

FLOOD DAMAGE REDUCTION STRATEGY

Date: June 30, 2021
To: Chehalis Basin Board Members
From: Andrea McNamara Doyle, Director, Office of Chehalis Basin
Re: Developing a Comprehensive Flood Damage Reduction Strategy

Background

At the June 3, 2021 meeting, Board members expressed support for developing a comprehensive, basin-wide flood damage reduction roadmap as well as the development of a Local Actions Alternative (LAA, aka “non-dam alternative”) to a suite of actions to reduce flood damage that includes the proposed flood retention facility/airport levee project. Several types of groups and processes have been suggested for adding to the existing governance structure of OCB to achieve these objectives, with a broad range of different roles and responsibilities. The different approaches suggested would have very different implications for how the groups are established and staffed, how they would make decisions, and how long their work would take. Further Board direction is needed for staff to refine initial cost estimates.

This memo provides some guiding principles for this work, summarizes suggestions that have been made to date for a revised flood damage reduction governance structure, and offers a path forward. Finally, it includes a series of questions for the Board to consider when providing more direction to staff to further develop details and refine cost estimates for a new governance approach.

At the August 5, 2021 Board meeting, Board members will need to provide direction on the following issues in order for OCB to initiate the additional governance structure and associated work. At the July 1, 2021 Board meeting, OCB staff need to know if the Board believes that the structure and process laid out below is sufficient for their support of a \$2.5M budget allocation for the Local Actions Alternative & Comprehensive Basin-Wide Flood Damage Reduction Road Map. The following topics are what Board guidance and direction is needed for:

- Provide direction for chartering a policy-level group (e.g., a Flood Damage Reduction Steering Committee) to make recommendations to the Board on a comprehensive, basin-wide flood damage reduction Roadmap.
 - This Roadmap is envisioned to have two pathways: one that outlines local actions projects & programs *with* the proposed retention facility/airport levee project and one that identifies local actions projects & programs *without* the proposed retention facility/airport levee project.
 - This policy-level group could also make a recommendation to the Board on whether or not to advance the proposed flood retention facility/airport levee project to the permitting phase after completion of the final SEPA/NEPA EISs.

- Provide direction for chartering an additional policy-level group (e.g., a new Local Actions Alternative Group) separate from the above-mentioned Steering Committee to develop a recommended proposal for a Local Actions Alternative comprised of a basin-wide suite of actions for flood damage reduction that does not include the proposed flood retention facility/airport levee project (a LAA or “non-dam alternative”).
- Provide guidance on the kind of independent environmental, feasibility, and/or cost-benefit review of a LAA that is desired, and on who would be most appropriate to lead and perform that technical evaluation (e.g., a new third-party consultant team under the direction of OCB or other SEPA Lead Entity, the existing ASRP Technical Advisory Group, or another independent entity).
- Provide guidance on the Board’s expectations for when work products and recommendations should be available from these groups to support the Board’s decision-making on a series of milestones, including: (1) a Local Actions Alternative, (2) an evaluation of the Local Actions Alternative, (3) a comprehensive, basin-wide flood damage reduction Roadmap, (4) a decision on whether or not to advance the proposed flood retention facility/airport levee project to the permitting phase. Staff recommend that the Board set the first milestone to receive a recommended proposal for the Local Actions Alternative by the mid-point of the 2021-23 biennium.

Summary of Suggestions Made for Additional Governance Structure

OCB has received suggestions from a number of different board members and others regarding possible groups and governance structures that could be established to achieve comprehensive flood damage reduction in the Basin. These suggestions have included:

- Steering Committee – this has variously been described as a group that could:
 - Similar to ASRP, guide and coordinate different elements of a flood damage reduction program
 - As an analog to ASRP Steering Committee, steer development of a basin-wide long-range plan and implementation of flood damage reduction measures
 - Develop and recommend a flood damage reduction roadmap for the Board to consider, that includes a suite of prioritized flood damage reduction projects and programs
 - Engage with a science/engineering technical group to prioritize work related to data gaps and analyses

Note: the Board is highly deferential to the ASRP Steering Committee, provides limited direction/guidance, expects consensus recommendations rather than options, and generally accepts recommendations with limited adjustments. Staff suggests this highly deferential approach would not work as well for a Flood Damage Reduction Steering Committee.

