NATIONAL ASSOCIATION OF ENVIRONMENTAL PROFESSIONALS

# Planning for Resilient Flood Solutions through Clean Water Act and National Environmental Policy Act Integration

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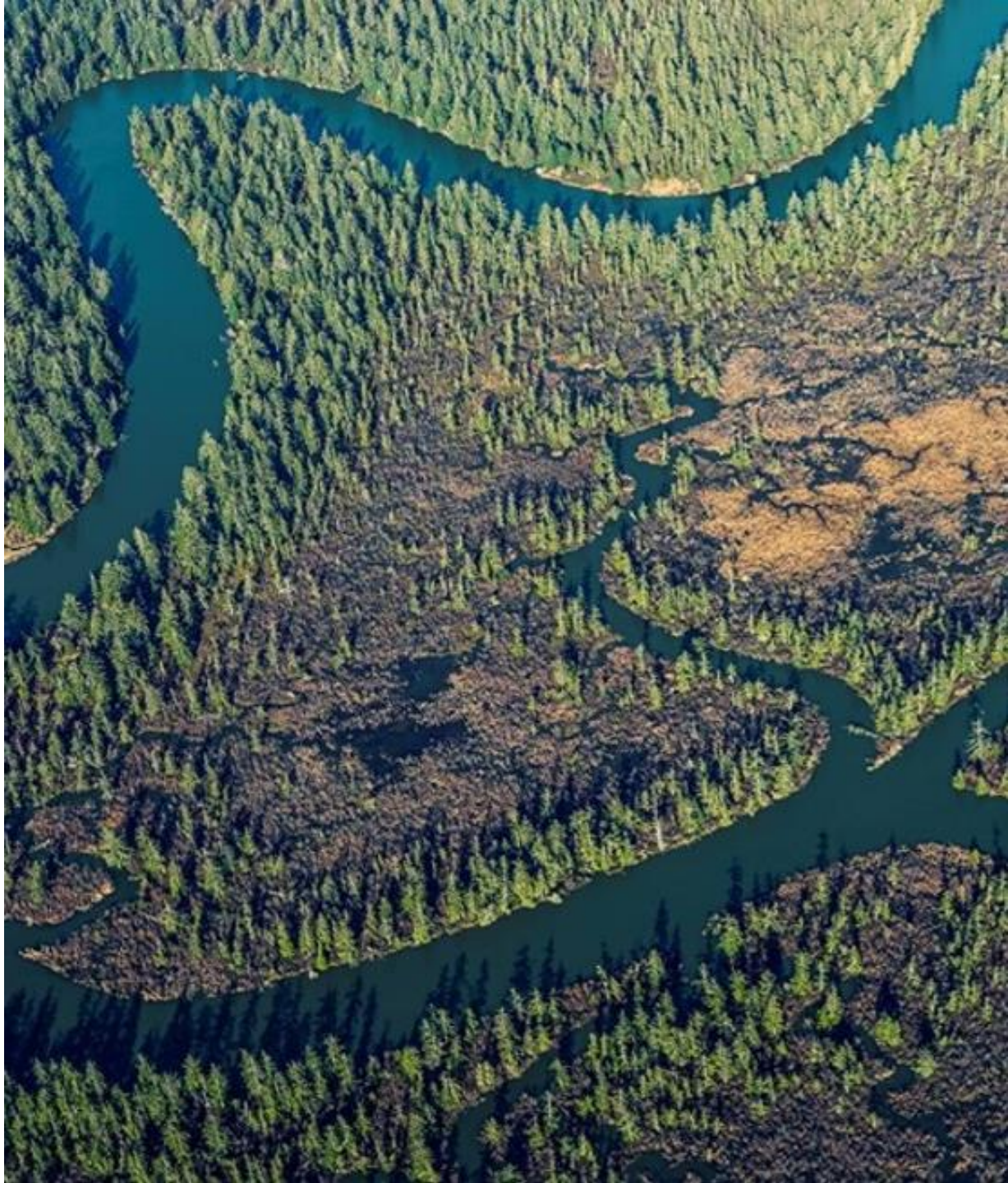
# Changing Regulatory Landscape

- Rescinding CEQ's National Environmental Policy Act (NEPA) regulations: **EO 14154**
- Agency-specific NEPA procedures: **90 Fed. Reg. 29465, July 2025 USACE NEPA rule**
- Narrowing of NEPA to central action (limitations of causation): ***Seven County Infrastructure Coalition v. Eagle County*, No. 23-975 (2025)**
- Consideration of changing climatic conditions: **EO 14148**

