



**US Army Corps
of Engineers®**
Portland District



WILLAMETTE VALLEY SYSTEM OPERATIONS AND MAINTENANCE

APPENDIX R: VISUAL RESOURCES INVENTORY

*Willamette Valley System Operations and Maintenance
Environmental Impact Statement*

TABLE OF CONTENTS

CHAPTER 1 - Visual Resources Inventory	1
CHAPTER 2 - References.....	7

THE DEIS VISUAL RESOURCES APPENDIX HAS BEEN MODIFIED IN THE FEIS

Summary of changes from the DEIS:

- **Visitor data have been updated from DEIS 2019 data to FEIS 2022 data.**
- **DEIS visitor spending has been deleted in the FEIS. Visitor spending is not a measurable component of the analysis area economy at the local, dam and reservoir level. Economic effects are addressed in Section 3.11, Socioeconomics.**

Visitor spending is irrelevant to assess visual resource impacts. The amount spent by visitors for trip expenses can generate local income, but this is a minor component of the local economy and is not an accurate indicator of the difference between the action alternatives and the No-action Alternative in terms of visitor interest in a particular dam.

Moreover, the amount spent by visitors at a given dam cannot be correlated to visitor interest, which is more accurately represented by visitor numbers. Visitor numbers are the primary metric to assess aesthetic quality impacts on viewers from alternative implementation. For example, 75,000 visitors may spend \$20,000 on trip expenses to a given dam, or those same 75,000 visitors could spend \$200,000 in trip expenses to that dam. The amount spent does not change the number of visitors and, therefore, the number of visitors impacted by alterations in the visual character of the dam under any alternative.



CHAPTER 1 - VISUAL RESOURCES INVENTORY

The following is a detailed description of the visual resources inventory for the nine dams that could be impacted substantially from the Proposed Action and alternatives. This includes Lookout Point (LOP), Detroit (DET), Green Peter (GRP), Hills Creek (HCR), Dexter (DEX), Cougar (CGR), Blue River (BLU), Foster (FOS), and Fall Creek (FCR). This assessment was adapted from the BLM Visual Resources Manual (BLM 1986) and applied to each dam using a combination of images from Google Earth, Value to the Nation Fast Facts (USACE 2019a–i), and descriptions of each dam and reservoir location from the USACE Willamette Valley website (USACE No Date a–k).

1. DETROIT (DET):

a. Scenic Quality Inventory

- i. Landform: Mostly consists of rolling hills, few or no interesting landscape features. Score = 1.
- ii. Vegetation: Some variety of vegetation, mostly trees and grasses. Score = 3.
- iii. Water: Large reservoir filled with clear and clean-appearing water, dominating factor in the landscape. Score = 5.
- iv. Color: Some variety of color among the water, trees, and vegetation. Score = 3.
- v. Influence of adjacent scenery: Adjacent scenery has little to no influence. Score = 0.
- vi. Scarcity: Somewhat common within the region. Score = 1.
- vii. Cultural modifications: Modifications add little or no visual variety to the area. Score = 0.
- viii. Overall Score = 13; Grade = B.

b. Sensitivity Level Analysis

- i. Amount of Use: Greater than 75,000 visits were recorded in FY 2022. Score = High.
- ii. Overall Rating: Low – Moderate.

c. Distance Zone

- i. Foreground – middle ground: Detroit Dam and Reservoir is visible from travel routes or observation points within 3 to 5 miles.
- ii. Visual Resource Inventory Class: III

2. FOSTER (FOS):

- a. Scenic Quality Inventory
 - i. Landform: Mostly consists of rolling hills, few or no interesting landscape features. Score = 1.
 - ii. Vegetation: Some variety of vegetation, mostly trees and grasses. Score = 3.
 - iii. Water: Large reservoir filled with clear and clean-appearing water, dominating factor in the landscape. Score = 5.
 - iv. Color: Some variety of color among the water, trees, and vegetation. Score = 3.
 - v. Influence of adjacent scenery: Adjacent scenery has little to no influence. Score = 0.
 - vi. Scarcity: Visitors may spot rare species. Score = 3.
 - vii. Cultural modifications: Modifications add little or no visual variety to the area. Score = 0.
 - viii. Overall Score = 15; Grade = B.
- b. Sensitivity Level Analysis
 - i. Amount of Use: Greater than 75,000 visits were recorded in FY 2022. Score = High.
 - ii. Overall Rating: High.
- c. Distance Zone
 - i. Foreground – middle ground: Foster Dam and Reservoir is visible from travel routes or observation points within 3 to 5 miles.
- d. Visual Resource Inventory Class: II