- Planning Groups – two types of planning groups have been suggested, with very different charges and quite a bit of overlap with the suggestions for a Steering Committee:
 - Basin-wide Long Range Planning Team
 - To produce and execute a comprehensive basin-wide flood damage reduction plan that includes prioritized projects
 - To knit together individual efforts into a cohesive basin-wide long-range plan guided by the Steering Committee
 - To make two recommendations: what a comprehensive basin-wide flood damage reduction plan would include with the proposed dam, and what it would include without the proposed dam
 - May only be needed to create a long-term vision and plan, or may have ongoing responsibility to oversee implementation
 - Local Actions Alternative Planning Team
 - To develop a science-based, basin-wide program to address flood damage reduction in the absence of the flood retention project
 - To define the scope and scale of different actions that would be needed to achieve the Board’s approved flood damage reduction outcomes without the proposed flood retention facility/airport levee project
 - To define the suite of actions, using the best available information, that should be independently evaluated as an alternative to the proposed flood retention facility/airport levee project
- Science, Engineering, Technical Groups
 - Science and Engineering Committee or Group
 - To support best available science and ensure integration and synergy across all Chehalis Basin Strategy efforts
 - To support the comprehensive flood damage reduction plan with the best available science and technical review
 - To advise Planning Groups and/or Steering Committee on technical requirements for establishing level-of-protection standards, evaluate expected damage from various flood levels, recommend options for addressing future climate in the basin-wide long-range plan
 - Could overlap or be shared with the ASRP side of the Strategy, to ensure synergy across efforts, review and advise on flood and erosion-related data needs, and recommend methodologies and analyses to keep flood management information current
 - Independent Evaluation
 - To show, at a high level, the effectiveness, and the costs and benefits, of a basin-wide local actions program to address flood damage reduction in the absence of the flood retention project, including socioeconomic impacts

Potential Approach

In response to the Board's requests and the suggestions provided above regarding new governance structure options, OCB recommends three specific tasks appropriate to delegate to new groups to better support the Board's decision-making on a comprehensive, basin-wide strategy for flood damage reduction:

1. Develop a recommended Flood Damage Reduction Roadmap (Roadmap) for the Board to consider. The Roadmap will include a suite of prioritized flood damage reduction projects and programs that may or may not include a dam.
2. Develop a recommended Local Actions Alternative (or "non-dam" alternative) to be considered for potential inclusion in the Roadmap. The LAA will assume there is no dam and include a suite of actions to reduce flood damage throughout the entire Basin.
3. Conduct an independent evaluation of the Local Actions Alternative to determine its potential to reduce flood damage and its environmental and socioeconomic implications.

To complete these delegated tasks, staff suggests the following groups and governance options, along with underlying assumptions for each. The evaluation section includes two options for the Board to consider.

Establish a Flood Damage Reduction Steering Committee

Purpose: A Flood Damage Reduction Steering Committee (FDR Steering Committee) would consider information from multiple groups and entities (see Figures 1 and 2) to develop and recommend to the Board a Flood Damage Reduction Roadmap – a comprehensive suite of prioritized flood damage reduction projects and programs. Key questions the FDR Steering Committee could answer include whether a dam should be included in the Roadmap or not, and how the suite of local flood damage reduction actions should be adjusted to reflect this decision.

Assumptions: The FDR Steering Committee would undertake the following actions:

- Develop and recommend a Roadmap that maximizes the Board's approved flood damage reduction outcomes
- Recommend a short- and long-term implementation plan that will inform the Board's 2023-25 biennium budget recommendations to the legislature
- Be informed by simultaneous efforts occurring during the 2021-23 biennium (e.g., SEPA and NEPA EISs, Local Action Alternative Group progress and final alternative(s), CBS integrated programs/projects, CFAR, Flood Authority projects, North Shore Levee work)
- Continue its work as an integral part of the Chehalis Basin Strategy, even after the Board adopts a Roadmap

Establish a Local Actions Alternative Group

Purpose: A Local Actions Alternative (LAA) Group would develop a recommended proposal for a Local Actions Alternative for a basin-wide suite of actions for flood damage reduction that does not include the flood retention facility/airport levee project, for the FDR Steering Committee to consider for the Roadmap. The LAA Group will build on the work of the 2020-21 Local Actions Program's Implementation and Technical Advisory Groups. Key questions the LAA Group will answer relate to the appropriate scale of local actions that would be needed to meet the Board's approved flood damage reduction outcomes in the absence of a dam, including (1) floodproofing both private and public structures in the 2080 100-year floodplain, (2) conducting voluntary property acquisitions, (3) adjusting land use controls to augment this work, and (4) structural actions such as levees.

