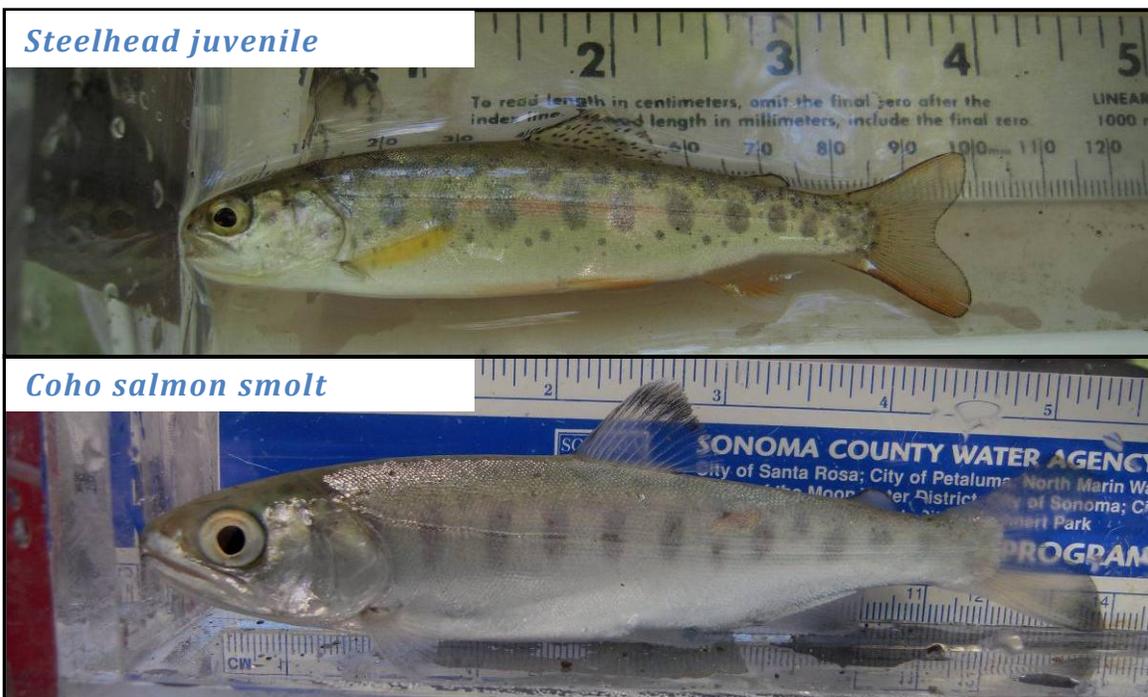


# Downstream Migrant Trapping in Russian River Mainstem, Tributaries, and Estuary

## Introduction

In September 2008, the National Marine Fisheries Service issued the Russian River Biological Opinion, which requires the Sonoma County Water Agency (Water Agency) to improve conditions for coho salmon, steelhead and Chinook salmon in the Russian River. The Biological Opinion requires the Water Agency to increase monitoring of coho and steelhead juveniles and smolts in the river and tributaries. (The term “smolt” refers to the life cycle stage when salmon and steelhead migrate to the ocean and the term “juvenile” refers to stages prior to migrating to the ocean.) Dutch Bill Creek and Austin Creek are both important habitat for coho and steelhead. Fish from these tributaries, as well as from the many other tributaries to the Russian River, may also take advantage of the estuary to enhance their growth before entering the ocean. Because land along both creeks (and most of the river and estuary) is privately owned, the cooperation of willing landowners is critical to monitoring efforts.

