



August 27, 2007

**TO: David Boughton, Chair, Technical Recovery Team South-Central/Southern California Coast Steelhead Recovery Planning Domain
Anthony Spina, Southern California Steelhead Team Leader**

FROM: Mark H. Capelli, South-Central/Southern California Coast Steelhead Recovery Coordinator

RE: Recent Ventura River Steelhead (*Oncorhynchus mykiss*) Sightings

The past winter, short and light winter rains along the central and southern California coast provided limited opportunity for steelhead to enter coastal streams; additionally, because of the shortened duration of passage flows, and in some cases early closure of estuary mouths, fish had limited opportunity to emigrate back to the ocean after spawning (or attempting to spawn). As a result, an unusual number of adult steelhead have been observed this spring and summer trapped in the lower mainstems of several coastal streams (e.g., San Simeon and San Carpoforo Creeks, San Luis Obispo County).

Most recently, while conducting the second annual *O. mykiss* survey in the Ventura River system in connection with the Matilija Dam removal project, Thomas R. Payne & Associates' (TRPA) fish survey crew reported two adult steelhead between July 17-19, 2007 in the lower Ventura River. Two additional observations of adult steelhead were made by NMFS staff on August 4 and 5, 2007. The following documents these recent observations of adult steelhead in the lower Ventura River.

Lower Ventura River Conditions

The base summer flows in the lower Ventura River (between Casitas Springs and the ocean) are sustained by a combination of inflow from lower tributaries (e.g. San Antonio Creek, Cañada Larga), rising groundwater, and discharge from the Ojai Valley Sanitary District Wastewater Treatment Plant (located approximately 0.5 mile below the Casitas Vista Bridge at Foster Park and 4.5 miles upstream of the Main Street Bridge). Flow in the lower Ventura River between July 17 and August 5, 2007 ranged between approximately 6.2 and 7.4 cfs (based on the combined river flow as measured at the USGS gauging Station No. 11118500 at the Casitas Vista Road Bridge, and the mean daily discharge from the Ojai Valley Sanitary District). Note: this calculation does not reflect any inflow from Cañada Larga or other minor underground tributary flows, or percolation below the Casitas Vista Bridge, which could affect the flow in the lower river).

Water conditions at the time of the observations were suitable for supporting both juvenile and adult *O. mykiss*, with a mix of pools and riffles, and over-hanging riparian vegetation in some reaches. Because the lower reach is within the coastal belt which experiences coastal fog, observed water temperatures have ranged from the low to mid-20⁰s C (68⁰ F to 75⁰ F), with some local reaches moderated by small springs, during the observation period. A variety of chubs, minnows, sticklebacks, and invertebrates provide a food base for larger fishes, but the cobble benthic habitat was notably covered with fine organic and inorganic sediments.

Steelhead Sightings – July 17-19, 2007

The smaller of the two adult steelhead (estimated at 16-18 inches) was observed on July 17, 2007 by TRPA while snorkeling a pool approximately 1.25 miles above the Main Street Bridge at N 34 deg 17 min 58 sec W 119 deg 18 min 16 sec. Flow in the lower Ventura River survey site on July 17 was approximately 7.4 cfs (based on the combined river flow of 4.3 cfs as measured at the USGS gauging Station No. 11118500 at the Casitas Vista Road Bridge, and the mean daily discharge of 3.1 cfs from the Ojai Valley Sanitary District). This fish was observed in the upper reaches of a 230 foot long pool, which ranged in depth from approximately 2 to 4 feet. The pool was bordered by a continuous stand of willow (*Salix* spp.), with some Water Primrose (*Lugwigia* spp.) along the west bank. The fish was reported as showing some signs of fin rot. This fish was not observed on subsequent days. (See photos of pool below and attached location map)



Ventura River Pool: Location of 16-18 inch steelhead observed July 17, 18, and 19, 2007

The larger of the two steelhead (estimated at 20+ inches) was first observed snorkeling on July 17, 2007 approximately 1.5 miles above the Main Street Bridge at N 34 deg 18 min 16 sec W 119 deg 18 min 07 sec. This fish was observed in the upper reaches of a pool over 200 hundred feet long, with a depth which ranged from approximately 2 to 3 feet. The fish was observed in the exact same location on the following two days while walking along the bank. This fish was reported as in good condition, with no observable fin rot or other signs of stress. No adult steelhead had been observed during the previous year's fish survey by TRPA. (See photos of pool below and attached location map.)



Ventura River Pool: Location of 20+ inches steelhead observed July 17-19, 2007

Steelhead Sightings August 4-5, 2007

Between August 3 and 5 NOAA staff visually surveyed the lower Ventura River for adult steelhead. On August 3 an attempt was made to relocate the fish observed on July 17-19 by walking a line through the thalweg of the lower Ventura River from the Main Street Bridge (upper end of the Ventura River Estuary) to a point just below the Shell Road Bridge. Flow in the lower Ventura River on August 3 was approximately 6.2 cfs (based on the combined river flow of 3.1 cfs as measured at the USGS gauging Station No. 11118500 at the Casitas Vista Road Bridge, and the mean daily discharge of 3.1 cfs from the Ojai Valley Sanitary District). Water clarity was good to a depth of approximately 4 feet, with most of the thalweg channel bordered by rooted aquatics, including Water Primrose and Water Cress (*Rorippa* spp). In one location Water Primrose had over-grown the thalweg for approximately 150 feet. Water temperatures ranged from 20⁰ C (68⁰ F) in the morning to 24⁰ C (75⁰ F) in the late afternoon.