Assumptions: The LAA Group would do the following:

- Develop an alternative that meets the Board's approved flood damage reduction outcomes
- Assume there is no FRE facility to retain floodwaters during major or catastrophic storm events when developing the alternative
- Use existing information to develop alternative(s) (i.e., it will not initiate new studies or modeling)
- Identify issues that affect the feasibility of implementation
- Be informed by parallel efforts occurring during the 2021-23 biennium (e.g., CFAR, Flood Authority projects, CBS integrated programs/projects)
- Sunset after a Local Actions Alternative is approved by the FDR Steering Committee for inclusion in the recommended Roadmap

Conduct an independent Local Actions Alternative Evaluation

Purpose: An independent evaluation would determine the Local Action Alternative's ability to achieve flood damage reduction and its environmental and socioeconomic implications. An evaluation could be conducted in one of two ways:

- Evaluation Option A:** Commission an outside organization or entity to evaluate the local action alternative in terms of what it could achieve for flood damage reduction and its environmental and socio-economic implications. (See Figure 1.)
- Evaluation Option B:** Expand the scope and expertise of the ASRP's new Technical Advisory Group (formerly the ASRP Science and Technical Review Team and the Monitoring and Adaptive Management Team) to (1) evaluate the local action alternative in terms of what it could achieve for flood damage reduction and its environmental implications and (2) advise both the ASRP Steering Committee and the Flood Damage Reduction Steering Committee on technical and scientific topics. The Technical Advisory Group (TAG) would be a long-standing group (i.e., it

would not sunset along with the LAA Group) and its LAA evaluation likely would not address socioeconomic implications, unless the group's scope and membership were adjusted. (See Figure 2.)

Figure 1 depicts the possible flow of information among the proposed groups/processes and other, more established groups and processes, should the Board choose Evaluation Option A

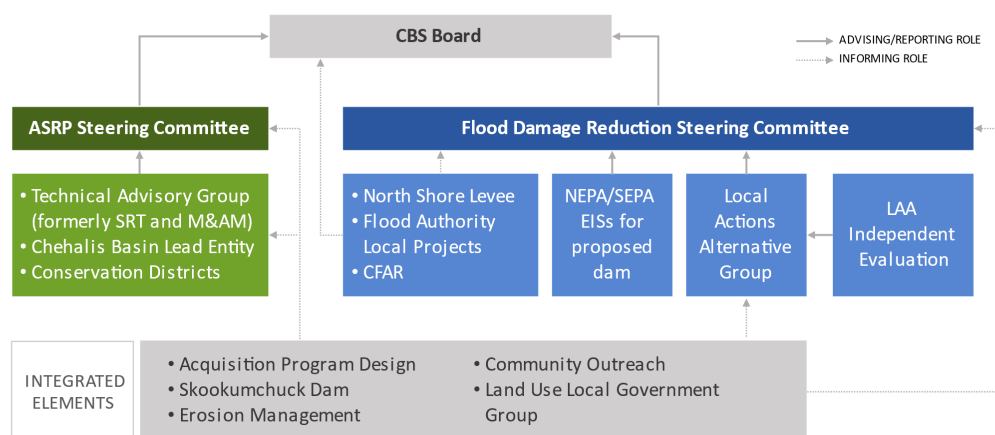


Figure 1 Flow of Information with Evaluation Option A

Figure 2 depicts the possible flow of information among the proposed groups and processes should the Board choose to move forward LAA Evaluation Option 2 (in which the TAG conducts the evaluation and supports both the ASRP and the Flood Damage Reduction steering committees).

