Welcome!

Dungeness Off-Channel Reservoir Project

Community Information Meeting and Open House

Project Sponsor: Clallam County

October 22, 2024

Meeting Overview

- Overview of Meeting Format
- Procedures for Asking Questions and Submitting Comments
- Reservoir Design Update
- Federal Emergency Management Administration (FEMA) Introduction, National Environmental Policy Act (NEPA) Scoping
- Public Question and Answer Session
- Open House – Stations and Survey

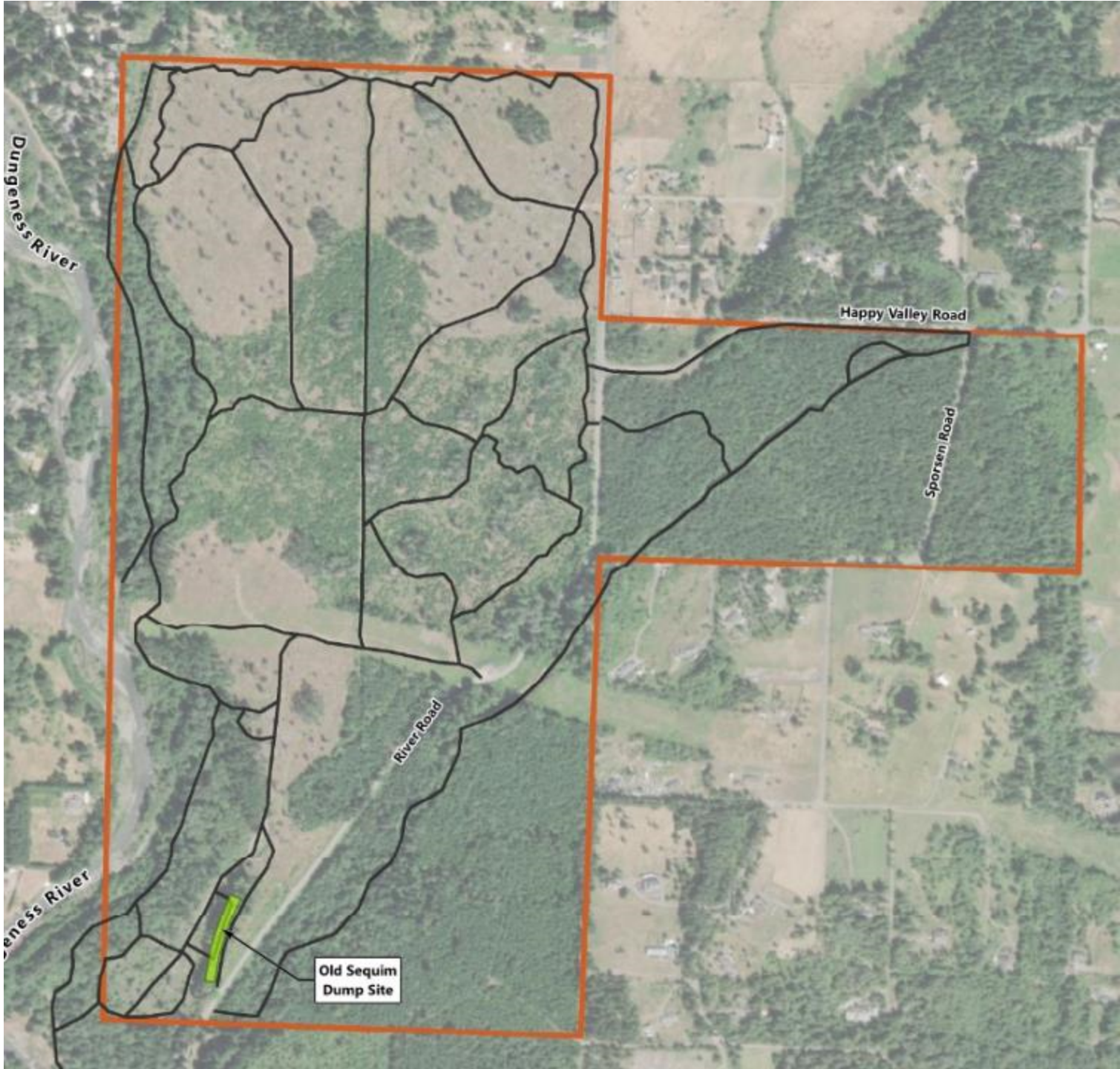
Project History, Purpose, and Targeted Benefits

- Purpose
  - Design, permit, and construct a reservoir to improve the management of water resources in the Dungeness River Watershed
  - Provide the key community benefits outlined below
- Targeted Benefits
  - Streamflow restoration for salmon
  - Long-term agricultural viability and climate-resilient water supply
  - Potential for infiltration and aquifer recharge
  - Public recreation opportunities

Project Milestone: Land Acquisition

Oct. 2024: County acquisition of ~ 400 acres from state for Off Channel Reservoir & County Park

- $1,240,100 purchase paid for under state Streamflow Restoration Grant
- Price reflects need for clean-up of old dump site

