

Middle Chehalis River Ecological Region Overview

What are important/unique features and functions within this Ecological Region?

- Migratory fish from all sub-basins in the upper Chehalis Basin pass through this region, making its ecological function more impactful to large areas.
- The Ecological Region is unique in that it includes a large and deep river channel as well as a series of off-channel habitats created by old river channels in various stages of succession.
- High exotic loading is found in off-channel habitats and substantial exotic fishes live in the mainstem Chehalis River.
- Numerous disconnected oxbows are present on the floodplain. The reach likely once held substantial off-channel rearing areas in the form of old oxbows and other features.

What is working? What is broken?

- The Ecological Region is lacking wood nearly everywhere.
- Substantial channel length lacks stable gravel.
- Channel migration and channel-forming processes have degraded over time. Over multiple decades, the banks of the mainstem have been artificially stabilized (e.g., riprap) by landowners desiring to protect property from the river. Artificial stabilization has resulted in less migration of the mainstem and creation of few off-channel areas, and now the existing off-channel areas are undergoing succession (i.e., disconnecting) and newer off-channel areas are not being created.
- Exotic fish species and bullfrogs are widespread in this Ecological Region.
- The main channel is largely disconnected from its floodplain. Riparian zones are narrow to non-existent in much of the reach. Very little wood exists in the Middle Chehalis River, and moderate lengths of riprap and channel control are found throughout the reach.
- High water temperatures are a significant issue. Pockets of cooler water near the Chehalis River confluences with the Skookumchuck and Newaukum rivers may be critical to providing refuges during the summer months, especially for adult spring Chinook salmon and Olympic mudminnow.

What are your thoughts about some of the protection and restoration strategies and actions we feel are important for this Ecological Region?

- Restore instream structure and pool frequency with large wood installations.
- Consider spacing off-channel habitat restoration, using a node concept to increase fish access along the length of the reach. Restoration of channel-forming process and floodplain connection will be somewhat constrained by land uses.
- Protect existing riparian forest.
- Protect existing wet prairie.
- Test restoration of floodplain wetlands that dry out in the summer.
- Protect cool-water inputs.



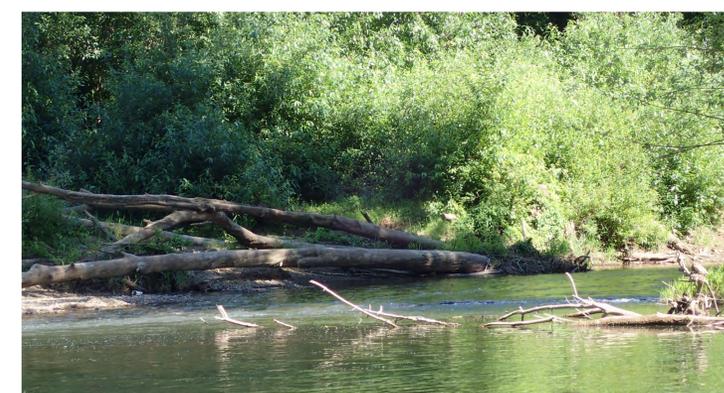
The Middle Chehalis River Ecological Region is limited by infrequent instream pools and inadequate riparian conditions. In this area upstream of the confluence with the Newaukum River, the Chehalis River shows channel incision, an eroding bank, and a lack of functioning riparian vegetation and wood.



Stearns Creek, an important small tributary, historically included wetland and prairie habitat at the confluence with the Chehalis River. Current conditions at the creek mouth, viewed from the Willapa Hills Trail, illustrate sediment deposition.



This glide habitat near Chehalis River river mile 78 shows the need for wood and structural habitat elements, and the potential for floodplain reconnection.



Tributaries influence conditions in the mainstem Chehalis River, and the effectiveness of actions in other ecological regions will be influenced by conditions in the mainstem. This image shows an important confluence with the Newaukum River, which can deliver inputs of wood and gravel and can provide a cooling influence on water temperatures.