



Fact Sheet

Frequently Asked Questions:

The Bay Delta Plan Update and Its Anticipated Impacts to Agriculture, Water Supply, and Wildlife

Following nearly 10 years of scientific review, draft policy development, and responses to public comments, the State Water Resources Control Board is finalizing its review and public comment period for the Lower San Joaquin River and Southern Delta piece of the Bay-Delta Plan update. The following is a frequently asked questions fact sheet intended to respond to common questions and misconceptions about this important update to the Bay Delta plan.

Why is the Bay-Delta Plan being updated?

The two Bay-Delta Plan updates are part of a delicate balancing act -- addressing an ecological crisis in the watershed and preventing further collapse of Bay-Delta fisheries while acknowledging the other vital water uses for millions of Californians. A dramatic decline in the once-thriving populations of native fish species that migrate through and inhabit the Delta has brought some species to the brink of extinction. In 1984, for example, about 70,000 fall-run Chinook salmon adults returned to the San Joaquin Basin. The number of returning adults dropped to 40,000 in 2010 and just 8,000 in [2014](#). The last time this water quality plan for the Bay Delta was updated was 1995.

FAQ1: Did the State Water Board consider the most recent and best science?

Yes. The plan amendments are based on years of study and analysis of the necessary steps to provide greater protection of fish and wildlife while balancing the needs of agriculture, business and residential water users. The overwhelming body of evidence demonstrates that increased flow is the vital piece of the puzzle to restore habitat and improve the survival of native fish and other species.

The science was subject to external [peer review – the same kind of scrutiny and rigor conducted at preeminent research facilities](#). The peer reviewers agreed with the central premise -- -- current diminished flows are harmful to native fish and wildlife, and that a more natural and more robust flow pattern would be beneficial.

Also see the response to the question on [peer reviewed studies](#).



CALIFORNIA ENVIRONMENTAL PROTECTION AGENCY

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FAQ2: Haven't salmon been doing better the last couple of years? Why does the State Water Board still need to act?

The science tells us that reductions in flows and alterations to the flow regime in the San Joaquin River (SJR) Basin resulting from water development over the past several decades have hurt native fish and wildlife. In science and policy circles, we call this negatively affecting beneficial uses. But it really means slower and warmer flows are bad for fish and wildlife. Crunching the numbers backs this up. Data collected by the California Department of Fish and Wildlife show returning adult fall-run Chinook salmon have fallen from approximately 70,000 in the mid-1980s to about 10,000 in 2016 and 2017. This is an 85 percent drop.

Yes, there has been some recent good news the past two years. In 2014-2015, however, returning adult numbers were, at about 4,000 returning adults, which is a more than 90 percent drop from the mid-1980s.

FAQ3: Will higher flows benefit fish populations, or are the plan amendments somehow related to the California WaterFix project?

Higher flows will definitely help native fish populations and other species. The [California WaterFix](#) is a separate project from the plan amendments that will also be subject to flow and other conditions to protect other legal users of water as well as fish and wildlife. The higher flows that are proposed in the plan amendments are intended to benefit native fish populations in the tributaries to the San Joaquin River where those fish are born and grow and return to spawn. Increased flows from the Lower San Joaquin River will reach the Delta. A small percentage of this could be exported under current rules but most of the water that is exported comes from the Sacramento River watershed, not the San Joaquin River. Moreover, increased flows into the Delta are likewise benefitting the fishery and water quality in the Delta for farms and municipalities.

More information on how the State Water Board is updating the Bay-Delta Plan is provided in the response to the [question on LSJR Plan Amendments](#).

FAQ 4: Why don't the Lower San Joaquin River Plan Amendments include the entire Delta and all of its tributaries, including the Sacramento River?

The Sacramento River and the San Joaquin River meet in the Delta but native fish populations like salmon in the San Joaquin River have generally been doing worse than in the Sacramento for a prolonged period of time. There are only minimal flow requirements in place on the Lower San Joaquin River tributaries to protect fish, particularly since a prior agreement to provide flows expired in 2011 and nothing has replaced that agreement. The three salmon-bearing tributaries of the Lower San Joaquin River also have fairly similar hydrology with the highest river flows occurring in May and June due to snowmelt from the high elevation mountains.