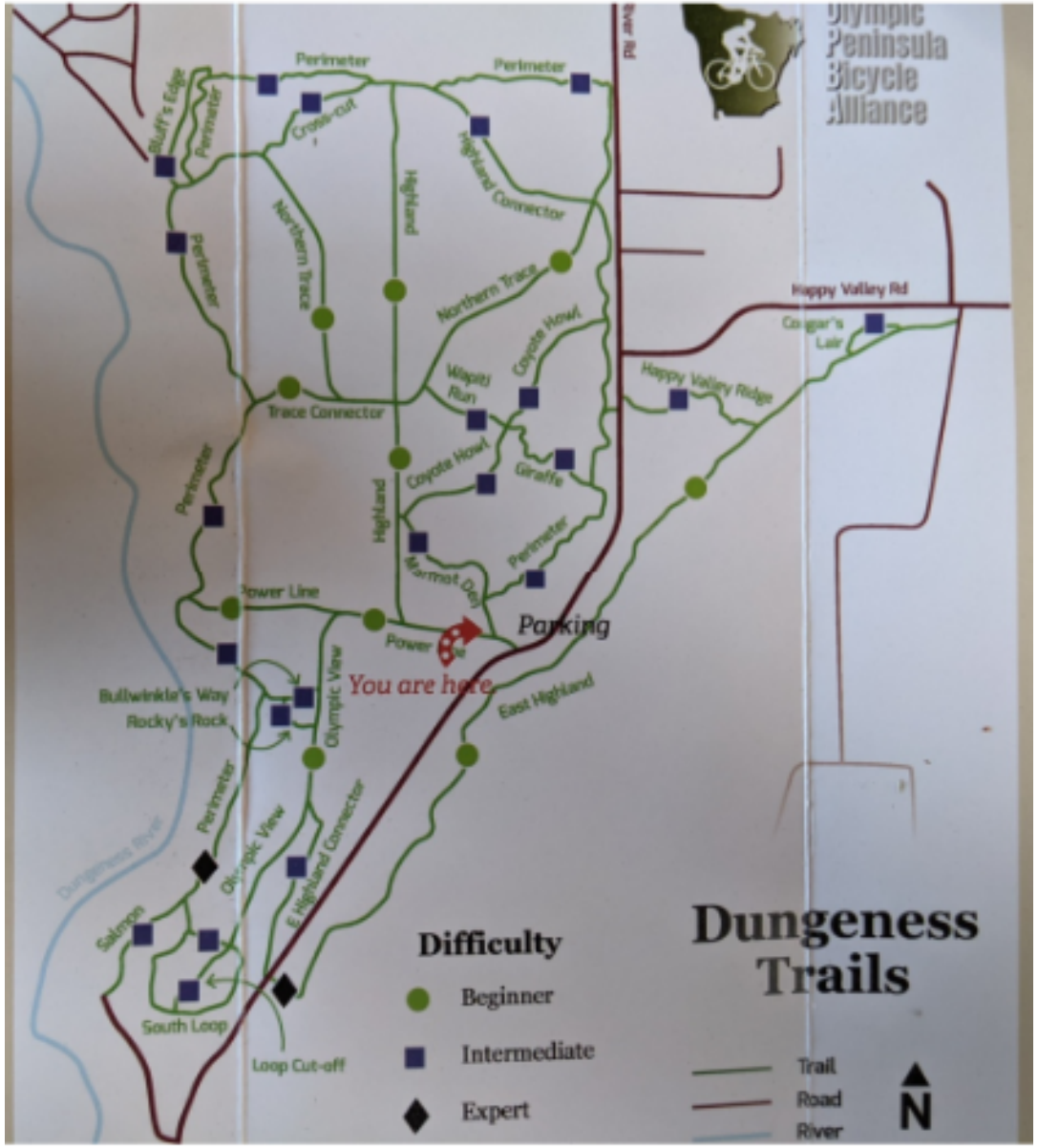


Project Status: Site Cleanup

- **Jan. 2024:** Work Plan & Cost Estimates Completed.
- **Oct. 2024:** Contract with Anchor QEA
  - Topographic survey
  - Quantify debris, soils & vegetation removal
  - Soil sampling/environmental testing
  - Design & permitting
  - Bidding & construction phase assistance
  - Construction Management
  - Final debris removal documentation report per state requirements.
  - *Estimated Over 95% grant funded*
- **Spring/Summer 2025**: Complete Cleanup
  - Est. 80% or more of costs grant funded
- **2025-2028:** 3-Year Post Removal Groundwater Monitoring and Site Closure

Project Status: Public Access

- Ownership now Clallam County
- Public access and trails to remain open to public
- County will need to develop near-term and long-term park and recreation plans for the ~ 400-acre property.



Key Dungeness Off-Channel Reservoir Project Milestones

- Initial site investigations (borings, monitoring wells, surveys, etc.)
- Cultural Resources Surveys
- Environmental Site Assessments
- Initiation of consultation with Ecology's Dam Safety Office
- Preliminary design and related analyses
- Seismic Fault Analysis
- Evaluation of alternate reservoir design configurations based on previous public input and seismic fault analysis
- Application for and securing of majority of project funding

Dungeness Off-Channel Reservoir

Reservoir Design Update

Presented By: David Rice, PE – Anchor QEA

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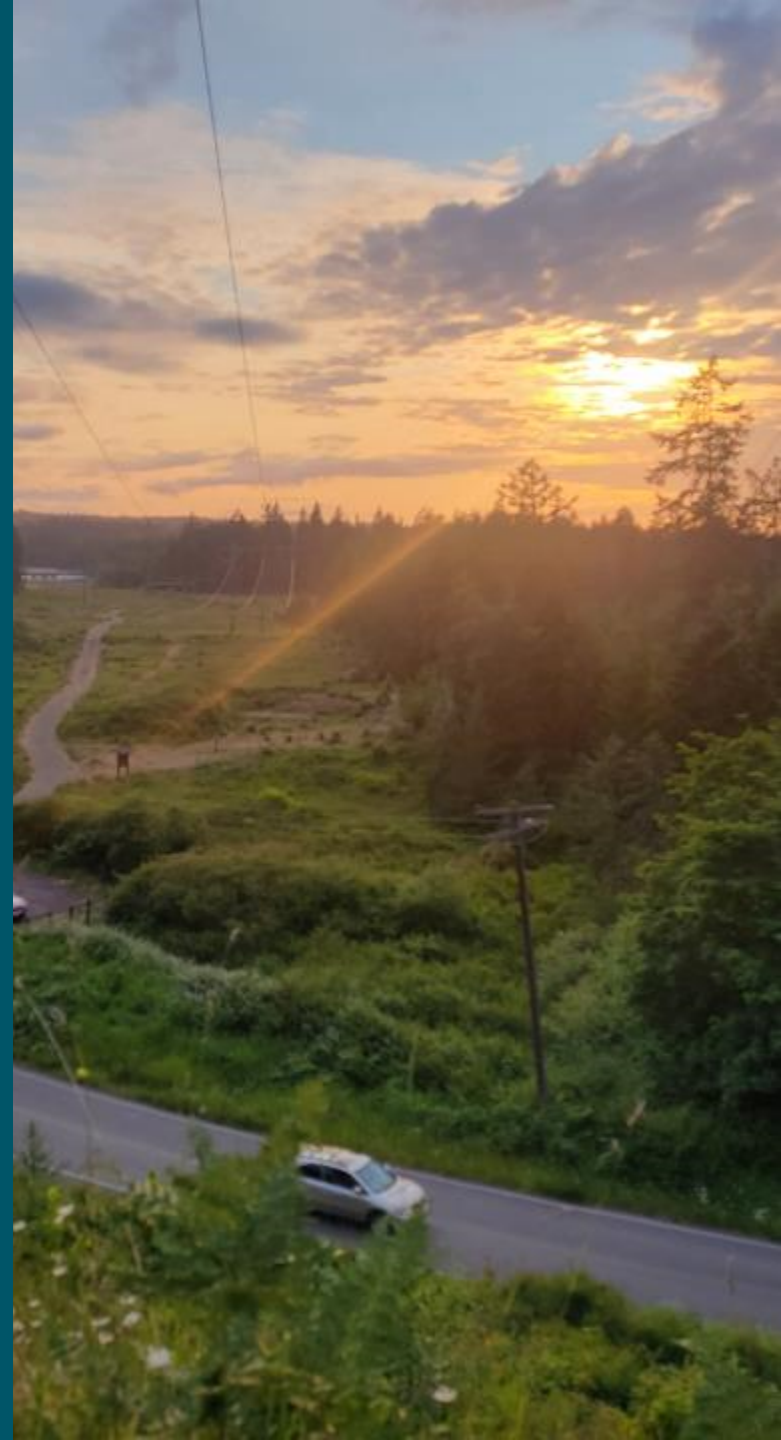
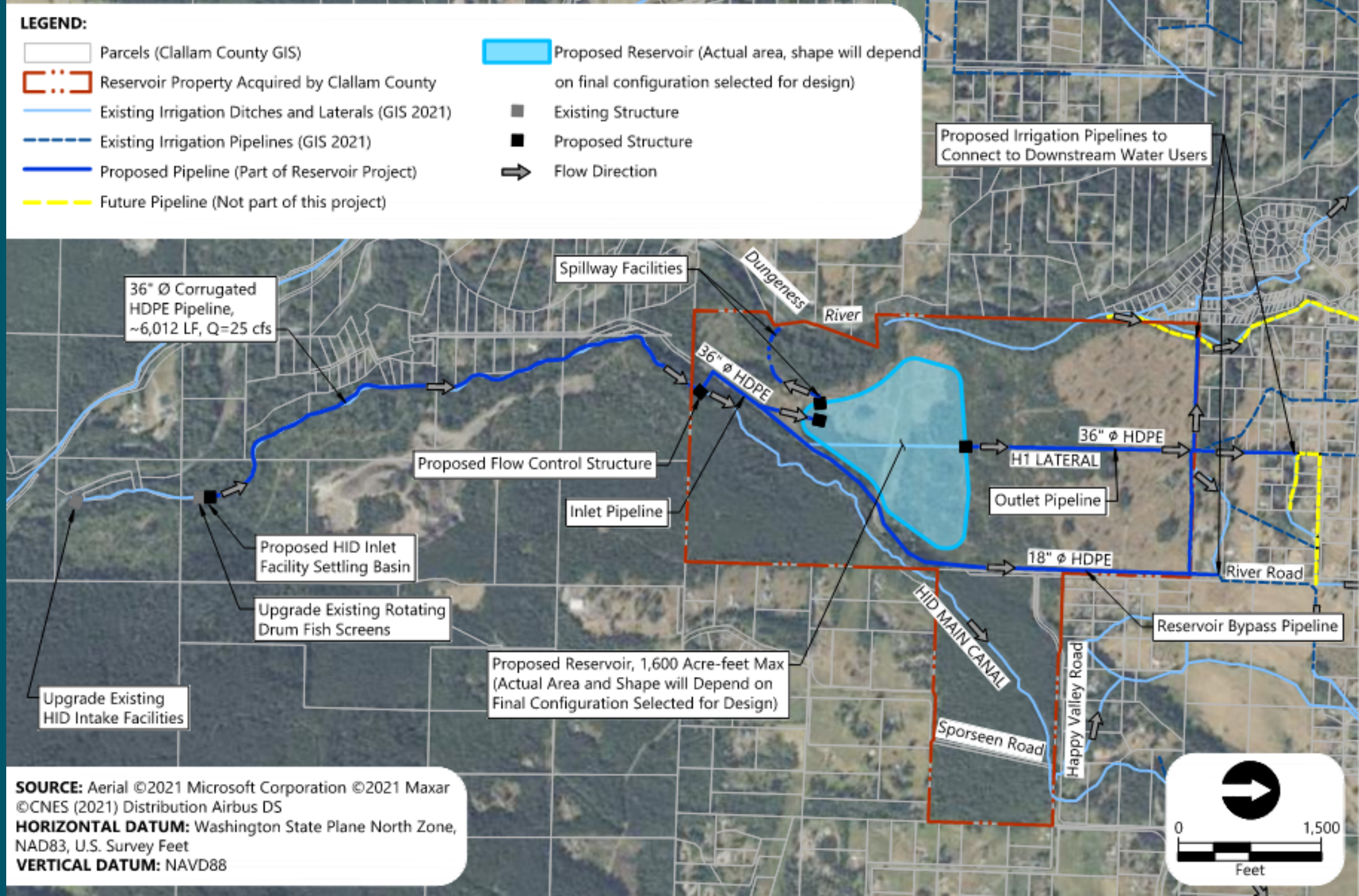