3. GREEN PETER (GRP):

- a. Scenic Quality Inventory
 - i. Landform: Mostly consists of rolling hills, few or no interesting landscape features. Score = 1.
 - ii. Vegetation: Some variety of vegetation, mostly trees and grasses. Score = 3.
 - iii. Water: Large reservoir filled with clear and clean-appearing water, dominating factor in the landscape. Score = 5.
 - iv. Color: Some variety of color among the water, trees, and vegetation. Score = 3.
 - v. Influence of adjacent scenery: Adjacent scenery has little to no influence. Score = 0.
 - vi. Scarcity: Visitors may spot rare species. Score = 3.
 - vii. Cultural modifications: Modifications add little or no visual variety to the area. Score = 0.
 - viii. Overall Score = 15; Grade = B.

*Willamette Valley System Operations and Maintenance
Environmental Impact Statement*

- b. Sensitivity Level Analysis
 - i. Amount of Use: Greater than 75,000 visits were recorded in FY 2022. Score = High.
 - ii. Overall Rating: Moderate – High.
- c. Distance Zone
 - i. Foreground – middle ground: Green Peter Dam and Reservoir is visible from travel routes or observation points within 3 to 5 miles.
- d. Visual Resource Inventory Class: III

4. COUGAR (CGR):

- a. Scenic Quality Inventory
 - i. Landform: Mostly consists of rolling hills, few or no interesting landscape features. Score = 1.
 - ii. Vegetation: Some variety of vegetation, mostly trees and grasses. Score = 3.
 - iii. Water: Large reservoir filled with clear and clean-appearing water, dominating factor in the landscape. Score = 5.
 - iv. Color: Some variety of color among the water, trees, and vegetation. Score = 3.
 - v. Influence of adjacent scenery: Adjacent scenery has little to no influence. Score = 0.
 - vi. Scarcity: Visitors may spot rare species. Score = 3.
 - vii. Cultural modifications: Modifications add little or no visual variety to the area. Score = 0.
 - viii. Overall Score = 15; Grade = B.
- b. Sensitivity Level Analysis
 - i. Amount of Use: Less than 50,000 visits were recorded in FY 2022. Score = Low.
 - ii. Overall Rating: Low.
- c. Distance Zone
 - i. Foreground – middle ground: Cougar Dam and Reservoir is visible from travel routes or observation points within 3 to 5 miles.
- d. Visual Resource Inventory Class: IV

5. BLUE RIVER (BLU):

- a. Scenic Quality Inventory
 - i. Landform: Mostly consists of rolling hills, few or no interesting landscape features. Score = 1.
 - ii. Vegetation: Some variety of vegetation, mostly trees and grasses. Score = 3.
 - iii. Water: Large reservoir filled with clear and clean-appearing water, dominating factor in the landscape. Score = 5.
 - iv. Color: Some variety of color among the water, trees, and vegetation. Score = 3.

*Willamette Valley System Operations and Maintenance
Environmental Impact Statement*

- v. Influence of adjacent scenery: Adjacent scenery has little to no influence.
Score = 0.
- vi. Scarcity: Somewhat common within region. Score = 0.
- vii. Cultural modifications: Modifications add little or no visual variety to the area.
Score = 0.
- viii. Overall Score = 13; Grade = B.
- b. Sensitivity Level Analysis
 - i. Amount of Use: Less than 50,000 visits were recorded in FY 2022. Score = Low.
 - ii. Overall Rating: Low.
- c. Distance Zone
 - i. Foreground – middle ground: Blue River Dam and Reservoir is visible from travel routes or observation points within 3 to 5 miles.
- d. Visual Resource Inventory Class: IV

