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SYR Fish Management Plan
May Public Meeting Comments
Questions & Answers

General Comments on the Fish Management Plan:

The Plan doesn't state a measurable objective. How are we going to (quantifiably) measure the success of the program? How are we going to measure habitat recovery? What is the timeline?

> The Plan recommends a series of projects, each with specific goals and measurable objectives. Overall, we will measure the success of the Plan through improved habitat quality. The measures of habitat quality include spawning habitat (e.g. appropriate spawning gravels, access to spawning areas, appropriate flows), rearing habitat (e.g. adequate pools/refugia, water temperature, flow, access to rearing habitat), quantity and quality of riparian habitat, and increases in year-round flows. We will then see how fish populations respond to any habitat improvements (e.g. Are spawning habitats being utilized? Are various age classes of fish inhabiting improved pool habitats?). Each project will have a specific timeline for success. We are not counting fish because it is not appropriate for this system.

Comment: Opinion that the term "typical" used in the Plan is not appropriate. "Episodic" is more descriptive.

There is a map in the Plan that characterizes current habitat as poor, fair, and good. If we implement the Plan, what do we expect to occur to the habitat rating categories? Would these ratings move up a step, for example "poor" habitat to become "fair?"

> This depends on each action that is implemented. The goals of each project will be laid out as each project in defined. But, yes, the ratings should go up in some areas.

Did we look above Bradbury Dam to evaluate impacts? Do we get credit for protecting the fishery above the dam?

> The primary focus of the Plan coincides with the ESU boundary which is on the Lower Santa Ynez River below Bradbury Dam. So we do not really get "credit" for any habitat enhancements above the dam.

Comment: We really need better management of the watershed above the dam so that greater runoff could occur. Controlled burns should be continued.

> There is a debate within the Forest Service as to how much to burn at a time. Both the City and County of Santa Barbara are in favor of the controlled burn program.

What portion of Hilton Creek is the Plan talking about restoring? The quarry contributes lots of sediment to the creek. Is this a problem?

> Implementation actions have been recommended for the portion of Hilton Creek that lies on Bureau of Reclamation (Reclamation) property. The quarry is following a sediment control plan approved by the Regional Water Quality Control Board to contain sediments produced by quarry operations in mitigation ponds. The SYRTAC Project Biologist has only observed

excessive sediment input into Hilton Creek once in five years during the first storm of the 1997-98 storm season. Even during this event, the resulting turbidity cleared quickly and caused no negative impact to the fish in the stream. Before and since then, sediment has not been a problem.

What happens down the road? Where is the mandate for implementation?

Reclamation has an obligation through the Biological Opinion and Water Rights permits to implement the recommendations in this Plan.

Comment: Water agencies are contributing funds to this process and discuss funding at public meetings. The water agencies have an interest in keeping this plan going for the foreseeable future.

Is there a reason steelhead aren't specifically listed as the "only" objective? It seems they are the only species considered in the Plan, yet that's not clearly stated. Are all fish equally important? Will the Plan protect all species (e.g. bass, catfish)? Or are steelhead considered the best/only barometer of river health?

All aquatic species are considered in the Plan. Steelhead are the most sensitive and have the most stringent life-history requirements. The other aquatic species should benefit from actions that benefit steelhead.

Where are we monitoring habitat? Are we ignoring everything downstream of Buellton? Why does the Plan's emphasis [seem to be] upstream of Buellton?

The SYRTAC studies focus on year-round habitat, much of which is above Buellton. All of the south-side tributaries below Bradbury Dam have been studied as part of this plan. These tributaries include: Hilton, Quiota, Alisal, Nojoqui, Salsipuedes, El Jaro and San Miguelito Creeks. Each of these is described in detail in the technical appendix. We are also monitoring the lagoon. Along some creeks access for surveys has been limited due to private property. A portion of Hilton Creek lies on Bureau of Reclamation Property. As such, access for surveys has been available, and opportunities for restoration actions are greater and easier. We intend to pursue activities on all tributaries where restoration potential and (lack of) passage barriers deem it prudent, pending landowner cooperation.