# Unique Challenges to Evaluating Water Resource Projects

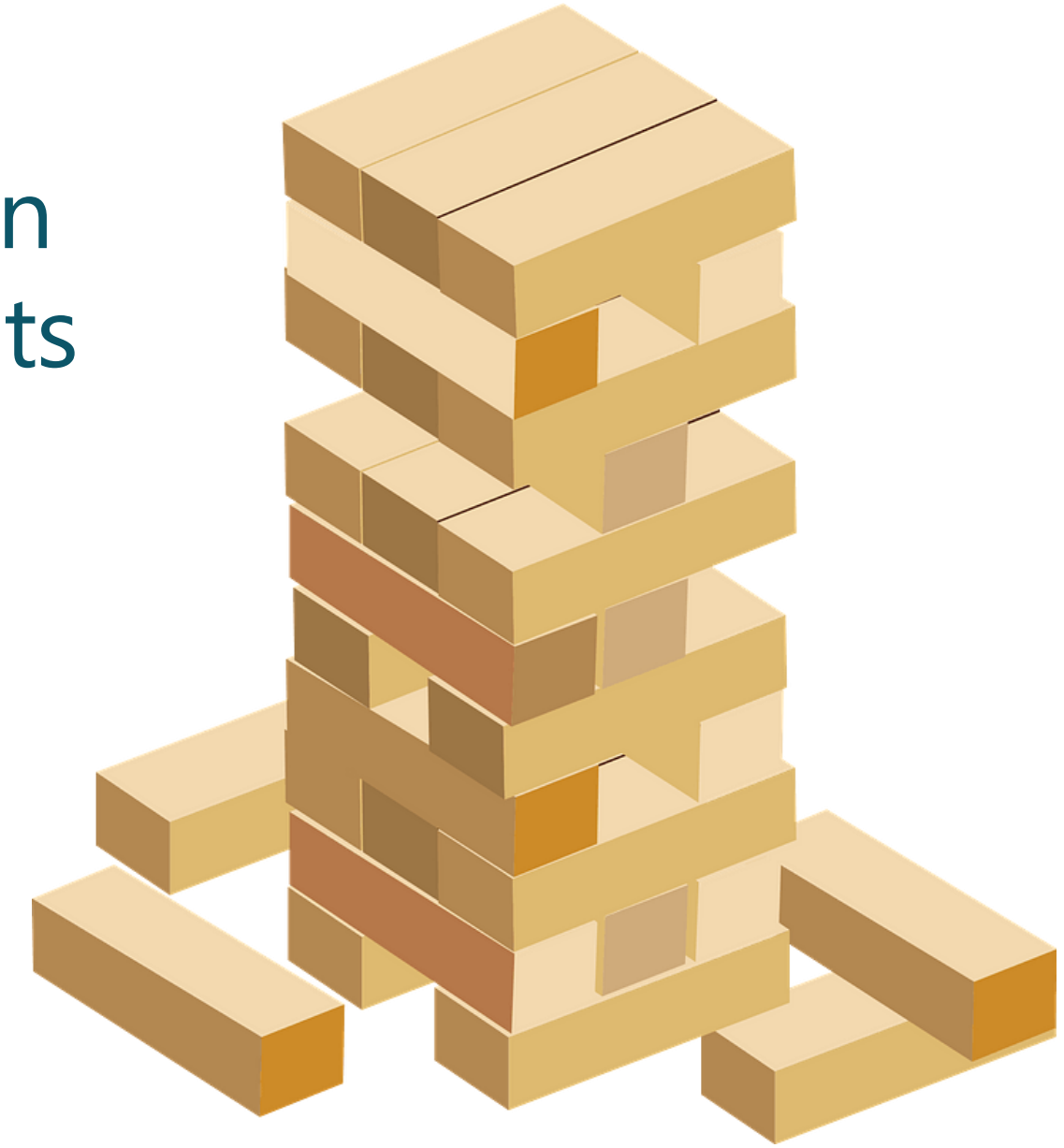
- Larger infrastructure → NEPA
- Clean Water Act (CWA) permitting → Section 404



# Climate Assumptions Shape the NEPA Evaluation for Water Resource Projects

Climate Assumptions Drive:

- Purpose and need
- Alternatives development
- Screening criteria
- Impact analysis
- Mitigation



