Lower Green River Corridor Flood Hazard Management Plan Draft Programmatic EIS

Board of Supervisors Briefing
May 9, 2023

KING COUNTY FLOOD CONTROL DISTRICT

Legislative History

The Board's relevant legislative history is presented in chronological order:

FCD Resolution 2014-09 (July 2014): Adopted flooding goals and provisional level of protection of 18,800 cubic feet per second (500-year level of protection) for the Lower Green River.

FCD Resolution 2016-05 (February 2016): Directed the preparation of a work plan for a Lower Green River Corridor Flood Hazard Management Plan and for a SEPA PEIS for the Plan and established an Advisory Committee.

FCD Motion 18-01 (April 2018): Initiated the planning process for the Plan in accord with SEPA requirements, and it defined alternatives and flood facility project types.

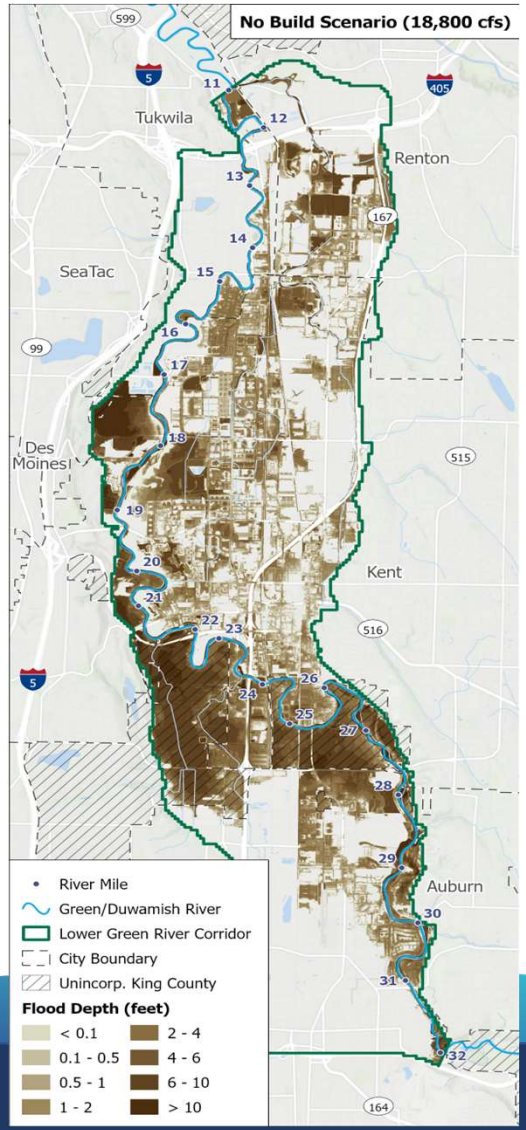
FCD Motion 20-07 (November 2020): Reaffirmed the District's commitment to integrated floodplain management and a set of multibenefits, and convened a committee of governments and stakeholders to advise the District on flood management on the Lower Green River.

FCD Motion 21-03 (October 2021): Revised the name of the Plan to the "Lower Green River Corridor Flood Hazard Management Plan" and directed that the PEIS evaluate three new alternatives.

Flood Risk

The Lower Green River Corridor includes river mile 11 to river mile 32 and its associated floodplains.

During a large flood event, much of the Corridor would be flooded.



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Protecting the Lower Green River Corridor

The Lower Green River Corridor is home to:

- 22,000 people living in the Valley and floodplain
- Over 100,000 jobs
- 2nd largest industrial park on the West Coast and 3rd largest warehouse and distribution center in the country
- Over $37 million in income from businesses of all sizes, including companies like Boeing, Starbucks, REI, IKEA, and Blue Origin
- Major transportation routes and public facilities, including hospitals and schools
- Threatened salmon and other aquatic animals
- Farming
- Parks, trails, and natural areas

PEIS Alternatives

Three alternatives are considered in the draft PEIS. Each alternative takes a different approach to managing flood risk. The PEIS describes potential impacts and ways to reduce or eliminate them.

