Restoration to Support Steelhead Recovery in the LA River

Q&A Fact sheet

Male and female steelhead trout. (Source: NOAA Fisheries)

Want to learn about LAR fish passage? Click here:
https://youtu.be/QPkZTs5-RV0?feature=shared

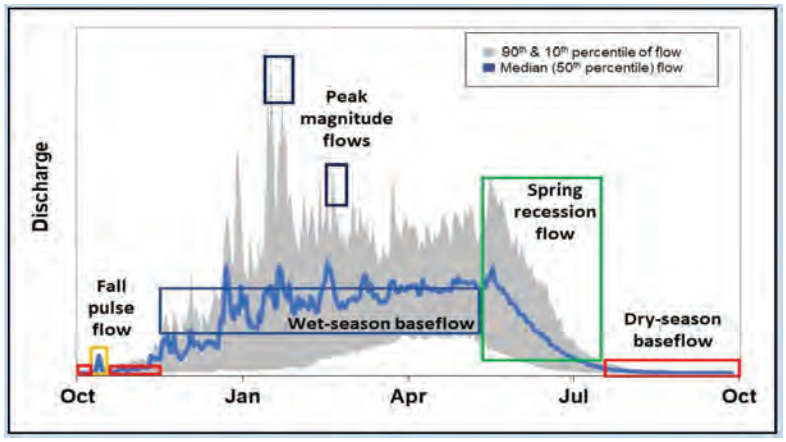
How did the LAR fish passage program start? What's coming next? Click here:
https://healthywatershed.maps.arcgis.com/apps/Cascade/index.html?appid=23f290dcac5246b6942b9dfcdb826d05

When do steelhead migrate?

Steelhead typically move at the tail end of storm events. Due to the length of the LA River and the current lack of resting habitat, LA River steelhead would be moving over several storm events.

Are native rainbow trout (*O. mykiss*) currently attempting to migrate down from the Arroyo Seco?

There are currently thousands of native rainbow trout in the Arroyo Seco above Devils Gate Dam and below Brown Mountain Dam. The California Department of Fish and Wildlife (CDFW) is actively monitoring this trout population. LA County opens the tunnels at Devils Gate Dam to release water during high flow events as part of its flood management operations. According to CDFW, trout have likely moved down the Arroyo Seco during such high flow events, but their fate is unknown. The City of LA and other river champions have been implementing improvements and recommendations for steelhead recovery and flows.



This typical, dimensionless reference hydrograph demonstrates the five functional flow components of CEFF. It shows seasonal flows over the course of a year for a more snowmelt-driven system. (Source: CEFF Working Group)

What about steelhead migrating from the ocean upstream? How will they get to Reach 8A in downtown LA, for example?

CDFW has documented steelhead migrating from the ocean to the nearby San Gabriel River as far upstream as the confluence with Coyote Creek, nearly four miles. Since the LAR historically supported steelhead migration, it is possible that steelhead are also attempting to migrate up the LA River. Trout Unlimited is leading a fish passage and habitat enhancement project in the lower LA River. The City of LA will be the first to implement fish passage in the LA River as part of a larger program to provide wildlife connectivity, fish migration, biodiversity, and access to nature across the watershed and its tributaries.

Southern California steelhead. (Source: Mark Capelli)

Mountains Recreation & Conservation Authority
Stillwater Sciences

What changes will need to occur in order for the City of LA and others to support steelhead needs from an operational and broader regional standpoint?

This is where the LAR CEFF project can help the City and others work together to meet multiple goals and make decisions collaboratively toward steelhead recovery and broader ecological management needs to find win-win solutions for our communities and future generations. For example, what operational levers can be adjusted to provide more flows during migratory periods and achieve ecological objectives for focal species?

What about water temperature? The LA River temperatures get very warm during the summer and fall. With climate change, how will steelhead do in the LA River watershed?

From spring to early fall, water temperatures are too warm for steelhead in the mainstem LA River. However, water temperatures everywhere in the LA River watershed are cool enough for steelhead during their typical migration period. Steelhead mainly migrate upstream from the ocean (adults) and downstream from rearing tributaries (juveniles) during high flows that occur in the winter rainy season, when temperatures are cooler.

Due to the high water temperatures and lack of habitat, the mainstem is only expected to serve as a migration corridor for steelhead, even after passage and habitat improvements are completed. Year-round water temperatures and habitat conditions at some soft-bottom locations in the mainstem could possibly support other native fish such as arroyo chub, but none are currently present.

So, does this mean we may see steelhead return to the LA River in our lifetime?

The fact that native rainbow trout are already in the headwaters and likely moving down the LA River during high flow events is reason enough to believe that steelhead will return in our lifetime, provided we act now to remove barriers to steelhead recovery.

Likely historical steelhead migration pathways, spawning habitat, and rearing habitat. (Source: Stillwater Sciences)

Proposed design for Reach 8A that will help steelhead travel upstream by increasing water depth, slowing flows, and creating deep resting pockets. (Source: Stillwater Sciences)

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