Sacramento River tributaries experience peak flows earlier in the year due to a higher proportion of water arriving as rain than snowmelt compared to the lower San Joaquin River tributaries. In addition, the southern Delta is heavily influenced by the Lower San Joaquin River, which is why it is included in the Lower San Joaquin River /Southern Delta update. Similarly, the Sacramento River provides the majority of the flow and influence for the Central Delta. Both are critically important to the health and survival of the Bay-Delta ecosystem but they influence them in somewhat different ways.

The State Water Board is addressing the entire Delta and its contributing watersheds through two separate processes. The first effort is focused on Lower San Joaquin River flows and Southern Delta salinity. On July 6, 2018, the State Water Board released the proposed final Lower San Joaquin River and Southern Delta updates to the Bay-Delta Plan, the associated final draft environmental document in support of those changes, and a notice of a board meeting to consider adoption of the changes and finalization of the environmental document.

The second effort is focused on the Sacramento River and its tributaries, Delta eastside tributaries (including the Calaveras, Cosumnes, and Mokelumne rivers), Delta outflows, and interior Delta flows. Together, this portion is referred to as the “Sacramento/Delta.” On July 6, 2018, the State Water Board released a framework for the Sacramento/Delta update, including the background, purpose, and need for the update, as well as a summary of information that will be included in the forthcoming draft environmental document/Staff Report.

The Sacramento/Delta update has been underway for some time. The State Water Board released a [fact sheet](#) and [Scientific Basis Report](#) in the fall of 2017, which generally describe recommended Sacramento/Delta updates to the Bay-Delta Plan (Plan amendments). The Scientific Basis Report which documents the science upon which those changes are based, was [reviewed by the Delta Independent Science Board](#) and was [peer reviewed](#) by an independent panel before release.

FAQ 5: Can flow alone address the decline of native fish? Did the State Water Board consider actions in lieu of, or in addition to flow measures, so as to avoid or minimize increasing surface water flow requirements?

Flow is key for fish survival and flow alone can help the species at risk through improving habitat, temperatures, and migration; however, the State Water Board also recognizes the importance of implementing habitat restoration and other non-flow measures to support and maintain the different habitat needs of fish and wildlife. For this reason, the State Water Board incorporates and recommends a range of non-flow actions complementary to the flow objectives for the reasonable protection of fish and wildlife in the plan amendments. Descriptions of these actions and their associated cost and potential environmental impacts are provided in [Chapter 16, Evaluation of Other Indirect and Additional Actions](#), and in [Master](#)

[Response 5.2, Incorporation of Non-Flow Measures](#). These recommended non-flow actions should be part of the overall effort to comprehensively address Delta aquatic ecosystem and tributary ecosystem needs, and results from implementation of non-flow actions can be used to inform adaptive implementation decisions under the plan amendments. As noted in the plan and below, the State Water Board is also encouraging voluntary actions that increase non-flow actions that can provide comparable protections at less flow.

FAQ 6: Is the State Water Board relying only on flows to protect salmon?

The State Water Board recognizes that non-flow measures serve an important role in river restoration by supporting native fish and wildlife and promoting ecosystem improvements that complement flow for the reasonable protection of fish and wildlife. The Bay-Delta Plan amendments therefore recommend non-flow measures to complement the new flow objectives. Flows alone can help fish populations by improving temperature and oxygen conditions, wetting habitat to generate food and shelter for native fish, and by improving flow conditions to benefit native fish habitat at the expense of predators. Implementing non-flow measures can potentially reduce the need for flows, within the 30 to 50 percent range under the proposal by more actively creating habitat that favors natives over predators, reducing temperatures, and taking other measures. Flow is the tool that the State Water Board can require. It can encourage but not require other non-flow measures. It can, however, accept such measures in a robust, transparent, and well monitored agreement if it demonstrates it can lead to comparable or superior improvements. Non-flow measures alone, however, are unlikely to show improvement without adding additional flows.

FAQ 7: What can the State Water Board do about non-flow fish stressors?