Are we giving up on Salsipuedes/El Jaro (and other tributaries below Buellton)? What are the issues in this system? What are we planning to do in the tributaries?

We are definitely not "giving up" on the Salsipuedes/El Jaro watershed. We are currently pursuing conservation easements with interested landowners on this watershed. The technical appendix outlines potential actions for each of the tributaries, including those below Buellton.

Is it true that if there were no steelhead in the river, or if they hadn't been listed as endangered, then we wouldn't need this Plan?

No. As part of the water rights permits to operate Bradbury Dam, Reclamation and the Cachuma Project member districts have an obligation to protect public trust resources below the dam. Steelhead is only one of these resources. The SYRTAC began its studies and work on this Plan in 1993 before steelhead were listed in 1997. Because of the listing, emphasis has been placed on steelhead and steelhead habitat, but all aquatic resources are considered in the Plan. The State Water Board wants to know the impact of the Project on all public trust resources, so we would have to develop a Plan even without the endangered species listing.

Does Department of Fish and Game (DFG) have a separate steelhead plan?

In 1996 DFG published the *Steelhead Restoration and Management Plan*. This manual identified the restoration and enhancement of spawning and rearing habitats in tributaries below Bradbury Dam as one of its primary recommendations for restoration along the Santa Ynez River. SYRTAC's *Fish Management Plan* starts with the recommendations of DFG's plan, further describes the habitat and makes specific implementation recommendations.

Are we water rich or habitat poor? Do we have more water or more habitat?

These are not unrelated. Putting more water into the Santa Ynez River does not necessarily help because beyond a certain point in the year, water temperatures become too warm regardless of the amount of water in the system. Putting cool water into the tributaries would help, but we can't get it there from the reservoir. This translates into relatively poor summer habitat.

Do the willows near Lompoc create barriers for steelhead migration? How does the Plan address this?

In general, willows do not necessarily create a passage barrier for steelhead but may be an impediment if flow in the river is affected or if their is no passage corridor through the willows. Any willow clearing activities implemented for flood control would serve to benefit steelhead passage.

Increased flows will lead to flood control and riparian habitat issues. Who will pay for the consequences of increased flows? (referring to Lompoc flood control issues).

Flood control issues in the Santa Ynez River have been of concern for a very long time. The County Flood Control District has had ongoing permitting difficulties with the Army Corps of Engineers and other involved agencies. The impact (environmental and economic) of increased flows in the river as a result of additional water being released to sustain fish habitat will be evaluated through in the Environmental Impact Report being prepared for the State Water Board water rights hearings in 2000. However, increased flow for the fishery does not mean there will be water flowing all the way to Lompoc; the extent of the flow is dependent on the rain year. Even with a 5-10 cfs release, water will probably not flow past Buellton. Modification of the "willow dams" is not within the scope of the Plan.

Is flood control one of the public trust issues?

Not in the sense of fish, vegetation, and water quality.

What caused us to find that Hilton Creek has the best "good" spawning habitat?

Spawning habitat is based on a number of factors including quantity and quality of spawning gravels, water temperature and flow. SYRTAC surveys also note the presence of redds and spawning activity. Compared to the mainstem and many of the tributaries, Hilton Creek has the flow, gravel and temperature required for steelhead spawning, as well as the presence of redds and spawning individuals. What Hilton Creek lacks is natural perennial flow to support the offspring that are produced. The Hilton Creek Water Supply System was developed to address this issue and will provide the perennial flow to allow the offspring to grow until they migrate to the ocean. Voluntary property owner participation is needed to work anywhere else in the system.

