Staff Summary for June 17-18, 2026

5. Southern Resident Killer Whale

Today's Item **Information ☐** **Action ☒**

Consider and potentially act on the petition, the Department's evaluation report, and comments received to determine whether listing southern resident killer whale (*Orcinus orca*) as endangered under the California Endangered Species Act (CESA) may be warranted.

Summary of Previous/Future Actions

• Received petition	November 25, 2025
• Transmitted petition to Department	December 12, 2025
• Public receipt of petition	December 10-11, 2025
• Published notice of receipt of petition	January 2, 2026
• Approved Department's request for a 30-day extension to complete its petition evaluation report	February 11-12, 2026
• Received Department's petition evaluation report	March 17, 2026
• **Today, potentially determine petitioned action may be warranted, initiating Department's one-year status review**	**June 17-18, 2026**

Background

In November 2025, the Commission received from the Orca Conservancy a CESA petition to list southern resident killer whale as endangered (Exhibit 1).

California Fish and Game Code Section 2073.5 requires that the Department evaluate the petition and submit a written evaluation with a recommendation to the Commission; the Commission publicly received the Department's evaluation report (exhibits 2 and 3) at its April 2026 meeting. The evaluation report delineates each of the categories of information required for a petition, evaluates the sufficiency of the available scientific information for each of the required components, and incorporates additional relevant information that the Department possessed or received during the review period. Based on the information contained in the petition and other relevant information, the Department concludes that there is sufficient information to indicate the petitioned action may be warranted.

At today's meeting, the Commission will receive a presentation on the Department's petition evaluation, receive a presentation from the petitioner, and hold a public hearing to receive testimony. After public comment, the commission may reach a decision on whether listing may be warranted, close the public hearing and continue the meeting on the petition for the purpose of deliberation, or continue both the public hearing and the meeting on the petition to a subsequent date.

If the Commission determines the listing may be warranted pursuant to Section 2074.2 of the California Fish and Game Code, the Department will undertake a one-year status review before the Commission can make a final decision on listing. CESA and the Commission's listing regulation require that the petition contain specific scientific information related to the

status of the species. CESA, and case law interpreting it, make clear that the Commission must accept a petition when the petition contains sufficient information to lead a reasonable person to conclude there is a substantial possibility the requested listing could occur. The requested listing is tied to the species' status, that is, whether the species' continued existence is in serious danger or is threatened by a number of factors, and in no way relates to economic consequences that might result from listing.

If the Commission determines the petitioned action may be warranted, southern resident killer whale will become a candidate species for listing as either threatened or endangered pursuant to Fish and Game Code Section 2074.2. Candidate species are protected during the remainder of the listing process pursuant to Fish and Game Code Section 2085.

Significant Public Comments (N/A)

Recommendation

Commission staff: Determine that listing southern resident killer whale may be warranted; direct staff to issue a notice reflecting this finding and indicating that southern resident killer whale is a candidate species for listing as endangered.

Department: Accept the petition for further consideration under CESA.

Exhibits

1. Petition, received November 25, 2026
2. Department memo, received March 17, 2026
3. Department petition evaluation report, dated April 2026
4. Department presentation

Motion

Moved by _____ and seconded by _____ that the Commission, pursuant to Section 2074.2 of the California Fish and Game Code, finds that the petition to list southern resident killer whale (*Orcinus orca*) as an endangered species *does* provide sufficient information to indicate that the petitioned action may be warranted based on the information in the record before the Commission, and directs staff to issue a notice reflecting this finding and indicating that southern resident killer whale is a candidate for endangered species status.

OR

Moved by _____ and seconded by _____ that the Commission, pursuant to Section 2074.2 of the California Fish and Game Code, finds that the petition to list southern resident killer whale (*Orcinus orca*) as an endangered species *does not* provide sufficient information to indicate that the petitioned action may be warranted based on the information in the record before the Commission.

Petition Under the California Endangered Species Act to List the Southern Resident Killer Whale (*Orcinus orca*) as Endangered

K37 Rainshadow (male, born 2003).
S. Tarantino / Orca Conservancy, Nov 15, 2024.

Mural at Nimbus Fish Hatchery (Sacramento County, CA) showing Chinook salmon and a killer whale. Nimbus produces Central Valley Chinook released into the lower American River; these fish enter ocean waters where Southern Resident killer whales forage, though hatchery-origin attribution is unconfirmed.
Photo: S. Christianson / Orca Conservancy, Nov. 17, 2024.