A No Build scenario illustrates why flood hazard management is needed on the Lower Green River, but this scenario is not evaluated as an alternative in the PEIS.

Alternative 1	CURRENT PRACTICE	• Project-by-Project Multibenefit Implementation
Alternative 2	NEW	• Systematic Multibenefit Implementation
Alternative 3	NEW	• Enhanced Systematic Multibenefit Implementation

Detailed overview of all three alternatives is available at lowergreensepa.org.

Flood Management Can Have Additional Benefits

The District is committed to providing integrated floodplain management and multibenefit projects. The District has defined ten multibenefits. In most cases, these benefits could be realized in collaboration with Tribes, federal and state agencies, local jurisdictions, and stakeholders. These are the ten benefits:

Equity and Social Justice

Environmental Justice

Habitat Protection and Salmon Recovery

Jobs and Sustainable Livelihoods

Open Space Conservation

Productive and Viable Agriculture

Recreation and Other Opportunities to Connect People With Nature

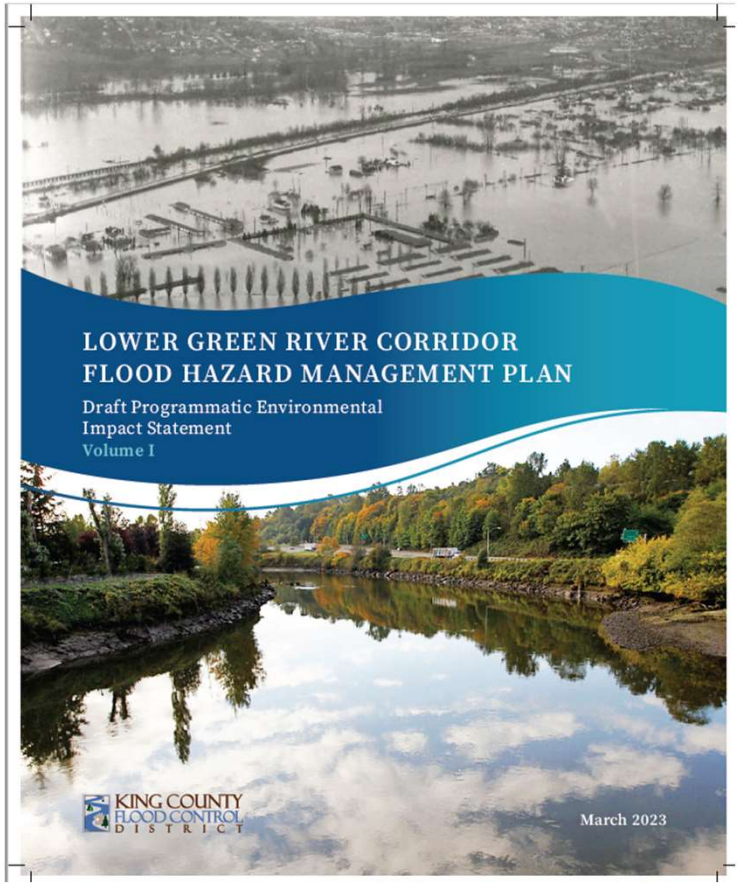
Resilient Communities and Ecosystems

Sustainable and Clean Water

Sustainable Development

Results of Draft PEIS Evaluations

- Flood Risk Reduction
- Potential Impacts and Benefits
- Planning-level Cost Estimates



