8 Preliminary Matters:

9 Chairman Mosby called meeting to order at 2:14 pm. All attendees introduced themselves. Mosby
asked for additions or corrections to the current agenda.

11 Public Comment: None

12 Finance:

13 Mosby started the meeting by stating that the Board will continue to push for conservative
spending during the pandemic and the uncertainty it brings.

15 Souza reviewed the revenue received by the District for the month of June. She also reviewed the
District’s total expenses and noted that a majority was spent on salary, benefits, and contracted
services. Souza continued that there was a smaller amount in general expenses, most of that being
the rent for the office. She summarized that the District is spending as usual for this time of year
and that COVID-19 has had no effect.

20 Souza continued by reviewing elections costs so far this year. She noted that there was
approximately $133,000 in total expenses as of June and about $140,000 is remaining of the
$275,000 budgeted. Souza explained election costs will ramp up in October and November as the
2021 election approaches.

24 Souza shared a” quick math” expense report that compares 2019 to 2020 spending on a monthly
basis. She added to her earlier point that spending has been about the same and she projects similar
spending will happen in the second half of the year. Souza stated she can share this sheet with the
Board moving forward.

28 She finished her presentation by stating that there has been no word yet about the November
deposit yet, but she will share with the Board confirmation and updates as soon as she gets them.

"Promoting sustainable uses of natural resources
through responsible stewardship"
30 Porter asked Souza if collections were received in May, Souza confirmed the District did receive full collections in May. She added that she was told there may be a drop in November.

32 Porter asked if there was a way to get the money later on if it’s not collected in November. Souza said no and that it is what it is.

34 Souza continued that that is the reason why the District should be conservative in spending, because there is potential that we will only get partial collections. She added that everyone she has spoken to that work the same way that the District does like WSCC, other conservation districts, and King County Offices are being conservative as well.

38 Haugen asked Souza to explain the collections process. She also asked when would know if the District would be short. Souza stated that she has a contact at the King County office that reports to her every month on where we are with collections.

41 The Board asked for the status on the two version of the budget they requested at the last meeting. Souza confirmed that the Finance team is working on untangling the budget daily. She explained that it’s been a complicated process since the Finance team was not a part of the group that put the budget together. She added that one of the biggest challenges has been grouping well-established programs into “focus areas” for reporting. Souza assured the Board she and her team are trying their best to meet the Board’s request.

47 There was no more business before the Board.

48 **Haugen moved; Porter seconded passed unanimously a motion to adjourn the meeting at 2:31 pm.**

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52 Authorised Signature

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56 **Haugen moved; Porter seconded passed unanimously a motion to adjourn the meeting at 2:31 pm.**
### BUDGET SUMMARY

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**Funding for Forestry Cost-Share has recently become available through Working Lands Initiative Funding**

### Adjusted Balance Available for FY 2020

- Funds Available to Reallocate: $1,656.24
- Adjusted Balance: $237,172.80

### COST SHARE AWARD DETAIL - July Cycle

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### COST-SHARE FUNDS AVAILABLE TO REALLOCATE

(Prior & Current Year Contracts, Cancelled or Closed Under Budget During FY 2020)

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King Conservation District Board of Supervisors Meeting
Agenda Action Briefing/Report
Meeting Date: August 10th, 2020

SUBJECT: AI 20-044
- Motion to approve the Des Moines Member Jurisdiction grant application from Des Moines Farmers Market for the Low Income Senior Healthy Eating Initiative

FISCAL IMPACT
- The applicant is requesting $11,750 from 2019-2020 KCD-Des Moines Member Jurisdiction funds

POLICY CONSIDERATION
- The proposal meets the following natural resource improvement actions which are criteria for funding from the grant program
  o Education and Outreach

STAKEHOLDER INTERESTS
- The market is very eager to apply because without KCD funding, this very popular program could not be offered.

BACKGROUND
- The grant subcommittee reviewed this application and is supportive of the project.

EFFECTIVE DATE:
- If approved, this Motion becomes effective on the date of approval.

OPTIONS
- Vote in favor or not in favor of approving the consent agenda.
- Request that this item be removed from the consent agenda for discussion.

RECOMMENDATION
- The grant subcommittee recommends approval of this grant application.

MOTION
- Motion to approve the Member Jurisdiction grant application for $11,750 from KCD-Des Moines Member Jurisdiction 2019-20 funds for the Des Moines Farmers Market Low Income Senior Healthy Eating Initiative
Des Moines Farmers Market - KCD Low Income Senior Healthy Eating Initiative 2020

Member Jurisdiction Grant Program

Des Moines Farmers Market
Kim Richmond
P.O. Box 98843
Des Moines, WA 98198
0: 206-595-9971

Kim Richmond
22307 Dock Avenue South
P.O. Box 98843
Des Moines, WA 98198
kim@frogsongfarms.com
0: 206-595-9971
Application Form

Summary Information

Project Title*
Des Moines Farmers Market - KCD Low Income Senior Healthy Eating Initiative 2020

Project Description - Short*
Provide a short, concise description of the project no more than two or three sentences.

Our unique Low Income Senior Healthy Eating Program helps King County low-income senior participants purchase fresh fruits, vegetables, bread and other qualifying food items at the Des Moines Farmers Market through a weekly $10 free market tokens.

Principal Partners (if any)
City of Des Moines, Des Moines Legacy Foundation

Amount of KCD Funding Requested*
You will need to upload a detailed budget document before you submit your application. Please make sure the amount requested and total project cost amounts you list here match the amounts in the uploaded budget document.

$11,750.00

Total Project Cost*
$14,000.00

Total Matching Funds (optional)
$2,250.00

Project Start Date*
06/01/2020
Project End Date*
10/31/2020

Close Date

Project Location*
Address, Parcel #, OR L&L Points, for site specific projects only.
If more than two locations, state “multiple” and explain.
22307 Dock Ave S, Des Moines, WA 98198

Jurisdiction*
If the applicant is not a city or jurisdiction, please type in the city or jurisdiction this project is located in.
Des Moines

Is your project on public or private land?*
Public

State Legislative District #*
Click here to find it on the web. If your project resides in more than one district, type in the primary district or type in zero.
33

King County District #*
Click here to find it on the web. If your project resides in more than one district, type in the primary district or type in zero.
9

Narratives, Budget, & Attachments

Project Description - Detailed*
Provide a description of the project that summarizes what you will do, how you will do it, and why you will do it. Describe target audience, outcomes, objectives and general timelines.

In 2012, the Des Moines Farmers Market decided to partner with KCD and the City of Des Moines to fill a small part of the food access gap.
Our seniors are a valued part of our communities, but many of them find it difficult to make ends meet. Quality fresh food is often priced at a premium at grocery stores, and some have to choose between quality or price, or even go without. Additionally, since the QFC in downtown Des Moines closed a couple of years ago, a greater part of the area has become a food desert, with access to only convenience store-type groceries for those without reliable vehicle transportation. Many of the seniors who visit the Market are brought by bus from a retirement community, and do not have a personal vehicle.

2020 has brought concerns with COVID-19 infection rates, particularly in the senior demographic. The Market is working closely with King County Department of Health to ensure all market shoppers, vendors, staff and volunteers are educated on how to remain safe at the Market, including hand washing and mandatory face coverings for all adults. Additionally, we have a seniors-only hour from 9-10 am to limit exposure of this more vulnerable population.

We help our seniors, help our farmers, and help our community by giving qualifying seniors $10 in free tokens, to be used to purchase fruits, vegetables and other staples at the Des Moines Farmers Market.

The project is administered as follows:
1. Identify applicants - returning participants, word of mouth within local retirement communities, signage at the Market and at local senior communities (beginning May and through market season)
2. Take applications - simple one page form to self-declare eligibility at 135% of Federal poverty level or below, age and residency in a KCD-eligible city, verified by market staff (during market season)
   * In 2020, this form is also available online, and the Market Board of Directors has agreed to allow one person per household to receive tokens for other members if those other members have a current application on file.
3. Dispense tokens - participants are added to a checklist (see attached) and tracked for weekly participation
4. Receive back the $1 KCD-logo tokens, count and record after each market day

Project Activities and Measurable Results*
List specific project activities to be completed with KCD grant funds and the associated outcomes or measurable results, and timeline.

1. Issuance and redemption of KCD grant program market tokens at the Market
2. Staff hours to administer the program (promote the program, process applications, hand out tokens, record participation, count redeemed tokens) – approximately 7 hours per week at $15/hr.
3. Reusable shopping bags with KCD and other program partner logos distributed to participants
4. Consistent marketing and display of KCD logos, on applications, website and on the tokens themselves, to recognize KCD’s support

Average participation during the 17 Saturdays and 7 Wednesdays of 2019 was 61 seniors per market day (a 32.6% increase over the prior year, exceeding our goal of 30% increase in participation), with an average of $645 redeemed (50% increase over prior year average redemption of $423). The improvement in redemption goes 100% to farm and food vendor sales, and was a result of both some redemption from 2018 token distribution, and a larger base of repeat participation throughout the 2019 season. The higher participation and redemption required us to order 500 additional $1 tokens to meet demand.

The Senior Health Eating Initiative helps our farms and farmers, increasing sales in the Market dollar for dollar of KCD tokens distributed (almost $12,000 in 2019). The redemption rate is high, with 93% of all tokens distributed during the season redeemed. There is overlap in redemption both with the prior year and tokens that will be redeemed in 2020, as tokens don’t expire and can be used at a later date. It is our intent to honor these tokens regardless of whether we receive 2020 grant funding. While a small percentage of total farm sales, the KCD sales represent more than $600 average per market day in additional revenue to farmers, encouraging continued farming and direct-to-the-consumer sales of fresh produce. Beyond the numbers, the response from participants is overwhelmingly positive. For some, we’ve given them hope, health, and a reason to get out of their rooms on a Saturday morning. In many cases, seniors are able to
combine their KCD grant tokens with EBT and Market Bucks, significantly expanding their resources for fresh food purchases at the market (ex. $10 KCD plus $10 EBT plus Market Bucks match equals $30). Our program recipients have been and remain a part of our bigger Des Moines family. We see singles, couples, and whole apartment groups and are on a first-name basis with many. Our only challenge has been having to turn away those who are over the income level or do not reside in a KCD program city.

While not officially tracked at this time, observation suggests as much at 50% of participants are non-white or Hispanic.

**Project Budget and Expenses**
Fill out and upload separate Application Budget Form also available on the KCD Member Jurisdiction Grant Program website. Budget must be detailed with footnotes, appropriate and reasonable, meeting state auditor/GAAP guidelines. Please do not use forms from previous applications. Please only upload the form linked above. Thank you!

KCD-Member-Jurisdiction-Grant-Program-Application-Budget-Form 2020.xlsx

**Member Jurisdiction Authorization Letter**
If you are a nonprofit organization seeking Member Jurisdiction funding, you must upload written authorization from the Member Jurisdiction to apply for funding. This can be in the form of a letter or scanned copy of an email.

Senior Healthy Eating Initiative Support Letter 06.08.2020.pdf

**Additional Attachments**
Upload any photos or maps of your project here. Only one file will be accepted. Please combine multiple files into one if possible.

IMG_20190117_180610871.jpg

**Natural Resource Improvement Actions- Criteria Checklist**
Please only select "yes" below the action that your project directly addresses

**Direct Improvement of Natural Resource Conditions**
To improve landscape and natural resource conditions as a result of direct action that enhances water quality, protects and conserves soils, implements ecosystem restoration and preservation projects (examples include supporting private property owners with land stewardship, water quality, aquatic and wildlife habitat resources, removal of invasive weeds, stewardship on public land)

Does your project directly address this issue?

No
Education and Outreach*
To raise awareness, deepen knowledge, and change behaviors of residents, landowners, and other land managers and organizations to practice exemplary stewardship of natural resources (examples include education about stormwater management; the value of farmland, local farms and food systems, shorelines, salmon habitat, forests and other ecosystems)

Does your project directly address this issue?
Yes

Pilot and Demonstration Projects*
To test and/or improve concepts and/or approaches in natural resource management that can be replicated by others (examples include low impact development or green infrastructure demonstration projects, development of new best management practices, distribution of local farm products, urban agriculture (e.g. farmers markets and backyard food production to promote or support social economic independence and healthy living); technological innovation for natural resource conservation)

Does your project directly address this issue?
No

Capacity Building*
To enhance the ability of organizations, agencies, residential landowners and other land owners and managers to have knowledge, skills, tools, support systems and technical resources to implement exemplary best management practices and deliver natural resource management actions on the ground (examples include urban agriculture, development, assistance to and inclusion of private property owners, preservation, restoration, and/or expansion of urban and/or rural agricultural lands, rural and urban forest lands, riparian restoration and stewardship on private and public lands)

Does your project directly address this issue?
No

Project Type*
Agriculture, Urban

KCD Acknowledgement and Signature
By signing below, the applicant agrees to acknowledge King Conservation District funding by placing the KCD-provided logo on signs, materials, and documents produced as part of the above proposal. In addition, the applicant will notify KCD of public events and activities funded by the KCD.
I have read the above paragraph about acknowledging KCD and I will use the provided logo.

**Authorized Applicant Electronic Signature**
Please enter your full name to sign and agree to the above.

Kim Richmond

**Title**
President

**Date**
07/01/2020
File Attachment Summary

Applicant File Uploads
- KCD-Member-Jurisdiction-Grant-Program-Application-Budget-Form 2020.xlsx
- Senior Healthy Eating Initiative Support Letter 06.08.2020.pdf
- IMG_20190117_180610871.jpg
**Member Jurisdiction Grant Program**

*Grant Application Project Budget Form*

Promoting sustainable uses of natural resources through responsible stewardship

<table>
<thead>
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<td>Des Moines Waterfront Farmers Market</td>
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<tr>
<td>Contact</td>
<td>Kim Richmond</td>
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<tr>
<td>Mailing Address</td>
<td>1644 S 280th St, Des Moines WA 98198</td>
</tr>
<tr>
<td>E-mail</td>
<td><a href="mailto:kim@frogsongfarms.com">kim@frogsongfarms.com</a></td>
</tr>
<tr>
<td>Phone</td>
<td>206.595.9971</td>
</tr>
</tbody>
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| Project Start Date | 6/1/2020  |
| Project End Date  | 10/30/2020|

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Please provide detailed budget information below. Itemize categories such as supplies, contracted services with footnotes and detailed descriptions below.

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<th>Other Funds (City of Des Moines - committed)</th>
<th>Other Funds (Legacy Foundation - pending)</th>
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<td>(for - volunteers, staff)</td>
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<td><strong>$1,000</strong></td>
<td><strong>$14,000</strong></td>
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| Total Project Cost        | $14,000   |
| Total Match               | $2,250    |
| Amount of KCD Funding Requested | **$11,750** |
| Match Percentage          | 16%       |

---

Footnotes:
June 8, 2020

Kim Richmond
Des Moines Farmers Market
PO Box 98843
Des Moines WA 98198

Dear Ms. Richmond,

The City of Des Moines approves the Des Moines Farmer’s Market grant request of $13,000 for their 2020 Des Moines Farmers Market Senior Health Eating Initiative to help feed low income seniors.

Best,

Michael Matthias
City Manager

cc: Susan Cezar, Chief Strategic Officer
King Conservation District Board of Supervisors Meeting  
Agenda Action Briefing/Report  
Meeting Date: August 10th, 2020

SUBJECT: AI 20-045  
- Motion to approve the Member Jurisdiction grant application from King County for the 2020 Keeping Farmers Farming, King County Agriculture Program

FISCAL IMPACT  
- The applicant is requesting $172,500 from 2019-2020 KCD-King County Member Jurisdiction funds

POLICY CONSIDERATION  
- The proposal meets the following natural resource improvement actions which are criteria for funding from the grant program  
  o Education and Outreach  
  o Direct Improvement of Natural Resources  
  o Capacity Building  
  o Pilot and Demonstration Projects

STAKEHOLDER INTERESTS  
- View attached application for details about stakeholders

BACKGROUND  
- The grant subcommittee reviewed this application and is supportive of the project.

EFFECTIVE DATE:  
- If approved, this Motion becomes effective on the date of approval.

OPTIONS  
- Vote in favor or not in favor of approving the consent agenda.  
- Request that this item be removed from the consent agenda for discussion.

RECOMMENDATION  
- The grant subcommittee recommends approval of this grant application.

MOTION  
- Motion to approve the Member Jurisdiction grant application for $172,500 from KCD-King County Member Jurisdiction 2019-2020 funds for the 2020 Keeping Farmers Farming, King County Agriculture Program
Keeping Farmers Farming, King County Agriculture Program 2020

Member Jurisdiction Grant Program

King County
Maureen Dahlstrom
201 S Jackson St, Ste 600
Seattle, WA 98104
0: 206-477-4687

Maureen Dahlstrom
201 S. Jackson St Suite 600
201 S. Jackson St Suite 600
Seattle, WA 98104
Maureen.Dahlstrom@kingcounty.gov
0: 206-477-4777
Application Form

Summary Information

Project Title*
Keeping Farmers Farming, King County Agriculture Program 2020

Project Description - Short*
Provide a short, concise description of the project no more than two or three sentences.

The goal of the King County Agriculture Program is to conserve farmland and agricultural soils, increase the economic success of farm enterprises, and improve farm management practices to protect soil, water quality and wildlife.

Principal Partners (if any)

Amount of KCD Funding Requested*
You will need to upload a detailed budget document before you submit your application. Please make sure the amount requested and total project cost amounts you list here match the amounts in the uploaded budget document.

$172,500.00

Total Project Cost*
$346,935.00

Total Matching Funds (optional)
$174,435.00

Project Start Date*
01/01/2020

Project End Date*
12/31/2020
Close Date

Project Location*
Address, Parcel #, or L&L Points, for site specific projects only.
If more than two locations, state "multiple" and explain.
All of King County

Jurisdiction*
If the applicant is not a city or jurisdiction, please type in the city or jurisdiction this project is located in.
King County (UNIN)

Is your project on public or private land?*
Public

State Legislative District #*
Click here to find it on the web. If your project resides in more than one district, type in the primary district or type in zero.
0

King County District #*
Click here to find it on the web. If your project resides in more than one district, type in the primary district or type in zero.
0

Narratives, Budget, & Attachments

Project Description - Detailed*
Provide a description of the project that summarizes what you will do, how you will do it, and why you will do it. Describe target audience, outcomes, objectives and general timelines.

The goal of the King County Agriculture Program, partially supported with King Conservation District funding, is to conserve farmland and agricultural soils, increase the economic success of farm enterprises, and improve farm management practices to protect soil, water quality and wildlife.

King County has a long history of preserving farmland and supporting farmers and their markets in the County. The 2009 FARMS Report identified major challenges for farmers and actions needed to be taken if farming is to continue to be successful in King County. Since then, the Agriculture Program, with the assistance of the Agriculture Commission, has made progress on the recommendations, continued to refine
them, and set annual priorities. In 2013, the County partnered with the City of Seattle and Pike Place Market in roundtable conversations to enhance farmland protection and increase market opportunities for the county’s agricultural industry. In 2014, the King County Executive launched his Food Economy Initiative and created a "Kitchen Cabinet" to develop targets, strategies and actions to enhance the food economy in the County. In 2015, the Kitchen Cabinet released its "Local Food Initiative," which identified the top 20 priority action items and strategies to be implemented in 2015-2017. The King County Agricultural Program's 2020 work plan was structured to directly contribute to the Local Food Initiative priorities and some of the tasks in the work plan will be supported by the requested KCD funding.

The beneficiaries of this project are farmers, consumers of local farm products, farmers market managers, farmland owners and other residents of King County. Most of the activities target farmers in the agriculture production districts. However, we will also focus on rural and urban residents and city governments to build interest in local farm products, support for farmers, and understanding of the environmental challenges we face in trying to restore salmon and enhance agriculture within the same geographical area. Overall, the tasks outlined in this proposal will enhance conservation of agricultural land and natural resources, and increase opportunities to buy local food in stores, restaurants and farmers markets throughout King County and support immigrant/refugee farmers who have been traditionally underserved. The requested $172,500 of KCD funds will be augmented by King County funds to carry out the specific programs defined here.

**Project Activities and Measurable Results**

List specific project activities to be completed with KCD grant funds and the associated outcomes or measurable results, and timeline.

1. Provide technical support to Working Farmland Partnership. In 2018, King County and key stakeholders collaborated on a KCD-funded pilot project to determine whether focused engagement can accelerate rates of farmland returned to production. This project used information learned about "farmable but unfarmed lands" identified during the summer 2017 land use survey to work with landowners who were interested in leasing land to farmers, enhancing production on their lands, or transitioning away from farm management or ownership. The WFP grant from KCD was focused in the Snoqualmie APD and on Vashon Island, but program partners also responded to opportunities elsewhere in the county. Initial project results were very promising and KCD agreed to support PCC Farmland Trust to continue building the WFP. In 2020, we will:
   - Serve on WFP Steering Committee and sub-committees
   - Provide direct outreach and technical support to landowners and farmers to ultimately improve opportunities to restore or enhance agricultural production on underused land.
   - Participate in landowner and farmer workshops, individual landowner and farmer consultations to understand needs and expectations and supporting other Working Farmland Partnership staff to plan and host team meetings.
   - Assist with management and assessment of agricultural land use data, including GIS-based analyses and reporting.
   - Primary staff: Melissa Borsting PPMII (0.2 FTE).

2. Enhance farming activities on King County-owned farmland. The County currently owns property that could be better utilized for farming and serve as platforms for good farm management and ecological sustainability. This portfolio includes lands that were acquired for long-term farming uses as well as lands acquired for other purposes but that have significant short-term farming potential (e.g., river/habitat restoration). In 2020, we will:
   - Continue capital improvement to enhance production potential on county-owned farmland and make county farmland a platform to demonstrate good farm management.
- Provide interpretive services to Hmong farmers who lease county-owned farmland to help provide needed infrastructure improvements and to navigate the leasing process.
- Complete a plan, with partner engagement, that identifies how best King County-owned farmland can add value to the larger agricultural community, especially to provide land access for new/beginning farmers and immigrant/refugee farmers.
- Primary staff: Bee Cha PPM II (0.3 FTE), Melissa Borsting PPM II (0.1 FTE)

3. Increase water availability for irrigation. Farming requires adequate irrigation. Based upon earlier assessments, too many of the county’s farms do not have legal water rights or rights to water in quantities needed to irrigate high value crops. In 2020, we will:
   - Complete the temporary transfer of water rights from 60 Acres soccer complex to county-owned Sammamish River Farms. Provide technical support to SRF farmers to provide much-needed irrigation water, which will allow farmers to grow higher value crops. Initiate water delivery summer 2020.
   - Work with staff in Wastewater Treatment Division to further develop plans to deliver commercial quantities of recycled water to farmers in the Sammamish Valley. Options for direct delivery as well as indirect delivery via river withdrawals with replacement will be considered.
   - Explore opportunities to claim “municipal rights” to irrigation water rights associated with King County properties. Ensure those rights are not lost due to non-use (e.g., place rights in state water trust) and initiate action to transfer water from at least one right to downstream agricultural properties.
   - Primary staff: Melissa Borsting PPM II (0.2 FTE)

4. Provide technical support, outreach and education to King County farmers. DNRP agriculture staff provide frequent technical support for farmers and farm landowners, both through targeted outreach and one-on-one contacts. In 2020, we will:
   - Update and provide new content for FarmKingCounty.org and DNRP agricultural websites.
   - Lead the Farm King County Technical Assistance Team and complete an assessment of all farmer training in King County, strive to minimize duplication of effort and identify gaps in training that can be filled by team participants.
   - Provide key support to efforts to gather and disseminate information to farmers, farmland owners and consumers challenged by Covid-19.
   - Respond to KC farmers requesting assistance with management, regulations/permitting, transition planning, etc.
   - Primary staff: Melissa Borsting (0.2 FTE)

5. Coordinate development and implementation of a strategic plan to support immigrant/refugee farmers. South King County immigrants and refugees were often farmers in their home countries but have not been afforded needed support to explore opportunities to farm commercially in King County. In 2018, we began a targeted outreach program to assess the immigrant farming communities in south King County and to determine the level of interest in commercial farming. In 2020, we will:
   - Work with partner organizations to develop a strategic plan to deliver needed resources, including access to land and technical training and education.
   - Coordinate implementation of initial high priority actions, which will include linking immigrant/refugee farmers searching for leasing opportunities with WFP.
   - Explore opportunities to acquire property as an addition to the KC farmland portfolio to serve the needs of immigrant/refugee and beginning farmers.
   - Work with partner organizations to develop a plan for collaborative farming on shared land provided by King County.
   - Primary staff: Melissa Borsting PPM II (0.3 FTE)
Project Budget and Expenses*
Fill out and upload separate Application Budget Form also available on the KCD Member Jurisdiction Grant Program website. Budget must be detailed with footnotes, appropriate and reasonable, meeting state auditor/GAAP guidelines. Please do not use forms from previous applications. Please only upload the form linked above. Thank you!

2020 Jurisdictional Grant Budget.xlsx

Member Jurisdiction Authorization Letter
If you are a nonprofit organization seeking Member Jurisdiction funding, you must upload written authorization from the Member Jurisdiction to apply for funding. This can be in the form of a letter or scanned copy of an email.

Additional Attachments
Upload any photos or maps of your project here. Only one file will be accepted. Please combine multiple files into one if possible.

Natural Resource Improvement Actions- Criteria Checklist
Please only select "yes" below the action that your project directly addresses

Direct Improvement of Natural Resource Conditions*
To improve landscape and natural resource conditions as a result of direct action that enhances water quality, protects and conserves soils, implements ecosystem restoration and preservation projects (examples include supporting private property owners with land stewardship, water quality, aquatic and wildlife habitat resources, removal of invasive weeds, stewardship on public land)

Does your project directly address this issue?
Yes

Education and Outreach*
To raise awareness, deepen knowledge, and change behaviors of residents, landowners, and other land managers and organizations to practice exemplary stewardship of natural resources (examples include education about stormwater management; the value of farmland, local farms and food systems, shorelines, salmon habitat, forests and other ecosystems)

Does your project directly address this issue?
Yes

Pilot and Demonstration Projects*
To test and/or improve concepts and/or approaches in natural resource management that can be replicated by others (examples include low impact development or green infrastructure demonstration projects, development of new best management practices, distribution of local farm products, urban agriculture (e.g. farmers markets and
backyard food production to promote or support social economic independence and healthy living; technological innovation for natural resource conservation)

Does your project directly address this issue?
Yes

Capacity Building*
To enhance the ability of organizations, agencies, residential landowners and other land owners and managers to have knowledge, skills, tools, support systems and technical resources to implement exemplary best management practices and deliver natural resource management actions on the ground (examples include urban agriculture development, assistance to and inclusion of private property owners, preservation, restoration, and/or expansion of urban and/or rural agricultural lands, rural and urban forest lands, riparian restoration and stewardship on private and public lands)

Does your project directly address this issue?
Yes

Project Type*
Agriculture, Urban

KCD Acknowledgement and Signature
By signing below, the applicant agrees to acknowledge King Conservation District funding by placing the KCD-provided logo on signs, materials, and documents produced as part of the above proposal. In addition, the applicant will notify KCD of public events and activities funded by the KCD.

* I have read the above paragraph about acknowledging KCD and I will use the provided logo.

Authorized Applicant Electronic Signature*
Please enter your full name to sign and agree to the above.

Maureen Dahlstrom

Title
Program Manager
Date*
07/01/2020
File Attachment Summary

**Applicant File Uploads**
- 2020 Jurisdictional Grant Budget.xlsx
### Member Jurisdiction Grant Program

**Grant Application Project Budget Form**

Promoting sustainable uses of natural resources through responsible stewardship

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<thead>
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<th>Project Name</th>
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<td>King County, Water and Land Resources Division</td>
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<tr>
<td>Contact</td>
<td>Richard Martin</td>
</tr>
<tr>
<td>Mailing Address</td>
<td>201 S Jackson Street, Suite 600, Seattle, WA 98104</td>
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<tr>
<td>E-mail</td>
<td><a href="mailto:richard.martin@kingcounty.gov">richard.martin@kingcounty.gov</a></td>
</tr>
<tr>
<td>Phone</td>
<td>206-477-3876</td>
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<tr>
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</tr>
<tr>
<td>Project End Date</td>
<td>12/31/2020</td>
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Please provide detailed budget information below. Itemize categories such as supplies, contracted services with footnotes and detailed descriptions below.

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<th>KCD Funds</th>
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<td>(for - volunteers, staff)</td>
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Total Project Cost: $346,935
Total Match: $174,435
Amount of KCD Funding Requested: $172,500
Match Percentage

50%

Unrecovered Indirect Costs are calculated at the King County WLR Indirect Rate of 37.4%

Budget Notes

Salaries and Benefits: Melissa Borsting PPM II (1.0 FTE), TBD PPMII (.6 FTE) funded by KCD; Patrice Barrentine, Rick Reinlasoder, Ted Sullivan, Eric Beach and Richard Martin (.1 FTE each charged as match)

Office Supplies: miscellaneous office supplies, printing

Contracted/Professional Services: WSFMA Farmers Market Manager Forum coordination, economic study of sugar beverage tax investment in purchasing local produce for public support programs, county water needs assessment

Unrecovered Indirect: calculated as 37.4% of total salary, benefits and other direct program costs ($289,631)

Other Funds: SWM=Surface Water Management, GF=General Funds
King Conservation District Board of Supervisors Meeting
Agenda Action Briefing/Report
Meeting Date: August 10th, 2020

SUBJECT: AI 20- 046
- Motion to approve the Member Jurisdiction grant application from the City of Tukwila for the Green Tukwila Implementation 2020-21 project

FISCAL IMPACT
- The applicant is requesting $30,000 from 2017-2020 KCD-Tukwila Member Jurisdiction funds

POLICY CONSIDERATION
- The proposal meets the following natural resource improvement actions which are criteria for funding from the grant program
  o Education and Outreach
  o Direct Improvement of Natural Resources
  o Capacity Building
  o Pilot and Demonstration Projects

STAKEHOLDER INTERESTS
- The City of Tukwila is doing an amazing job with this program and has multiple business partnerships making it possible

BACKGROUND
- The grant subcommittee reviewed this application and recalled the close out information about the excellent progress made with the previous grant and is supportive of this next phase.

EFFECTIVE DATE:
- If approved, this Motion becomes effective on the date of approval.

OPTIONS
- Vote in favor or not in favor of approving the consent agenda.
- Request that this item be removed from the consent agenda for discussion.

RECOMMENDATION
- The grant subcommittee recommends approval of this grant application.

MOTION
- Motion to approve the Member Jurisdiction grant application for $30,000 from KCD-Tukwila Member Jurisdiction 2017-20 funds for the City of Tukwila Green Tukwila Implementation 2020-21 project
Green Tukwila Implementation 2020-2021

Member Jurisdiction Grant Program

Tukwila

6200 Southcenter Blvd
Tukwila, WA 98188

Stephanie Gardner-Brown

6200 Southcenter Blvd
TUKWILA, WA 98188

Stephanie.Gardner@TukwilaWA.gov
0: 206-767-2342
Application Form

Summary Information

Project Title*
Green Tukwila Implementation 2020-2021

Project Description - Short*
Provide a short, concise description of the project no more than two or three sentences.
Building upon the Green Tukwila program by growing expanding stewardship opportunities, increasing education and outreach initiatives, implementing pilot park improvement project, and continuing to build capacity within Tukwila.

Principal Partners (if any)

Amount of KCD Funding Requested*
You will need to upload a detailed budget document before you submit your application. Please make sure the amount requested and total project cost amounts you list here match the amounts in the uploaded budget document.
$30,000.00

Total Project Cost*
$147,500.00

Total Matching Funds (optional)
$117,500.00

Project Start Date*
04/01/2020

Project End Date*
12/31/2021
Close Date

Project Location*
Address, Parcel #, OR L&L Points, for site specific projects only.
If more than two locations, state “multiple” and explain.

  Multiple sites:
  Two sites will be added in 2020/2021 and bring the total number of Green Tukwila sites up to five. The 
two additional sites are:

  - Duwamish Hill Preserve: 3800 S. 115th St., Tukwila, WA
  - Tukwila Pond: 299 Strander Blvd., Tukwila, WA

Jurisdiction*
If the applicant is not a city or jurisdiction, please type in the city or jurisdiction this project is located in.

  Tukwila

Is your project on public or private land?*

  Public

State Legislative District #**
Click here to find it on the web. If your project resides in more than one district, type in the primary district or type in zero.

  11

King County District #**
Click here to find it on the web. If your project resides in more than one district, type in the primary district or type in zero.

  8

Narratives, Budget, & Attachments

Project Description - Detailed*
Provide a description of the project that summarizes what you will do, how you will do it, and why you will do it. Describe target audience, outcomes, objectives and general timelines.

  In March 2017, the Tukwila City Council adopted a 20-year Stewardship Plan and the Green Tukwila Program (GTP) initiative soon followed. In 2018 and 2019, with support from KCD funding, staff initiated the first steps towards developing the Green Tukwila Program. Throughout the past two years, the program has
gained momentum, positive attention, and demonstrated the need for staff support. Tukwila Parks and Recreation had one staff member who has dedicated .5 FTE towards developing GTP and the work that was accomplished has been impressive: 2,024 volunteer hours, 134,128 square feet of invasive plants removed, and 847 native plants placed.

2020 has presented unique challenges however staff have continued work with stewards and have been developing education and outreach materials to sustain the work that has been accomplished. Work loads continue to be shifted to support GTP - one .75 FTE dedicates nearly 75% of their workload towards continued support and development of the program. The City desires to expand existing staff hours for the program and is requesting KCD funds to add an additional .25 FTE. Additional funding will allow increased focused development and program expansion over the next two years. In 2018/2019 one staff person dedicated 20 hours per week towards the program. In 2020/2021 the City is requesting the additional funding so this staff person can dedicate 30 hours per week towards GTP efforts. Additionally, existing city budget will be used to contract professional crew days, purchase small tools and equipment, and support events, outreach, and educational materials.

The allocation of staff time for this program will allow staff to further develop and expand the Green Tukwila Program. Outcomes and objectives for 2020-2021 are as follows:

- Adding two additional Green Tukwila Program sites, bringing the total to five sites: The two additional sites are Duwamish Hill Preserve and Tukwila Pond.
  - Duwamish Hill Preserve (DHP) has had a dedicated group of park neighbors performing ongoing stewardship and maintenance of the 10 acre preserve for several years. Formalizing DHP as a Green Tukwila site will create an opportunity for staff to seek a business partners that can support Friends of the Hill stewardship efforts. Work at DHP focuses on removing invasive plants, planting native plants, and weeding.
  - Tukwila Pond is a 25-acre park located in the middle of the Southcenter Urban District and is a hidden gem that has seen better days. Stewardship work will focus on restoration and invasive plant removal: English Ivy and Himalayan Blackberry. Staff are confident surrounding businesses will be interested in becoming stewards as there has been significant expressed interest in this park.

- Develop an Adopt-a-Spot program. Due to Covid-19 hosting traditional work parties are not feasible. Staff will develop opportunities for individuals, household groups, and small groups to adopt-a-spot. Activities will include invasive plant removal, weeding, and/or litter removal. Staff will work to connect participants with GTP site stewards or assign spots within parks and trails of future GTP sites. This program will contribute to the Green Tukwila volunteer database and when larger work parties are permitted again, Adopt-a-Spot participants will be linked to future opportunities.

- Events: Staff will conduct events in 2021 that will incorporate opportunities for education and capacity building. The Backyard Wildlife Festival, which has occurred for 19 years in Tukwila, will become an official Green Tukwila sanctioned event and will incorporate a stronger focus on native plants, native animals, and the habitats that they thrive in. Additionally, the annual Green Tukwila Day event will expand to include micro events at other Green Tukwila sites when group gatherings are permitted again. If group gatherings are not feasible, staff will work with partners to develop content and media that supports restoration and stewardship efforts throughout Tukwila.

The overarching goal is to continue to grow the Green Tukwila Program with an emphasis on restoring public green space through stewardship activities, education, and community building.

**Project Activities and Measurable Results**
List specific project activities to be completed with KCD grant funds and the associated outcomes or measurable results, and timeline.
1. Stewardship: Develop and strengthen partnerships with existing Green Tukwila Stewards and solicit new stewards to support two additional Green Tukwila sites. Staff will provide guidance, education, training, tools and equipment, and volunteers to complete onsite work.

2. Green Tukwila project sites: Staff will perform annual site assessments (working with input from site stewards) to develop work plans and site-specific goals. Annual work plans will guide staff and stewards to facilitate removal of invasive plants, native planting, and weeding and maintenance. As progress is made at each site observable physical changes will be made and celebrated.

3. Adopt-A-Spot Volunteer Program: In response to the Coronavirus pandemic and to limit group gatherings, staff will develop a pilot sub-program of Green Tukwila called the “Adopt-a-Spot” program. The program will provide opportunities for individuals, small groups, and household units to adopt a location within a Green Tukwila site, or future Green Tukwila site. Volunteers will work with staff and stewards to receive educational materials, trainings, equipment, and supplies. Activities will include invasive plant removal, weeding, and litter removal.

4. Education and Outreach: Staff will develop and distribute content and materials to support Green Tukwila education and outreach. Examples include producing “how to” videos that demonstrate proper removal and disposal of invasive shrubs, and how to identify, plant, and care for native plants. Videos will be posted within the City of Tukwila website and Tukwila Parks and Recreation social media. Other education and outreach examples include developing age appropriate activity sheets for preschool, grade school, family units, and older adults. Activity sheets may include scavenger hunts, word searches, and coloring sheets that demonstrate the importance of healthy forests, water, and communities. Sheets will be distributed through existing parks and recreation programs (including Green Tukwila activities), offered to local classroom teachers, and will be printable from the City website.