Comment: You are trying to fix the steelhead "problem" with the poorest habitat we have. This is a weakness in the Plan. The best habitat is above Bradbury Dam, yet the management actions are focused in the poor habitat below the dam. The upper basin has the best habitat, now and historically.

> Yes, the best steelhead habitat historically was in the upper basin. Bradbury Dam prevents upstream migration and passage around Bradbury Dam is infeasible, so we are looking for opportunities in the lower basin to provide steelhead habitat.

Comment: Most management actions contemplated are below the dam. Everyone knows the best habitat is above the dam. Cal Trout believes that one of the things that should remain on the table is to find a way to reconnect the habitat upstream. A fish ladder is not feasible, but trap and truck operations are. Jennifer Nielson (genetics expert) has said that it is good to have anadromous and resident fish interbred even though it is hard on the fish to move them. Santa Barbara Sea also supports the trap and truck option and would like to see this option higher on the management list of priorities to maintain the genetic mixing of resident and anadromous forms.

> At this time, NMFS restricts the handling of steelhead to only rescue efforts. NMFS and DFG have required that trap and truck be de-emphasized, however, we have not removed it from the list of options. The Plan is a living document and we will take another look at trap and truck if there is an opportunity to do so at a later time.

Comment: California Parks and Recreation Department and users of the Lake Cachuma fishery have not really been involved in this issue.

> We have invited them and welcome their input and contributions. The County Fish and Game commission has been involved for the recreational fisheries in Lake Cachuma.

Comment: We need watershed management, especially with reference to wet El Nino years and planning.

> Yes, we agree. This is very important.

Comment: The Plan is thorough and well written.

Property/Water Rights Comments:

Comment: Clarify in the Plan that only the lower basin habitat is privately owned. Much of the upper basin is National Forest.

Do we have cooperation of landowners? What percentage?

> We have held workshops with several landowners and a number of them along Salsipuedes/El Jaro Creeks have expressed interest in pursuing conservation easements and conservation management practices. We intend to continue our outreach efforts to encourage other landowners to voluntarily participate in the process. We will also help match interested owners with funding sources to carry out habitat enhancements.

Are we forecasting condemnation of private property?

> Absolutely not. Participation is voluntary. We are recommending voluntary actions which

landowners can implement on their own properties, and pursuing conservation easements if the landowner expresses an interest in this option.

There is concern that a change in Cachuma Project yield with respect to fish releases may lead to increased pumping. Many owners currently do not pump to their allowed allocations. How does the Plan address pumping rights and impacts to fisheries? Concern that pumping may be considered a fish "take" by NMFS.

Currently, water allocated for fish releases (2,000 acre feet per year) comes out of Cachuma Project yield. This amount may increase depending on what is eventually required by NMFS through the Biological Opinion and/or the State Water Board at the water rights hearings. The Plan does not address prescriptive water rights relative to the impact on fisheries. NMFS generally is of the opinion that if anyone removes or alters a component of the habitat needed by a threatened or endangered species, it can be considered a "take". If NMFS thinks that increased pumping is having an impact to surface water flow and, therefore, to steelhead/rainbow trout habitat, they will likely want to evaluate individual pumpers.

Comment: Need to balance water rights (i.e. pumping) and fisheries issues. As agricultural lands are converted from rangeland to irrigated crops (especially vineyards), pumping may increase. Suggested that adjudication is needed to give the assurance that property rights will not be penalized.

It has been our experience that adjudication doesn't work in these situations. We are pursuing a cooperative approach.

Comment: It is necessary to balance protection of public trust with prescriptive water rights. There may be an opportunity with this Plan to give incentives to owners for participation in fish preservation measures if their water rights could be protected. For instance, owners could trade "riparian rights" through conservation easement programs for guaranteed pumping rights by the State Water Board.

Questions about the State Water Board/NMFS Process:

When do we expect the State Water Board hearings?

The scheduled date is December, 2000.

When do we expect the CEQA review?

