

AMENDED IN SENATE JULY 6, 2011
AMENDED IN ASSEMBLY MAY 27, 2011
AMENDED IN ASSEMBLY APRIL 11, 2011
AMENDED IN ASSEMBLY MARCH 23, 2011
CALIFORNIA LEGISLATURE—2011–12 REGULAR SESSION

ASSEMBLY BILL

No. 1299

**Introduced by Assembly Member Huffman
(Coauthors: Assembly Members Fong and Ma)**

February 18, 2011

An act to amend Section 7050 of, to add Sections 92, 95, and 7080.5 to, and to add Chapter 9 (commencing with Section 7095) to Part 1.7 of Division 6 of, the Fish and Game Code, relating to marine fisheries.

LEGISLATIVE COUNSEL'S DIGEST

AB 1299, as amended, Huffman. Marine fisheries: forage species.

Existing law, enacted as part of the Marine Life Management Act of 1998, generally establishes a comprehensive plan for the management of marine life resources. Existing law requires the Department of Fish and Game to develop, and submit to the Fish and Game Commission for its approval, a fishery management master plan, and provides for the preparation and approval of fishery management plans, which form the primary basis for managing California's sport and commercial marine fisheries.

~~This bill would enact the Forage Species Conservation and Management Act of 2011. The act would state the policy of the state with regard to forage species, as defined. The act state that it is the policy objective of the state to ensure the conservation, sustainable use,~~

and, where applicable, restoration of California's forage species populations, including their habitats and associated water quality, for the benefit of all citizens of the state, and achieve ecosystem-based management of marine forage species that recognizes, prioritizes, accounts for, and incorporates the ecological services rendered by forage species, including the dependence of predator species on those forage species. The bill would define "forage species" and "ecosystem-based management" for those purposes. The bill would require new fishery management plans and amendments to existing fishery management plans for forage species completed after January 1, 2012, to be consistent with that policy, to the extent that scientific data is readily available for that purpose.

Vote: majority. Appropriation: no. Fiscal committee: yes.
State-mandated local program: no.

The people of the State of California do enact as follows:

1 SECTION 1. Section 92 is added to the Fish and Game Code,
2 to read:

3 92. "Ecosystem-based management" means a management
4 approach that recognizes the array of interactions within an
5 ecosystem, including humans, rather than considering single issues,
6 species, or ecosystem services in isolation.

7 SEC. 2. Section 95 is added to the Fish and Game Code, to
8 read:

9 95. (a) "Forage species" includes Pacific herring (*Clupea*
10 *pallasii*), Pacific sardine (*Sardinops sagax*), northern anchovy
11 (*Engraulis mordax*), Pacific mackerel (*Scomber japonicus*), jack
12 mackerel (*Trachurus symmetricus*), market squid (*Doryteuthis*
13 *opalescens*), shortbelly rockfish (*Sebastes jordani*), smelt
14 (*Osmeridae*), silverside (*Antherinidae*), lanternfish (*Myctophidae*),
15 Pacific saury (*Scomberesocidae*), American shad (*Alosa*
16 *sapidissima*), Pacific tomcod (*Microgadus proximus*), Pacific hake
17 (*Merluccius productus*), sandlance (*Ammodytidae*), neon flying
18 squid (*Ommastrephes bartramii*), boreal clubhook squid
19 (*Onychoteuthis borealijaponica*), jellyfish (*Medusozoa*), mysid
20 shrimp (*Mysida*), mesozooplankton, and any species designated
21 by the commission pursuant to subdivision (b).

22 (b) The commission may designate additional species as forage
23 species, if it finds that a species comprises a major component in

1 *the diets of fish, birds, mammals, or turtles, and contributes*
2 *disproportionately to ecosystem functions and resilience due to*
3 *its role as prey.*

4 SEC. 3. *Section 7050 of the Fish and Game Code is amended*
5 *to read:*

6 7050. (a) The Legislature finds and declares that the Pacific
7 Ocean and its rich marine living resources are of great
8 environmental, economic, aesthetic, recreational, educational,
9 scientific, nutritional, social, and historic importance to the people
10 of California.

11 (b) It is the policy of the state to ensure the conservation,
12 sustainable use, and, where feasible, restoration of California's
13 marine living resources for the benefit of all the citizens of the
14 state. The objective of this policy shall be to accomplish all of the
15 following:

16 (1) Conserve the health and diversity of marine ecosystems and
17 marine living resources.

18 (2) Allow and encourage only those activities and uses of marine
19 living resources that are sustainable.

20 (3) Recognize the importance of the aesthetic, educational,
21 scientific, and recreational uses that do not involve the taking of
22 California's marine living resources.

23 (4) Recognize the importance to the economy and the culture
24 of California of sustainable sport and commercial fisheries and
25 the development of commercial aquaculture consistent with the
26 marine living resource conservation policies of this part.

