

Limiting Factor Report

This report contains a list of limiting factors by watershed (HUC5) as generated during multiple processes. These factors have been described as impediments to fish productivity or abundance that occur in the tributary habitat of the species. They pertain to salmon, generally Chinook or Steelhead, that spawn, rear, or migrate through these watersheds. We provide these lists here for Tribal PCSRF project solicitors so that they may use them as needed for project selection and design, and also for documentation of how projects will meet the objectives to remedy limiting factors in their areas. Because limiting factor definitions were not standardized between these different sources, they are provided here as separate lists.

Up to three sources of limiting factors are provided here, although not all basins were assessed for each process:

1) Subbasin Planning: Limiting Factors were identified at CRITFC as they were documented in the 2001/2002 Subbasin Plans. Generally, this information was generated for Ecosystems Diagnosis & Treatment (EDT) or Qualitative Habitat and Analysis (QHA) modeling of subbasin processes, but in many cases the Subbasin Planners edited these lists for publication in the Subbasin Plans according to their knowledge.

2) Tribal Remand Process: During the Tribal response and habitat action proposal process of the BiOp Remand, Tribal biologists identified limiting factors by watershed that affect Chinook and Steelhead habitat. These limiting factors were used to assess the potential benefit for survival improvement if habitat actions occur. These lists of limiting factors are provided here.

3) NOAA Technical Recovery Team: We have been assured that NOAA will generate a standardized set of limited factors for use, probably during the Fall of 2007. When these lists are made available, we will add them here.

Limiting Factors identified during Subbasin Planning by Watershed

HUC4: Lower Yakima (17030003)

Watershed Ahtanum Creek (1703000301) (HUC5):

Limiting Factor:

Channel Stability

Flow

Habitat Diversity

Key Habitat Quantity

Obstructions

Predation

Sediment Load

Water Temperature

Watershed Upper Lower (1703000302) (HUC5): Yakima River

Limiting Factor:

Channel Stability

Flow

Habitat Diversity

Key Habitat Quantity

Obstructions

Pathogens

Predation

Sediment Load

Water Temperature

Watershed Upper (1703000303) (HUC5): Toppenish Creek

Limiting Factor:

Channel Stability

Flow

Habitat Diversity

Key Habitat Quantity

Obstructions

Pathogens

Predation

Sediment Load

Water Temperature

Limiting Factors identified during Subbasin Planning by Watershed

Watershed Lower (1703000304)
(HUC5): Toppenish
Creek

Limiting Factor:

Channel Stability

Flow

Habitat Diversity

Key Habitat Quantity

Obstructions

Pathogens

Predation

Sediment Load

Water Temperature

Watershed Satus Creek (1703000305)
(HUC5):

Limiting Factor:

Channel Stability

Flow

Habitat Diversity

Key Habitat Quantity

Obstructions

Predation

Sediment Load

Water Temperature

Watershed Yakima River- (1703000306)
(HUC5): Spring Creek

Limiting Factor:

Channel Stability

Flow

Habitat Diversity

Key Habitat Quantity

Obstructions

Pathogens

Predation

Sediment Load

Water Temperature

Limiting Factors identified during Subbasin Planning by Watershed

Watershed Yakima River- (1703000307)
(HUC5): Cold Creek

Limiting Factor:

Habitat Diversity

Key Habitat Quantity

Obstructions

Pathogens

Predation

Sediment Load

Water Temperature

Limiting Factors identified by Tribes during Remand by Watershed

HUC4: Lower Yakima (17030003)

Watershed Ahtanum Creek (1703000301) (HUC5):

Limiting Factor:

Watershed - Hydrology
Ecologic – Community
In-channel Characteristics
Passage / Entrainment
Riparian / Floodplain
Water Quality – Chemistry
Side Channel Reconnection
Water Quality - Temperature
Water Quality - Toxics
Water Quantity – Flow
Sediment
Pools

Watershed Upper Lower (1703000302) (HUC5): Yakima River

Limiting Factor:

Sediment
In-channel Characteristics
Ecologic – Community
Passage / Entrainment
Pools
Riparian / Floodplain
Water Quality – Chemistry
Water Quality - Temperature
Water Quality - Toxics
Water Quantity – Flow
Side Channel Reconnection
Watershed - Hydrology

Limiting Factors identified by Tribes during Remand by Watershed

Watershed Upper (1703000303)
(HUC5): Toppenish
Creek

Limiting Factor:

Ecologic – Community
Water Quality - Toxics
Side Channel Reconnection
In-channel Characteristics
Passage / Entrainment
Pools
Water Quality - Temperature
Water Quality – Chemistry
Water Quantity – Flow
Watershed - Hydrology
Riparian / Floodplain
Sediment

Watershed Lower (1703000304)
(HUC5): Toppenish
Creek

Limiting Factor:

Ecologic – Community
Sediment
In-channel Characteristics
Passage / Entrainment
Pools
Riparian / Floodplain
Water Quality – Chemistry
Water Quality - Temperature
Water Quality - Toxics
Watershed - Hydrology
Water Quantity – Flow
Side Channel Reconnection

Limiting Factors identified by Tribes during Remand by Watershed

Watershed Satus Creek (1703000305)
(HUC5):

Limiting Factor:

Water Quality - Temperature

Side Channel Reconnection

In-channel Characteristics

Passage / Entrainment

Pools

Sediment

Riparian / Floodplain

Water Quality – Chemistry

Water Quality - Toxics

Water Quantity – Flow

Watershed - Hydrology

Ecologic – Community

Watershed Yakima River- (1703000306)
(HUC5): Spring Creek

Limiting Factor:

Pools

Water Quantity – Flow

Passage / Entrainment

In-channel Characteristics

Sediment

Water Quality – Chemistry

Water Quality - Toxics

Ecologic – Community

Water Quality - Temperature

Watershed - Hydrology

Side Channel Reconnection

Riparian / Floodplain

Limiting Factors identified by Tribes during Remand by Watershed

Watershed Yakima River- (1703000307)
(HUC5): Cold Creek

Limiting Factor:

Ecologic – Community

Riparian / Floodplain

In-channel Characteristics

Pools

Sediment

Side Channel Reconnection

Water Quality - Temperature

Water Quality - Toxics

Water Quantity – Flow

Passage / Entrainment

Watershed - Hydrology

Water Quality – Chemistry