The CEQA process has already started and an Environmental Impact Report will be prepared by the State Water Board. More information will be available in the near future.

Will the State Water Board give credit for the existing enhanced fisheries upstream of (and resulting from) Bradbury Dam?

The Board will look at beneficial uses of the reservoir and the river.

Comment: Cachuma is only one water project. Ultimately the State Water Board will look at all water projects.

What happens if the National Marine Fisheries Service (NFMS) & State Water Board don't accept the Plan? Do they have the power to step in and do something more "heavy-handed"?

We are required to have a Plan in place; NMFS will not write a separate one. NFMS and the State Water Board staff are actively involved in SYRTAC process. The Endangered Species Act does give NMFS the power to make changes or additions to it and it is very possible for them to put more emphasis on some of the measures being suggested. However, they are contributing input at every stage. It is our intention to continue this close relationship so that when the Plan is presented, they will understand it and accept it.

What are some examples of fish preservation measures that NMFS may want to see considered in the Biological Opinion that aren't in the Plan?

The Management Alternatives report outlined over 45 alternatives. Each were evaluated and discussed in depth. For this reason and because NMFS is working closely with us on the Plan and the Biological Assessment, we do not anticipate that there will be any new measures we have not already considered. NMFS may have a different emphasis or priority for some of the measures, such as a different mix of tributary actions versus the main stem or the amount of stream flow may need to be increased over what is being recommended. But we do not anticipate that any new measures will come to light.

Does the Plan overlap with the Biological Opinion for Section 7 consultation? What is the effect on the Cachuma Project?

Yes, there will be considerable overlap, but the Biological Opinion will only address those options directly under the jurisdiction of Reclamation. Baseline will be existing operating conditions with the dam in place.

When do we expect the Biological Opinion from NMFS?

August, 1999.

Is "safe harbor" an option for conservation actions?

It may be. Typically NFMS has not used safe harbor for aquatic ecosystems, but we are investigating this as an option.

Will this Plan lead to a permit for [continued] Cachuma Project operations?

Yes, this Plan is an integral part of the required documentation for the State Water Board hearings in 2000.

What role dos NMFS's critical habitat listing play in this Plan? Will NMFS wait to see how this Plan works out?

A Critical habitat listing has been proposed and any effect the Plan may have on critical habitat will be discussed with NMFS.

Steelhead/Fish Biology Questions:

What are the effects of state water on steelhead imprinting?

The release of state water is not expected to impact steelhead imprinting. The volume of state water is small compare to the amount of project water. In addition, state water would not be

released to the river during the period when smolt may be migrating, except at the very tail of the migration period during about fifteen percent of the years. Therefore, during the vast majority of years there would be no impacts on steelhead imprinting at all. During the fifteen percent of years when releases might occur, these releases would begin during the latter part of the migration season and so would affect only a small proportion of the smolt in that year. In addition, smolt tend to immigrate earlier in dry years (when such releases would occur), which would further reduce the potential impact of state water releases. Finally, state water releases would be mixed with Cachuma Project water, which would likely eliminate any remaining effect. CCWA is currently consulting with NMFS about these releases and will develop measures to avoid or mitigate any potential impacts that may occur.

Can Southern Steelhead manage warmer temperatures [than cited in the literature]?

Steelhead may survive at temperatures slightly higher than 25 degrees Celsius. This criterion was selected as a conservative estimate of their temperature tolerance. Literature evidence on other forms of rainbow trout from warm climates indicates a thermal maximum temperature of 26.2 degrees C. However, there is little evidence that steelhead can withstand temperatures of greater than 25 degrees C for a period of more than a few hours. Steelhead have been observed in warmer temperatures, but observational evidence indicates that these fish are extremely fragile and can be killed even by relative mild stresses.

What is the temperature criteria for Southern Steelhead? Is it higher here than north of us?

This has not yet been determined. It is possible that Southern Steelhead may have a greater temperature threshold than northern species, but not enough data has been collected to date.