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1. ACTION SOUGHT

1.1 Notice of Petition

This Petition is submitted pursuant to Title 14, California Code of Regulations (CCR) § 670.1 and California Fish and Game Code §§ 2070–2079, governing the listing of endangered and threatened species under the California Endangered Species Act (CESA), Fish & Game Code §§ 2050–2089.25.

1.2 Species Being Petitioned

Common Name: Southern Resident killer whale (SRKW)
Scientific Name: *Orcinus orca*
Taxonomic/Legal Unit: Distinct Population Segment (federally listed under the U.S. Endangered Species Act)

For purposes of this Petition, the population is introduced once as the Southern Resident Killer Whale (*Orcinus orca*, SRKW); subsequent references use SRKW unless the scientific name is required for clarity.

1.3 Recommended Action

Petitioner respectfully requests that the California Fish and Game Commission (Commission) list the Southern Resident killer whale (SRKW) as an Endangered species pursuant to Fish & Game Code §§ 2050 et seq. and Title 14 CCR § 670.1.

This Petition demonstrates that SRKW meets the statutory definitions of both “endangered species” and “threatened species.”

Under Fish & Game Code § 2062, an *endangered species* is any native species or subspecies “in serious danger of becoming extinct throughout all, or a significant portion, of its range due to one or more causes, including loss of habitat, change in habitat, overexploitation, predation, competition, or disease.”

Under § 2067, a *threatened species* is one “that, although not presently threatened with extinction, is likely to become an endangered species in the foreseeable future in the absence of special protection and management efforts.”

As demonstrated herein, SRKWs regularly occupy California’s coastal and offshore waters and face imminent extinction risk due to prey depletion, toxic contamination, vessel noise and disturbance, increasing oil-spill risk, disease burden, and cumulative climate-driven stressors.

Petitioner respectfully requests that the California Department of Fish and Wildlife (Department) evaluate this Petition pursuant to Fish & Game Code § 2073.5, and that the Commission,

following review under § 2074.2, determine that listing SRKW as *Endangered* under CESA is warranted.

2. EXECUTIVE SUMMARY

The Southern Resident killer whale (Orcinus orca, SRKW) is a culturally and genetically distinct population of salmon-eating killer whales occurring along the West Coast of North America. Once numbering more than 140 individuals, the population has declined to approximately 74 whales as of 2024 (Center for Whale Research 2024). SRKWs range seasonally throughout the California Current Ecosystem, with satellite-tag, acoustic, and sighting data documenting use of outer coastal waters from Washington to California, including Point Reyes, Cape Mendocino, and Monterey Bay (Hanson et al. 2013; NMFS 2021). Winter habitat associations for resident killer whales in the northern California Current (Washington & Oregon coastal waters) further highlight their reliance on near-shelf habitats during low-productivity periods (Bliss et al. 2024).

SRKWs rely heavily on Chinook salmon (*Oncorhynchus tshawytscha*) as their primary prey, and population trends continue to closely track coastwide Chinook abundance (Ford et al. 2016; Hanson et al. 2021). Photogrammetry and fecal-hormone analyses document population-level nutritional stress, reduced body condition, and high rates of failed pregnancies (Fearnbach et al. 2019; Wasser et al. 2017). Studies estimate that more than half, and in some years up to three-quarters, of detected pregnancies do not result in viable calves, with inadequate prey availability identified as a major contributing factor (Wasser et al. 2017). These indicators of chronic nutritional stress underscore that existing federal and regional protections have not stabilized the population, demonstrating that SRKWs remain in serious danger of extinction without additional state-level action under CESA.

2.1 Federal and Regional Status

SRKWs were listed federally as Endangered in 2005 (70 Fed. Reg. 69903, Nov 18, 2005). The population is listed as Endangered in Washington (2004). The Oregon Fish and Wildlife Commission formally listed SRKW as Endangered on February 16, 2024. California has not listed SRKW under CESA, leaving a significant protection gap across approximately one-third of the whales' range (NMFS 2008; Oregon DFW 2024).

2.2 Nutritional Dependence and Starvation

Chinook salmon compose ≈ 85–90% of the Southern Residents' diet (Hanson et al. 2021). West-coast Chinook stocks have declined in both abundance and size, reducing energetic yield (Ohlberger et al. 2018). Climate-driven synchrony among salmon populations now amplifies regional prey shortages (Sullaway et al. 2021). These changes translate into starvation, low birth rates, and declining body condition (Fearnbach et al. 2019; Stewart et al. 2020).