Project Overview Map



Upstream Improvements

- Improvements to Highland Irrigation District headgate structure
- Improvements to Highland Irrigation District fish screens by Washington Department of Fish and Wildlife (WDFW)
- Installation of a settling basin
- Installation of ~6,000 feet of 36-inch pipeline in the upstream end of the Highland Irrigation District main canal
- Flow control structure
- Inlet pipeline to reservoir

CLALLAM COUNTY 1854

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Upstream Improvements

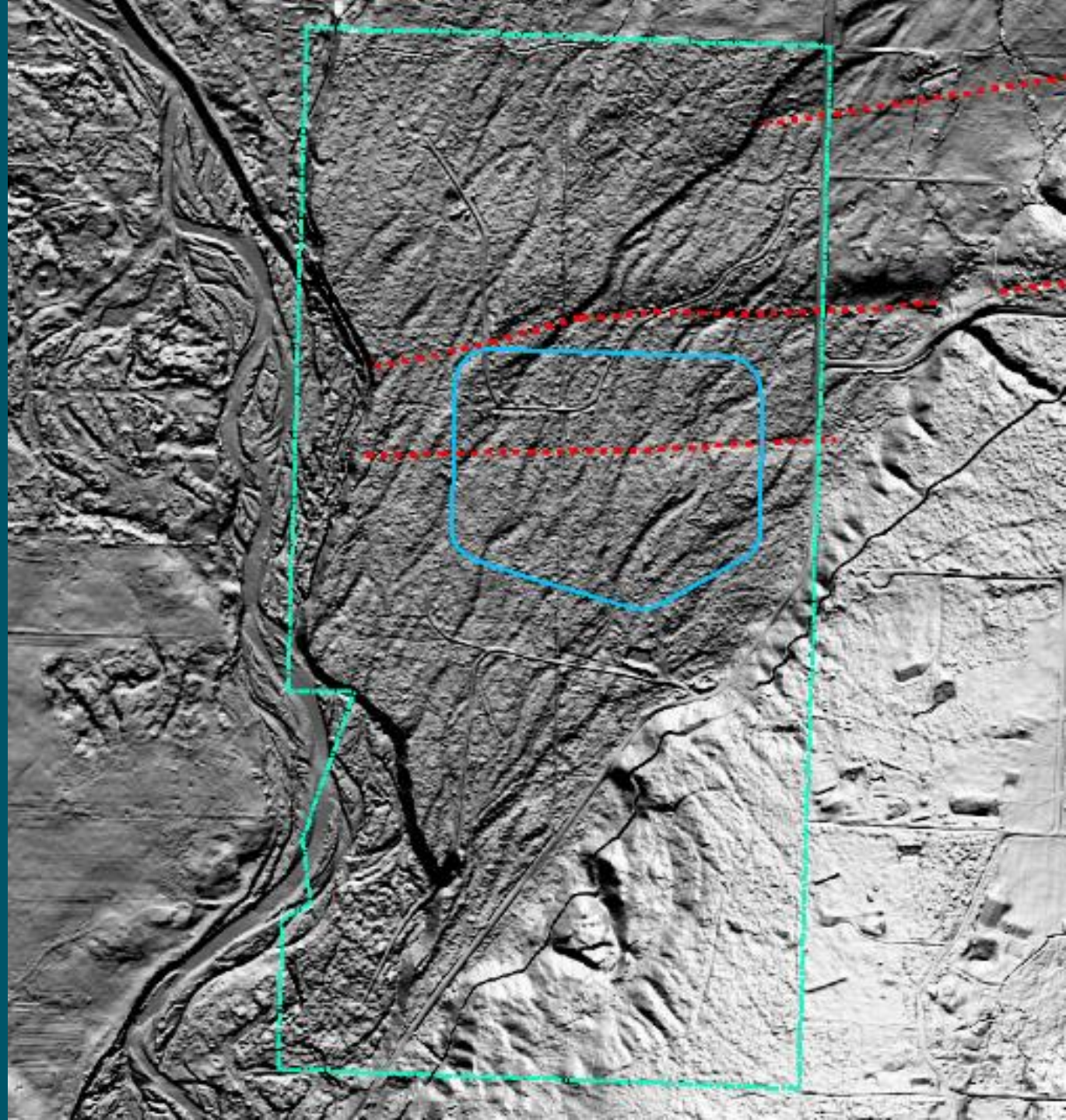
- Funding
  - U.S. Bureau of Reclamation WaterSmart to fund headgate structure improvements, other intake system improvements, settling basin, flow control structure, and inlet pipeline to reservoir
  - Natural Resources Conservation Service grant to fund pipeline in upstream end of Highland Irrigation District main canal
  - WDFW to refurbish Highland Irrigation District fish screens and gantry system with grant from U.S. Fish and Wildlife Service