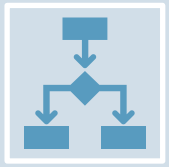
# CWA Integration

USACE is in a unique position as NEPA lead agency

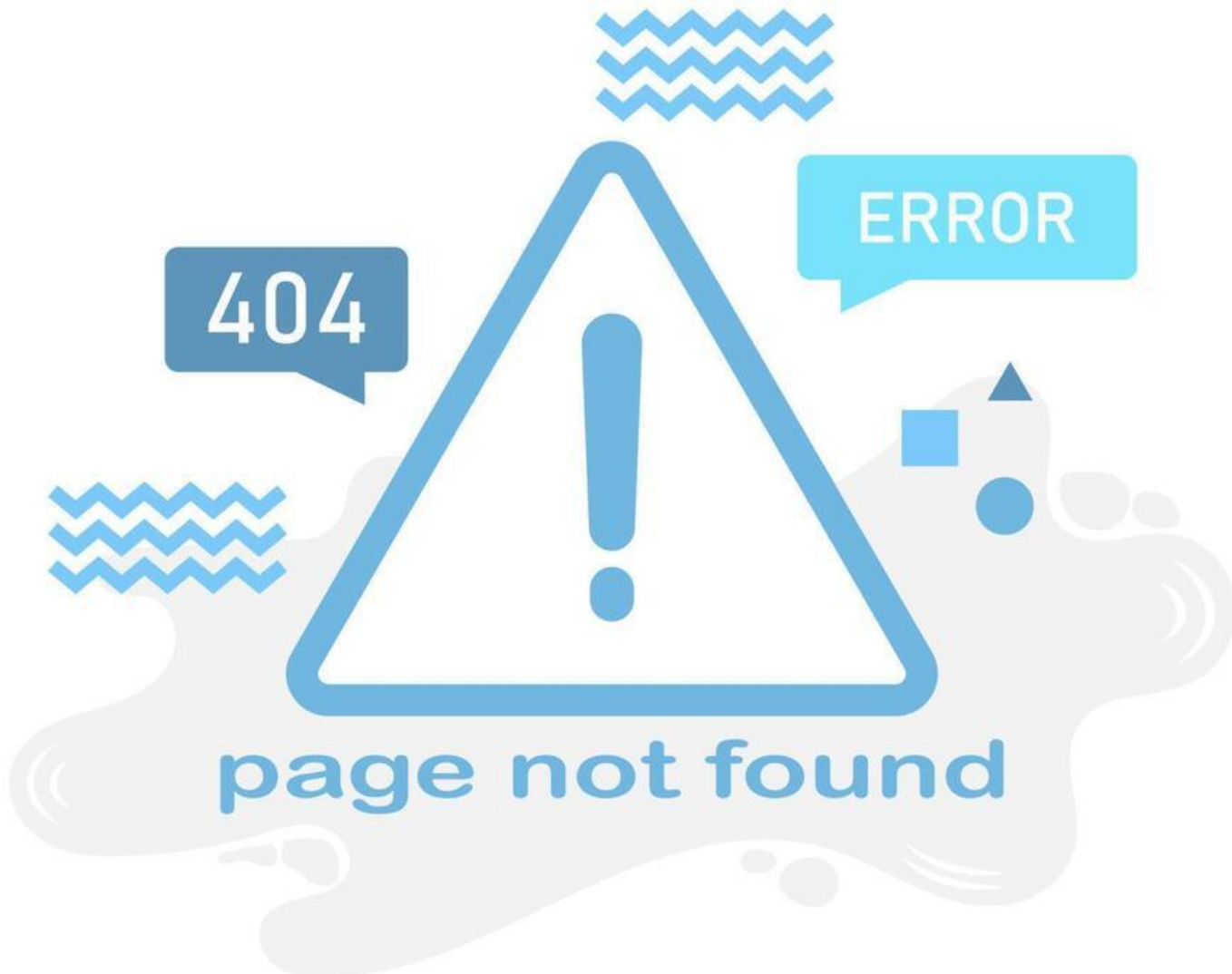
NEPA limits climate analysis

Section 404 requires LEDPA determination and Public Interest Review

NEPA EIS informs the CWA Section 404 permit decision



If assumptions and impacts change, the LEDPA and permit decision can change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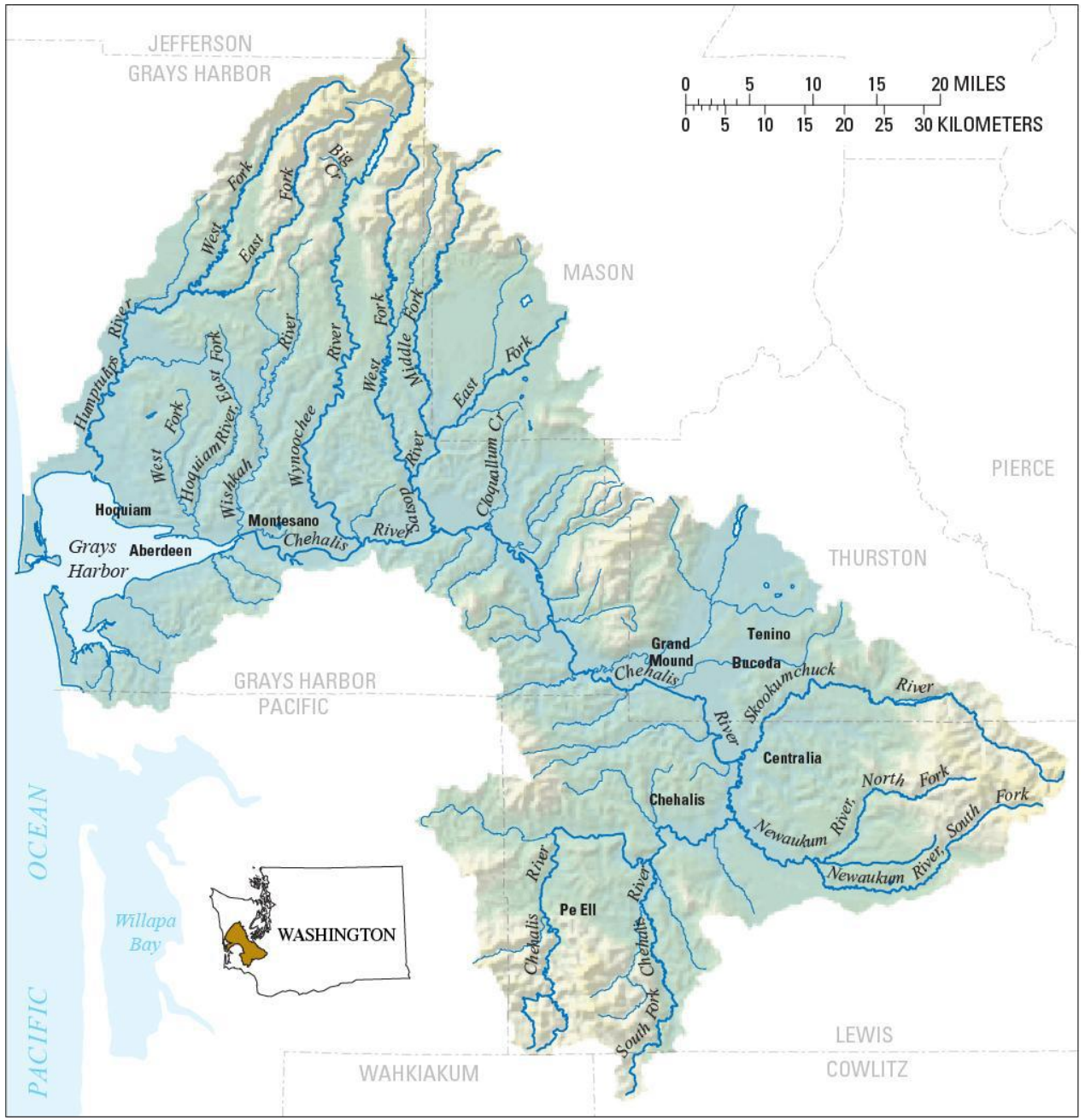
CASE STUDY