6. LOOKOUT POINT (LOP):

- a. Scenic Quality Inventory
 - i. Landform: Mostly consists of rolling hills, few or no interesting landscape features.
Score = 1.
 - ii. Vegetation: Some variety of vegetation, mostly trees and grasses. Score = 3.
 - iii. Water: Large reservoir filled with clear and clean-appearing water, dominating factor in the landscape. Score = 5.
 - iv. Color: Some variety of color among the water, trees, and vegetation. Score = 3.
 - v. Influence of adjacent scenery: Adjacent scenery of mountains in the distance and the Lowell Covered Bridge moderately enhances overall visual quality. Score = 3.
 - vi. Scarcity: Visitors may spot rare species. Score = 3.
 - vii. Cultural modifications: Modifications add little or no visual variety to the area.
Score = 0.
 - viii. Overall Score = 18; Grade = B.
- b. Sensitivity Level Analysis
 - i. Amount of Use: Between 50,000 – 75,000 visits were recorded in FY 2022. Score = Moderate.
 - ii. Overall Rating: Low – Moderate.
- c. Distance Zone
 - i. Foreground – middle ground: Lookout Point Dam and Reservoir is visible from travel routes or observation points within 3 to 5 miles.
- d. Visual Resource Inventory Class: IV

7. HILLS CREEK (HCR):

- a. Scenic Quality Inventory
 - i. Landform: Mostly consists of rolling hills, few or no interesting landscape features. Score = 1.
 - ii. Vegetation: Some variety of vegetation, mostly trees and grasses. Score = 3.
 - iii. Water: Large reservoir filled with clear and clean-appearing water, dominating factor in the landscape. Score = 5.
 - iv. Color: Some variety of color among the water, trees, and vegetation. Score = 3.
 - v. Influence of adjacent scenery: Adjacent scenery has little to no influence. Score = 0.
 - vi. Scarcity: Somewhat common within region. Score = 1.
 - vii. Cultural modifications: Modifications add little or no visual variety to the area. Score = 0.
 - viii. Overall Score = 13; Grade = B.
- b. Sensitivity Level Analysis
 - i. Amount of Use: Greater than 75,000 visits were recorded in FY 2022. Score = High.
 - ii. Overall Rating: Low – Moderate.
- c. Distance Zone
 - i. Foreground – middle ground: Hills Creek Dam and Reservoir is visible from travel routes or observation points within 3 to 5 miles.
- d. Visual Resource Inventory Class: IV

8. DEXTER (DET):

- a. Scenic Quality Inventory
 - i. Landform: Mostly consists of rolling hills, few or no interesting landscape features. Score = 1.
 - ii. Vegetation: Some variety of vegetation, mostly trees and grasses. Score = 3.
 - iii. Water: Large reservoir filled with clear and clean-appearing water, dominating factor in the landscape. Score = 5.
 - iv. Color: Some variety of color among the water, trees, and vegetation. Score = 3.
 - v. Influence of adjacent scenery: Adjacent scenery has little to no influence. Score = 0.
 - vi. Scarcity: Visitors may spot rare species. Score = 3.
 - vii. Cultural modifications: Modifications add little or no visual variety to the area. Score = 0.
 - viii. Overall Score = 15; Grade = B.

*Willamette Valley System Operations and Maintenance
Environmental Impact Statement*

- b. Sensitivity Level Analysis
 - i. Amount of Use: Greater than 75,000 visits were recorded in FY 2022. Score = High.
 - ii. Overall Rating: High.
- c. Distance Zone
 - i. Foreground – middle ground: Dexter Dam and Reservoir is visible from travel routes or observation points within 3 to 5 miles.
- d. Visual Resource Inventory Class: II

9. FALL CREEK (FCR):

- a. Scenic Quality Inventory
 - i. Landform: Mostly consists of rolling hills, few or no interesting landscape features. Score = 1.
 - ii. Vegetation: Some variety of vegetation, mostly trees and grasses. Score = 3.
 - iii. Water: Large reservoir filled with clear and clean-appearing water, dominating factor in the landscape. Score = 5.
 - iv. Color: Some variety of color among the water, trees, and vegetation. Score = 3.
 - v. Influence of adjacent scenery: Adjacent scenery has little to no influence. Score = 0.
 - vi. Scarcity: Somewhat common within the region. Score = 1.
 - vii. Cultural modifications: Modifications add little or no visual variety to the area. Score = 0.
 - viii. Overall Score = 13; Grade = B.
- b. Sensitivity Level Analysis
 - i. Amount of Use: Greater than 75,000 visits were recorded in FY 2022. Score = High.
 - ii. Overall Rating: Low – Moderate.
- c. Distance Zone
 - i. Foreground – middle ground: Fall Creek Dam and Reservoir is visible from travel routes or observation points within 3 to 5 miles.
- d. Visual Resource Inventory Class: III

