

Issue Paper 2. CWC Public Benefits Discussion: Ecosystem Benefits

The Issue

Exactly what ecosystem-related benefits should be eligible for public funding under the SBX7-2 (the Act) definition of ecosystem benefits? Do any and all economic benefits that result from use of surface storage for ecosystem improvement qualify as an ecosystem public benefit? Do all benefits that result from “restoration of aquatic ecosystems and native fish and wildlife” qualify as ecosystem benefits?

Background

SB X7-2 Chapter 8 (the Act), codified as California Water Code §79740 et seq., requires the California Water Commission (Commission) to develop and adopt, by regulation, methods for quantification and management of public benefits associated with eligible water storage projects .

The Act’s definition of ecosystem improvement public benefits is:

Ecosystem improvements, including changing the timing of water diversions, improvement in flow conditions, temperature, or other benefits that contribute to restoration of aquatic ecosystems and native fish and wildlife, including those ecosystems and fish and wildlife in the Delta.

The Act also states that

79746. (b) No project may be funded unless it provides ecosystem improvements as described in paragraph (1) of subdivision (a) of Section 79743 that are at least 50 percent of total public benefits of the project funded under this chapter.

So, the definition of what can be counted may influence the ranking of projects, the share of all public benefits that are for ecosystem, and through cost allocation, the exact definition and scope of ecosystem benefits will influence the share of cost allocated to public benefits.

The Act also states

79742. A project shall not be funded pursuant to this chapter unless it provides measurable improvements to the Delta ecosystem or to the tributaries to the Delta.

A common approach to evaluating ecosystem benefits is known as “ecosystem services.” Ecosystem improvements can provide a set of physically quantifiable benefits, called ecosystem services, that have value to identifiable groups of people. Ecosystem services may include, among other things, benefits obtained by recreational users or benefits obtained by water users such as increased supply or reduced costs of water supply.

Staff’s proposed option #1

Any economic benefits that result from “the restoration of aquatic ecosystems and native fish and wildlife” are ecosystem benefits.

Some examples of how this clarification would be applied are:

- A salmon population increases because of improvement in flow conditions and temperature, and as a result recreational catch increases. The benefit of increased catch would be counted as ecosystem improvement because it was caused by ecosystem improvement.

- Water is released from storage in order to contribute to flow and temperature to help restore aquatic ecosystems and native fish and wildlife. Some of this water can be diverted or exported downstream without diminishing the ecosystem benefit. The water supply benefit of this diversion or export would not be counted as an ecosystem benefit because it was not caused by “restoration of aquatic ecosystems and native fish and wildlife.” There is a benefit, but it is a water supply benefit because it was incidental to the ecosystem operation and was not caused by ecosystem restoration.
- Improvements in flow conditions in the Delta are expected to contribute to the recovery of Delta smelt, and this recovery is expected to reduce pumping restrictions and increase water supply. The water supply benefit caused by recovery of Delta smelt would be counted as an ecosystem improvement benefit.
- A water supply project south-of-Delta would replace some Delta supply with a local supply, thereby reducing Delta exports and improving flow conditions in the Delta. The Delta flow improvement is expected to contribute to restoration of aquatic ecosystems and native fish and wildlife. The flow improvement would be protected and would not be available for export by others; therefore, it would provide an ecosystem benefit.

In summary, any ecosystem services resulting from restoration of aquatic ecosystems and native fish and wildlife would be ecosystem benefits regardless of who obtains the benefits.

Staff's proposed option #2

A benefit should be categorized based on the type of benefit obtained, regardless of whether or not it was enabled by restoration of aquatic ecosystems and native fish and wildlife.

- In the first example above, since recreational fishermen are the beneficiaries of the value of the catch, that benefit would be assigned to recreation. The benefit would be an eligible public benefit under the Act, but it would not count under 79747(b) as part of the 50% ecosystem requirement.
- In the second example above, the water supply benefit of this diversion or export would not be counted as an ecosystem benefit simply because it is a water supply benefit (same result as in option #1 above).
- In the third example, the water supply enabled by relaxed pumping restrictions accrues to water users in the regions receiving the supply increment. It would be counted as a water supply benefit.
- In the fourth example, the flow improvement is an eligible public benefit, but any recreation or water supply benefits would be counted as recreation or water supply, not ecosystem.

Under option #2, the eligible ecosystem public benefits would be limited to the economic value that the public places on the type and amount of restoration of aquatic ecosystems and native fish and wildlife provided. These types of economic benefits are often estimated using survey methods.

Other Issues

1. Special status of native fish and wildlife

An additional issue involves the Act's apparent deference to native fish and wildlife. The ecosystem benefits must contribute to "restoration of aquatic ecosystems *and native* fish and wildlife" (§79743(1), emphasis added). For ecosystem benefits, should only benefits to native fish and wildlife be counted? Should economic benefits caused by ecosystem improvements for non-native species, such as striped bass, be included?

2. Restoration of terrestrial habitat or creation of new aquatic habitat may not be eligible

The Act specifies that ecosystem benefits “contribute to restoration of aquatic ecosystems **and** native fish and wildlife” (emphasis added). Restoration of aquatic ecosystems is specifically included, but not restoration of terrestrial ecosystems. Should restoration of terrestrial habitat be eligible? Also, creation of artificial aquatic ecosystems, for example, in a reservoir, may not be eligible. Should any actions that benefit native fish and wildlife be eligible as ecosystem improvements?