



Columbia River System Operations EIS

Public Update Session

December 7, 2017



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Columbia River System Operations EIS

December 7 Update Session Online and Telephone

If **online** participants experience any technical difficulties, send a note to "Event Producer" with details of what they are experiencing.

If **callers** experience any technical difficulties, please hang up and call again. If needed, call 1-877-369-5243.

To submit a question:

- **By phone:** Press #2 on your phone keypad. This places you in line to ask your question. When you hear a notification your phone line will be taken off mute. Please state your name and question. You will then be returned to mute.
- **Online:** Type a question at any time using the **Chat** window on the right side of your screen. Please send all note questions to "All Panelists" located in the 'Send To:' drop down box.



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Goals for today

- Discuss results of public scoping and how this information is used in the EIS process to develop alternatives for long-term System operations, maintenance and configuration.
- Provide an overview
 - Process by which alternatives are developed
 - Progress to date.
- Discuss the work planned for the coming year, including finalizing a range of alternatives and starting analysis of environmental impacts of those actions.



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What is CRSO?

- Ongoing operation, maintenance and configuration of the system of 14 federal dam and reservoir projects in Idaho, Montana, Oregon and Washington
- Congress authorized the Corps and Reclamation to construct, operate and maintain these projects to meet multiple specified purposes, including
 - Flood risk management
 - Navigation
 - Hydropower production
 - Irrigation
 - Fish and wildlife conservation
 - Recreation
 - Municipal & industrial water supply
 - Water quality
- Congress authorized BPA to market and transmit the power generated by coordinated System operations



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What are we doing?

- Under the National Environmental Policy Act, we are evaluating our approach to the long-term System operations, maintenance and configuration, including
 - Costs, benefits and tradeoffs of updated approaches
 - Actions both within and outside of current authorities
 - Measures to avoid, offset or minimize impacts to resources affected by management of the System.



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What are we doing?

- Outcome of this process: Environmental Impact Statement identifying potential alternatives to current operations and maintenance that
 - Inform future decisions on a flexible approach to provide for multiple Congressionally authorized purposes and our resource, legal, and institutional purposes
 - Minimize or eliminate environmental impacts
 - Meet all federal statutory and regulatory requirements and responds to recent court order

