

## Barrier Categories and Types

Barrier Categories	Definition	Barrier Types Encountered
<b>Natural Features</b>		
<b>Waterfall</b>	Free-falling stream flow from a vertical, or close to vertical, feature.	Bedrock Waterfall, Boulder Waterfall
<b>Chute</b>	Steep stream reach with high water velocities over exposed bedrock.	Bedrock Chute, Bedrock and Boulder Chute
<b>Cascade</b>	Steep stream reach comprised of small waterfalls separated by shallow pools and/or short sections of turbulent flow.	Boulder Cascade, Steep Stream Reach
<b>Anthropogenic Structures</b>		
<b>Dam</b>	Structure designed to impede, retain, regulate, and/or divert the flow of water or movement of sediment and stream-born debris.	Debris Basin, Diversion, Water-Storage, Stone, Seasonal Diversion
<b>Stream Crossing</b>	Structure that facilitates the passage of vehicular, equipment, railroad, pedestrian, or other traffic across the stream.	Bridge, Culvert (Concrete, Metal, Box, Double Box, Open-bottom Arch, Stone), Apron, In-stream
<b>Grade Control Structure</b>	Structure intended to provide streambed, utility, or bank protection and/or influence the movement of streambed substrate, stream flow, or debris.	Riprap, Berm, Curb, Boulder, Pipe Crossing, Gaging Weir
<b>Channelization</b>	Stream reach that has been modified with extensive bank and streambed protection measures and/or altered from the "natural" alignment.	Channelization (Concrete, Riprap), Stream Realignment, Concrete-lined Bottom, Confined Stream Channel, Bank Revetment
<b>Blockage</b>	Structure or accumulation of discarded material that impedes the movement of water and/or substrate.	Metal Pipe, Aerial Pipe, Quarry Tailing, Failed Culvert, Collapsed Bank Revetment
<b>Estimated Natural Upstream Limit to Steelhead Migration</b>		
<b>Estimated Natural Limit</b>	Estimated location where the stream sustains a slope exceeding 10%. Method based on CDFG estimated upstream limit to salmonid migration, where direct surveying is not possible.	Sustained Slope Exceeding 10%

The barrier "Definitions" are based on local structural observations and defined by Stoecker for this project and are not intended to be an established or accepted definition. Some structures may fit into multiple barrier categories (i.e. a Bridge and Grade Control Structure)