# Chehalis River Basin Flood Damage Reduction Project

Image from: https://www.ci.chehalis.wa.us/building/page/flood-information-and-elevation-certificates

# Chehalis River Basin Flooding Context

Chehalis River Basin in Lewis County, Washington (Chehalis-Centralia area)



# Chehalis River Basin Flooding Context

- I-5, communities, and farmland repeatedly flood
- Nine 10-year and 100-year flood events in ~60 years
- 2007 flood caused ~$900M in damage and a 4-day I-5 closure

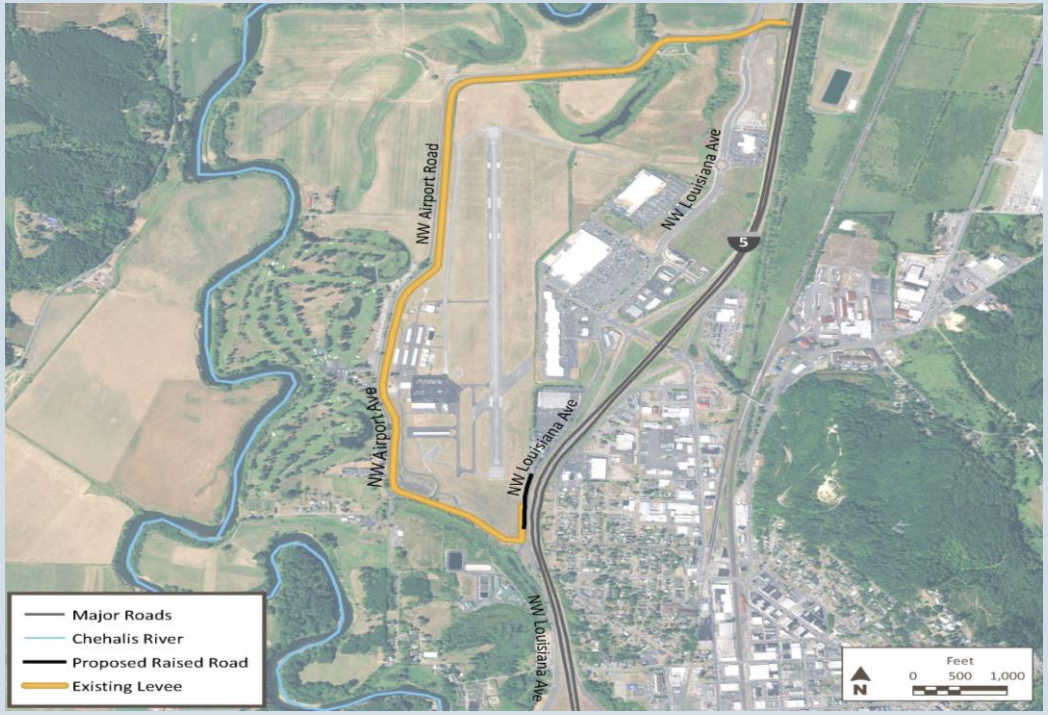
# Chehalis River Basin Flood Damage Reduction Project