5. Host events: If permitted in 2021, Green Tukwila staff will host events such as Backyard Wildlife Festival and Green Tukwila Day(s). Staff will place a great emphasis on including partners that promote native habitats, stewardship, conservation, and healthy communities. If in-person events are not permitted, staff will work with partners to offer virtual options such as webinars, tours, and other activities.

6. Contract professional crew workdays for GTP sites to address technical and challenging work that cannot be completed by volunteers. Work will be coordinated with stewards each year and integrated into site work plans.

Project Budget and Expenses*
Fill out and upload separate Application Budget Form also available on the KCD Member Jurisdiction Grant Program website. Budget must be detailed with footnotes, appropriate and reasonable, meeting state auditor/GAAP guidelines. Please do not use forms from previous applications. Please only upload the form linked above. Thank you!

2020-KCD-Member-Jurisdiction-Grant-Program-Application-Budget-Form.xls.pdf

Member Jurisdiction Authorization Letter
If you are a nonprofit organization seeking Member Jurisdiction funding, you must upload written authorization from the Member Jurisdiction to apply for funding. This can be in the form of a letter or scanned copy of an email.

Additional Attachments
Upload any photos or maps of your project here. Only one file will be accepted. Please combine multiple files into one if possible.

GTP Implementation 2020 & 2021.pdf
Natural Resource Improvement Actions - Criteria Checklist

Please only select "yes" below the action that your project directly addresses

Direct Improvement of Natural Resource Conditions*
To improve landscape and natural resource conditions as a result of direct action that enhances water quality, protects and conserves soils, implements ecosystem restoration and preservation projects (examples include supporting private property owners with land stewardship, water quality, aquatic and wildlife habitat resources, removal of invasive weeds, stewardship on public land)

Does your project directly address this issue?
Yes

Education and Outreach*
To raise awareness, deepen knowledge, and change behaviors of residents, landowners, and other land managers and organizations to practice exemplary stewardship of natural resources (examples include education about stormwater management; the value of farmland, local farms and food systems, shorelines, salmon habitat, forests and other ecosystems)

Does your project directly address this issue?
Yes

Pilot and Demonstration Projects*
To test and/or improve concepts and/or approaches in natural resource management that can be replicated by others (examples include law impact development or green infrastructure demonstration projects, development of new best management practices, distribution of local farm products, urban agriculture (e.g. farmers markets and backyard food production to promote or support social economic independence and healthy living); technological innovation for natural resource conservation)

Does your project directly address this issue?
Yes

Capacity Building*
To enhance the ability of organizations, agencies, residential landowners and other land owners and managers to have knowledge, skills, tools, support systems and technical resources to implement exemplary best management practices and deliver natural resource management actions on the ground (examples include urban agriculture development, assistance to and inclusion of private property owners, preservation, restoration, and/or expansion of urban and/or rural agricultural lands, rural and urban forest lands, riparian restoration and stewardship on private and public lands)
Does your project directly address this issue?
Yes

**Project Type**
- Education
- Forestry, Urban
- Shorelines, Urban

---

**KCD Acknowledgement and Signature**
By signing below, the applicant agrees to acknowledge King Conservation District funding by placing the KCD-provided logo on signs, materials, and documents produced as part of the above proposal. In addition, the applicant will notify KCD of public events and activities funded by the KCD.

* I have read the above paragraph about acknowledging KCD and I will use the provided logo.

**Authorized Applicant Electronic Signature**
Please enter your full name to sign and agree to the above.
Stephanie Gardner-Brown

**Title**
Parks and Recreation Management Analyst

**Date**
07/13/2020
File Attachment Summary

Applicant File Uploads
- 2020-KCD-Member-Jurisdiction-Grant-Program-Application-Budget-Form.xls.pdf
- GTP Implementation 2020 & 2021.pdf
# Member Jurisdiction Grant Program

**Grant Application Project Budget Form**

Promoting sustainable uses of natural resources through responsible stewardship

<table>
<thead>
<tr>
<th>Project Name</th>
<th>Green Tukwila Program Implementation and Expansion</th>
</tr>
</thead>
<tbody>
<tr>
<td>Applicant</td>
<td>City of Tukwila - Parks and Recreation Department</td>
</tr>
<tr>
<td>Contact</td>
<td>Stephanie Gardner-Brown</td>
</tr>
<tr>
<td>Mailing Address</td>
<td>12424 42nd Ave. S., Tukwila, WA 98203</td>
</tr>
<tr>
<td>E-mail</td>
<td><a href="mailto:Stephanie.gardner@TukwilaWa.gov">Stephanie.gardner@TukwilaWa.gov</a></td>
</tr>
<tr>
<td>Phone</td>
<td>Office: 206-767-2342 / Project Start Date: 4/1/2020</td>
</tr>
<tr>
<td></td>
<td>Project End Date: 12/31/2021</td>
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Please provide detailed budget information below. Itemize categories such as supplies, contracted services with footnotes and detailed descriptions below.

<table>
<thead>
<tr>
<th>Budget Item</th>
<th>KCD Funds</th>
<th>Other Funds</th>
<th>Other Funds</th>
<th>Total</th>
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</thead>
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<td>$100,000</td>
<td>City of Tukwila</td>
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<td>$0</td>
<td>$0</td>
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<td>Field Supplies</td>
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<td>Contracted/ Professional Services</td>
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<td>Permits</td>
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<td>Other: (specify)</td>
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<tr>
<td>Other: (specify)</td>
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<td>$0</td>
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<tr>
<td>Other: (specify)</td>
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<td>Other: (specify)</td>
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<td>TOTAL</td>
<td>$30,000</td>
<td>$117,500</td>
<td>$0</td>
<td>$147,500</td>
</tr>
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</table>

| Total Project Cost                  | $147,500  |
| Total Match                          | $117,500  |
| Amount of KCD Funding Requested      | $30,000   |
The 2017 20-Year Green Tukwila Stewardship Plan estimated project expenses for 2020 at $113,161 and 2021 at $127,639 totaling $240,800. Tukwila Parks and Recreation will not be able to implement the project at this level however is committed to continuing to the grow the program. To do this staff workloads have been modified again for 2020/2021. This is reflected above in the City of Tukwila column. Under salaries and benefits, part of this includes reallocating .5 FTE of an existing .75 FTE staff member to this project (note: .25 of this position was dedicated in 2018-2019 and with KCD funds the position was able to dedicate .5 FTE towards Initial Green Tukwila development and implementation). In 2020/2021 Tukwila will increase staff time to .5 FTE and desires to add .25 FTE to continue to grow the Green Tukwila program. This funding request is for funds to support the increase in staff time (benefits and salaries).
Green Tukwila Implementation – 2020 & 2021
Tukwila Parks & Recreation

Contents

Green Tukwila Program – Project Estimate........................................... Pg. 2
Map: All Identified Green Tukwila Sites (future and current) .....................Pg. 3
Map: Duwamish Hill Preserve: New Green Tukwila Site for 2020...............Pg.4
Map: Tukwila Pond: New Green Tukwila Site for 2021............................Pg. 5
2018-2019 Green Tukwila Program Review.............................................Pg. 6
### Suggested Project Budget from 20-Year Stewardship Plan

Green Tukwila Partnership projections of program costs and volunteer match value for figure 14 on page 52 of the draft 20-Year Plan

<table>
<thead>
<tr>
<th>Year</th>
<th>Estimated number of NEW acres to enroll each year</th>
<th>Total Estimated Program and Field Costs</th>
<th>Volunteer Match Value ($28.99 as of 2017)</th>
<th>Estimated number of volunteer hours each year</th>
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<td>$110,162</td>
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<td><strong>$1,985,315</strong></td>
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Overall cost to maintain all 87 acres and a smaller volunteer program beyond the 20 years is estimated at **$75,000** to $80,000/year.
APPENDIX A. MAPS OF TREE-AGE CATEGORIES PER SITE: OVERVIEW AND INDIVIDUAL SITE MAPS

Key to Individual Site Maps

<table>
<thead>
<tr>
<th>Site Name</th>
<th>Map Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Duwamish Gardens</td>
<td>1</td>
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<tr>
<td>Duwamish Hill Preserve</td>
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<tr>
<td>Duwamish Park</td>
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<tr>
<td>Duwamish Restoration</td>
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<tr>
<td>Challenge</td>
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<td>Fort Dent Business Loop</td>
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<td>Fort Dent Park</td>
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<tr>
<td>Foster Fire Station</td>
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<tr>
<td>Foster Golf Links</td>
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<tr>
<td>Foster High School &amp; Showalter School</td>
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<tr>
<td>Showalter Middle School</td>
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<tr>
<td>Fort Memorial Park</td>
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<tr>
<td>Foster Point Leachute Park</td>
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<td>Gilman Creek Detention Pond</td>
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<tr>
<td>Green River 1st Interurban Trail</td>
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<td>Hazelnut Park &amp; Fire Station 32</td>
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<td>Interurban Hill Site</td>
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<td>Leachute Park</td>
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<td>Macadam Rd. S. Site</td>
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<td>Macadam Wetlands &amp; Winter Garden</td>
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<td>Nelson Site</td>
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<td>North Wind's Way</td>
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<td>P-17 Pond</td>
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<td>Pamela Drive Site</td>
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<td>Riverton Mini Park</td>
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<td>Riverton Park</td>
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<tr>
<td>S. 15th St. Riverbank</td>
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<tr>
<td>S. 125th St. Site</td>
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<tr>
<td>S. 140th St. ROW &amp; Riverbank Parcels</td>
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<tr>
<td>S. 152nd ROW</td>
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<tr>
<td>Duwamish Hill</td>
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<tr>
<td>Ryan Creek</td>
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<tr>
<td>Ryan Hill</td>
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<tr>
<td>Stecandi Site</td>
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<tr>
<td>Southgate Park</td>
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<td>Seward Park</td>
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<tr>
<td>Thunderbird Elementary</td>
<td>7</td>
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<tr>
<td>TIB &amp; S. 130th St.</td>
<td>7</td>
</tr>
</tbody>
</table>

Key to Individual Site Maps

<table>
<thead>
<tr>
<th>Site Name</th>
<th>Map Number</th>
</tr>
</thead>
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<td>Crystal Springs Park</td>
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map created by FORTELLA in partnership with the City of Tukwila.
King Conservation District / City of Tukwila – 2018 - 2019 Funding Utilization

Overview

The native landscape in Tukwila is as much a part of the city as the sidewalks, building and roads. Like the built infrastructure, urban forests need maintenance and care. The Green Tukwila Partnership has become the pipeline for volunteers and partner organizations to care for these precious spaces. Volunteers removed invasive plants like English ivy, Himalayan blackberry, bindweed and holly and replaced them with native shrubs like Sword ferns, Nootka roses, Sala, Hookers willow, Red Flowering Currant and Evergreen Huckleberry to name a few. The impact is not only the landscape but is on the people who come out. Over the past two years the program has been educating people about native ecosystems, tools and how to safely use them, native wildlife, history of the sites, watersheds, and how we are all connected.

Throughout 2018 and 2019 Tukwila Parks and Recreation utilized King Conservation District funding to improve natural resource conditions, provide education and outreach, and pilot the Green Tukwila Program at three sites throughout Tukwila. Those sites, as well as accomplishments at each site, are as follows:

**Tukwila Park:** Located at 15460 65th Ave. South. Tukwila Park was established in 1934, initial park development was performed by the Works Project Association during the Great Depression. Throughout the years English Ivy, Himalayan blackberry and other invasive plants have taken over the park. In 2018 volunteers started to clear out invasive plants and replace with native plants such as sword ferns, salal, and winter huckleberry. While removing invasive plants original trails and stonework were discovered in the park, as well as snakes, banana slugs, and other native animals. In addition to volunteers, the City contracted with the Student Conservation Corp to further restoration efforts. Students learned about restoration and the importance of native plants throughout their two-week experience at the park. Tukwila Park was the site of the MLK Day of Service, second annual Green Tukwila Day and annual Day of Caring in 2018. Each event hosted several volunteers in a festive atmosphere that included an education component, food, and roving music. A total of 180 volunteers contributed 492 hours of work at Tukwila Park.

In 2019 Tukwila Park hosted the 3rd Annual Green Tukwila Day, the annual Day of Caring, and two private business work parties. These work parties had a focus on connecting people to nature and building community. Most of the volunteers were new to restoration and had tons of questions. The events hosted 109 volunteers that put in 330 hours at the park. Tukwila Park is covered in a thick blanket of established English Ivy, volunteers cleared and micro weeded 16,200 square feet, completed 22 tree survival rings and planted 110 native plants. They also mulched 11,000 square feet around young native plants.

**Crystal Springs Park:** Located 15832 51st Ave. S., Crystal Springs Park protects and preserves a natural spring that was used by Native Americans and early pioneers in region. The 11-acre park was originally developed in 1984, after nearly 25 years Laurel and English Ivy have invaded the park. The City partnered with Forterra and McKinstry Corporation to begin restoration work in mid-2018. McKinstry selected Crystal Springs Park to give back to the community while creating team building opportunities for their staff. 114 volunteers dedicated 291 hours in the park. Volunteers learned about invasive plants, including how to properly remove and re-plant with native plants. Additionally, professional crews worked over a period of four days to inject invasive Laurel.
McKinstry Construction has become Tukwila’s first business to officially steward a site and they continued their work through 2019. They held a handful of work parties that were also open to the public, and park neighbors have started participating in the work. Crystal Springs had 137 volunteers that put in 278 hours in 2019 and they cleared 49,000 square feet of invasive plants and planted 300 native trees, plants and shrubs.

**S. 128th St. Parcel:** Located on the corner of S. 128th St. and 37th Ave S., this parcel is one of Tukwila’s newest open space locations. The site was officially named through the City Council process in late 2019 – “Cottonwood Corner.” When acquired in 2017, the parcel was inaccessible due blackberry overgrowth and knotweed invasion. Now, thanks to Heidi Waters (volunteer forest steward) and her Homeschool Stewardship Squad the park is turning into an easily accessible nature playground for neighborhood children. Heidi Waters created a site restoration plan with support from Parks and Recreation Staff and the Tukwila Parks Commission.

Throughout 2018, 104 volunteers dedicated 306 hours to the site. The City contracted with professional work crews to inject invasive knotweed in 2018 and 2019,

In 2019, 116 volunteers completed 327 hours of service on the site. The volunteers cleared 2,000 square feet of dense Himalayan blackberry, bindweed, and some ivy. Two of the work parties had a focus on planting, by the end of the year the volunteers had planted 247 native plants on the site. Riverton creek flows through the site and one of the highlights was finding a dragonfly larva in the creek and talking about how the work we are doing today supports life in the future.

The following table demonstrates the accomplishments and impact of the Green Tukwila Program throughout the past two years.

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Report Total 680,048.38
UNFINISHED BUSINESS
SUBJECT:
A motion to approve an Addendum to the Agreement for Performance of Conservation Services between King Conservation District and the City of Snoqualmie in the amount of $7,600 and Authorization of the Board Chair to sign the Addendum.

FISCAL IMPACT
The Addendum will fund a project implemented in partnership with City of Snoqualmie using a portion of the balance available in the City of Snoqualmie Member Jurisdiction Fund. The current balance of Snoqualmie Member Jurisdiction Fund is summarized in the following table:

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POLICY CONSIDERATION
The original Agreement for Performance of Conservation Services was reviewed and signed by Executive Director Covington in May 2020. This proposed Addendum has been developed in collaboration with Director of Strategic & Interagency Partnerships, City of Snoqualmie staff and City of Snoqualmie Mayor.

STAKEHOLDER INTERESTS
- City of Snoqualmie
- Urban Forest Initiative Working Group that worked with KCD Urban Forest Stewardship to identify and prioritize the project in partnership with the City
- Residents and landowners within the boundary of the City
- King CD Board members and staff

BACKGROUND
Member Jurisdiction Information
Snoqualmie is a small city (population 13,190, 2016 census), with a public urban forest resource comparable to that of much larger cities. Snoqualmie is unique, because the city owns 71% of the total urban forest canopy, whereas most municipalities own on average 15-30% of the urban forest. With over 9,550 street and park trees, and 1205 acres of forestland in public ownership, the City has the challenge of maintaining and improving significant urban forest assets. Snoqualmie has rapidly developed an urban forest program since 2010 and is engaged in the struggle to adequately maintain its resources to provide maximum environmental and social benefits to its residents.

Collaboration with KCD UFS Program
From 2015-2017, the City of Snoqualmie partnered with KCD’s Urban Forest Health Management Program to create an on-the-ground forest stewardship program: The Green Snoqualmie Partnership.

The program had a successful launch with KCD’s help in October 2016, engaging 670 citizens for 1,696 hours of volunteer restoration work, resulting in the restoration of 6.2 acres of forestland between October 2016-December 2017.

AI 20-0
King Conservation District Board of Supervisors Meeting
Agenda Action Briefing/Report
Meeting Date: August 10th, 2020

In 2018, after KCD’s technical assistance to initiate this program ended, the City took full leadership in this program, engaging 470 citizens for 1363 volunteer hours, resulting in the restoration of 18.5 acres (which exceeded the stewardship plan’s goals by 8.5 acres). In 2019, the Green Snoqualmie Partnership continued to grow, with 27 volunteer restoration events. With this success, the City has a challenge to adequately fund and staff this growing program, so it can meet its potential and restore all 1205 acres of Snoqualmie’s forestland over the next 16 years.

As a result of the work of KCD UFS in concert with the K4C-KCD Sustaining Urban Forests Working Group in 2015, Snoqualmie updated its Storm water utility ordinance (Chapter 13.10) including the use of storm water fees to fund urban forestry within the City. This combined with an upcoming utility rates study beginning in late 2019 position the City to fund its urban forestry program for the first time from SSWM fees. The final missing piece to make this new funding request is the quantified storm water benefit that Snoqualmie’s urban forest provides.

At the end of 2019 the City of Snoqualmie partnered with King Conservation District’s Urban Forest Stewardship Program to assess the storm water benefit and other forest ecosystem services values provided by the public portion of Snoqualmie’s urban forest. This technical assessment will be used to support a new funding mechanism from Surface and Storm water Management Fees (SSWM), which will support the growth of the Green Snoqualmie Partnership, an on-the-ground forest stewardship program, as well as other elements of Snoqualmie’s urban forest program. KCD has contracted with the environmental consulting firm The Keystone Concept (TKC) to complete the analysis and assessment of the storm water benefit and other forest ecosystem services values provided by the public portion of Snoqualmie’s urban forest. A portion of the work performed in association with the full scope of work for the Project is funded with the City of Snoqualmie Member Jurisdiction Fund, and KCD R&C allocated for projects in partnership with the City are approved for use on the Project by the Agreement for Performance of Conservation Services.

Addendum to Conservation Services Agreement and Consulting Services Contract
The City of Snoqualmie has identified the need to complete three additional case studies within the city’s boundaries that will assess the impact of different types of urban forest natural infrastructure. Funding for this amended scope of work is KCD R&C allocated for projects in partnership with the City. The amount of additional funding to be accessed through the City of Snoqualmie Member Jurisdiction Fund is $7,600.

Note: With approval and execution of the Addendum to the Agreement for Performance of Conservation Services, KCD FS staff will amend the consulting services contract with The Keystone Concept to complete the additional Project case studies.

EFFECTIVE DATE
If approved by the Board of Supervisors, Addendum to the Agreement for Performance of Conservation Services will become effective upon signature by Board representative or Board designated signatory.

OPITIONS
1) No Board Action

AI 20-0
2) Approval and Signature of proposed Addendum to the Agreement for Performance of Conservation Services between King Conservation District and the City of Snoqualmie.

RECOMMENDATION
Staff recommends Board approval of proposed Addendum to the Agreement for Performance of Conservation Services between King Conservation District and the City of Snoqualmie in the amount of $7,600 for an increased scope of work associated with the 2019 Snoqualmie Urban Forest Stewardship Project,

MOTION
----- Moved, ----- Seconded; Passed unanimously a motion to approve the proposed Addendum to the Agreement for Performance of Conservation Services in the amount of $7,600 for the 2019 Snoqualmie Urban Forest Stewardship Project, and authorize the Board Chair to sign the Addendum.
ADDENDUM TO AGREEMENT FOR PERFORMANCE
OF CONSERVATION SERVICES

This Addendum to Agreement ("Addendum") is made between the King Conservation District Number 9, a municipal corporation in King County, Washington, located at 800 SW 39th Street Suite 150 Renton Washington 98057 (referred to herein as "District"), and the City of Snoqualmie, a municipal corporation in King County, Washington, located at 38624 SE River Street, Snoqualmie WA 98065 (referred to herein as "City"), for the purposes set forth herein.

The purpose of the Addendum is to amend the Agreement for Performance of Conservation Services dated May 5, 2020. The Addendum increases the scope of work and associated budget for the KCD urban forest stewardship project titled Quantifying Stormwater Benefit of Publicly Managed Forests (Project). The amended scope of work includes preparing three natural infrastructure assessment case studies. The details associated with the amended Project scope of work included in the Exhibit to this Addendum. The cost associated with the amended Project scope of work is $7,600. The source of funding for the additional Project cost is King Conservation District Rates & Charges collections set aside for projects in partnership with the City. The additional Project costs increase the allocation of King Conservation District Rates & Charges collections from $3,750 to $11,350. KCD Urban Forest Stewardship Program Funds applied to the Project remain the same at $4,500. The amended Agreement total is $15,850.

The final costs of the project may vary depending on the actual cost of the services provided. The District shall not be required to provide labor and materials above the approved Project Costs. The parties agree that the Project Costs will be funded through a credit against the City's allocation from the King Conservation District Special Assessment and Rates & Charges collections set aside for projects in partnership with the City, which shall not exceed $11,350 without the advance written approval of the City. The District will keep the City informed about the actual Project costs, and the District will coordinate with the City to further amend the Agreement to document any additional increases in Project cost.

All other terms and conditions of the original Agreement shall remain unchanged and in full force and effect.

CITY

KING CONSERVATION DISTRICT

By ________________________________  By ________________________________

Date: ______________________________ Date: ______________________________

Agreement for Performance of Conservation Services Addendum
EXHIBIT

ADDENDUM SCOPE OF WORK

The King Conservation District (District) Urban Forest Stewardship Program is funding and implementing the urban forest stewardship project titled *Quantifying Stormwater Benefit of Publicly Managed Forests* in partnership with the City of Snoqualmie. The purpose of the Project is to quantify the stormwater benefits of forest and open space areas managed by the City to substantiate use of stormwater utility fees for programmatic-based green infrastructure investments. In addition to the original scope of work for the Project, the District will prepare three case studies assessing the impact of City forested natural infrastructure. The costs of the additional case studies will be funded using King Conservation District Rates & Charges collections set aside for projects in partnership with the City.

**Case Study #1 City Street Trees**

A case study will be completed which highlights the stormwater retention and water quality impact of city owned street trees within the right-of-way. Case study will be provided as a 1-2 page graphically designed report incorporated into the existing City of Snoqualmie Natural Infrastructure Assessment Report and as a stand-alone PDF.

**Case Study #2 Retained City Forestland within Snoqualmie Ridge development**

A case study will be completed which highlights the stormwater retention and water quality impact of retained city forestland within Snoqualmie Ridge development. Case study will be provided as a 1-2 page graphically designed report incorporated into the existing City of Snoqualmie Natural Infrastructure Assessment Report and as a stand-alone PDF.

**Case Study #3 Retained City Forestland within Snoqualmie valley**

A case study will be completed which highlights the stormwater retention and water quality impact of retained city forestland within Snoqualmie valley. Case study will be provided as a 1-2 page graphically designed report incorporated into the existing City of Snoqualmie Natural Infrastructure Assessment Report and as a stand-alone PDF.

**ESTIMATED COSTS FOR AMENDED SCOPE OF WORK**

Costs associated with the amended Project scope of work include contracted professional services to complete necessary data analysis, reports and presentation of results.

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Item 1. Case Study #1</td>
<td>$2,000.00</td>
<td></td>
</tr>
<tr>
<td>Item 2. Case Study #1</td>
<td>$2,800.00</td>
<td></td>
</tr>
<tr>
<td>Item 3. Case Study #1</td>
<td>$2,800.00</td>
<td></td>
</tr>
<tr>
<td>TOTAL</td>
<td>$7,600.00</td>
<td></td>
</tr>
</tbody>
</table>
AGREEMENT FOR PERFORMANCE
OF CONSERVATION SERVICES

This Agreement is made between the King Conservation District Number 9, a municipal
corporation in King County, Washington, located at 800 SW 39th Street Suite 150 Renton
Washington 98057 (referred to herein as “District”), and the City of Snoqualmie, a municipal
corporation in King County, Washington, located at 38624 SE River Street, Snoqualmie WA
98065 (referred to herein as “City”), for the purposes set forth herein.

SECTION 1. RECITALS

1.1 Whereas, the District is a special purpose district organized and existing under
authority of Chapter 89.08 RCW, which engages in certain activities and programs to conserve
natural resources, including soil and water, which activities are declared to protect and promote
the health, safety, and general welfare of the people of the state of Washington; and

1.2 Whereas, pursuant to RCW 89.08.400 and RCW 89.08.405, King County has
authorized and imposed a system of assessments and/or a system of rates and charges to finance
the activities and programs of the District; and

1.3 Whereas, pursuant to RCW 89.08.220 and RCW 89.08.341, the District is
authorized to enter into agreements with, or to furnish financial or other aid to, municipal entities
and agencies (governmental or otherwise), or their designees, or any occupier of lands within the
District, in order to carry out and facilitate the activities and programs of the District to conserve
natural resources; and

1.4 Whereas, the District and City desire to enter into this Agreement for the purpose
of the performance of the conservation projects described in ATTACHMENT A which will be
funded by a portion of conservation assessment funds and/or rates and charges funds collected
for the District as described in ATTACHMENT B.

SECTION 2. AGREEMENT

2.1 The District agrees to provide the labor and materials necessary in connection
with the conservation projects described in ATTACHMENT A in the amount identified in
ATTACHMENT B and referred to as the “Project Cost.” The District shall not be required to
provide labor and materials above the approved Project Costs.

2.2 The District agrees to allocate a portion of the assessment / rates and charges
funds received by the District in the amount identified in ATTACHMENT B toward payment of
the Project Cost.

2.3 The City agrees to provide payment to the District within thirty (30) days of
project completion in the amount identified in ATTACHMENT B and referred to therein as the
“Cash Match”.

Page 1 of 3
SECTION 3. GENERAL PROVISIONS

3.1 The District shall not by virtue of this Agreement acquire any proprietary or governmental interest in the projects described in ATTACHMENT A.

3.2 This Agreement shall be binding upon and inure to the benefit of the parties hereto and their respective successors and assigns.

3.3 This Agreement constitutes the entire agreement between the parties with respect to the subject matter hereof and may be modified only by an agreement in writing signed by both parties. The parties contemplate that this Agreement may from time to time be modified by written amendment which shall be executed by duly authorized representatives of the parties and attached to this Agreement.

3.4 Each party warrants and represents that such party has full and complete authority to enter into this Agreement and each person executing this Agreement on behalf of a party warrants and represents that he/she has been fully authorized to execute this Agreement on behalf of such party and that such party is bound by the signature of such representative.

3.5 This Agreement shall be effective for the period April 28th, 2020 through December 31, 2020. This Agreement shall remain in effect as noted unless terminated by either party by giving thirty (30) days prior written notice to the other party.

DISTRICT:

By Bea Covington
Name Bea Covington
Title Executive Director
Date 5/5/2020

CITY:

By Matthew R. Larson
Name Matthew R. Larson
Title Mayor
Date 5/5/2020

DISTRICT LEGAL COUNSEL:

By
Name
Title
Date

CITY ATTORNEY:

By By (approved remotely)
Name Bob C. Sterbank
Title City Attorney
Date 4/22/2020
SUBJECT:
A motion to approve an Addendum to the Consultant Services Contract between King Conservation District and The Keystone Concept, LLC in the amount of $7,600 and Authorization of the Board Chair to sign the Addendum.

FISCAL IMPACT
The Contract Addendum will fund a project implemented in partnership with City of Snoqualmie using a portion of the balance available in the City of Snoqualmie Member Jurisdiction Fund. The current balance of Snoqualmie Member Jurisdiction Fund is summarized in the following table:

<table>
<thead>
<tr>
<th>Current Balance</th>
<th>$38,337.62</th>
</tr>
</thead>
<tbody>
<tr>
<td>Amended Contract Scope of Work</td>
<td>$7,600.00</td>
</tr>
<tr>
<td>Balance Remaining</td>
<td>$30,737.62</td>
</tr>
</tbody>
</table>

POLICY CONSIDERATION
The original Consultant Services Contract was reviewed and signed by Executive Director Covington in January 2020. This proposed Contract Addendum has been developed in collaboration with Director of Strategic & Interagency Partnerships, City of Snoqualmie staff and The Keystone Concept, LLC’s principal.

STAKEHOLDER INTERESTS
- City of Snoqualmie
- Urban Forest Initiative Working Group that worked with KCD Urban Forest Stewardship to identify and prioritize the project in partnership with the City
- Residents and landowners within the boundary of the City
- King CD Board members and staff

BACKGROUND
Current Contract and Project Results
KCD has contracted with the environmental consulting firm The Keystone Concept (TKC) to complete the analysis and assessment of the storm water benefit and other forest ecosystem services values provided by the public portion of Snoqualmie’s urban forest. A portion of the work performed in association with the full scope of work for the Project is funded with the City of Snoqualmie Member Jurisdiction Fund, and KCD R&C allocated for projects in partnership with the City are approved for use on the Project by an Agreement for Performance of Conservation Services.

In June of 2020 The Keystone Concept completed an assessment of the storm water benefit and other forest ecosystem services values provided by the public portion of Snoqualmie’s urban forest. The results of this assessment were presented in a report titled City of Snoqualmie, Natural Infrastructure Assessment, 2020. This report is attached.

Addendum to Consulting Services Contract
The City of Snoqualmie has identified the need to complete three additional case studies within the city’s boundaries that will assess the impact of different types of urban forest natural infrastructure. Funding
King Conservation District Board of Supervisors Meeting
Agenda Action Briefing/Report
Meeting Date: August 10th, 2020

for this amended scope of work is provided by KCD R&C allocated for projects in partnership with the City through a conservation services agreement between KCD and the City of Snoqualmie. The amount of additional funding to be accessed through the City of Snoqualmie Member Jurisdiction Fund is $7,600.

EFFECTIVE DATE
If approved by the Board of Supervisors, Addendum to the Consulting Services Contract will become effective upon signature by Board representative or Board designated signatory.

OPINIONS

1) No Board Action

2) Approval and Signature of proposed Addendum to the Consulting Services Contract between King Conservation District and The Keystone Concept, LLC.

RECOMMENDATION
Staff recommends Board approval of proposed Addendum to the Consulting Services Contract between King Conservation District and The Keystone Concept, LLC in the amount of $7,600 for an increased scope of work associated with the 2019 Snoqualmie Urban Forest Stewardship Project.

MOTION

_______ Moved, ________ Seconded; Passed unanimously a motion to approve the proposed Addendum to the Consulting Services Contract in the amount of $7,600 for the 2019 Snoqualmie Urban Forest Stewardship Project, and authorize the Board Chair to sign the Addendum.
Amended Scope Work –

The District’s contract with Consultant for the urban forest stewardship project titled Quantifying Stormwater Benefit of Publicly Managed Forests is amended to complete the additional project tasks described below:

A. Task 1 – Complete an assessment case study which highlights the stormwater retention and water quality impact of city owned street trees within the right-of-way. Case study will be provided as a 1-2 page graphically designed report incorporated into the existing City of Snoqualmie Natural Infrastructure Assessment Report and as a stand-alone PDF. (estimated service hours: 16 hours)

B. Task 2 - Complete an assessment case study which highlights the stormwater retention and water quality impact of retained city forestland within the Snoqualmie Ridge development. Case study will be provided as a 1-2 page graphically designed report incorporated into the existing City of Snoqualmie Natural Infrastructure Assessment Report and as a stand-alone PDF. (estimated service hours: 22.4 hours)

C. Task 3 - Complete an assessment case study case study which highlights the stormwater retention and water quality impact of retained city forestland within Snoqualmie valley. Case study will be provided as a 1-2 page graphically designed report incorporated into the existing City of Snoqualmie Natural Infrastructure Assessment Report and as a stand-alone PDF. (estimated service hours: 22.4 hours)

Billing/Rate Information –

A. The District shall compensate the Consultant in an amount additional to the original contract amount. The additional contract amount is detailed below.

B. The District shall compensate the Consultant for services performed as detailed under Amended Scope of Work or as otherwise mutually agreed to in writing by both parties. The Consultant will bill the District at $125.00 per hour, not to exceed the total cost of $7,600.00.

C. The Consultant agrees to submit approved billing invoices monthly to the District, along with progress reports identifying the nature of the services performed by date.

CONSULTANT

By ____________________________________________

Date: ____________________________________________

KING CONSERVATION DISTRICT

By ____________________________________________

Date: ____________________________________________
CONSULTANT SERVICES CONTRACT

THIS AGREEMENT is between the KING CONSERVATION DISTRICT, a municipal corporation of the State of Washington (the "District"), and The Keystone Concept, LLC (the "Consultant").

The parties agree as follows:

1. **Term of Agreement.** This Agreement shall be effective from and after 1/20/2020 through 12/31/2020, unless terminated earlier pursuant to the provisions of this Agreement.

2. **Scope of Work to be Performed.** The Consultant shall perform the work and services described in Exhibit A. If specified in Exhibit A, the work and services shall be performed pursuant to task orders issued by the District. In the event of a conflict between Exhibit A and this Agreement, the provisions of this Agreement shall prevail.

3. **Compensation and Payment.**

   A. **Compensation.** The District shall pay the Consultant for all completed work and services as provided in Exhibit A. The total amount paid under this Agreement shall not exceed $9,950.00 unless mutually agreed upon in writing by the parties.

   B. **Mileage and Travel.** The District shall not compensate for mileage and/or time spent in travel unless explicitly included in Exhibit A or otherwise approved by the District in writing in advance of such costs being incurred. If specified or approved, the District shall compensate Consultant for hours associated with travel at a rate not to exceed 50% of the Consultants established hourly rate, unless work is performed during said travel.

   Compensation rates for mileage, hotel and/or per diem shall not exceed rates established by the State of Washington and posted at:


   C. **Payment.** The Consultant shall submit to the District at the end of each month an itemized billing statement that identifies in detail, to the reasonable satisfaction of the District, the days and hours worked and which describes the work or services performed. The District will pay the Consultant for work or services performed on or before the 15th day of the following month within 30 days after receipt of an itemized billing statement, in accordance with established practices. The Consultant will provide the District with a Taxpayer Identification Number before or along with the first billing statement submitted to the District.

4. **Record Keeping and Reporting.** The Consultant shall maintain accounts and records, including personnel, property, financial and programmatic records, which sufficiently and properly reflect all direct and indirect costs of any nature expended and work or services
performed under this Agreement, and any other records or reports as may be deemed necessary by the District to ensure the performance of this Agreement. These records shall be maintained for a period of six (6) years after termination of this Agreement, unless permission to destroy such records is granted by the Office of Archivist in accordance with RCW 40.14.070 and the District.

5. **Audit.** The Consultant shall permit the District, from time to time as the District deems necessary (including after the expiration or termination of this Agreement), to inspect and audit at all reasonable times in King County, Washington, or at such other reasonable location as the District selects, all pertinent books and records of the Consultant to verify the accuracy of accounting records. The Consultant shall supply the District with, or shall permit the District to make, a copy of any books and records upon the District's request. The Consultant shall ensure that the inspection, audit and copying right of the District is a condition of any subcontract, agreement or other arrangement under which any other person or entity is permitted to perform work and services under this Agreement.

6. **Compliance with Law.**

   A. **General Requirement.** The Consultant, at the Consultant's sole cost and expense, shall perform and comply with all applicable Federal, State, County and City laws and ordinances.

   B. **Discrimination.** Consultant agrees not to discriminate against any employee or applicant for employment or any other person in the performance of this Agreement because of race, creed, color, national origin, marital status, sex, age, disability, or other circumstance prohibited by federal, state or local law or ordinance, except for a bona fide occupational qualification.

   C. **Licenses and Similar Authorizations.** The Consultant, at no expense to the District, shall secure and maintain in full force and effect during the term of this Agreement all required licenses, permits and similar legal authorizations.

   D. **Taxes.** The Consultant shall pay, before delinquency, all taxes, levies and assessments arising from the Consultant's activities and undertakings under this Agreement; taxes levied on the Consultant's property, equipment and improvements; and taxes on the Consultant's interest in this Agreement and any leasehold interest deemed to have been created by this Agreement under RCW Chapter 82.29A.

7. **Contractual Relationship.**

   A. **Independent Contractor.** The Consultant and District agree that the Consultant is an independent contractor with respect to work or services provided under this Agreement. Nothing in this Agreement shall be considered to create the relationship of employer and employee between the Consultant and the District. It is understood and agreed that the Consultant or any employee of the Consultant will not be entitled to receive any other benefits accorded District employees. The District will not be responsible for withholding or otherwise
deducting federal income tax, social security, or contributing to the State Industrial Insurance Program, or in any other way assuming the duties of an employer with respect to the Consultant or any employee of the Consultant.