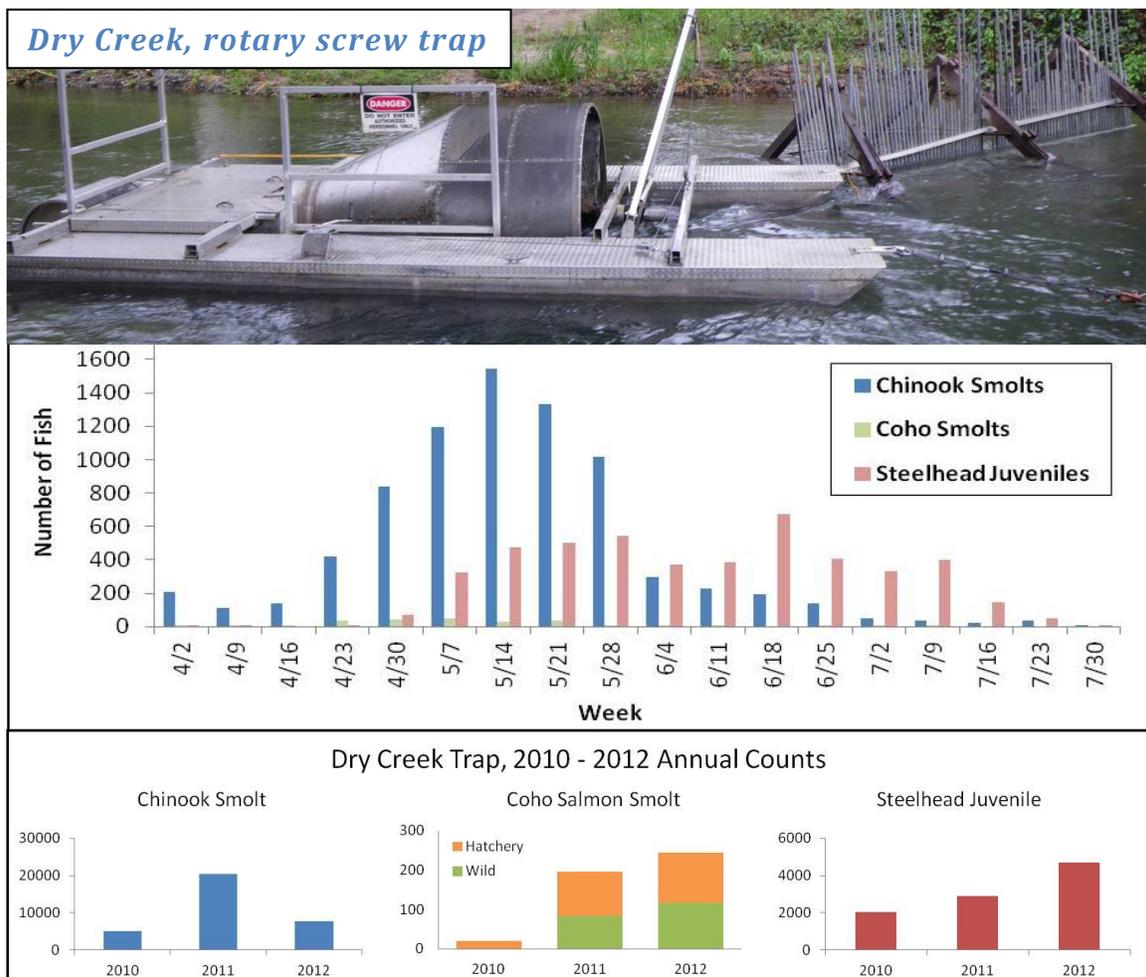
The following is a summary of the Sonoma County Water Agency’s 2012 monitoring efforts in Dry Creek, the mainstem of the Russian River, Dutch Bill Creek, and Austin Creek.



## Dry Creek

The week of April 2, 2012 the Water Agency began operating a rotary screw trap in Dry Creek just downstream of the Westside Road bridge (approximately 2.1 miles upstream of the creek mouth) to monitor young steelhead, Chinook, and coho as they made their way downstream. A rotary screw trap uses stream flow to turn a cone-shaped metal drum to capture and retain fish in a live-well. The trap was checked each morning at which time all fish were removed, measured, examined for tags and marks, and released back into the river to continue their migration. Trapping operations were concluded the week of July 30, 2012.