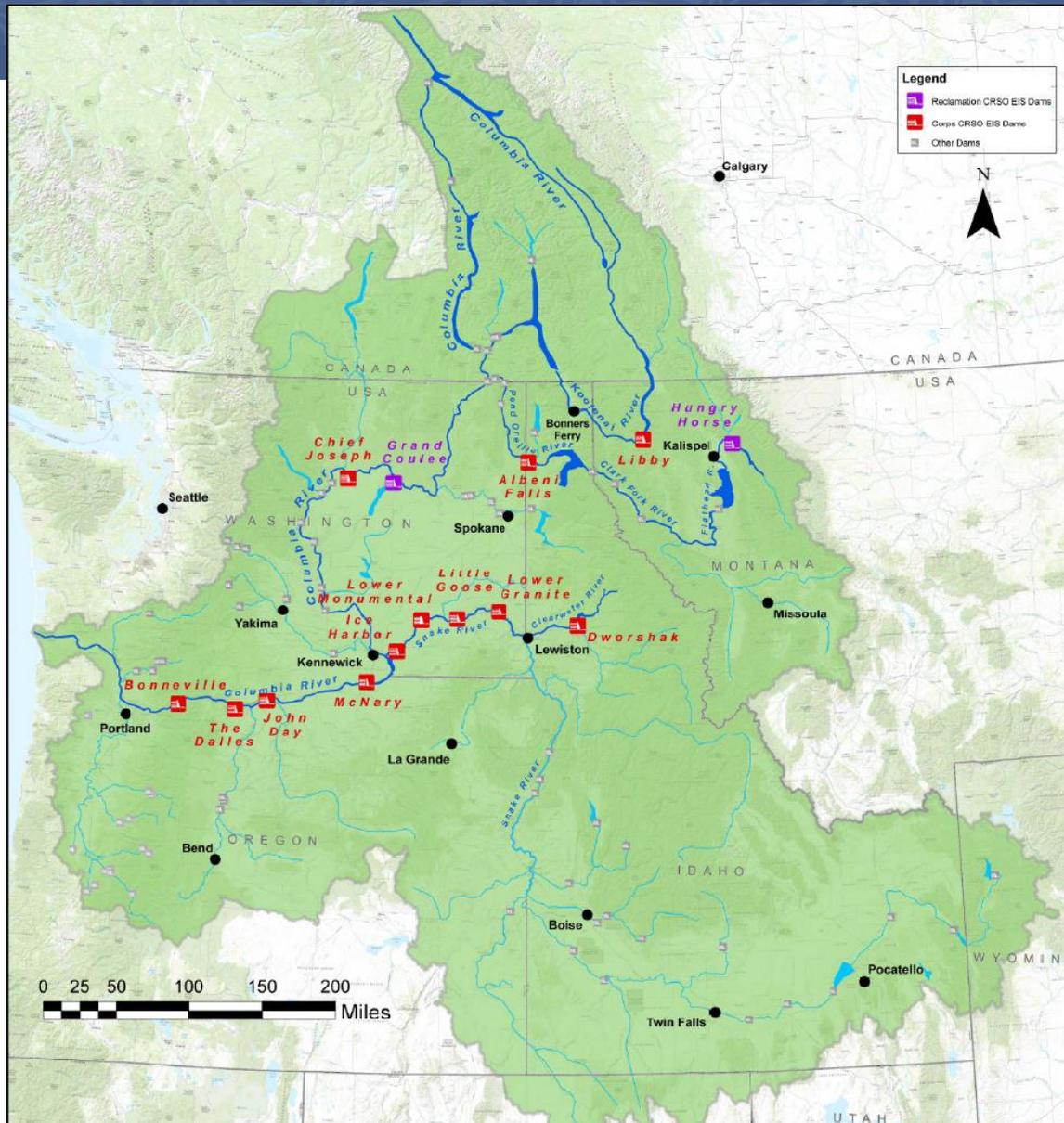


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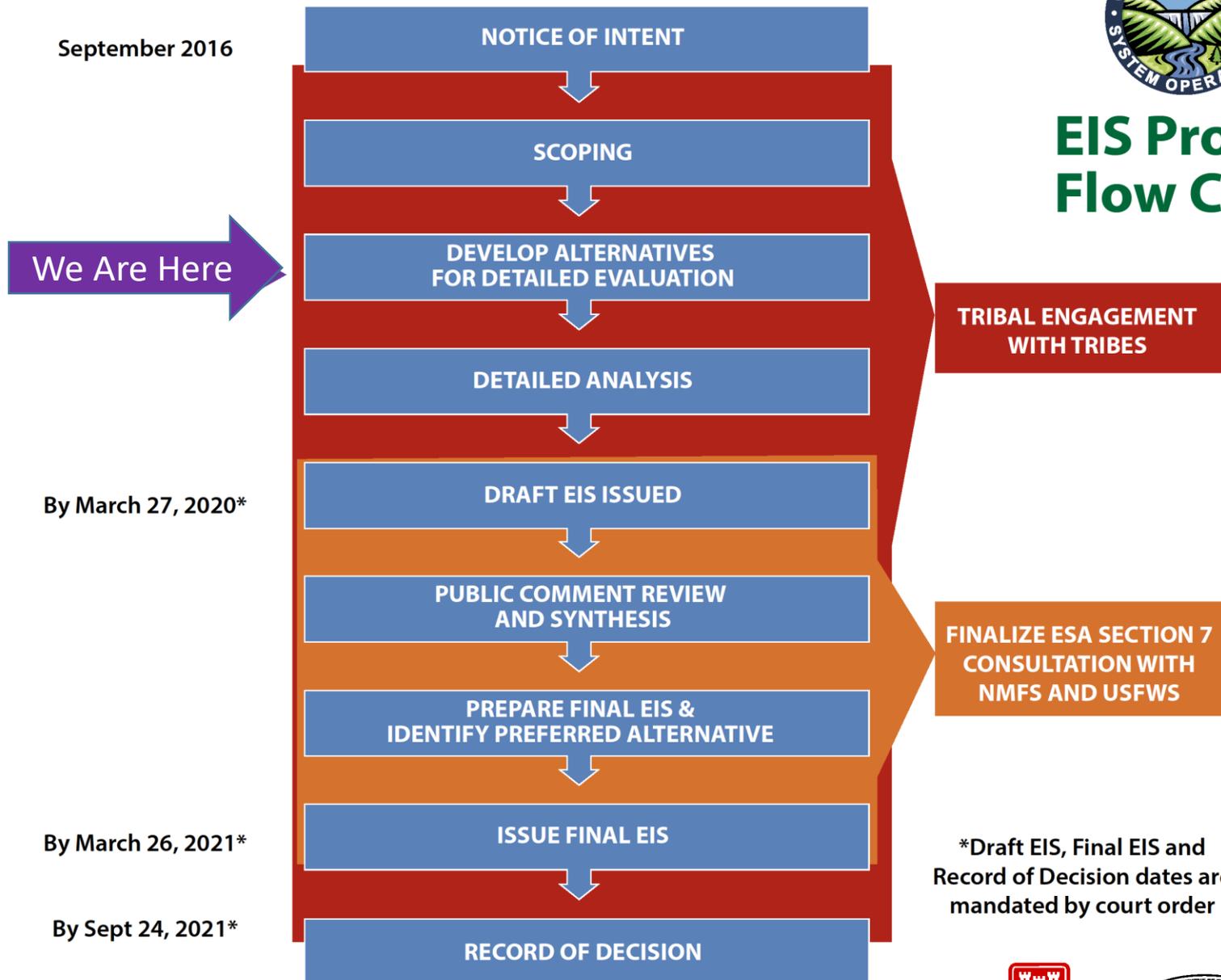