B. **Lack of Authority.** This Agreement does not constitute the Consultant as the agent or legal representative of the District for any purpose. The Consultant is not granted any express or implied right or authority to assume or create any obligation or responsibility on behalf of or in the name of the District or to bind the District in any manner.

8. **No Subcontracting or Assignment.** The Consultant shall not subcontract or assign any portion of the work or services covered by this Agreement without the prior written approval of the District.

9. **Indemnification.**
   
   A. **By Consultant.** The Consultant shall protect, defend, indemnify and save harmless the District, its officers, employees, agents from any and all costs, claims, judgments or awards of damages, arising out of or in any way resulting from the negligent acts or omissions of Consultant, its officers, employees and agents in performing this Agreement.
   
   B. **By District.** The District shall protect, defend, indemnify and save harmless Consultant, its officers, employees and agents from any and all costs, claims, judgments or awards of damages arising out of or in any way resulting from the negligent acts or omissions of the District, its officers, employees or agents in performing this Agreement.

10. **Insurance.** The Consultant shall procure and maintain for the duration of this Agreement automobile and commercial general liability insurance in amounts which are acceptable to the District. Before commencing work and services under this Agreement, the Consultant shall provide to the person identified in Section 12 a Certificate of Insurance evidencing the insurance described above. The District reserves the right to request and receive a certified copy of all required insurance policies.

11. **Ownership of Documents.** Reports, studies, plans, drawings, maps, models, specification, computer files, videos, presentations and other work products produced by the Consultant, except for working notes and internal documents, shall be the property of the District. The Consultant shall furnish these documents to the District upon request. The Consultant shall refer all third-party requests for inspection and copying of these documents to the District which shall determine whether the documents shall be made available for inspection. Modification or re-use of any of these documents by the District for other than the intended purpose following completion of the work and services under this Agreement, without the written permission of the Consultant, shall be at the District's sole risk.

   A. Pursuant to performing the specified Services, Consultant will create certain instruments of service, which may take the form of printed, hard copy documents and electronic, computer-ready materials including but not limited to computer programs, software,
videos, presentations, and data. These instruments may also take the form of methodology, processes, and logic.

B. Materials, methodologies, processes, and logic will be delivered to District as part of the Specific Services rendered by Consultant, and District will acknowledge said materials as instruments of service. All instruments shall become the property of District upon completion of the respective Specific Service and payment in full of monies due Consultant for that service.

C. Consultant makes no warranties, expressed or implied, of the merchantability or fitness of said instruments for any particular purpose other than the pertinent scope of the Specified Services.

D. Consultant may retain reproducible copies of the its instruments of service (aka “documents” per District). If Consultant uses its instruments of service with other clients, Consultant must credit District.

12. **Addresses for Notices and Deliverable Materials.** All notices and other material to be delivered under this Agreement shall be in writing and shall be delivered or mailed to the following addresses:

   Michael Lasecki
   michael.lasecki@kingcd.org

   King Conservation District
   800 SW 39th St, Suite 150
   Renton, WA 98057

   or such other addresses as either party may, from time to time, designate in writing.

13. **Amendments.** No modification or amendment of this Agreement shall be effective unless in writing and signed by authorized representatives of the parties. The parties expressly reserve the right to modify this Agreement, from time to time, by mutual agreement.

14. **Binding Effect.** The provisions, covenants and conditions in this Agreement shall bind the parties, their legal heirs, representatives, successors and assigns.

15. **Applicable Law; Venue.** This Agreement shall be construed and interpreted in accordance with the laws of the State of Washington. The venue of any action brought under this Agreement shall be in the Superior Court for King County.

16. **Remedies Cumulative.** Rights under this Agreement are cumulative, and the failure to exercise a right on any occasion shall not operate to forfeit the right on another occasion. The use of one remedy shall not exclude or waive the right to use another.
17. **No Waiver.** No waiver of full performance by either party shall be construed, or operate, as a waiver of any subsequent default or breach of any of the terms, covenants or conditions of this Agreement. The payment of compensation to the Consultant shall not be deemed a waiver of any right or the acceptance of defective performance.

18. **Termination.**

A. **At Convenience of District.** The District may terminate this Agreement at any time upon 10 days written notice to the Consultant.

B. **For Cause.** Either party may terminate this Agreement where the other party fails to perform its obligations and the failure has not been corrected in a timely manner after notice of breach.

C. **For Reasons Beyond Control of Parties.** Either party may terminate this Agreement without recourse by the other party where performance is rendered impossible or impracticable for reasons beyond the party's reasonable control such as, but not limited to, acts of nature; war or warlike operations; civil commotion; riot; labor disputes including strike, walkout, or lockout; sabotage; or superior governmental regulation or control.

D. **Notice.** Notice of termination pursuant to Subsections B and C above shall be given by the party terminating this Agreement to the other not less than 30 days prior to the effective date of termination.

19. **Previous Agreements Superseded.** The terms and conditions of this Agreement supersede the terms, obligations and conditions of any existing or prior agreement between the parties regarding the subject matter of this Agreement.

20. **Entire Agreement.** This Agreement is all of the covenants, promises, agreements and conditions, either oral or written, between the parties.

**CONSULTANT:**

By: [Signature]
Title: [Title]
Date: 1/20/2020

**KING CONSERVATION DISTRICT:**

By: [Signature]
Title: [Title]
Date: 1/10/2020
Exhibit A

I. Scope of Services to be provided by the Contractor. The Contractor shall furnish services including, but not limited to the following:
   A. Assess the economic benefits for stormwater that the City of Snoqualmie's urban forest provides
      1. Use existing land cover data to build a tool that quantifies stormwater runoff for each land use type
      2. Calculate estimated economic benefits based on stormwater runoff value focused on avoided costs from flood risk, water quality reduction, and ecosystem service values associated with water retention
   B. Produce a graphic report of stormwater benefit value analysis assessment that provides the following. This report will be 10 pages or less and produced in a simple and graphic format to support presentations to City of Snoqualmie leadership and staff.
      1. Showcases the stormwater benefits of the urban forest
      2. A thorough and scientifically based methodology for measuring stormwater delivery and estimating the economic value of stormwater capture from the urban forest
      3. Educates city leadership on the benefits and opportunities that these values provide for supporting municipal programs

II. Scope of Services to be provided by the King Conservation District. The District shall furnish services and materials as follows:
   A. Access to planning documents, materials and other resources associated with project
   B. Support from the KCD Urban Forest Stewardship Program staff who will collaborate on implementation of project
   C. Facilitate communications between Consultant and city staff as needed
   D. Copying and printing as needed in association with development and production of assessment and graphic report

III. Billing / Rate Information. The Contractor shall be reimbursed as follows:
   A. The District shall compensate the Consultant for services performed as detailed below or as otherwise mutually agreed to in writing by both parties.
   B. The Consultant will bill the District at $100 per hour, not to exceed the total cost of $9,950.00.
   C. The Consultant agrees to submit approved billing invoices monthly to the District, along with progress reports identifying the nature of the services performed by date.
Contract Addendum

King Conservation District and The Keystone Concept, LLC (Consultant)
Snoqualmie Stormwater Value Analysis

Amended Scope Work

The District’s contract with Consultant for the project titled Snoqualmie Stormwater Value Analysis is amended to complete previously approved scope of work items and additional project tasks described below:

A. Task 1 - Prepare and deliver with city staff project partners a presentation to Snoqualmie City Council. (estimated service hours: 10 hours)

B. Task 2 - Complete an analysis of estimated amount of carbon stored in existing land cover types, as well as the amount sequestered over time. Analysis methods and results will be included in project’s final report. (estimated service hours: 12.5 hours).

C. Task 3 - Complete an analysis of the avoided costs of water quality treatment provided by the City’s natural infrastructure. Analysis will target the avoided treatment costs of stormwater that flows directly into the Snoqualmie River, focusing on reduction in inorganic chemicals, nitrates, and other water quality indicators.

- Phase 1 of water quality analysis will include documentation of the approach to valuation of water quality provided by City of Snoqualmie natural infrastructure, including a vetted final list of compounds filtered from surface water (estimated service hours: 22.5 hours).

- Phase 2 of water quality analysis will include a final presentation of Water Quality valuation methods included in the final report. This includes a final approved version of the report, including formatting. (estimated service hours: 37.5 hours).

Billing/Rate Information

A. The District shall compensate the Consultant in an amount additional to the original contract amount. The additional contract amount is detailed below.

B. The District shall compensate the Consultant for services performed as detailed under Amended Scope of Work or as otherwise mutually agreed to in writing by both parties. The Consultant will bill the District at $100.00 per hour, not to exceed the total cost of $8,250.00.

C. The Consultant agrees to submit approved billing invoices monthly to the District, along with progress reports identifying the nature of the services performed by date.

CONSULTANT

[Signature]
Date: 5/26/20

KING CONSERVATION DISTRICT

[Signature]
Date: 5/2/20
01. ACKNOWLEDGEMENTS
Project team and key contributors

02. EXECUTIVE SUMMARY
Valuing Snoqualmie's Natural Infrastructure
Natural Infrastructure in Economic Decision Making

05. INTRODUCTION:
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EXECUTIVE SUMMARY

VALUING SNOQUALMIE'S NATURAL INFRASTRUCTURE

The Snoqualmie Natural Infrastructure Assessment establishes the stormwater retention, water quality and climate stability values of Snoqualmie's urban forest. Using geographically referenced land cover and a proven Ecosystem Service Valuation method, this assessment analyzes the natural infrastructure benefits delivered by the City’s urban forest to the community at-large. Recommendations and resources are also provided. This assessment supports sustainable program development and improvements to the City’s overall environmental and human health.

Urban forests provide extensive infrastructure benefits, which are often unvalued. This Assessment provides data to inform land managers and City leadership on the value, effective management and funding for maintaining and enhancing the City’s urban forest resource. Assessment results focus on the substantial extent and value of Snoqualmie’s natural infrastructure:

1. Snoqualmie’s public forest resources encompass over 70% of the City’s total owned lands.
2. City forest resources provide ecosystem services that return benefits to the environment and health of the residents who live in and around Snoqualmie.
3. Three key ecosystem services are evaluated through this assessment. Results show that public forests in the City generate a range of approximately $5.8 million (M) to $7.3M in evaluated goods and services each year.

TOTAL ANNUAL VALUE OF ECOSYSTEM SERVICES PROVIDED BY THE CITY-OWNED PORTION OF SNOQUALMIE’S URBAN FOREST:

<table>
<thead>
<tr>
<th>Ecosystem Service</th>
<th>Low</th>
<th>High</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stormwater Retention</td>
<td>$5,760,484</td>
<td>$7,079,149</td>
</tr>
<tr>
<td>Carbon Sequestration</td>
<td>$45,820</td>
<td>$81,213</td>
</tr>
<tr>
<td>Water Quality</td>
<td>$57,472</td>
<td>$147,305</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>$5,863,776</strong></td>
<td><strong>$7,307,668</strong></td>
</tr>
</tbody>
</table>

+70% OF CITY OWNED LANDS ARE FOREST

$5.8M TO $7.3M

ANNUAL DOLLAR VALUE (IN MILLIONS) OF EVALUATED GOODS AND SERVICES GENERATED BY PUBLIC FORESTS
NATURAL INFRASTRUCTURE IN ECONOMIC DECISION MAKING

In addition to providing ecosystem service values for stormwater retention, water quality and climate stability, The Keystone Concept (TKC) team presents a suite of opportunities for the City of Snoqualmie to consider in managing and investing in their natural infrastructure.

IMMEDIATE OPPORTUNITY

Apply future stormwater fee funding to the City urban forestry program in a manner proportionate to the values established by this Natural Infrastructure Assessment and regional examples in the Herrera Environmental Consultants Technical Memorandum (Appendix F).

ADDITIONAL OPPORTUNITIES

These opportunities, listed in no priority, will take additional time, funding and staff resources to materialize:

- Explore City Forest Credits and King County Forest Credits carbon credit programs to fund tree planting and preservation projects (Appendix E Resources to Support Snoqualmie's Urban Forestry Program).
- Update current land cover and urban tree canopy GIS database in order to reflect land cover and land use changes that have occurred over the last 5 years.
- Evaluate additional Ecosystem Services provided by Snoqualmie's forest resources, including recreation and tourism among other services.
- Investigate King County Transfer of Development Rights (TDR) programs to enhance infrastructure preservation in high priority landscapes.
- Build a FEMA disaster declaration plan, based on Ecosystem Service Valuation, that captures ecosystem service values for any future city disaster declarations.
- Establish an Interlocal Watershed Investment District.

WHEN ACCOUNTING FOR ECOSYSTEM SERVICES VALUE
RESULTS SHOW THAT PUBLIC FORESTS IN THE CITY OF SNOQUALMIE GENERATE

$158M TO $195M OVER 50 YEARS
INTRODUCTION: VALUING SNOQUALMIE'S NATURAL INFRASTRUCTURE

In January 2020, the City of Snoqualmie partnered with King Conservation District (KCD) and The Keystone Concept team (The Keystone Concept (TKC), Ecosystem Sciences and Equilibrium Economics), collectively the Project Team, to assess the ecosystem services provided by Snoqualmie's urban forest.

The resulting Snoqualmie Natural Infrastructure Assessment (Assessment) is a comprehensive and proven urban forest valuation for stormwater retention, climate stability and water quality for all lands within the boundary of the city.

Members of TKC Team have collaborated on several urban forest assessments, ecosystem service valuations and stormwater modeling projects across the United States, including in the Western US and Pacific Northwest. Projects relevant to this assessment include: Puget Sound Urban Tree Canopy and Stormwater Management Technical Report; Colorado's South Platte Watershed Natural Capital Resource Assessment; and the Ada County, Idaho Subwatershed Plan – Americana and Main Street Subwatersheds. The collaborative approach of the TKC team, in concert with KCD and City of Snoqualmie, ensures the most current and proven scientific ecosystem service valuation approach to build this assessment, tools and recommendations to benefit the City of Snoqualmie's programs and natural resources for many years to come.

The Assessment is informed by data and recommendations identified as priorities in City policy and planning documents, including: Snoqualmie 2032, the city’s comprehensive plan (December 2014); and the Snoqualmie Urban Forest Strategic Plan (June 2014).

The Assessment was built in-partnership with KCD’s Urban Forestry Program, a replicable partnership leveraging local guidance and expertise yielding a high return on City investment. Assessment results can inform city policy decisions and potential new funding mechanisms that will reduce overall infrastructure costs and ultimately sustain the city's urban forestry program, the Green Snoqualmie Partnership, and quality of life in Snoqualmie.

Project Team

- The Keystone Concept
  - Project Management
- City of Snoqualmie
  - Technical Assistance
- King Conservation District
  - Technical Assistance
- Equilibrium Economics
- Ecosystem Sciences
  - GIS/Design/Modeling
What is Natural Infrastructure?

Natural infrastructure consists of the minerals, energy, plants, animals, and ecosystems found on Earth that provide a flow of natural goods and services. Ecosystems perform natural functions (such as intercepting rainfall and preventing soil erosion) and provide goods and services that humans need to survive (e.g., a clean water supply and reduction of downstream flooding). The benefits that humans receive from nature, many of which are generally taken for granted, are known as ecosystem goods and services.

The ecosystems providing natural goods and services (Natural Infrastructure) within Snoqualmie are initially defined by the local land cover. Land cover is the type of vegetation, built environment (road, building, sidewalk etc.) rock or water that encompass an area. For this project land cover was mapped for the City of Snoqualmie using GIS data provided by City staff. Figure 1 depicts the land cover of the City of Snoqualmie (the City). Appendix A – Natural Infrastructure outlines the data sources and data processing used to develop Figure 1.

Snoqualmie's land cover types are summarized by acreage in Table 1, describing the City's Natural Infrastructure. Forest is the most abundant land cover type encompassing over 2,600 acres and accounting for 55% of the total land area. Impervious and irrigated vegetation both encompass over 700 acres, accounting for 15% of the land area (Table 1).

HYDROLOGY

Development of Snoqualmie Ridge included stormwater design features to partially mitigate the effects of new pollution-generating impervious surfaces. Stormwater ponds, swales and other features are used to remove pollutants from runoff before discharging to local water bodies. Most Snoqualmie Ridge stormwater features treat runoff for water quality only, and do not provide for flow control or retention to reduce high runoff rates typically associated with developed areas. Instead, most areas of the Snoqualmie Ridge development take advantage of a flow control exemption which allows for peak flows to be discharged directly to the Snoqualmie River through high-flow bypass pipes. Although this configuration helps to protect smaller streams from excessive erosion and scour, it does little to mitigate the increased volume of runoff to the Snoqualmie River that the forest environment otherwise provides.

<table>
<thead>
<tr>
<th>Table 1. City of Snoqualmie Land Cover Types</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Major Land Cover</strong></td>
</tr>
<tr>
<td>Bare soil or dry veg</td>
</tr>
<tr>
<td>Forest</td>
</tr>
<tr>
<td>Impervious</td>
</tr>
<tr>
<td>Irrigated Vegetation</td>
</tr>
<tr>
<td>Open Water</td>
</tr>
<tr>
<td>Shrub</td>
</tr>
<tr>
<td>Total</td>
</tr>
</tbody>
</table>
Rain that falls on Snoqualmie's land can either be absorbed (i.e. infiltrate) into the ground or runs overland (i.e. run-off) into local streams, the Snoqualmie River, or other local water bodies. The rate at which absorption or run-off occurs is based on the land cover (i.e. impervious surface or natural infrastructure) and the intensity at which rain is falling.

Quantifying the rate at which ecosystems or natural infrastructure absorb or allow run-off is termed stormwater modeling. Understanding stormwater is vital for flood risk reduction, which in turn impacts environmental and human health. The built environment, such as roads, contributes pollutants to water bodies like the Snoqualmie River, degrading water quality and habitat for aquatic species such as salmonids. Conversely, natural infrastructure, such as forests, reduce stormwater runoff by infiltration and tree canopy capture. Natural infrastructure, when compared to the built environment, contributes less run-off (reduces stormwater quantity), promotes infiltration (replenishes groundwater), and reduces pollutant loads (limits surface water interaction) to local water bodies and recharges groundwater.

This assessment is informed by two stormwater modeling approaches (as further described in Appendix A): The Rational Method and the Hydrologic Simulation Program Fortran (HSPF) model.

- The Rational Method was used to establish volumes of stormwater runoff for each landcover type within the project area.
- The HSPF model outputs, provided by the City and Northwest Hydraulic Consultants, were used to further refine the ecosystem service valuation to determine values of stormwater mitigation within the City.

Table 2 below shows the peak runoff per land cover type for the City of Snoqualmie, separating results in privately owned areas, public lands (city-owned), and the volume of stormwater associated with streets, Snoqualmie's Right-of-Way (ROW). For a 2-yr storm event the City of Snoqualmie generates a peak discharge of 176 cubic feet per second (cfs). In general, the runoff results follow typical patterns; vegetated areas intercept rain and allow it to infiltrate into the soil, while impervious or compacted areas intensify runoff as minimal interception and infiltration occur. For example, for the entire land area for the City of Snoqualmie (public and private), impervious areas encompass only 15% of the land area, but account for 47% of the runoff. Conversely, forested areas encompass roughly 55% of the land area, but only account for 19% of the runoff.

### TABLE 2. RUNOFF VOLUMES PER LAND COVER TYPE OF SNOQUALMIE (2-YR EVENT).

<table>
<thead>
<tr>
<th>Major Land Cover</th>
<th>Total Acreage</th>
<th>2-yr Event Peak Discharge (cfs)</th>
<th>% Total Discharge</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Public Area</td>
<td>Private Area</td>
</tr>
<tr>
<td>Bare soil or dry veg</td>
<td>438</td>
<td>1.3 (4%)</td>
<td>9.7 (7%)</td>
</tr>
<tr>
<td>Forest</td>
<td>2,665</td>
<td>14.4 (42%)</td>
<td>18.9 (13%)</td>
</tr>
<tr>
<td>Impervious</td>
<td>736</td>
<td>5.8 (17%)</td>
<td>77.0 (55%)</td>
</tr>
<tr>
<td>Irrigated Vegetation</td>
<td>713</td>
<td>8.0 (23%)</td>
<td>14.3 (10%)</td>
</tr>
<tr>
<td>Open Water</td>
<td>193</td>
<td>3.8 (11%)</td>
<td>20.4 (14%)</td>
</tr>
<tr>
<td>Shrub</td>
<td>129</td>
<td>1.1 (3%)</td>
<td>1.3 (1%)</td>
</tr>
<tr>
<td>Total</td>
<td>1,590</td>
<td>34.3 (100%)</td>
<td>141.6 (100%)</td>
</tr>
</tbody>
</table>

**STORMWATER RUNOFF**

**IMPERVIOUS AREAS ENCOMPASS ONLY 15% OF THE LAND AREA, BUT ACCOUNT FOR 47% OF THE RUNOFF**

- CONVERSELY -
**FORESTED AREAS ENCOMPASS 55% OF THE LAND AREA, BUT ONLY ACCOUNT FOR 19% OF THE RUNOFF**

**KEY STORMWATER FINDINGS**

In general, the City owned parcels generate significantly less runoff than non-city owned parcels, 34 cfs and 142 cfs respectively.

**FORESTED AREAS ARE CRITICAL FOR MANAGING STORMWATER**

Forest encompasses 72% of publicly owned land area within the City and accounts for 42% of the runoff. Conversely, the impervious cover type encompasses only 3.2% yet accounts for 17% of the runoff.

If there is a significant conversion of natural land cover to impervious surfaces, greater flooding will occur, requiring more investment in built infrastructure.

**FORESTED AREAS AND STREET TREES ARE VALUABLE IN MITIGATING THE VOLUME OF STORMWATER WITHIN CITY RIGHT-OF-WAY**

Most stormwater is associated with streets and over 400 acres of City land area that is dedicated to ROW.

ROW generates a significant volume of stormwater as the area is dominated by the impervious land cover class (51%). Such a high area of impervious cover leads to proportionately high runoff volumes, as 88% of the runoff within the ROW is generated from the impervious cover class.

Conversely, Forest (primarily street trees) encompasses 37% of the ROW and accounts for only 7% of the runoff.

**FORESTS SAVE TAXPAYER MONEY**

The City manages over 1,300 acres of forested land (including street tree areas in ROWs). These forests are working for the local community by absorbing rainwater that may otherwise flow over streets and into local streams and rivers, which may lead to, or exacerbate, temperature, erosion, sediment or other pollutant problems.
CITYWIDE APPRAISAL OF NATURAL INFRASTRUCTURE: ECOSYSTEM SERVICES

Clean air, clean water, healthy food, flood risk reduction, waste treatment, and stable atmospheric conditions are all examples of ecosystem services. Without natural infrastructure, we would not have the benefit of these services, which are in fact the basis of economic activity.

Likewise, the health of the City's forest affects threatened species, the integrity and stabilization of riverine slopes, and water quality of the Snoqualmie River. Refer to Appendix B for a complete overview of all ecosystem services and the standards to define, identity and classify them.
Whether in the outskirts of the City or downtown, Snoqualmie’s forests provide a suite of ecosystem services. This report focuses on forest ecosystem services, though grasslands, shrubs, and even soils also sequester carbon, retain stormwater, and filter pollutants from runoff. Forest ecosystem services save the City money in many ways, such as by reduced water treatment costs, reduced risk of flood damage, and increased tourism from recreation opportunities. Recognizing these savings and extra revenues will help Snoqualmie realize the value of preserving, maintaining, and enhancing the urban forest. The following section outlines how this value can be recognized and accounted for throughout the City.

Ecosystem service valuation (ESV) assigns a dollar value to goods and services provided by a given ecosystem. This allows for management policies to be considered in terms of their ability to improve ecological processes that produce valuable ecosystem goods and services.

ESV is a natural appraisal method that calculates the economic value of ecological goods and services by transferring quantitative estimates, often monetary values, from existing literature to a comparable study area. As in a house or business appraisal, ESV sums the value of various attributes (number of rooms in a house, or different assets in a business) and establishes the value based on closely related comparable valuations. All valuation appraisals include a degree of uncertainty. A house appraisal will have several comparables that range in value, though a single value is often chosen. ESV is a well-accepted and commonly applied methodology in economics, particularly for ecosystem service valuation. It has been accepted by academics, private industry, as well as federal, state and local governments.

As an example, in June of 2013, FEMA approved Mitigation Policy FP-108-024-01 (FEMA, 2013), based on values developed using this methodology, for use in all hurricane and flood disaster mitigation across all 50 states. ESV has become the go-to approach for valuation delivering for decision-makers a timely and cost-effective way to value ecosystem services and natural infrastructure (Wilson and Hoehn, 2006).

**STORMWATER RETENTION:**
**STORMWATER CAPTURED BY SNOQUALMIE’S FORESTS**

This section details the approach of estimating the amount of stormwater captured by each acre of forest and calculates the monetary benefits provided by the captured stormwater. To arrive at an annual dollar value per acre stormwater retention, the volume of stormwater retained by forests was combined with a marginal cost of stormwater infrastructure.

This study was limited to valuing the stormwater retention of a 2-year 24-hour storm, as described above. Figure 2 provides more detail on what each component includes. For more information on the use of marginal cost, see Appendix C.

As described above, this study utilizes the King County Rational Method to determine the peak runoff from a defined land area (watershed, park, parcel etc.). As peak runoff is then used to determine pipe-sizing and storage magnitude for stormwater infrastructure, the same method was used in this study to estimate the avoided cost of water storage infrastructure due to storage provided by forests. This becomes the proxy value of forested green infrastructure for Snoqualmie, where inputs for calculating this value are summarized in Table 3. Details on calculations in this table are provided in Appendix C.

Table 3 shows that the total value of stormwater retention provided by Snoqualmie forests is approximately $11.8M to $14.5M for every 2-year 24-hour storm alone.
TABLE 3: TOTAL VALUE OF STORMWATER RETAINED BY SNOQUALMIE FORESTS ($/2-YEAR STORM)

<table>
<thead>
<tr>
<th>Ownership Type</th>
<th>Total Acres of Forest (acre)</th>
<th>Unit Water Volume Retained (cf/acre)</th>
<th>Total Water Volume Retained (cf)</th>
<th>Marginal Water Storage Market Value ($/cf)</th>
<th>Total Value of Water Storage by Forests ($)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Private</td>
<td>1,365</td>
<td>5,336</td>
<td>7,207,360</td>
<td>$0.85 - $1.02</td>
<td>$6,048,508 - $7,433,107</td>
</tr>
<tr>
<td>Public</td>
<td>1,150</td>
<td>6,139,534</td>
<td>8,078,900</td>
<td>$0.85 - $1.02</td>
<td>$6,352,013 - $7,692,324</td>
</tr>
<tr>
<td>ROW</td>
<td>150</td>
<td>808,809</td>
<td>808,809</td>
<td>$0.85 - $1.02</td>
<td>$644,671 - $816,825</td>
</tr>
<tr>
<td>Total</td>
<td>2,665</td>
<td>14,227,702</td>
<td>14,227,702</td>
<td>$0.85 - $1.02</td>
<td>$11,800,953 - $14,512,256</td>
</tr>
</tbody>
</table>

TABLE 4: TOTAL ANNUAL VALUE OF CARBON SEQUESTRATION BENEFITS OF SNOQUALMIE FORESTS

<table>
<thead>
<tr>
<th>Ownership Type</th>
<th>Acres by Ownership</th>
<th>Total Carbon Sequestration Value Low ($/yr)</th>
<th>Total Carbon Sequestration Value High ($/yr)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Public w/ ROW</td>
<td>1,300</td>
<td>$45,019.72</td>
<td>$61,213.42</td>
</tr>
<tr>
<td>Private</td>
<td>1,365</td>
<td>$45,300.75</td>
<td>$57,456.80</td>
</tr>
<tr>
<td>Total</td>
<td>2,665</td>
<td>$91,320</td>
<td>$118,667</td>
</tr>
</tbody>
</table>

TABLE 5: TOTAL VALUE OF WATER QUALITY BENEFITS OF SNOQUALMIE FOREST

<table>
<thead>
<tr>
<th>Forest Ownership Type</th>
<th>Acres</th>
<th>Value of Nutrient/Compound Reduction ($/Acre/Year)</th>
<th>Value of Nutrient/Compound Reduction ($/Acre/Year)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Low</td>
<td>High</td>
</tr>
<tr>
<td>Public</td>
<td>1,300</td>
<td>$44.18</td>
<td>$113.24</td>
</tr>
<tr>
<td>Private</td>
<td>1,365</td>
<td>$44.18</td>
<td>$113.24</td>
</tr>
<tr>
<td>Total</td>
<td>2,665</td>
<td>$117,680.45</td>
<td>$301,879.83</td>
</tr>
</tbody>
</table>

CLIMATE STABILITY: CARBON STORED AND SEQUESTRATED BY SNOQUALMIE’S FORESTS

This section outlines the annual value of sequestered carbon by forests within the City of Snoqualmie. Sequestered carbon biomass provides economic value by contributing to climate stability. Each year, trees, shrubs, and grasslands sequester carbon which would otherwise be released into the atmosphere.

To arrive at an annual dollar value per acre of carbon sequestration, total carbon biomass was combined with dollar values for each ton of carbon sequestered. Figure 3 provides more detail on what each component includes.

Appendix C provides details on the data sources used in each component shown in Figure 3. Table 4 summarizes the total value of carbon sequestration. Table 4 shows that the total value of carbon sequestration provided by Snoqualmie forests is approximately $91,200 to $138,670 each year.

Carbon Stock: Carbon stock refers to stored carbon sequestered over time. In forests, carbon is typically stored in the biomass, but also to a lesser extent in dead wood and litter. The ability to store carbon depends on the condition of the forest (age and health) and the management practice. Poorly managed or unhealthy forests can re-release carbon back into the atmosphere and/or have lower storage ability compared to healthy and well managed forests.

Carbon stocks represent historic carbon capture and therefore will not be used in the calculations of future asset value presented in this report. However, recognizing total carbon biomass would help guide development and management decisions that minimize the amount of carbon released into the atmosphere.

Development of land resulting in the cutting of forest stands and disposal of the timber releases carbon into the atmosphere, imposing a cost on society through increased GHG emissions. Appendix C calculates the amount of stored carbon in the City of Snoqualmie’s forests, and shows the value of this stored carbon.

This report models this one storm, which does not account for larger, less frequent storms that have the potential to devastate cities. Therefore, this is an underestimate of the full stormwater retention benefit provided by Snoqualmie forests. Why a range? The value provided by the City's natural assets, or the cost required to replace this value, does not easily translate to a specific type of infrastructure, but likely a suite of options. A range provides greater certainty that the unit value of stormwater retention benefits the City and is captured within this range.

While we assume the stormwater benefit averages to approximately $6.95M each year, the 2-year 24-hour storm does not occur in this interval. Under normal conditions, scientists estimate that the probability of this storm occurring is approximately 50% in any given year, which suggests the storm can occur more frequently than twice a year. In fact, the effects of climate change suggest that this size of storm will occur more frequently in the future, likely resulting in a re-defining of the 2-year storm event in the future.
Figure 01

General Example Function Transfer

Figure 02

Calculating the Stormwater Retention Benefits
Marginal cost is the per-unit cost of a capital project or enhancement. In the case of stormwater infrastructure, the marginal cost reflects the total cost of, for instance, a detention basin, divided by the amount of stormwater the basin can store. This becomes useful when investing in multiple projects of varying size and cost, where the use of marginal cost offers an apples-to-apples comparison.

Figure 03

Calculating Carbon Sequestration Benefits

Figure 04

Calculating Water Quality Benefits
WATER QUALITY: WATER FILTERED BY URBAN AND RURAL FORESTS

Natural ecosystem processes have the ability to remove elements from the water column that may be toxic to humans or impactful to downstream habitat. For example, forests adjacent to the Snoqualmie River buffer roadside surface water runoff by collecting oils, heavy metals, and other particles. Forests remove a variety of pollutants and purify water, although regulations might still require mechanical filtration for further purification.

To arrive at an annual dollar value per acre of water filtration provided by forests, local estimates of nutrients and other compounds removed from water by an acre of forest was combined with the marginal cost of water treatment with conventional infrastructure. Figure 4 (previous page) provides more detail on what each component includes.

Among the nutrients and compounds in scope for this analysis are the reduction of nitrogen, phosphorus, and total suspended solids from water runoff. Table 5 (previous page) combines each nutrient filtered by the City of Snoqualmie forest with selected market value to arrive at the annual value of water quality each year. Appendix C provides data sources on each input used and how the values below were calculated.

### TABLE 6: TOTAL ANNUAL ECOSYSTEM SERVICE VALUE OF SNOQUALMIE FORESTS

<table>
<thead>
<tr>
<th>Forest Ownership Type</th>
<th>Stormwater Retention</th>
<th>Carbon Sequestration</th>
<th>Water Quality</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Low</td>
<td>High</td>
<td>Low</td>
</tr>
<tr>
<td>Public</td>
<td>$5,760,484</td>
<td>$7,076,149</td>
<td>$45,820</td>
</tr>
<tr>
<td>Private</td>
<td>$6,080,488</td>
<td>$7,443,107</td>
<td>$45,381</td>
</tr>
<tr>
<td>Total</td>
<td>$11,840,972</td>
<td>$14,522,256</td>
<td>$91,200</td>
</tr>
</tbody>
</table>

### TABLE 7: TOTAL ASSET VALUE BY DISCOUNT RATE

<table>
<thead>
<tr>
<th>Discount Rate</th>
<th>Value 1</th>
<th>Value 2</th>
<th>Value 3</th>
<th>Value 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.75%</td>
<td>$324,451,278</td>
<td>$403,688,451</td>
<td>$608,898,684</td>
<td>$747,640,311</td>
</tr>
<tr>
<td>0%</td>
<td>$324,451,278</td>
<td>$403,688,451</td>
<td>$608,898,684</td>
<td>$747,640,311</td>
</tr>
</tbody>
</table>
When all natural infrastructure benefits are valued as assets and brought into the light of economic decision-making, these cost-effective goods and services are more likely to be retained, continuing to provide real returns to citizens, private companies, and government.

As demonstrated above, the ecosystem services valued in this report are an underestimate of the full value provided by City of Snoqualmie forests. Nonetheless, the following sections show the value of stormwater retention, water quality, and carbon sequestration of Snoqualmie’s forests amount to a multimillion-dollar asset.

TOTAL ANNUAL ECOSYSTEM SERVICE VALUE OF SNOQUALMIE FORESTS

The above sections presented three ecosystem services in dollars per acre per year. Combining with the total acreage of forest provided above, Table 6 (previous page) summarizes the total annual ecosystem service value for forests across the entire City.

Results show that forests in the City of Snoqualmie generate about $12M to $15M (US dollars, 2020) in goods and services every year. When accounting for only the publicly-owned forests, total ecosystem service value generates about $5.8M to $7.3M (Table 6).

These are economic benefits provided to the City’s residents each year and will continue to be provided in perpetuity if Snoqualmie forests are well managed and remain healthy. When considering the value being provided year over year, as an annual flow of value, a net present value, analogous to an asset value, can be calculated.

ASSET VALUE OF FOREST ECOSYSTEM SERVICES OVER 50 YEARS

An ecosystem produces a flow of valuable services over time, like a traditional capital asset. This analogy can be extended to calculating the asset value through net present value of the future flows of ecosystem services, just as the asset value of a capital asset (such as a power plant or bridge) can be calculated as the net present value of its expected future benefits. Like bridges, roads and many other built assets, ecosystems are generally not sold on the market. Thus, this calculation is an estimate of asset value without a potential for sale. However, it is useful for revealing the scope and scale of the economic value of Snoqualmie’s forests.

Calculating an asset’s net present value implies the use of a discount rate. The range of values used as discount rates varies greatly across federal agencies and applications. There is no standard across the board. This analysis uses 2.75%, the current rate for federal water projects (NRCS, 2018), as it is federally accepted for water projects. Appendix D discusses the use of discount rates in capital asset valuation and the justification for using this discount rate. The forest ecosystem services were calculated above in annual or biannual dollars. Table 7 (previous page) shows how each ecosystem service accrues value over time with the use of discount rates.
Results show that forests in the City of Snoqualmie generate about $324M to $404M (US dollars, 2020) in goods and services over 50 years using a 2.75% discount rate. These are economic benefits provided to people. From this annual flow of value, a net present value, analogous to an asset value, can be calculated. When accounting for public land only, Snoqualmie forests generate about $158M to $195M over 50 years.

CONCLUSION: NATURAL INFRASTRUCTURE IN ECONOMIC DECISION MAKING

As established in this report, Snoqualmie's natural systems provide immense value to the citizens of Snoqualmie and the natural environment. This natural infrastructure does not depreciate or fall apart like built capital assets. In fact, natural systems can even appreciate in value over time, being comprised of living and growing organisms. Of course, natural systems are only renewable if they are protected against degradation, development, unsustainable extraction, and other impacts. As long as Snoqualmie's natural infrastructure is not degraded or depleted below its ability to renew itself, this flow of value will likely continue into the future.

As a municipality, Snoqualmie has one of the highest per capita natural infrastructure values in the Pacific Northwest. Based on the findings of the Project Team, the City has an incredibly valuable natural infrastructure which should be considered in funding allocation and policy development.

