



INFORMATIONAL MEMORANDUM

TO: Transportation and Infrastructure Committee
FROM: Henry Hash, Public Works Director *H.H.*
BY: Ryan Larson, Senior Program Manager
CC: Mayor Ekberg
DATE: January 18, 2019
SUBJECT: Surface Water Fund
Lower Green River Corridor Plan – Flood Hazard Management Plan

ISSUE

The King County Flood Control District (Flood District) is beginning work on the Lower Green River Corridor Plan and is accepting comments on the scope of the plan and proposed alternatives.

BACKGROUND

The King County Flood Control District is preparing a Lower Green River Corridor Flood Hazard Management Plan (Plan) for approximately 21 river miles of the lower Green River that flow through unincorporated King County and the cities of Auburn, Kent, and Tukwila. The goal of the Plan is to provide a long-term approach to reduce flood risk and improve fish habitat while supporting the economic prosperity of the region.

The Flood District is also preparing a Programmatic Environmental Impact Statement (PEIS), which will analyze alternatives for flood protection that could be included in the plan. The PEIS will evaluate the potential impacts of the projects identified in each proposed alternative.

DISCUSSION

The Flood District is accepting comments on the Plan and PEIS through January 28, 2019. Staff has reviewed the information provided by the Flood District and is preparing response comments for the Flood District to consider in this effort. Our broad approach to this effort will be to:

- Request that all projects throughout the Flood District be prioritized first for life and safety concerns and that environmental benefits should be included in all construction projects to minimize the impact of levees to the natural environment.
- Request that the Flood District evaluate and quantify their ability to recover Puget Sound Chinook salmon. (See attached draft letter by Puget Sound Salmon Recovery Council)
- Request that all future levee projects except for Fort Dent, be constructed to provide a 500-year level of flood protection.
- Request that the Fort Dent levee be brought to a 100-year level of flood protection.
- Request that the study area be lengthened to include impacts throughout the City and not end at the Black River.
- Provide a prioritized list of known Green River flood protection projects throughout the City. This will primarily be made up of known deficiencies along the Tukwila 205 levee with an emphasis on completing these projects first.

FISCAL IMPACT

None at this time.

RECOMMENDATION

Staff is seeking Committee approval to finalize and submit the public comment letter.

ATTACHMENTS

Draft Puget Sound Salmon Recovery Council Letter
Lower Green River Corridor – Flood Hazard Management Plan Information.

January XX, 2019

King County Flood Control District
ATTN: Michelle Clark, SEPA Responsible Official
516 Third Avenue Room 1200
Seattle, WA 98104

RE: Lower Green River Corridor Flood Hazard Management Plan Draft Programmatic Impact Statement

Dear Ms. Clark:

Since the 1999 listing of Puget Sound Chinook as a Threatened Species, significant local, state, and federal resources have been invested to avert extinction of Puget Sound Chinook. A fundamental need to recover Chinook throughout Puget Sound is increasing and improving rearing habitat of river systems. The Puget Sound Chinook Salmon Recovery Plan identifies the Lower Green River as a significant bottleneck to recovering Puget Sound Chinook salmon due to substantial reduction of rearing habitat and dramatic decrease in the survival of Chinook salmon. It is absolutely critical to increase the rearing habitat of the Lower Green River to recover the Green River Chinook salmon population--and recovery of Chinook salmon Puget Sound-wide.

Continued decline in the Green River Chinook salmon population is of regional and statewide concern as its recovery is essential to de-listing Puget Sound Chinook as Threatened and, moreover, avoid losing the Southern Resident killer whale population. The three alternatives identified in the November 26, 2018 Draft Programmatic Environmental Impact Statement (DPEIS) scoping notice will not advance Puget Sound Chinook salmon recovery.

The Puget Sound Salmon Recovery Council (SRC) requests that the King County Flood Control District evaluate and quantify their ability to recover Puget Sound Chinook salmon by their ability to recover the Green River Chinook population. The SEPA environmental evaluation and analysis must identify an alternative for flood management of the Lower Green River that is consistent with the Puget Sound Chinook Salmon Recovery Plan.

The Puget Sound region cannot afford losing opportunities to reverse declines of salmon and orca. The SRC strongly believes that a narrow approach to long-term flood risk reduction throughout Puget Sound, without appropriately integrating the needs of Chinook salmon recovery, is a significant step backward. To ensure the value of the millions of dollars that have been invested in Puget Sound to recover Chinook salmon, a multiple-benefit approach to floodplain management is imperative for the Lower Green River.

Lower Green River Corridor

FLOOD HAZARD MANAGEMENT PLAN AND PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT

Project Description

The Lower Green River is susceptible to flooding and flood damage that affects people and residential, commercial, industrial, and agricultural properties along its banks. The potential impacts and damages of major flooding on people, structures, infrastructure, businesses, and jobs throughout the Lower Green River Valley are substantial. To address these issues, the King County Flood Control District is preparing a Lower Green River Corridor Flood Hazard Management Plan (Plan) for approximately 21 river miles of the Lower Green River that flow through the cities of Auburn, Kent, Renton, Tukwila, and unincorporated King County. The goal of the Plan is to provide a long-term approach to reduce flood risk and improve fish habitat while supporting the economic prosperity of the region. See the Study Area map on page 2.