## Flood Retention Facility

Construct a flow-through dam and temporary reservoir

## Airport Levee Modifications

Raise an existing flood protection levee at the Chehalis-Centralia Airport



# Overview of State and Federal Environmental Reviews

**June 2017** - SEPA Chehalis Basin Strategy Final Programmatic EIS

**May 2020** - SEPA Draft EIS

**September 2020** - NEPA Draft EIS

**2022–2024** - Project Redesign - SEPA / NEPA EISs Pause

**November 2025** - SEPA Revised Draft EIS

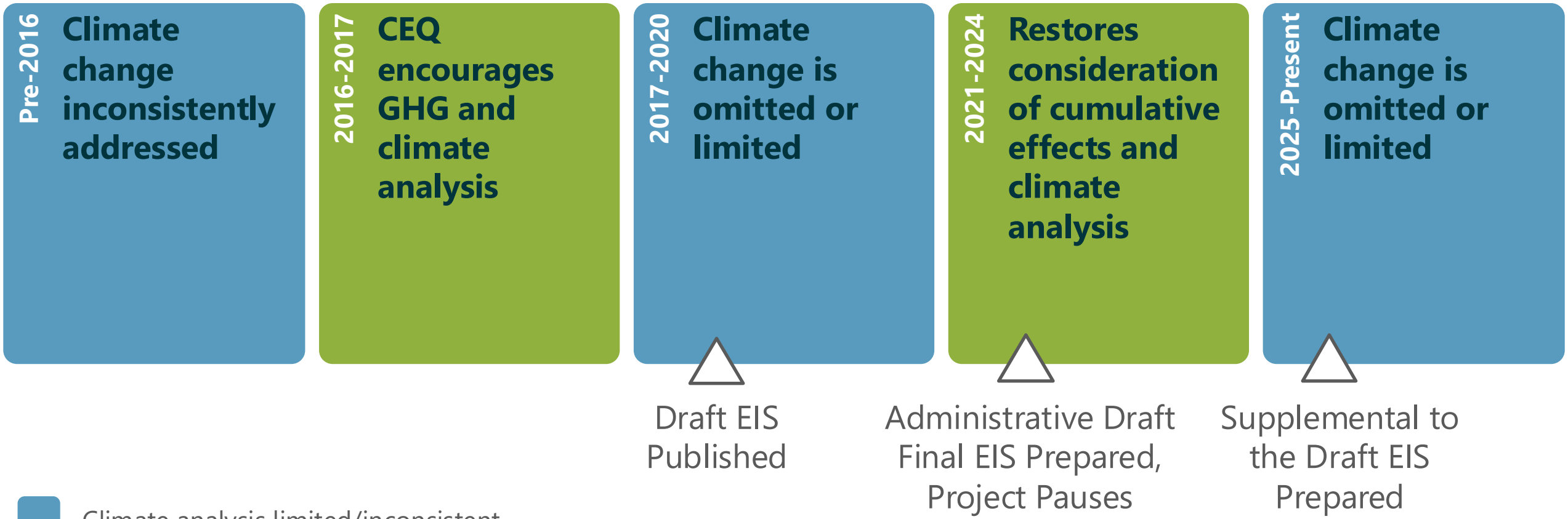
**Ongoing** - SEPA Final EIS

**Ongoing** - NEPA Supplemental to the Draft EIS

State (Ecology)