SNOQUALMIE HAS ONE OF THE HIGHEST PER CAPITA NATURAL INFRASTRUCTURE VALUES IN THE PACIFIC NORTHWEST

<p>| TABLE 8: STEWARDSHIP &amp; OPPORTUNITIES FOR CITY OF SNOQUALMIE |
| (FURTHER DETAIL IN APPENDIX A) |</p>
<table>
<thead>
<tr>
<th>OPPORTUNITY</th>
<th>DESCRIPTION</th>
<th>ACTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stormwater fees fund urban forestry</td>
<td>Using the stormwater values from this assessment and local examples from Herrera's Stormwater Tech Memo (Appendix F), use a portion of City stormwater fees to fund the urban forestry program</td>
<td>Staff recommendation and Council approval of funding levels in biennial budget discussions</td>
</tr>
<tr>
<td>City Forest Credits projects fund urban forestry program</td>
<td>Develop City Forest Credits projects (planting and/or preservation) in partnership with local corporate funders, and potentially King County's Forest Carbon Program</td>
<td>Develop and implement a City-wide City Forest Credits Program</td>
</tr>
<tr>
<td>Land cover and urban tree canopy GIS database update</td>
<td>Update the City's current land cover and urban tree canopy GIS database to reflect current land use and land cover conditions</td>
<td>Plan for, budget and complete an updated land cover and urban tree canopy assessment in the next 5 years</td>
</tr>
<tr>
<td>Evaluate and value additional ecosystem services</td>
<td>Evaluate the value of the City's recreation and tourism resources</td>
<td>Plan for, budget and complete an Ecosystem Services Assessment of the city's recreation and tourism resources in a future budget cycle</td>
</tr>
<tr>
<td>Investigate King County Transfer of Development Rights opportunities (TDR Programs)</td>
<td>Investigate, in partnership with King County, opportunities for increasing density and conservation within existing growth management policies in the City</td>
<td>Invest in a City-wide TDR Program that will incentivize smart growth and generate funding for City programs</td>
</tr>
<tr>
<td>Build a FEMA Disaster Plan Declaration</td>
<td>Investigate FEMA Mitigation Policy FP-108-924-01 in June of 2013 (Federal Emergency Management Agency, 2013) and evaluate opportunity for City to incorporate ecosystem service values in disaster mitigation plans</td>
<td>Update City’s current disaster planning policies to incorporate ecosystem service values. These values will justify millions of dollars in mitigation funding in the future for natural disasters occurring within the City</td>
</tr>
<tr>
<td>Establish an Interlocal Watershed Investment District</td>
<td>Investigate, in collaboration with Water Resource Inventory Area (WRIA) #7, the opportunity for a regional taxing district that rewards Snoqualmie for stormwater mitigation provided by City’s natural infrastructure</td>
<td>In partnership with WRIA #7, develop an Interlocal Watershed Investment District that incentivizes stormwater mitigation through the use of natural infrastructure</td>
</tr>
</tbody>
</table>

NATURAL INFRASTRUCTURE STEWARDSHIP

Through this assessment, the TKC team provides a robust and scientifically proven analysis of the City's natural infrastructure and its ecosystem service value. Using the outputs from this analysis, the TKC team collaborated with technical experts in a variety of areas (stormwater, urban forestry, land use) and City staff to develop potential policy and funding recommendations for the City to consider in sustaining the urban forestry program.
APPENDIX A: CHARACTERIZATION OF SNOQUALMIE LAND COVER AND HYDROLOGY MODELING

LAND COVER DATA SOURCES AND ASSUMPTIONS

The land cover GIS dataset (feature class) is the combination of four existing datasets, or feature classes.

1. 2012 Urban Tree Canopy Data (Plan-it Geo)
2. 2013 King County Forest Landscape Assessment Tool (FLAT) (2013)
3. 2015 Tree Canopy Update (Plan-it Geo)
4. King County’s Sensitive Area Ordinance Wetlands

All data was provided to Ecosystem Sciences by Phil Bennett (City of Snoqualmie Parks Department) and Brendan Ecker (City of Snoqualmie, GIS Analyst). The four land cover feature classes were merged in GIS to create one seamless land cover layer for the City of Snoqualmie. Figure 6 describes the hierarchical process for creating the Major Land Cover layer:

1. Tree Canopy 2015 defined the tree canopy.
2. 2012 UTC determined the land cover type for areas not covered by Tree Canopy 2015.
3. FLAT (Forest Landscape Assessment Tool) Land Cover Management Units added specificity to the existing Land Cover feature class by defining Deciduous vs. Coniferous (sub Land Cover type) and other specificity to existing classes, for example hardscape (impervious) vs. landscape (irrigated vegetation). Combining the first three feature classes covered most of the City.

Data Limitations: Portions of the “Mill Site” were not mapped in the previous 3 feature classes and thus this area was blank after combining the first three feature classes. To fill in the “Mill Site” portion that did not have land cover associated with them, the City of Snoqualmie provided the King County SAO Wetlands shapefile. This shapefile covered most of the remaining area. The wetland shapefile was updated (heads-up digitized) with the Major Land Cover type that the wetland area covered. One large polygon was added to the final land cover layer. A large “Bare soil or dry veg” polygon was added to the final land cover layer. This area covers the non-vegetated (not developed) area in the Northeast corner of the City of Snoqualmie, just north of Lake Boset (Figure 5).

Merging of multiple land cover sets to make one land cover layer for the City of Snoqualmie involved cross-walking (making one consistent land cover legend) each of the datasets into one dataset. The cross-walking resulted in six major land cover types. Table 9 describes the land cover types and provides the acreage and percent of Snoqualmie each cover type encompasses. Forest is the most abundant land cover type encompassing over 2,600 acres and accounting for 54% of the landscape. Impervious and Irrigated Vegetation both encompass over 700 acres and each account for roughly 15% of the land area (Table 9). The land cover described in Table 9 form the Natural Infrastructure ecosystems of the City of Snoqualmie.

Figure 5.

FIGURE 5. MAJOR LAND COVER CITY OF SNOQUALMIE (ANALYSIS EXTENT)
Table 9. Land Cover Types City of Snoqualmie (Acreage, %, and Description)

<table>
<thead>
<tr>
<th>Land Cover</th>
<th>Acres</th>
<th>% Area</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bare Soil or Dry</td>
<td>438.3</td>
<td>9.0%</td>
<td>Limited vegetation or bare ground</td>
</tr>
<tr>
<td>Vegetation</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Forest</td>
<td>2,865.5</td>
<td>54.7%</td>
<td>Tree Canopy (coniferous and deciduous)</td>
</tr>
<tr>
<td>Impervious</td>
<td>735.8</td>
<td>15.1%</td>
<td>Hardscape, roads, buildings, parking lots etc.</td>
</tr>
<tr>
<td>Irrigated Vegetation</td>
<td>713.4</td>
<td>14.6%</td>
<td>Lawns, landscaped areas, ball fields, parks etc.</td>
</tr>
<tr>
<td>Open Water</td>
<td>183.1</td>
<td>4.0%</td>
<td>River, streams, lakes, ponds, emergent wetlands</td>
</tr>
<tr>
<td>Shrub</td>
<td>120.3</td>
<td>2.7%</td>
<td>Non-tree riparian, brushy veg., non-tree woody veg.</td>
</tr>
</tbody>
</table>

Total 4,875.5 100.0%

The King County Surface Water Design Manual provides specific guidance on modeling stormwater dynamics (King County 2016). King County employs the Rationale Method to determine the peak runoff from a defined land area (watershed, park, parcel etc.). Peak runoff is then used to determine pipe-sizing for stormwater infrastructure. For this analysis, the Rationale Method is employed to compare runoff from different land cover types.

The Rationale Method computes peak runoff Q(cfs) using the following equation (King County 2016):

\[ QR = C \times Ir \times A \]

- \( QR \) = peak flow (CFS) for a storm of return frequency \( R \)
- \( C \) = estimated runoff coefficient (ratio of rainfall that becomes runoff)
- \( Ir \) = peak rainfall intensity (inches/hour) for a storm return frequency \( R \)
- \( A \) = drainage subbasin area (acres)

Conversely, natural infrastructure, such as Forests, reduce stormwater runoff by infiltration and canopy capture (rain that falls on leaves). Natural infrastructure, when compared to the built environment (impervious areas), contributes less run-off (reduces stormwater quantity), promotes infiltration (replenishes groundwater), and reduces pollutant loads (limited surface water interaction) to local water bodies.

Stormwater Hydrology Modeling Approach and Data

Generally speaking, rain that falls on Snoqualmie’s land can either be absorbed (i.e. allowed to infiltrate) into the ground or runs overland (i.e. run-off) into local streams, the Snoqualmie River, or other local water bodies. The rate at which absorption or run-off occurs is based on the land cover (i.e. natural infrastructure) and the intensity at which rain is falling. Quantifying the rate at which ecosystems, or natural infrastructure, absorb or allow run-off is termed stormwater modelling, especially within an urban environment like the City. Understanding stormwater is vital to aquatic health, as the built environment (e.g. roads) contributes pollutants to local water bodies, such as the Snoqualmie River. Pollutants degrade water quality and habitat for aquatic species such as salmonids.
**C – Runoff Coefficient:** The King County Surface Water Design Manual provides runoff coefficient values for pertinent land cover types found within the County. Table 10 lists the Land Cover Type, its associated King County Surface Water Design Manual associated land cover type and its Runoff Coefficient (King County 2016).

Irrigation (I): WRAP Peak Rainfall Intensity: As mentioned above, this study focused on modeling efforts on the 2-year 24-hour storm. The Ir for the 2-year event for Snoqualmie = 0.125 inches/hr (3.0 inches/24 hours).

Acreage (A): Acreage is determined by the GIS shapefile. The initial analysis focuses on the entire City of Snoqualmie. Subsequent analysis, such as public vs. private, entails breaking the city up into distinct sub-basins, and thus acreage (in GIS) needs to be recalculated each time that a different analysis unit is created.

**Stormwater Modeling Results 2-yr Return Frequency Storm Event**

Table 11 below presents the peak runoff per land cover type for the City of Snoqualmie. For a 2-year event storm the City of Snoqualmie generates a peak discharge of 175.9 cfs. In general, the runoff results follow typical patterns; vegetated areas intercept rain and allow it to infiltrate into the soil, while impervious or compacted areas exacerbate runoff as minimal interception and infiltration occur. For example, Impervious areas encompass only 15% of the City of Snoqualmie, but account for 47% of the runoff. Conversely, Forested areas encompass roughly 55% of the City, but only account for 19% of the runoff. Open water is highlighted in red to indicate that rain that falls on natural “open water” areas, such as rivers and streams in the project area, is not typically “runoff.” Rain that falls on stormwater ponds in the project area, will at some point “runoff” into the system. In short, “Open Water” runoff volumes should be viewed in the context that not all rain that falls on “Open Water” is runoff.
Public (City Owned) v. Private (Non-City Owned) To determine the runoff per ownership in the City of Snoqualmie, the City provided a feature class (Phil Bennett and Brendan Ecker) that delineated City Owned areas (Figure 8). This feature class was joined with the Land Cover feature class. This new feature class was used to determine the runoff associated with City Owned areas (Table 12) and non-City owned areas (Table 13). In general, the City Owned parcels generate significantly less runoff than non-city owned parcels, 34.4cfs and 141.6cfs respectively. Forest encompasses 72% of the city-owned area and accounts for 42% of the runoff (Table 12). Conversely, the Impervious cover type encompasses only 3.2% yet accounts for 17% of the runoff. To compare, during a 2-yr storm event, an acre of City-Owned Forest accounts for 0.0125cfs, while an acre of Impervious 0.113cfs, a nine-fold increase. Forest areas are very important for managing stormwater.

**Right-of-Way (ROW):** Most stormwater is associated with streets. To quantify the volume of stormwater associated with streets, Snoqualmie’s Right-of-Way (ROW) was analyzed. The City of Snoqualmie provided a ROW feature class. This feature class was used to clip the Land Cover feature class. This new feature class was used to determine the runoff associated within the ROW (Table 14). Similar to the other analyses within this report, the ROW generates a significant volume of stormwater as the area is dominated by the impervious land cover class (51%). Such a high area of impervious cover leads to high runoff volumes, as 88% of the runoff within the ROW is generated from the impervious cover class (Table 14). Conversely, Forest (primarily street trees) encompasses 37% of the ROW and accounts for only 7% of the runoff (Table 14). In short, forested areas and street trees are valuable in ameliorating the volume of stormwater generated within the Snoqualmie’s ROW.

**Preliminary Summary of runoff characteristics for the City of Snoqualmie to compliment land cover assessment being completed by Ecosystem Sciences.**

Northwest Hydraulic Consultants is developing a Hydrologic Simulation Program Fortran (HSPF) model of the City of Snoqualmie to support the City's Stormwater Master Plan (SMP) efforts. The model currently utilizes USGS Regional Runoff calibration parameters (Dinica, 1990) and is being calibrated to local flow data collected on D-Creek and E-Creek during the winter of 2019. When complete the model will include most City managed flow control facilities and flow diversions. The flow summary provided below relies on unit area runoff rates (i.e., it does not reflect the detailed model routing information that is under development) and is intended to provide a high level look at runoff within the

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**TABLE 11. RUNOFF VOLUMES PER LAND COVER TYPE CITY OF SNOQUALMIE (2-YR EVENT)**

<table>
<thead>
<tr>
<th>Major Land Cover</th>
<th>Acres</th>
<th>% Area</th>
<th>2-yr Event Peak Discharge (CFS)</th>
<th>Total Cubic Feet (1 hr)</th>
<th>% Discharge</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bare soil or dry veg</td>
<td>438.3</td>
<td>9.0%</td>
<td>11.0</td>
<td>3,9451</td>
<td>6.2%</td>
</tr>
<tr>
<td>Forest</td>
<td>2,065.5</td>
<td>54.7%</td>
<td>33.3</td>
<td>119,947</td>
<td>18.9%</td>
</tr>
<tr>
<td>Impervious</td>
<td>735.8</td>
<td>15.1%</td>
<td>82.8</td>
<td>208,016</td>
<td>47.1%</td>
</tr>
<tr>
<td>Irrigated Vegetation</td>
<td>713.4</td>
<td>14.6%</td>
<td>22.3</td>
<td>80,258</td>
<td>12.7%</td>
</tr>
<tr>
<td>Open Water</td>
<td>193.1</td>
<td>4.0%</td>
<td>24.1</td>
<td>86,928</td>
<td>13.7%</td>
</tr>
<tr>
<td>Shrub</td>
<td>129.3</td>
<td>2.7%</td>
<td>2.4</td>
<td>8,726</td>
<td>1.4%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>4,875.5</td>
<td>100.0%</td>
<td>175.9</td>
<td>633,328</td>
<td>100.0%</td>
</tr>
</tbody>
</table>

---

**Snoqualmie Stormwater GIS & ESV Project**

City Owned Parcels / Snoqualmie, WA

**FIGURE 8. CITY OF SNOQUALMIE CITY OWNED PARCELS AND MAJOR LAND COVER**

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City that is consistent with the hydrologic modeling approach being used for the stormwater plan. Once complete the SMP will provide flow quantile summaries for each basin in the City that reflect detailed flow routing and bypass modeling.

It is worth noting that approximately 60% of the City’s developed area lies within areas served by direct discharge conveyance systems that route storm flows around sensitive creeks and discharge directly to the Snoqualmie River. On Snoqualmie Ridge the North High Flow Bypass (NHFB) and the East High Flow Bypass (EHFB) convey all high flows north and east off of the Ridge, while allowing base flows to continue to flow to the smaller streams and wetlands. In the Historic Downtown planning area there are a series of smaller stormwater outfalls that convey all runoff to the river. Table 15 has divided the impervious area by a 60/40 ratio into “unmitigated, routed directly to Snoqualmie River” and “mitigated, routed to streams” categories. The mitigated impervious category is assumed to have a 2-year peak runoff response similar to forest cover, which was included in the 1998 flow control design standard applied at the time that portion of Snoqualmie Ridge was developed. The unmitigated runoff routed to the Snoqualmie River reflects no attenuation from flow control facilities.

Area listed above came from Table 3 of the Ecosystem Sciences PDF. “% of Peak Runoff” has also been reported in a similar manner, reflecting the % of the peak hour of runoff contributed by each land cover area based on the simulated unit area runoff rates.

Overall, Natural Infrastructure, such as forests, provides significant ecosystem services, especially related to stormwater. Promoting infiltration of rainfall, as opposed to promoting runoff (e.g. roads), improves groundwater reserves (through infiltration) and reduces total volume of stormwater and pollutant loads to local water bodies.

### TABLE 12. 2-YR EVENT RUNOFF ASSOCIATED WITH CITY OF SNOQUALMIE OWNED (PUBLIC) PARCELS

<table>
<thead>
<tr>
<th>Major Land Cover</th>
<th>Acres</th>
<th>% Area</th>
<th>2-yr Event Peak Discharge (CFS)</th>
<th>Total Cubic Feet (1 hr)</th>
<th>% Discharge</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bare soil or dry veg</td>
<td>52.1</td>
<td>3.3%</td>
<td>1.3</td>
<td>4,688</td>
<td>3.8%</td>
</tr>
<tr>
<td>Forest</td>
<td>1,150.5</td>
<td>72.0%</td>
<td>14.4</td>
<td>51,772</td>
<td>41.9%</td>
</tr>
<tr>
<td>Impervious</td>
<td>51.4</td>
<td>3.2%</td>
<td>5.8</td>
<td>20,832</td>
<td>16.9%</td>
</tr>
<tr>
<td>Irrigated Vegetation</td>
<td>255.4</td>
<td>16.0%</td>
<td>8.0</td>
<td>28,846</td>
<td>23.3%</td>
</tr>
<tr>
<td>Open Water</td>
<td>30.3</td>
<td>1.9%</td>
<td>3.8</td>
<td>13,016</td>
<td>11.6%</td>
</tr>
<tr>
<td>Shrub</td>
<td>57.4</td>
<td>3.6%</td>
<td>1.1</td>
<td>3,073</td>
<td>3.1%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>1,598.1</td>
<td>100.0%</td>
<td>34.3</td>
<td>125,530</td>
<td>100.0%</td>
</tr>
</tbody>
</table>

### TABLE 13. 2-YR EVENT RUNOFF ASSOCIATED WITH NON-CITY OF SNOQUALMIE OWNED (PRIVATE) PARCELS

<table>
<thead>
<tr>
<th>Major Land Cover</th>
<th>Acres</th>
<th>% Area</th>
<th>2-yr Event Peak Discharge (CFS)</th>
<th>Total Cubic Feet (1 hr)</th>
<th>% Discharge</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bare soil or dry veg</td>
<td>386.3</td>
<td>11.8%</td>
<td>9.7</td>
<td>34,763</td>
<td>6.0%</td>
</tr>
<tr>
<td>Forest</td>
<td>1,515.0</td>
<td>46.2%</td>
<td>10.9</td>
<td>68,175</td>
<td>13.4%</td>
</tr>
<tr>
<td>Impervious</td>
<td>684.4</td>
<td>20.3%</td>
<td>77.0</td>
<td>277,184</td>
<td>54.4%</td>
</tr>
<tr>
<td>Irrigated Vegetation</td>
<td>457.0</td>
<td>13.9%</td>
<td>14.3</td>
<td>51,413</td>
<td>10.1%</td>
</tr>
<tr>
<td>Open Water</td>
<td>162.9</td>
<td>5.0%</td>
<td>20.4</td>
<td>73,265</td>
<td>14.4%</td>
</tr>
<tr>
<td>Shrub</td>
<td>71.9</td>
<td>2.2%</td>
<td>1.3</td>
<td>4,858</td>
<td>1.0%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>3,277.4</td>
<td>100.0%</td>
<td>141.6</td>
<td>509,573</td>
<td>100.0%</td>
</tr>
</tbody>
</table>
### TABLE 14. 2-YR EVENT RUNOFF ASSOCIATED WITHIN THE RIGHT-OF-WAY (ROW) CITY OF SNOQUALMIE

<table>
<thead>
<tr>
<th>Major Land Cover</th>
<th>Acres</th>
<th>% Area</th>
<th>2-yr Event Peak Discharge (CFS)</th>
<th>Total Cubic Feet (1 hr)</th>
<th>% Discharge</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bare soil or dry veg</td>
<td>26.5</td>
<td>6.8%</td>
<td>0.7</td>
<td>2,381</td>
<td>2.5%</td>
</tr>
<tr>
<td>Forest</td>
<td>150.3</td>
<td>37.4%</td>
<td>1.9</td>
<td>6,704</td>
<td>7.1%</td>
</tr>
<tr>
<td>Impervious</td>
<td>205.0</td>
<td>51.2%</td>
<td>23.2</td>
<td>83,347</td>
<td>87.8%</td>
</tr>
<tr>
<td>Irrigated Vegetation</td>
<td>16.7</td>
<td>4.1%</td>
<td>0.5</td>
<td>1,674</td>
<td>2.0%</td>
</tr>
<tr>
<td>Open Water</td>
<td>0.9</td>
<td>0.2%</td>
<td>0.1</td>
<td>414</td>
<td>0.4%</td>
</tr>
<tr>
<td>Shrub</td>
<td>1.8</td>
<td>0.4%</td>
<td>0.0</td>
<td>121</td>
<td>0.1%</td>
</tr>
<tr>
<td>Total</td>
<td>401.9</td>
<td>100.0%</td>
<td>26.4</td>
<td>94,901</td>
<td>100.0%</td>
</tr>
</tbody>
</table>

### TABLE 15

<table>
<thead>
<tr>
<th>Major Land Cover</th>
<th>Acres (from E.S. PDF)</th>
<th>% of Total Area</th>
<th>Citywide HSPF Model</th>
<th>Rational Method from E.S. PDF</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>2-year Event Peak (1-hour average) Discharge (cfs)</td>
<td>% of Peak Runoff</td>
</tr>
<tr>
<td>Bare soil or dry veg</td>
<td>438.3</td>
<td>9%</td>
<td>64</td>
<td>11%</td>
</tr>
<tr>
<td>Forest</td>
<td>2636.2</td>
<td>54%</td>
<td>57</td>
<td>7%</td>
</tr>
<tr>
<td>Impervious (unmitigated, routed directly to Snoqualmie River)</td>
<td>441.42</td>
<td>9%</td>
<td>215</td>
<td>38%</td>
</tr>
<tr>
<td>Impervious (mitigated, routed to streams)</td>
<td>294.28</td>
<td>8%</td>
<td>43</td>
<td>8%</td>
</tr>
<tr>
<td>Irrigated Vegetation</td>
<td>721.9</td>
<td>15%</td>
<td>105</td>
<td>19%</td>
</tr>
<tr>
<td>Open Water</td>
<td>193.2</td>
<td>4%</td>
<td>94</td>
<td>17%</td>
</tr>
<tr>
<td>Shrub</td>
<td>149.6</td>
<td>3%</td>
<td>5</td>
<td>1%</td>
</tr>
<tr>
<td>Total Area</td>
<td>4874.9</td>
<td>100%</td>
<td>562</td>
<td>100%</td>
</tr>
</tbody>
</table>
APPENDIX B: OVERVIEW OF ECOSYSTEM GOODS AND SERVICES

In 2001, an international coalition of over 1,360 scientists and experts from the United Nations Environmental Program, the World Bank, and the World Resources Institute assessed the effects of ecosystem change on human well-being. A key goal of the assessment was to develop a better understanding of the interactions between ecological and social systems, and in turn to develop a knowledge base of concepts and methods that would improve our ability to "...assess options that can enhance the contribution of ecosystems to human well-being" (UNEP, 2005). This study produced the landmark Millennium Ecosystem Assessment, which classifies ecosystem services into four broad categories according to how they benefit humans. These categories are as follows:

1. **Provisioning goods and services** provide physical materials and energy for society that vary according to the ecosystems in which they are found. Forests produce lumber, agricultural lands supply food, and rivers provide drinking water.

2. **Regulating services** benefit society by maintaining climate, water quality, disease, and pest outbreaks in check. Remaining arable land, slope stability, and coastal integrity are examples of regulating services.

3. **Supporting services** include primary productivity (natural plant growth) and nutrient cycling (nitrogen, phosphorus, and carbon cycles). These services are the basis of the vast majority of food webs and life on the planet.

4. **Information services** are functions that allow humans to interact meaningfully with nature. These services include information on spiritual significance, natural areas, natural places for recreation, and opportunities for scientific research and education.

<table>
<thead>
<tr>
<th>TABLE 16: TWENTY-ONE ECOSYSTEM SERVICES</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Provisioning</strong></td>
</tr>
<tr>
<td>Energy and Raw Materials</td>
</tr>
<tr>
<td>Food</td>
</tr>
<tr>
<td>Medicinal Resources</td>
</tr>
<tr>
<td>Ornamental Resources</td>
</tr>
<tr>
<td>Water Storage</td>
</tr>
<tr>
<td><strong>Regulating</strong></td>
</tr>
<tr>
<td>Air Quality</td>
</tr>
<tr>
<td>Biological Control</td>
</tr>
<tr>
<td>Climate Stability</td>
</tr>
<tr>
<td>Stormwater Retention</td>
</tr>
<tr>
<td>Pollination and Seed Dispersal</td>
</tr>
<tr>
<td>Soil Formation</td>
</tr>
<tr>
<td>Soil Quality</td>
</tr>
<tr>
<td>Soil Retention</td>
</tr>
<tr>
<td>Water Quality</td>
</tr>
<tr>
<td>Water Capture, Conveyance, and Supply</td>
</tr>
<tr>
<td>Ultraviolet Radiation Reduction</td>
</tr>
<tr>
<td>Temperature Regulation</td>
</tr>
<tr>
<td><strong>Supporting</strong></td>
</tr>
<tr>
<td>Habitat</td>
</tr>
<tr>
<td>Nutrient Cycling</td>
</tr>
<tr>
<td><strong>Information</strong></td>
</tr>
<tr>
<td>Aesthetic Information</td>
</tr>
<tr>
<td>Cultural Value</td>
</tr>
<tr>
<td>Science and Education</td>
</tr>
<tr>
<td>Recreation and Tourism</td>
</tr>
<tr>
<td>Artistic Inspiration</td>
</tr>
</tbody>
</table>
APPENDIX C: USING FUNCTION TRANSFER TO MEASURE STORMWATER RETENTION REPLACEMENT COST

Compared to Benefit transfer, function transfer method typically provides better accuracy because it can be calibrated to the specific site conditions. Function transfer requires knowledge of the values of the independent variables for the proposed site of interest and assumes that the statistical relationship between the dependent and independent variables is the same between the study and proposed sites (Rosenberger and Loomis, 2003). For this study, data availability allowed for the use of function transfer to monetize three ecosystem services in the City of Snoqualmie: Stormwater retention, carbon sequestration, and water quality. The following provide more detail on the approach taken for each.

Using Construction Marginal Costs to Derive a Market Values for Stormwater and Filtration Ecosystem Services

The costs of different engineered stormwater retention and water filtration facilities are well known, as are the water retention and filtration capacities of natural systems in the Northwest. Using function transfer to value water ecosystem services is a widely accepted approach conducted throughout the US (Nordman et al. 2018). To arrive at stormwater retention and water quality ecosystem service values, this analysis uses function transfer to estimate replacement cost, or the cost required to replace the City’s natural infrastructure with built capital. The remainder of this section on how the market value was selected and how this is the “right size” for the City of Snoqualmie.

Traditional methods of controlling stormwater flow and filtering water is achieved through the construction of infrastructure such as drainage basins, pipes, culverts, and other flow and storage systems, as well as filtration systems. Without the natural infrastructure provided by urban and rural forests, either flooding increases or capital investments are required to replace these services. Stormwater systems, for example, are constructed, improved, and retrofitted over time, making it difficult to estimate the value of stormwater control systems across an entire city. Therefore, we rely on the marginal cost of stormwater infrastructure costs, or the cost per unit of water retained.

Multiple research efforts by private firms, non-profits, and government entities have established data libraries and archives of capital infrastructure projects in the US (RSMeans, 2009; CNT, 2009). This information provides a means of calculating the marginal cost of stormwater and water filtration infrastructure.

\[
\text{Marginal Cost (\$/c)} = \frac{\text{Stormwater Construction Cost (\$/Storage Volume (c)}}
\]

A robust list of capital projects allows for the selection of right-sized infrastructure projects that are comparable to a given scenario. Accordingly, we find that this approach allows for the derivation of a marginal cost that is suited to the characteristics of the same scenario.

The following two sections detail how the marginal cost of capital infrastructure are used to value stormwater retention and water quality respectively.

Details on Calculating Stormwater Retention Benefit of Snoqualmie Forests

Table 3 shows a value of 5,339 cf per acre retained by City of Snoqualmie forests. This value suggests that, during the 24 hour 2-year storm where 3 inches (or 10,891 c per acre) of rainfall falls, approximately 49% of the rainfall is captured by forests. Compared to an impervious surface (parking lot) where nearly none of the water is retained as it becomes surface water runoff.

This was derived using a modified function provided by the consultant Northwest Hydraulic Consultants using the Hydraulic Simulation Program Fortran (HSPF) model of the City of Snoqualmie. Developing the Stormwater Master Plan. The model showed that, over the course of a year, City of Snoqualmie forest cover rendered approximately 10.5 acre-ft per acre per year of stormwater runoff, as compared to impermeable surfaces which produce 8.1 acre-ft per acre per year. The difference (2.5 acre-ft per acre per year, or a 49% reduction) demonstrates the benefit provided by forests compared to impermeable surfaces. Using this factor, we assumed this same reduction in the 24 hour 2-year storm scenario, where 10,891 cf per acre reduces to approximately 5,339 cf per acre.

Market Value: Stormwater infrastructure is not one size fits all. Depending on the type of infrastructure selected, the per unit cost of stormwater mitigated varies. For example, a water detention basin requires limited construction versus more advanced assets like a bioretention system. Both structures may provide similar storage capacity but are designed for much different purposes and at different costs. Table 17 provides a wide sampling of stormwater infrastructure projects from a single study, showing a range of costs and capacities (Ballester et al., 2004). The study discussed how more expensive projects targeted water quality performance goals in addition to providing some quantity of stormwater abatement.

Each value in the table above was amortized, meaning the cost of the capital infrastructure project was spread out over an estimated 30-year lifespan, discounted at 5%. Additionally, dollar values were converted to today’s 2020 dollar rate.

Criteria for Selection for City of Snoqualmie: To design or establish a baseline stormwater project, there is a requirement that the outlet flows be controlled to avoid peak flows that exceed the capacity of the existing stormwater infrastructure. The most common and inexpensive approach to this is construction of one or more detention basins. This study used, as the baseline, a detention basin designed with outlet flows that did not exceed 20 cfs. This assumption established a “cap” on the size of the infrastructure project and was based on the fact the study area does not include a contiguous 130 acre of natural infrastructure. A common release rate standard requires an outlet no higher than 0.15-cfs per acre of development, which was used to calculate the assumed 20 cfs design standard (USGS, 2009).

Using a detention basin designed to the parameters discussed above, the marginal cost of capital was then derived. The values selected and used in the monetization of stormwater benefits were adopted from...
King County and shown in Table 17 above. When reviewing the King County report that provided the dollar values, the description of “medium density residential” and “low density residential” matched best with the density and conditions of the City of Snoqualmie, relative to the other studies and associated locations listed in Table 17.

Following the formula presented in Figure 2 above, each input used to calculate the value of stormwater benefit is outlined below:

**Part A - Stormwater Retained by Snoqualmie Forests:** The peak rate of water runoff retained by Snoqualmie urban and rural forests was calculated above. This and other information are used to calculate the total volume of water retained by these forests, found to be approximately 5,339 cf per acre under a 2yr 24hr storm. Appendix C provides detail on how this was calculated.

**Part B - Marginal Cost of Stormwater Infrastructure:** Deriving marginal cost values for the City of Snoqualmie was completed by collecting local geophysical data (i.e. average rainfall, average storm size and frequency) and comparing this to relevant municipal stormwater infrastructure cost data, similar to existing stormwater projects the City of Snoqualmie published in historic 10-yr capital plans (City of Snoqualmie, 2017). Stormwater values were found to be approximately 5.83 to 1.02 per cf. Appendix C details the process of selecting marginal cost values, including data sources.

**Details on Calculating Water Quality Benefits of Snoqualmie Forests**

Calculating water quality benefits provided by City of Snoqualmie forests is broken down in the steps below:

**Part A - Compounds Filtered from Water:** Hill et al. published in 2013 analyzed water quality benefits provided by forests adjacent and near headwater streams and catchments in Washington State (Hill et al. 2013). The study calculated the rate of nutrient and compound reduction (nitrogen, phosphorus, total suspended solids filtration) in kilograms per hectare per year, which were converted to kilograms per acre per year in Table 18 below.

---

**TABLE 17. SAMPLE STORMWATER INFRASTRUCTURE PROJECT COST RATIOS**

<table>
<thead>
<tr>
<th>Infrastructure Type</th>
<th>Ratio ($/cf)</th>
<th>Study</th>
</tr>
</thead>
<tbody>
<tr>
<td>Retention Basin (Low)</td>
<td>$0.75</td>
<td>USEPA, 2009</td>
</tr>
<tr>
<td>Retention Basin (High)</td>
<td>$1.49</td>
<td>USEPA, 2009</td>
</tr>
<tr>
<td>Wet Pond - Medium Density Residential</td>
<td>$0.83</td>
<td>King County, 2012</td>
</tr>
<tr>
<td>Wet Pond - Low Density Residential</td>
<td>$1.02</td>
<td>King County, 2012</td>
</tr>
<tr>
<td>Detention Basin</td>
<td>$1.09</td>
<td>CRT, 2009</td>
</tr>
<tr>
<td>Detention Basin</td>
<td>$0.70</td>
<td>CRT, 2009</td>
</tr>
<tr>
<td>Large Detention Basin</td>
<td>$2.29</td>
<td>Barr 2011</td>
</tr>
<tr>
<td>Bioretention System</td>
<td>$6.36</td>
<td>Ballstero, 2005</td>
</tr>
<tr>
<td>Surface Sand Filter</td>
<td>$11.59</td>
<td>Ballstero, 2005</td>
</tr>
</tbody>
</table>

The Hill et al. study used nine data collection points at and downstream of headwater streams on the west side of the cascade mountains. This was collected as a part of the EPA’s National Rivers and Streams Assessment with catchment attributes related to the reduction of nitrogen, phosphorus, and total suspended solids. The study used this data to develop ecological production functions related to the delivery of ecosystem services from headwater catchments.

The study conducted a statistical analysis, calculating mean values for several catchment attributes including annual precipitation and runoff, sedimentation rates, in addition to nutrient reduction rates. All values were statistically significant.

**Part B - Marginal Cost of Filtration Infrastructure:** Over the last two decades, ample research has been conducted on the costs associated with nitrogen, phosphorus, and total suspended solids removal from riverine water sources. One of the adopted market values came from the US EPA document Water Quality Trading Toolkit for Permit Writers (USEPA 2009). Table 19 shows the market values adopted for nitrogen, phosphorus, and total suspended solids filtration. The selection of these values among others provided in a literature review is discussed in Appendix C.

---

**TABLE 18: NUTRIENT OR COMPOUND REDUCTION**

<table>
<thead>
<tr>
<th>Nutrient/Compound</th>
<th>Reduction Rate (kg/ha/yr)</th>
<th>Study</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nitrogen Fixation</td>
<td>33.6</td>
<td>USEPA, 2009</td>
</tr>
<tr>
<td>Phosphorus Fixation</td>
<td>1.4</td>
<td>0.6</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>46.8</strong></td>
<td><strong>10.0</strong></td>
</tr>
</tbody>
</table>
TABLE 19: MARKET VALUE OF NUTRIENT/COMPOUND REDUCTION

<table>
<thead>
<tr>
<th>Compound</th>
<th>Market Value ($/kg)</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low</td>
<td>High</td>
<td></td>
</tr>
<tr>
<td>Nitrogen</td>
<td>$3.13 - 5.88</td>
<td>USEPA, 2015</td>
</tr>
<tr>
<td>Phosphorus</td>
<td>$2.61 - 57.66</td>
<td>USEPA, 2015</td>
</tr>
<tr>
<td>Total Suspended Solids</td>
<td>$0.03 - 0.13</td>
<td>USEPA, 1998</td>
</tr>
</tbody>
</table>

TABLE 20: LIST OF MARKET VALUES FOR THE COST OF NUTRIENT REDUCTION

<table>
<thead>
<tr>
<th>Source</th>
<th>Compound</th>
<th>Value ($/kg)</th>
<th>Note</th>
</tr>
</thead>
<tbody>
<tr>
<td>EPA Toolkit</td>
<td>Nitrogen</td>
<td>$3.13 - 5.88</td>
<td>Municipal waste treatment</td>
</tr>
<tr>
<td>EPA Toolkit</td>
<td>Phosphorus</td>
<td>$2.61 - 57.66</td>
<td>Municipal waste treatment</td>
</tr>
<tr>
<td>Sano et al. 2004</td>
<td>Phosphorus</td>
<td>$14.87 - 47.71</td>
<td>Reservoir treatment</td>
</tr>
<tr>
<td>Randall et al. 1999</td>
<td>Nitrogen</td>
<td>$0.57 - 4.25</td>
<td>Wastewater treatment plant</td>
</tr>
<tr>
<td>Wiedeman 2000</td>
<td>Nitrogen</td>
<td>$2.58</td>
<td>Wastewater treatment plant</td>
</tr>
<tr>
<td>Faeth 2000</td>
<td>Phosphorus</td>
<td>$0.20 - 18.88</td>
<td>Publicly owned treatment works (BOD and TSS)</td>
</tr>
<tr>
<td>USEPA 1999</td>
<td>Total Suspended Solids</td>
<td>$0.03 - 0.13</td>
<td>Urban Stormwater w/ Treatment</td>
</tr>
</tbody>
</table>

TABLE 20: LIST OF MARKET VALUES FOR THE COST OF NUTRIENT REDUCTION

<table>
<thead>
<tr>
<th>Forest Type</th>
<th>Forest Type Specific</th>
<th>Acres</th>
<th>Estimated Sequestered Carbon (tons/acre/year)</th>
<th>Low</th>
<th>High</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coniferous</td>
<td>Hanlock-Sitka Spruce</td>
<td>151.0</td>
<td>2.544 - 2.544</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Coniferous</td>
<td>Douglas Fir</td>
<td>421.3</td>
<td>2.726 - 2.726</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Coniferous</td>
<td>Mixed Species</td>
<td>778.7</td>
<td>2.544 - 2.726</td>
<td>2.135</td>
<td>2.135</td>
</tr>
<tr>
<td>Deciduous</td>
<td>Alder-Maple</td>
<td>542.2</td>
<td>0.053 - 0.053</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Deciduous</td>
<td>Aspen-Birch</td>
<td>0.1</td>
<td>0.053 - 0.053</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Deciduous</td>
<td>Elm-Ash-Cottonwood</td>
<td>1.2</td>
<td>0.714 - 0.714</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Deciduous</td>
<td>Mixed Species</td>
<td>771.5</td>
<td>0.714 - 2.135</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Not only are municipalities and utilities interested in costs to treat public drinking water sources, but federal and state entities provide data on the costs of nutrient reduction informing permitting costs and guidelines. As a result, multiple institutions had attempted to understand the value of nutrient and compound reduction in public waters. Table 20 below provides a list of market values from a literature review, highlighting those from the EPA selected for this study.