Programmatic Environmental Impact Statement

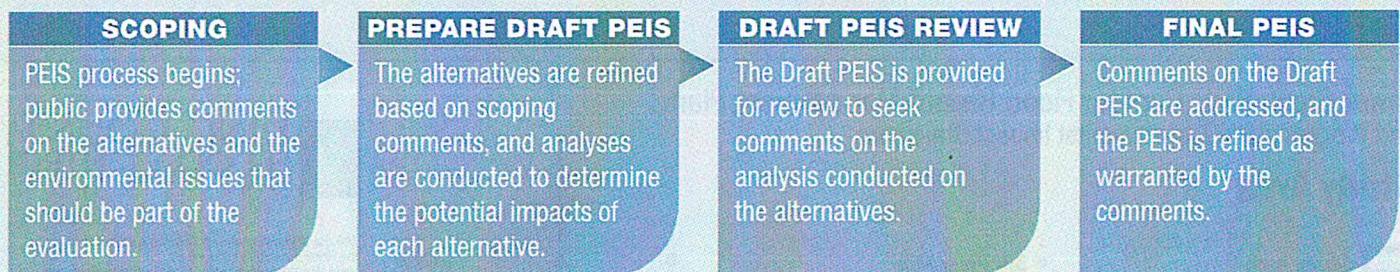
The District is also preparing a Programmatic Environmental Impact Statement (PEIS), which will analyze alternatives for flood protection that could be included in the Plan. The PEIS describes potential environmental impacts and measures to reduce or eliminate them. Because each alternative includes a variety of flood protection projects that make up a “program” of actions, a PEIS is being prepared. The PEIS will evaluate the potential impacts of the projects identified in each alternative.

What are the Alternatives?

- 1:** The *“No Action Alternative”* is required to objectively evaluate and compare the other two alternatives. It would include completing existing projects adopted in the 2018–23 Capital Improvement Program (Resolution FCD2018-06.2).
- 2:** The *“Moderate Geographic Extent of Increased Level of Protection Alternative”* would include 3 miles of new levees and improvements to 17 miles of existing levees.
- 3:** The *“Greater Geographic Extent with Increased Level of Protection, Integrated Habitat and Recreation, Agricultural Protection Facilities, and Habitat Restoration Project Partnerships Alternative”* is the same as Alternative 2 with the addition of 10 miles of new levees and 2 miles of non-structural improvements. Incentives to provide habitat restoration could also be provided.

Each of the alternatives includes continued maintenance of existing flood facilities. Alternatives 2 and 3 would also include some drainage improvements to agricultural lands and flood-proofing of agricultural structures. More detailed descriptions of the alternatives can be found online at: www.lowergreensepa.org.

Process The PEIS will take about two years to complete. Comment periods during scoping and during review of the Draft PEIS will provide opportunities for the public to provide input.



WHEN CAN YOU MAKE SCOPING COMMENTS?

The scoping comment period is from November 28, 2018, to January 29, 2019.

Provide your comments in-person:

Scoping Meeting

Wednesday, January 9, 2019

5:00–5:45 p.m. *Open House*

5:45–7:30 p.m. *Presentation and Public Testimony*

7:30–8:00 p.m. *Open House*

Green River College Kent Campus

417 Ramsay Way, Room 283
Kent, WA 98032

A Spanish interpreter will be available at the meeting. Habrá un intérprete de español disponible en la reunión.

If you would like to request an interpreter for another language, please call 206-775-8778.

Please send your written comments to:

EMAIL:

lowergreensepa@kingcounty.gov

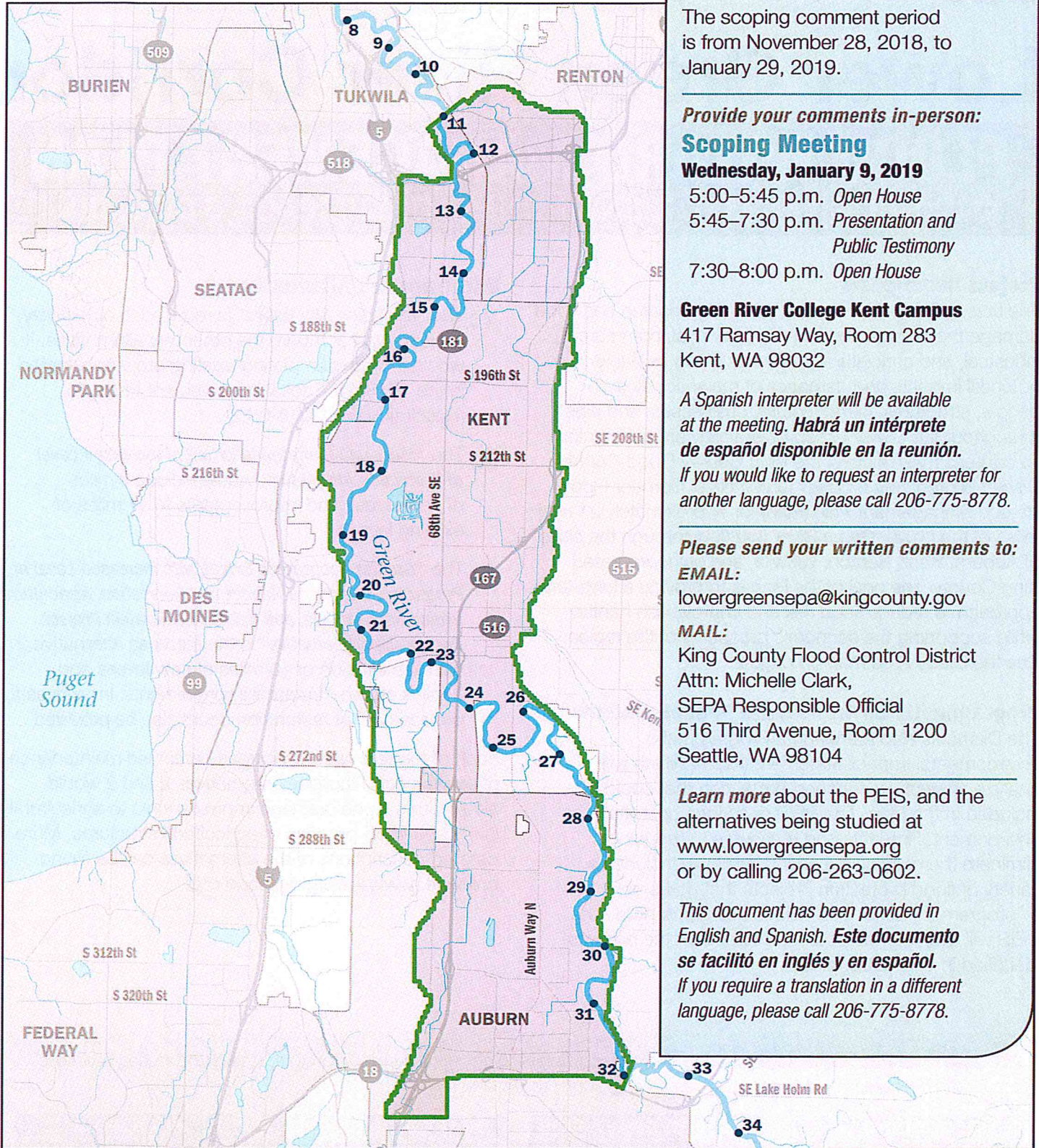
MAIL:

King County Flood Control District
Attn: Michelle Clark,
SEPA Responsible Official
516 Third Avenue, Room 1200
Seattle, WA 98104

Learn more about the PEIS, and the alternatives being studied at www.lowergreensepa.org or by calling 206-263-0602.

This document has been provided in English and Spanish. Este documento se facilitó en inglés y en español.

If you require a translation in a different language, please call 206-775-8778.



Lower Green River Corridor Flood Hazard Management Plan and Programmatic Environmental Impact Statement

Study Area

- Study Area
- Green River

- 30 River Mile
- City Area



September 2018



The use of the information in this map is subject to the terms and conditions found at: www.kingcounty.gov/services/gis/Maps/terms-of-use.aspx. Your access and use is conditioned on your acceptance of these terms and conditions.
Data: King County GIS File: 1809_9290w_green_cfl_zn_map.ai

Alternative 1

No Action

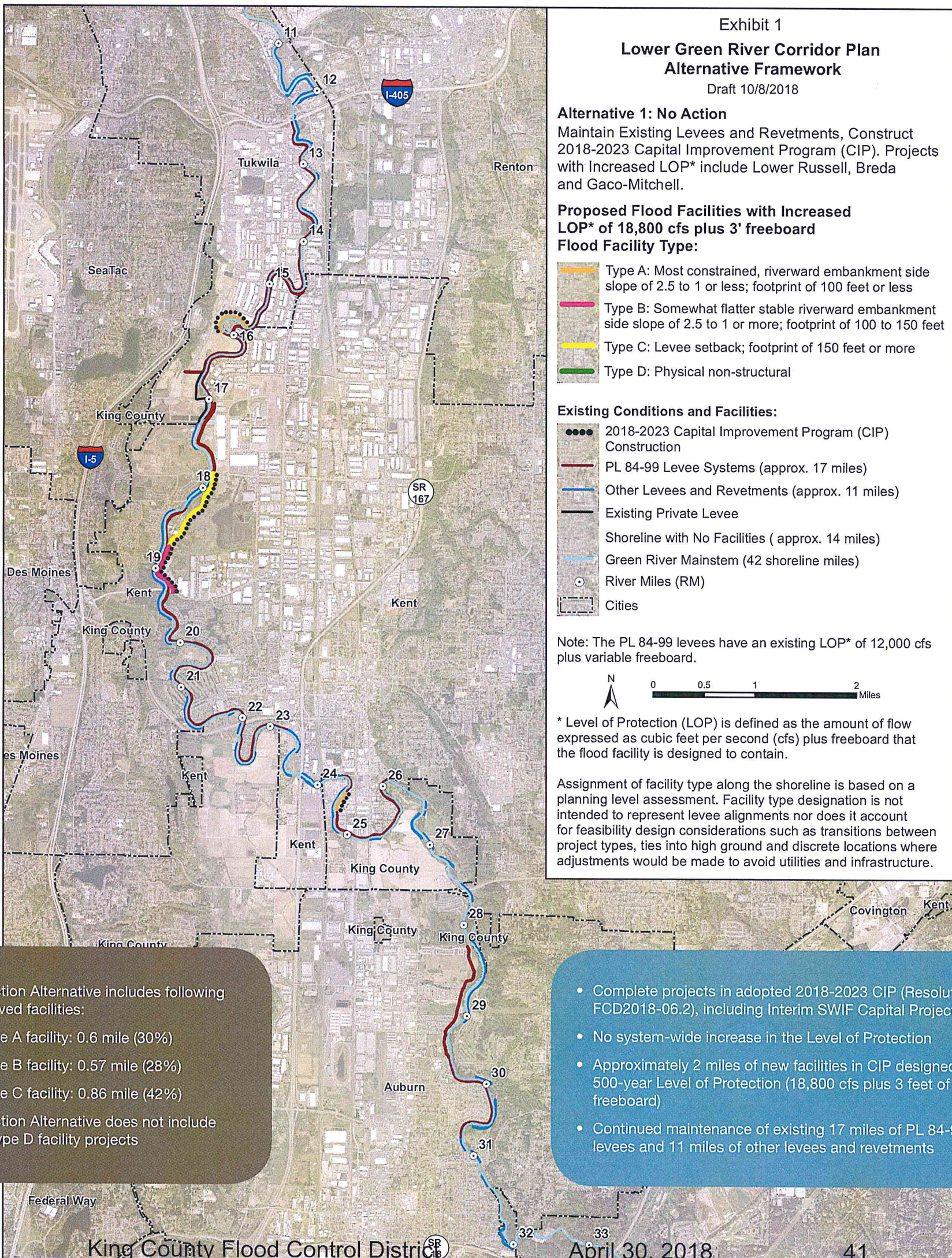


Exhibit 1
Lower Green River Corridor Plan
Alternative Framework
Draft 10/8/2018

Alternative 1: No Action
Maintain Existing Levees and Revetments, Construct 2018-2023 Capital Improvement Program (CIP). Projects with Increased LOP* include Lower Russell, Breda and Gaco-Mitchell.

Proposed Flood Facilities with Increased LOP* of 18,800 cfs plus 3' freeboard
Flood Facility Type:

- Type A: Most constrained, riverward embankment side slope of 2.5 to 1 or less; footprint of 100 feet or less
- Type B: Somewhat flatter stable riverward embankment side slope of 2.5 to 1 or more; footprint of 100 to 150 feet
- Type C: Levee setback; footprint of 150 feet or more
- Type D: Physical non-structural

Existing Conditions and Facilities:

- 2018-2023 Capital Improvement Program (CIP) Construction
- PL 84-99 Levee Systems (approx. 17 miles)
- Other Levees and Revetments (approx. 11 miles)
- Existing Private Levee
- Shoreline with No Facilities (approx. 14 miles)
- Green River Mainstem (42 shoreline miles)
- River Miles (RM)
- Cities

Note: The PL 84-99 levees have an existing LOP* of 12,000 cfs plus variable freeboard.

N
0 0.5 1 2 Miles

* Level of Protection (LOP) is defined as the amount of flow expressed as cubic feet per second (cfs) plus freeboard that the flood facility is designed to contain.

Assignment of facility type along the shoreline is based on a planning level assessment. Facility type designation is not intended to represent levee alignments nor does it account for feasibility design considerations such as transitions between project types, ties into high ground and discrete locations where adjustments would be made to avoid utilities and infrastructure.

No Action Alternative includes following improved facilities:

- Type A facility: 0.6 mile (30%)
- Type B facility: 0.57 mile (28%)
- Type C facility: 0.86 mile (42%)

No Action Alternative does not include any Type D facility projects

- Complete projects in adopted 2018-2023 CIP (Resolution FCD2018-06.2), including Interim SWIF Capital Projects
- No system-wide increase in the Level of Protection
- Approximately 2 miles of new facilities in CIP designed to 500-year Level of Protection (18,800 cfs plus 3 feet of freeboard)
- Continued maintenance of existing 17 miles of PL 84-99 levees and 11 miles of other levees and revetments

(Three alternatives are being studied)

FLOOD HAZARD MANAGEMENT PLAN AND PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT

