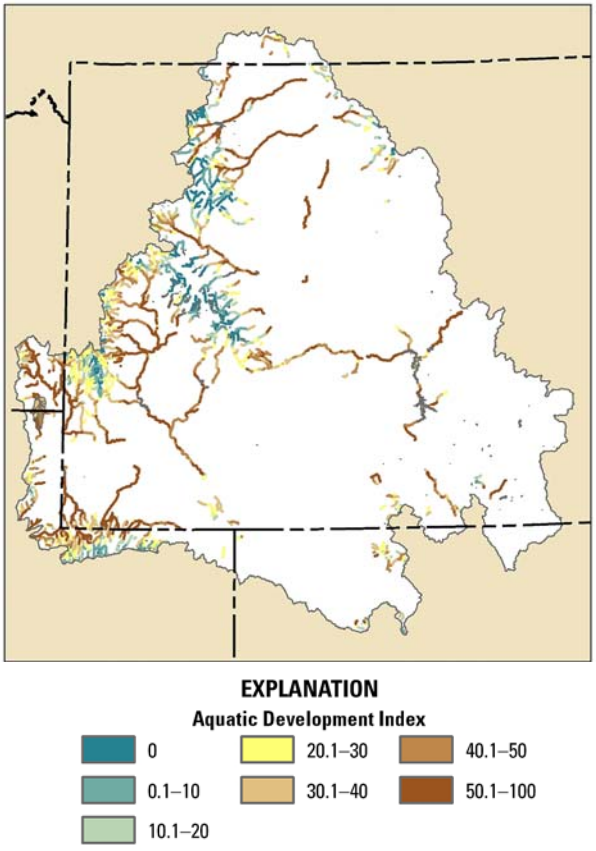
Cutthroat Trout

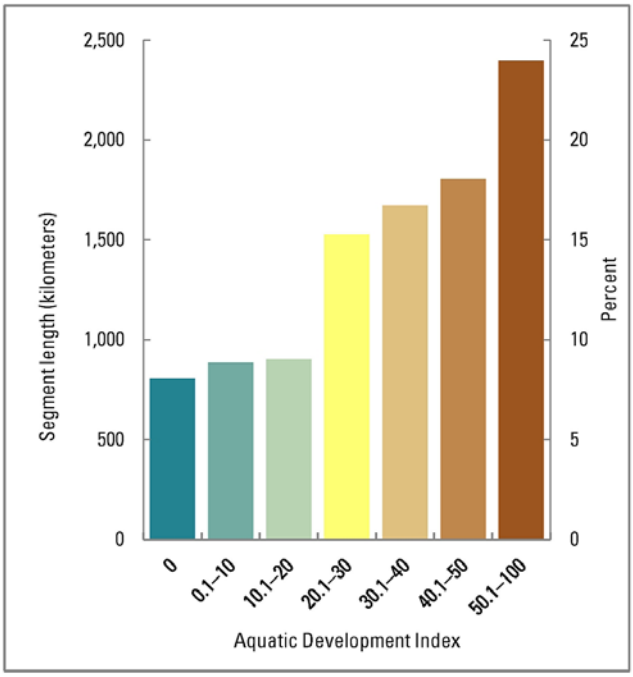
Management Questions

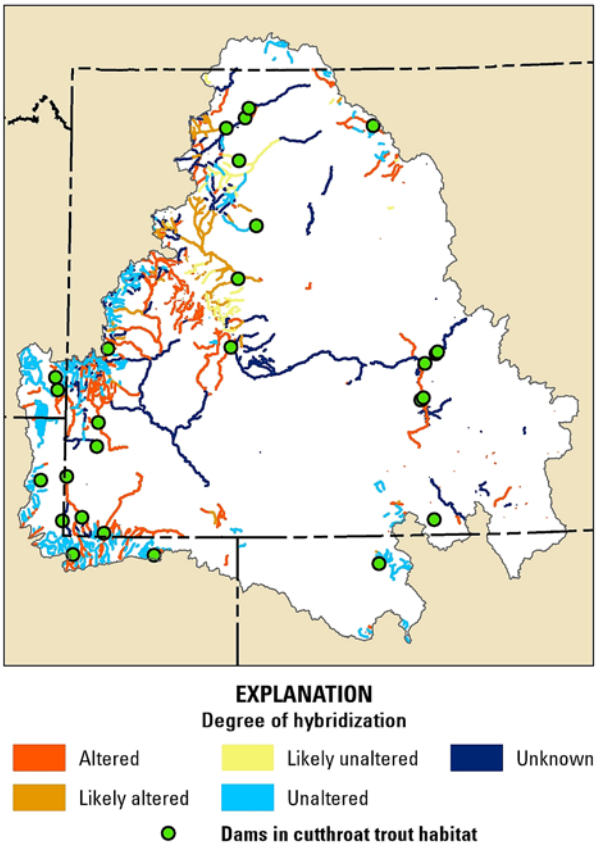
- Where is baseline occupied cutthroat trout habitat, and what is the total amount occupied by native/introduced populations and by each subspecies?
- Where does development pose the greatest threat to baseline cutthroat trout habitat, and where are the large, relatively undeveloped habitats? (Left map below)
- Where do diversions and road crossings pose potential barriers to cutthroat trout movements, and where are watersheds with the highest structural connectivity?
- Where are genetically pure populations of cutthroat trout, and where are populations at risk from hybridization? (Top left map following page)
- Where are cutthroat trout populations at risk of competition and predation by nonnative salmonid species?
- Where are cutthroat trout populations at risk from whirling disease?
- Where are cutthroat trout populations currently at risk from low summer flows?
- Where are cutthroat trout populations at risk from projected shifts in mean summer flow, timing of peak streamflow, and temperature increases in 2040?
- How does risk from development vary by land ownership for cutthroat trout habitat?
- Where are the fifth-level watersheds with the greatest landscape-level ecological values? (Top right map following page)
- Where are the fifth-level watersheds with the greatest landscape-level risks? (Center right map following page)
- Where are the fifth-level watersheds with the greatest conservation potential? (Bottom right map following page)