The State Water Board can and does recommend to the entities that will be responsible for attainment of flow objectives, and others, to take actions, other than flow, that will complement the LSJR flow objectives. The State Water Board recognizes that non-flow actions could assist in further improving habitat conditions that benefit fish and wildlife beneficial uses or improve related science and management within the Lower San Joaquin River Watershed. Increased flows, however, remain the principal means of implementation of the objective because science shows that additional flow is still needed, at a minimum, to reasonably protect fish and wildlife beneficial uses in the Lower San Joaquin River

The State Water Board's authority to require and enforce the implementation of non-flow actions depends on the proposed non-flow action and whether the facts and circumstances support requiring them. This is discussed in [Master Response 5.2, Incorporation of Non-Flow Measures](#).

FAQ 8: *Are there actions that can be taken to protect fish that are unrelated to flow?*

The following nonflow actions can be taken to address other stressors, in addition to flow:

- Increase and improve in-channel habitat to make it favorable for native fish by providing habitat types that benefit salmon, like riffles, runs, and pools for cold water refugia.
- Increase and improve flood-plain habitat, including lowering the floodplain so that it is wetted at lower flows.
- Provide gravel for salmon nests.
- Reduce predator hot spots created by structures and deep languid pools.
- Improve riparian vegetation to provide shade, cover, and food production.
- Improve reservoir operations and/or physical structures to maintain adequate water temperature conditions.
- Expand fish screening.
- Improve fish passage above dams.
- Improve fish and water barrier programs.
- Improve management and operation of fish hatcheries.
- Evaluate and revise, if needed, fish harvest policies and take actions to reduce illegal harvesting.

The above non-flow actions could work in concert with flows. For example, river channels can be improved for fish by adding spawning gravels and more complex habitat structure. In addition, floodplain habitat, which provides food and refuge for growing fish, can be restored and created in a manner that takes better advantage of flows. Increased flow, however, will amplify the benefits of existing and newly restored habitat available to fish. Ultimately, the right combination of flow and habitat is needed to create suitable conditions for fish survival, it's not one or the other. Fishery benefits will not materialize, for example, if additional habitat is provided by bringing the floodplain down to current water levels and the water temperatures are still high or if flows are further diminished because flow requirements are not in place to maintain those flows.

FAQ 9: *How are other fish species faring in the Delta?*

The 2017 report, [Scientific Basis Report in Support of New and Modified Requirements for Inflows from the Sacramento River and its Tributaries and Eastside Tributaries to the Delta, Delta Outflows, Cold Water Habitat, and Interior Delta Flows](#) provides population abundance trends for several species as part of the summary of scientific knowledge assembled in the report to inform fish and wildlife flow recommendations.

FAQ 10: *Is California “wasting” water to the ocean?*

This notion of “wasting” water to the ocean is a common misconception. California has extremely variable weather and climate, with both very dry and very wet times. When it is extremely wet and flooding, a lot of water flows out to the ocean. This happens because no one can use the extra water. During these events, the ground and existing water ways are already saturated. There often is not even room in reservoirs to store this extra water, which can become dangerous if it is coming in faster than it is going out, as we saw with Lake Oroville. The state is exploring opportunities to facilitate more storage above and below ground, including bond funding and other measures, however, as noted below, periodic higher flows are also important to ecosystem function and carry benefits all the way through to San Francisco Bay for people and ecosystems along the way.

During dry times, however, the overall amount of water in the rivers and streams is much less. When that happens, sufficient water must be kept in stream in order to keep the water from being too salty for human uses, not just to protect fish. In the end, water follows gravity and water channels carved from millennia and serve as a conduit – from the highest point of land to sea level – where it enters the ocean.

FAQ 11: *What purpose is there to allowing water to flow out to San Francisco Bay and the ocean?*

Sometimes a lot of water must flow through places like the Delta into the San Francisco Bay and ocean to make sure that the water in the Delta stays fresh enough to use for agriculture and drinking water. This happens often even during dry periods. If all the fresh water was used, and none left to flow into the ocean, then the water in the Delta would be unusable as a drinking water or agricultural supply. Moreover, just like people, fish need water to live. They need habitat, water quality, and flows so that they can live in and migrate through rivers and the Delta. The additional amount of San Joaquin River water proposed to be provided to protect fish is small compared to what people are using.