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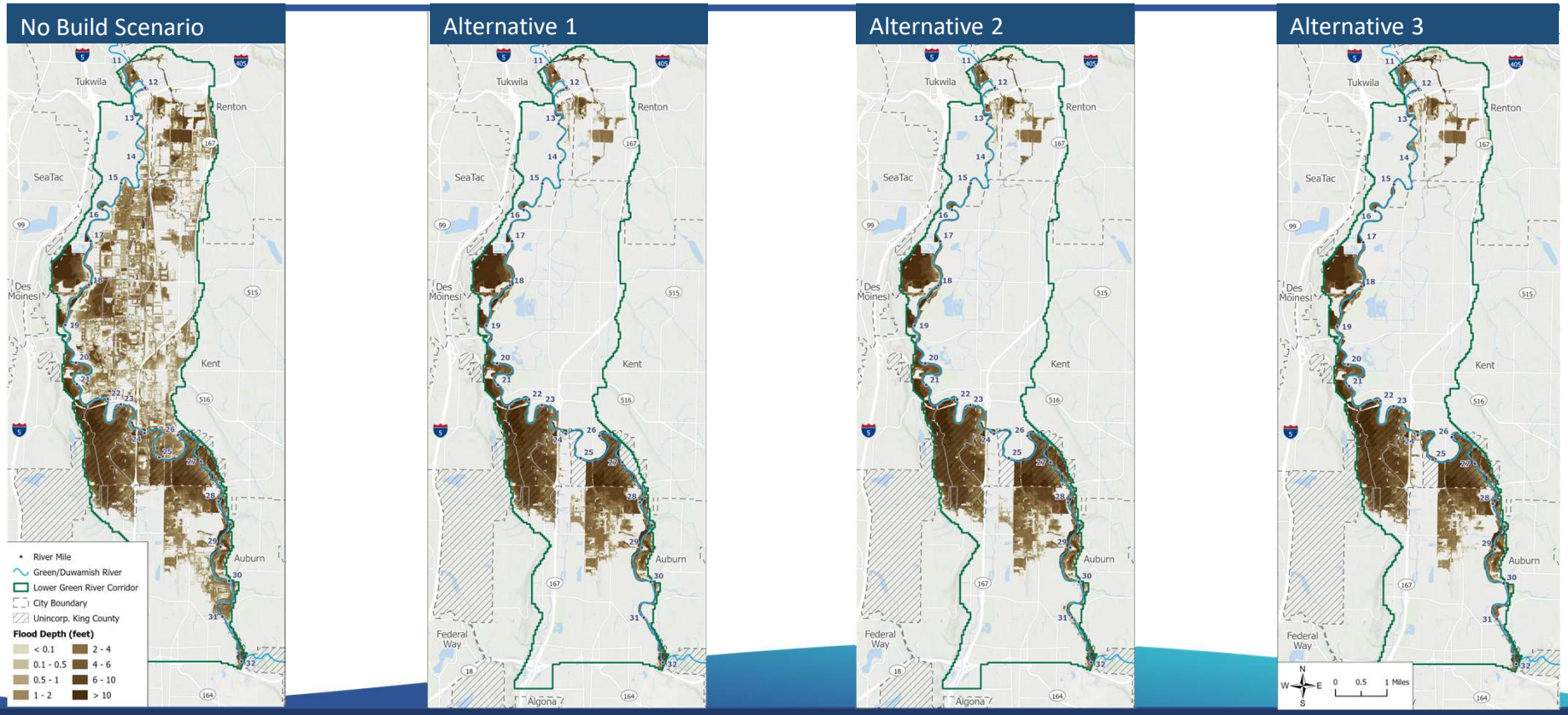
All Alternatives Greatly Reduce Flooding

Modeled Flooding at 18,800 cfs (500-year flood event)