Alternative 2

Moderate Geographic Extent of Increased Level of Protection

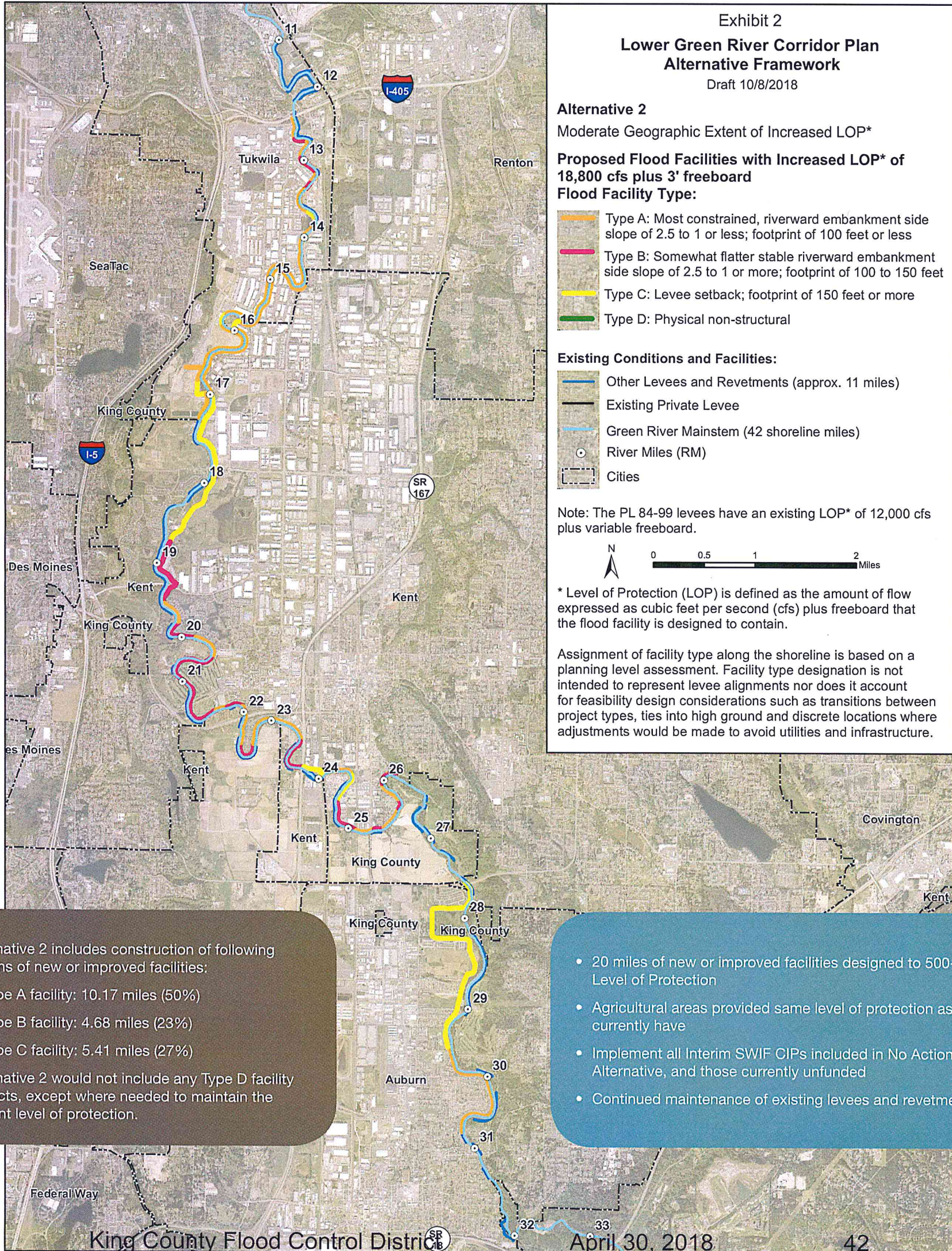


Exhibit 2
**Lower Green River Corridor Plan
Alternative Framework**
Draft 10/8/2018

Alternative 2
Moderate Geographic Extent of Increased LOP*

Proposed Flood Facilities with Increased LOP* of 18,800 cfs plus 3' freeboard
Flood Facility Type:

- Type A: Most constrained, riverward embankment side slope of 2.5 to 1 or less; footprint of 100 feet or less
- Type B: Somewhat flatter stable riverward embankment side slope of 2.5 to 1 or more; footprint of 100 to 150 feet
- Type C: Levee setback; footprint of 150 feet or more
- Type D: Physical non-structural

Existing Conditions and Facilities:

- Other Levees and Revetments (approx. 11 miles)
- Existing Private Levee
- Green River Mainstem (42 shoreline miles)
- River Miles (RM)
- Cities

Note: The PL 84-99 levees have an existing LOP* of 12,000 cfs plus variable freeboard.