The values selected for this study include the EPA Toolkit values for nitrogen and phosphorus, as well as a separate study from the EPA for TSS. These were chosen based on review of the documents showing the most recent and relevant market values. Relevance was determined with the need to select non-agricultural nutrient reduction costs in order to avoid overestimating market value. Additionally, more recent studies reflect more accurate market conditions for public works construction.

Limitations of Approach: The water quality analysis in this report accounted for a few well studied nutrients or compounds traditionally filtered by conventional infrastructure. In an urban context, stormwater runoff produces three water quality concerns, several of which were not assessed specifically in this report. Sedimentation, road oils and salts, and other common urban heavy metals were not specifically assessed and were therefore omitted.

Details on Calculating Carbon Sequestration and Stock Benefits of Snoqualmie Forests

Following the formula provided in Figure 3, carbon benefits provided by City of Snoqualmie forests are broken down in the steps below:

Part A - Carbon Sequestered by Snoqualmie Forests: Multiple studies were used to estimate carbon sequestration of Snoqualmie forests. Each study was used to collect carbon biomass data, matching values in annual metric tons of carbon sequestered per acre to vegetation types found specifically in the Central Cascade region. Table 21 below lists the taxonomy of forest type groups that exist within City limits, providing their corresponding acreage, carbon biomass, and data sources.

The range above represents how mixed forests may contain multiple forest species, and thus varying carbon sequestration rates. Appendix C shows how each species identified above breaks down by ownership, and what assumptions were made in estimating the amount carbon sequestered each year.
## TABLE 22: CARBON SEQUESTRATION RATES BY OWNERSHIP TYPE

<table>
<thead>
<tr>
<th>Ownership Type</th>
<th>Forest Type</th>
<th>Forest Type Specific</th>
<th>Acres</th>
<th>Seq Carbon Low</th>
<th>Seq Carbon High</th>
</tr>
</thead>
<tbody>
<tr>
<td>Private</td>
<td>Coniferous</td>
<td>Cedar-Hemlock-Sitka Spruce</td>
<td>2.4</td>
<td>2.355</td>
<td>2.355</td>
</tr>
<tr>
<td>Private</td>
<td>Coniferous</td>
<td>Douglas Fir</td>
<td>23.2</td>
<td>2.248</td>
<td>2.248</td>
</tr>
<tr>
<td>Private</td>
<td>Coniferous</td>
<td>Mixed Species</td>
<td>739.2</td>
<td>2.248</td>
<td>2.355</td>
</tr>
<tr>
<td>Private</td>
<td>Deciduous</td>
<td>Alder-Maple</td>
<td>10.5</td>
<td>2.135</td>
<td>2.135</td>
</tr>
<tr>
<td>Private</td>
<td>Deciduous</td>
<td>Aspen-Birch</td>
<td>0.1</td>
<td>0.853</td>
<td>0.853</td>
</tr>
<tr>
<td>Private</td>
<td>Deciduous</td>
<td>Elm-Ash-Cottonwood</td>
<td>11.1</td>
<td>0.714</td>
<td>0.714</td>
</tr>
<tr>
<td>Private</td>
<td>Deciduous</td>
<td>Mixed Species</td>
<td>578.3</td>
<td>0.714</td>
<td>2.135</td>
</tr>
<tr>
<td>Public</td>
<td>Coniferous</td>
<td>Cedar-Hemlock-Sitka Spruce</td>
<td>148.55</td>
<td>2.355</td>
<td>2.355</td>
</tr>
<tr>
<td>Public</td>
<td>Coniferous</td>
<td>Douglas Fir</td>
<td>318.11</td>
<td>2.248</td>
<td>2.248</td>
</tr>
<tr>
<td>Public</td>
<td>Coniferous</td>
<td>Mixed Species</td>
<td>39.50</td>
<td>2.248</td>
<td>2.355</td>
</tr>
<tr>
<td>Public</td>
<td>Deciduous</td>
<td>Alder-Maple</td>
<td>406.18</td>
<td>2.135</td>
<td>2.135</td>
</tr>
<tr>
<td>Public</td>
<td>Deciduous</td>
<td>Aspen-Birch</td>
<td>0</td>
<td>0.853</td>
<td>0.853</td>
</tr>
<tr>
<td>Public</td>
<td>Deciduous</td>
<td>Elm-Ash-Cottonwood</td>
<td>115.48</td>
<td>0.714</td>
<td>0.714</td>
</tr>
<tr>
<td>Public</td>
<td>Deciduous</td>
<td>Mixed Species</td>
<td>42.74</td>
<td>0.714</td>
<td>2.135</td>
</tr>
<tr>
<td>ROW</td>
<td>Coniferous</td>
<td>Cedar-Hemlock-Sitka Spruce</td>
<td>0.0151</td>
<td>2.355</td>
<td>2.355</td>
</tr>
<tr>
<td>ROW</td>
<td>Coniferous</td>
<td>Douglas Fir</td>
<td>0.2318</td>
<td>2.248</td>
<td>2.248</td>
</tr>
<tr>
<td>ROW</td>
<td>Coniferous</td>
<td>Mixed Species</td>
<td>36.39</td>
<td>2.248</td>
<td>2.355</td>
</tr>
<tr>
<td>ROW</td>
<td>Deciduous</td>
<td>Alder-Maple</td>
<td>0.1321</td>
<td>2.135</td>
<td>2.135</td>
</tr>
<tr>
<td>ROW</td>
<td>Deciduous</td>
<td>Aspen-Birch</td>
<td>0</td>
<td>0.853</td>
<td>0.853</td>
</tr>
<tr>
<td>ROW</td>
<td>Deciduous</td>
<td>Elm-Ash-Cottonwood</td>
<td>1.0408</td>
<td>0.714</td>
<td>0.714</td>
</tr>
<tr>
<td>ROW</td>
<td>Deciduous</td>
<td>Mixed Species</td>
<td>112.56</td>
<td>0.714</td>
<td>2.135</td>
</tr>
</tbody>
</table>

Sequestration rates were taken from multiple studies (Smith et al. 2006; Liu et al. 2013; Heath et al. 2003). These studies calculated sequestration rates and carbon storage of several types of forests throughout the US. Tree species located in Snoqualmie were matched with the most closely related forest type. The following assumptions were made on the selection: average age of deciduous urban trees (25 years), average age of rural coniferous trees (70 years), management regime of forest (reforestation - regrowth after clearcut).

### Part B - Market Value of Carbon

Dozens of carbon values already exist in the US markets. As of Q1 2020, the California Carbon Auctions market trading at $17.84 per ton of carbon (California Air Resources Board, 2020). This value was adopted for this report, in addition to another that comes from City Forest Credit (CFC), an organization that established a carbon offset market and urban forest carbon protocol for community forests. A recent CFC carbon transaction in King County at $22.00 per ton of carbon not only establishes a local carbon market value, but also highlights the opportunity for a funding mechanism for the City of Snoqualmie.

There exist multiple US carbon markets. In addition to those used in this report, several others have been established, some estimating the social cost of carbon. The social cost of carbon is defined as at attempt to be a comprehensive estimate of climate change damages and includes, among other things, changes in net agricultural productivity, human health, property damages from increased flood risk and changes in energy system costs, such as reduced costs for heating and increased costs for air conditioning (USEPA, 2016). The Center for Environmental Quality’s Interagency Working Group on the Social Cost of Carbon published a 2011 report showing that carbon costs approximately $46.05 to 142.33 per metric ton (Interagency Working Group on Social Cost of Carbon, 2013).

### Carbon Stock Calculations

The value of carbon stocks in Snoqualmie’s forests is calculated by combining the price of carbon with peer reviewed estimates of carbon stocks for Snoqualmie’s forest types. Part A and B following Figure 3.

**Part A - Carbon Stock in Snoqualmie forests:** Multiple studies were used to estimate carbon stock of Snoqualmie forests. These studies reported carbon biomass allowing for the matching of values in metric tons of carbon stored per acre to vegetation types found specifically in the Central Cascade region with monetary values provided above. Table 23 below lists the taxonomy of forest type groups that exist within City limits, providing their corresponding acreage and carbon biomass.
Table 23: Carbon Stock by Forest Type

<table>
<thead>
<tr>
<th>Forest Type</th>
<th>Forest Type Specific</th>
<th>Estimated Carbon Stock (tC/acre)</th>
<th>Low</th>
<th>High</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coniferous</td>
<td>Cedar-Hemlock-Sitka Spruce</td>
<td></td>
<td>237.9</td>
<td>237.9</td>
</tr>
<tr>
<td>Coniferous</td>
<td>Douglas Fir</td>
<td></td>
<td>242.8</td>
<td>242.8</td>
</tr>
<tr>
<td>Coniferous</td>
<td>Mixed Species</td>
<td></td>
<td>237.9</td>
<td>242.8</td>
</tr>
<tr>
<td>Deciduous</td>
<td>Alder-Maple</td>
<td></td>
<td>264.6</td>
<td>264.6</td>
</tr>
<tr>
<td>Deciduous</td>
<td>Aspen-Birch</td>
<td></td>
<td>117.1</td>
<td>117.1</td>
</tr>
<tr>
<td>Deciduous</td>
<td>Elm-Ash-Cottonwood</td>
<td></td>
<td>132.3</td>
<td>132.3</td>
</tr>
<tr>
<td>Deciduous</td>
<td>Mixed Species</td>
<td></td>
<td>132.3</td>
<td>264.6</td>
</tr>
</tbody>
</table>

Table 24: Carbon Stock by Ownership Type

<table>
<thead>
<tr>
<th>Ownership Type</th>
<th>Acres by Ownership</th>
<th>Total Carbon Stock Value</th>
<th>Low ($/yr)</th>
<th>High ($/yr)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Private</td>
<td>1,385</td>
<td>9,927,280</td>
<td>$4,690,993</td>
<td>$7,548,323</td>
</tr>
<tr>
<td>Public</td>
<td>1,300</td>
<td>14,467,061</td>
<td>$5,237,195</td>
<td>$6,918,738</td>
</tr>
<tr>
<td>Total</td>
<td>2,685</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

In fact, natural systems can even appreciate in value over time, being composed of living and growing organisms. Of course, natural systems are only renewable if they are protected against degradation, development, unsustainable extraction, and other impacts. As long as the natural infrastructure of the City of Snoqualmie is not degraded or depleted below its ability to renew itself, this flow of value will likely continue into the future.

Discounting can be adjusted for different types of assets and is designed to reflect the following:
- Time preference of money. This is the value that people put on something for use now, as opposed to the value they assign for that use or income at a later date.
- Opportunity cost of investment. A dollar in one year's time has a present value of less than a dollar today, because a dollar today can be invested for a positive return in one year.
- Depreciation. Built assets such as roads, bridges and levees deteriorate and lose value due to wear and tear. Eventually, they must be replaced.

Discounting has limitations that may result in under- or overestimates when applied to natural infrastructure. Using a discount rate assumes that the benefits humans reap in the present are more valuable than the benefits provided to future generations, or even to this generation in just a few years into the future. Natural infrastructure assets should be treated with lower discount rates than built capital assets because they tend to appreciate over time, rather than depreciate. The City of Snoqualmie is providing more water, to more people, for a greater total value than it provided 50 or 100 years ago. Unlike a factory that is 50 years old, a protected watershed will appreciate in value if it remains mostly intact and experiences an increase in demand for its services. Additionally, most of the benefits that a natural asset such as forests provides reside in the distant future, whereas most of the benefits of built capital reside in the near-term, with few or no benefits provided into the distant future. Both types of assets are important to maintain a high quality of life, but each operates on a different time scale. It would be unwise to try to treat human time preference for a forest like it were a building, or that of a building as if it were a disposable coffee cup. Thus, a low discount rate better reflects the asset value of the City of Snoqualmie's natural assets.

The net present value of the City's forest ecosystem services was calculated using two discount rates over 50 years: 2.75% and 0% percent. The discount rate of 0% percent reflects the fact that human population and future development will degrade the City's ecosystems and reduce their ability to provide ecosystem services if they are not adequately protected. This process is analogous to depreciation of a built capital asset. Federal agencies like the Army Corps of Engineers use a 2.75% percent discount rate for water resource projects (Powers, 2013).

The cut-off date of 50 years is arbitrary. Clearly, far greater value yet resides for the many generations who should benefit from the watershed well beyond the 50-year point, assuming the watershed is adequately protected. Currently, the value of economic assets is generally not considered beyond 50 years. This study follows that tradition. With no cut-off for value, any renewable resource would register an infinite value. However, the value of watersheds does extend far beyond a 50-year period, and better tools for capturing that value are being developed by economists.
APPENDIX E: RESOURCES TO SUPPORT URBAN FORESTRY PROGRAM

KING COUNTY PROGRAMS

King County offers a diversity of programs that can support City of Snoqualmie in your goal of developing and sustaining a thriving urban forestry program that maintains healthy and thriving natural infrastructure.
  • Transfer of Development Rights
  • In-lieu fee mitigation
  • Land Conservation Initiative
  • Forest Carbon

King County Program Contacts:

Michael Murphy
Transfer of Development Rights and In Lieu Fee Mitigation
Water and Land Resources Division
Department of Natural Resources & Parks
(206) 477-4781
Michael.Murphy@kingcounty.gov

Kathleen Farley Wolf
Forestry Program
King County Department of Natural Resources & Parks
201 S. Jackson Street, Suite 600
Seattle, WA 98104
(206) 477-4363
kfarleywolf@kingcounty.gov

CITY FOREST CREDITS

City Forest Credits is a non-profit, third-party verified city forest carbon registry based out of Seattle, WA. This program has protocols and funding partners that could be very valuable in supporting sustainable growth of Snoqualmie’s urban forestry program.

Mark McPherson
Executive Director & Founder
999 Third Ave #4600
Seattle, WA 98104
(206) 470-7696
mark@cityforestcredits.org

Liz Johnston
Director
liz@cityforestcredits.org

APPENDIX F: STEWARDSHIP AND OPPORTUNITIES FOR CITY OF SNOQUALMIE

Through this assessment, the TKC team provides a robust and scientifically proven analysis of the City’s natural infrastructure and its ecosystem service value. Using the outputs from this analysis, the TKC team collaborated with technical experts in a variety of arenas (stormwater, urban forestry, land use) and City staff to develop potential policy and funding recommendations for the City to consider in sustaining the urban forestry program. The following discussion expands on priorities for implementation outlined in Table 8 of this report.

STORMWATER FEES Use stormwater fees to fund the urban forestry program based on values set in this Natural Infrastructure Assessment and regional examples established in the Herrera Environmental Consultants Tech Memo (Appendix G).

ACTIONS The Herrera Report provides a thorough analysis of 11 municipalities, in the PNW and across the US. The data gathered includes recommendations for: municipal codes, ordinances and council to support stormwater utility rates tied to urban forest planning. Recommendations include:
  • Establish a stormwater fee rate structure based on local data and regional examples

ADDITIONAL OPPORTUNITIES

CITY FOREST CREDITS Explore City Forest Credits and King County Forest Credits carbon credit programs to fund tree planting and preservation projects (Appendix E)

ACTIONS The City Forest Credits Program provides verified third-party certified carbon credits available for tree planting and preservation projects. We recommend, Snoqualmie staff partner with City Forest Credits (and potentially King County) to develop a pilot project for City Forest Credit certification. If proven fruitful in securing credits and a carbon funder, this project could be the beginning of a long-term sustainable funding source for Snoqualmie’s Urban Forestry Program.
  • Example: Treasure Valley City Forest Credits Program

UPDATE CURRENT LAND COVER AND URBAN TREE CANOPY GIS DATABASE

ACTIONS Update current land cover and urban tree canopy GIS database – As recommended in Snoqualmie’s Urban Forest Management Plan, and throughout the process of completing this assessment, an updated and more robust land cover mapping and urban tree canopy GIS database will be valuable to inform more accurate and beneficial data for the City’s Urban Forestry Program.

EVALUATE RECREATION AND TOURISM ECOSYSTEM SERVICE VALUES

In discussions with staff, while analyzing potential ecosystem services to value through this assessment, there was an interest in better understanding the value of recreation and tourism.

ACTIONS Snoqualmie staff can develop budget requests to support funding of a robust ecosystem services valuation for recreation and tourism within the City.

KING COUNTY TRANSFER OF DEVELOPMENT RIGHTS (TDR) PROGRAMS

Investigate programs to enhance infrastructure preservation in high priority landscapes

ACTIONS Meet with King County staff, identify potential lands for conservation / preservation and pursue opportunities to capitalize on economic opportunities in preserving land from potential future development.

FEMA DISASTER DECLARATION PLAN

A city-wide plan, based on the ecosystem service valuation platform, captures values for any future city flood disaster mitigation planning.

BACKGROUND & ACTIONS The United States Federal Emergency Management
Agency (FEMA) became the first federal agency to adopt ecosystem service valuation in formal policy. Faced with rising natural disaster costs and climate uncertainty, FEMA approved Mitigation Policy FP-108-024-01 in June of 2013 (Federal Emergency Management Agency, 2013), which allows the inclusion of ecosystem services in benefit-cost analysis for acquisition projects. This policy is being applied for all flood disaster mitigation in all 50 states, for all private residential, business, public utility, city, county, and state impacted infrastructure. Under this policy, FEMA applies ecosystem service values nationwide.

On May 13, 2016, FEMA expanded the application of ecosystem services to all FEMA project types, including fire and drought. FEMA now allows restoration of streams and floodplains that mitigate the effects of drought and wildfire. Actions such as reforestation, soil stabilization, and flood diversion are now eligible. These wildfire and drought related mitigation activities are applicable to both the Hazard Mitigation Grant Program (following disaster declaration), as well as the Pre-Disaster Mitigation program.

While competitive at varying degrees, states and counties are able to apply for both funding sources. This suggests that the values derived in this report can be applied and used in Benefit Cost Analysis when applying for HMA grants following a disaster. For example, if a fire were to occur within the City of Snoqualmie boundary, King County or the City of Snoqualmie could use the ecosystem services values calculated in this report to improve the Benefit Cost Analysis ratio if a HMA grant were applied for. This FEMA policy represents an important acknowledgement of the importance of ecosystem services loss in the event of disaster and provides an opportunity for funding to recover from such an event.

INTERLOCAL WATERSHED INVESTMENT DISTRICT

BACKGROUND & ACTIONS. Consider this problem: In one Washington State watershed (WRIA 9), 16 stormwater districts invest significantly to pipe water more efficiently into creeks and rivers as impermeable surface increases, while a county-wide flood district attempts to invest in flood risk reduction. City funded infrastructure is contributing to higher downstream peak flows and flood risks while the County’s funding is increasingly devoted to larger levees and levee repairs. There’s an “Infrastructure conflict” and a vicious cycle of increasing flood damage and infrastructure (levee) costs.

Planning at a watershed level, it would be reasonable for downstream cities and the Snohomish County to pay for part of the City of Snoqualmie’s green infrastructure stormwater costs because they receive flood risk reduction benefits. Unlike traditional stormwater systems that push more water downstream, the City of Snoqualmie green infrastructure reduces downstream peak flows.

The City of Snoqualmie is in Water Resource Inventory Area #7. Improving the WRIA 7 structure to include tax district funding transfers for services would increase income to Snoqualmie as a city higher in the watershed that provides significant green infrastructures for downstream communities.
REFERENCES


King County. 2016. King County, Washington Surface Water Design Manual. Prepared by the King County Department of Natural Resources.


US Environmental Protection Agency (USEPA). 2015. A Compilation of Cost Data Associated with the Impacts and Control of Nutrient Pollution


APPENDIX G: HERRERA ENVIRONMENTAL CONSULTANTS TECHNICAL MEMO
Date: August 14, 2017
To: King Conservation District, K4C-KCD Sustaining Urban Forests Working Group
From: Rebecca Dugopolski, PE, Herrera Environmental Consultants
Subject: Stormwater Utility Rates Supporting Urban Tree and Urban Forest Planning, Planting, and Management

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INTRODUCTION

The King County-Cities Climate Collaboration (K4C) is a collaboration of King County and 13 cities that are working on enhancing the effectiveness of local government climate and sustainability action. K4C program areas include green building, using and producing renewable energy, sustainability outreach and education, and alternative transportation. King Conservation District (KCD) and a subset of K4C cities developed a working group focused on sustaining urban forests. The K4C-KCD Sustaining Urban Forests Working Group (which includes KCD, City of Snoqualmie, City of Normandy Park, City of Burien, City of Sammamish, and recently the City of Kirkland) was interested in developing an ordinance and code language that included urban tree and urban forest planning, planting, and management as a viable stormwater program component, to authorize expenditure of stormwater or surface water utility rates on urban tree and urban forest planning, planting, and management. This memorandum summarizes approaches taken by other Pacific Northwest and East Coast jurisdictions related to this topic and includes an implementation plan for developing municipal code language revisions. This memorandum is organized into the following sections:

- Background
- Documents Reviewed
- Summary of Findings
- Urban Forestry and Stormwater Program Budget Comparison
- Recommendations
- Implementation Plan
- Work Products (attachments):
  - Code Template
  - Ordinance Template
  - Council Report Template

BACKGROUND

City and County stormwater or surface water utility funds support a wide variety of activities related to stormwater management, but are often not well documented in the City/County municipal code language. Several cities and counties are interested in providing clarity to rate
payers regarding the broad range of stormwater management activities that are supported by their stormwater/surface water utility rate.

The cities participating in this working group are required to comply with the National Pollutant Discharge Elimination System (NPDES) Phase II Municipal Stormwater Permit, which includes requirements for public education and outreach, public involvement and participation; illicit discharge detection and elimination; controlling runoff from new development, redevelopment, and construction sites; and municipal operations and maintenance. The NPDES Phase II Municipal Stormwater Permit also includes measures to minimize loss of native vegetation as one of the three primary goals to be addressed during the integration of low impact development (LID) principles into local development-related codes, rules, standards, and enforceable documents that was recently completed by most of the Phase II permittees.

The 2012 Stormwater Management Manual for Western Washington (SWMMWW), prepared by the Washington State Department of Ecology (Ecology) and amended in 2014, recognizes the importance of preserving native vegetation and retaining trees to provide stormwater flow control benefits such as interception, transpiration, and increased infiltration. Jurisdictions that adopt Ecology’s 2012 SWMMWW, as amended in 2014, must allow provisions for providing a flow control credit for retained and newly planted trees. The flow control credit is applied only to trees that meet setback requirements, are protected during construction activities, are viable for long-term retention (i.e., in good health and compatible with proposed construction), and have a canopy overhanging proposed or existing impervious surfaces.

The goal of this project was to review municipal code language and supporting documents from several Pacific Northwest jurisdictions and East Coast jurisdictions with strong urban forestry programs and funding to determine how the linkage between stormwater/surface water utility funding; habitat restoration; and urban tree and urban forest planning, planting, and management is currently being made. This information, and working sessions with the working group, was used to develop a set of work products that can be implemented by those in the working group as well as by other interested jurisdictions in the Pacific Northwest.

**DOCUMENTS REVIEWED**

Municipal code language and Urban Forest Management Plans from the following jurisdictions were reviewed:

- City of Redmond, Washington
- City of Vancouver, Washington
- City of Everett, Washington
- City of Kirkland, Washington
• City of Tacoma, Washington
• City of Longview, Washington
• City of Portland, Oregon
• City of Fairview, Oregon
• City of Gresham, Oregon
• City of Milwaukee, Wisconsin
• Baltimore County, Maryland

SUMMARY OF FINDINGS

City of Redmond, Washington

The City of Redmond’s Urban Forestry program operates with a $435,000 per year budget for maintenance and management activities for trails, street trees, support facilities, restoration-related activities, and support to volunteers (T. Kluger, personal communication, March 28, 2017). The City’s Tree Fund is managed by an interdepartmental team composed of staff from Parks and Recreation, Planning and Community Development, and the Natural Resources Division of Public Works. The Tree Fund can be used for planting trees, planting preparation, and work to save existing canopy trees threatened by invasive species.

The City of Redmond does not include specific language regarding Urban Forestry as part of their Stormwater Management Utility code (Chapter 13.18); however, their 20-year Forest Management Plan (Green Redmond Partnership 2009) includes the following language:

• “Much of the funding that the Natural Resources Division uses for stream buffer restoration and volunteer events comes from the Stormwater Fund, which is maintained by a standard fee levied on all Redmond residents and businesses as a fee per impervious unit. It is managed by Natural Resources and can be used for stormwater issues, outreach and education, planning, research, or maintaining water quality related to stormwater.”

• “The Stormwater Fund can be used for stormwater issues, education, planning, research, or maintaining water quality relating to stormwater. This funding could potentially be directed toward stream or wetland restoration in parks where stormwater management is a concern.”
City of Vancouver, Washington

Funding for the City of Vancouver’s Urban Forestry Program comes from surface water management fees (97 percent) and compensatory mitigation via a Tree Fund (3 percent) (C. Ray, personal communication, July 6, 2016).

The City of Vancouver does not include specific language regarding Urban Forestry as part of their Stormwater Management – Regulations and Charges code (Chapter 14.09); however, their Urban Forestry Management Plan (Vancouver 2007) includes the following language:

- “In a renewed effort to not only protect the dwindling urban forest but also significantly restore canopy coverage, City Council approved a funding program for Urban Forestry in 2004, utilizing a portion of its surface water management fees in recognition of the green infrastructure and stormwater management benefits of trees.”

- “Currently, Public Works supports Urban Forestry through dedication of a portion of the City’s surface water management fees. These funds are used specifically to provide City services related to canopy restoration: coordination of contractor and volunteer tree planting efforts, outreach and education to promote environmental stewardship, and enhanced customer service. The use of this funding source is in recognition of the importance of the urban forest for stormwater management functions, water quality protection, and Clean Water Act, Clean Air Act, and Endangered Species Act compliance.”

City of Everett, Washington

The City of Everett’s Urban Forestry program is currently funded by the Parks Department operating budget; however, one of the long-term funding sources that will be evaluated as part of the 20-Year Forest Management Plan (Green Everett Partnership 2013) includes:

- “Financial nexus establishment between the management of forested parkland as stormwater management infrastructure and for other ecosystem services related to utility infrastructure.”

The City of Everett does not currently list allowable expenditures of their surface water management rate in their municipal code (Chapter 14.60).

City of Kirkland, Washington

The City of Kirkland does not include specific language regarding Urban Forestry as part of their Surface Water Utility code (Chapter 15.56); however, their 20-year Forest Restoration Plan (Green Kirkland Partnership 2008) includes the following language:
• “The Surface Water Utility (SWU) is part of the Public Works Department. SWU interests intersect with Green Kirkland Partnership forest restoration efforts that directly contribute to water quality, stormwater management and habitat, especially near streams. Parks will collaborate with SWU when planning restoration events along streams. In return, SWU will provide guidance and support, continue public outreach and education on the importance of forested natural areas to water quality and other Public Works programs, engage volunteers in a water quality monitoring program for lakes and streams such as Forbes Lake, Totem Lake, and Forbes Creek, and conduct city-funded riparian and fish passage habitat improvements.”

• Consider increasing "... fees or rates for utility ratepayers for management of forested natural areas as stormwater management (and other ecosystem services) infrastructure."

The City of Kirkland’s Surface Water Utility currently supports a half-time (20 hours per week) Urban Forestry position ($47,558) and 50 percent of a full-time Field Arborist position (D. Powers, personal communication, July 13, 2016).

**City of Tacoma, Washington**

The City of Tacoma’s Urban Forestry Program is funded through the storm and surface water sewerage charge. The Storm and Surface Water Sewerage Charge code (Chapter 12.08) does not include specific language regarding Urban Forestry; however, the City’s website lists the following as supported by the City’s surface water rate:

• Protection of Commencement Bay, Puget Sound and their tributaries from polluted runoff

• Operation and maintenance of stormwater structures, including 500 miles of pipe, 22,000-plus catch basins (storm drains), four pump stations and numerous detention ponds/structures protecting the area from flooding

• Innovative stormwater treatment systems

• Stormwater system inspections and monitoring

• Habitat restoration in wetlands, tidelands and uplands

The City of Tacoma’s Tree Coupon Program for residential trees is also supported by the City’s surface water rate. The Tree Coupon Program began in 2011 and is now in its fourth season (2015–2016).
City of Longview, Washington

The City of Longview’s Urban Forestry Program operates with a $1,191,560 budget; $750,000 (63 percent) of which comes from the Storm Water Utility fund (C. Nedved, personal communication, September 22, 2016).

The City of Longview does not include specific language regarding Urban Forestry as part of their Stormwater Utility code (Chapter 15.80). The municipal code broadly states that the “storm water utility shall have authority and responsibility ... for planning, design, construction, maintenance, administration, and operation of all city stormwater conveyances and facilities.”

City of Portland, Oregon

The City of Portland’s Urban Forestry Program is funded primarily through the general fund and grants; however, a portion of the Bureau of Environmental Services’ “Grey to Green Initiative” uses sewer and stormwater fees to fund natural area acquisition and watershed revegetation, including tree planting (Portland State University 2010).

The City of Portland defines stormwater management services in their municipal code (Chapter 17.36) as the following:

- “Stormwater Management Services” means services and actions used to collect, convey, detain, retain, treat or dispose of stormwater. These services include managing stormwater runoff from public streets, mitigating flooding, preventing erosion, improving water quality of stormwater runoff, collecting and conveying stormwater runoff from private properties when runoff exceeds the capacity of private facilities to manage stormwater onsite, mitigating impacts to natural habitats caused by stormwater runoff, and protecting properties and natural habitats from hazardous soils and materials that are discharged from private properties and public rights-of-way.”

City of Fairview, Oregon

The City of Fairview funds their Urban Forestry Program through stormwater fees and the City’s general fund (Portland State University 2010). Urban forestry is not explicitly listed as an approved use for the storm drainage utility fund in the City’s municipal code (Chapter 13.30); however, the language included in the City’s code may be a useful model for this project. The City’s Storm Drainage Utility Fund section of the municipal code states the following:

- “... money in the drainage utility fund shall be used for planning, design, construction, operation, maintenance and administration of storm drainage facilities, including repayment of indebtedness, and for all expenses for the operation and management of the storm drainage utility. Expenditures from this fund need not be identified to any particular revenue source.”
City of Gresham, Oregon

The City of Gresham funds their Urban Forestry Program through stormwater fees, development fees, and grants (Portland State University 2010). The 2007–2008 operating budget for urban forestry was $600,000 (Portland State University 2010). Urban forestry is not explicitly listed as an approved use for the stormwater drainage utility fund in the City's municipal code (Chapter 3.60); however, the language included in the City's code may be a useful model for this project. The City's Storm Drainage Utility Fund municipal code states:

- “Money in the stormwater utility fund shall be used for planning, designing, and constructing the public stormwater system; for the regulation, maintenance, and administration of the public stormwater system; for providing all stormwater services, including the repayment of any indebtedness incurred before or after the effective date of this ordinance; and for all expenses related to the operation and management of the stormwater utility."

- Stormwater service is defined as “the operation of the city's stormwater utility in providing programs and facilities for maintaining, improving, regulating, collecting, and managing stormwater quantity and quality within the city's service area. This includes meeting regulatory requirements for protecting, monitoring, and reporting on water quality and on species listed under the Endangered Species Act."

City of Milwaukee, Wisconsin

The City of Milwaukee has been identified as a leader in funding their urban forestry program through its stormwater management fee (Gulick, undated). The City approved a small increase to their stormwater management fee and earmarked it for the urban forestry program. Urban forestry is not explicitly listed as an approved use for the stormwater management charge in the City’s municipal code (Chapter 309); however, the language included in the City’s code may be a useful model for this project. The City’s Stormwater Management Charge municipal code states:

- “In order to protect the health, safety and welfare of the public, the common council establishes a storm water management charge to support operation and maintenance of the storm water management components of the city sewerage system. The city may use storm water management charge revenues to, without limitation by reason of enumeration, acquire, construct, lease, own, operate, maintain, extend, expand, replace, clean, dredge, repair, conduct, manage and finance such facilities as are deemed to be proper and reasonably necessary for management of storm water and other surface water discharge within the city. The common council further finds that those elements of the storm water management system that provide for the collection and disposal of storm water are of benefit to all real property within the city of Milwaukee, including property not presently served by that system. The costs of operating and maintaining the storm water management system and financing necessary repairs, replacement,
improvements and extensions of the system should, to the maximum extent possible, be allocated in direct relationship to contributions of storm water to the system."

**Baltimore County, Maryland**

Baltimore County’s Urban Forestry Program receives funding through the stormwater remediation fee (Article 34, Title 4) does not include specific language regarding Urban Forestry; however, the County’s website lists the following activities as supported by the stormwater remediation fund:

- Street sweeping
- Storm drain cleaning
- Stormwater facility inspection, maintenance and upgrades
- Shoreline stabilization
- Urban canopy tree planting
- Reforestation
- Stream restoration
- Monitoring, planning and programs
URBAN FORESTRY AND STORMWATER PROGRAM BUDGET COMPARISON

Table 1 was developed to compare the Urban Forestry Program budget, Stormwater/Surface Water Utility budget, Stormwater/Surface Water Utility rate for single-family residential properties, and population for cities where funding information was readily available and through personal communication with a few local jurisdictions.

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Redmond, WA</td>
<td>$435,000b</td>
<td>$29,941,265</td>
<td>$16.56</td>
<td>54,144</td>
</tr>
<tr>
<td>Vancouver, WA</td>
<td>$653,864c</td>
<td>$25,434,839</td>
<td>$8.79</td>
<td>161,791</td>
</tr>
<tr>
<td>Kirkland, WA</td>
<td>Not applicable; however does support 1 FTEd</td>
<td>$23,888,452</td>
<td>$16.87</td>
<td>48,787</td>
</tr>
<tr>
<td>Longview, WA</td>
<td>$1,191,560e</td>
<td>$6,484,000</td>
<td>$10.09</td>
<td>36,848</td>
</tr>
<tr>
<td>Gresham, OR</td>
<td>$600,000f</td>
<td>$6,025,910</td>
<td>$10.34</td>
<td>105,594</td>
</tr>
</tbody>
</table>

a Note: Operating budget does not include funding for Capital Improvement Program (CIP) projects.
e Source: C. Nedved, personal communication, September 22, 2016.
f Source: Portland State University 2010.

RECOMMENDATIONS

Based on the jurisdictional code review for this memorandum, no specific examples linking urban forestry and stormwater utilities were found in the municipal code. Although urban forestry or associated components were not specifically listed as an allowable expenditure for the stormwater utility fee in the municipal code language, several Urban Forest Management Plans, studies, or jurisdictional websites listed the activities summarized in Table 2 as allowable stormwater utility expenditures related to urban forestry. None of the municipal code language reviewed explicitly prohibited stormwater utility fees being used to support urban forestry programs.
Table 2. Allowable Storm and Surface Water Expenditures Related to Urban Forestry.

<table>
<thead>
<tr>
<th>Activity</th>
<th>Redmond, WA</th>
<th>Vancouver, WA</th>
<th>Kirkland, WA</th>
<th>Tacoma, WA</th>
<th>Portland, OR</th>
<th>Baltimore County, MD</th>
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<tbody>
<tr>
<td>Public Outreach and Education</td>
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<td>X</td>
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</tr>
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<td>Stream or Wetland Restoration</td>
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<td></td>
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</tr>
<tr>
<td>(Riparian Planting)</td>
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<td>Watershed Revegetation</td>
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<td>Tree Planting</td>
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</tr>
</tbody>
</table>

Code language from the City of Fairview, Oregon; City of Gresham, Oregon; or the City of Milwaukee, Wisconsin, were considered as potential models for listing allowable uses of a stormwater utility fee. All three jurisdictions provided a list of allowable uses (although fairly general in nature) for the stormwater utility fund.