Seismic Review – Prior to Preliminary Design

- 2007 U.S. Geological Survey (USGS) Study
  - Fault line mapped at site, referred to as “Sequim Fault”
  - Study did not provide explanation or basis for mapping
- 2020 PanGEO Report
  - County contracted with PanGEO to complete feasibility review
  - Review of available geologic information
  - Site review with geologists from USGS
  - Initial geologic map and LiDAR topographic data review
  - Found no explanation of mapping of “Sequim Fault”
  - Found “no identifiable evidence of faulting in the project area”
  - Recommended review of excavations for any “soil anomalies”

April 2023 Seismic Reconnaissance

- Initial desktop review, including analysis and interpretation of LiDAR topographic data for potential surface deformation
- Site review
- Identified subtle linear topographic features (lineaments) that suggest presence of faults

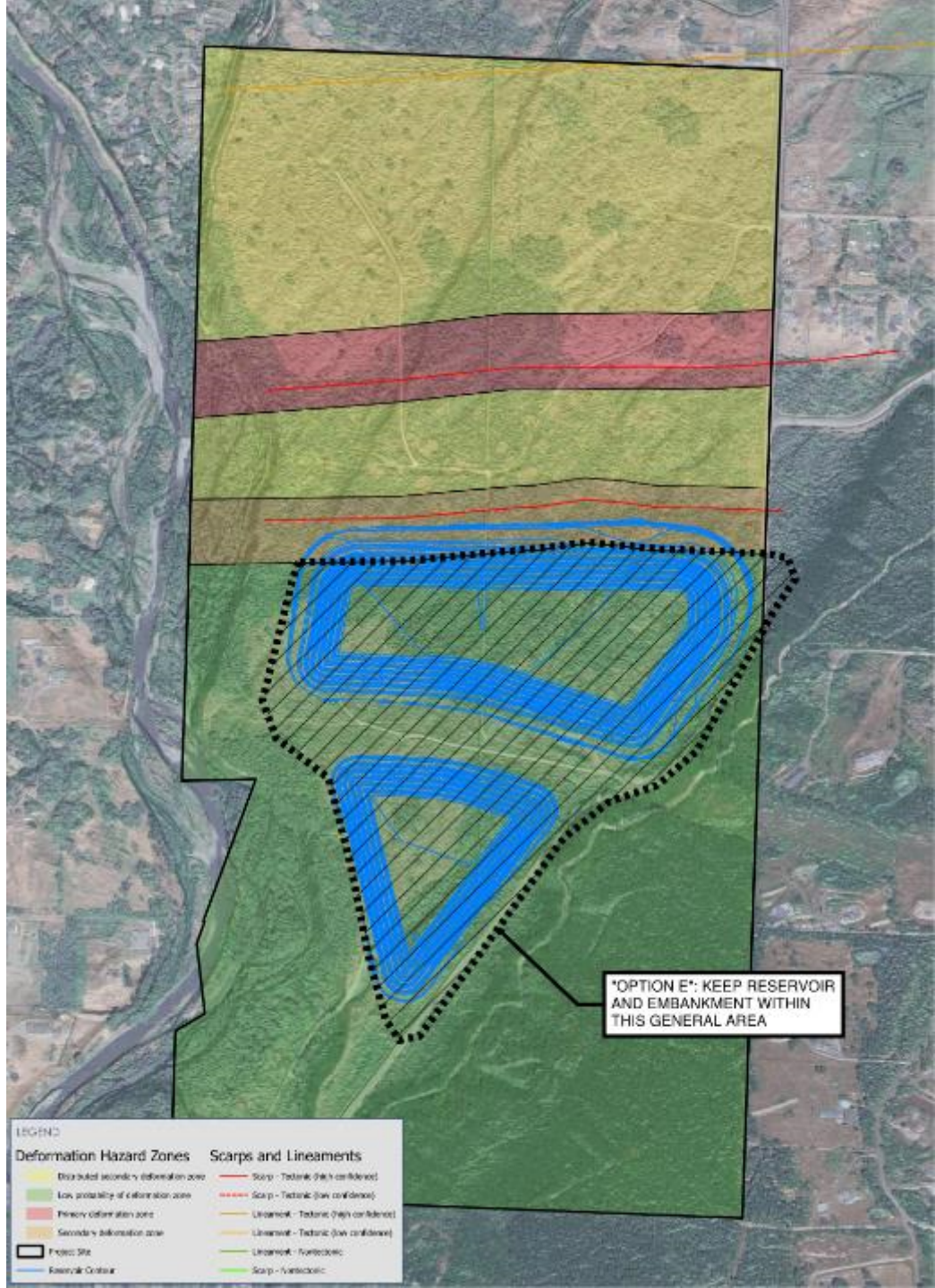


Detailed Seismic Study: Key Findings

- Findings support the hypothesis that an active fault zone crosses the proposed reservoir site
- Primary, secondary, distributed secondary deformation zones identified, where findings suggest that fault rupture could cause deformation
- Low probability deformation zone identified where no evidence was found of past surface deformation
- Full analysis available in May 2024 Fault Hazard Evaluation Report

Study Recommendations

- Shift reservoir south so that primary structural embankment and reservoir are within the low probability deformation zone
- Perform additional seismic hazard analyses to support the design
- Excavation slopes should be observed during reservoir construction by a Licensed Geologist