A recent Public Policy Institute of California report titled [A New Approach to Accounting for Environmental Water](#), which analyzed how and when flows were managed in the Sacramento-San Joaquin Delta, concluded: “During the driest hydrologic conditions, the water allocated to fish and other ecological uses is much smaller than the water that must be left instream to protect water quality for in-Delta diversions and export uses.”

FAQ 12: *Is the State Water Board favoring fish over people?*

No, the State Water Board is not favoring fish over people. The State Water Board is amending the Bay-Delta Plan to reasonably protect fish and wildlife and address the balance of instream needs and human uses. The new flow objectives require more water to remain instream to reasonably protect fish and wildlife to establish a better balance between human uses and the needs of fish and wildlife.

FAQ 13: *Is the State Water Board doubling or tripling the water left in the river?*

On average, the Lower San Joaquin River flow proposal will increase instream flows by approximately 26 percent—that's far less than a doubling of flows. And to achieve this increase in instream flows, surface water supplies for human uses will be reduced by approximately 14 percent, on average. However, the proposed Lower San Joaquin River flows will more than double or triple the current extremely low amount of water left in the Merced, Tuolumne, and Stanislaus rivers some of the time. That may seem high, but that is because conditions are now so bad in these rivers -- instream flows are sometimes only six percent of the total available flow. This means at those times that 94 percent of the water is going towards human uses. Fish and wildlife simply cannot survive with so little water. The Lower San Joaquin River flow proposal and its overall effects are summarized in the Final Substitute Environmental Document (SED) [Executive Summary](#).

FAQ 14: *How much extra water in terms of percentage is the State Water Board asking for from tributaries? Is this a 40 percent water supply reduction, as has been reported? Would half as much water be available for human uses?*

The Lower San Joaquin River flow proposal would provide a range of 30 to 50 percent of unimpaired flow from February through June in the Merced, Tuolumne, and Stanislaus rivers. The starting point is proposed to be 40 percent of unimpaired flow. This is not the same as a 40 percent reduction. The 40 percent unimpaired flow proposal would result, on average, in a 14 percent reduction in surface water supply for human uses like agriculture and drinking water, and an average 26 percent increase in instream flows on the Merced, Tuolumne, and Stanislaus rivers. Also, see the response to the question: [Is the SWB doubling or tripling the water left in the river?](#)

FAQ 15: *Does the SWB proposal ignore other salmon stressors?*

No, the proposed Lower San Joaquin River plan amendments and supporting draft Final Substitute Environmental Document (SED) recognize that other factors, like predation and loss of habitat, affect fish populations, and the draft Final SED encourages and incentivizes habitat restoration and other “non-flow” actions that are complimentary to flows. Nonetheless, the State Water Board also recognizes that increased flows will have a large positive effect on two big salmon stressors — lack of suitable habitat and high-water temperatures; increased flows will also provide migration clues for salmon and other benefits. The response to the question

on [what the SWB can do about non-flow fish stressors](#) describes the other actions that the State Water Board acknowledges are important to salmon.

FAQ 16: Haven't striped bass co-existed with salmon for many decades before fish populations declined?

Yes, striped bass have co-existed with salmon for many decades before fish populations declined. This shows that it is important to consider all factors when assessing stressors. Focused efforts to reduce predation opportunities (not necessarily predators) in some locations, however, may make a difference in the survival rates of depleted salmon and other species and provide some assistance to their recovery. Such predator control actions alone would require an ongoing intensive implementation program and would not address the habitat conditions that allow predator populations to thrive. Changing the habitat to benefit natives and disadvantage predators can help. Higher and more variable flows will create habitat conditions that are less suited for predator populations and provide conditions that reduce exposure of salmonids and other native fishes to predators, increasing the overall effectiveness of the predator control measures by allowing salmon to become more resilient by helping them to grow larger and faster, and by providing flow to get past predation hotspots.

FAQ 17: Does the Bay Delta Plan only save 1,100 fish?

