

Floodplains

Affected Environment

The corridor crosses seven drainages identified on Federal Insurance Rate Maps as *100-year floodplains*. The Federal Emergency Management Agency identifies areas that have a 1-percent chance of being flooded in a given year as 100-year floodplains. The 100-year floodplains in the corridor are in the drainages of Sherman Creek, Hawk Creek, Stock Creek, Coulee Creek, Deep Creek, the Spokane River, and Country Homes Canal (see Figure 3-37).

Transmission line structures are currently located within the floodplain areas of Coulee Creek (corridor mile 75/6), Deep Creek (corridor mile 75/8 and 76/1), and the Spokane River (corridor mile 77/3). The floodplain widths for Coulee Creek and the Spokane River are roughly 190 feet and 1,200 feet, respectively. The transmission line crosses the Deep Creek floodplain in two areas (corridor mile 75/7 to 75/9 and 75/9 to 76/2). The Deep Creek floodplain between corridor mile 75/7 and 75/9 is approximately 525 feet wide, whereas the section between corridor mile 75/9 and 76/2 is approximately 600 feet wide. Sherman Creek, in corridor mile 24, lies immediately adjacent to a county road within an agricultural area. This portion of Sherman Creek was straightened sometime in the past and the narrow floodplain (approximately 250 feet) associated with it parallels the road. Hawk Creek, in corridor mile 38, runs through a narrow canyon and has a narrow floodplain (approximately 170 feet) associated with it. The Stock Creek floodplain (170 feet) is not located adjacent to the creek itself; it is located to the north of the creek, within a low-lying meadow. The corridor crosses the narrow floodplain (approximately 65 feet) for the Country Homes Canal in corridor mile 81.

Hawk and Sherman Creeks, as well as the Spokane River, are perennial streams. The floodplains for Deep Creek and the Spokane River have associated wetlands.

Environmental Consequences

Floodplains adjoining creeks and rivers are important because they provide wildlife habitat, agricultural and forest products, and recreation areas, besides providing a channel for flood waters. Protection of floodplains is necessary to prevent damage to these functions, to protect the human and natural features within them, and to comply with Executive Order 11988 (Floodplain Management). Construction within a floodplain has the potential to create obstructions to floodwater and alter flow patterns and floodplain acreage, which may cause additional damage when a flood occurs. In this case, impacts on floodplains would be direct and long term. Sediments could be deposited into floodplains from activities upslope if erosion or sedimentation occurs. These impacts would be indirect and would likely be temporary.

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Impact Definitions

A **high** impact would occur when structures or permanent access roads encroach on designated floodplains and the amount of flood storage in a floodplain would be significantly decreased, or the course of flood waters would be altered.

A **moderate** impact would occur when structures or permanent access roads encroach on designated floodplains and the amount of flood storage in a floodplain would be moderately decreased.

A **low** impact would occur when the amount of flood storage in a floodplain would be slightly decreased (e.g., due to erecting a structure in a floodplain).

No impact would occur where direct impacts to floodplains would be avoided.

Impacts

Towers and Related Construction

Removal of existing wood pole structures is not expected to result in direct or indirect impacts to floodplains. Typically, existing wood pole structures would be excavated or cut off two feet below ground level and holes backfilled with native material. However, structures located in or adjacent to floodplains would be cut off at ground level to avoid potential impacts associated with excavation and backfilling. Therefore, removal of existing wood pole structures is expected to have no impact on floodplains.

All floodplains would be spanned and there would be no new structures constructed within any floodplains. However, there is the possibility that vegetation, particularly trees that pose a danger to the transmission lines, could be removed. Additionally, the 500-kV tower on the west span of the Spokane River would be placed approximately 150 feet west of the existing wood structure (corridor mile 77/3), situating it outside of the Spokane River floodplain. Therefore, no impacts are expected to floodplains in the project area due to construction of new towers.

New staging areas and conductor tensioning sites would not be sited in floodplain areas, thus no impacts to floodplains would be expected from these activities.