27 (5) Support and promote scientific research on marine
28 ecosystems and their components to develop better information
29 on which to base marine living resource management decisions.

30 (6) Manage marine living resources on the basis of the best
31 available scientific information and other relevant information that
32 the commission or department possesses or receives.

33 (7) Involve all interested parties, including, but not limited to,
34 individuals from the sport and commercial fishing industries,
35 aquaculture industries, coastal and ocean tourism and recreation
36 industries, marine conservation organizations, local governments,
37 marine scientists, and the public in marine living resource
38 management decisions.

39 (8) Promote the dissemination of accurate information
40 concerning the condition of, or management of, marine resources

1 and fisheries by seeking out the best available information and
2 making it available to the public through the marine resources
3 management process.

4 (9) Coordinate and cooperate with adjacent states, as well as
5 with Mexico and Canada, and encourage regional approaches to
6 management of activities and uses that affect marine living
7 resources. Particular attention shall be paid to coordinated
8 approaches to the management of shared fisheries.

9 (10) *Ensure the conservation, sustainable use, and, where*
10 *applicable, restoration of California's forage species populations,*
11 *including their habitats and associated water quality, for the benefit*
12 *of all citizens of the state, and achieve ecosystem-based*
13 *management of marine forage species that recognizes, prioritizes,*
14 *accounts for, and incorporates the ecological services rendered*
15 *by forage species, including the dependence of predator species*
16 *on those forage species.*

17 SEC. 4. Section 7080.5 is added to the Fish and Game Code,
18 to read:

19 7080.5. *In addition to Section 7080, new fishery management*
20 *plans for forage species and amendments to existing fishery*
21 *management plans for forage species completed after January 1,*
22 *2012, shall be consistent with the policy described in paragraph*
23 *(10) of subdivision (b) of Section 7050, to the extent that scientific*
24 *data is readily available for that purpose. It is the intent of the*
25 *Legislature to not require the reconsideration of regulations or*
26 *fishery management plans in place before January 1, 2012. In*
27 *determining consistency with paragraph (10) of subdivision (b) of*
28 *Section 7050 and in implementing Section 7080, the department*
29 *or commission shall review the best readily available scientific*
30 *information to do all of the following:*

31 (a) *Identify the current population levels of major predators of*
32 *forage species, determine the relative contribution of the forage*
33 *species to the diets of those predators, and evaluate the effects of*
34 *management actions on those predators.*

35 (b) *Identify the other forage species that serve as similar prey*
36 *in the forage pool to the major predators identified in subdivision*
37 *(a) and evaluate their stock status.*

38 (c) *Evaluate the long-term effects of alternative harvest*
39 *strategies on available indicators of ecosystem structure and*
40 *function.*

1 (d) Consider the effectiveness of existing fishing regulations to
2 provide adequate forage for the populations of major predators.

3 (e) Consider ecological and ocean conditions, including the
4 dynamics of decadal or long-term oceanic cycles, that affect the
5 populations of forage species.

6 (f) Ensure sufficient availability of live and dead bait to support
7 the needs for bait of California commercial and recreational
8 fisheries.

9 **SECTION 4.**

10 SEC. 5. Chapter 9 (commencing with Section 7095) is added
11 to Part 1.7 of Division 6 of the Fish and Game Code, to read:

12

13 **CHAPTER 9. FORAGE SPECIES**

14

15 7095. This chapter shall be known, and may be cited, as the
16 Forage Species Conservation and Management Act of 2011.

17 7096. The Legislature finds and declares all of the following:

18 (a) Forage species are an integral part of the California Current
19 Large Marine Ecosystem and are of great ecological, economic,
20 aesthetic, recreational, educational, scientific, nutritional, social,
21 and historic importance to the people of California.

22 (b) Forage species are important because they transfer energy
23 and nutrients from plankton to larger predatory fish, including
24 those that are a part of important commercial and recreational
25 fisheries, seabirds, and marine mammals, thereby contributing
26 disproportionately to the functioning and resilience of ocean
27 ecosystems.

28 (c) Many populations of forage species lack baseline scientific
29 data and face a multitude of risks, including, but not limited to,
30 ocean acidification, pollution, fishing pressure, global climate
31 change, and demand for feeds in the agriculture and aquaculture
32 industries.

33 (d) Most forage species have great nutritional value, including
34 high levels of certain long chain omega-3 polyunsaturated fatty
35 acids, which have been shown to reduce the risk of cardiac events
36 in adults and offer significant developmental benefits for pregnant
37 and nursing women and children.

38 (e) Regarding utilization of forage species landed in the state,
39 it is the intent of the Legislature to promote higher value uses for
40 these species, such as use for human consumption, over other uses.