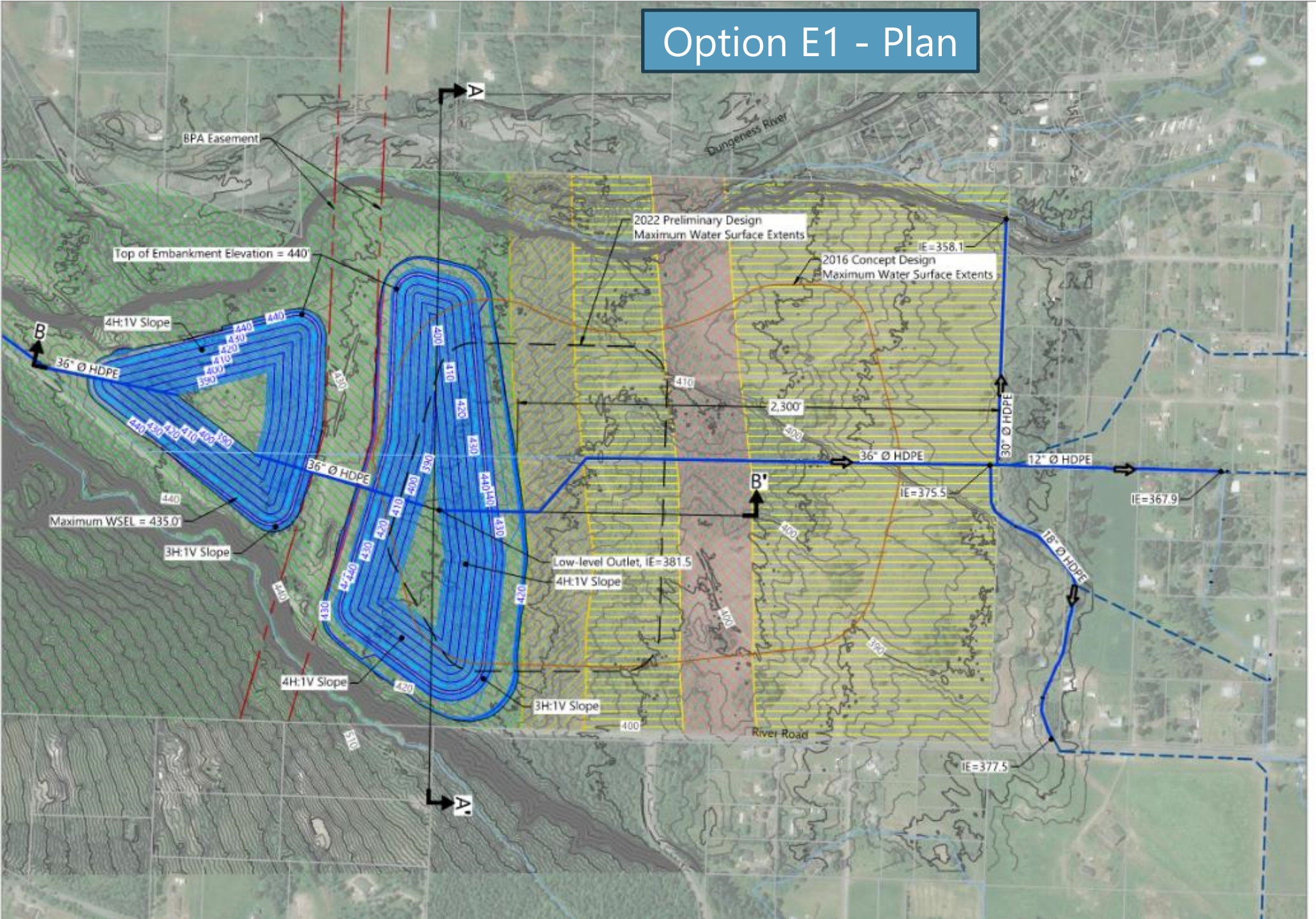
Prior Reservoir Configurations Considered

- Preliminary Design
- Options A–C Reservoir Configurations
  - Designed to be responsive to public comment about height of embankment and volume of water stored aboveground
- Option D Reservoir Configuration
  - Completed after seismic reconnaissance to look at potential for shifting reservoir south to avoid overlap with fault zone mapped by Shannon & Wilson
  - Also designed to be responsive to public comment about height of embankment and volume of water stored aboveground
  - Configured to minimize impact on BPA easement

“Option E” Reservoir Configurations

- Four additional reservoir configurations considered
- Intended to be responsive to recommendations of May 2024 Fault Hazard Evaluation Report
  - Shift reservoir south so that primary structural embankment and reservoir are within the low probability deformation zone
- Also intended to be responsive to public comment about height of embankment and volume of water stored above-ground
- Varying levels of impact to existing infrastructure, including BPA easement and transmission lines

Option E1 - Plan



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HORIZONTAL DATUM: Washington State Plane North Zone, NAD83, U.S. Survey Feet
VERTICAL DATUM: NAVD88

LEGEND:

- Parcels (Clallam County GIS)
- Existing Irrigation Ditches and Laterals (GIS 2013)
- Existing Irrigation Pipelines (GIS 2013)
- Existing Contours (2' & 10' Intervals)
- Proposed Contours (2' & 10' Intervals)
- Existing BPA Easement
- Primary Seismic Deformation Zone
- Secondary Seismic Deformation Zone
- Distributed Secondary Seismic Deformation Zone
- Low Probability of Seismic Deformation Zone
- Proposed Irrigation Pipeline
- Proposed Full Reservoir Water Surface for Option E1
- Proposed Full Reservoir Water Surface from 2016 Concept Design
- Proposed Full Reservoir Water Surface from 2021 30% Design
- A — Cross Section Location and Designation

0 500
Feet


Outlet to Eureka Canal
Outlet to Independent Canal
36"Ø Reservoir Outlet Pipeline
Highland I.D. H1 Lateral
2,300 Feet
River Road
Happy Valley Road
18"Ø Reservoir Bypass Pipeline
Reservoir Outlet Structure
Dungeness Off-Channel Reservoir
BPA Power Easement
Dungeness Off-Channel Reservoir
Emergency Spillway
Reservoir Inlet Structure
Dungeness River
River Road
Highland I.D. Main Canal
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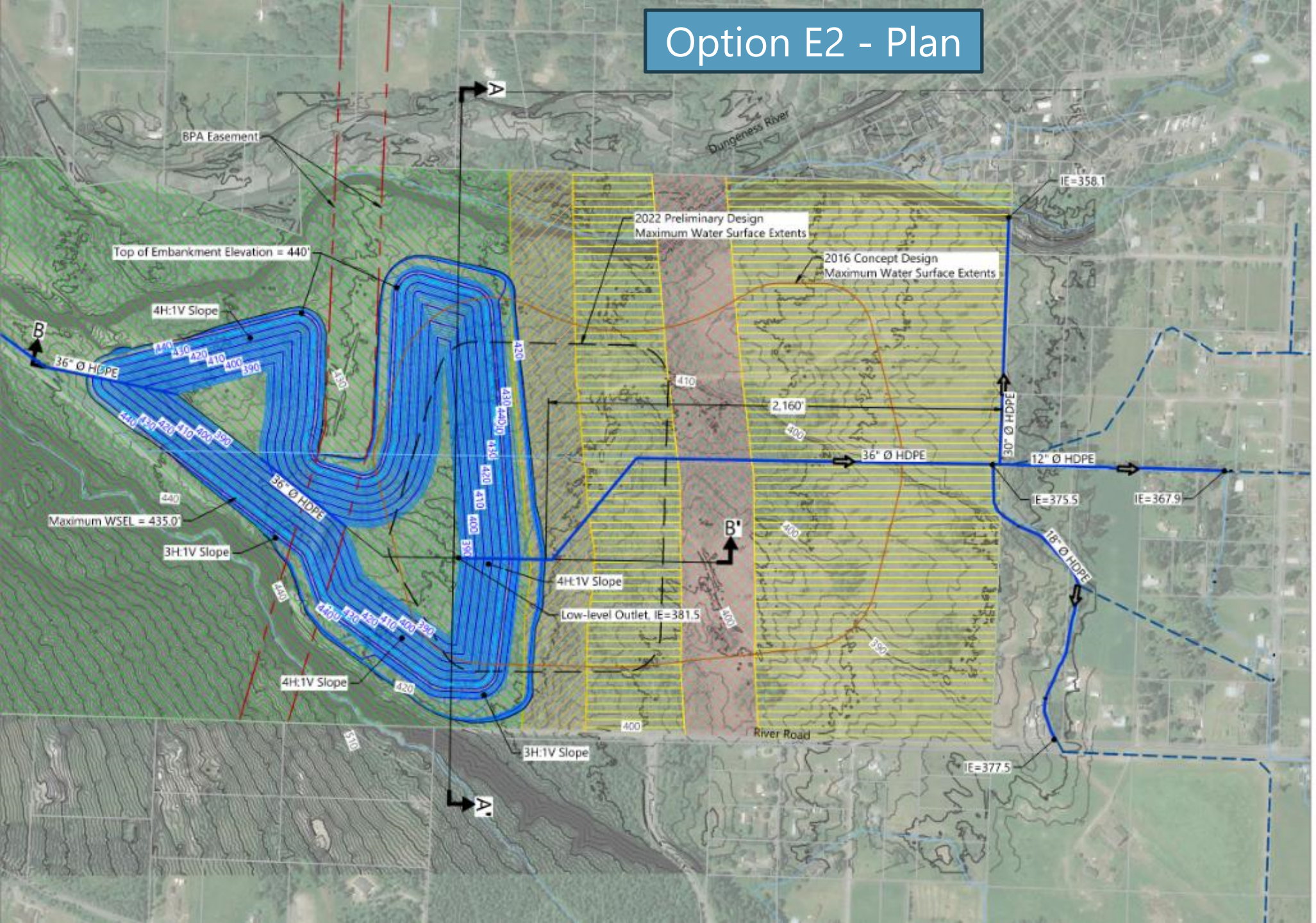
Option E2 - Plan