What does "rainbow/steelhead trout" mean? How can you tell them apart?

Rainbow trout and steelhead are the same species. Steelhead are the anadromous form of the species which at a critical stage in their life history, smolt and migrate to the ocean, then return to their home streams to spawn. Unlike salmon, steelhead do not die after spawning, but can return to the ocean and return again to the streams to spawn multiple times. The Rainbow form do not smolt and remain in streams their entire life and may reproduce without entering the ocean. The progeny of steelhead may exhibit a resident rainbow trout life history and the progeny of rainbow trout may exhibit an anadromous life history.

Are rainbow trout listed?

Landlocked rainbow trout and steelhead above Bradbury Dam are not listed. The anadromous form with access to the ocean is listed. NMFS considers all trout downstream of dams as potential steelhead, hence there is no fishing of any kind allowed downstream of Bradbury Dam.

Are hatchery fish downstream of the dam steelhead?

Hatchery fish are not protected under the Endangered Species Act.

When was the last time a steelhead migrated up from the ocean?

Every year of the study steelhead (both smolts and adults) have been sighted. Smaller fish captured this year may be steelhead, but until we get results from the DNA analysis it remains unclear about the genetic origin of these fish. A 26 inch migrant was caught in the trap last week.

What causes smolting? Does exposure to brackish water cause a fish to smolt, or does a physiological change drive a fish to saline water?

Smoltification is a suite of physiological, morphological, biochemical, and behavioral changes including development of the silvery color of adults and a tolerance to seawater that takes place in salmonid parr as they migrate downstream and enter the sea. Smoltification occurs when fish reach a particular size and condition and may also be influenced by the length of daylight, water temperature and water chemistry. Smoltification is not related to exposure to saltwater. Juveniles begin the smoltification process prior to reaching the ocean. Smoltification likely does cue the juvenile fish to begin moving downstream, although other factors may affect the migrational tendencies of juvenile steelhead as well.

Can a resident fish become a smolt even if its been resident for generations?

It is unlikely that a residualized fish will smolt if given access to the ocean. It is likely that its progeny could smolt and migrate.

If young rainbow/steelhead trout are "indistinguishable", then are they a different species?

Rainbow trout and steelhead are the same species.

If there were no dam, would fish above the dams migrate to the ocean?

Historically they did, so we assume that, yes, they would.

Have we seen any fish with anadromous behavior?

Yes. We have captured ocean-going fish in our migrant traps each year of the studies.

How many fish in the system are anadromous?

The number of anadromous fish within the system depends on the rain year. Any number would be speculation, but is probably less than 100.

What data do we have on inter-species competition, especially natives and exotics?

We have not studied inter- and intraspecies competition specifically. Clearly there are predation issues with exotics (e.g. bass) preying on young steelhead.

Comment: from a genetic perspective there is evidence that we don't want artificial movement of fish, they need to move (migrate) on their own. But interbreeding between resident (i.e. above Bradbury Dam) and anadromous forms increases genetic diversity. Therefore Cal Trout promotes mixing of these forms to maintain genetic diversity.

Comment: Because of concerns of mixing the genetic populations] can Parks and Recreation look at the issue of stocking fish from other regions?

We would welcome their input and cooperation.

Comment: There are new (cutting edge) methods for determining a fish's river of origin and if they are anadromous.

General Questions/Comments:

What are the effects of grazing on the river system?

Cattle in the streams can contribute fine sediments and fecal material, contribute to streambank erosion and remove riparian vegetation. Lack of vegetation increases the water temperature and eliminates important refuge areas. Increased sedimentation reduces spawning habitat and decreases the survival of eggs and young fry.

What other reports have the SYRTAC produced? Are copies available?

The Management Alternatives Report, the Synthesis Report, and Annual Data Compilation reports are available (we took the gentleman's name and address and sent him copies).