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EIS Process Flow Chart



*Draft EIS, Final EIS and Record of Decision dates are mandated by court order





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Scoping Overview

- Provided opportunity for the public to inform the scope of the study and nature of the analysis
- Received over 400,000 comment letters or forms
- Published a Scoping Summary Report in October 2017
- Input categorized as
 - proposed actions to take
 - resources to consider
 - methods to use in the evaluation
 - issues to address in the scope of the analysis



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Scoping Comment Topic Areas

- NEPA Process
- Public Scoping Process
- Alternatives (e.g., dam breach, various levels of spill)
- Scope of Analysis for EIS
- Impact Analysis Methodologies
- Hydrology and Hydraulics
- Climate Change
- Water Quality
- Water Supply
- Air Quality
- Anadromous and Resident Fish
- Threatened and Endangered Fish Species – Dam Configuration & Operation
- Wildlife
- Wetlands and Vegetation
- Invasive and Nuisance Species
- Cultural and Historic Resources
- Tribal Interests/Resources
- Flood Risk Management
- Power Generation/Energy
- Power Transmission
- River Navigation
- Transportation of Goods and Fish
- Recreation
- Socioeconomics and Environmental Justice
- General Opposition to EIS Development
- General Support to EIS Development



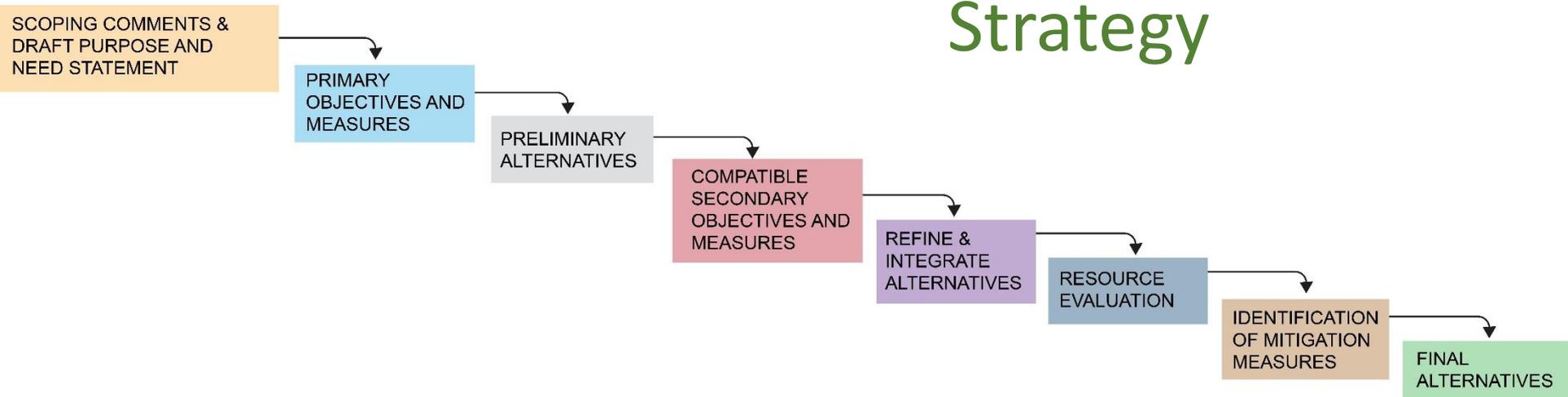
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Alternatives Development Strategy