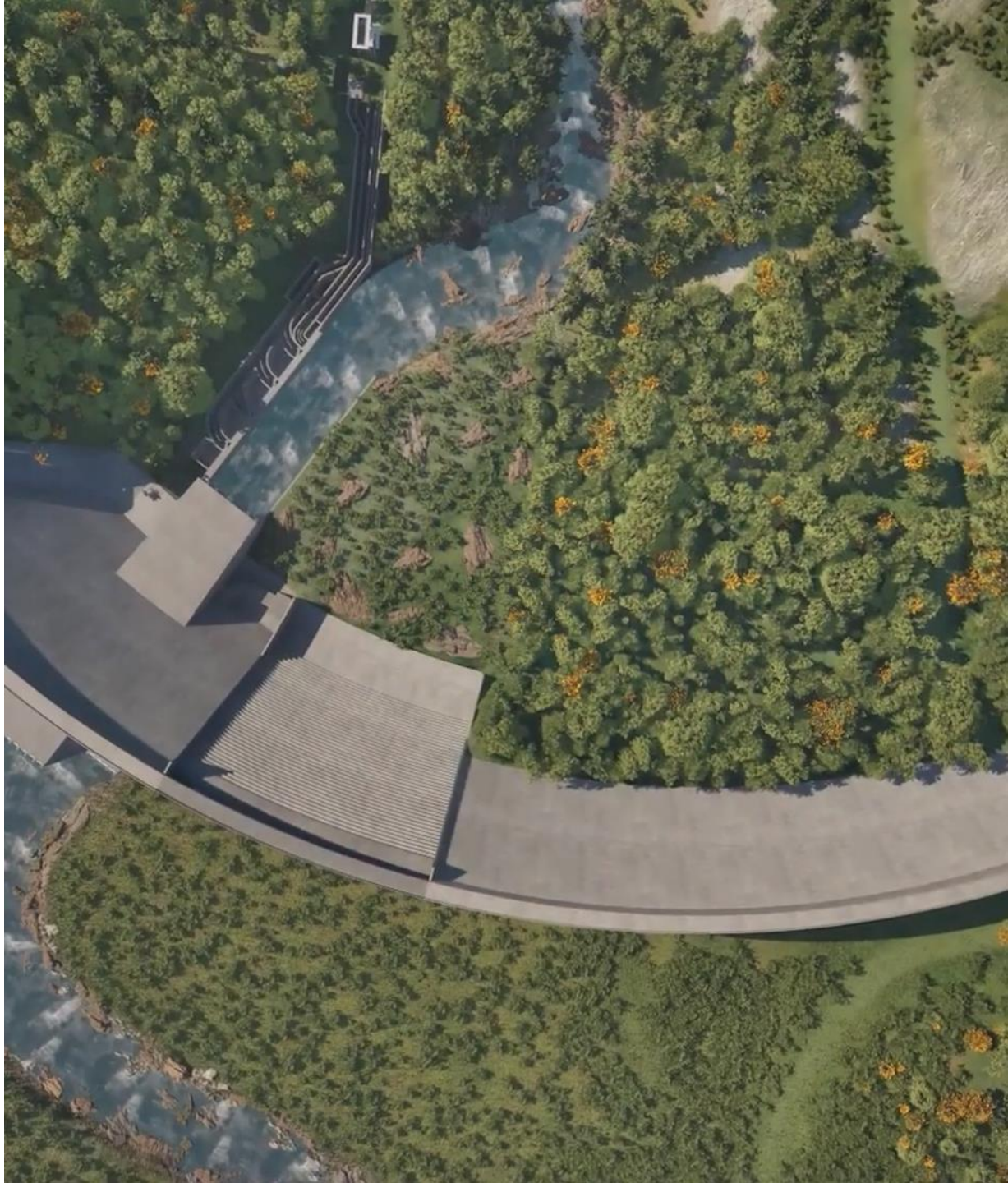
Federal (USACE)

# Trajectory of NEPA EIS Through Changing Climate Guidance



# Climate Change in the NEPA Draft EIS

- Based on historical hydrology (~30-year record)
- Operational scenarios limited to 10- and 100-year events
- Dam operation estimated at approximately 7-year frequency



# What the NEPA Draft EIS Did Not Do

- No quantitative climate change analysis
- Climate change not considered in alternatives screening
- Climate change not incorporated into impact modeling