N
0 0.5 1 2 Miles

* Level of Protection (LOP) is defined as the amount of flow expressed as cubic feet per second (cfs) plus freeboard that the flood facility is designed to contain.

Assignment of facility type along the shoreline is based on a planning level assessment. Facility type designation is not intended to represent levee alignments nor does it account for feasibility design considerations such as transitions between project types, ties into high ground and discrete locations where adjustments would be made to avoid utilities and infrastructure.

Alternative 2 includes construction of following lengths of new or improved facilities:

- Type A facility: 10.17 miles (50%)
- Type B facility: 4.68 miles (23%)
- Type C facility: 5.41 miles (27%)

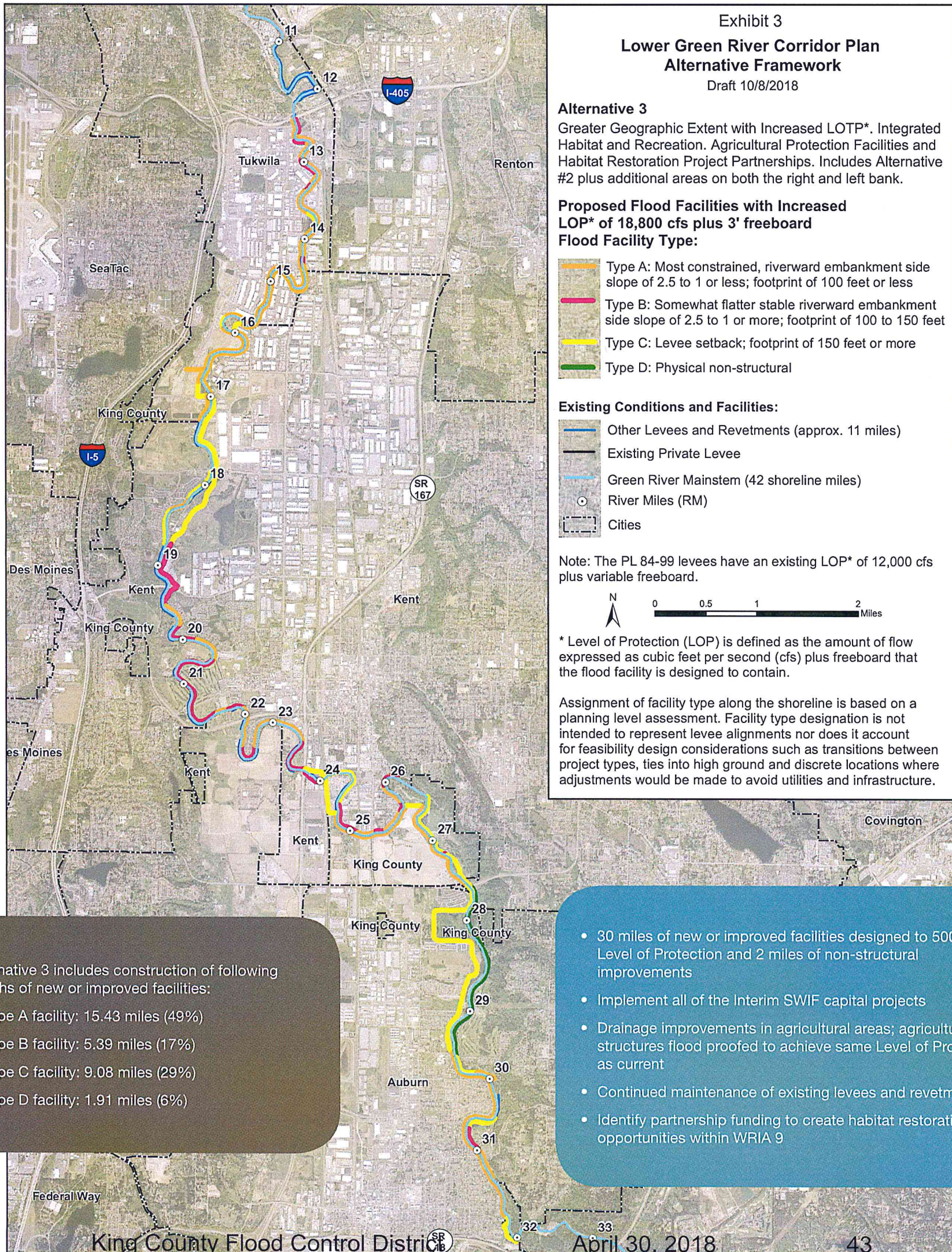
Alternative 2 would not include any Type D facility projects, except where needed to maintain the current level of protection.