Photo credit: Carlin Girard, University of Wyoming.



Aquatic Development Index scores for cutthroat trout habitat in the Wyoming Basin Rapid Ecoregional Assessment project area.





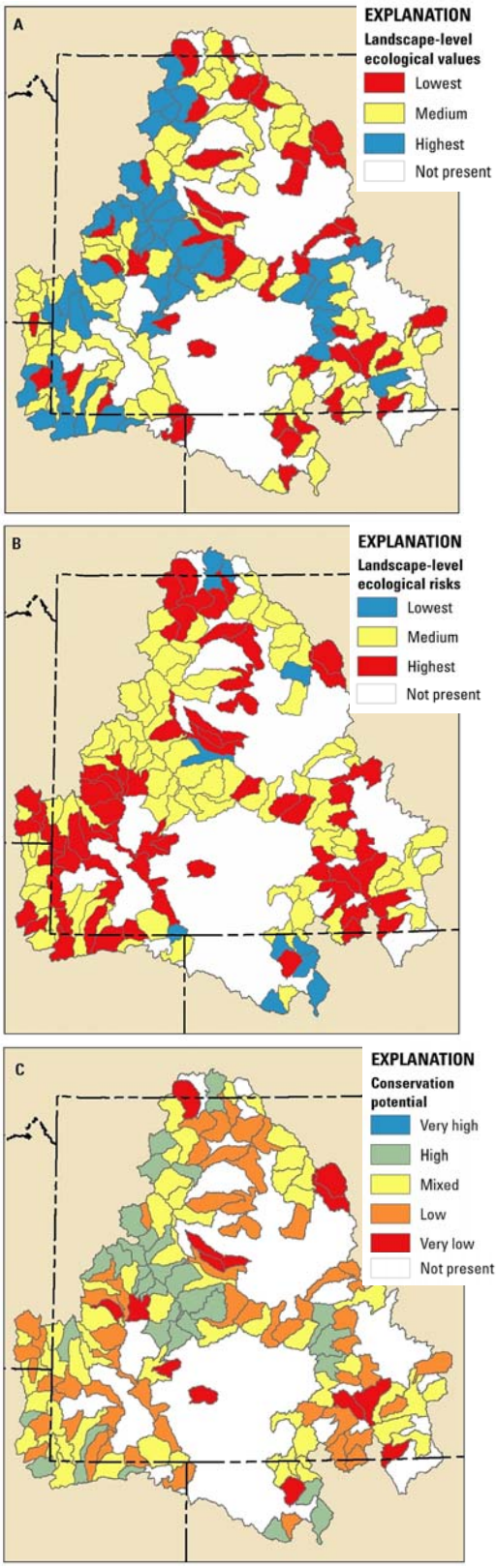
Degree of hybridization of cutthroat trout populations with rainbow trout in the Wyoming Basin Rapid Ecoregional Assessment project area.

Summary

Cutthroat trout are present primarily in the western portion of the Wyoming Basin Rapid Ecoregional Assessment project area, with the larger native populations occurring in the Greybull, Wind, Bear, Upper Green, and Little Snake River drainages and introduced populations occurring in the North Platte and Lower Green River drainages.

Habitat has been fragmented by dams, especially for mainstem populations. Barriers generally have negative effects, but barriers can isolate genetically pure populations from introduced rainbow trout. Most of the habitat occupied by cutthroat trout is highly developed from roads and agriculture. The Bear and Green River drainages are highly developed although headwaters remain relatively undeveloped. The Bear River drainage has high development scores due to extensive agriculture, many water diversions, and high road density, yet it also has long segments supporting genetically pure native cutthroat trout.

The greatest risk from a projected increase in temperature was in the northeast portion of the Wyoming Basin. Most of the populations in that region, however, were introduced and consequently are of lower conservation concern than native cutthroat trout populations.



(*A*) Landscape-level ecological values, (*B*) ecological risks, and (*C*) conservation potential of cutthroat trout habitat summarized by fifth-level watershed.