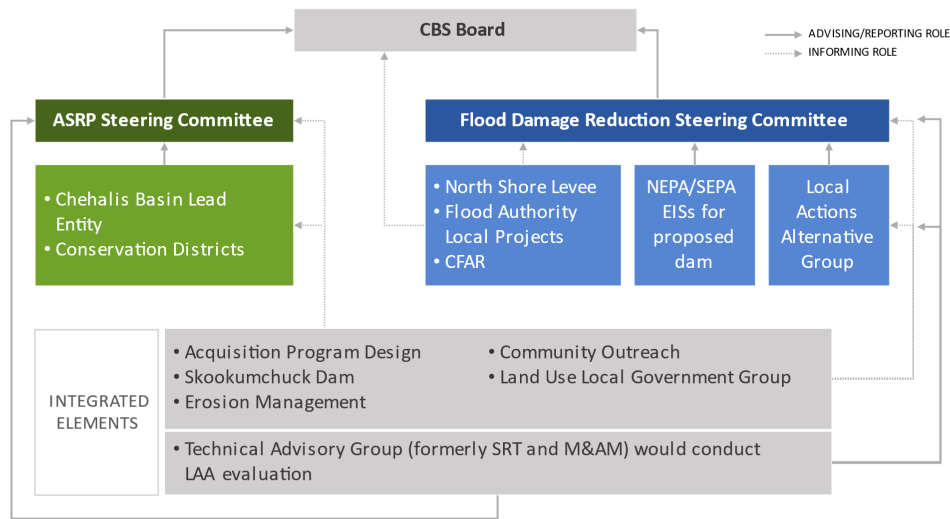


Figure 2 Flow of Information with Evaluation Option B

Assumptions: The independent evaluation could be a formal, systematic evaluation of the LAA Group’s recommended local action alternative, with a focus on the anticipated flood damage reduction outcomes. The evaluation, at a high level, should assess effectiveness, and the costs and benefits, of a basin-wide local actions program to address flood damage reduction in the absence of the flood retention project, including socioeconomic impacts.

- In Option A, it would be a one-time evaluation conducted by a group that does not continue to work after the evaluation.
- In Option B only, it would require additional work to evaluate socioeconomic implications of the LAA and/or an adjustment to the scope and membership of the ASRP TAG to account for those considerations.

Timing Considerations

The steps involved in launching an additional governance approach and completing the delegated tasks described above include the following:

- The Board will need to adopt the charters and approve the memberships of two groups.
- A Local Actions Alternative Group will need to review and consider past work on local actions and, if possible, reach consensus on a recommended proposal for a Local Actions Alternative

with a combination of flood-proofing, acquisition, relocation, and land-use programs, policies, and projects that does not include the proposed flood retention facility/airport levee project.

- An independent evaluation of the Local Actions Alternative will need to be conducted.
- The Local Actions Alternative Group will need to refine the recommend LAA proposal based on the independent evaluation to be considered by the FDR Steering Committee for the Roadmap.
- The FDR Steering Committee will need to incorporate information and recommendations from the LAA Group and the independent LAA evaluation, along with information and recommendations from the North Shore Levee, the Flood Authority, CFAR, and the SEPA/NEPA EISs, to develop the Roadmap for the Board's review and consideration.
- The FDR Steering Committee will need to answer and, if possible, reach consensus as a group on whether or not the Roadmap should include the proposed dam.
- The Board (and public) will need to be kept apprised with updates during the process of the various groups.

The Board must consider the inherent tradeoff between pacing and depth of work. The three groups (FDR Steering Committee, LAA Group, and independent evaluation) will likely require approximately 12 months to complete work to the degree they are described above and contribute to the development of a comprehensive flood reduction strategy in a meaningful way. Based on this reality, staff recommends that the milestone of development of a LAA, and that the independent evaluation of that alternative be targeted for the mid-biennium check in (about June 2022).

Cost Estimates

We have used costs associated with two comparable processes to provide an order of magnitude estimate for the level of effort that could be put towards these new additions to the OCB governance structure and associated deliverables.

1. Staff used costs associated with the development and implementation of the ASRP Steering Committee and its associated Science and Technical Review and Monitoring & Adaptive Management Teams for state agencies, tribal nations, local engagement, and consultant staff in the 2017-19 biennium (costs for data gaps and monitoring during this biennium were not included): ~\$2.6 million. This total reflects a level of effort that included bimonthly ASRP Steering Committee meetings for 11 Steering Committee members and one staff member and monthly technical team meetings for 12 to 14 members and 2 to 3 staff members over 24 months, and significant consultant time to develop a full draft of the ASRP document. This equates to an approximately 12-month level of effort cost estimate of \$1.3M.
2. Staff used costs associated with the development and implementation of the Local Action Program's Implementation and Technical Advisory Groups for consultant staff and nonprofit engagement between October 2020 and February 2021: ~\$870,000. This total reflects a level of

effort that included three public meetings and fifteen advisory group meetings for 17 to 18 advisory group members and 4 to 7 staff members in six months. This equates to an approximately 12-month level of effort cost estimate of \$1.7M.