IMPLEMENTATION PLAN

The working group developed a set of implementation tools that can be modified and tailored to specific City/County needs. The three implementation tools developed as part of this project and included as appendices to this memorandum include:

1. Code Template
2. Ordinance Template
3. Council Report Template

The working group is also developing supporting tools to assist City/County staff with communicating and proposing the code, ordinance, and council report to decision makers and citizens in their communities.

Code Template

The code template developed for this project is included as Appendix A. Two levels of municipal code were developed: minimum recommended language and expanded language. The minimum recommended language includes a shorter purpose statement, a streamlined list of regulatory requirements, and fewer stormwater management services than the expanded
language. It was anticipated that this more streamlined code may be easier for some City/County councils to review and approve. The expanded language includes a more robust purpose statement, a more detailed list of regulatory requirements, and additional stormwater management services. Additional items in the expanded language are shown in blue text to highlight the differences between the two code templates.

Alternate terminology (City versus County, Stormwater versus Surface Water Utility Fund) is included in brackets in both code examples. Yellow highlighted text should be filled in by the City or County with the appropriate municipal code section reference. Both code templates include recommended language and terminology, but should be tailored by the City/County for consistency with terminology used by that jurisdiction.

**Ordinance Template**

The ordinance template developed for this project is included as Appendix B. A single ordinance was developed that includes two optional whereas statements for a more robust ordinance. Similar to the code template, alternate terminology is included in brackets; yellow highlighted text should be filled in by the City or County; and light blue text designates expanded language. The City/County will need to provide a local definition of urban tree and urban forest planning, planting, and management. A whereas statement was also included for each City/County to add specific tailored language regarding the importance of urban tree protection and management in their jurisdiction (e.g., Tree City USA designation, adoption of an Urban Forestry Management Plan).

**Council Report Template**

Several jurisdictions in the working group typically provide a short council report or memorandum along with request for code changes. A one-page council report was also developed for this project to serve this purpose and is included as Appendix C. Similar to the code template and ordinance, alternate terminology is included in brackets; yellow highlighted text should be filled in by the City or County; and light blue text designates expanded language. Each of the statements in the council report could be expanded upon for a longer council report or memorandum. For a more technical memorandum, specific values regarding tree leaf canopy rainfall retention could be added from a Stormwater Magazine article titled "Give Me the Numbers: How trees and urban forest systems really affect stormwater runoff" published in the October 2016 issue (Teague and Kuehler 2016). Specific information regarding local requirements and the importance of trees could be added for an expanded council report or memorandum.
REFERENCES


APPENDIX A

Code Template
CODE TEMPLATE

STORMWATER UTILITY RATES SUPPORTING
URBAN TREE AND URBAN FOREST PLANNING, PLANTING, AND MANAGEMENT

Minimum Recommended Language

[Alternate terminology is included in brackets]

XX.XX.XXX Stormwater [or Surface Water] Utility Fund

A. In order to protect the health, safety, and welfare of the public; collect, convey, manage, and mitigate the quantity and quality of stormwater runoff; and meet the regulatory requirements of the National Pollutant Discharge Elimination System municipal stormwater permit, a Stormwater [or Surface Water] Utility Fund has been established to support City [or County] stormwater management activities.

B. The City [or County] may use Stormwater [or Surface Water] Utility fund revenues for planning, design, construction, operations and maintenance, replacement, and administration of the public stormwater system. Stormwater management services include, but are not limited to, public education and outreach; illicit discharge detection and elimination; stormwater site plan review; construction inspections; stormwater facility inspections; habitat restoration; and urban tree and urban forest planning, planting, and management.

Expanded Language

[Additional terms are shown in blue text, alternate terminology is included in brackets]

XX.XX.XXX Stormwater [or Surface Water] Utility Fund

A. In order to protect the health, safety, and welfare of the public; collect, convey, manage, and mitigate the quantity and quality of stormwater runoff; mitigate flooding; prevent erosion; and meet the regulatory requirements of the National Pollutant Discharge Elimination System municipal stormwater permit, Clean Water Act, Clean Air Act, Endangered Species Act, Shoreline Master Program, and the City [or County] critical areas ordinance; a Stormwater [or Surface Water] Utility Fund has been established to support City [or County] stormwater management activities.

B. The City [or County] may use Stormwater [or Surface Water] Utility fund revenues for planning, design, construction, operations and maintenance, replacement, acquisition, and administration of the public stormwater system. Stormwater management services include, but are not limited to, public education and outreach; illicit discharge detection and elimination; stormwater site plan review; construction inspections; stormwater facility inspections; design and installation of innovative treatment systems to reduce urban stormwater pollutant concentrations and runoff volumes; stormwater monitoring; street sweeping; shoreline stabilization; habitat restoration; urban tree and urban forest planning, planting, and management; and urban tree canopy assessment and monitoring.
ORDINANCE TEMPLATE

STORMWATER UTILITY RATES SUPPORTING URBAN TREE AND URBAN FOREST PLANNING, PLANTING, AND MANAGEMENT

ORDINANCE NO. XXXX

AN ORDINANCE of the City of XXX [or County], Washington, amending XXX to list specific activities that can be supported by the City [or County] Stormwater [or Surface Water] Utility Fund.

WHEREAS, the Stormwater [or Surface Water] Utility Fund supports a wide variety of activities related to stormwater management; and

WHEREAS, the City [or County] wants to provide clarity to rate payers regarding the broad range of stormwater management activities that are supported by their Stormwater [or Surface Water] Utility rate; and

WHEREAS, the City [or County] is required to comply with the National Pollutant Discharge Elimination System (NPDES) Phase II [or Phase I] Municipal Stormwater Permit, which includes requirements for public education and outreach; public involvement and participation; illicit discharge detection and elimination; controlling runoff from new development, redevelopment, and construction sites; and municipal operations and maintenance; and

[optional: WHEREAS, the NPDES Phase II [or Phase I] Municipal Stormwater Permit and included measures to minimize loss of native vegetation as one of the three primary goals to be addressed during the integration of low impact development principles into local development-related codes, rules, standards, and enforceable documents]

[optional: WHEREAS, the Washington State Department of Ecology recognizes that urban trees provide environmental benefits such as energy conservation, improved air quality, carbon sequestration, reduced heat island effect, pollutant removal, and habitat preservation or formation; and]

WHEREAS, the Washington State Department of Ecology Stormwater Management Manual for Western Washington recognizes the importance of preserving native vegetation and retaining trees to provide stormwater flow control benefits such as interception, transpiration, and increased infiltration; and
WHEREAS, several Pacific Northwest jurisdictions have recognized the importance of trees in relation to stormwater benefits and have designated a portion of their Stormwater for Surface Water Utility Fund to support urban tree and urban forest planning, planting, and management,

WHEREAS, several Pacific Northwest jurisdictions have recognized the impacts from stormwater runoff on surface water quality and have designated a portion of their Stormwater for Surface Water Utility Fund to support habitat restoration [optional: and shoreline stabilization] activities,

WHEREAS, the City [or County] defines urban tree and urban forest planning, planting, and management as XXX

WHEREAS, the City [or County] recognizes the importance of urban tree and urban forest planning, planting, and management [optional: through its Tree City USA designation and the adoption of an Urban Forestry Management Plan [or Forest Management Plan, Forest Restoration Plan]]

NOW, THEREFORE, THE CITY [or County] COUNCIL OF XXXX, WASHINGTON DOES HEREBY ORDAIN AS FOLLOWS:

Amend Chapter XX of the City [or County] code. Chapter XX is hereby amended as follows:

[insert Stormwater Utility Rates Supporting Urban Forest Planning, Planting, and Management code template with preferred language here]
APPENDIX C

Council Report Template
COUNCIL REPORT TEMPLATE

TO: XXXX, City [or County] Council
FROM: [name], [department]
DATE: [date]
SUBJECT: Stormwater [or Surface Water] Utility Rates Supporting Urban Tree and Urban Forest Planning, Planting, and Management

Background
The 2012 Stormwater Management Manual for Western Washington (SWMMWW), prepared by the Washington State Department of Ecology (Ecology) and amended in 2014, recognizes the importance of preserving native vegetation and retaining trees to provide stormwater flow control benefits such as interception, transpiration, and increased infiltration. In addition, the K4C-KCD Sustaining Urban Forests Working Group (comprising King Conservation District [KCD] and the Cities of Snoqualmie, Normandy Park, Burien, and Sammamish) supports the adoption of municipal code language that identifies urban forestry programs as a viable stormwater [or surface water] utility program component and, by extension, authorizes expenditure of stormwater [or surface water] utility funding on habitat restoration and urban tree and urban forest planning, planting, and management.

Analysis
Jurisdictions that adopt Ecology’s 2012 SWMMWW, as amended in 2014, must allow provisions for providing a flow control credit for retained and newly planted trees. The flow control credit is applied only to trees that meet setback requirements, are protected during construction activities, are viable for long-term retention (i.e., in good health and compatible with proposed construction), and have a canopy overhanging proposed or existing impervious surfaces.

The 2012 Low Impact Development Technical Guidance Manual for Puget Sound stated that the annual stormwater reduction benefits from urban trees (dollars per gallon on construction and maintenance of stormwater facilities) ranged from approximately $37,000 to $496,000.

Urban trees have been shown to retain greater rainfall volume than trees in forests due to the greater leaf area of open-grown trees. Urban trees can retain as much as 80 percent of rainfall in regions with relatively light rainfall intensity and volume, such as the Pacific Northwest. Tree leaf canopy also delays the passage of water to the ground for less intense rainfall events from minutes to hours. Urban tree canopy assessment can help to determine the quantitative benefits of the existing tree canopy cover and set goals for future local ordinances, regulations, and comprehensive planning efforts.

Several jurisdictions in the Pacific Northwest, including Redmond, Vancouver, Tacoma, and Longview, Washington, and Gresham, Fairview, and Portland, Oregon, have recognized the importance of trees in providing stormwater benefits and currently support all or a portion of their urban forestry programs through stormwater/surface water utility rates.

Recommendation
The [department] recommends that the City [or County] Council approve Ordinance XXXX and encourages the Mayor/Commissioners to sign.

Budget
No funding is associated with this ordinance. However, the benefits of the City’s [or County’s] existing tree canopy could be further studied to help establish a baseline for quantifying the benefits of future urban tree and urban forest planning, planting, and management.
NATURAL INFRASTRUCTURE ASSESSMENT

CITY OF SNOQUALMIE
38624 SE RIVER ST
PO BOX 987
SNOQUALMIE, WA 98065

JUNE 2020
ACTION ITEM: 20-050

SUBJECT:
A motion to authorize the Board Chair to sign the Agreement with the Washington Department of Fish and Wildlife (WA DFW) for the grant project titled Forest Health Management for Reduced Stormwater and Runoff and Land Conversion (Project) also known as the PSCD Caucus Regional Forest Stewardship Pilot Program.
(Note: This grant corresponds to S.I. pilot program titled Regional Forest Stewardship Pilot Program.)

FISCAL IMPACT
Funding for the Project from WA DFW will provide $595,000 in critical seed funding to support an interagency partnership of 7 Puget Sound conservation districts that will develop, launch and implement the PSCD Caucus Regional Forest Stewardship Pilot Program. This pilot program directly implements the Forest Stewardship Services priority included in the PSCDs Portfolio of Regional Programs and Services adopted in 2016.

The Project grant runs through March 30, 2022 and includes funding for grant management and administration, project management and coordination, strategic engagement of forest landowners, delivery of forest stewardship services, and development of communications collateral for use in supplemental funding development in partnership with regional stakeholders. Grant and project administration and coordination will be provided by KCD. Direct landowner services will be provided by KCD, Snohomish CD and Mason CD. Interagency partners also are funded to participate in the PSCD Caucus Regional Forest Stewardship Collaborative.

Project match is not required by the grant. However, it is anticipated that each of the 7 participating PSCDs may incur up to $1,000 each associated with miscellaneous office supplies and indirect administrative functions, and that each conservation district functioning as a duty station for an Area Forester will incur the cost of providing computer equipment for the hosted Area Forester (estimated NTE $2,500). KCD, Mason CD and Whidbey Island CD are the only PSCDs of the 7 interagency partners that have existing forest stewardship program that could be considered match, but none of these PSCD forest stewardship program budgets are expected by WA DFW as match.
POLICY CONSIDERATION
The Project grant funding through WA DFW is critical seed funding for a PSCD Caucus regional that will allow the entire central and south Puget Sound region of the PSCD Caucus to deploy forest stewardship services to non-commercial private forest landowners / managers.

The Project is in alignment with the PSP Action Agenda Vital Sign target to reduce forest land conversion and polluted stormwater runoff; the KCD long range plan, annual work plan and 5-year Program of Work submitted to the MKCC to substantiate the 2020-2024 system of Rates and Charges; and the PSCD Caucus Portfolio of Regional Programs and Services.

There is no legal obligation for KCD to participate in the Project.

Since 1997, KCD has delivered forest stewardship services since 2015 when these services were first funded at a baseline level of 1 forest stewardship program coordinator that serves as forest stewardship planning technician. The Project grant funding was pursued in part to increase capacity of the KCD baseline program and augment service delivery to other priority forest landowners where prioritized.

Lastly, the Project is aligned with the District’s Mission, Vision, and priority goals and objectives.

STAKEHOLDER INTERESTS
- Forest landowners in the boundaries of 7 PSCDs including KCD
- Agency and organization partners
- Stakeholders party to the development, approval and implementation of the KCD 2015 – 2019
- Stakeholders party to the development of the KCD proposed 2020-2024 Program of Work

BACKGROUND
*Overview of KCD Forest Stewardship Services*
The King Conservation District has provided technical assistance to forest landowners since 2015. From 2015 - 2019 this work focused on addressing forestland in King County at risk of conversion due to an absence of educational, technical assistance and financial incentives support. As part of the 5-year
King Conservation District Board of Supervisors Meeting  
Agenda Action Briefing/Report  
Meeting Date: August 10, 2020

Program of Work associated with 2015-2019 System of Rates and Charges, KCD began delivering forest steward services and supporting WSU forest stewardship education programming to forest landowners with 1 to 5 acres of forested stand on their property. In 2020, this focus was expanded to include economies of scale by strategically engaging forest lands associated with Homeowner Associations and groups of parcels that would increase the contiguous acres of forestland in active stewardship.

Overview of the PSCD Caucus Interagency Collaborative
The current incarnation of the Puget Sound Conservation Districts Caucus (Caucus) was formed in mid 2000s to address shared resource management priorities through a model of collective impact. Together the PSCDs have identified regionally significant resource management programs that should be delivered Puget Sound wide by the PSCD system, and have worked together regional stakeholder, funders and legislators to advance the work of the PSCDs. In 2016, the PSCD Caucus adopted the Puget Sound Conservation District’s Portfolio of Regional Programs and Services to articulate core PSCD resource management programming and market those services for investment by public and private funding sources. Since 2015, the PSCDs have advanced many of the included regional programs through the PSP Action Agenda process. The Regional Forest Stewardship Pilot Program is one of several PSCD regional programs or projects included in the PSP Action Agenda.

EFFECTIVE DATE:
If approved, this Motion becomes effective immediately

OPTIONS
None presented

RECOMMENDATION
Staff recommends approval of the motion

MOTION
______ Moved, ______ Seconded; Passed unanimously a motion authorizing the Board Chair to sign the Agreement with the Washington Department of Fish and Wildlife (WA DFW) for the grant project titled Forest Health Management for Reduced Stormwater and Runoff and Land Conversion (Project) also known as the PSCD Caucus Regional Forest Stewardship Pilot Program.
GRANT AGREEMENT - EPA FUNDS

TITLE: Forest Health Management for Reduced Stormwater Runoff and Land Conversion
WDFW NUMBER: 20-15500

GRANTEE: King County Conservation District
CONTRACT PERIOD: 05/01/2020 to 03/31/2022

TYPE: Payable / Grant / Sub-Recipient Federal EPA 16-05251
CONTRACT AMOUNT: $595,000.00

A. PARTIES TO THIS CONTRACT
This contract is entered into between the Washington State Department of Fish and Wildlife (WDFW), Post Office Box 43200, Olympia, WA 98504-3200; and King County Conservation District (Grantee), 935 Powell Ave. SW, Renton, WA 98055; and shall be binding upon the agents and all persons acting by or through the parties.

B. PURPOSE OF CONTRACT
The purpose of this contract is to provide a grant award to the Grantee for the project specified herein. For this contract the Environmental Protection Agency is the Federal awarding agency, WDFW is the pass-through entity, and the Grantee is the subrecipient.

C. DESCRIPTION OF PROJECT
The Grantee shall perform the project as described in Attachments, which are incorporated herein by this reference:
Attachment - A - General Terms and Conditions
Attachment - B - Contract/Project Summary
Attachment - C - Special Terms and Conditions
Attachment - D - Statement of Work

The Grantee is a subrecipient of federal funds as identified under “Federal Funding Information” in Attachment B.

D. PERIOD OF PERFORMANCE
The performance period under this contract shall commence on 05/01/2020 and terminate on 03/31/2022. No expenditures made before or after this period are eligible for reimbursement unless incorporated by written amendment into this contract. The contract may be terminated or the performance period extended pursuant to terms set forth in Attachment A.

E. COMPENSATION / PAYMENT
The total dollars provided by WDFW for this contract shall not exceed $595,000.00 minus any matching requirements identified in this contract. The Grantee shall be responsible for all project costs exceeding this amount. Only eligible reimbursement activities that are in direct support of the project deliverables identified in this contract will be reimbursed. Any additional services provided by the Grantee must have prior written approval of WDFW.

Compensation for services rendered shall be payable upon receipt of properly completed invoices, which shall be submitted to the Project Manager by the Grantee not more often than monthly. The invoices shall describe the document to WDFW’s satisfaction, a description of work performed, activities accomplished, or the progress of the project. The rates shall be in accordance with those herein agreed to.

Payment shall be considered timely if made by WDFW within 30 days after receipt of properly completed invoices. Payment shall be sent to the address designated by the Grantee. WDFW may, in its sole discretion, terminate the contract or withhold payments claimed by the Grantee for the services rendered if the Grantee fails to satisfactorily comply with any term or conditions of this contract.

F. RIGHTS AND OBLIGATIONS
All rights and obligations of the parties of this contract are subject to this contract, including the Attachments, which are incorporated herein by this reference. By signing this contract the Grantee acknowledges that they have read, fully understand, and agree to be bound by all terms and conditions set forth in this contract.
G. **COMPLIANCE WITH APPLICABLE STATUTES, RULES, AND WDFW POLICIES**  
The Grantee shall comply with all applicable state, federal, and local laws and regulations, including published WDFW policies, while performing under this contract.

H. **ORDER OF PRECEDENCE**  
In the event of an inconsistency in this contract, unless otherwise provided herein, the inconsistency shall be resolved by giving precedence in the following order:

- Applicable Federal and State of Washington statutes and regulations.
- Attachment - A - General Terms and Conditions.
- Attachment - C - Special Terms and Conditions.
- Attachment - D - Statement of Work, and
- Any other provision, term or material incorporated herein by reference or otherwise incorporated.

I. **CONTRACT REPRESENTATIVES**  
The below named representatives for each of the parties shall be the contact people for all communications and billings regarding the performance of this contract. All written communications regarding this contract shall be sent to the designated representatives at the addresses below unless notified in writing of any change.

**Grantee's Representative**  
Brandy Reed  
800 SW 39th Street, Suite 150  
Renton WA 98057  
(425) 282-1924  
brandy.reed@kingcd.org

**WDFW's Representative**  
Sean Williams  
PO Box 43143  
Olympia, Washington, 98504-3143  
(360) 902-6136  
sean.williams@dfw.wa.gov

J. **ENTIRE CONTRACT**  
This contract, along with all attachments and exhibits, constitutes the entire agreement of the parties. No other understandings, verbal or otherwise, regarding this contract shall exist or bind any of the parties.

K. **APPROVAL**  
This contract shall be subject to the written approval of WDFW's authorized representative and shall not be binding until so approved. This contract may be altered, amended, or waived only by a written amendment executed by both parties.

**IN WITNESS WHERE**, WDFW and the Grantee have signed this contract.

**KING COUNTY CONSERVATION DISTRICT**  

**WASHINGTON DEPARTMENT OF FISH AND WILDLIFE**

---

**SIGNATURE AND DATE**

**SIGNATURE AND DATE**

**PRINTED NAME AND TITLE**

**PRINTED NAME AND TITLE**

WDFW # 20-15500  
Page 2 of 14
DEFINITIONS
As used throughout this contract, the following terms shall have the meaning set forth below:

A. "AGENCY" or "WDFW" shall mean the Department of Fish and Wildlife of the State of Washington, any division, section, office, unit or other entity of the AGENCY, or any of the officers or other officials lawfully representing that AGENCY.

B. "AGENT" shall mean the AGENCY Director, and/or the delegate authorized in writing to act on the Director's behalf.

C. "CFR" shall mean the Code of Federal Regulations. All references in the contract to CFR chapters or sections shall include any successor, amended or replacement regulations.

D. "EPA" shall mean the Environmental Protection Agency.

E. "GRANTEE" shall mean any organization or individual that is performing service(s) under this contract, and shall include all employees of the GRANTEE.

F. "RCW" shall mean the Revised Code of Washington. All references in the contract to RCW chapters or sections shall include any successor, amended or replacement statutes.

G. "Subcontractor" shall mean one not in the employment of the GRANTEE, who is performing all or part of those services under this contract under a separate contract with the GRANTEE. The terms "Subcontractor" and "Subcontractors" means Subcontractor(s) in any tier.

H. "USC" shall mean United States Code. All references in the contract to USC chapters or sections shall include any successor, amended or replacement statutes.

ACCESS TO DATA
In compliance with RCW 39.26.180, the GRANTEE shall provide access to data generated under this contract to AGENCY, the Joint Legislative Audit and Review Committee, the State Auditor, and Federal auditors at no additional cost. This includes access to all information that supports the findings, conclusions, and recommendations of the GRANTEE's reports, including computer models and methodology for those models.

ADVANCE PAYMENTS PROHIBITED
No payments in advance of or in anticipation of goods or services to be provided under this contract shall be made by the AGENCY.

AMENDMENTS
This contract may be amended by mutual agreement of the parties. Such amendments shall not be binding unless they are in writing and signed by personnel authorized to bind each of the parties.

AMERICANS WITH DISABILITIES ACT (ADA) OF 1990, PUBLIC LAW 101-336, also referred to as the "ADA" CFR Part 35
Both parties shall comply with the ADA, which provides comprehensive civil rights protection to individuals with disabilities in the areas of employment, public accommodations, state and local government services, and telecommunications.

ASSIGNMENT
The work to be provided under this contract, and any claim arising thereunder, is not assignable or delegable by either party in whole or in part, without the express prior written consent of the other party, which consent shall not be unreasonably withheld.

ATTORNEYS' FEES
In the event of litigation or other action brought to enforce contract terms, each party agrees to bear its own attorney fees and costs.

BUY AMERICAN ACT
The GRANTEE shall comply with 41 USC 10a-10c (the "Buy American Act") by purchasing only American-made equipment and products with contract funds except articles, materials, and supplies — a) for use outside the United States; b) for which the cost would be unreasonable, as determined in accordance with federal regulations; c) for which the AGENCY determines that domestic preference would be inconsistent with the public interest; or d) that are not mined, produced, or manufactured in the United States in sufficient and reasonable available commercial quantities, of a satisfactory quality.

CENTRAL CONTRACTOR REGISTRATION AND DATA UNIVERSE NUMBERING SYSTEM (DUNS)
Unless exempt under 2 CFR 25.110, the GRANTEE shall comply with 2 CFR 25 and be registered in the federal System for Award Management Registration (S.A.M.); and maintain an active registration with current information at all times during the period of performance for this contract; and provide its DUNS number to the Agency.

CONFIDENTIALITY/SAFEGUARDING OF INFORMATION
The GRANTEE shall not use or disclose any information concerning the AGENCY, or information that may be classified as confidential, for any purpose not directly connected with the administration of this contract, except with prior written consent of the AGENCY, or as may be required by law.
CONSULTANT CAP
EPA participation in the salary rate (excluding overhead) paid to individual consultants retained by the GRANTEE shall be limited to the maximum daily rate for a Level IV of the Executive Schedule, available at https://www.opm.gov/policy-data-oversight/pay-leave/salaries-wages, to be adjusted annually. This limit applies to consultation services of designated individuals with specialized skills who are paid at a daily or hourly rate. This rate does not include transportation and subsistence costs for travel performed (the GRANTEE will pay these in accordance with their normal travel reimbursement practices). Subcontracts with firms for services which are awarded using the procurement requirements in Subpart D of 2 CFR 200, are not affected by this limitation unless the terms of the subcontract provide the GRANTEE with responsibility for the selection, direction and control of the individuals who will be providing services under the subcontract at an hourly or daily rate of compensation.

CONFLICT OF INTEREST
Notwithstanding any determination by the Executive Ethics Board or other tribunal, the AGENCY may, in its sole discretion, by written notice to the GRANTEE terminate this contract if it is found after due notice and examination by the AGENT that there is a violation of the Ethics in Public Service Act, Chapter 42.52 RCW; or any similar statute involving the GRANTEE in the procurement of, or performance under this contract. In the event this contract is terminated as provided above, the AGENCY shall be entitled to pursue the same remedies against the GRANTEE as it could pursue in the event of a breach of the contract by the GRANTEE. The rights and remedies of the AGENCY provided for in this clause shall not be exclusive and are in addition to any other rights and remedies provided by law. The existence of facts upon which the AGENT makes any determination under this clause shall be an issue and may be reviewed as provided in the "Disputes" clause of this contract.

EPA's conflict of interest (COI) policy is posted at http://www.epa.gov/ogd/coi.htm. The GRANTEE must notify WDFW of any potential conflicts of interest identified in EPA's COI Policy within 5 calendar days of the discovery of the potential COI.

COST PRINCIPLES AND AUDIT REQUIREMENTS
The GRANTEE agrees to comply with the costs principles contained in 2 CFR Part 200 as appropriate for this contract. The GRANTEE agrees to comply with the organizational audit requirements of 2 CFR Subpart F, and further understands and agrees that funds may be withheld, or other related requirements may be imposed, if outstanding audit issues (if any) from 2 CFR Subpart F audits (and any other audits of Contract funds) are not satisfactorily and promptly addressed.

COPYRIGHT PROVISIONS
Unless otherwise provided, all materials produced under this contract shall be considered "works for hire" as defined by the U.S. Copyright Act and shall be owned by the AGENCY. The AGENCY shall be considered the author of such materials. In the event the materials are not considered "works for hire" under the U.S. Copyright laws, the GRANTEE hereby irrevocably assigns all right, title, and interest in materials, including all intellectual property rights, to the AGENCY effective from the moment of creation of such materials.

Materials means all items in any format and includes, but is not limited to, data, reports, documents, pamphlets, advertisements, books, magazines, surveys, studies, computer programs, films, tapes, and/or sound reproductions. Ownership includes the right to copyright, patent, register and the ability to transfer these rights.

For materials that are delivered under the contract, but that incorporate pre-existing materials not produced under the contract, the GRANTEE hereby grants to the AGENCY a nonexclusive, royalty-free, irrevocable license (with rights to sublicense others) in such materials to translate, reproduce, distribute, prepare derivative works, publicly perform, and publicly display. The GRANTEE warrants and represents that the GRANTEE has all rights and permissions, including intellectual property rights, moral rights and rights of publicity, necessary to grant such a license to the AGENCY.

The GRANTEE shall exert all reasonable effort to advise the AGENCY, at the time of delivery of materials furnished under this contract, of all known or potential invasions of privacy contained therein and of any portion of such document that was not produced in the performance of this contract.

The AGENCY shall receive prompt written notice of each notice or claim of infringement received by the GRANTEE with respect to any data delivered under this contract. The AGENCY shall have the right to modify or remove any restrictive markings placed upon the data by the GRANTEE.

In accordance with 40 CFR 31.34 for State, local and Indian Tribal governments or 40 CFR 30.36 for other recipients, the EPA has the right to reproduce, publish, use, and authorize others to use copyrighted works or other data developed under this contract for Federal purposes.

COVENANT AGAINST CONTINGENT FEES
The GRANTEE warrants that no person or selling agent has been employed or retained to solicit or secure this contract upon an agreement or understanding for a commission, percentage, brokerage or contingent fee, excepting bona fide employees or bona fide established agents maintained by the GRANTEE for securing business. The AGENCY shall have the right, in the event of breach of this clause by the GRANTEE, to annul this contract without liability or, in its discretion, to deduct from the contract price or consideration.
or recover by other means the full amount of such commission, percentage, brokerage or contingent fee.

**CYBERSECURITY**
The GRANTEE agrees to comply with the current EPA general terms and conditions "Cybersecurity". The terms and conditions can be found on the EPA Grants Terms and Conditions Website.

For STATE AGENCIES:

For TRIBES:

For Other Recipients:

**DAVIS BACON AND RELATED ACTS**
If any work performed by the GRANTEE or Subcontractor employees is subject to the Davis Bacon Act and Davis-Bacon prevailing wage provisions contained in applicable federal laws, the GRANTEE shall ensure that they and their Subcontractor(s) a) pay at least once per week wages to GRANTEE and/or Subcontractor laborers and mechanics at a rate not less than the minimum wages specified in wage determinations made by the U.S. Department of Labor; and b) provide to the AGENCY each week U.S. Department of Labor Form WH-347 "Payroll (For Contractors Optional Use)" stating the wages paid to GRANTEE and/or Subcontractor laborers and mechanics engaged in work funded by this contract.

**DISADVANTAGED BUSINESS ENTERPRISE**
The Grantee agrees to comply with the requirements of the Program for Utilization of Small, Minority and Women's Business Enterprises in procurement under assistance agreements, contained in 40 CFR, Part 33.

**DISALLOWED COSTS**
The GRANTEE is responsible for any audit exceptions or disallowed costs incurred by its own organization or that of its Subcontractors.

**DISPUTES**
Except as otherwise provided in this contract, when a dispute arises between the parties and it cannot be resolved by direct negotiation, either party may request a dispute hearing with AGENT.

1. The request for a dispute hearing must:
   - Be in writing;
   - State the disputed issue(s);
   - State the relative positions of the parties;
   - State the GRANTEE's name, address, and contract number; and

2. Be mailed to the AGENT and the other party's (respondent's) contract manager within 3 working calendar days after the parties agree that they cannot resolve the dispute.

3. The respondent shall send a written answer to the requester's statement to both the AGENT and the requester within 5 calendar days.

4. The AGENT shall review the written statements and reply in writing to both parties within 10 calendar days. The AGENT may extend this period if necessary by notifying the parties.

5. The parties agree that this dispute process shall precede any action in a judicial or quasi-judicial tribunal.

Nothing in this contract shall be construed to limit the parties' choice of a mutually acceptable alternate dispute resolution method in addition to the dispute resolution procedure outlined above.

**DRUG FREE WORKPLACE**
The GRANTEE shall comply with the Drug-Free Workplace Act of 1988, 41 USC 701-707, as amended. Compliance with the Drug-Free Workplace Act includes publishing a drug-free workplace statement and establishing a drug-free awareness program for GRANTEE employees; and taking actions concerning GRANTEE employees who are convicted of violating drug statutes in the workplace. The GRANTEE shall provide written notice of a conviction of a GRANTEE employee of a drug violation in the workplace to the AGENCY within seven (7) calendar days after the GRANTEE learns of the conviction.

**DUPLICATE PAYMENT**
The AGENCY shall not pay the GRANTEE, if the GRANTEE has charged or will charge the State of Washington or any other party under any other contract or agreement, for the same services or expenses.

**ENTIRE AGREEMENT**
This contract contains all the terms and conditions agreed upon by the parties. No other understandings, oral or otherwise, regarding the subject matter of this contract shall be deemed to exist or to bind any of the parties hereto.

**EQUIPMENT MANAGEMENT**
The GRANTEE may keep any equipment funded through this contract and continue to use it on the project originally funded through this contract or on other federally funded projects whether or not the project or program continues to be supported by federal funds. If the GRANTEE is a state agency, the GRANTEE will manage and dispose of equipment acquired under this contract in accordance with state laws and procedures.
FEDERAL DEBARMENT AND SUSPENSION
The GRANTEE certifies, that neither it nor its "principals" (as defined in 49 CFR 29.105) is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participation in this transaction by any Federal department or agency. Further, the GRANTEE agrees not to enter into any arrangements or other contracts with any party that is on the "List of Parties Excluded from Federal Procurement or Non-procurement Programs" which can be found at https://www.sam.gov.

FEDERAL FUNDING ACCOUNTABILITY AND TRANSPARENCY ACT
This contract is subject to the requirements of the Federal Funding Accountability and Transparency Act (FFATA) as stated in 2 CFR 170. The GRANTEE agrees to comply with applicable requirements to assist the AGENCY in reporting first-tier subawards of $25,000 or more and, in certain circumstances, in reporting the names and total compensation of the five most highly compensated executives of first-tier subrecipients of award funds. Such data will be submitted to the FFATA Subaward Reporting System (FSRS).

FINAL INVOICE
The GRANTEE shall submit the final invoice not later than 60 calendar days from the end of the contract period.

GOVERNANCE
This contract is entered into pursuant to and under the authority granted by the laws of the state of Washington and any applicable federal laws. The provisions of this contract shall be construed to conform to those laws. In the event of an inconsistency in the terms of this contract, or between its terms and any applicable statute or rule, the inconsistency shall be resolved by giving precedence in the following order:

a. Applicable state and federal statutes and rules;
b. Statement of work; and
c. Any other provisions of the contract, including materials incorporated by reference.

GOVERNING LAW
This contract shall be construed and interpreted in accordance with the laws of the State of Washington, and the venue of any action brought hereunder shall be in the Superior Court for Thurston County.

HOTEL FIRE SAFETY ACT
The Grantee agrees to ensure that all space for conferences, meetings, conventions, or training seminars funded in whole or in part by this contract complies with the protection and control guidelines of the Hotel and Motel Fire Safety Act (PL 101-391, as amended).

INDEMNIFICATION
To the fullest extent permitted by law, the GRANTEE shall indemnify, defend, and hold harmless State, agencies of State and all officials, agents and employees of State, from and against all claims for injuries or death arising out of or resulting from the performance of the contract. "Claim," as used in this contract, means any financial loss, claim, suit, action, damage, or expense, including but not limited to attorney's fees, attributable for bodily injury, sickness, disease, or death, or injury to or destruction of tangible property including loss of use resulting therefrom.

The GRANTEE's obligations to indemnify, defend, and hold harmless includes any claim by the GRANTEE's agents, employees, representatives, or any Subcontractor or its employees.

The GRANTEE expressly agrees to indemnify, defend, and hold harmless the State for any claim arising out of or incident to the GRANTEE's or any Subcontractor's performance or failure to perform the contract. The GRANTEE's obligation to indemnify, defend, and hold harmless the State shall not be eliminated or reduced by any actual or alleged concurrent negligence of State or its agents, agencies, employees and officials.

The GRANTEE waives its immunity under Title 51 RCW to the extent it is required to indemnify, defend and hold harmless State and its agencies, officials, agents or employees.

INDEPENDENT CAPACITY OF THE GRANTEE
The parties intend that an independent contractor relationship will be created by this contract. The GRANTEE and his or her employees or agents performing under this contract are not employees or agents of the AGENCY. The GRANTEE will not hold himself/herself out as or claim to be an officer or employee of the AGENCY or of the State of Washington by reason hereof, nor will the GRANTEE make any claim of right, privilege or benefit that would accrue to such employee under law. Conduct and control of the work will be solely with the GRANTEE.

INDIRECT COSTS
The GRANTEE is entitled to reimbursement of indirect costs, subject to any statutory or regulatory administrative cost limitations, if the GRANTEE has a current Federally-approved indirect cost rate agreement or have submitted an indirect cost rate proposal to their cognizant federal agency for review and approval and a final rate has been determined by the cognizant agency. The GRANTEE is responsible for maintaining an approved indirect cost rate for the life of this contract. If the GRANTEE has a difference between their provisional rate and final rate the GRANTEE is not entitled to more than the contract value without prior approval from WDFW.

The GRANTEE must send its proposal to its cognizant federal agency within six (6) months after the close of the governmental unit's fiscal year. If the GRANTEE is an Indian tribe and does not have a previously established
indirect cost rate, the GRANTEE must submit their indirect costs rate proposal to the National Business Center, Indirect Cost Services, U.S. Department of the Interior, 2180 Harvard Street, Suite 430, Sacramento, CA 95815-3317. The GRANTEE will comply with the audit requirements in accordance with 2 CFR 200 Subpart F.

INDUSTRIAL INSURANCE COVERAGE
The GRANTEE shall comply with the provisions of Title 51 RCW, Industrial Insurance. If the GRANTEE fails to provide industrial insurance coverage or fails to pay premiums or penalties on behalf of its employees, as may be required by law, the AGENCY may collect from the GRANTEE the full amount payable to the Industrial Insurance accident fund. The AGENCY may deduct the amount owed by the GRANTEE to the accident fund from the amount payable to the GRANTEE by the AGENCY under this contract, and transmit the deducted amount to the Department of Labor and Industries, (L&I) Division of Insurance Services. This provision does not waive any of L&I’s rights to collect from the GRANTEE.