2.3 Principal Threats

1. **Prey Depletion** — Collapse of Chinook salmon from California's Klamath, Eel, and Sacramento–San Joaquin basins has caused widespread orca malnutrition (Moyle et al. 2008; Hitt et al. 2025).
2. **Toxic Contamination** — SRKW carry some of the highest PCB and legacy pesticide burdens measured in fish-eating marine mammals (Mongillo et al. 2016). Blubber concentrations commonly exceed 40,000 ng/g lw PCBs and 200,000 ng/g lw DDTs in adults, levels associated with immune suppression, endocrine disruption, and reduced reproductive success. Although mammal-eating Bigg's killer whales exhibit even higher contaminant loads, SRKW concentrations remain well above toxicity thresholds for impaired immune and reproductive function.
3. **Vessel Noise and Disturbance** — Chronic shipping and naval activity reduce foraging efficiency and raise stress levels (Williams et al. 2016).
4. **Disease and Parasites** — *Anisakis* nematodes infect > 90 % of individuals, imposing additional energetic costs (Mastick et al. 2025).
5. **Climate Change** — Marine heatwaves and altered upwelling reduce salmon availability (Cavole et al. 2016).

2.4 Need for California Action

Under Fish & Game Code §§ 2052 and 2055, California is obligated to conserve native species of "ecological, educational, and scientific value." SRKWs are a native predator within California's marine waters and depends on California salmon stocks. Listing under CESA would:

- Align California policy with federal and neighboring state protections;
- Require state-level consultation on fisheries, shipping, and coastal development; and
- Reinforce California's commitment to preserve a keystone species integral to its marine ecosystem.

3. PETITIONERS

3.1 Lead Petitioner

Orca Conservancy
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Website: www.orcaconservancy.org
Email: info@orcaconservancy.org

Steven C. Christianson, J.D.
President, Orca Conservancy, San Diego, California
Licensed Attorney, State Bar of California No. 333067

3.2 Organizational Overview and Mission

Founded in 1996, **Orca Conservancy (OC)** is a 501(c)(3) nonprofit dedicated to protecting and recovering wild orca populations and the ecosystems on which they depend. The organization has collaborated with federal, state, tribal, and academic partners to advance marine-mammal

research, salmon recovery, and public education across the Pacific Northwest and California Current. Orca Conservancy was a signatory to the 2001 federal petition to list the SRKWs under the Endangered Species Act and continues to engage in regional recovery initiatives (NMFS 2008).

OC's programs include:

- Support for independent and collaborative research on orca health, ecology, and pollutants;
- Policy advocacy for salmon habitat restoration and vessel noise mitigation;
- Public education initiatives in Washington, Oregon, and California; and
- Collaboration with universities and NGOs conducting photogrammetry and toxicology studies.

3.3 California Nexus and Legal Standing

Although headquartered in Washington, Orca Conservancy maintains substantial ties to California and qualifies as an "interested person" under *Title 14 CCR* § 670.1(a):

- **Leadership and Residency:** President Steven C. Christianson has resided in California since 1999 and is licensed to practice law in the state.
- **California Donors and Volunteers:** OC maintains an active membership and donor base in California, with its current Treasurer also residing in the state of California.
- **Research and Academic Engagement:** OC partners with California-based research institutions including the University of California San Diego, Moss Landing Marine Laboratories, and the Monterey Bay Aquarium Research Institute, and supports ongoing graduate research by Chloe Kotik, M.S. (UC San Diego), Ph.D. Candidate, University of Alaska Fairbanks, an Orca Conservancy–affiliated scientist conducting photogrammetric and toxicological studies relevant to orca conservation.

Through these activities, Orca Conservancy has a direct and demonstrable interest in the protection of California's marine ecosystem and its native orca population. The organization is therefore qualified to file this petition under CESA.

3.4 Petitioner Certification

Pursuant to *Title 14 CCR* § 670.1(f), the undersigned certifies that the information contained herein is accurate to the best of their knowledge and that the supporting evidence constitutes substantial scientific information indicating that listing the SRKWs (*Orcinus orca*) as Endangered under CESA may be warranted.

4. SPECIES DESCRIPTION AND TAXONOMY

4.1 Taxonomic Classification

Kingdom: Animalia **Phylum:** Chordata **Class:** Mammalia
Order: Cetacea **Suborder:** Odontoceti **Family:** Delphinidae
Genus and Species: *Orcinus orca* (Linnaeus 1758) **Common Name:** Killer Whale, Orca

The killer whale (Orcinus orca) is the largest member of the dolphin family and has a cosmopolitan distribution and is well known for their distinct black and white markings. This single species includes several well-defined ecotypes that differ in genetics, morphology, behavior, and prey specialization (Ford et al. 2000; Hoelzel et al. 2007; NMFS 2008). SRKWs are part of the fish-eating "resident" ecotype and form a genetically and culturally distinctive population. Although recent studies have proposed that some killer whale lineages may merit subspecies designation, no formal changes have been adopted, and SRKWs are currently managed as a Distinct Population Segment (DPS) based on their clear evolutionary separation. While some groups have advocated for reviving the historical trinomial *Orcinus orca ater* to distinguish Southern Residents, no contemporary taxonomic authority recognizes this name, and the population is formally classified as a DPS of Orcinus orca under the federal ESA.