1 (f) The department and the Ocean Protection Council are
2 encouraged to work together collaboratively, and coordinate with
3 appropriate federal agencies, to achieve the policy objectives of
4 this chapter, including conservation, sustainable use, and
5 ecosystem-based management of forage species, consistent with
6 the duties and responsibilities of the department under this part,
7 and the duties and responsibilities of the Ocean Protection Council
8 under Chapter 3 (commencing with Section 35600) of Division
9 26.5 of the Public Resources Code, including, but not limited to,
10 Section 35620 of the Public Resources Code.

11 (g) California's wetfish industry provides more than 3,000 jobs
12 in the fishing and processing sectors, contributing up to 95 percent
13 of the seafood volume landed in the ports of Monterey, Moss
14 Landing, Ventura, Port Hueneme, and Los Angeles, including San
15 Pedro and Terminal Island, and represents a cultural icon in those
16 fishing communities.

17 (h) Through their ecological roles, forage species support
18 California's ocean-based recreational and tourism sectors, including
19 recreational fisheries and other commercial fisheries, which
20 together provide over 250,000 jobs and generate approximately
21 \$12 billion annually to the state, maintaining a rich natural and
22 cultural heritage for current and future generations of California
23 citizens.

24 ~~7097. As used in this chapter:~~

25 (a) ~~“Ecosystem-based management” means a management~~
26 ~~approach that recognizes the array of interactions within an~~
27 ~~ecosystem, including humans, rather than considering single issues,~~
28 ~~species, or ecosystem services in isolation.~~

29 (b) (1) ~~“Forage species” includes Pacific herring (Clupea~~
30 ~~pallasi), Pacific sardine (Sardinops sagax), northern anchovy~~
31 ~~(Engraulis mordax), Pacific mackerel (Scomber japonicus), jack~~
32 ~~mackerel (Trachurus symmetricus), market squid (Doryteuthis~~
33 ~~opalescens), shortbelly rockfish (Sebastes jordani), smelts~~
34 ~~(Osmeridae), silversides (Antherinidae), lanternfish~~
35 ~~(Myctophidae), Pacific saury (Scomberesocidae); American shad~~
36 ~~(Alosa sapidissima), Pacific tomcod (Microgadus proximus),~~
37 ~~Pacific hake (Merluccius productus), sandlance (Ammodytidae);~~
38 ~~neon flying squid (Ommastrephes bartrami), boreal clubhook squid~~
39 ~~(Onychoteuthis borealijaponica), jellyfish (Medusozoa), mysid~~

1 shrimp (*Mysida*), meso-zooplankton, and any species designated
2 by the commission pursuant to paragraph (2):

3 (2) The commission may designate additional species as forage
4 species, if it finds that a species comprises a major component in
5 the diets of fish, birds, mammals, or turtles, and contributes
6 disproportionately to ecosystem functions and resilience due to its
7 role as prey.

8 7098. (a) It is the policy of the state to ensure the conservation,
9 sustainable use, and, where applicable, restoration of California's
10 forage species populations, including their habitats and associated
11 water quality, for the benefit of all citizens of the state. The
12 objective of this policy shall be to achieve ecosystem-based
13 management of marine forage species that recognizes, prioritizes,
14 accounts for, and incorporates the ecological services rendered by
15 forage species, including the dependence of predator species on
16 those forage species.

17 (b) New fishery management plans for forage species and
18 amendments to existing fishery management plans for forage
19 species completed after January 1, 2012, shall be consistent with
20 the policy described in subdivision (a) to the extent that scientific
21 data is readily available for that purpose. It is the intent of the
22 Legislature to not require the reconsideration of regulations or
23 fishery management plans in place before January 1, 2012. In
24 determining consistency with subdivision (a) and in implementing
25 Section 7080, the department or commission shall review the best
26 readily available scientific information to do all of the following:

27 (1) Identify the current population levels of major predators of
28 forage species, determine the relative contribution of the forage
29 species to the diets of those predators, and evaluate the effects of
30 management actions on those predators.

31 (2) Identify the other forage species that serve as similar prey
32 to the major predators identified in paragraph (1) and evaluate
33 their stock status.

34 (3) Evaluate the long-term effects of alternative harvest
35 strategies on available indicators of ecosystem structure and
36 function.

37 (4) Consider the effectiveness of existing fishing regulations to
38 provide adequate forage for the populations of major predators.

- 1 ~~(5) Consider ecological and ocean conditions, including the~~
- 2 ~~dynamics of decadal or long-term oceanic cycles, that affect the~~
- 3 ~~populations of forage species.~~
- 4 ~~(6) Ensure sufficient availability of live and dead bait to support~~
- 5 ~~the needs for bait of California commercial and recreational~~
- 6 ~~fisheries.~~