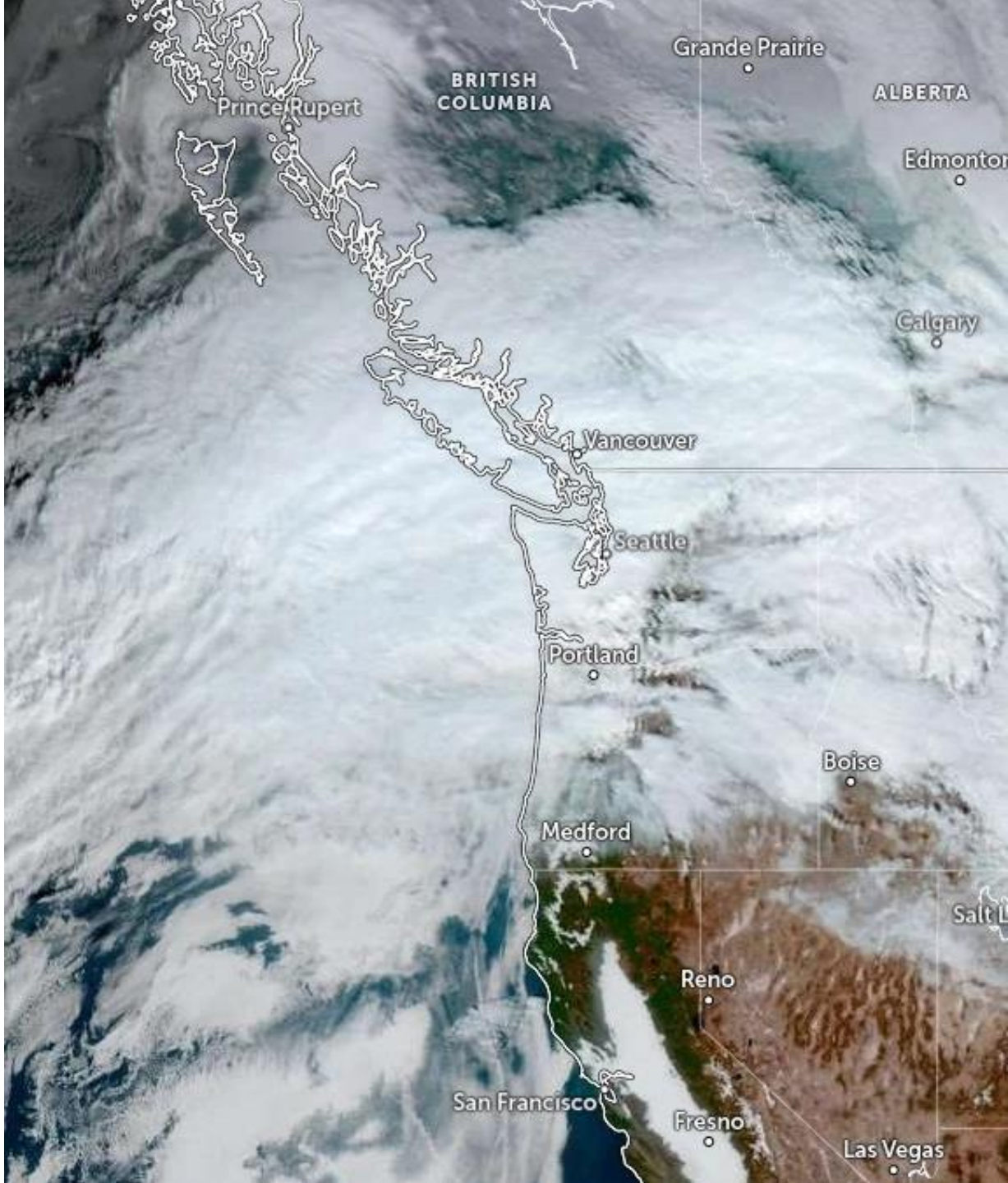



Image source: https://watchers.news/2025/12/10/major-atmospheric-river-washington-state-widespread-potentially-historic-riverine-flooding-december-2025/

# Why This Matters

If flood frequency increases:

- Facility operates more often
- Environmental impacts increase

This affects:

- Alternatives meeting purpose and need
- Mitigation effectiveness
- Permit decision

# NEPA vs SEPA

*Same project, different assumptions, different conclusions*

| Federal (NEPA) | State (SEPA) |
| --- | --- |
| • Baseline assumes existing hydrology is representative<br>• Flood frequency treated as fixed<br>• No Action reflects ongoing habitat degradation and flood damage under future conditions<br>• Climate qualitatively incorporated in cumulative impacts chapter | • Baseline assumes mid- and late-century modeled climate conditions<br>• Flood frequency includes climate scenarios with peak flows up to ~55% higher, temperature increases, and reduced summer flows<br>• No Action reflects increased habitat degradation and flood damage under future conditions<br>• Climate quantitatively incorporated in impact analysis |

CASE STUDIES

# Coastal Texas Protection & Restoration Feasibility Study Final EIS (USACE 2021)

- Evaluates:
  - Project impacts on climate (e.g., GHG emissions)
  - Climate change effects on project performance
- Evaluates alternatives under future storm and surge conditions
- Climate is embedded in mitigation

CASE STUDIES

# Pearl River Flood Risk Management Revised Draft EIS (USACE 2025)

- Flood risk management alternatives in Rankin and Hinds Counties, Mississippi
- Climate change section removed after the 2024 Draft EIS
- Hydrology based on existing conditions, not future scenarios
- Alternatives evaluated under a static baseline