- 20 miles of new or improved facilities designed to 500-year Level of Protection
- Agricultural areas provided same level of protection as they currently have
- Implement all Interim SWIF CIPs included in No Action Alternative, and those currently unfunded
- Continued maintenance of existing levees and revetments

FLOOD HAZARD MANAGEMENT PLAN AND PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT

Alternative 3

Greater Geographic Extent with Increased Level of Protection, Integrated Habitat and Recreation, Agricultural Protection Facilities, and Habitat Restoration Project Partnerships



(Three alternatives are being studied)



516 Third Avenue • Room 1200 • Seattle, WA 98104
206.296.1020 • info@kingcountyfloodcontrol.org
www.kingcountyfloodcontrol.org

**Lower Green River Corridor Flood Hazard Management Plan
Programmatic Environmental Impact Statement
Scoping Comment Form**

Submit a comment on the PEIS by filling out this form and leaving it in the comment box at today's meeting or by mailing it to the following address by January 29, 2019:

King County Flood Control District
Attn: Michelle Clark, SEPA Responsible Official
516 Third Avenue
Room 1200
Seattle, WA 98104

You can also email comments to LowerGreenSEPA@kingcounty.gov or submit them online at www.lowergreensepa.org.

Name:	Address:
Email Address:	
Comment:	

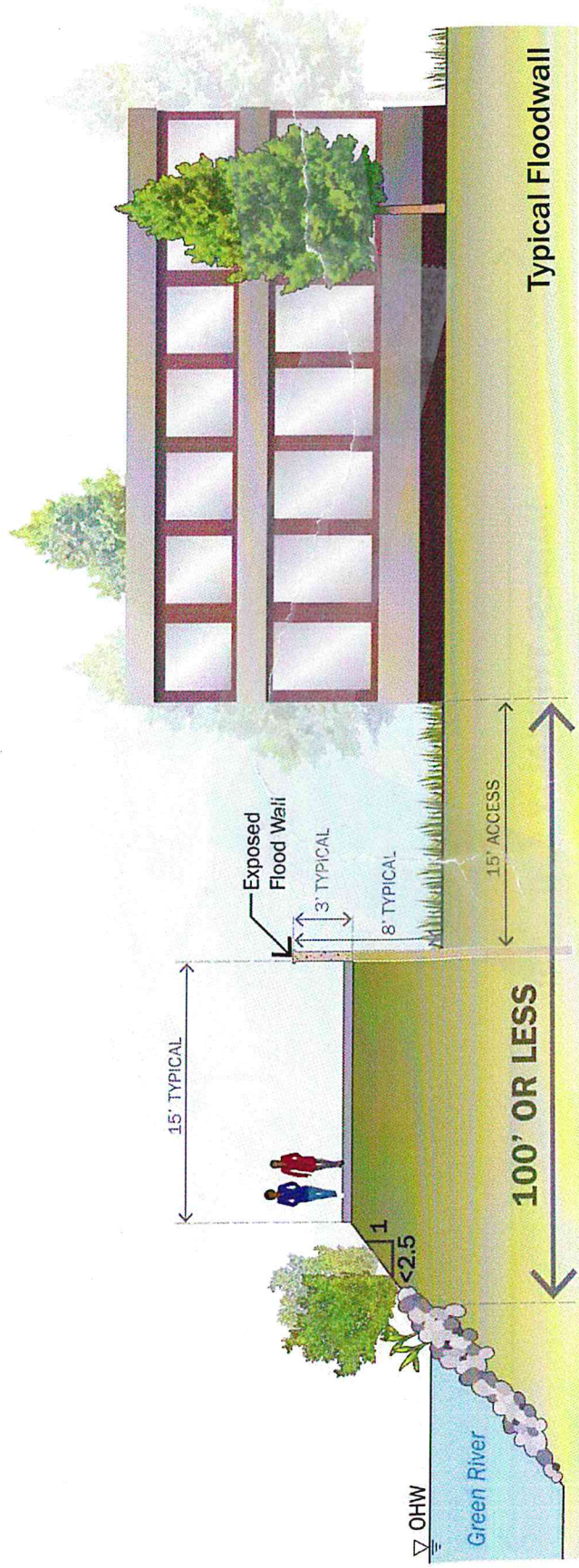
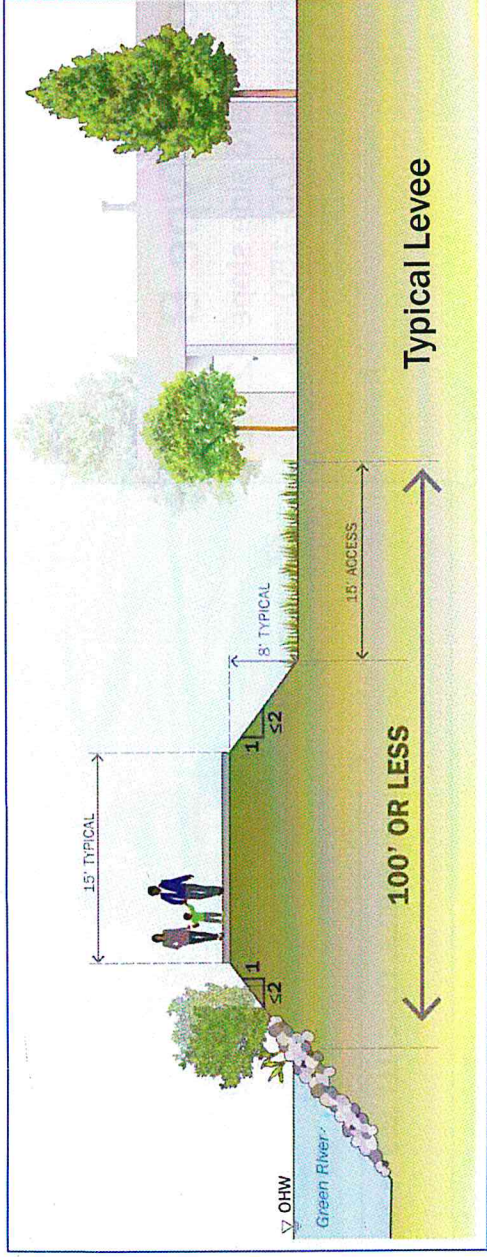
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8/30/2018

