
TRIBUTARY MOUTH PHOTOGRAPHS

2009

February 2009



Public Utility District No. 1 of Chelan County
Wenatchee, Washington

INTRODUCTION

The following document is intended to highlight changes that have occurred at the mouths of major tributaries to Lake Chelan between March 2008 and February 2009. The new lake level operating regime for the Lake Chelan Project has been in effect since September 2007. The intent of the new regime was to draft the lake lower in the fall in order to allow winter freshets to carve out sediment at the mouths of tributaries to prevent formation of barriers (depth, velocity, gradient) to upstream adult fish passage, primarily Westslope cutthroat trout, in the spring for spawning. Note the changes in tributary mouths, particularly at Fish and Prince creeks. Obvious barriers to upstream passage are documented in March 2008. These barriers appear to have been removed in Fish and Prince creeks by freshets that occurred during the winter of 2008-2009. Other tributaries appear also to be “healing themselves,” with better fish passage conditions documented in the February 2009 photographs. Note the Stehekin River hydrograph (Figure 1). A storm event occurred the first week in January 2009 that raised the discharge from the Stehekin significantly. It is expected that the tributaries to the lake followed a similar pattern. This event, and preceding ones during winter 2008-2009, may be responsible for the changes noted in the 2009 photographs. These data are preliminary, but give an indication that the new lake level operating regime may be providing the desired benefits of preventing tributary mouth barrier formation and removing existing barriers to upstream adult fish passage.

FISH CREEK



Fish Creek 2008 – Elevation 1082.9



Fish Creek 2009 – Elevation 1087.6

GOLD CREEK



Gold Creek 2008 – Elevation 1082.9



Gold Creek 2009 – Elevation 1087.6

GRADE CREEK



Grade Creek 2008 – Elevation 1082.9



Grade Creek 2009 – Elevation 1087.6

MITCHELL CREEK



Mitchell Creek 2008 – Elevation 1082.9



Mitchell Creek 2009 – Elevation 1087.6

PRINCE CREEK



Prince Creek 2008 – Elevation 1082.9



Prince Creek 2009 – Elevation 1087.6

SAFETY HARBOR



Safety Harbor 2008 – Elevation 1082.9



Safety Harbor 2009 – Elevation 1087.6

USGS 12451000 STEHEKIN RIVER AT STEHEKIN, MA