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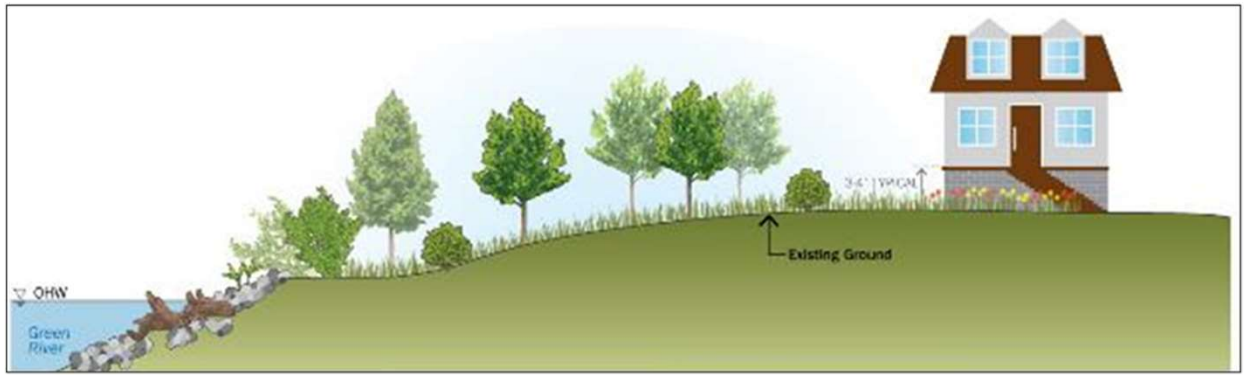
All Alternatives Greatly Reduce Flooding

Compared to the No Build scenario, all three of the alternatives would:

- Reduce the number of acres flooded with more than 1 foot of water by around 50%
- Reduce the percentage of historically disadvantaged populations at risk of flooding by more than 50%
- Prevent catastrophic flooding in regional growth and manufacturing industrial centers
- Reduce the overall flood extent for parks, recreation, and open space areas
- Slightly reduce the overall extent of flooding on agricultural lands

Flood Proofing

Alternatives 2 and 3 include measures to reduce the effects of flooding called flood proofing. These measures include things like home elevations and drainage improvements. Flood proofing becomes less practical in areas where the depth of flooding could exceed 4 feet.



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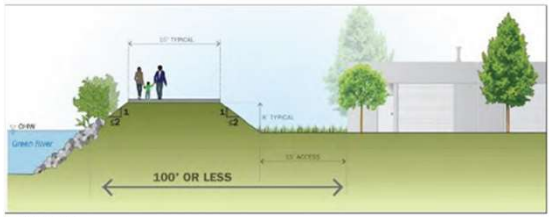
Flood Hazard Management Facility Impacts and Benefits



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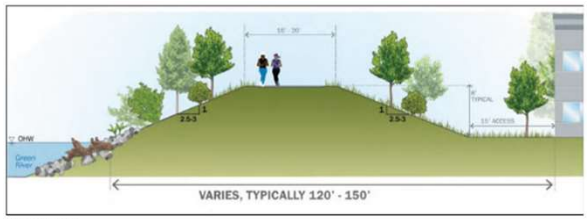

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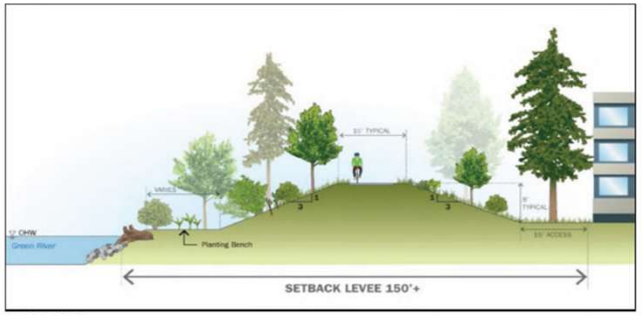

Source: King County

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Lower Russell Road Levee Setback Project

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Summary of Potential Impacts, Benefits, Costs

	Alternative 1	Alternative 2	Alternative 3
Flood Risk Reduction	All three alternatives substantially reduce flood risk during an 18,800 cfs (500-year) flood event compared to current conditions with localized variation in depth and extent.		
Impacts	Least impacts to adjacent land uses	Slightly more impacts to adjacent land uses	Most impacts to adjacent land uses
Amount of Space Available for Multibenefits	Least amount of space riverward of facilities for multibenefits	Slightly more amount of space riverward of facilities for multibenefits	Most amount of space riverward of facilities for multibenefits and opportunities for potential flood storage
Costs	$9.25M to $19.5M annualized planning-level cost	$9.75M to $20.75M annualized planning-level cost	$14M to $27.5M annualized planning-level cost
Area-Specific Plan?	No	Yes	Yes