Note that these preliminary cost estimates are meant primarily to provide points of comparison to actual efforts undertaken in the Basin. Refined cost estimates would need to be developed based on the Board's final recommendations regarding governance structure, schedule, and deliverables to be developed.

Guiding Questions for the Board

To assist the Board in providing direction to staff for developing a more detailed proposal for a new governance structure, staff requests the Board consider the following questions:

1. **Expectations for the Groups—Work Products, Timing, and Relationship to the Board:** First order questions involve what relationship these groups (FDR Steering Committee, LAA Group, and Independent LAA Evaluation) will have to the Board and their timeline for making milestone decisions on the long-term strategy. What does the Board need and want from these groups in terms of work products or deliverables (see Box below)? When are these work products or deliverables wanted or needed (e.g., what is needed in 12 months, 18 months, or other timelines)? Are there other adjustments to the function or charge of the FDR Steering Committee, LAA Group, and/or the Independent LAA Evaluation as described in this memo? Answers to these questions will drive the time and resources needed to stand up these groups and support their work because it will affect the size and make-up of the groups, selection of members, as well as the type and amount of technical and facilitation support they will need.

Potential Work Products or Deliverables

Staff suggest that the Board's next steps include defining the charge or charter of the group(s), with one or more of the following work products or deliverables:

- A recommended suite of local actions that could serve as an alternative to the proposed flood retention facility/airport levee project
- An independent environmental and/or cost-benefit review of a LAA to the proposed flood retention facility/airport levee
- A recommendation, after completion of the final SEPA/NEPA EISs, on whether or not to advance the proposed flood retention facility/airport levee project to the permitting phase
- A recommendation on a comprehensive, basin-wide flood damage reduction Roadmap with two pathways – one pathway that identifies the scope and scale of local actions the Strategy would include with the proposed retention facility/airport levee project; and one pathway that identifies the scope and scale of local actions the Strategy would include without the proposed flood retention/airport levee project

2. **Relationship of the Groups to Each Other:** Secondary questions involve what would be the relationship of these groups to one another, and to existing groups already working on elements of the strategy? The issues the Board is wrestling with are complex, multi-dimensional and interrelated, and it will be necessary for you to be clear about who will be directing, guiding, informing whom. For example, what would be the relationship of these new groups to the independent authorities exercised by the Flood Authority, the Flood Control Zone District, and individual tribal, county, and city governments responsible for managing land uses and development in the floodplains within their jurisdictions? Furthermore, should the evaluation of the LAA be conducted by an independent entity or be added to the charge of the new Technical Advisory Group for ASRP? What would be the hierarchical relationship between any policy or technical groups created, e.g., the Flood Damage Reduction Steering Committee, LAA Group, and technical group conducting LAA evaluation – in other words, will the technical experts guide the policy deliberations, or will the policy representatives direct the technical evaluations? The answers to these questions will inform the membership of the groups, the type of decision-making processes appropriate for them, as well as timing of the feedback loops that may be necessary to generate consensus.
3. **Guidance on “Actionable” Level of Detail:** Related questions relate to determining an “actionable” level of detailed information for these groups to make their recommendations about a Local Actions Alternative (“non-dam alternative”) and about a comprehensive, basin-wide flood damage reduction Roadmap or plan. For example, it has been suggested the SEPA EIS should not be finalized until there is a better-defined LAA to the proposed retention facility/airport levee project to be evaluated in the final EIS. Others have suggested the Board

can't make an informed decision about more investment in CFAR or floodplain acquisition until a decision has been made about whether or not the proposed flood retention facility/airport levee project will be constructed because it affects where, how, and how many home elevations, buyouts, and relocations might be needed to make meaningful progress toward meeting the Board's approved measurable outcomes. These decisions about the detail of focus for each group will affect the amount of time and resources needed for development of work products for the Board to support decision-making on the comprehensive flood damage reduction strategy.

Next Steps

Ultimately, the Board will need to make a decision about what actions should be included as part of your comprehensive, basin-wide flood damage reduction strategy and the broader long-term Chehalis Basin Strategy. And, at some point, the Board will need to call the question on what actions should receive continued investment, including the proposed flood retention facility/airport levee project and efforts to find a Local Actions Alternative to the dam. The choices you make now about how to create, structure, fund, and direct these flood damage reduction subgroups will directly affect when the Board might be in a position to make those ultimate decisions. Based on your feedback, staff will further scope and define plans and associated timelines and costs for chartering and establishing groups to support the Board's decision-making.