Comment: It seems that the Cachuma Project would have enhanced the flows for fish on the river. Water is now released during the summer (WR 89-18 releases) where the river was previously dry.

The Plan focuses on what we have today and how we can maximize the additional water now allocated for the fishery.

Do Cachuma summer releases enhance seasonal flows?

Yes.

Are beaver dams helpful (e.g. create pools) to steelhead, or not helpful?

Whether or not beaver dams are helpful is subject to speculation and is dependent on the rain year. Beavers provide good habitat when flows are high enough for fish to navigate through dams and pools. In low flow years they are possible passage impediments. Some years flow is sufficient to remove beaver dams. In other years (such as this year), flow was not sufficient to remove beaver dams directly downstream of Bradbury Dam, so that any migrating steelhead could not negotiate this particular dam.

Does water temperature drop when you reach the ocean/lagoon?

Yes, but in the summer they are still very high.

Is habitat between Buellton and Bradbury Dam different from pre-1950 or pre-1969? Do we have any records of what this reach looked like in 1952-69? After 1969, pools and vegetation that were in this reach are now gone. As a result, where will the fish now live?

The upper watershed was cut off by construction of Bradbury Dam in the 1950s, but the river always dried up in the summer. However, pools remained upstream of Buellton. The floods associated with the record storms of 1969 had a profound effect on the Santa Ynez River. Vegetation and pools were completely scoured particularly those areas close to the dam.

Where in southern California do we have the best potential to save steelhead? It certainly is not the Santa Ynez River.

The Ventura and Santa Clara Rivers have the best potential to re-establish significant runs of steelhead because they have little perturbances within their upper drainages (unlike the Santa Ynez River which has three dams). But there is probably not one or two streams that will pull

the Southern California ESU off the Endangered Species List. It will take a collective effort within the entire ESU.

Putting fish that are smolting into the estuary would provide good rearing habitat. Has this been considered.

DFG and NMFS are not ready to do this yet until benefits can be identified. There is a challenge on determining the effects of cooler salt water mixing with warmer fresh water lenses when the composition changes depending on the flow regime and time of year. Also the tide water goby, another endangered species, needs to be considered.

What is the steelhead restoration potential in Sisquoc Creek?

Restoration opportunities on Sisquoc Creek are very difficult. This particular stream is very flashy and any migration is subject to only periodic opportunities during the winter. There is good, wild habitat upstream but infrequent connectivity to the ocean. Also flows often decrease and go underground within a short time after storms. There are long wide, sandy bottom reaches of the stream which are not conducive to spawning of rearing. The lower section through Santa Maria is a migration corridor only and offers no spawning or rearing habitat.

Are passage barriers in the Salsipuedes/El Jaro drainage a problem?

At road crossings passage barriers are a problem and there are also some erosional problems. But in general, this is a very good system.

Comment: One way to open up areas for the fish is for Caltrans to look at removing passage barriers such as culverts and bridge modifications.

What percentage of the river will come under "control" of the SYRTAC now?

A very small amount. Lower Hilton Creek, Reclamation property below the dam, and in the Salsipuedes/El Jaro drainage through conservation easements.

Is it true that the Santa Ynez River was dry in the summer before Bradbury Dam?

Yes, unless it was a very wet year such as the 1998 El Nino year when the river maintained flow throughout the summer. It could also remain dry for almost the entire year in times of drought. The Santa Ynez River is within a Mediterranean climate zone and therefore exhibits flow characteristics typical of all rivers in southern California. It is an ephemeral rather than perennial stream which means that it generally flows during the winter and dries up in the summer. While there was no continuous flow throughout the entire basin before Bradbury Dam was constructed, there were several areas where large deep pools persisted throughout the summer. The majority of the river did dry, however, these refuge pools provided habitat during the summer months.

Where are the migrant traps located?

Hilton, Nojoqui, Salsipuedes, and San Miguelito Creeks.

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