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Key Definitions

- **Objectives** describe the results you want to achieve (the “why”)
- A **Measure** is an action at a specific location to achieve a desired effect (the “how”)
 - One measure may be used with multiple objectives
 - May be sited at multiple locations
- An **Alternative** is driven by one or more objectives
- The actions of an **Alternative** come from the **Measures** that are implemented together to achieve one or more of the objectives



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Preliminary Alternatives Development

Refined Objectives and status of Measures

- Reviewed 100+ objectives and 500+ measures
 - Public, Tribes, Co-lead Agencies, Cooperating Agencies, Scoping
 - Meet the study purposes?
 - Identify primary objectives
- Screening: Review objectives and 230 measures
 - Measures - Meet an objective?
 - Meet technical criteria?
- Summer 2017: Begin application of objectives and measures to develop Preliminary Focus Alternatives



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Objectives

- 1) Improve juvenile and adult fish passage and long-term survival of anadromous fish
- 2) Improve survival and habitat connectivity of resident fish
- 3) Provide a reliable power supply; minimize carbon emissions by generating carbon-free power (includes hydropower and integration of other renewable energy)
- 4) Maximize operating flexibility and adaptable water management strategies to be responsive to changing conditions, including hydrology, climate and the environment
- 5) Provide unmet, authorized regional water supply



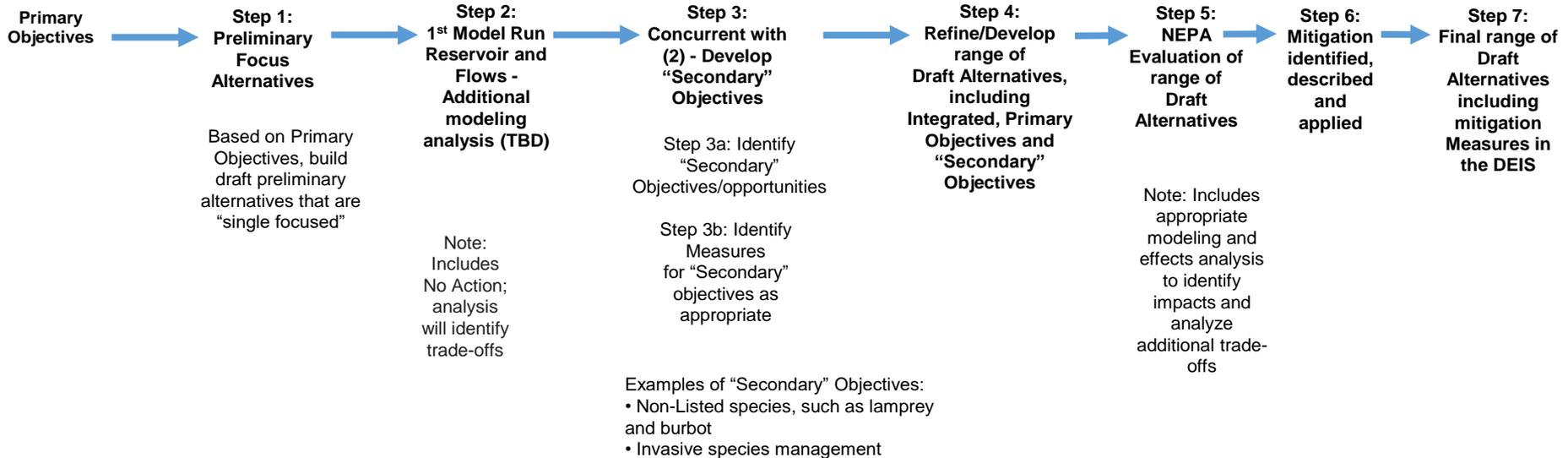
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Development and Analysis of Reasonable Range of Alternatives for DEIS



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Preliminary Focus Alternatives

What are they?