Potential Impacts, Benefits, Cost
Alternative 1 – Project-by-Project Multibenefit Implementation

Alternative 1 could have the least impacts on nearby land use and could provide the fewest multibenefits:

- Impacts structures on commercial or industrial land valued at $330,000 – $490,000
- Displaces approximately 90 to 145 people
- Impacts up to 110 acres of parkland area in the Corridor
- Makes space available that could support achieving 2 of 7 WRIA 9 Salmon Habitat Plan goals, as well as other multibenefits
- Does not consider facilities to reduce flood risk on agricultural lands

Planning-level cost estimate: $370M to $780M over the 30- to 50-year implementation horizon

$9.25M to $19.5M annualized planning-level cost

Estimate is provided for comparison. Not based on design. Exclusions apply.

Potential Impacts, Benefits, Costs
Alternative 2 – Systematic Multibenefit Implementation

Alternative 2, when compared to Alternative 1, could have similar impacts on nearby land use but have the following differences:

- Could contribute more space for multibenefits than Alternative 1 that could support achieving 2 to 3 of 7 WRIA 9 Salmon Habitat Plan goals
- Does not consider facilities to reduce flood risk on agricultural lands but includes flood proofing measures to reduce the effects of flooding on agricultural lands

Planning-level cost estimate: horizon	$390M to $830M over the 30- to 50-year implementation
	$9.75M to $20.75M annualized planning-level cost

Estimate is provided for comparison. Not based on design. Exclusions apply.

Potential Impacts, Benefits, Costs
Alternative 3 – Enhanced Systematic Multibenefit Implementation

Alternative 3 could have the most impacts on nearby land use and provide the most space for multibenefits:

- Impacts structures on commercial or industrial land valued at $23,200,000 – $34,800,000
- Displaces approximately 110 to 170 people
- Impacts up to 170 acres of parkland area in the Corridor
- Could make more space available for multibenefits than Alternatives 1 and 2 that could support achieving 6 to 7 of 7 WRIA 9 Salmon Habitat Plan goals
- Provides flood management up to 11,900 cfs (slightly below a 100-year flood) for some agricultural lands in addition to flood proofing

Planning-level cost estimate: $560M to $1,100M over the 30- to 50-year implementation horizon

$14M to $27.5M annualized planning-level cost

Estimate is provided for comparison. Not based on design. Exclusions apply.