Road Construction

The construction of new access roads, improvement of existing access roads, and the construction of temporary access roads are expected to have no impact on floodplains (Table 3-19). Road construction activities in or near floodplains are unlikely to alter the amount floodplain storage, local patterns of flooding, or create obstructions to floodwaters.

Table 3-19. Floodplains Identified within the Corridor.

| Floodplain | Corridor Mile | Potential Construction Impacts From | |
|---------------------|------------------|---|--|
| | | Access Road | Proposed Towers |
| Sherman Creek | 24/3 to 24/4 | No Impact: Rock existing road to Improve access to Sherman Draw Road | No Impact: Towers more than 100 ft from floodplain |
| Hawk Creek | 39/1 to 39/2 | No Impact: Road improvements to reduce runoff and erosion | No Impact: Towers more than 100 ft from floodplain |
| Stock Creek | 41/3 to 41/4 | No Impact: No road improvements proposed | No Impact: Towers more than 100 ft from floodplain |
| Coulee Creek | 75/5 to 75/6 | No Impact: Relocating access road to improve access to Pine Bluff Road | No Impact: Towers more than 100 ft from floodplain |
| Deep Creek | 75/7 to 76/2 | No Impact: Relocating access road to improve access to Pine Bluff Road | No Impact: Towers more than 100 ft from floodplain |
| Spokane River | 76/8 to 77/5 | No Impact: No road improvements proposed | No Impact: Towers more than 100 ft from floodplain |
| Country Homes Canal | 81/9 to 81/10 | No Impact: Blading, grading, and installation of drain dips; improve access to Waikiki Road | No Impact: Towers more than 100 ft from floodplain |

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Operation and Maintenance

Operation and maintenance activities are expected to have no impact on floodplains as access roads and structures would not be located in floodplains. Potential vegetation management activities, such as removal of danger trees, are expected to be minimal and are also not expected to adversely affect floodplain functions.

Environmental Consequences of the Alternative Action

Floodplain impacts for the alternative action would be the same as those for the proposed action.

Cumulative Impacts

Sherman, Hawk, and Stock creeks are all located within Lincoln County, while Coulee Creek, Deep Creek, the Spokane River, and the Country Homes Canal are located within Spokane County. County governments for both Lincoln and Spokane counties were contacted to inquire about current and future activities within floodplain areas within their respective jurisdictions. Lincoln County is currently in the process of developing its critical area ordinances to regulate

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activities within critical and environmentally sensitive areas. Spokane County adopted its critical areas ordinance in August 1996.

Spokane County may conduct such activities as vegetation management or storm drain maintenance in some floodplain areas, depending on the classification of a given floodplain. Road and bridge maintenance activities may also occur where county roads cross floodplain areas, such as Coulee Creek. The extent to which these activities may impact floodplain function is unknown, but is expected to be low. Based on information provided by Lincoln and Spokane counties, as well as a review of Spokane County's critical areas ordinance, it appears that cumulative impacts to floodplains would be low to no impact.

Mitigation

Standard mitigation would effectively eliminate or reduce potential impacts within the floodplains of the drainages to be crossed. Mitigation for indirect impacts includes: using appropriate sediment and erosion control measures; leaving vegetative buffers next to all water bodies when possible (as long as it does not interfere with the safe operation of the line); and spanning floodplains wherever possible. Fill used for temporary access road widening will be placed on fabric and removed entirely to an upland site after construction is finished.

The following mitigation activities would reduce impacts:

- Designing the project to locate roads and structures to avoid floodplains completely.
- Locating structures to minimize the potential for creating obstructions to floodwaters.
- Depositing all excavated material near floodplain areas not reused in an upland area and stabilizing it.
- Re-contouring and re-vegetating disturbed areas near floodplains with native and local species.
- Removing debris from construction and clearing within and near floodplains.

Environmental Consequences of the No Action Alternative

No floodplain impacts have been identified under existing conditions. The potential for disturbance to floodplain functions associated with transmission line structures in floodplains would continue under the No Action Alternative. No new impacts to floodplains are expected under this alternative.