Flood Facility

Project Type A

- Riverward side slope < 2.5:1
- Footprint 100' or less



OHW= ordinary high water

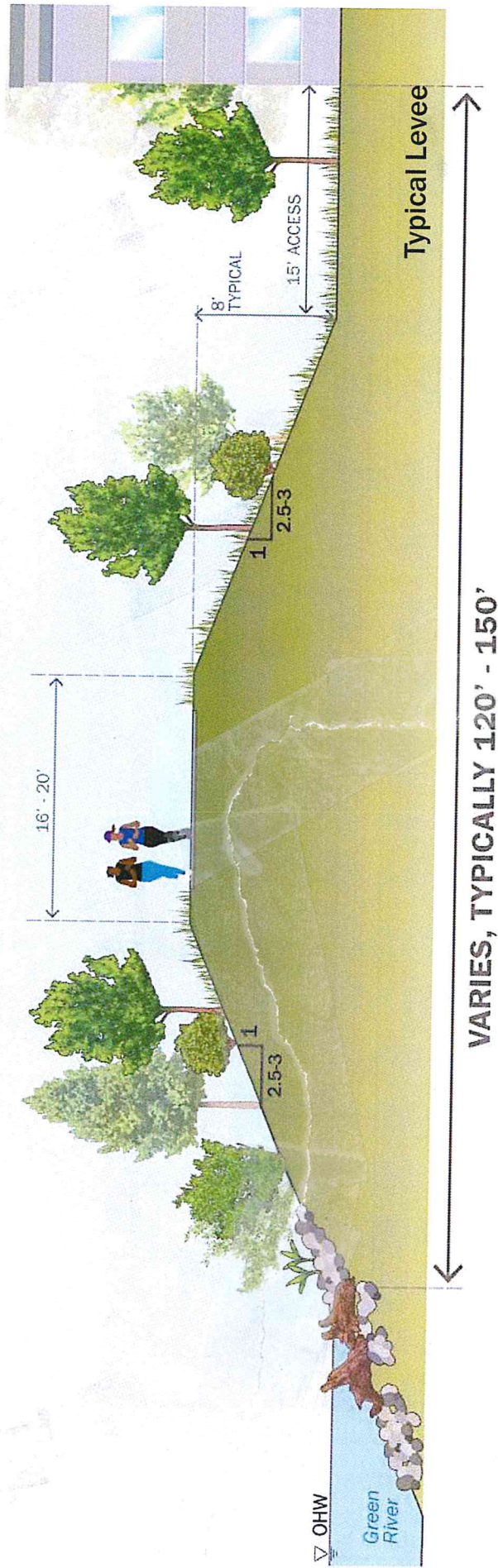
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8/30/2018

Flood Facility

Project Type B

- Riverward side slope >2.5:1
- Footprint 100'-150'