INSURANCE
The GRANTEE shall provide insurance coverage as set out in this section. The intent of the required insurance is to protect the state should there be any claims, suits, actions, costs, damages or expenses arising from any negligent or intentional act or omission of the GRANTEE or Subcontractor, or agents of either, while performing under the terms of this contract.

The GRANTEE shall provide insurance coverage, which shall be maintained in full force and effect during the term of this contract, as follows:

1. Commercial General Liability Insurance Policy. Provide a Commercial General Liability Insurance Policy, including contractual liability, in adequate quantity to protect against legal liability arising out of contract activity but no less than $1,000,000 per occurrence. Additionally, the GRANTEE is responsible for ensuring that any Subcontractors provide adequate insurance coverage for the activities arising out of subcontracts.

2. Automobile Liability. In the event that services delivered pursuant to this contract involve the use of vehicles, either owned or unowned by the GRANTEE, automobile liability insurance shall be required. The minimum limit for automobile liability is $1,000,000 per occurrence, using a Combined Single Limit for bodily injury and property damage.

3. Marine Insurance. If the GRANTEE will be using a vessel or boat in the performance of this contract, the GRANTEE shall maintain a Commercial Marine Protection and Indemnity (P&I) Policy with P&I limit of not less than $1,000,000 per occurrence and with a deductible not to exceed $25,000 (to include diving operations if diving is a part of the contracted service for any liability which includes coverage for injury to the crew and passengers).

4. The insurance required shall be issued by an insurance company authorized to do business within the state of Washington, and shall name the state of Washington, its agents and employees as additional insureds under the insurance policy/ies. All policies shall be primary to any other valid and collectable insurance. GRANTEE shall instruct the insurers to give AGENCY thirty (30) calendar days advance notice of any insurance cancellation.

If the GRANTEE is self-insured, evidence of its status as a self-insured entity shall be provided to the AGENCY. If requested by the AGENCY, the GRANTEE must describe its financial condition and the self-insured funding mechanism.

The GRANTEE shall submit to AGENCY within fifteen (15) calendar days of the contract effective date, a certificate of insurance or evidence of its status as a self-insured entity that outlines the coverage and limits defined in this section. The GRANTEE shall submit renewal certificates as appropriate during the term of the contract; the failure of the AGENCY to enforce this term in no way reduces the GRANTEE’s responsibilities under this section.

LICENSES, ACCREDITATION AND REGISTRATION
The GRANTEE shall comply with all applicable local, state, and federal licensing, accreditation and registration requirements/standards, necessary for the performance of this contract.

LIGHT REFRESHMENTS AND/OR MEALS
The GRANTEE will obtain prior approval from WDFW for the use of contract funds for light refreshments and/or meals served at meetings, conferences, training workshops and outreach activities (events).

LIMITATION OF AUTHORITY
Only the AGENT or AGENT’S delegate by writing (delegation to be made prior to action) shall have the express, implied, or apparent authority to alter, amend, modify, or waive any clause or condition of this contract. Furthermore, any alteration, amendment, modification, or waiver or any clause or condition of this contract is not effective or binding unless made in writing and signed by the AGENT.

MANAGEMENT FEES
Management fees or similar charges in excess of the direct costs and approved indirect rates are not reimbursable under this contract. The term “management fees or similar charges” refers to expenses added to the direct costs in order to accumulate and reserve funds for ongoing business expenses, unforeseen liabilities, or for other similar costs which are not allowable under this contract.

MATCHING FUNDS
The GRANTEE shall be responsible for providing matching funds as indicated in the contract (if any). If the GRANTEE is responsible for matching funds they shall state the amount of match used during the billing period and the cumulative
amount of match used to date on every invoice submitted for payment to the AGENCY. The GRANTEE shall comply with the uniform administrative rules on matching or cost sharing for Federal grants and cooperative agreements and subawards as contained in 2 CFR Section 200.

MINORITY, WOMEN AND VETERAN-OWNED BUSINESSES
The AGENCY encourages participation by minority and women-owned business enterprises certified by the Office of Minority and Women’s Business Enterprises (OMWBE); and veteran-owned businesses certified by the Department of Veteran’s Affairs (DVA). If any part of this contract is subcontracted to an OMWBE or DVA-certified firm the GRANTEE shall submit a statement of participation indicating what OMWBE or DVA certified firm was used and the dollar amount of their subcontracts.

Pursuant to 40 CFR, Section 33.301, the GRANTEE agrees to make six good faith efforts whenever procuring construction, equipment, services and supplies funded through this contract, and to require that sub-recipient, loan recipients, and prime contractors also comply. Records documenting compliance with the six good faith efforts shall be retained by the GRANTEE.

NONDISCRIMINATION
During the performance of this contract, both parties shall comply with all federal and state nondiscrimination laws, regulations and policies, including Title VI of the Civil Rights Act of 1964, Section 504 of the Rehabilitation Act of 1973, the Age Discrimination Act of 1975, and, if applicable, Section 13 of the Federal Water Pollution Control Act Amendments of 1972. In the event of the GRANTEE’s non-compliance or refusal to comply with any nondiscrimination law, regulation, or policy, this contract may be rescinded, canceled or terminated in whole or in part, and the GRANTEE may be declared ineligible for further contracts with the AGENCY. The GRANTEE shall, however, be given a reasonable time in which to cure this noncompliance. Any dispute may be resolved in accordance with the “Disputes” procedure set forth herein.

PREVAILING WAGE
If any work performed by the GRANTEE or its Subcontractors is subject to Chapter 39.12 of the Revised Code of Washington, the GRANTEE shall ensure that the GRANTEE and its Subcontractors pay the prevailing rate of wages to all GRANTEE and/or Subcontractor workers, laborers or mechanics in the performance of any part of the work described in the contract in accordance with state law and Department of Labor and Industries rules and regulations.

PRIVACY
Personal information including, but not limited to, “Protected Health Information,” collected, used, or acquired in connection with this contract shall be protected against unauthorized use, disclosure, modification or loss. The GRANTEE shall ensure

its directors, officers, employees, Subcontractors or agents use personal information solely for the purposes of accomplishing the services set forth herein. The GRANTEE and its Subcontractors agree not to release, divulge, publish, transfer, sell or otherwise make known to unauthorized persons personal information without the express written consent of the agency or as otherwise required by law.

Any breach of this provision may result in termination of the contract and the demand for return of all personal information. The GRANTEE agrees to indemnify and hold harmless the AGENCY for any damages related to the GRANTEE’S unauthorized use of personal information.

PROCUREMENT STANDARDS
The GRANTEE will meet the procurement standards contained in 2 CFR 200.317 through 2 CFR 200.326.

RECOGNITION OF EPA FUNDING
The Grantee will ensure that reports, documents, signage, videos, or other media, developed as part of projects funded by this contract contain the following statement: "This project has been funded wholly or in part by the United States Environmental Protection Agency under assistance agreement PC-01J22301 through the Washington Department of Fish and Wildlife. The contents of this document do not necessarily reflect the views and policies of the Environmental Protection Agency or the Washington Department of Fish and Wildlife, nor does mention of trade names or commercial products constitute endorsement or recommendation for use."

RECORDS MAINTENANCE
The parties to this contract shall each maintain books, records, documents and other evidence which sufficiently and properly reflect all direct and indirect costs expended by either party in the performance of the services described herein. These records shall be subject to inspection, review or audit by personnel of both parties, other personnel duly authorized by either party, the Office of the State Auditor, and federal officials so authorized by law. All books, records, documents, and other material relevant to this contract will be retained for six years after expiration and the Office of the State Auditor, federal auditors, and any persons duly authorized by the parties shall have full access and the right to examine any of these materials during this period.

Records and other documents, in any medium, furnished by one party to this contract to the other party, will remain the property of the furnishing party, unless otherwise agreed. The receiving party will not disclose or make available this material to any third parties without first giving notice to the furnishing party and giving it a reasonable opportunity to respond. Each party will utilize reasonable security procedures and protections to assure that records and documents provided by the other party are not erroneously disclosed to third parties.
RECYCLED PRODUCTS
The Grantee agrees to use recycled paper and double sided printing for all reports which are prepared as a part of this contract. If a governmental entity, the Grantee shall comply with all the requirements of Section 6002 of the Resource Conservation and Recovery Act (42 USC 6962), including but not limited to the regulatory provisions of 40 CFR Part 247, and Executive Order 12872 as they apply to procurement.

RESTRICTIONS ON LOBBYING
The GRANTEE certifies that under the requirements of Lobbying Disclosure Act, 2 USC, Section 1601 et seq., no Federal appropriated funds have been paid or will be paid, by or on behalf of the GRANTEE, to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

RIGHT OF INSPECTION
The GRANTEE shall provide right of access to its facilities to the AGENCY, or any of its officers, or to any other authorized agent or official of the state of Washington or the federal government, at all reasonable times, in order to monitor and evaluate performance, compliance, and/or quality assurance under this contract.

SAVINGS
In the event funding from state, federal, or other sources is withdrawn, reduced, or limited in any way after the effective date of this contract and prior to normal completion, the AGENCY may terminate the contract under the "Termination" clause, without the thirty-day notice requirement, subject to renegotiation at the AGENCY’S discretion under those new funding limitations and conditions.

SEVERABILITY
The provisions of this contract are intended to be severable. If any provision is illegal or invalid for any reason whatsoever, such illegality or invalidity shall not affect the validity of the remainder of the contract.

SITE SECURITY
While on AGENCY premises, the GRANTEE, its agents, employees, or Subcontractors shall conform in all respects with physical, fire or other security policies or regulations.

STATEWIDE VENDOR PAYMENT REGISTRATION
The GRANTEE is required to be registered in the Statewide Vendor Payment System prior to submitting a request for payment under this contract. The Washington State Office of Financial Management (OFM) maintains the Statewide Vendor Payment System; to obtain registration materials contact the Statewide Payee Desk at (360) 407-8180; or go to: https://ofm.wa.gov/it-systems/statewide-vendorpayee-services.

SUBCONTRACTING
Neither the GRANTEE nor any Subcontractor(s) shall enter into subcontracts for any of the work contemplated under this contract without obtaining prior written approval of the AGENCY. AGENCY may deny the use of specific subcontractors if the subcontractors would not be eligible, under federal rules and regulations, to be funding subrecipients. In no event shall the existence of the subcontract operate to release or reduce the liability of the GRANTEE to the AGENCY for any breach in the performance of the GRANTEE’S duties. This clause does not include contracts of employment between the GRANTEE and personnel assigned to work under this contract.

Additionally, the GRANTEE is responsible for ensuring that all terms, conditions, assurances and certifications set forth in this contract are carried forward to any subcontracts. The GRANTEE and its Subcontractors agree not to release, divulge, publish, transfer, sell or otherwise make known to unauthorized persons personal information without the express written consent of the agency or as provided by law.

TERMINATION
Except as otherwise provided in this contract, the AGENCY may, by 10 calendar days written notice, beginning on the second day after the mailing, terminate this contract, in whole or in part. If this contract is so terminated, the AGENCY shall be liable only for payment required under the terms of this contract for services rendered or goods delivered prior to the effective date of termination.

TERMINATION FOR CAUSE
In the event the AGENCY determines the GRANTEE has failed to comply with the conditions of this contract in a timely manner, the AGENCY has the right to suspend or terminate this contract. Before suspending or terminating the contract, the AGENCY shall notify the GRANTEE in writing of the need to take corrective action. If corrective action is not taken within 30 calendar days, the contract may be terminated or suspended.

The AGENCY reserves the right to suspend all or part of the contract, withhold further payments, or prohibit the GRANTEE from incurring additional obligations of funds during investigation of the alleged compliance breach and pending corrective action by the GRANTEE or a decision by the AGENCY to terminate the contract. A termination shall be deemed a “Termination for Convenience” if it is determined that the GRANTEE: (1) was not in default; or (2) failure to perform was outside of his or her control, fault or negligence. The rights and remedies of the AGENCY provided in this contract are not exclusive and are, in addition to any other rights and remedies, provided by law.
TERMINATION PROCEDURES

Upon termination of this contract, the AGENCY, in addition to any other rights provided in this contract, may require the GRANTEE to deliver to the AGENCY any property specifically produced or acquired for the performance of such part of this contract as has been terminated. The provisions of the "Treatment of Assets" clause shall apply in such property transfer.

The AGENCY shall pay to the GRANTEE the agreed upon price, if separately stated, for completed work and services accepted by the AGENCY, and the amount agreed upon by the GRANTEE and the AGENCY for (i) completed work and services for which no separate price is stated, (ii) partially completed work and services, (iii) other property or services that are accepted by the AGENCY, and (iv) the protection and preservation of property, unless the termination is for default, in which case the AGENCY shall determine the extent of the liability of the AGENCY. Failure to agree with such determination shall be a dispute within the meaning of the "Disputes" clause of this contract. The AGENCY may withhold from any amounts due the GRANTEE such sum as the AGENCY determines to be necessary to protect the AGENCY against potential loss or liability.

The rights and remedies of the AGENCY provided in this section shall not be exclusive and are in addition to any other rights and remedies provided by law or under this contract.

After receipt of a notice of termination, and except as otherwise directed by the AGENCY, the GRANTEE shall:

1. Stop work under the contract on the date, and to the extent specified, in the notice;
2. Place no further orders or subcontracts for materials, services, or facilities except as may be necessary for completion of such portion of the work under the contract that is not terminated;
3. Assign to the AGENCY, in the manner, at the times, and to the extent directed by the AGENCY, all of the rights, title, and interest of the GRANTEE under the orders and subcontracts so terminated, in which case the AGENCY has the right, at its discretion, to settle or pay any or all claims arising out of the termination of such orders and subcontracts;
4. Settle all outstanding liabilities and all claims arising out of such termination of orders and subcontracts, with the approval or ratification of the AGENCY to the extent AGENCY may require, which approval or ratification shall be final for all the purposes of this clause;
5. Transfer title to the AGENCY and deliver in the manner, at the times, and to the extent directed by the AGENCY any property which, if the contract had been completed, would have been required to be furnished to the AGENCY;
6. Complete performance of such part of the work as shall not have been terminated by the AGENCY; and
7. Take such action as may be necessary, or as the AGENCY may direct, for the protection and preservation of the property related to this contract, which is in the possession of the GRANTEE and in which the AGENCY has or may acquire an interest.

TRAFFICKING VICTIMS PROTECTION ACT

As described in 2 CFR Part 175 the AGENCY may terminate this contract, without penalty, if the GRANTEE is found to be in violation of the Trafficking Victims Protection Act of 2000.

UNIFORM ADMINISTRATIVE REQUIREMENTS FOR GRANTS AND COOPERATIVE AGREEMENTS

The GRANTEE shall comply with the uniform administrative rules for Federal grants and cooperative agreements and subawards contained in 2 CFR Part 200 and as appropriate for this contract:

<table>
<thead>
<tr>
<th>Federal Grantor Agency</th>
<th>2 CFR Chapter</th>
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<tbody>
<tr>
<td>Department of Agriculture</td>
<td>IV</td>
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<td>Department of the Interior</td>
<td>XIV</td>
</tr>
<tr>
<td>Environmental Protection Agency</td>
<td>XV</td>
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</table>

WAIVER

A failure by either party to exercise its rights under this contract shall not preclude that party from subsequent exercise of such rights and shall not constitute a waiver of any other rights under this contract unless stated to be such in a writing signed by an authorized representative of the party and attached to the original contract.

WHISTLEBLOWER PROTECTION

If this contract exceeds the federal simplified acquisition threshold of $100,000 the contract and all employees working on the contract are subject to the whistleblower protections established at 41 USC 4712 by section 828 of the National Defense Authorization Act for Fiscal Year 2013. If subject to this statute the Grantee shall inform their employees in writing, in the predominant language of the workforce, of the employee whistleblower rights and protections under 41 USC 4712. This section is applicable to all subcontractors and subawardees relate to this contract that exceed the federal simplified acquisition threshold of $100,000, and the Grantee shall include this section in all such subcontracts and/or subawards.
Attachment B - 
CONTRACT/PROJECT SUMMARY

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<th>TITLE:</th>
<th>Forest Health Management for Reduced Stormwater Runoff and Land Conversion</th>
<th>WDFW CONTRACT NUMBER:</th>
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<tr>
<td>PERIOD:</td>
<td>05/01/2020 to 03/31/2022</td>
<td>WDFW MANAGER:</td>
<td>Sean Williams (360) 902-8136</td>
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<tr>
<td>GRANTEE:</td>
<td>King County Conservation District</td>
<td></td>
<td></td>
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<tr>
<td>GRANTEE CONTACT:</td>
<td>Brandy Reed (425) 282-1924</td>
<td></td>
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SUMMARY CONTRACT DESCRIPTION:
This project is part of the Habitat Strategic Initiative FY19 NEP funding allocation.

King Conservation District will develop and implement a Pilot Project to strategically engage and deliver forest stewardship planning (FSP) services to Non-Industrial Private Forest (NIPF) landowners. The Pilot Project will deploy a conservation district Area Forester system that helps NIPF landowners steward privately held forests, retain forest cover and restore forest-related ecosystem functions, including improved fish and wildlife habitat, and reduced stormwater runoff volumes. The Pilot Project will deliver FSP services to priority geographic areas that are identified in partnership with key stakeholders.

Master Index Number(s): 37368

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<th>Award Number</th>
<th>Research &amp; Development?</th>
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<td>PC-01J22301</td>
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Attachment C -

SPECIAL TERMS AND CONDITIONS

1. **Summary**
   
   This project is part of the Habitat Strategic Initiative FY19 NEP funding allocation.

   King Conservation District will develop and implement a Pilot Project to strategically engage and deliver forest stewardship planning (FSP) services to Non-Industrial Private Forest (NIPF) landowners. The Pilot Project will deploy a conservation district Area Forester system that helps NIPF landowners steward privately held forests, retain forest cover and restore forest-related ecosystem functions, including improved fish and wildlife habitat, and reduced stormwater runoff volumes. The Pilot Project will deliver FSP services to priority geographic areas that are identified in partnership with key stakeholders.

2. **Description of all Project Requirements**

   The Grantee will perform the project as described in Attachment "D" (Statement of Work).

3. **Reporting Requirements**
   
   a. **Semiannual Reports.** The Grantee shall submit a performance report to the WDFW Project Manager once every six months using the reporting tool supplied by WDFW, unless otherwise specified in this Contract. This report shall include brief information on each of the following areas:

      - A comparison of actual accomplishments to the outputs/outcomes established in the assistance agreement work plan for the period;
      - The reasons for slippages if established outputs/outcomes were not met; and
      - Additional pertinent information, including when appropriate, analysis and information of cost overruns or high unit costs.

      The reporting periods for these reports are from October 1 to March 31 and from April 1 to September 30 for each year of the contract. Performance reports are due to the WDFW Project Manager not later than fifteen (15) calendar days after the end of each reporting period.

   b. **Final Report.** The Grantee will submit a final performance report to the WDFW Project Manager not later than sixty (60) calendar days after contract termination. The final report will generally contain the same information as contained in semiannual reports, but will cover the entire project period.

4. **Budget**

   WDFW will reimburse the Grantee for allowable costs as described in the budget contained in Attachment “D” in accordance with the deliverable and invoice requirements provided in the Habitat Strategic Initiative Grant Guidance located at https://pspwa.box.com/v/HSI-NEPGrantGuidance. Final payment is contingent on the approval and acceptance of all deliverables identified in Attachment “D” by the WDFW Project Manager.

5. **Peer Review**

   The results of the project funded through this contract may affect management decisions relating to Puget Sound. Prior to finalizing any significant technical products the Grantee’s Principal Investigator (PI) of this project must solicit advice, review and feedback from a technical review or advisory group consisting of relevant subject matter specialists. A record of comments and a brief description of how respective comments are addressed by the PI will be provided to the WDFW Project Monitor prior to releasing any final reports or products resulting from the funded study.
6. **Electronic and Information Technology Accessibility**

The Grantee is subject to the program accessibility provisions of Section 504 of the Rehabilitation Act, codified in 40 CFR Part 7, which includes an obligation to provide individuals with disabilities reasonable accommodations and an equal and effective opportunity to benefit from or participate in a program, including those offered through electronic and information technology ("EIT"). In compliance with Section 504, EIT systems or products funded by this contract must be designed to meet the diverse needs of users (e.g., U.S. public, recipient personnel) without barriers or diminished function or quality. Systems shall include usability features or functions that accommodate the needs of persons with disabilities, including those who use assistive technology. At this time, the EPA will consider a recipient's websites, interactive tools, and other EIT as being in compliance with Section 504 if such technologies meet standards established under Section 508 of the Rehabilitation Act, codified at 36 CFR Part 1194. While Section 508 does not apply directly to grant recipients, the EPA encourages recipients of EPA grant funds to follow either the 508 guidelines or other comparable guidelines that concern accessibility to EIT for individuals with disabilities. Recipients may wish to consult the latest Section 508 guidelines issued by the US Access Board or W3C's Web Content Accessibility Guidelines (WCAG) 2.0 (see http://www.access-board.gov/sec508/guide/index.htm).

7. **Riparian Buffers**

Riparian buffer restoration projects in agricultural areas shall be consistent with the interim riparian buffer recommendations provided to EPA and the Natural Resource Conservation Service by National Marine Fisheries Service letters of January 30, 2013 and April 9, 2013; or the October 28, 2013 guidance previously agreed to by Lead Organizations. These documents are available from WDFW on request. For projects involving riparian buffer restoration in agricultural areas, the Grantee shall confirm with WDFW in writing projects' consistency with the recommendations referenced above. When evaluating project proposals, WDFW will consider the extent to which proposals include appropriate riparian buffers or otherwise address pollution sources on other water courses on the properties in the project area to support water quality and salmon recovery. Deviations can only be obtained through an exception approved by EPA. In order for EPA to evaluate a request for an exception, the Grantee must submit to WDFW the scientific rationale demonstrating adequacy of buffers for supporting water quality and salmon recovery. The request must summarize tribal input on the scientific rationale or other relevant issues. The scientific rationale could be developed from sources such as site-specific assessment data, salmon recovery plans, Total Maximum Daily Loads (TMDLs) and the state nonpoint plan. EPA will confer with the National Oceanic and Atmospheric Administration (NOAA) and the Washington Department of Ecology and provide the opportunity for affected tribes to consult with EPA before making a final decision on a deviation request.

8. **STORET**

All water quality data generated in accordance with an EPA approved Quality Assurance Project Plan as a result of this contract will be required to be transmitted into the EPA's Storage and Retrieval (STORET) data warehouse using either WQX or WQX web. Water quality data appropriate for STORET include physical, chemical, and biological sample results for water, sediment and fish tissue. The data include toxicity data, microbiological data, and the metrics and indices generated from biological and habitat data. The Water Quality Exchange (WQX) is the water data schema associated with the EPA, State and Tribal Exchange Network. Using the WQX schema partners map their database structure to the WQX/STORET structure. WQX web is a web based tool to convert data into the STORET format for smaller data generators that are not direct partners on the Exchange Network. More information about WQX, WQX web, and the STORET warehouse, including tutorials, can be found at http://www.epa.gov/storet/wqx/
9. **Quality Assurance Requirements**

Acceptable Quality Assurance documentation must be submitted to the WDFW Project Manager within 30 days of acceptance of this contract or another date as negotiated with the WDFW Project Manager. The Washington Department of Ecology’s National Estuary Program (NEP) Quality Coordinator supports quality assurance for EPA-funded NEP projects. No work involving direct measurements or data generation, environmental modeling, compilation of data from literature or electronic media, and data supporting the design, construction, and operation of environmental technology shall be initiated under this contract until the WDFW Project Manager or the NEP Quality Coordinator has approved the Grantee’s quality assurance document. The Grantee will submit all Quality Assurance documentation to the following address; please copy the WDFW Project Manager on all correspondence with the NEP Quality Coordinator:

Britta Voss, NEP Quality Coordinator
Department of Ecology
bvoss461@ecy.wa.gov
360.407.6070

10. **Geospatial Data Standards**

All geospatial data created must be consistent with Federal Geographic Data Committee (FGDC) endorsed standards. Information on these standards may be found at [www.fgdc.gov](http://www.fgdc.gov).

11. **Information Collection Requirements**

The Grantee agrees to comply with the requirements of the Paperwork Reduction Act in completing the project under this contract. Because the scope of work includes a survey, a questionnaire or similar information-gathering activity, the Paperwork Reduction Act of 1995 (44 U.S.C. 3501 et seq.), requires the EPA to obtain Office of Management and Budget (OMB) clearance prior to the Grantee’s collection of information by means of identical questions posed to 10 or more persons. The Grantee will provide to WDFW the following information: (1) description of the information to be collected; (2) explanation of the need for the information; and (3) to whom the survey is being directed.

12. **International Travel (Including Canada)**

All International Travel must be approved by EPA’s Office of International and Tribal Affairs (OITA) through WDFW BEFORE travel occurs. Even a brief trip to a foreign country, for example to attend a conference, requires OITA approval. The Grantee will contact WDFW as soon as possible if travel is planned out of the country, including Canada and/or Mexico, so that WDFW can obtain appropriate approvals from EPA Headquarters.

13. **Animal Subjects**

Attachment D
STATEMENT OF WORK
Forest Health Management for Reduced Stormwater Runoff and Land Conversion

Project Tracking number (Novatus): 20-15500

Sub-recipient: King Conservation District
Sub-recipient Contact: Brandy Reed, brandy.reed@kingcd.org, (O) 425- 262-1924, (C) 206-669-3733
King Conservation District, 800 SW 39th Street, Suite 150, Renton WA 98057

Habitat Strategic Initiative (SI) Grant Manager:
Sean Williams, nep.grants@dfw.wa.gov, 360-902-8136

Effective Date: May 1, 2020
Expiration Date: March 31, 2022
Not to exceed: $595,000

Tracking information:

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<td>Vital sign links:</td>
<td>Land Development and Cover</td>
</tr>
<tr>
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<td>Land Development and Cover</td>
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<td>LIO geographies:</td>
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<td>Number of positions supported:</td>
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The following Statement of Work is based on the sub-recipient's Near-Term Action (NTA) proposal, which is referenced in the 2018 Puget Sound Action Agenda.
OVERVIEW

Forest Health Management for Reduced Stormwater Runoff and Land Conversion is a pilot project (Pilot Project) of the Puget Sound Conservation Districts Caucus will strategically engage Non-Industrial Private Forest (NIPF) landowners and deliver of forest stewardship planning services (FSP services) to reduce forest land conversion, improve fish and wildlife habitat, protect water quality and reduce stormwater runoff.

The Pilot Project will deliver FSP services to priority geographic areas that are identified in partnership with key stakeholders. Services will be marketed to high priority parcels within the priority geographies. An engagement strategy will be developed to identify approaches, tools and key messages used to promote landowner interest in FSP services. Landowners who access FSP services will increase their forest stewardship knowledge, receive a Forest Stewardship Plan, gain access incentives for restoration activities (such as weed control, forest structure, tree/shrub establishment, road abatement, fish passage barrier removal, etc.), and receive assistance on current use enrollment and available Transfer of Development Rights incentive programs.

The Pilot Project will be implemented by 1) Hiring Area Foresters to deliver FSP services within the boundaries of 3 Areas. 2) Engaging local and regional stakeholders on identifying priority sub-geographies within the 3 Areas and on identifying a framework for prioritizing forest parcels for engagement. 3) Using GIS to map priority forest lands within the boundaries of the 3 Areas. 4) Conducting outreach to market FSP services to NIPF landowners within the priority sub-geographies. And, 5) Develop and/or adapt FHM planning protocols/templates/procedures for standardized service delivery throughout the Pilot Project geographies.

The anticipated outcomes of the Pilot Project are 1) A tested and verified pilot project to increase the acres of NIPF lands that are actively stewarded for retention of forest cover, conserved through current use programs, and/or restored through public/private cost-share partnerships. And 2) Completion of Phase 1 PSCD FHM services scope of work, positioning the PSCD system to continue service delivery in the Pilot Project geographies and positioning the PSCD system to extend delivery of these services to additional Puget Sound sub-geographies.

GOALS & MEASURABLE OBJECTIVES

Develop and implement a pilot project to staff and deploy a conservation district Area Forester system that helps Non-Industrial Private Forest (NIPF) Landowners steward privately held forests, retain forest cover and restore forest-related ecosystem functions, including improved fish and wildlife habitat and reduced stormwater runoff volumes.

Objectives

1. Identify and prioritize private forest lands for targeted marketing and delivery of FSP services.
2. Develop and deploy FSP services and implementation protocols, systems, tools and templates for standardized FSP service delivery across the geographies served by the Area Forester system.
3. Market and deliver FS planning services, identify FS project opportunities and develop project prescriptions. Forest Stewardship plans will be the WA State Integrated Forest Management Plan Guidelines.
4. Connect forest landowners with financial incentives to implement FS plan goals and objectives, including invasive species control, forest structure / canopy restoration, tree / shrub establishment, road abatement, fish passage barrier removal, etc. Financial incentives include but are not limited to enrollment in current use taxation program and accessing federal, state and local sources of cost-share.
5. Connect forest landowners with contractors to implement funded forest stewardship projects.
TASKS & DELIVERABLES

King Conservation District (hereafter referred to as the sub-recipient) will manage all aspects of the project including execute sub-contracts; manage sub-contractors; project invoicing and fiscal management; and draft deliverables for review. The sub-recipient will provide all deliverables and invoices to the Habitat SI Grant Manager. It is preferred that deliverables and invoices are uploaded to the provided box.com folder for the grant but they may also be emailed to nep.grants@dfw.wa.gov. Additional detail is available in the Habitat SI Grant Guidance (https://pspwa.box.com/v/HSI-NEPGrantGuidance).

The following are the tasks, deliverables, and deadlines associated with this sub-award:

**TASK 1. Project Development**

This task must be completed before initiating any other work under this sub-award. **Work completed on other tasks prior to completion of Task 1 may be ineligible for reimbursement.**

**1.1 DEVELOP PROJECT PLAN**

The sub-recipient will complete the [project plan template](https://pspwa.box.com/v/HSI-NEPGrantGuidance) describing the work necessary to achieve the grant deliverables. The plan includes a timeline, workplan, and project success measures. The Habitat SI will have the opportunity to provide input on the plan and establish mutual expectations. The plan provides the framework for quarterly reporting (Task 2.2) and clear communication between the Habitat SI and the sub-recipient.

<table>
<thead>
<tr>
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<td>1.1</td>
<td>Project plan</td>
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**TOTAL ESTIMATED COST FOR TASK 1: $2,500**

**TASK 2. Project Management**

This task describes the data collection and reporting requirements associated with this sub-award.

**2.1 PROJECT FACTSHEET**

The sub-recipient will create a 2-page project factsheet (using the provided template) and submit it in MS Word. The first page of the factsheet will provide an overview of the project and a brief description of the sub-recipient’s organization. The first factsheet will be submitted with the first quarterly progress report. The second page will describe the project outcomes, lessons learned, and next steps, and will be submitted at the end of the grant. The factsheet will be made publicly available.

**2.2 PROGRESS REPORTING**

The sub-recipient will provide an updated version of the Project Plan developed in Task 1.1 each quarter. Target completion dates in the deliverable table will specify the date that progress reporting is due for the following quarterly reporting periods:

- Quarter 1 reporting period: January 1 – March 31
- Quarter 2 reporting period: April 1 – June 30*
- Quarter 3 reporting period: July 1 – September 30
- Quarter 4 reporting period: October 1 – December 31

*Month ending in 30th
These periods are synced to inform the Grant Program’s EPA reporting schedule and timely reporting is critical.

The Final Report template (2.3) is completed instead of updating the Project Plan in the final quarter of the grant.

*State fiscal year closeout. Ensure all invoices for work performed through June 30 are submitted by July 15.

Reporting requirements:

2.2.1 EPA FEATS REPORTING
Complete semi-annual FEATS (Financial and Ecosystem Accounting Tracking System) progress reports, as well as a final FEATS report. The final FEATS report, reflecting the final project billing, will be provided by the sub-recipient during project closeout, within 60 days of the expiration of the grant, and will describe the entire project, highlighting project outcomes and discussing lessons learned.

FEATS Reporting Periods:
- April 1 – September 30
- October 1 – March 31

Due with Quarter 1 progress reporting
Due with Quarter 3 progress reporting

2.2.2 Puget Sound Partnership NTA REPORTING
NTA owners are required to report on the following:
- Progress reporting of their actions on an annual basis (late winter)
- Financial status of their actions on an annual basis (summer)

2.3 FINAL CLOSE-OUT PROJECT REPORT
A final close-out report will evaluate the success of achieving the measures identified in the project plan. A final report will be written (using the provided template) by the sub-recipient which includes the methods, results, lessons learned, and recommendations for future work. The sub-recipient will include an evaluation of the pilot project activities conducted in priority geographic areas and characterizes the FHM services delivered in the priority geographic areas and associated outcomes where data are available. Additionally, the report will address the long-term sustainability of NIPF landowner services by the pilot project conservation districts and the larger collective of Puget Sound conservation districts.

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<td>Final Project Factsheet</td>
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<td>March 17, 2022</td>
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<td>2.2</td>
<td>Quarterly progress reporting (includes FEATS every April and October)</td>
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<td>2.3</td>
<td>Final Close-out Report Draft</td>
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<td>Final</td>
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<td>March 17, 2022</td>
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Total Estimated Cost for Task 2: $9,890
3.1 DEVELOP PILOT AREA FOCUS AND PRIORITIZATION
Sub recipient will engage relevant community stakeholders including members of the Puget Sound Conservation Districts Caucus, tribes, NGOs and community organizations to help identify priority sub-geographies for strategic delivery of Area Forster services. Additionally, stakeholders will be engaged to inform the development of a framework for prioritizing parcels for strategic engagement. Criteria for prioritizing strategic engagement may include but are not limited to:

- Salmon recovery priority areas
- Local watershed plan priority areas
- Riparian conservation/restoration priorities
- Water quality / TMDL priorities
- Proximity to surface waters, publicly held open space / conservation sites, other parcels with forest/timberland/conservation/open space current use designation, and Firewise communities
- Fire risk management / Fire resiliency priority areas

3.2 MARKET & ENGAGEMENT STRATEGY
The sub-recipient will develop a strategy for promoting forest stewardship services and engaging NIPF landowners. Existing tools and resources will be adapted and integrated into a pilot project landowner communication, marketing and engagement strategy. Some tools and resources available for adaptation and integration include:

1) The TELE approach (Tools for Engaging Landowners Effectively) developed by the Sustaining Family Forests Initiative and focused on forest landowner outreach and engagement to promote stewardship of forest resources, remove barriers to change behavior. The TELE guide will be used to develop the pilot project landowner communication, marketing and engagement strategy.

2) The Outreach Program guidance developed by The American Forest Foundation and focused on best practices to market and deliver services to forest landowner. This tool will be adapted for integration into the pilot project landowner communication, marketing and engagement strategy.

3) The Peers and Pros approach developed by Penn State Extension and focused on engaging forest landowners using forest landowner tested and verified key messages. These key messages will be integrated into the pilot project communications with landowners, and landowner communications and other key messages will be developed to address the specific forest land use patterns and demographics in each Area.

The engagement strategy will include descriptions and use of specific engagement tools. Engagement tools that may be utilized include direct mailings, service fliers, social media postings; engagement approaches may include marketing through community assets such as Granges and homeowner associations, through aligned service sectors such as Firewise programs, current use programs, and WSU Cooperative Extension, and through referrals.

3.3 PILOT PROJECT COORDINATION
Sub-recipient will coordinate implementation of the pilot project for program development and delivery in all pilot geographies. Program coordination will include a focus on standardized program tools, systems and resources. Program coordination also includes recruiting, hiring and onboarding three (3) Area Foresters and facilitating project coordination meetings with the corps of Area Foresters as well as the Forest Stewardship Teams at the host conservation districts.
### Task 3

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<td>Memo on selection of priority areas for pilot project.</td>
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<td>Memo outlining framework for prioritizing parcel for strategic engagement</td>
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<td>3.2</td>
<td>Memo on marketing and engagement strategy</td>
<td>$8,350</td>
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<td>3.3</td>
<td>Area Forester Position Descriptions</td>
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<td>Agenda and meeting notes from project coordination meetings with the Area Forester corps and Forest Stewardship Teams at host conservation districts.</td>
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**Total Estimated Cost for Task 3:** $49,580

### Task 4. Forest Health Management

#### 4.1 Forest Stewardship Outreach and Implementation

The Pilot Project will be implemented in three (3) sub-geographies of Puget Sound at high risk of land conversion to engage NIPF landowners through forest stewardship planning services and implementation of forest health management and restoration practices. The 3 sub-geographies equate to three (3) Areas that include the boundaries of seven Puget Sound conservation districts (CD).

- Area 1 comprises the boundaries of Kitsap CD, Mason CD and Thurston CD;
- Area 2 comprises the boundaries of King CD and Pierce CD; and
- Area 3 comprises the boundaries of Snohomish CD and Island CD with potential to expand into the boundaries of Skagit, San Juan and Whatcom CDs should resources allow.

The Area Foresters operating within these boundaries will deliver forest stewardship planning services focused on identifying forest conservation and restoration opportunities that support long term sustainability of forest canopy cover and forest habitat structure and function. Anticipated activity levels and results associated with implementing the Pilot Project include the following:

1) Engage approximately 120 NIPF Landowners representing 600 - 2400 acres (depending on the size of their property) in forest stewardship planning.