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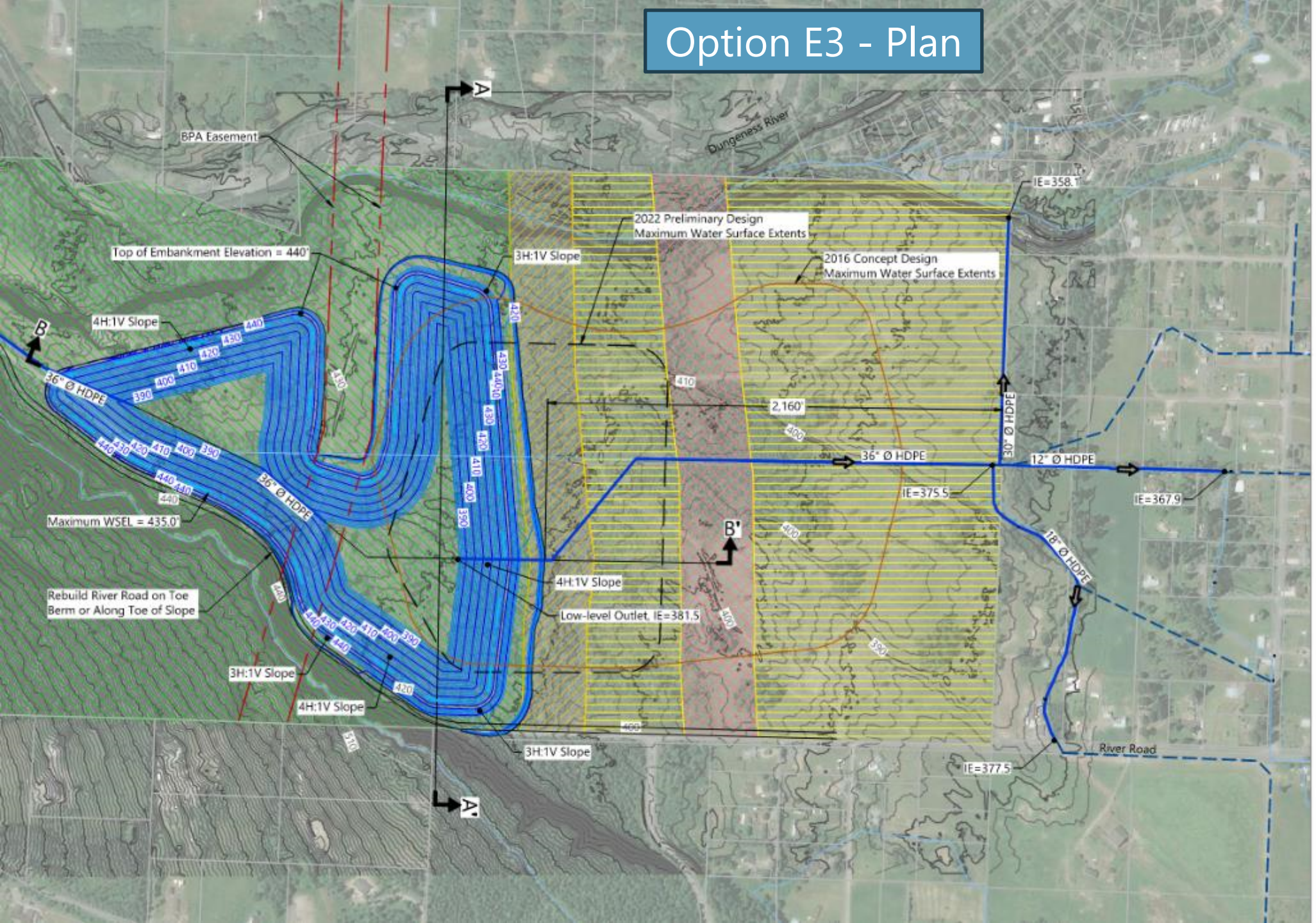
Option E3 - Plan