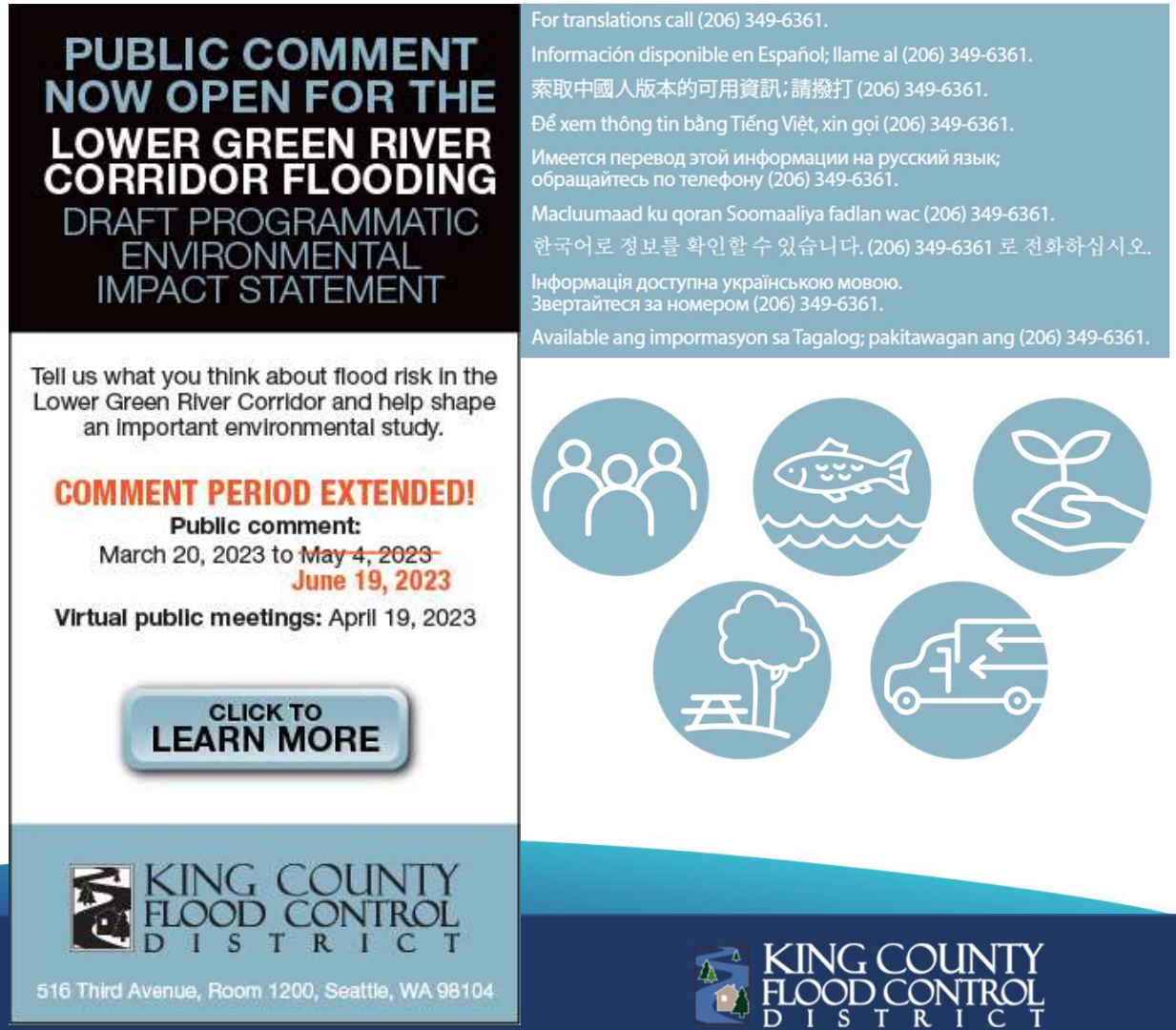
Vital Tribal Interests

- The Green River and the Corridor are vitally important to indigenous peoples; spiritually, culturally, and economically
  - Salmon play a prominent role in each of these interests
- Alternative 3 could result in the least amount of degradation of the ecosystem functions for salmon, compared to Alternatives 1 and 2
  - Alternative 3 could also provide the greatest opportunity for restoration of habitats that could support salmon
  - Alternative 3 could include acquisition of floodplain properties for natural flood storage
- Alternatives 1 and 2 would have less ground-disturbing work and therefore fewer potential impacts to cultural resources than Alternative 3

Outreach

APPROACH

- Guided by Public Outreach Plan
- Broad, Diverse, Inclusive, Accessible
  - Translated into 8 languages
- Multiple ways to learn and provide feedback