Multiple commenters on the draft SED suggested that, according to the SalSim life-history population simulation model results presented in the SED, the plan amendments are only expected to produce approximately 1,103 salmon per year. This assertion is inaccurate and mischaracterizes the information presented in the SED. The State Water Board did not rely upon SalSim due to limitations in the model, either for impact determinations in the SED or for its conclusions regarding fish benefits, as explained in [Chapter 19, Analyses of Benefits to Native Fish Populations from Increased Flow between February 1 and June 30](#), of the SED and in [Master Response 3.1, Fish Protection](#).

FAQ 18: Why do the "peer reviewed studies" from the State Water Board and the irrigation districts come to different conclusions about flow and salmon?

As discussed in [Master Response 3.1, Fish Protection](#), a number of commenters on the draft SED stated that information presented in the SED regarding species life history, distribution, and status was outdated, citing examples of recently published literature, status reports, or other published and unpublished sources. However, in most cases, this new information did not conflict with or contradict the key scientific information used to support the impact determinations or benefits assessments in the SED.

As described in the [Technical Report on the Scientific Basis for Alternative San Joaquin River Flow and Southern Delta Salinity Objectives](#), studies that examine the relationship between fall-run Chinook salmon population abundance and flow in the SJR Basin generally indicate that:

- additional flow is needed to significantly improve production (abundance) of fall-run Chinook salmon; and
- the primary influence on adult abundance is flow 2.5 years earlier during the juvenile rearing and outmigration life stage

To the extent that any new science or studies indicate that different actions would benefit salmon, they can be accommodated through the adaptive implementation elements of the program of implementation as described in the [Revised Water Quality Control Plan \(Appendix K\)](#), [Executive Summary](#), and [Master Response 2.2, Adaptive Implementation](#).

Additional information regarding specific Lower San Joaquin River fish studies is provided in the response to question: [Did the State Water Board consider the most recent and best science?](#)

FAQ 19: *Is the unimpaired flow concept a rigid flow regime ignoring the timing of fish needs?*

The unimpaired flow concept is not rigid. The unimpaired flow requirement is designed to mimic the natural cues that species have evolved to respond to, but is not intended to be a rigid and fixed percent of unimpaired flow. The proposal provides for and encourages collaboration to use the flows as a “water budget” that can provide flows that are “shaped” or shifted in time to better achieve ecological functions such as increased habitat, more optimal temperatures, or migration cues. Adaptive implementation of flows allows a nimble response to changing information and changing conditions while minimizing unintended impacts and can provide more timely and efficient use of flows than an inflexible regime of prescriptive flow rates. This requires coordinated effort between water agencies and fish and wildlife agencies as well as stakeholders to accomplish.

FAQ 20: *Scientists say fish need flows for specific functions. Why doesn't the State Water Board use functional flows instead of unimpaired flows?*

The unimpaired flow approach actually provides a variable budget of water that can be used to provide functional flows. The flows needed to provide certain functions, such as to provide a certain quantity of habitat or a specific temperature threshold can often be much higher than the total quantity of water available in some years. Using a percent of unimpaired flow allows the State Board to establish a limited quantity of water, that is a percent of the total available supply, that can be used to provide as much functional flow as possible within a specified

budget. This means the fish and environment have to get by on a budgeted amount of water just like people do now. Determining and providing those functional flows requires voluntary action by local water agencies working with fish agencies as noted above. See also the response to questions on the [unimpaired flow concept](#), [peer reviewed studies](#), and the discussion of Unimpaired Flow as Functional Flow in [Master Response 3.1, Fish Protection](#).

FAQ 21: The San Joaquin River and Delta are no longer in a natural condition. Why does the State Water Board want to impose natural flows on a highly modified unnatural system?

The unimpaired flow approach will restore some of the natural pattern of flows to which fish are adapted. This approach, however, is not intended to return natural flows to an unnatural system. The unimpaired flow approach is simply intended to keep a portion of the total available supply in the rivers in a pattern that mimics natural patterns because that is what the science shows that fish will benefit from. It is important to note that the State Water Board flow proposals are for percentages of unimpaired flow that are far lower than 100 percent. In addition to providing a simple and correct way to quantify an amount of water that can be used to reasonably protect fish and wildlife, the unimpaired flow approach provides a simple method to share the available water supply for multiple uses-- to balance the competing beneficial uses for water.