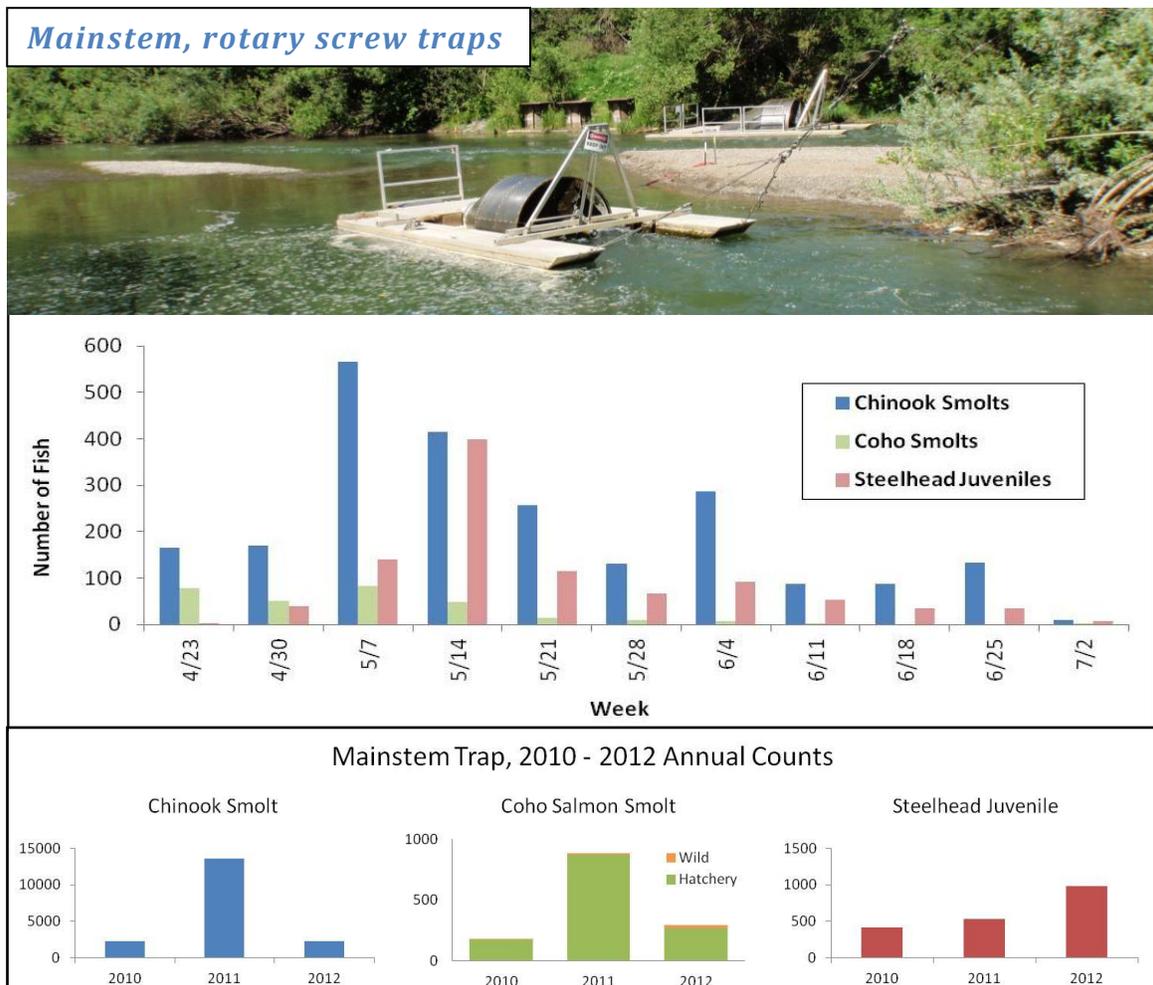
Over the course of the 2012 trapping season, 4,775 steelhead juveniles and smolts, 279 coho juveniles and smolts, and 7,803 Chinook smolts were captured. Most of the coho salmon captured were fish that had been previously stocked into tributaries of Dry Creek as part of a multi-agency effort (known as the Russian River Coho Salmon Captive Broodstock Program – or coho broodstock program) to recover coho populations to the Russian River (<http://ca-sgep.ucsd.edu/focus-areas/healthy-coastal-marine-ecosystems/russian-river-coho/captive-broodstock>), although a few were offspring from fish that returned from the ocean to spawn in the creek. Coho smolts averaged about 5 inches while steelhead ranged in size from 1-inch newly hatched juveniles to 10-inch smolts.