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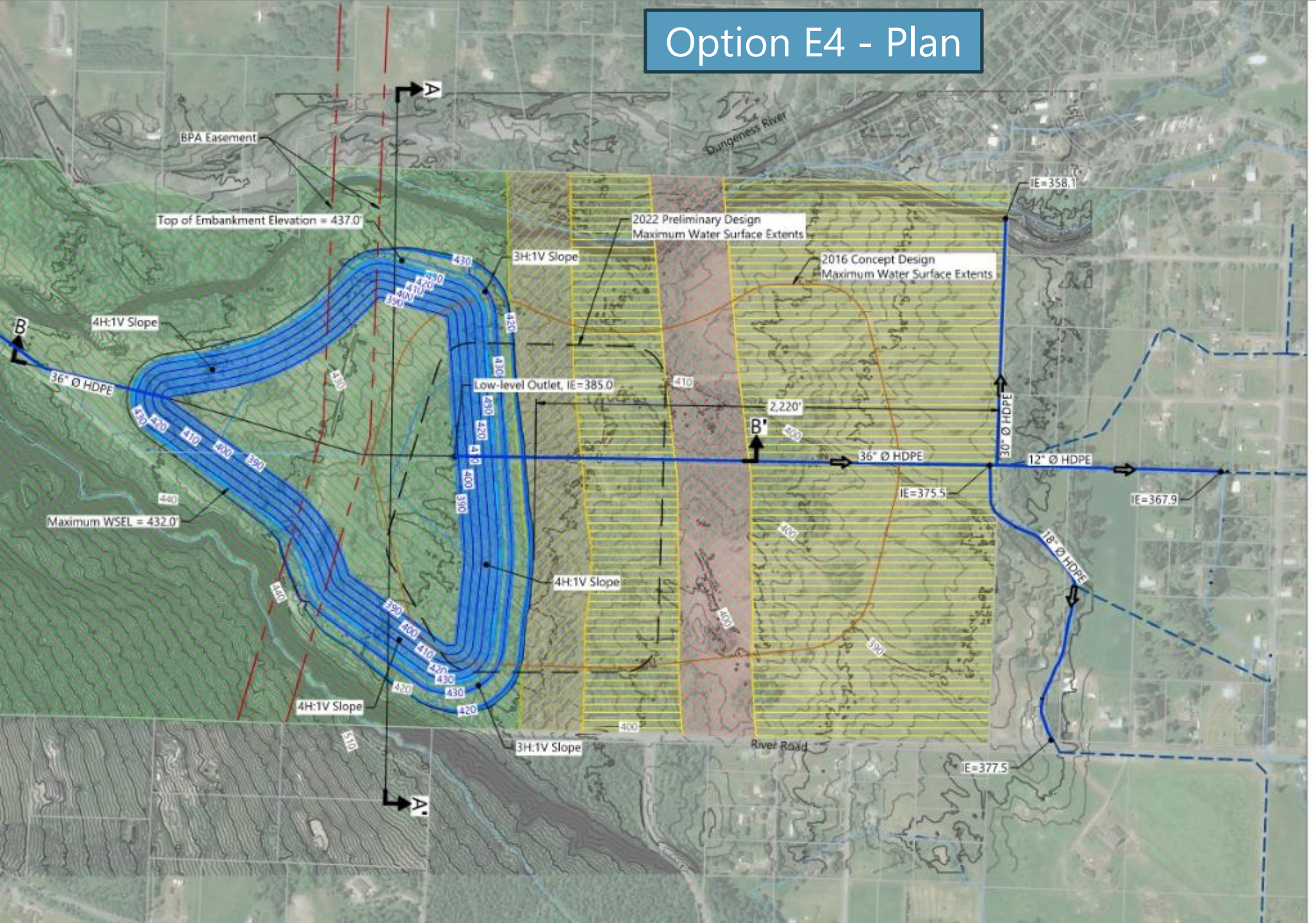
Option E4 - Plan



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Summary of "Option E" Reservoir Configurations

Design Variable	Option E1	Option E2	Option E3	Option E4
Max WSEL	435 feet	435 feet	435 feet	432 feet
Storage Capacity	959 acre-feet	1,236 acre-feet	1,465 acre-feet	1,610 acre-feet
Max Flow Benefit (Days at 25-cfs release)	19.3 days	24.9 days	29.5 days	32.5 days
Max Flow Benefit (Flow over 32-day release)	15.1 cfs	19.5 cfs	23.1 cfs	25.4 cfs
Max Height of N Embankment	25 feet±	25 feet±	25 feet±	22 feet±
Max Depth of Water Above Ex Ground	20 feet±	20 feet±	20 feet±	17 feet±
% Storage Capacity Below Ex Ground	67% (North) 77% (South)	76%	79%	85%
Total Excavation	1,107,452 CY	1,513,551 CY	1,875,689 CY	2,215,977 CY
Total Fill Required	395,657 CY	420,620 CY	408,010 CY	257,931 CY
Distance from N Property Boundary	2,390 feet	2,320 feet	2,320 feet	2,320 feet

Notes: cfs: cubic feet per second CY: Cubic Yard Ex: Existing
N: North WSEL: Water Surface Elevation

Planned Next Steps

- **Fall 2024:** Continue discussing site constraints with Bonneville Power Administration and others
- **Fall 2024:** Initiate preparation of documents needed to bid and complete debris removal from old "Sequim Dump" site
- **Fall 2024:** Complete water balance modeling, draft water rights framework
- **Fall 2024/Winter 2025:** Narrow down preferred reservoir configuration
- **Winter 2025:** Update preliminary designs to reflect preferred reservoir configuration
- **Winter 2025:** Initiate environmental permitting
- **Winter 2025, Spring 2025:** Schedule and initiate additional geotechnical field work
- **Spring/Summer 2025:** Complete debris removal from old "Sequim Dump" site
- **Winter 2026:** Complete detailed design and permitting
- **Ongoing:** Continued stakeholder coordination and public outreach

Dungeness Off-Channel Reservoir

FEMA Introduction/NEPA Scoping

Presented By:

FEMA/Washington Department of Emergency Management

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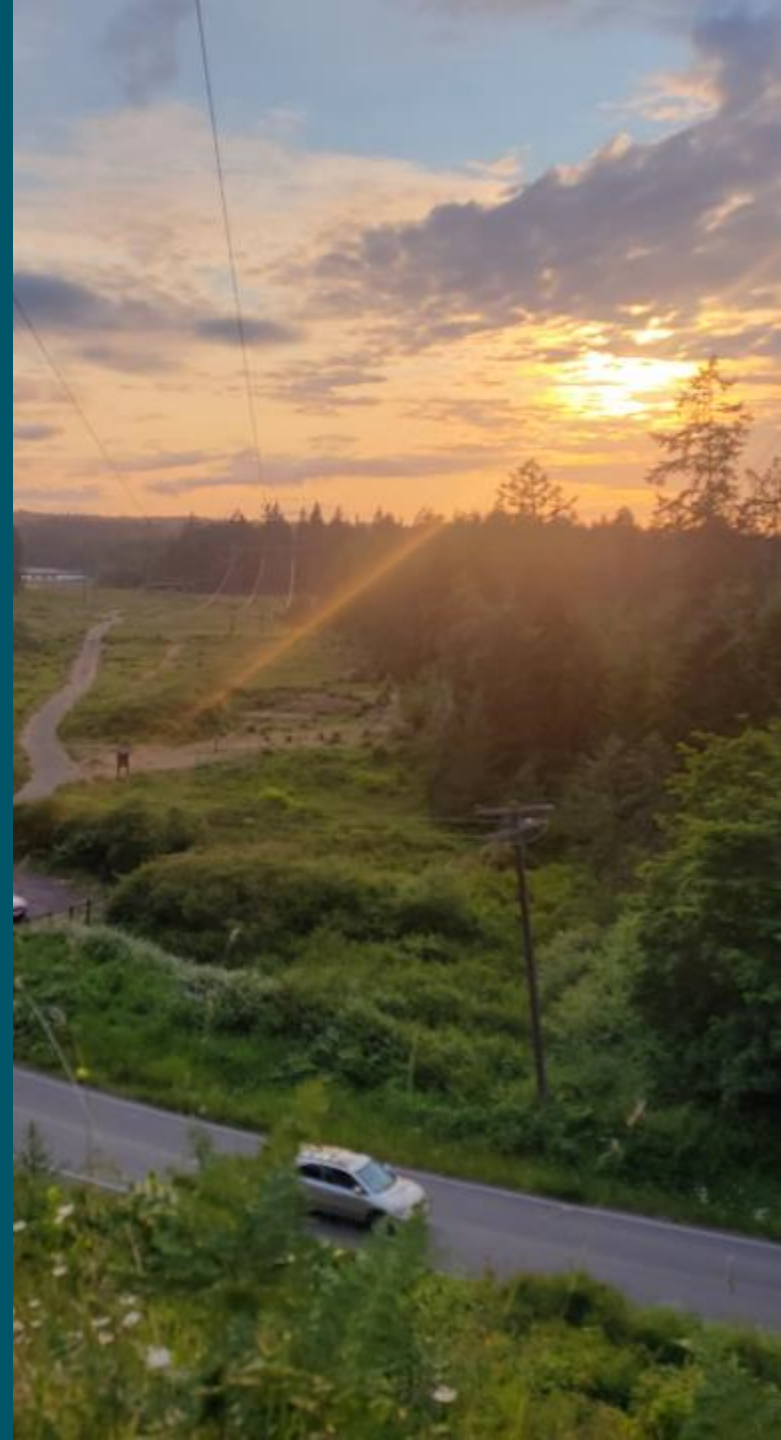
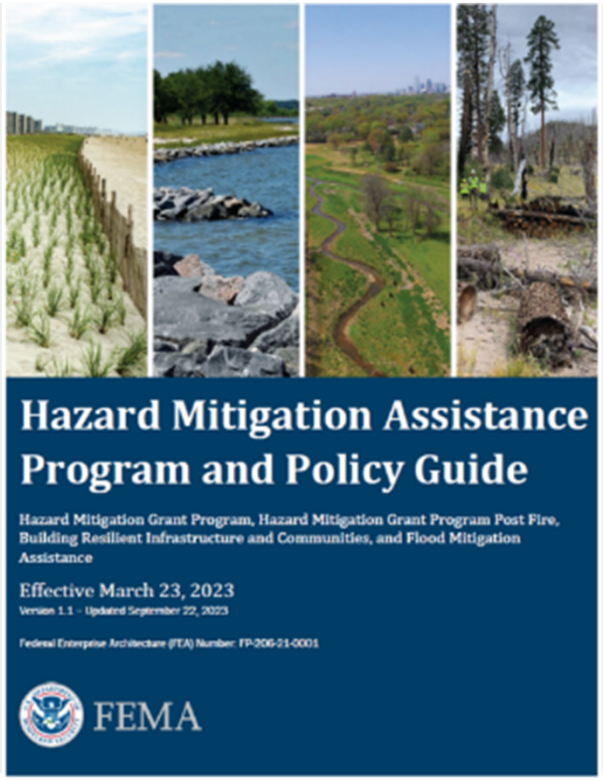