FAQ 22: Does this water "belong" to the users?

Water is a shared resource that has many different beneficial uses, and all water within California is the property of the people of the state ([Cal. Const. art. X, § 5](#); [Wat. Code §102](#)). Water is protected for the use and benefit of all Californians. California's waters cannot be owned by individuals, groups, businesses, or governmental agencies. But riparian, pre-1914 and appropriative water rights (permits, licenses, and registrations) give individuals and others the right to beneficially use reasonable amounts of water according to a priority system and subject to public trust and other regulatory requirements.

FAQ 23: What does the term "public trust" mean? Do fish and wildlife have water rights?

Public trust is the principle that certain natural and cultural resources are preserved for public use, and that the government must protect and maintain for the public's use. Public trust values include navigation, commerce, fisheries, recreation, scenic, and ecological values. Fish and wildlife don't have water rights, but as stated above, fisheries are a public trust resource. The State Water Board has also identified fish and wildlife as beneficial uses, to be protected under state and federal law. As beneficial uses, the State Water Board must establish flow and water quality objectives to protect the use.

FAQ 24: *Were the comments submitted opposing the draft plan ignored?*

No comments on the draft plan or supporting documents were ignored. During the 6-month public comment period for the draft SED, the State Water Board received more than 33,000 letters/communications. More than 30,000 of these were form letters that expressed similar themes of support or opposition to the draft SED. The remaining 3,100 were unique communications. The State Water Board reviewed the 3,100 letters/communications and identified that roughly 10,000 comments within those unique communications were received from federal, state, and local agencies; elected officials; stakeholders; and members of the public. A comprehensive [Responses to Comments](#) document provides more information on how comments were reviewed and responded to, and general and specific responses to all comments received are provided on the State Board's [Bay-Delta Plan Update: Amendments and Substitute Environmental Document \(SED\) for Lower San Joaquin River and Southern Delta](#) website.

FAQ 25: *Is this just a plan to send more water south?*

No, the Bay-Delta Plan Update for Lower San Joaquin River and Southern Delta is not a plan to send more water south. As stated in the [Executive Summary](#) for the plan amendment, the underlying fundamental project purpose and goal of the plan amendments are as follows:

- To establish flow objectives for the February–June period and a program of implementation for the reasonable protection of fish and wildlife beneficial uses in the Lower San Joaquin River Watershed, including the three eastside, salmon-bearing tributaries (the Stanislaus, Tuolumne, and Merced Rivers)
- To establish salinity objectives for the reasonable protection of southern Delta agricultural beneficial uses and a program of implementation to achieve the objectives
- Exports are also governed by rules regarding environmental and water quality pertaining to protecting flows for fisheries and water quality purposes.

FAQ 26: *If the WaterFix is built, will it have to comply with the Bay Delta Plan flow requirements?*

Whether to approve water right changes for the WaterFix tunnels, and under what conditions, is the subject of a separate, ongoing State Water Board [hearing](#). Any approval must include conditions to avoid injury to municipal, industrial, agricultural, and fish and wildlife beneficial uses in the Bay-Delta. Pursuant to the Delta Reform Act, any approval of the WaterFix must also include appropriate Delta flow criteria. The flow criteria included in a WaterFix water right approval are subject to modification over time, including via ongoing Delta water management actions, such as the Bay-Delta Plan updates. Once the State Water Board completes updates

for the Lower San Joaquin/Southern Delta and Sacramento River/Delta, the board will commence an implementation phase that requires applicable water right holders to comply with the Bay-Delta Plan requirements. In that phase, the relative seniority of water rights within watersheds is a key consideration in allocating responsibility for meeting plan requirements. During that implementation phase, any water right conditions applicable to WaterFix may be adjusted to implement the Bay-Delta Plan.

FAQ 27: The estimations of economic harm are vastly different between the estimates included in the SED and estimates by opponents. Why is that?

Several commenters performed their own economic analyses and arrived at higher regional economic effects by using extreme assumptions compared to those made in the SED. The assumptions used in the economic analyses performed by the commenters, with regard to agricultural economic effects, include the following.