- Combinations of suites of measures (actions) to achieve a single objective
- Capture a broad range of measures to frame the analysis
- Calibrate the modeling and analysis tools
- Used to inform/refine the measures in the integrated alternatives
- May or may not be carried forward and developed as an alternative in the draft EIS or final range of alternatives



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Preliminary Focus Alternatives

Fish passage & survival focused

- Increased spill to 125% TDG with extended duration
- Fish survival
 - Adult ESA-listed
 - Resident ESA-related
 - Juvenile ESA-related anadromous
- Lower Snake River dams breach

Operational flexibility focused

- Hydropower reliability
- Water management flexibility
- Water supply



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Current status

- Final development and review of Preliminary Focus Alternatives
 - Development teams provide final description of preliminary alternative measures
 - Co-lead agencies review for completeness
 - Details provided for modeling and modeling calibration
 - Start evaluation



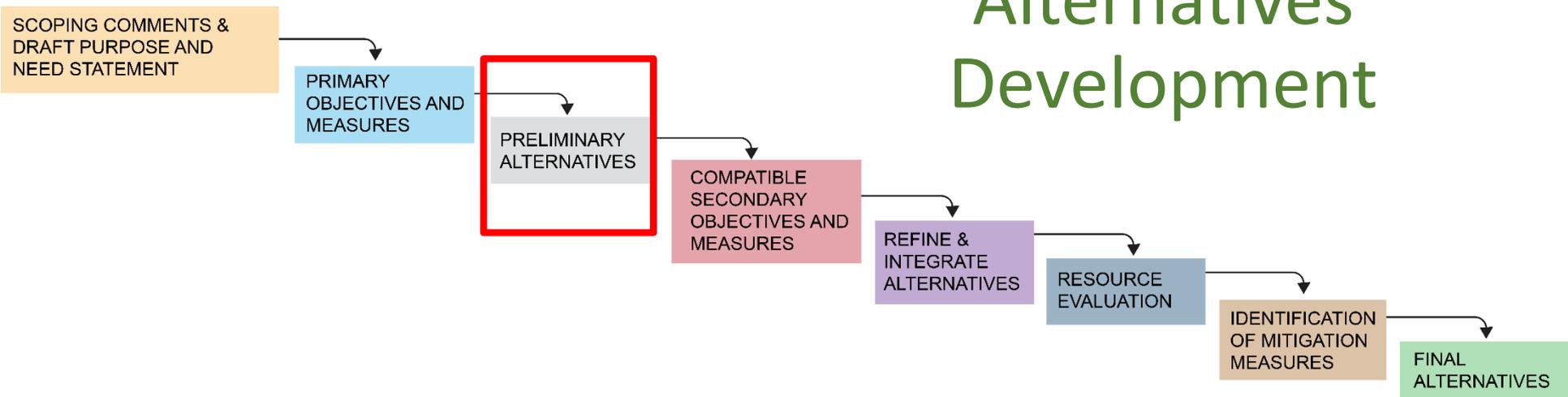
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Current Status of Alternatives Development



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What is Next?

- Incorporate secondary objectives and measures
- Develop integrated alternatives
- Finalize a reasonable range of alternatives for evaluation
- Evaluate a reasonable range of alternatives
- Evaluate mitigation measures and effectiveness with range of alternatives
- Identify preferred alternative and release draft EIS



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Refine and Integrate Alternatives

Plan to:

- Identify additional suite of compatible objectives and measures to add to alternatives
- Develop integrated alternatives
 - Will respond to multiple objectives
 - Will be informed by information gathered from the preliminary focus alternatives



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Development of a Reasonable Range of Alternatives

- Several alternatives will be developed to meet objectives to various degrees so that trade-offs can be compared.
- Analysis from preliminary focus alternatives will help verify effectiveness and assumptions in the integrated alternatives.
- The plan for the reasonable range of alternatives moving into the evaluation is to meet all applicable statutes and regulations.