Disaster Mitigation Grants



Hazard Mitigation Grant Program (HMGP)

- Only available following Presidential Disaster Declaration
- Funding is only for Declared State or Tribe
- 15% or 20% of Total Federal Disaster Costs

HMGP Post-Fire (HMGP PF)

- Newer statutory authorization
- After a *Fire Management Assistance Grant* (FMAG) Declaration
- Set amount per FMAG Declaration
- Prioritized to burn area counties and Tribes
- Different deadlines

Eligible Project Types

***not an exhaustive list**

- Property Acquisition and Structure Demolition
- Property Acquisition and Structure Relocation
- Structure Flood Elevation
- Seismic Structural and/or Non-Structural Retrofitting of Existing Buildings
- Tsunami Vertical Evacuation Shelters
- Updating Building Codes
- Safe Rooms
- Emergency Generators for Critical Facilities
- Infrastructure Hazard Retrofits
- Localized Flood Risk Reduction Projects
- Stormwater Management
- Erosion Protection for buildings and infrastructure
- Wildfire Mitigation
- Drought Mitigation
- Early Warning Systems

Standard HMGP Project Criteria

- Eligible project type (consistent with HMA Guidance)
- Included in FEMA-approved Hazard Mitigation Plan
- Project costs must be reasonable, eligible, and allocable
- Most practical, effective, environmentally conscious of alternatives considered
- Cost-Effective per FEMA BCA
- Sound engineering & technically feasible
- Long-term solution & functionally independent
- Environmentally compliant: NEPA, NHPA, EO's etc.
- Projects in the floodplain – community must be NFIP

For more information on the Hazard Mitigation Grant Program

Tim Cook, State Hazard Mitigation Officer
Emergency Management Division (EMD)
Washington Military Department
HMA@mil.wa.gov

Jane Rockhold, HMGP – WA Section Chief
Jane.Rockhold@fema.dhs.gov
www.FEMA.gov

FEMA

NEPA Overview

- National Environmental Policy Act of 1969
- Requires Federal Agencies to consider the environmental impact of their proposed actions prior to making a decision
- Two major purposes:
  - Better informed decisions
  - Citizen involvement

Scoping Process

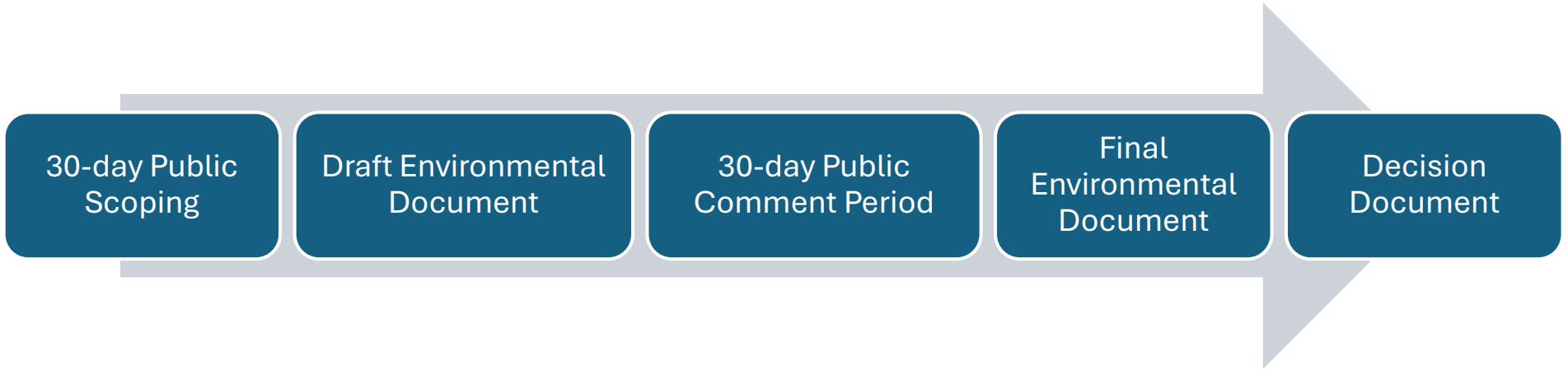
- Notify of agencies and interested members of the public
- Solicit early public input on potential issues and impacts
  - What are your concerns?
  - What issues would you like FEMA to analyze?
- Input informs our environmental impact analysis, including the development and consideration of potential alternatives

How to Comment

- Please provide comments:
  - Today at the open house (oral or in-writing)
  - Via email to fema-r10-ehp-comments@fema.dhs.gov
  - Via County survey or mail
- Due November 21, 2024
- Future opportunities to provide input on the draft environmental impact analysis

Next Steps

- Following the close of the public scoping period, FEMA will begin the preparation of a NEPA-compliant environmental document



Q&A Instructions

- Instructions for Asking Questions
- Timeline for Q&A
- Submit Questions to Be Answered Later

Questions???

Dungeness Off-Channel Reservoir Project