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Direct Engagement

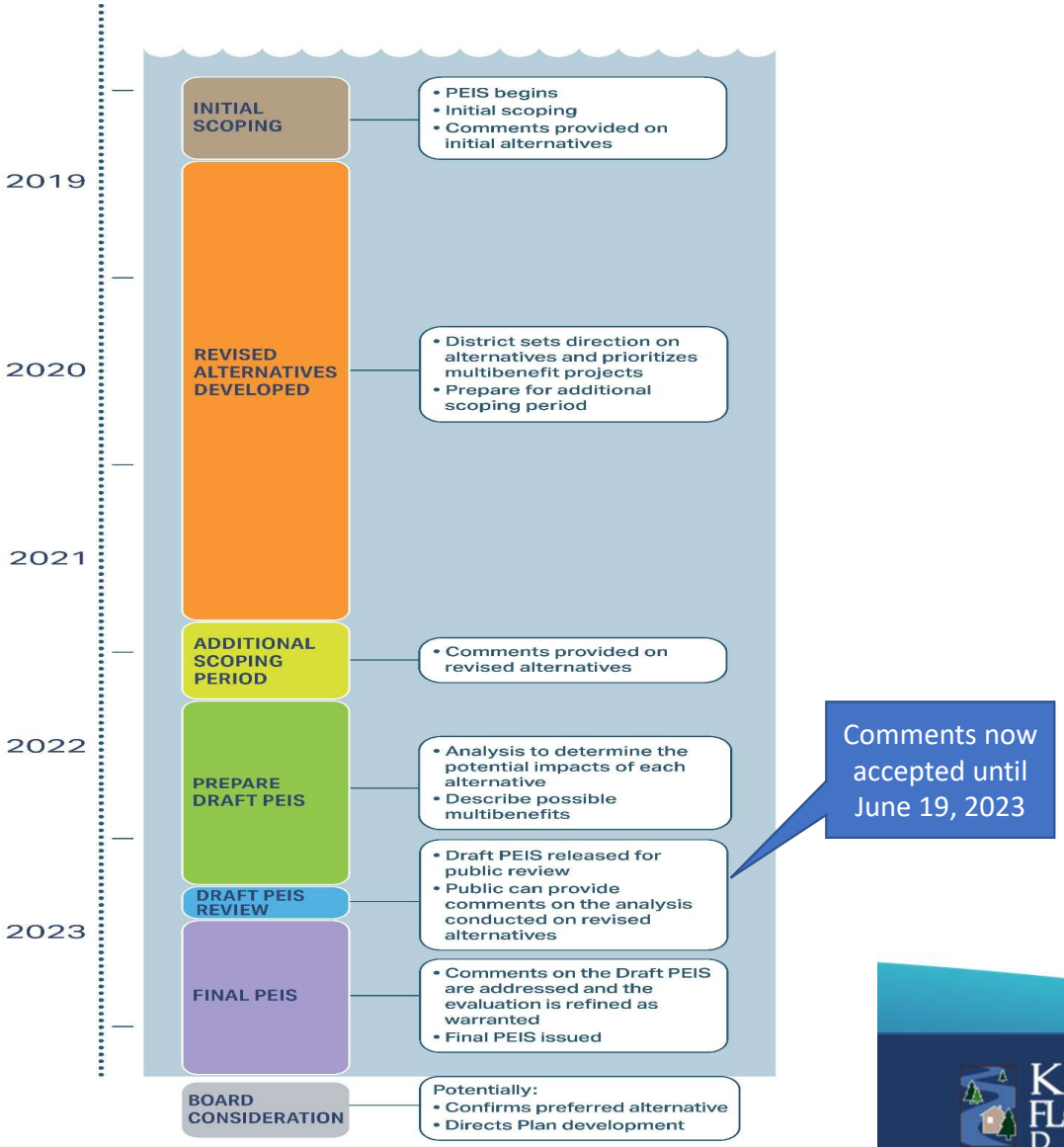
Community Navigators

- Trusted community leaders with cultural, linguistic, and navigational knowledge
- Advise and support engagement
- Tailored plans for specific communities
- Compensate (both navigators and community participants)

Public

- Virtual Public Meetings (April 19)
- Postcard mailed to entire corridor
- Draft PEIS available for review at public locations
- News media distribution
- Sharing information with Chambers, community organizations, etc.

Next Steps



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Questions and Discussion