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Resource Evaluation and Mitigation

- Final reasonable range of alternatives will undergo full evaluation, including impacts to significant resources.
- Impacts of alternatives will indicate the appropriate range of mitigation measures.
- Mitigation measures will undergo analysis for effectiveness and be comparable.
- Mitigation plans will be added to the alternatives in the final array.
- Co-lead agencies will identify a preferred alternative and release the draft EIS for public review.

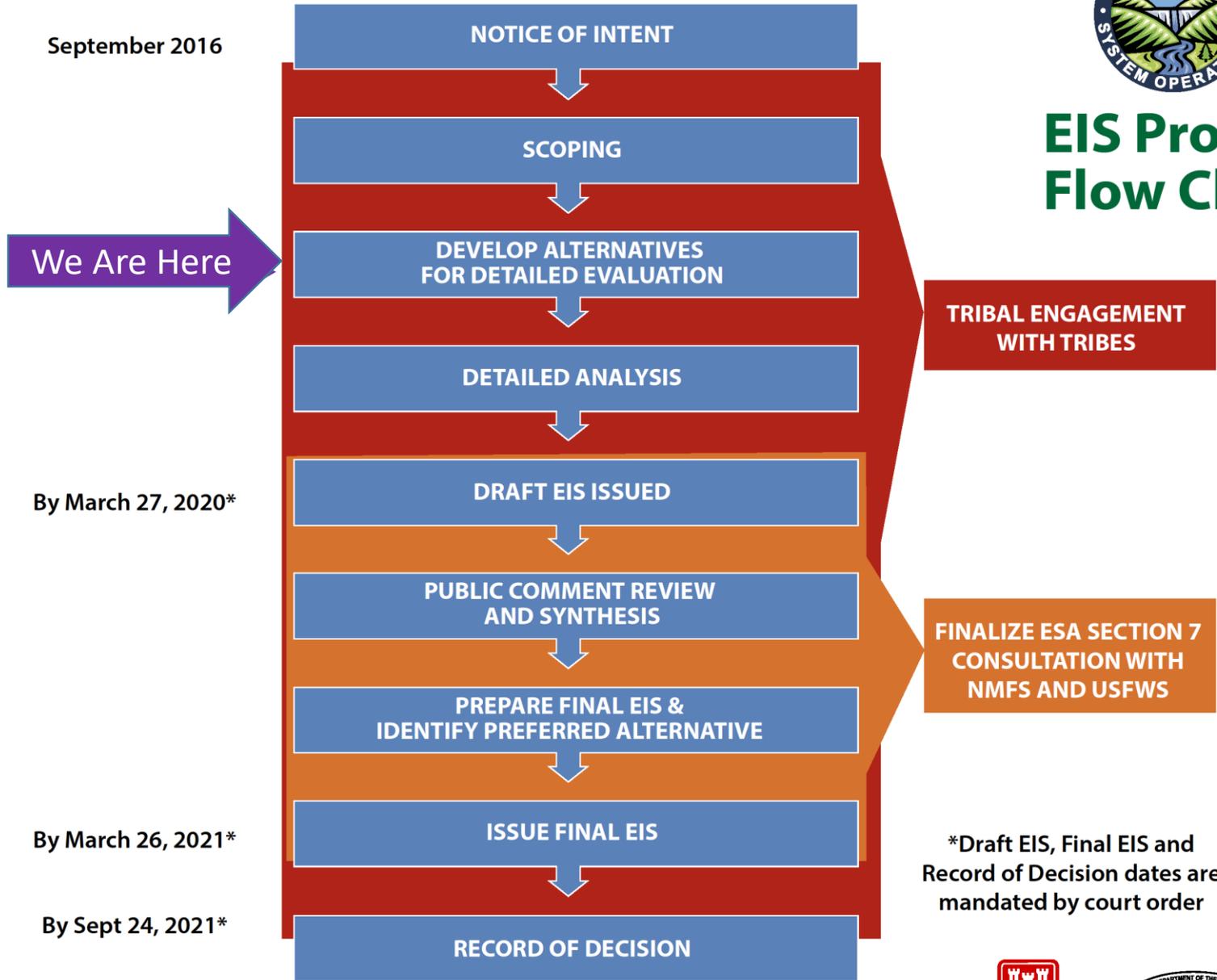


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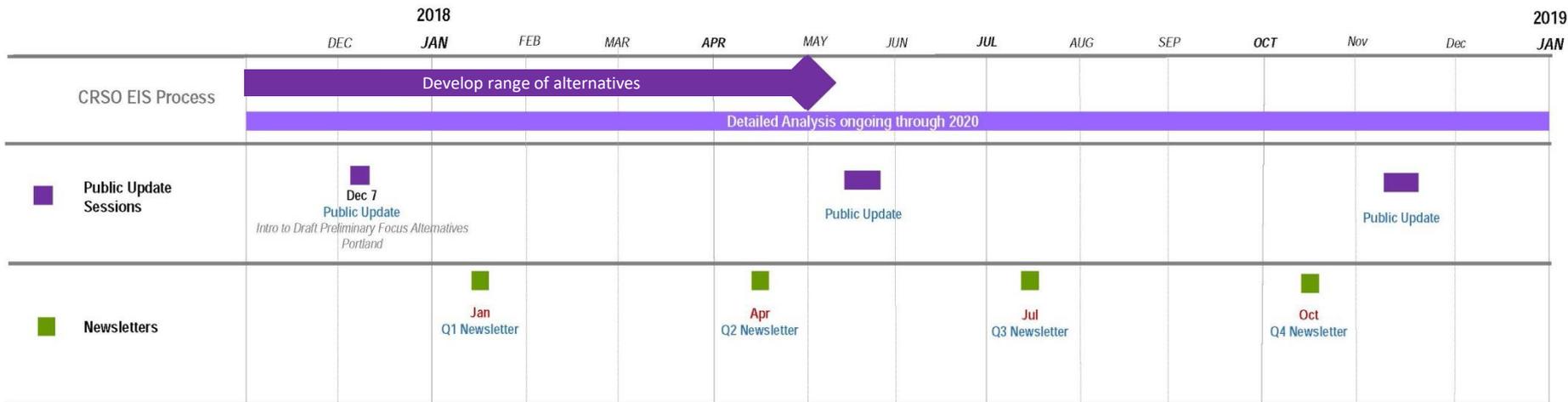