# Case Studies Comparison: Alternatives and Climate Consideration

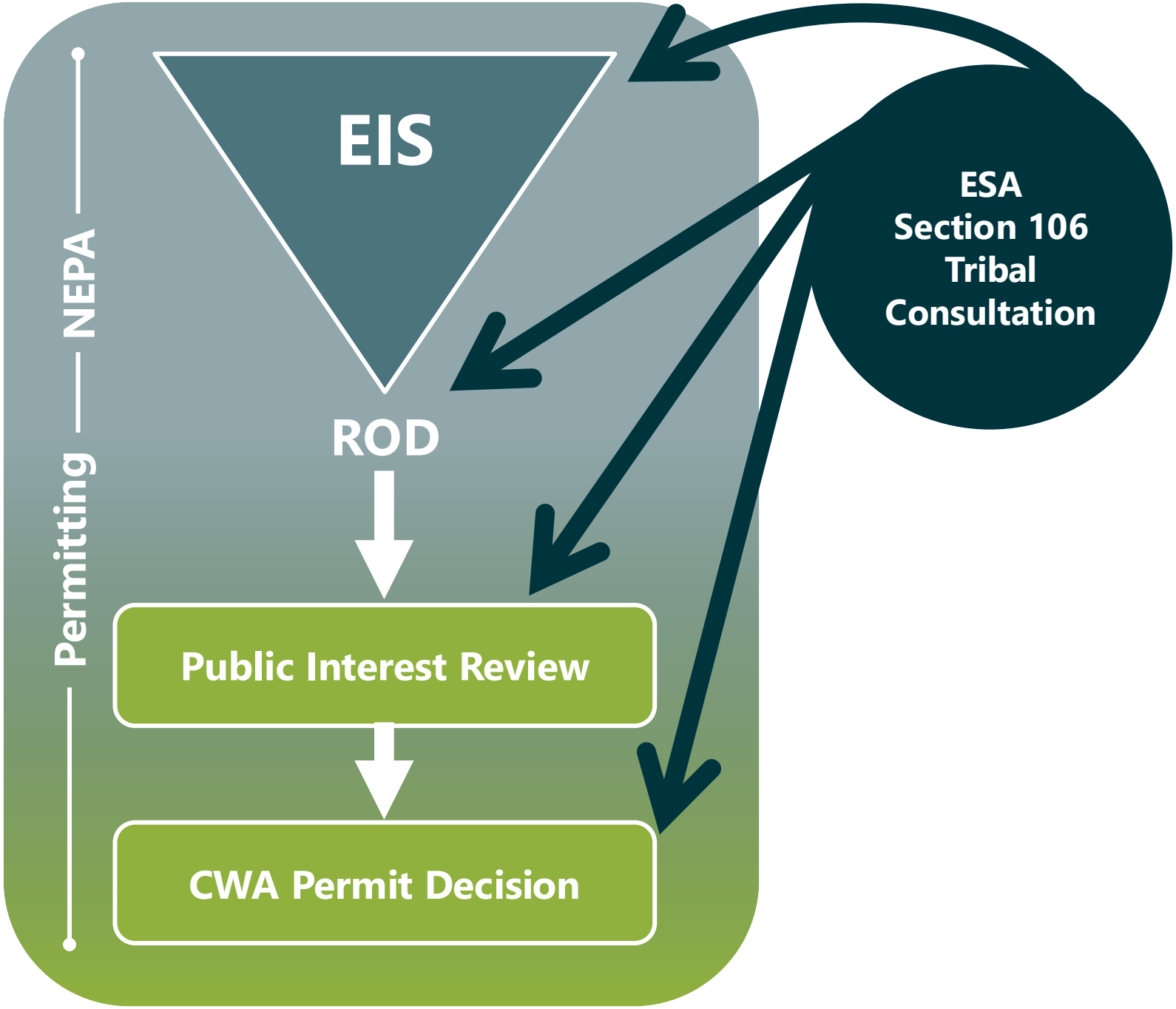
Regulatory (CWA Section 404)

- Alternatives constrained to applicant's proposal
- Climate consideration depends on applicant-defined project

Civil Works (USACE Planning)

- Broad alternatives formulation and screening
- USACE integrates future conditions into design and feasibility analysis

# Opportunities to Integrate Resiliency Through CWA Permitting



# Emerging Approaches to Bridge the Climate Gap

- Reliance on state review/permitting
- ESA consultation
  - Baseline/environmental consequences
  - Conservation measures
  - Project modifications
- Tribal consultation

# Addressing the Climate Gap Through CWA Compliance

- Section 404/Public Interest Review
  - Special conditions
  - Compensatory mitigation for resilience
  - Monitoring and adaptative management

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