CHAPTER 2 - REFERENCES

- Bureau of Land Management (BLM). 1986. Manual H-8410-1 – Visual Resource Inventory. Accessed August 4, 2021 at https://blmwyomingvisual.anl.gov/docs/BLM_VRI_H-8410.pdf.
- United States Army Corps of Engineers (USACE). 2019a. Detroit Dam Downstream Fish Passage and Temperature Control Draft Environmental Impact Statement. Willamette River Basin North Santiam River, Oregon.
- USACE. 2019b. USACE, Hills Creek Dam (OR00014): Periodic Inspection No. 12.
- USACE. 2019c. USACE, Lookout Point Dam (OR00009): Periodic Inspection No. 12.
- USACE. 2019d. Draft. Willamette Basin Annual Water Quality Report for 2018. U.S. Army Corps of Engineers, Portland, OR.
- USACE. 2019e. Willamette Valley System Operations and Maintenance Environmental Impact Statement Public Scoping Report. Available at https://www.bpa.gov/efw/Analysis/NEPADocuments/nepa/Willamette%20Valley%20System%20EIS/PublicScopingReport_Appendices1A_WVS_OM_EIS_Dec2019.pdf.
- USACE. 2019f. Value to the Nation Fast Facts. Lake Level Report, Cougar Lake Oregon. Available at <https://usace.contentdm.oclc.org/digital/collection/p16021coll2/id/6285>.
- USACE. 2019g. The Willamette Valley Project (Brochure). Accessed July 13, 2021 at <https://usace.contentdm.oclc.org/digital/collection/p16021coll6/id/2151>.
- USACE. 2019h. Value to the Nation Fast Facts. USACE Recreation 2019 Watershed Report, Willamette Watershed. Available at <https://usace.contentdm.oclc.org/utis/getfile/collection/p16021coll2/id/6703>.
- USACE. 2019i. Value to the Nation Fast Facts. Lake Level Report, Blue River Lake Oregon. Available at <https://usace.contentdm.oclc.org/digital/collection/p16021coll2/id/6282>.
- USACE. No Date-a. Big Cliff Dam & Reservoir. Accessed July 12, 2021 at <https://www.nwp.usace.army.mil/Locations/Willamette-Valley/Big-Cliff/>.
- USACE. No Date-b. Blue River Dam & Reservoir. Accessed July 12, 2021 at <https://www.nwp.usace.army.mil/Locations/Willamette-Valley/Blue-River/>.
- USACE. No Date-c. Cottage Grove Dam & Reservoir. Accessed July 12, 2021 at <https://www.nwp.usace.army.mil/Locations/Willamette-Valley/Cottage-Grove/>.
- USACE. No Date-d. Cougar Dam & Reservoir. Accessed July 12, 2021 at <https://www.nwp.usace.army.mil/Locations/Willamette-Valley/Cougar/>.
- USACE. No Date-e. Detroit Dam & Reservoir. Accessed July 12, 2021 at <http://www.nwp.usace.army.mil/Locations/Willamette-Valley/Detroit/>.
- USACE. No Date-f. Dexter Dam & Reservoir. Accessed July 12, 2021 at <https://www.nwp.usace.army.mil/Locations/Willamette-Valley/Dexter/>.
- USACE. No Date-g. Dorena Dam & Reservoir. Accessed July 12, 2021 at <https://www.nwp.usace.army.mil/Locations/Willamette-Valley/Dorena/>.
- USACE. No Date-h. Fall Creek Dam & Reservoir. Accessed July 12, 2021 at <https://www.nwp.usace.army.mil/Locations/Willamette-Valley/Fall-Creek/>.

*Willamette Valley System Operations and Maintenance
Environmental Impact Statement*

USACE. No Date-i. Fern Ridge Dam & Reservoir. Accessed July 12, 2021 at
<http://www.nwp.usace.army.mil/Locations/Willamette-Valley/Fern-Ridge/>.

USACE. No Date-j. Foster Dam & Reservoir. Accessed July 12, 2021 at
<https://www.nwp.usace.army.mil/Locations/Willamette-Valley/Foster/>.

USACE. No Date-k. Green Peter Dam & Reservoir. Accessed July 12, 2021 at
<https://www.nwp.usace.army.mil/Locations/Willamette-Valley/Green-Peter/>.