Ventura River reaches above Main Street Bridge, August 3, 2007.

No *O. mykiss* were observed in any portion of the lower river between these two points on August 3, including the two pools where adult steelhead had been observed by TRPA on July 17-19. Several small schools of Carp (*Cyprinus carpio*) and numerous Crayfish (*Procambarus* spp.) were observed in a number of small pools.



Ventura River: Crayfish (*Procambarus* spp.) Carp (*Cyprinus carpio*), August 3, 2007

On August 4, the Ventura River was examined by walking a line through the thalweg of the river between the Shell Road Bridge and the confluence of Cañada Larga Creek. Flow in the lower Ventura River on August 4 was approximately 6.3 cfs (based on the combined river flow of 3.1 cfs as measured at the USGS gauging Station No. 11118500 at the Casitas Vista Road Bridge, and the mean daily discharge 3.2 cfs from the Ojai Valley Sanitary District). The water quality was clear to a depth of approximately 4 feet in the deeper pools, with most of the thalweg channel bordered by rooted aquatics, including Water Primrose and Water Cress. The channel was open, with no reach completely covered by rooted aquatic vegetation. Water temperatures ranged from 20^o C (68^o F) in the morning to 24^o C (75^o F) in the late afternoon, with several small springs supplying cooler waters (18^o C, 65^o F) into several of the pools.

A single adult steelhead estimated at 22 inches was observed in a pool located approximately 0.25 miles above the Shell Road Bridge at N 34 deg 19 min 13 sec W 119 deg 17 min 43 sec while walking a line through the thalweg of the main channel. This fish was initially observed swimming to the head of the pool along the east bank where it sought cover under floating aquatic vegetation, Duckweed (*Lemna* spp.). After a few minutes the fish re-emerged and then swam slowly to the tail of the pool to another matt of floating aquatic vegetation, where it remained out of sight for approximately 15 minutes before re-emerging and swimming along the east bank to the tail of the pool. The pool was approximately 4+ feet deep at its deepest on the west side that is formed by an eroded sedimentary formation. A number of photographs of the fish were taken while it was moving towards the tail of the pool, and at the tail of the pool in approximately 2 feet of water, before bolting to the head of the pool where it swam out of sight. The fish did not show signs of emaciation, fin rot, or stress, but did appear to have a diagonal mark on the dorsal side immediately behind the pectoral fin (possibly from a bird strike); otherwise, the fish appeared in good condition.

This pool had been snorkeled by TPR on July 19, 2007, but no steelhead were observed. (See photos of pool and fish below and attached location map.)

Location of 22 inch steelhead observed August 4, 2007



Head of pool (west bank)



Tail of pool (east bank)



Ventura River Steelhead (*Oncorhynchus mykiss*) c. 22 inches, August 4, 2007

On August 5, 2007 an attempt was made to re-locate the steelhead located the previous day and to look for others in the reach between the Shell Road Bridge and Cañada Larga. Neither the fish observed the previous day 0.25 miles above the Shell Road Bridge, nor any other *O. mykiss* were observed. However, an adult steelhead was observed immediately below the Shell Road Bridge. This steelhead was estimated to be at least 25 inches and was holding in a short run immediately below a pool under the Shell Road Bridge with some woody debris at the head. The fish was observed for approximately 45 minutes, during which time it moved several times to the head of the run or into the pool, and then periodically drifted to the tail of the run. The fish also periodically moved to the east and west bank. The fish did not show signs of emaciation or stress and appeared in generally good condition; however, there were signs of fin erosion on the caudal fin. Flow in the lower Ventura River on August 5 was approximately 6.4 cfs (based on the combined river flow of

3.1 cfs as measured at the USGS gauging Station No. 11118500 at the Casitas Vista Road Bridge, and the mean daily discharge 3.3 cfs from the Ojai Valley Sanitary District). (See photos of run and fish below, and attached location map.)



Ventura River Steelhead (*Oncorhynchus mykiss*) c. 25 inches, Shell Road Bridge, August 5, 2007



Ventura River Steelhead (*Oncorhynchus mykiss*) c. 25 inches, Shell Road Bridge, August 5, 2007

At the time these steelhead were observed, the sand bar at the mouth of the Ventura River Estuary was breached with a channel which was approximately 25 feet wide and had a flow of approximately 6 inches deep. With the low flow to the estuary, this situation would be expected to vary with the mixed, semi-diurnal tides (including periodic opening and closure of the estuary mouth), which could either facilitate or inhibit the emigration of the adult steelhead observed up-stream to the ocean. Additionally, as noted, there was one reach of channel approximately 150 feet long which was over-grown with Water Primrose which potentially could inhibit if not completely block the passage of these fish to the estuary and eventually the ocean. Avian predators (e.g., Great blue herons and Egrets) could complicate the successful emigration of these fish to the ocean. However, from the several observations of these fish it is not clear if they were attempting to emigrate back to the ocean or over-summering in suitable reaches of the lower Ventura River.

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