## Mainstem Russian River

The week of April 23, 2012 the Water Agency began operating a pair rotary screw traps in the mainstem of the Russian River just downstream of an inflatable dam at Mirabel, near Forestville, to monitor young steelhead, Chinook, and coho as they made their way downstream. A rotary screw trap uses stream flow to turn a cone-shaped metal drum to capture and retain fish in a live-well. The trap was checked each morning at which time all fish were removed, measured, examined for tags and marks, and released back into the river to continue their migration. Trapping operations were concluded the week of July 2, 2012 when Chinook smolts were no longer captured.

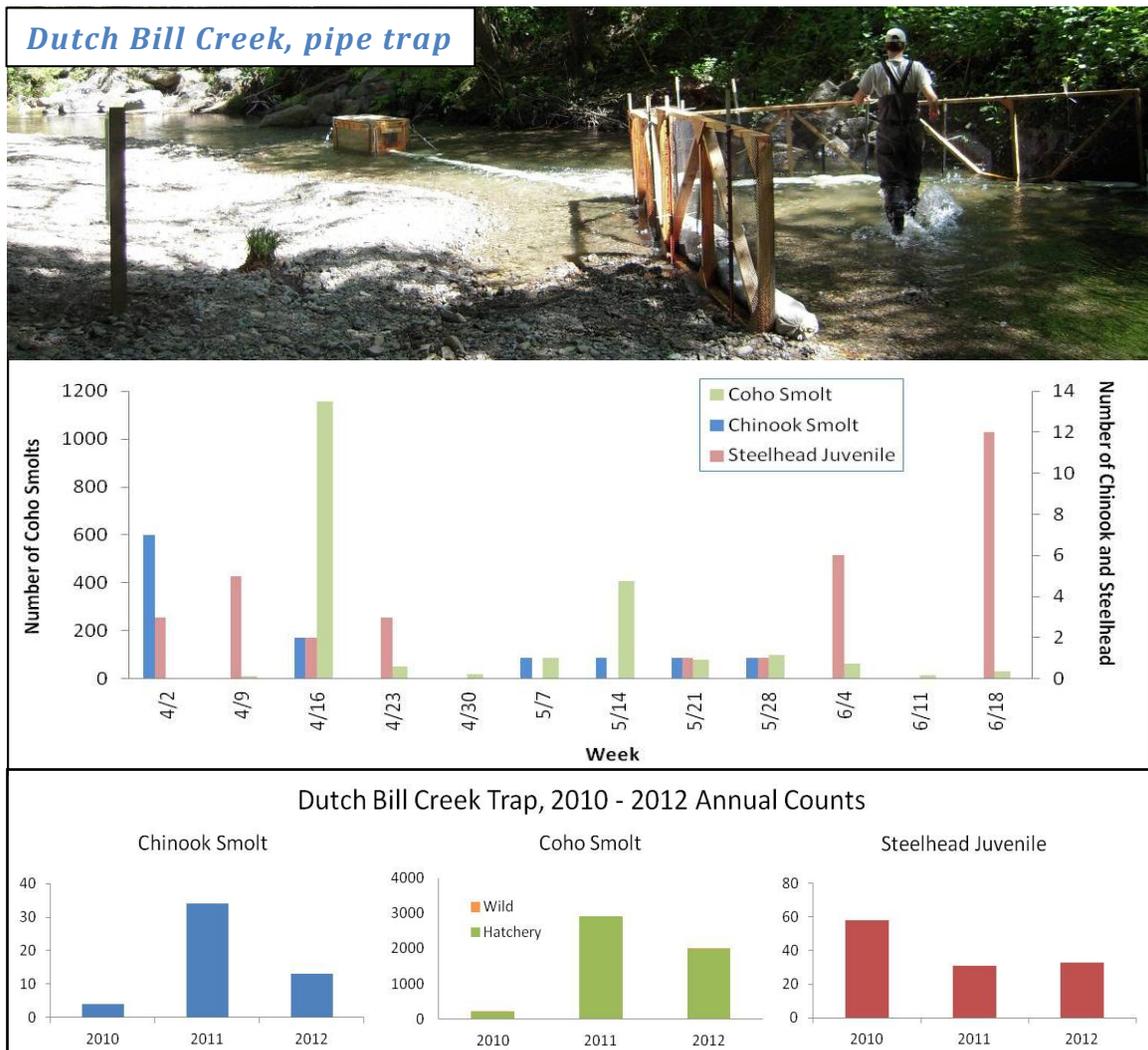
Over the course of the 2012 trapping season, 1,065 steelhead juveniles and smolts, 341 coho juveniles and smolts, and 2,307 Chinook smolts were captured. Most of the coho salmon captured were fish that had been previously stocked into tributaries of the Russian River as part of a multi-agency effort to recover coho populations to the Russian River through the coho broodstock program, although a few were offspring from fish that returned from the ocean to spawn in the creek. Coho smolts averaged about 5 inches while steelhead ranged in size from 1-inch newly hatched juveniles to 10-inch smolts.