2) Work with these approximately 120 NIPF Landowners to support enrollment in Open Space Taxation programs such as the Timberland Program and other locally administered “current use” programs where they exist such as the King County Public Benefit Rating System. Total NIPF land acreage enrolled in Open Space and current use programs will range from 180 to 720 acres (depending on the size of properties).
3) Work with at least 36 of these NIPF landowners on accessing and securing public/private partnership funding (cost-share) to implement forest stewardship prescriptions. (Sources of cost-share funding include federal, state and local partners such as USDA NRCS, WSCC, PSCDs, et cetera.) Total NIPF land acreage funded for on-the-ground stewardship and restoration treatments will range from 180 to 720 acres (depending on available funding and the size of areas to be treated). Only a portion of these funded cost-share projects will be initiated or completed within the time frame of the Pilot Project.

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<td>October 4, 2021 January 3, 2022</td>
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**TOTAL ESTIMATED COST FOR TASK 4: $506,290**

**TASK 5. Impact Communications**

This task outlines the communications strategy to develop pilot model success stories and promote Puget Sound-wide expansion of the pilot model during engagements with Legislators and key stakeholders.

**5.1 LANDOWNER TESTIMONIALS**

The sub-recipient will create land-owner testimonials to highlight the value of Forest Stewardship services to NIPF landowners. One landowner from each Area will be interviewed to develop testimonials representing the entire geographic scope of the pilot project. Testimonials will be posted on the PSCD web site (www.BetterGround.org) and PSCD social media accounts and will be printed for distribution to Legislators and regional stakeholders.

**5.2 REGIONAL FOREST STEWARDSHIP MODEL COMMUNICATIONS**

The sub-recipient will create high-quality communication materials describing the PSCDs regional forest stewardship program model, the results of the pilot project with success measures, and the role of regional forest stewardship services in addressing land cover and habitat priorities. Templates for the materials developed will include the communications materials for the PSCD Portfolio of Regional Programs and Services.

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**TOTAL ESTIMATED COST FOR TASK 5: $26,740**
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</tr>
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<td>Regional Forest Stewardship Pilot Program (PSCD Canopy Area Founder Pilot) (Contract Title - Forest Health Maps for Reduced Stormwater Runoff &amp; Local Connections)</td>
<td>345,000.00</td>
<td>WA OPW</td>
<td>confirmed</td>
</tr>
<tr>
<td>Urban Tree Canopy &amp; Landscape Partnership (Small Transit Project)</td>
<td>230,000.00</td>
<td>Sound Transit</td>
<td>confirmed</td>
</tr>
<tr>
<td></td>
<td>pending board</td>
<td>Chair signature</td>
<td></td>
</tr>
<tr>
<td>Member Jurisdiction Correlated Aquatic and Upland Restoration Services (Third Genre Capacity) (Contract Title - TSA between RECD for Services Related to ACR)</td>
<td>112,750.00</td>
<td>KC DNRP WLRD</td>
<td>confirmed</td>
</tr>
</tbody>
</table>
ACTION ITEM: 20-0 51

SUBJECT:
A motion to authorize the Board Chair to sign the Agreement with the King County Department of Natural Resources Water and Land Resources Division (KC DNRP WLRD) for cost-sharing on a Washington Department of Ecology (ECY) Washington Conservation Corps (WCC) work crew services in support of the Member Jurisdiction Contracted Aquatic and Upland Restoration Services Strategic Initiative. (Also referred to as Third Crew Pilot Project.)

FISCAL IMPACT

POLICY CONSIDERATION

STAKEHOLDER INTERESTS
- Agriculture landowners receiving services through King County ADAP
- King County DNRP WLRD ADAP
- Stakeholders party to the development, approval and implementation of the KCD 2015 – 2019
- Stakeholders party to the development of the KCD proposed 2020-2024 Program of Work
- KCD FHM Program, LIP, MJ Services Program, and the Shoreline & Riparian Habitat Improvement Program

BACKGROUND

EFFECTIVE DATE:
If approved, this Motion becomes effective immediately

OPTIONS
None presented

RECOMMENDATION
Staff recommends approval of the motion
MOTION

______ Moved, ______ Seconded; Passed unanimously a motion authorizing the Board Chair to sign the Agreement with the Washington Department of Fish and Wildlife (WA DFW) for the grant project titled Forest Health Management for Reduced Stormwater and Runoff and Land Conversion (Project) also known as the PSCD Caucus Regional Forest Stewardship Pilot Program.
Technical Services Agreement
Between King County and the King Conservation District
for Services
Related to the Agricultural Drainage Assistance Program

This Technical Services Agreement ("Agreement") is made and entered into by King County, as represented by its Department of Natural Resources and Parks, Water and Land Resources Division, hereinafter referred to as "County," and King Conservation District, hereinafter referred to as “KCD,” collectively referred to as the "Parties," in order for KCD to provide services to support the Agricultural Drainage Assistance Program (the “Project”).

The Parties mutually agree as follows:

I. Purpose

The purpose of this Agreement is to provide a mechanism whereby KCD will provide services to County to support its work on the Project, as described in Exhibit One, attached to this Agreement and incorporated herein and made a part hereof, and County will pay for such services.

II. Management of Technical Services Provision

A. The provision of services under this Agreement will be managed for County by Lou Beck, or other staff as designated by County, and for the KCD by Brandy Reed or other staff as may be designated by the KCD (“Project Administrators”).

B. In the event that a dispute arises under this Agreement, it shall be resolved by the Project Administrators. If the dispute cannot be resolved by the Project Administrators, it shall be referred for resolution to the Division Director of County’s Water and Land Resources Division and for the KCD, to the Executive Director. This dispute resolution provision shall not be construed as prohibiting either Party from seeking enforcement of the terms of this Agreement, or relief or remedy from a breach of the terms of this Agreement, in law or in equity.
III. Responsibilities
A. KCD will provide services as described in Exhibit One.
B. County will provide funding to cover KCD costs to provide services.

IV. Costs and Billing
A. County will pay KCD's actual costs to provide services. As provided for in Exhibit One, minimum annual service costs are estimated at $126,000 and are not to exceed the full cost of a WCC crew. An additional $5,000 is allocated in year one for purchase of crew tools and equipment. Annual costs above the minimum and up to the full cost of a crew will be agreed to in writing by the Parties.
B. KCD will invoice County for services not more frequently than a monthly basis. The invoice shall be accompanied by a summary of activities conducted under this Agreement and associated costs.
C. Payment to KCD will be made by County within forty-five (45) days of receipt of invoices.

V. Duration, Termination, and Amendment
A. This Agreement shall be effective October 1, 2019 by both Parties, and will expire on September 30, 2022 unless terminated sooner or extended as provided herein.
B. This Agreement may be terminated by either Party upon 30 days written notice.
C. This Agreement may be amended only by written agreement of the Parties.
D. This Agreement is not assignable by either Party, either in whole or in part.
E. This Agreement is a complete expression of the intent of the Parties and any oral or written representations or understandings not incorporated herein are excluded. The Parties recognize that time is of the essence in the performance of the provisions of this Agreement. Waiver of any default shall not be deemed to be waiver of any subsequent default. Waiver of breach of any provision of this Agreement shall not be deemed to be a waiver of any other or subsequent breach and shall not be construed to be a modification of the terms of the Agreement unless stated to be such through written approval by the Parties which shall be attached to the original Agreement.

VI. Indemnification and Hold Harmless
County shall protect, defend, indemnify, and save harmless the KCD, its officers, officials, and employees, while acting within the scope of their employment, from any and all costs, claims, judgments, and/or awards of damages, arising out of or in any way resulting from County’s own negligent acts or omissions, or the negligent acts or omissions of County’s officials, officers, or employees arising under the terms of this Agreement. The KCD shall protect, defend, indemnify, and save harmless County, its officers, officials, and employees, while acting within the scope of their employment, from any and all costs, claims, judgments, and/or awards of damages, arising out of or in any way resulting from the KCD’s own negligent acts or omissions, or the negligent acts or omissions of the KCD’s officials, officers or employees arising under the terms of this Agreement. Each Party agrees that its obligations under this Article VI extend to any claim, demand, and/or cause of action brought by, or on behalf of, any of its employees or agents. For this purpose, each Party, by mutual negotiation, hereby waives, with respect to the other Party only, any immunity that would otherwise be available against such claims under the Industrial Insurance provisions of Title 51 RCW. In the event that either Party incurs any judgment, award, and/or cost arising therefrom, including attorney’s fees, to enforce the provisions of this Article, all such fees, expenses, and costs shall be recoverable from the responsible Party to the extent of that Party’s culpability. The indemnification provided for in this Article VI shall survive the termination of this Agreement.

IN WITNESS WHEREOF, the Parties hereto have executed this Agreement effective on the first day of October, 2019.

Approved as to Form

By: _____________________________
Title: Deputy Prosecuting Attorney

By: _____________________________
Title: Water and Land Resources Division Director

Approved as to Form

King Conservation District:

By: _____________________________
Title: _____________________________

King County:

By: _____________________________
Title: _____________________________
EXHIBIT 1

Scope of Work
ADAP Support 2019-2022

King County’s Agricultural Drainage Assistance Program (ADAP) helps agricultural property owners improve the drainage on their properties in order to support agricultural production while applying pre-approved best management practices to insure regulatory compliance. ADAP programs and services include the following:

- property survey and problem identification;
- plan and profile preparation;
- permit submittal;
- removing aquatic life from the construction area;
- construction oversight and inspection;
- buffer planting;
- provide general technical assistance regarding agricultural drainage.

The King Conservation District (KCD) also provides agricultural landowner assistance services in King County and KCD has long-established relationships with landowners and experience managing contractors for projects similar to those undertaken by the ADAP. KCD also has a long history of managing and coordinating multiple Washington Conservation Corps (WCC) work crews to install and maintain native plants on projects throughout King County.

ADAP has used WCC crews managed by King County Ecological Restoration and Engineering Services (ERES) in previous years, and will continue to do so as opportunities arise. Due to recent changes in program planning, ERES WCC crews can no longer provide all the support ADAP requires to meet its buffer planting and plant maintenance needs, so ADAP will utilize a KCD WCC crew to fill service gaps.

Under this Scope of Work, KCD will perform activities as described below in cooperation with WLBD staff, to coincide with three WCC crew seasons from October 2019 through September 2022. ADAP expects to use the KCD WCC crew for the following activities.

- Planting site preparation
- Herbicide application
- Cardboard/fabric/mulch placement
- Planting
- Plant Maintenance
- In-water grass removal
- Beaver dam removal

**TASK 1. Manage KCD WCC Crew**

ADAP will work with KCD to utilize a WCC crew that KCD manages. KCD’s crew contract with WCC is an annual agreement, but the placement is intended for 3 years. WCC crews are assigned for an annual crew season starting in October of a calendar year and run through mid-September the following calendar year. It is anticipated that KCD will utilize 50% of the available crew days and ADAP will utilize 50% of the available crew days for 3 crew seasons starting October 2019 and running through September 2022. A KCD WCC crew is expected to have at least 39 weeks of productive work time (approximately 157 to 168 days) per crew season, therefore ADAP will utilize the KCD WCC crew for at least 19 of the 39 weeks (78 to 84 days) in a crew season. ADAP and KCD will coordinate specific times that each agency will use the crew. Since both entities crew needs are similar, it is anticipated that the crew will be assigned to each entity every other week throughout the crew season. At the request of either ADAP or KCD, reasonable accommodations will be made by either party to allow for longer crew assignments. If for any reason a crew cannot work a full 39 weeks in a calendar year, the crew time lost will be equally shared by both ADAP and KCD.

1. KCD will manage, direct, and otherwise be responsible for all aspects of keeping the KCD WCC crew, except that ADAP staff will provide project specific assignments and direction and crew coordination and oversight for work the WCC crew provides to ADAP. ADAP will provide project site specific materials necessary for the KCD WCC crew to perform work. The KCD WCC crew will provide tools that a WCC crew normally keeps and maintains. (Non-standard tools or equipment needed to support unique ADAP tasks which will be provided by ADAP.)

   **KCD Crew management Sub-Tasks:**
   1.1 General crew coordination associated with managing a shared crew
   1.2 Coordinate crew scheduling and high-level crew logistic.
   1.3 Coordinate with ADAP on crew deployment
   1.4 Ensure WCC prescribed support is provided to the crew
Table 1 summarizes the Cost Schedule for Direct Crew Cost, Crew Management and Crew Equipment for the 2019 - 2020 crew placement season. The Direct Crew Cost is expected to increase annually. KCD will inform ADAP when a new annual cost is announced. Based upon new cost information, the Cost Schedule will adjust proportionally for each subsequent year. Payment for Crew Management will be based on an employee’s actual billable hours.

Table 2 summarizes the maximum crew days available by month and for the 2019 - 2020 crew placement season. If both parties agree to an adjustment to the total KCD WCC crew time allotted to ADAP, expenses for the Direct Crew Cost will be pro-rated using the cost rate established in the Cost Schedule.

Table 1. Cost Schedule - 2019/2020 Crew Season

<table>
<thead>
<tr>
<th>Cost Factor</th>
<th>Cost Rate/day (2019/2020)</th>
<th>Quantity</th>
<th>Total (2019/2020)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Direct Crew Cost (for 19 weeks, 50%, of crew’s time)</td>
<td>$1,358.97</td>
<td>78 days</td>
<td>$106,000</td>
</tr>
<tr>
<td>Crew Management (Care and Support)</td>
<td>Varies</td>
<td>Varies</td>
<td>$10,000 (not to exceed)</td>
</tr>
<tr>
<td>Crew Equipment (50% of the cost of purchasing start equipment for the crew)</td>
<td>n/a</td>
<td>n/a</td>
<td>$5,000</td>
</tr>
</tbody>
</table>

Table 2. Estimate of KCD WCC Crew Availability Schedule

<table>
<thead>
<tr>
<th>Month</th>
<th>Estimated Annual Crew Days</th>
<th>Allocation Crew Days - KCD</th>
<th>Allocation Crew Days - KC</th>
</tr>
</thead>
<tbody>
<tr>
<td>October</td>
<td>14 days</td>
<td>7 days</td>
<td>7 days</td>
</tr>
<tr>
<td>November</td>
<td>9 days</td>
<td>4 days</td>
<td>5 days</td>
</tr>
<tr>
<td>December</td>
<td>17 days</td>
<td>9 days</td>
<td>8 days</td>
</tr>
<tr>
<td>January</td>
<td>16 days</td>
<td>8 days</td>
<td>8 days</td>
</tr>
<tr>
<td>February</td>
<td>15 days</td>
<td>7 days</td>
<td>8 days</td>
</tr>
<tr>
<td>March</td>
<td>14 days</td>
<td>7 days</td>
<td>7 days</td>
</tr>
<tr>
<td>April</td>
<td>17 days</td>
<td>9 days</td>
<td>8 days</td>
</tr>
<tr>
<td>May</td>
<td>15 days</td>
<td>7 days</td>
<td>8 days</td>
</tr>
<tr>
<td>Month</td>
<td>Days 1</td>
<td>Days 2</td>
<td>Days 3</td>
</tr>
<tr>
<td>-----------</td>
<td>--------</td>
<td>--------</td>
<td>--------</td>
</tr>
<tr>
<td>June</td>
<td>14 days</td>
<td>7 days</td>
<td>7 days</td>
</tr>
<tr>
<td>July</td>
<td>17 days</td>
<td>9 days</td>
<td>8 days</td>
</tr>
<tr>
<td>August</td>
<td>17 days</td>
<td>8 days</td>
<td>9 days</td>
</tr>
<tr>
<td>September</td>
<td>3 days</td>
<td>2 days</td>
<td>1 day</td>
</tr>
<tr>
<td></td>
<td>168 days</td>
<td>84 days</td>
<td>84 days</td>
</tr>
<tr>
<td>Strategic &amp; Pilot Initiative Title</td>
<td>Amount</td>
<td>Entity</td>
<td>Status</td>
</tr>
<tr>
<td>----------------------------------------------------------------------</td>
<td>--------</td>
<td>--------</td>
<td>--------</td>
</tr>
<tr>
<td>Promoting Stormwater Benefits from Urban Canopy Cover in Puyallup Sound (Trees &amp; Stormwater Phase 1)</td>
<td>152,400.00</td>
<td>WA ECL</td>
<td>confirmed</td>
</tr>
<tr>
<td>Promoting Stormwater Benefits from Urban Canopy Cover in Puyallup Sound (Trees &amp; Stormwater Phase 2)</td>
<td>152,400.00</td>
<td>WA RR</td>
<td>confirmed</td>
</tr>
<tr>
<td>Urbn Trx Canopy &amp; Forest Cover Foodlot (Trees &amp; Stormwater Phase 1)</td>
<td>152,400.00</td>
<td>WA ECL</td>
<td>confirmed</td>
</tr>
<tr>
<td>Shore Friendly King County Pilot Program</td>
<td>152,400.00</td>
<td>WA RCD</td>
<td>confirmed</td>
</tr>
<tr>
<td>Regional Forest Stewardship Pilot Program [Puget Sound] [Contract Title: Forest Health &amp; Urban Stormwater runoff &amp; Land Conversion]</td>
<td>152,400.00</td>
<td>WA DFW</td>
<td>confirmed</td>
</tr>
<tr>
<td>Urban Tree Canopy &amp; Landscape Partnership [Sound Transit Project]</td>
<td>152,400.00</td>
<td>Sound Transit</td>
<td>confirmed</td>
</tr>
<tr>
<td>Wetland Amelioration Contracted Aquatic and Upland Restoration Services [Contract Title: Contract title - TSL between IC/PCC for Services Rendered to ADP]</td>
<td>128,072.00</td>
<td>IC/EWRR/WUD</td>
<td>confirmed</td>
</tr>
</tbody>
</table>
ACTION ITEM: 20-052

SUBJECT:
A motion to authorize the Board Chair to sign the Agreement with the King County Department of Natural Resources Water and Land Resources Division (KC DNRP WLRD) for cost-sharing on a Washington Department of Ecology (ECY) Washington Conservation Corps (WCC) work crew services in support of the Member Jurisdiction Contracted Aquatic and Upland Restoration Services Strategic Initiative. (Also referred to as Third Crew Pilot Project.)

FISCAL IMPACT

POLICY CONSIDERATION

STAKEHOLDER INTERESTS

- Agriculture landowners receiving services through King County ADAP
- King County DNRP WLRD ADAP
- Stakeholders party to the development, approval and implementation of the KCD 2015 – 2019
- Stakeholders party to the development of the KCD proposed 2020-2024 Program of Work
- KCD FHM Program, LIP, MJ Services Program, and the Shoreline & Riparian Habitat Improvement Program

BACKGROUND

EFFECTIVE DATE:
If approved, this Motion becomes effective immediately

OPTIONS
None presented

RECOMMENDATION
Staff recommends approval of the motion
MOTION

_______ Moved, _______ Seconded; Passed unanimously a motion authorizing the Board Chair to sign the Agreement with the Washington Department of Fish and Wildlife (WA DFW) for the grant project titled Forest Health Management for Reduced Stormwater and Runoff and Land Conversion (Project) also known as the PSCD Caucus Regional Forest Stewardship Pilot Program.
AGREEMENT NO. WCC-2003

AGREEMENT BETWEEN

The State of Washington, Department of ECOLOGY
AND
King Conservation District

THIS AGREEMENT is made and entered into by and between the Department of Ecology, hereinafter referred to as "ECOLOGY", and King Conservation District hereinafter referred to as the "SPONSOR."

IT IS THE PURPOSE OF THIS AGREEMENT to provide Washington Conservation Corps (WCC) members to complete environmental or disaster services projects, pursuant to Chapter 43.220 of the Revised Code of Washington.

THEREFORE, IT IS MUTUALLY AGREED THAT:

STATEMENT OF WORK
Both parties agree to do all things necessary for or incidental to the performance of the work set forth in Appendix “A" attached hereto and incorporated herein.

PERIOD OF PERFORMANCE
Subject to its other provisions, the period of performance of this Agreement shall commence on 10/5/2020 and be completed on 9/30/2021, unless terminated sooner as provided herein. The WCC Crew and/or WCC Individual Placement corpsmember specified in this agreement will be available to SPONSOR on the dates set forth on the calendar in Appendix “B" attached hereto and incorporated herein.

COMPENSATION
The parties have determined that the cost of accomplishing the work herein will not exceed $702,250. Payment for satisfactory performance of the work shall not exceed this amount unless the parties mutually agree to a higher amount. Compensation for service(s) shall be based on the following established rates:

<table>
<thead>
<tr>
<th>Provided by ECOLOGY</th>
<th>Reimbursed to ECOLOGY by SPONSOR</th>
</tr>
</thead>
<tbody>
<tr>
<td>3 Full-Term WCC Crews</td>
<td>$676,500</td>
</tr>
<tr>
<td>1 Individual Placement</td>
<td>$25,750</td>
</tr>
</tbody>
</table>

Total SPONSOR COST $702,250

Above cost Not to be Exceeded

The costs reimbursed to ECOLOGY by SPONSOR are a cost-share rate. Estimated value of a WCC crew is $258,027 annually per WCC Crew consisting of five WCC/AmeriCorps Members and one WCC Supervisor and/or $34,333 annually per WCC Individual Placement. Indirect costs are included in SPONSOR share at a standard rate of 5% of direct costs.

BILLING PROCEDURE
ECOLOGY shall submit invoices monthly to the SPONSOR’s designated contact person listed under “Agreement Management” section. Payment to ECOLOGY for approved and completed work will be made by warrant or account transfer by SPONSOR within 30 days of receipt of the invoice. Upon expiration of the Agreement, any claim for payment not already made shall be submitted within 30 days after the expiration date or the end of the fiscal year, whichever is earlier.
AGREEMENT ALTERATIONS AND AMENDMENTS
This Agreement may be amended by mutual agreement of the parties. Such amendments shall not be binding unless they are in writing and signed by personnel authorized to bind each of the parties.

ASSIGNMENT
The work to be provided under this Agreement, and any claim arising thereunder, is not assignable or delegable by either party in whole or in part, without the express prior written consent of the other party, which consent shall not be unreasonably withheld.

ASSURANCES
Parties to this Agreement agree that all activity pursuant to this contract will be in accordance with all the applicable current federal, state and local laws, rules, and regulations.

CONFORMANCE
If any provision of this Agreement violates any statute or rule of law of the state of Washington, it is considered modified to conform to that statute or rule of law.

DISPUTES
If a dispute arises under this Agreement, it shall be determined by a Dispute Board in the following manner: Each party to this Agreement shall appoint one member to the Dispute Board. The members so appointed shall jointly appoint an additional member to the Dispute Board. The Dispute Board shall review the facts, agreement terms and applicable statutes and rules and make a determination of the dispute. The determination of the Dispute Board shall be final and binding on the parties hereto.

As an alternative to this process, if SPONSOR is a state agency, either of the parties may request intervention by the Governor, as provided by RCW 43.17.330, in which event the Governor's process will control.

FUNDING AVAILABILITY
The obligation of the SPONSOR to provide reimbursements is contingent upon appropriation of funds by the SPONSOR's governing body for the specific purpose of funding the project, which is the subject of this Agreement. Upon the failure of such appropriation, the SPONSOR may terminate this Agreement.

ECOLOGY's ability to provide cost-share is contingent on availability of funding. In the event funding from state, federal, or other sources is withdrawn, reduced, or limited in any way after the effective date and prior to completion or expiration date of this Agreement, ECOLOGY, at its sole discretion, may elect to terminate the agreement, in whole or part, for convenience or to renegotiate the agreement subject to new funding limitations and conditions. ECOLOGY may also elect to suspend performance of the agreement until ECOLOGY determines the funding insufficiency is resolved. ECOLOGY may exercise any of these options with no notification restrictions.

GOVERNING LAW AND VENUE
This Agreement is entered into pursuant to and under the authority granted by the laws of the state of Washington and any applicable federal laws. The provisions of this Agreement shall be construed to conform to those laws. This Agreement shall be construed and interpreted in accordance with the laws of the state of Washington, and the venue of any action brought hereunder shall be in the Superior Court for Thurston County.

This Agreement is entered into pursuant to and under the authority granted by the laws of the state of Washington and any applicable federal laws. The provisions of this Agreement shall be construed to conform to those laws.

INDEMNIFICATION
To the fullest extent permitted by law, each party shall defend, indemnify, and hold harmless the other party, including officials, agents, and employees from and against all claims of third parties, and all associated losses arising out of or resulting from the performance of the contract. "Claim," as used in this contract, means any financial loss, claim, suit, action, damage, or expense, including but not limited to attorney's fees, attributable for bodily injury, sickness, disease, or death, or injury to or destruction of tangible property including loss of use resulting therefrom. Parties waive their immunities under Title 51 RCW to the extent it is required to indemnify, defend and hold harmless the other party and their agencies, officials, agents or employees.
INDEPENDENT CAPACITY
The employees or agents of each party who are engaged in the performance of this Agreement shall continue to be
employees or agents of that party and shall not be considered for any purpose to be employees or agents of the other
party.

ORDER OF PRECEDENCE
In the event of an inconsistency in the terms of this Agreement, or between its terms and any applicable statute or
rule, the inconsistency shall be resolved by giving precedence in the following order:
1. Applicable federal and state of Washington statutes, regulations, and rules.
2. Mutually agreed written amendments to this Agreement
3. This Agreement
5. Any other provisions of this Agreement, including materials incorporated by reference.

RECORDS MAINTENANCE
The parties to this Agreement shall each maintain books, records, documents and other evidence that sufficiently and
properly reflect all direct and indirect costs expended by either party in the performance of the service(s) described
herein. These records shall be subject to inspection, review or audit by personnel of both parties, other personnel
duly authorized by either party, the Office of the State Auditor, and federal officials so authorized by law. All books,
records, documents, and other material relevant to this Agreement will be retained for six years after expiration of this
Agreement and the Office of the State Auditor, federal auditors, and any persons duly authorized by the parties shall
have full access and the right to examine any of these materials during this period.

Records and other documents, in any medium, furnished by one party to this Agreement to the other party, will remain
the property of the furnishing party, unless otherwise agreed. The receiving party will not disclose or make available
this material to any third parties without first giving notice to the furnishing party and giving it a reasonable opportunity
to respond. Each party will utilize reasonable security procedures and protections to assure that records and
documents provided by the other party are not erroneously disclosed to third parties subject to state public disclosure
laws.

RESPONSIBILITIES OF THE PARTIES
Each party of this Agreement hereby assumes responsibility for claims and/or damages to persons and/or property
resulting from any act or omissions on the part of itself, its employees, its officers, and its agents. Neither party will be
considered the agent of the other party to this Agreement.

RIGHTS IN DATA
Unless otherwise provided, data, which originates from this Agreement shall be "works for hire" as defined by the U.S.
Copyright Act of 1976 and shall be jointly owned by ECOLOGY and SPONSOR. Data shall include, but not be limited
to, reports, documents, pamphlets, advertisements, books magazines, surveys, studies, computer programs, films,
tapes, and/or sound reproductions. Ownership includes the right to copyright, patent, register, and the ability to
transfer these rights.

SEVERABILITY
If any provision of this Agreement or any provision of any document incorporated by reference shall be held invalid,
such invalidity shall not affect the other provisions of this Agreement which can be given effect without the invalid
provision, if such remainder conforms to the requirements of applicable law and the fundamental purpose of this
agreement, and to this end the provisions of this Agreement are declared to be severable.

TERMINATION FOR CAUSE
If for any cause, either party does not fulfill in a timely and proper manner its obligations under this Agreement, or if
either party violates any of these terms and conditions, the aggrieved party will give the other party written notice of
such failure or violation. The responsible party will be given the opportunity to correct the violation or failure within 15
working days. If failure or violation is not corrected, this Agreement may be terminated immediately by written notice
of the aggrieved party to the other.
TERMINATION FOR CONVENIENCE
Either party may terminate this Agreement upon 30 days' prior written notification to the other party. If this Agreement is so terminated, the parties shall be liable only for performance rendered or costs incurred in accordance with the terms of this Agreement prior to the effective date of termination.

WAIVER
A failure by either party to exercise its rights under this Agreement shall not preclude that party from subsequent exercise of such rights and shall not constitute a waiver of any other rights under this Agreement unless stated to be such in a writing signed by an authorized representative of the party and attached to the original Agreement.

ALL WRITINGS CONTAINED HEREIN
This Agreement contains all the terms and conditions agreed upon by the parties. No other understandings, oral or otherwise, regarding the subject matter of this Agreement shall be deemed to exist or to bind any of the parties hereto.

AGREEMENT MANAGEMENT
The program manager for each of the parties shall be responsible for and shall be the contact person for all communications and billings regarding the performance of this Agreement.

The Contract/Program Manager for ECOLOGY is:
   Travis Weller  
   PO Box 47600  
   Olympia, WA 98504  
   (360) 742-8760  
   travis.weller@ecy.wa.gov

The Contract/Program Manager for SPONSOR is:
   Debbie Meisinger  
   800 SW 39th Street #150  
   Renton WA 98057  
   425-282-1900  
   debbie.meisinger@kingcd.org; accounting@kingcd.org

IN WITNESS WHEREOF, the parties have executed this Agreement.

State of Washington  
Department of ECOLOGY  

_________________________  ________________  ______________________  ________________
Signature  Date  Signature  Date

Heather R. Bartlett, Deputy Director  
Printed Name, Title
STATEMENT OF WORK
Appendix A

Work summary:

Under direction of SPONSOR, crew(s) will perform restoration activities. Specific tasks could include invasive control, native species installation, plant nursery care, scientific monitoring, and fence installation or repair.

Individual Placement (IP): Under the direction of SPONSOR, WCC IP(s) will perform various conservation, outreach, project management and research projects. Administrative tasks, if required, will be limited (less than 10 percent).

Special terms and conditions:
1. WCC resources (members, supervisors, tools and trucks) will not be utilized to clear active or abandoned homeless encampments and/or to clean up hazardous materials including hypodermic needles. If a significant amount of hazardous or unidentifiable material is discovered on a project site, activity will cease until SPONSOR mitigates potential hazards or finds an alternate project site.

2. WCC vehicle is not to be used for heavy hauling; the primary use is for transportation of crew, tools, and safety equipment. In the event that WCC vehicles are requested to tow SPONSOR-provided equipment (including rentals), it will only be on a limited basis and SPONSOR is solely responsible for accidental damages, unless damages are caused by WCC negligence.

3. WCC is not responsible for normal wear and tear when project requires the use of SPONSOR-provided tools, equipment, or safety gear.

4. The assignment of members shall not result in the displacement of currently employed workers, including partial displacement such as reduction in hours of non-overtime work, wages, or other employment benefits. Agencies that participate in the program may not terminate, lay-off, or reduce working hours of any employee for the purpose of using a member with available funds. In circumstances where substantial efficiencies or a public purpose may result, participating agencies may use members to carry out essential agency work or contractual functions without displacing current employees.

5. All state holidays and shutdown weeks are non-working days for members. Shutdown weeks are to be used by WCC staff/supervisors for planning purposes. The WCC standard 40-hour schedule is Monday through Thursday from 7:00am to 5:30pm. An alternate schedule may be arranged with prior approval from the WCC.

6. WCC’s cost-share rate is calculated using the full costs of supporting WCC crews and IPs, including time spent training, required community service events, shutdowns, etc. Indirect costs are included in SPONSOR share at a standard rate of 5% of direct costs.

7. If inclement weather makes a project site inaccessible, then the sponsor should reassign the WCC crew or IP to alternative projects in an accessible location.

In inclement weather, WCC crews follow the weather-related guidance (e.g. shut-down, delayed start, early end, etc.) from the regional Ecology office closest to the crew lock-up or IP service location. If the member’s assigned location is more than one hour from an Ecology regional office, then WCC follows weather-related guidance of federal, state and local governments. Only WCC can instruct a crew or IP to shut-down due to weather. Sponsors are not charged for WCC-initiated, weather related shut-downs or delays.

If a shut-down is requested by a sponsor for any reason, then the sponsor is responsible for crew costs.

ECOLOGY shall:
1. Provide WCC members for the number of weeks specified in this agreement. Full-term crews and Individual Placements are available to SPONSOR for a maximum of 41 weeks (approx. 164 days) during the Federal AmeriCorps program service year (October-September).

2. Enroll members to begin service no sooner than October 5, 2020 and no later than October 19, 2020 to attain a full AmeriCorps scholarship. Member vacancies may be filled with a 900 hour, half-term AmeriCorps Education Award beginning March 24, 2021. Any further member enrollment for the remainder of the program year is at the discretion of ECOLOGY and based on availability.

3. In the event of a disaster response deployment, ECOLOGY will make every effort to fulfill SPONSOR needs, including sending additional members, whenever possible. Unless disaster response activities are requested by the sponsor, sponsors are not charged for WCC’s emergency and disaster responses.
4. Provide training and development specified in Appendix B: four (4) days of formal WCC training, a two to four day Orientation Training, one day dedicated to MLK Community Service, and one day for a debrief meeting near the conclusion of the term. Beyond dates included in Appendix B, Ecology will schedule up to 6 additional days of Supervisor training during the term. WCC members and supervisors are logging hours on the dates identified for WCC-sanctioned events, but are unavailable to SPONSOR. ECOLOGY will provide a 4-day Assistant Supervisor training to the designated Assistant Supervisor.

5. Each full-term crew or IP may spend up to three weeks (twelve days) with an alternative sponsor during the crew year. These dates will be determined in coordination with their full-term Sponsor.

6. For crews, ECOLOGY agrees to provide a crew of 5 members, a crew supervisor, vehicle, and basic hand tools. Rates are not based on actual attendance, however, invoices will be reduced for member or supervisor vacancies lasting 20 days or more.

SPONSOR shall:

1. Guide completion of appropriate projects for number of weeks specified in this agreement by providing logistical, technical and safety-related support necessary for project completion. Provide site orientation for WCC members, site-specific training, and materials beyond basic hand tools to complete tasks. Obtain and ensure adherence to applicable permits as set by local, state, tribal or federal laws and regulations.

2. Help promote the AmeriCorps and WCC brands, logo, slogans and phrases. WCC will provide camera-ready logo. AmeriCorps is a registered service mark of the Corporation for National and Community Service.

3. For a SPONSOR hosting Individual Placement positions, SPONSOR agrees to provide computer access, email, transportation to and from WCC events (or private mileage reimbursement), and day-to-day direction of activities.

4. For a SPONSOR hosting full-term WCC Crew(s), SPONSOR shall provide a secure site to store tools and park crew vehicles as well as desk and internet access for the crew supervisor. In the event of theft, vandalism, or loss, the SPONSOR shall provide reimbursement (75 percent sponsor share) of expenditures and deductibles.

AmeriCorps Prohibited Activities:

While charging time to the AmeriCorps program, accumulating service or training hours, or otherwise performing activities supported by the AmeriCorps program or CNCS, staff and members may not engage in the following activities (see 45 CFR § 2520.65):

A. Attempting to influence legislation;
B. Organizing or engaging in protests, petitions, boycotts, or strikes;
C. Assisting, promoting, or deterring union organizing;
D. Impairing existing contracts for services or collective bargaining agreements;
E. Engaging in partisan political activities, or other activities designed to influence the outcome of an election to any public office;
F. Participating in, or endorsing, events or activities that are likely to include advocacy for or against political parties, political platforms, political candidates, proposed legislation, or elected officials;
G. Engaging in religious instruction, conducting worship services, providing instruction as part of a program that includes mandatory religious instruction or worship, constructing or operating facilities devoted to religious instruction or worship, maintaining facilities primarily or inherently devoted to religious instruction or worship, or engaging in any form of religious proselytization;
H. Providing a direct benefit to—
   I. A business organized for profit;
   II. A labor union;
   III. A partisan political organization;
   IV. A nonprofit organization that fails to comply with the restrictions contained in section 501(c)(3) of the Internal Revenue Code of 1986 related to engaging in political activities or substantial amount of lobbying except that nothing in these provisions shall be construed to prevent participants from engaging in advocacy activities undertaken at their own initiative; and
   V. An organization engaged in the religious activities described in paragraph 3.g. above, unless CNCS assistance is not used to support those religious activities;
I. Conducting a voter registration drive or using CNCS funds to conduct a voter registration drive;
J. Providing abortion services or referrals for receipt of such services; and
K. Such other activities as CNCS may prohibit.

AmeriCorps members may not engage in the above activities directly or indirectly by recruiting, training, or managing others for the primary purpose of engaging in one of the activities listed above. Individuals may exercise their rights as private citizens and may participate in the activities listed above on their initiative, on non-AmeriCorps time, and using non-CNCS funds. Individuals should not wear the AmeriCorps logo while doing so.
<table>
<thead>
<tr>
<th>Strategic &amp; Pilot Initiative Title</th>
<th>Grant Award</th>
<th>Grant Agreement</th>
<th>Project Timeline</th>
</tr>
</thead>
<tbody>
<tr>
<td>Promoting Stormwater Benefits from Urban Canopy Cover in Puget Sound (Trees Phase 1)</td>
<td>153,500.00</td>
<td>WA ECV confirmed</td>
<td>executed 10/2017</td>
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<td>240,000.00</td>
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<td>Urban Tree Canopy &amp; Forest Cover Toolkit (Trees &amp; Stormwater Phase 1)</td>
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<td></td>
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<td>Regional Forest Stewardship Pilot Program (PSCO Caucus Area) (Contract Title - Forest Health of the forest) (Contract Title - Forest Health of the forest)</td>
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<td>Member Jurisdiction Contracted Aquatic &amp; Upland Restoration Services (Third Creek Estuary)</td>
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<td>KC DNR/WRD confirmed</td>
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