

Appendix N

Visual Quality Impact Analysis

September 2020

Chehalis River Basin Flood Damage Reduction Project

NEPA Environmental Impact Statement



APPENDIX N: VISUAL QUALITY IMPACT ANALYSIS

Visual Quality Methods

The visual impact analysis followed these steps:

1. Define study area for viewshed analysis
2. Conduct a viewshed analysis
3. Identify key viewpoints
4. Assess the extent to which proposed project changes are visible
5. Evaluate the sensitivity and number of people affected at key viewpoints

The analysis focused on the places where new facilities would be constructed in the flood retention facility and Airport Levee Improvement project areas. The analysis areas are shown in Figures 1 and 2. Visual changes in the Chehalis River 100-year floodplain area were assessed qualitatively.

The viewshed analysis looked at topography to find places where views would be blocked by higher ground. The viewshed analysis also looked at areas where road turnouts might open onto a scenic overlook. It did not consider whether trees, other vegetation, or buildings might block views.

In the flood retention facility project area, the analysis found all the places where people would likely be able to see the proposed facilities. This included the places where people would likely be able to see the temporary reservoir. Because the ground surrounding the Chehalis-Centralia Airport is relatively flat, a viewshed analysis was not completed for the Airport Levee Improvements.

Key viewpoints were identified based on the viewshed analysis and an understanding of how people use the study area. Although the proposed project changes could be visible from other points within the viewshed, three key viewpoints were chosen as representative. This includes two at the proposed flood retention facility location (Viewpoints 1 and 2 in Figure 1). Based on the viewshed analysis and field visits, it was determined that the proposed project changes would not be visible from Viewpoint 1. Viewpoint 1 was originally selected because it is along a popular hiking trail, the Willapa Hills Trail. Viewpoint 2 was selected because it is within an area where the public may be granted access by permit. The viewpoint at the Chehalis-Centralia Airport was selected because it is from the Riverside Golf Club where people may be more sensitive to visual changes (Viewpoint 3 in Figure 2).

The analysis then considered how sensitive people might be to the visual changes as seen from these locations. People whose experience depends in part on the visual setting are more sensitive to view changes than those whose experience does not. For example, motorists are generally less sensitive than recreationalists.

If the changes caused by the proposed action were determined to be visible, an evaluation of changes in visual quality was performed based on concepts in the *Visual Resources Assessment Procedure for U.S. Army Corps of Engineers* (VRAP; Corps 1988). The VRAP identifies the basic elements of landscape visual quality that, when perceived, provide the viewer with a positive or negative response.

The degree of the impact was determined based on factors specified in the VRAP plus changes to the views, how well the changes could be seen, and how sensitive viewers were expected to be to the change. The results of the analysis are provided in Section 5.2 of the EIS.

Reference

Corps (U.S. Army Corps of Engineers), 1988. *Visual Resources Assessment Procedure for US Army Corps of Engineers*. Instruction Report EL-88-1. Vicksburg, Mississippi: Waterways Experiment Station. March 1988. Accessed at: <http://blmwyomingvisual.anl.gov/docs/vrap.pdf>.