- Restrictions on how much groundwater will be used to supplement reduced surface water supplies and assumptions that the Sustainable Groundwater Management Act (SGMA) will prevent increased groundwater pumping.
- A one-to-one relationship between a reduction in feed crop production and a reduction in dairy and livestock sector production.
- The assumption that the dairy and livestock industries cannot replace reduced grain and pasture production in the plan area with other feed crops or with supplies from outside of the plan area.
- Reductions in crops, such as vegetables, will proportionally reduce production of processed products.

Some of the commenters also apparently assumed in their modeling of economic effects that there would be no reduction in surface water use, even as reservoir levels dropped. This extreme and unreasonable assumption results in frequent emptying of reservoirs. Not only would entirely emptying reservoirs result in enormous economic effects, it would also result in catastrophic temperature effects on salmon. Historical evidence shows that reservoir operators and water districts generally operate to meet multiple objectives of maximizing water delivery to meet demands, saving some water in reservoirs, and providing minimum allocations when water supply is low and do not, as some commenters analyses suggested, drain the reservoirs dry to meet full demands every year. Rather, operators conserve water by allocating the available water based on the projected supply. This is the approach reflected in the SED analysis which provides water as reliably as possible from year to year given system constraints.

There are multiple valid ways to conduct an evaluation of regional economic effects, including the SED's method. The SED presents a more reasonable scenario of what would happen in response to the Lower San Joaquin River alternatives based on actual historical observations,

including strategic use of reduced surface water, reservoir carryover storage, strategic use of groundwater during periods of drought to maintain permanent crops and some feed crop production, substitution of high water use feed crops for feed crops that use less water, import of dry feed from other areas, and maintenance of high revenue producing crops.

FAQ 28: *Will schools lose safe drinking water because of this plan?*

The issue of safe drinking water for schools and others, including disadvantaged communities, has been raised because of concerns that with reduced surface water supplies, water users in the Lower San Joaquin River watershed will rely more heavily on groundwater, and that this could result in degraded water quality. Schools will not lose safe drinking water because SGMA requires that groundwater be managed sustainably to ensure reliable water supplies and to protect against degradation. Currently, all groundwater is managed locally. Consistent with that approach, SGMA entrusts local public agencies to achieve sustainability but places the state in an important oversight and enforcement role. Moreover, the state is working on ways to streamline focused groundwater recharge. In addition, the State Water Board has been actively engaged in helping communities through financial and technical assistance and is continuing to seek even more tools from the legislature to be able to do even more for small disadvantaged communities and schools. Drinking water is also a significantly smaller water use than agriculture.

More information on SGMA is available in [Master Response 3.4, Groundwater and the Sustainable Groundwater Management Act](#). More information on the potential impacts of the plan amendments on disadvantaged communities (DACs) and small public water systems is provided in [Master Response 2.7, Disadvantaged Communities](#).

FAQ 29: *How are other fish species faring in the Delta? (charts?)*

The 2017 report, [Scientific Basis Report in Support of New and Modified Requirements for Inflows from the Sacramento River and its Tributaries and Eastside Tributaries to the Delta, Delta Outflows, Cold Water Habitat, and Interior Delta Flows](#) provides population abundance trends for the following species as part of the summary of scientific knowledge assembled in the report to inform fish and wildlife flow recommendations:

- Sacramento River and Delta Tributary (Mokelumne, Cosumnes, and Calaveras) Chinook Salmon
- Sacramento River and Delta Tributary Steelhead
- Longfin Smelt
- Green Sturgeon
- Sacramento Splittail
- Delta Smelt
- Starry Flounder
- California Bay Shrimp

- Zooplankton

In summary, these species are also generally in decline and doing poorly, with several species at the verge of extinction, due to reduced flows into and out of the Delta as well as other nonflow stressors like habitat modifications. As discussed above, the State Water Board is considering new and modified flow and water project operational requirements to protect these species as part of the Sacramento/Delta update to the Bay-Delta Plan. That update will also provide for voluntary solutions by water users that reduce the need for flow by addressing nonflow stressors. A draft environmental document for that effort is expected to be released later this year.

For more information please visit the Bay Delta Update page found [here](#).

This fact sheet was last updated on Aug. 21, 2018.