# Introduction

The Chehalis Basin is the State's second-largest river drainage system, made up of distinct landscapes: mountain foothills, farms, forests, small towns, and cities. Its elevation ranges from sea level up to around 2,700 feet on its highest mountain. It is the region's economic engine, a prime recreational destination, and home to many communities and tribes with deep cultural connections to the land. It is also the home of important and rare species of fish and aquatic wildlife that live in its wetlands, streams, and rivers. The Basin provides crucial nesting grounds for migratory birds and a wildlife corridor connecting the Cascades to the Olympics, and it is one of the state's most important wild salmon strongholds.

Both built and natural environments are subject to increased and often catastrophic flooding. In 2012, Governor Gregoire created the Chehalis Basin Work Group to develop options for Basin-wide flood damage reduction and aquatic species habitat restoration. The Washington State Legislature created the Office of Chehalis Basin (OCB) and Chehalis Basin Board (CBB) in 2016 (members listed on the Acknowledgments Page). The Office of Chehalis Basin operates within the Washington State Department of Ecology and works with the CBB to oversee the development and implementation of the Chehalis Basin Strategy. The Chehalis Basin Strategy is long-term plan designed to both restore aquatic species and reduce flood damage for Basin communities.

### The Origins of the LAND Alternative

The Chehalis Basin Strategy establishes the framework for a suite of projects and programs many of which have been studied for many years. Since the 1930s, there have been approximately 1,000 studies that examined ways to reduce damage from major and catastrophic floods in the Chehalis Basin. As part of these studies, structural approaches such as infrastructure bypass options, levees, floodwalls, floodproofing, and flood retention facilities (dams) of various scales and locations have been assessed for effectiveness in reducing flood damage as well as mitigating and recovering from floods. Largescale restorative flood protection actions, largescale and localized buyouts, changes in land use management, and localized restoration actions have also been assessed for effectiveness in

reducing flood damage as well as mitigating and recovering from floods.

The focus and breadth of the technical work and policies to reduce flood damage increased following the devastating 2007 flood. This refocusing has included preparation of a State Environmental Policy Act (SEPA) Programmatic Environmental Impact Statement (PEIS; Ecology 2017) that evaluated a number of potential programs and projects, followed by two projectlevel Draft EISs (Ecology 2020 for SEPA and Corps of Engineers 2020 for the National Environmental Policy Act [NEPA]) that assessed impacts from a potential flood retention facility (FRE), all focused on reducing flood damage in the Chehalis Basin.

### **Local Actions Program**

After extensive community feedback, it was clear that communities across the Basin had differing views on how to move forward and what actions should be taken to address flooding in the Basin. In response to concerns expressed by communities, in July 22, 2020 Governor Jay Inslee directed the CBB to develop and evaluate a Local Actions Program that considered action that would be needed in absence of the FRE. As a result, the CBB led two advisory groups (a technical advisory group and an implementation/



Floodplain storage



Structure elevations and floodproofing



Updated land use and development regulations



|    | policy advisory group) to develop the Local       |
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|    | Actions Program (LAP), a series of Basin-wide     |
| at | flood damage reduction options. The advisory      |
|    | groups identified projects and actions that would |
|    | be needed in the absence of the proposed FRE,     |
|    | as well as how a LAP (or individual projects      |
| е  | within the program) might differ if implemented   |
| IS | in conjunction with the proposed FRE. The         |
|    | advisory groups considered the following:         |



Structural actions such as levees



Buyouts, relocations, and changes to land use management requirements

### **Local Actions Non-Dam Alternative**

In 2021, the CBB approved funding for the next steps in developing a comprehensive Basin-wide flood damage reduction roadmap that can be incorporated into the long-term Chehalis Basin Strategy. The LAND Alternative builds upon the LAP advisory group options and previous studies to provide the CBB, other decision makers, and the public with a credible alternative to the proposed FRE on the upper Chehalis River.

The LAND Alternative was established to address the many needs of people in the Chehalis Basin—soliciting input from local business and the agricultural community, tribal governments, community members, technical experts, and the area's city and county departments—to develop credible recommendations.

To be successful, the LAND Alternative must show that a comparable amount of flood damage reduction could be achieved without the FRE on the Chehalis River.

Change can involve difficult and sometimes painful discussions. Resiliency after a flood event rests on the community's ability to meet a challenge head on and adapt—while maintaining its identity. The LAND Alternative described in this plan establishes a series of projects, programs, and policies that provide multiple opportunities to bolster existing flood damage reduction activities, while also identifying larger and more complex infrastructure solutions.

Source: Office of Chehalis Basin



### **Project Area**

The CBB approved primary and secondary focus areas for analysis for the LAND Alternatives process, as shown below.

Vicinity Map Chehalis Basin Briefing Book





### **Primary Focus Area**



The Primary Focus Area includes the mainstem of the Chehalis River upstream of its confluence with the Skookumchuck River, including the major tributaries to the mainstem in the upper Basin: Skookumchuck, Newaukum and South Fork Chehalis Rivers.

### **Secondary Focus Area**



The Secondary Focus Area includes the mainstem and major tributaries of the Chehalis River downstream of the Skookumchuck River, including the Black, Satsop, Wynoochee, Wishkah and Humptulips Rivers.

### LAND Steering Group

The CBB created the LAND Steering Group to guide the process and provide consensus recommendations to the Board, identifying the most optimal and feasible alternatives that could meet the CBB's targeted outcomes without the need for an FRE. LAND Steering Group members (listed on the Acknowledgments Page) represent more than a century of living in the Chehalis Basin and all hold vested interests in the safety of the Basin and its communities.

