

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: Upper John (17070201)
Day

Watershed Middle South (1707020103)
(HUC5): Fork John Day
River

Limiting Factor:

Key Habitat Quantity

Sediment Load

Water Temperature

Watershed Murderers (1707020104)
(HUC5): Creek

Limiting Factor:

Key Habitat Quantity

Sediment Load

Water Temperature

Watershed Lower South (1707020105)
(HUC5): Fork John Day
River

Limiting Factor:

Key Habitat Quantity

Sediment Load

Water Temperature

Watershed Upper John (1707020106)
(HUC5): Day River

Limiting Factor:

Flow

Habitat Diversity

Key Habitat Quantity

Sediment Load

Water Temperature

Watershed Canyon Creek (1707020107)
(HUC5):

Limiting Factor:

Key Habitat Quantity

Limiting Factors identified during Subbasin Planning by Watershed

Watershed Strawberry (1707020108)
(HUC5): Creek

Limiting Factor:

Flow
Habitat Diversity
Key Habitat Quantity
Obstructions
Sediment Load
Water Temperature

Watershed Beech Creek (1707020109)
(HUC5):

Limiting Factor:

Flow
Habitat Diversity
Key Habitat Quantity
Obstructions
Sediment Load
Water Temperature

Watershed Laycock Creek (1707020110)
(HUC5):

Limiting Factor:

Flow
Habitat Diversity
Key Habitat Quantity
Obstructions
Sediment Load
Water Temperature

Watershed Fields Creek (1707020111)
(HUC5):

Limiting Factor:

Flow
Habitat Diversity
Key Habitat Quantity
Obstructions
Sediment Load
Water Temperature

Limiting Factors identified during Subbasin Planning by Watershed

Watershed Upper Middle (1707020112)
(HUC5): John Day

Limiting Factor:

Habitat Diversity
Key Habitat Quantity
Sediment Load
Water Temperature

Watershed Mountain Creek (1707020113)
(HUC5):

Limiting Factor:

Channel Stability
Habitat Diversity
Key Habitat Quantity
Obstructions
Sediment Load
Water Temperature

Watershed Rock Creek (1707020114)
(HUC5):

Limiting Factor:

Key Habitat Quantity
Obstructions
Sediment Load

Watershed John Day River- (1707020115)
(HUC5): Johnson Creek

Limiting Factor:

Flow
Habitat Diversity
Key Habitat Quantity
Obstructions
Sediment Load
Water Temperature

Limiting Factors identified by Tribes during Remand by Watershed

**HUC4: Upper John (17070201)
Day**

**Watershed Upper South (1707020101)
(HUC5): Fork John Day
River**

Limiting Factor:

In-channel Characteristics
Riparian / Floodplain
Water Quality - Temperature
Water Quantity – Flow

**Watershed Middle South (1707020103)
(HUC5): Fork John Day
River**

Limiting Factor:

In-channel Characteristics
Riparian / Floodplain
Water Quality - Temperature
Water Quantity – Flow

**Watershed Murderers (1707020104)
(HUC5): Creek**

Limiting Factor:

Riparian / Floodplain
Water Quality - Temperature
Water Quantity – Flow
In-channel Characteristics

**Watershed Lower South (1707020105)
(HUC5): Fork John Day
River**

Limiting Factor:

Riparian / Floodplain
Water Quality - Temperature
Water Quantity – Flow
In-channel Characteristics

Limiting Factors identified by Tribes during Remand by Watershed

Watershed Upper John (1707020106)
(HUC5): Day River

Limiting Factor:

Water Quality - Temperature
In-channel Characteristics
Riparian / Floodplain
Water Quantity – Flow

Watershed Canyon Creek (1707020107)
(HUC5):

Limiting Factor:

In-channel Characteristics
Passage / Entrainment
Riparian / Floodplain
Water Quality - Temperature
Water Quantity – Flow

Watershed Strawberry (1707020108)
(HUC5): Creek

Limiting Factor:

In-channel Characteristics
Riparian / Floodplain
Water Quantity – Flow
Water Quality - Temperature
Passage / Entrainment

Watershed Beech Creek (1707020109)
(HUC5):

Limiting Factor:

In-channel Characteristics
Riparian / Floodplain
Water Quality - Temperature
Water Quantity – Flow

Watershed Laycock Creek (1707020110)
(HUC5):

Limiting Factor:

Riparian / Floodplain
In-channel Characteristics
Water Quantity – Flow
Water Quality - Temperature

Limiting Factors identified by Tribes during Remand by Watershed

Watershed Fields Creek (1707020111)
(HUC5):

Limiting Factor:

Water Quality - Temperature

Water Quantity – Flow

In-channel Characteristics

Riparian / Floodplain

Watershed Upper Middle (1707020112)
(HUC5): John Day

Limiting Factor:

In-channel Characteristics

Riparian / Floodplain

Water Quality - Temperature

Water Quantity – Flow

Watershed Mountain Creek (1707020113)
(HUC5):

Limiting Factor:

Riparian / Floodplain

In-channel Characteristics

Water Quantity – Flow

Water Quality - Temperature

Watershed Rock Creek (1707020114)
(HUC5):

Limiting Factor:

In-channel Characteristics

Riparian / Floodplain

Water Quality - Temperature

Water Quantity – Flow

Watershed John Day River- (1707020115)
(HUC5): Johnson Creek

Limiting Factor:

Water Quality - Temperature

In-channel Characteristics

Riparian / Floodplain

Water Quantity – Flow
