

Chehalis River Basinwide General Investigation

Overview

The U.S. Army Corps of Engineers, Grays Harbor County (serving as the local sponsor) and other stakeholders are working together on the Chehalis River Basinwide General Investigation (GI). This study will identify, evaluate and recommend ecosystem restoration and flood risk management projects for the entire Chehalis River Basin. The draft Project Management Plan is finished and awaiting concurrence from the Chehalis Basin Working Group.

Before finalizing the Project Management Plan, the working group asked the Corps about the potential of looking at two “without project conditions” scenarios. This information paper describes the impacts of this decision on the Chehalis GI.

Without Project Conditions

To identify projects and predict how they might perform for ecosystem restoration and flood risk management, the Corps needs to know the existing conditions in the basin, and how these would change as a result of a project or number of projects being implemented. Some examples of conditions include: amount and type of habitat – such as wetlands, number of residential and commercial structures and their value, and extent of the floodplain. Changes from a proposed project could be in environmental conditions, project location, amount of flooding, or in economic and social changes.

The documentation of what the Corps calls the “without project conditions” creates that basic understanding of the conditions in the basin so the Corps can identify what problems need to be solved, and what positive and negative impacts projects may have throughout the area. The “without project conditions” accounts for environmental, hydrologic, hydraulic, economic and cultural characteristics. It also includes real estate and existing infrastructure inventory.

When looking at “without project conditions,” the Corps also looks 50 years into the future to see what things are likely to change so those changed conditions can be incorporated into the analysis of the impacts of potential projects.

Developing Two Without Project Conditions

Normally Corps studies only include one “without project conditions,” largely based on existing conditions. However, the Corps is required to look at any uncertainties with existing and future conditions in the study area. The Corps does this to ensure that the proposed projects will deliver benefits for the community, no matter which future condition happens in the study area.

For the Chehalis GI, there is an option to look at two possible “without project conditions.”

1) The first assumes that the Twin City Project (modifications to Skookumchuck Dam and levees in and around Centralia and Chehalis) is built in the basin. In the 2007 Water Resources Development Act, Congress authorized the Corps to construct the Twin Cities Project, per the authorized plan. The project team is moving forward with the design phase of the Twin Cities Project. Therefore, as part of the “without project conditions” for the Chehalis GI, the Corps needs to analyze the impacts of the Twin Cities Project.

2) The proposed option is to look at a second “without project conditions” scenario that shows the Twin Cities Project not built in the basin. If the local stakeholders choose to pursue this option, the Corps would analyze the

alternatives of not having the Twin Cities Project in place. This may or may not suggest a different set of possible projects.

In order to study these two possible scenarios, the Corps will need to conduct some additional studies to describe conditions in the basin with and without the Twin Cities Project, including hydrology and hydraulics, damage estimates, and possibly environmental differences.

Measures Development

Once the “without project conditions” scenarios are complete, measures will be developed to resolve identified problems. Measures are a feature of an activity that can be implemented at a specific geographic site to address one or more planning objectives.

- Equal consideration must be given for structural and non-structural measures, per federal requirements.
- All potential measures must be included.
- Measures are screened based upon an assessment of meeting the GI’s objectives, environmental standards, and relative benefit-cost ratio.
- Measures will be developed for both ecosystem restoration and flood risk management.
- The effectiveness and impacts of a measure are based on contrasting conditions with the measure in place (eg. a small levee system for a town) versus no project (“without project conditions”).
- Measures must be incrementally justified. This means the additional benefits of a measure must exceed the additional costs of that measure.

If stakeholders choose to study solutions for two different future scenarios, there may need to be additional work on measures development.

Alternatives Development

During alternative development, the remaining measures will get combined into project alternatives that enhance or complement each other at a larger scale. An alternative is a set of one or more measures functioning together to address one or more project objectives.

Approval to Continue the Study

The Corps of Engineers is required to hold a Feasibility Scoping Meeting (FSM) where the non-federal sponsor, key stakeholders, and the Corps’ district team meet with decision makers from Corps headquarters and division to get approval to continue the planning study. The primary purpose of the FSM is to allow Corps headquarters and division a chance to review the “without project conditions,” which includes verification that the study team chose the proper “future” condition, provided accurate documentation, and identified and evaluated reasonable measures and alternatives for the problems identified in the “without project conditions.”

If the Chehalis GI is still carrying two future scenarios, which are equally considered likely, and these different scenarios require different solutions, the study may run into difficulties in obtaining approval from Corps headquarters to move forward with the study.

Selecting a Path Forward

The longer the Corps carries two future scenarios through the planning analysis, the greater the impacts to the overall study schedule and budget. In the table on page 3, it is assumed the Corps develops two “without project conditions” analyses (with and without the Twin City Project), provides a report that includes both scenarios, and completes full technical review and finalization of a document.

If the study carries two future scenarios into the measures and alternatives analysis phase, costs would go up as work becomes more detailed. To select the recommended plan that will go to Congress for authorization, the feasibility report needs to show one expected future scenario.

The final report will state how well the recommended plan would function if an alternative future condition happens. This is a form of risk analysis to determine how well the federal project would function under potential changed conditions, and if there is still a federal interest under that condition.

Added Cost and Schedule for Two Without Project Conditions

Two without project conditions	Approximate Cost	Estimated Time *
Additional second “without project conditions” scenario	\$3 million	2 years
Totals for the feasibility phase with two “without project conditions” scenarios	\$24 million	14.5 years

***The estimated time is subject to the availability of funding.**

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