

Alameda Creek Alliance
Position Paper on
Fish Transport Issues

The Alameda Creek Alliance advocates the transport of upstream adult migrant fish past barriers in lower Alameda Creek, until fish passage facilities are constructed which will allow free passage for anadromous fish. The transport operation does not effectively move sufficient numbers of fish upstream to have a viable spawning population. However, it does prevent adult fish from becoming trapped and perishing in the flood control channel, prevents spawning in the flood control channel, where egg survival is not viable, and radio-tagged fish provide important information on migration problems and habitat quality upstream of the barriers. There are several issues that have been raised regarding fish transport operations:

1) The issue of “take” of listed steelhead

Most returning adult steelhead in Alameda Creek in the past few years have been documented to be listed fish, genetically part of the Central California Coast ESU. Section 4(d) of the Endangered Species Act prohibits “take” of these fish. Constructing or maintaining structures such as dams that eliminate or impede a listed species’ ability to migrate or gain access to habitat is considered “take” by NMFS. Capture, handling, and transport of these fish upstream could also be considered “take” by NMFS, and could require a federal permit.

It has been argued that fish blocked below barriers in the lower creek should not be captured and transported out of the flood control channel, since they may return to the Bay and move to another creek to successfully spawn. However, there has been no evidence that fish trapped below the BART weir have been able to move back downstream. Conversely, it has been documented that steelhead have been trapped at the BART weir for over a month when the lower rubber dam was inflated. Listed steelhead have died in the channel as a result of de-watering, and they also have spawned in the flood control channel (which will likely result in the death of the eggs due to temperature, predation, and/or de-watering).

Radio-tagged steelhead have yielded important information about habitat and migration barriers upstream. A NMFS permit should appropriately be granted for transport for scientific research purposes.

2) The issue of creating a “founder effect” by moving just a few fish over barriers

The concern is that moving just a few fish that successfully spawn will create a founder population that are essentially all brothers and sisters, with low genetic diversity. Saving eggs and releasing the resultant fry would compound this effect. Some biologists and regulatory agencies have proposed not moving fish or rescuing eggs until the “jump start” operation has commenced.

Countering this argument is the fact that some adults transported upstream could spawn with native

trout, increasing the available genetic diversity (there is some suspicion that this is what happened with a female steelhead moved into Stonybrook Creek in 1998).

Presuming enough steelhead are moved by transport operations that they could actually find each other upstream in Niles Canyon to spawn (unlikely), their offspring would spend 1-2 years in the creek rearing, then 1-2 years in the ocean. The small percentage of these fish which survived creek and ocean conditions would be returning to the creek from winter 2003/2004 to winter 2005/2006. By this time fish passage may be completed and jump-start operations should have begun, ensuring a (more) diverse gene pool for them to mix with.

Our returning adult steelhead may represent an important genetic lineage, in that if these fish have successfully exited and returned to the creek, and we don't want to lose this strain of fish. These fish may have the correct timing for return to the watershed, and if they are indeed offspring of resident fish in the watershed, certainly had the correct emigration timing, a very important trait!

3) Transport of non-native anadromous fish, specifically chinook salmon

The California Department of Fish and Game is opposed to moving chinook salmon over barriers in the creek, since they are likely not native and of hatchery origin. However, CDFG has been planting hatchery non-native trout in Niles Canyon for years, and recently planted 10,000 hatchery chinook in Lake Del Valle.. Salmon historically used this watershed for spawning, whether or not they were here every year is irrelevant. Since our native salmon are gone, we might as well rebuild a salmon stock with fish that show up at the right time and are able to survive. Salmon restoration will not conflict with steelhead restoration, in that fall-run salmon fry will move out of the system the same year they are hatched - they do not need extra flows for rearing over summer. Also, salmon will enter the watershed and spawn when fish passage facilities are in place anyhow.