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2018 Public Outreach

(as of December 2017)



Check the project website for changes to this schedule and to add your name to the mailing list for outreach announcements: www.crso.info.



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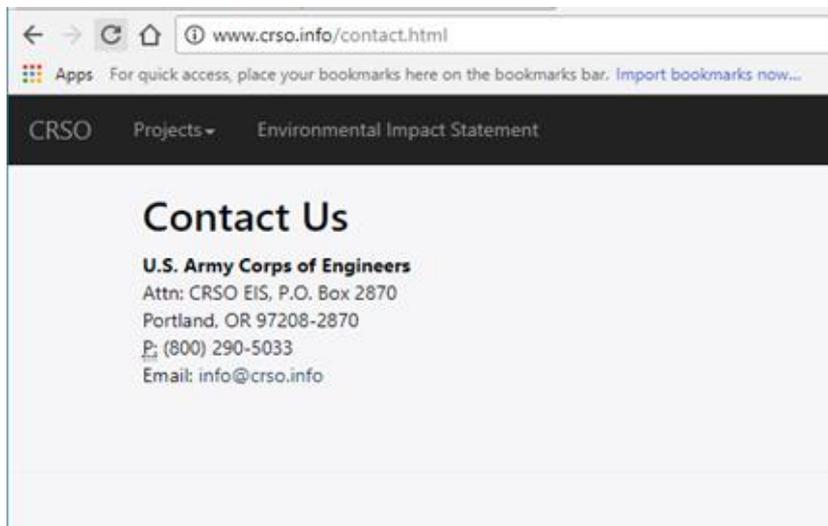




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Stay informed

- Find us at www.crso.info
- Add your name to our project mailing list
 - Call 800-290-5033
 - Email your contact information info@crso.info



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Questions & Discussion

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