## Dutch Bill Creek

The week of April 2, 2012, the Water Agency began operating a combination pipe trap and fish weir in Dutch Bill Creek adjacent to the park in downtown Monte Rio (approximately 0.2 miles upstream of the creek mouth) to monitor young steelhead and coho salmon as they made their way downstream. A pipe trap uses mesh panels to direct stream flow and fish through a plastic pipe and into a live-well. Once fish enter the live-well, water pressure through the pipe discourages them from swimming upstream and out of the live-well. The trap was tended each day at which time all fish were removed, measured, examined for tags and marks, and released downstream. Trapping operations were concluded the week of June 18, 2012 when water levels became too low and there was no longer contiguous flow between the mouth of Dutch Bill Creek and the Russian River.

Over the course of the 2012 trapping season, 44 steelhead juveniles and smolts, 2,019 coho salmon juveniles and smolts, and 13 Chinook smolts were captured. Most of the coho salmon captured were fish that had been previously stocked into Dutch Bill Creek as part of a multi-agency effort to recover coho populations to the Russian River through the coho broodstock program, although a few were offspring from fish that returned from the ocean to spawn in the creek. Coho smolts averaged about 5 inches while steelhead ranged in size from 1-inch newly hatched juveniles to 10-inch smolts.



## Austin Creek

The week of April 16, 2012 the Water Agency began operating a rotary screw trap in Austin Creek just upstream of the steel bridge (approximately 0.7 miles upstream of the creek mouth) to monitor young steelhead and coho as they made their way downstream. A rotary screw trap uses stream flow to turn a cone-shaped metal drum to capture and retain fish in a live-well. The trap was tended each morning at which time all fish were removed, measured, examined for tags and marks, and released downstream. Trapping operations were concluded the week of July 2, 2012 when there was no longer contiguous surface flow between the mouth of Austin Creek and the Russian River.

Over the course of the 2012 trapping season, 3,836 steelhead juveniles and smolts, 1,500 coho juveniles and smolts, and 377 Chinook smolts were captured. Most of the coho salmon captured were fish that had been previously stocked into tributaries of Austin Creek as part of a multi-agency effort to recover coho populations to the Russian River through the coho broodstock program, although a few were offspring from fish that returned from the ocean to spawn in the creek. Coho smolts averaged about 5 inches while steelhead ranged in size from 1-inch newly hatched juveniles to 10-inch smolts.