OHW= ordinary high water

Not to Scale
Illustrative Only

4/23/2018

Flood Facility Project Type C

- Riverward side slope 3:1
- Footprint 150' or more



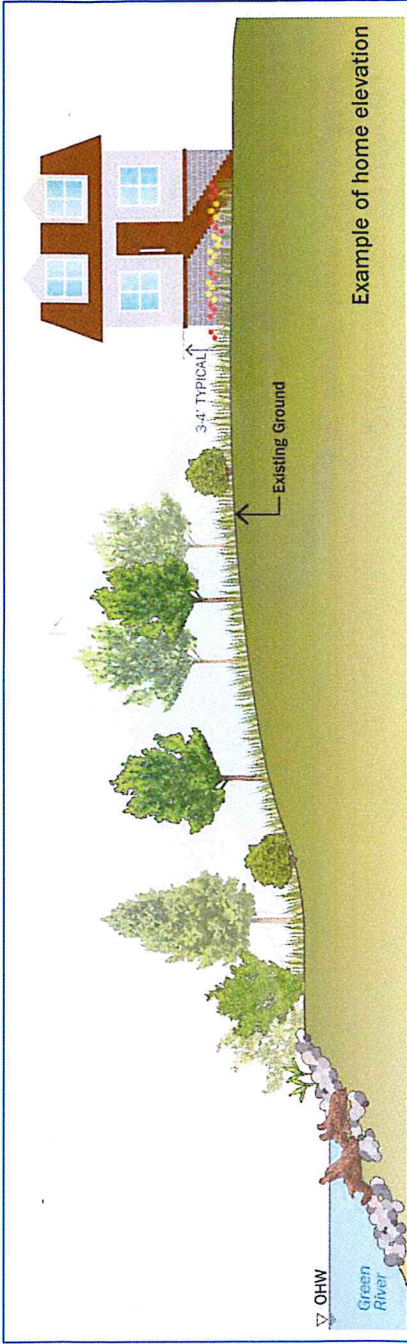
OHW= ordinary high water

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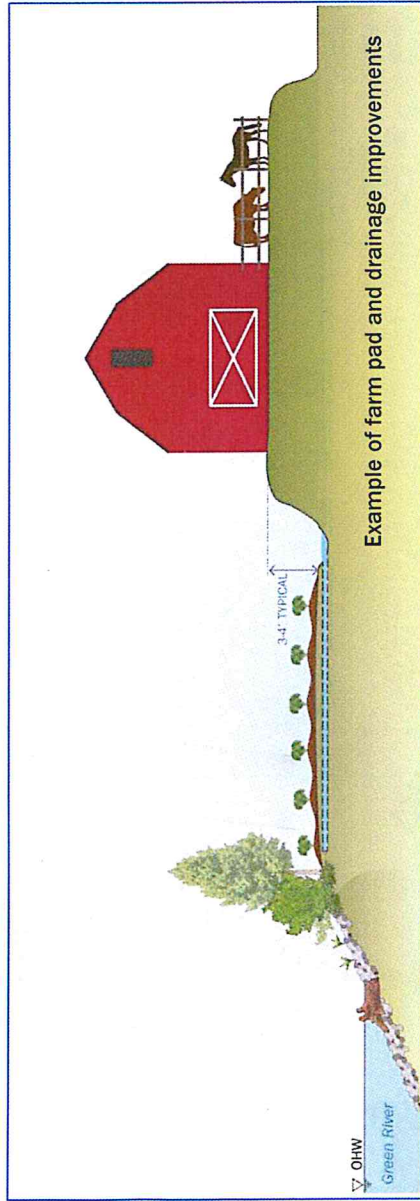
4/23/2018

Flood Facility Project Type D

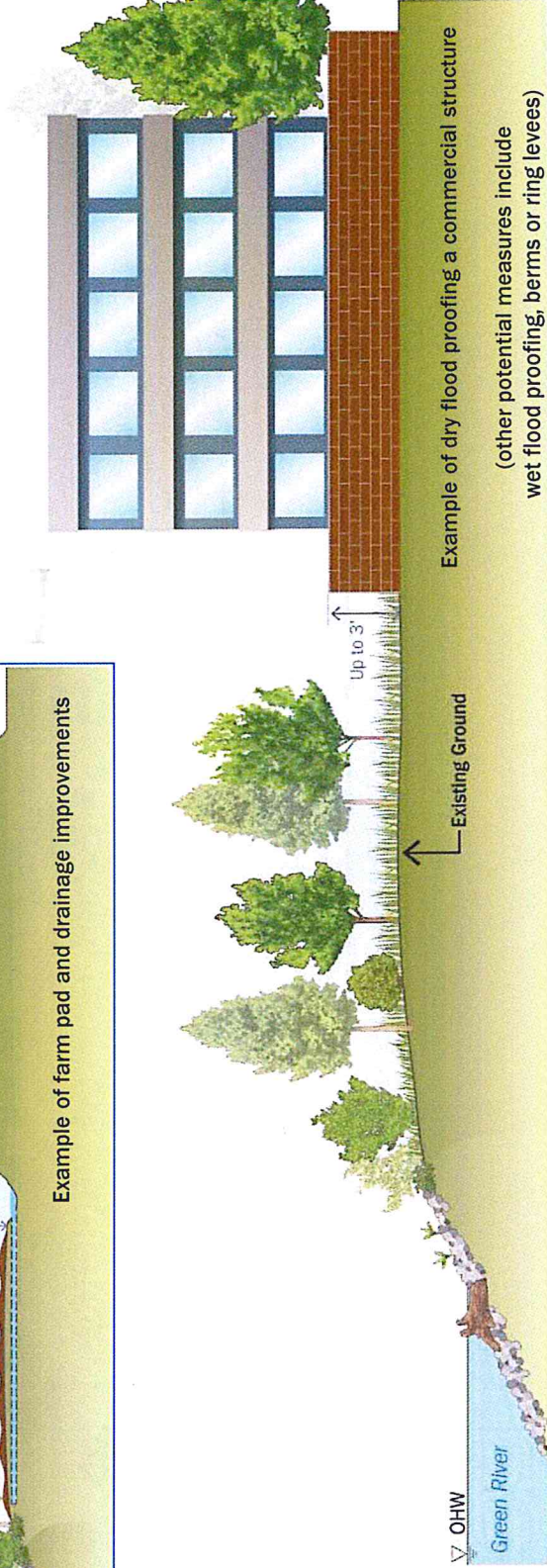
- Physical Non-Structural



Example of home elevation



Example of farm pad and drainage improvements



Example of dry flood proofing a commercial structure

(other potential measures include wet flood proofing, berms or ring levees)