The CBB provided the LAND Steering Group with the following targeted outcomes to help guide deliberation and discussion:

### Valuable Structures Protected from Mainstem, Catastrophic Flooding: The

amount of existing homes, businesses and public buildings in the focus area that could be vulnerable to flood damage by current or 2080 predicted 100-year flood levels in the Basin would be significantly reduced, because they are protected by localized infrastructure, floodproofed/elevated, or the structure has been removed.

Critical Facilities Protected: The amount of critical facilities in the focus area that could be vulnerable to flood damage by current or 2080 predicted 100-year flood levels would be significantly reduced, because they are protected by localized infrastructure, elevated/floodproofed, or relocated.

The LAND Steering Group began its series of monthly meetings in November 2021, exploring a range of potential projects and programs that included both structural and non-structural interventions and actions: large and small-scale infrastructure, floodproofing structures, incentives and other mitigation efforts that can help reduce flood damage to the Basin's people, property, and natural resources.

The LAND Steering Group provided its preliminary consensus LAND Alternative recommendations to the CBB in January 2023. The LAND Steering Group presented its final recommendations to the CBB at its April 2023 meeting.

#### Farmland and Rural Structures Protected:

The number of locations where migrating river channels and bank erosion pose a high risk of near-term damage to valuable structures or loss of economically productive land uses would be significantly reduced while protecting ecological processes.

#### **Environmental Justice Advanced:**

Communities with environmental justice concerns would suffer less hardship and damage from flooding, would not be disproportionately burdened by actions to reduce flood damage, and would be improved by flood solutions.

### **Public Input and Discussion**

The LAND Alternative process included extensive conversations with local community leaders, the Quinault Indian Nation (QIN) and Confederated Tribes of the Chehalis Reservation, technical experts, elected officials, and the Basin communities. The types of engagement implemented ranged from individual meetings with interested parties to Basin-wide events that brought together a range of participants with diverse interests and experiences.

## INTERESTED PARTIES MEETINGS AND FOCUS GROUPS

The Project Team met with several community leaders throughout the Basin to understand the background of flooding, review current proposals for flood damage reduction in the Basin, and discuss other issues that should be considered as part of the LAND development process. While not exhaustive, these initial meetings helped lay the foundation for the project and started meaningful conversations about LAND. The results directly informed the project's scope and direction.

#### SITE TOUR

The CBB and LAND Steering Group members, staff from cities and counties, elected officials, and Project Team members took part in a halfday site tour to meet with local landowners affected by flooding, observe areas damaged by previous floods, and view flood damage reduction projects that have been completed recently to address flooding. The site tour encouraged participants to discuss key issues in the Basin and consider the diverse perspectives represented in the LAND process.

#### **MONTHLY CHEHALIS BASIN BOARD MEETINGS**

The CBB was updated regularly on the LAND alternative development process during its monthly meetings. The Project Team was introduced to the CBB in February 2023, and it provided additional details and responded to requests for input at subsequent meetings. The LAND Alternative was presented to the CBB in April 2023, with follow-up discussions with the CBB through August 2023.

#### CHEHALIS BASIN VALUES PLANNING WORKSHOP AND ONLINE SURVEY

The LAND Alternative development process began in earnest in May 2023 with the Chehalis Basin Values Planning Workshop, a two-day event that established the foundation and vision for LAND and presented potential concepts for further refinement. Over 60 people attended the Values Planning Workshop (including staff working on other flood projects in the region) and identified a number of critical areas to address, including infrastructure and natural systems, agriculture and forestry, economic development and housing, recreation and education, and land use. Key outcomes from this meeting included the values described in Chapter 3 that have guided the various components of LAND throughout the process. Additionally, approximately 200 members of the public provided input through an online survey, which offered participants the opportunity to weigh in on the values established at the workshop, as well as to describe their own personal experiences with flooding.

#### **COMMUNITY PRIORITIES WORKSHOP**

Using information gathered from the Values Workshop, online survey, and other outreach, th Basin community came together again in Janua 2023 to review LAND concepts, which included potential projects, programs and policies that could be packaged together in various ways to address flooding in the Basin. Options includes both structural and non-structural elements as well as programs and policies to reduce impact of flooding for those where structural solutions such as levees would not provide protection. Approximately 75 people attended the event. The information gathered provided additional information necessary for the Steering Group to develop the LAND Alternative that was presented to the CBB in April 2023.

#### ONLINE AND IN-PERSON COMMUNITY BRIEFINGS

In February 2023 the Project Team presented a webinar that described the flood damage reduction concepts discussed during the Community Priorities Workshop in January 202. The Project Team facilitated a discussion with community members about the tradeoffs of each of the concepts and also explained the ne steps for the project. The webinar was recorded and can be accessed on the Chehalis Basin Strategy website.

| ne<br>ary | As part of its ongoing outreach, the Project<br>Team also presented to and facilitated<br>discussions with many local community and<br>environmental organizations, city council and<br>county commissions, state agencies and Tribal<br>governments. The Project Team presented to the<br>following organizations and agencies: |
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|           | Cities of Chehalis and Centralia City Councils   |
| S         | Lewis and Thurston Counties Board of County Commissioners  |
|           | Confederated Tribes of the Chehalis  |
|           | Quinault Indian Nation   |
| ed        | Washington Department of Ecology   |
|           | Washington Department of Transportation  |
|           | Washington Department of Fish and Wildlife   |
|           | Lewis County Fire and Emergency Response     Committee   |
|           | Lewis County Flood Authority   |
|           | Chehalis River Alliance  |
| 3.        | Citizens for a Clean River   |
| ext<br>I  | <ul> <li>American Society of Civil Engineers Water<br/>Resources Group</li> </ul>  |
|           | Sierra Club  |
|           | Input gathered during these meetings provided additional information to the LAND Steering  |

additional information to the LAND Steering Group as they developed recommendations for the LAND Alternative.