

## **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: Wallowa River ( 17060105 )

---

#### Watershed Upper Wallowa ( 1706010501 ) (HUC5): River

---

**Limiting Factor:**

Flow

Habitat Diversity

Key Habitat Quantity

Sediment Load

Water Temperature

#### Watershed Lostine River ( 1706010502 ) (HUC5):

---

**Limiting Factor:**

Flow

Habitat Diversity

Key Habitat Quantity

Sediment Load

Water Temperature

#### Watershed Middle ( 1706010503 ) (HUC5): Wallowa River

---

**Limiting Factor:**

Flow

Habitat Diversity

Key Habitat Quantity

Sediment Load

Water Temperature

#### Watershed Bear Creek ( 1706010504 ) (HUC5):

---

**Limiting Factor:**

Flow

Habitat Diversity

Key Habitat Quantity

Sediment Load

Water Temperature

---

## Limiting Factors identified during Subbasin Planning by Watershed

---

**Watershed Minam River ( 1706010505 )**  
**(HUC5):**

---

**Limiting Factor:**

Flow

Habitat Diversity

Key Habitat Quantity

Sediment Load

Water Temperature

**Watershed Lower Wallowa ( 1706010506 )**  
**(HUC5): River**

---

**Limiting Factor:**

Flow

Habitat Diversity

Key Habitat Quantity

Sediment Load

Water Temperature

---

## Limiting Factors identified by Tribes during Remand by Watershed

---

### HUC4: Wallowa River ( 17060105 )

---

---

#### Watershed Upper Wallowa ( 1706010501 ) (HUC5): River

---

##### Limiting Factor:

Noxious Weed Invasions  
Sediment effects on rearing and spa  
Lack of passage - Lack of access to  
Loss of riparian vegetation and co  
Loss of riparian vegetation and co  
Loss of riparian vegetation and co  
Temperature effects on rearing and  
Low Flows - Irrigation withdrawals  
No Limiting Factor Listed  
Elevated Flows - Irrigation return w

---

#### Watershed Lostine River ( 1706010502 ) (HUC5):

---

##### Limiting Factor:

Noxious Weed Invasions  
Loss of riparian vegetation and co  
Low Flows - Irrigation withdrawals  
Elevated Flows - Irrigation return w  
Lack of passage - Lack of access to  
No Limiting Factor Listed  
Loss of riparian vegetation and co  
Sediment effects on rearing and spa  
Temperature effects on rearing and  
Loss of riparian vegetation and co

---

## Limiting Factors identified by Tribes during Remand by Watershed

---

---

**Watershed Middle ( 1706010503 )**  
**(HUC5): Wallowa River**

---

**Limiting Factor:**

Temperature effects on rearing and  
Loss of riparian vegetation and co  
Low Flows - Irrigation withdrawals  
Elevated Flows - Irrigation return w  
Loss of riparian vegetation and co  
No Limiting Factor Listed  
Noxious Weed Invasions  
Sediment effects on rearing and spa  
Loss of riparian vegetation and co  
Lack of passage - Lack of access to

---

**Watershed Bear Creek ( 1706010504 )**  
**(HUC5):**

---

**Limiting Factor:**

Low Flows - Irrigation withdrawals  
Loss of riparian vegetation and co  
No Limiting Factor Listed  
Elevated Flows - Irrigation return w  
Lack of passage - Lack of access to  
Noxious Weed Invasions  
Sediment effects on rearing and spa  
Temperature effects on rearing and  
Loss of riparian vegetation and co  
Loss of riparian vegetation and co

---

**Watershed Minam River ( 1706010505 )**  
**(HUC5):**

---

**Limiting Factor:**

Noxious Weed Invasions  
No Limiting Factor Listed  
Lack of passage - Lack of access to  
Loss of riparian vegetation and co  
Elevated Flows - Irrigation return w  
Sediment effects on rearing and spa  
Temperature effects on rearing and  
Loss of riparian vegetation and co  
Low Flows - Irrigation withdrawals  
Loss of riparian vegetation and co

---

---

## Limiting Factors identified by Tribes during Remand by Watershed

---

---

**Watershed Lower Wallowa ( 1706010506 )**  
**(HUC5): River**

---

**Limiting Factor:**

Low Flows - Irrigation withdrawals

Loss of riparian vegetation and co

Elevated Flows - Irrigation return w

Lack of passage - Lack of access to

Loss of riparian vegetation and co

Noxious Weed Invasions

Sediment effects on rearing and spa

No Limiting Factor Listed

Loss of riparian vegetation and co

Temperature effects on rearing and