4.2 Northeast Pacific Ecotypes

Three ecotypes co-occur along the U.S. West Coast:

1. **Resident (fish-eating)** stable matrilineal pods feeding primarily on salmonids. The Southern Resident population belongs to this group.
2. **Transient (Bigg's, mammal-eating)** smaller, fluid groups with distinct genetics and acoustics.
3. **Offshore** pelagic whales feed on sharks and large fish.

These ecotypes are genetically and socially isolated and have not been observed to interbreed (Hoelzel et al. 2007).

Members of J-pod and K-pod.
S. Tarantino / Orca Conservancy, Nov 15, 2024.

4.3 Southern Resident Killer Whale Population

Comprising the J, K, and L pods, the SRKWs population numbers approximately 74 individuals (Center for Whale Research 2024). These pods maintain distinct vocal dialects and cultural traditions transmitted matrilineally. Core summer habitat occurs in the inland waters of the Salish Sea, while winter and spring movements extend south along the outer coast with documented use of the California Current as far south as Monterey Bay (Hanson et al. 2013; NMFS 2021). K and L pods have been photographed off Fort Bragg, Point Arena, and Monterey Bay (Victoria Times Colonist 2007). In 2021, NOAA expanded SRKW critical habitat southward to Point Sur, California (NMFS 2021), reflecting their broader coastal distribution.

4.4 Distinct Population Segment (DPS)

NOAA designated the Southern Resident Killer Whale as a Distinct Population Segment (DPS) under the federal ESA (70 Fed. Reg. 69903 [Nov 18, 2005]) based on:

1. **Genetic discreteness** from Northern Residents and Transients.
2. **Ecological significance** due to unique salmon-specialist behavior and dialects; and
3. **Conservation importance** as a key predator within the California Current.
   These same criteria meet the definition of a “discrete and significant population” under Fish & Game Code § 2062 and *Title 14 CCR* § 670.1(b).

4.5 Morphology and Diagnostic Features

Adult male killer whales reach 8–9 m in length (≈5,000 kg), while adult females typically reach 6–7 m (≈3,000 kg). Distinguishing traits include a tall, triangular dorsal fin, a contrasting white saddle patch, and stable pigmentation patterns that allow for individual identification (NMFS 2008). Aerial photogrammetry has documented measurable declines in body condition and blubber thickness in Southern Residents, consistent with reduced prey availability and nutritional stress (Fearnbach et al. 2019; Stewart et al. 2020). Comparative morphometric work using drone-based photogrammetry further demonstrates significant differences between fish-eating and mammal-eating ecotypes (Kotik et al. 2022), underscoring the specialized foraging ecology of resident populations, including the SRKWs.

4.6 Genetics and Phylogeography

Mitochondrial DNA and nuclear microsatellite data confirm the Southern Resident population’s monophyly (Hoelzel et al. 2007; Parsons et al. 2013). Coalescent modeling suggests divergence from Northern Residents ≈ 700,000 years ago (Foote et al. 2011). Genome-wide studies reveal extreme inbreeding and low heterozygosity (Kardos et al. 2023).

4.7 Health and Sublethal Stressors

- **Skin Disease:** Nearly all individuals photographed between 2004–2016 displayed gray-patch or black-spot lesions indicative of immune suppression (Gaydos et al. 2023).
- **Parasitic Infection:** *Anisakis* nematodes infect ≈ 94 % of individuals, adding physiological stress (Mastick et al. 2025).
- **Contaminants:** Blubber pollutant loads exceed known toxicity thresholds—ΣPCBs > 40,000 ng/g lw, ΣDDT ≈ 210,000 ng/g lw (Mongillo et al. 2016).
- **Nutritional Deficits:** Reduction in Chinook size and abundance (Ohlberger et al. 2018) and synchronized coast-wide salmon declines (Sullaway et al. 2021) limit foraging success.
- **Climate Impacts:** Marine heatwaves and altered upwelling in the California Current further reduce prey (Cavole et al. 2016).

4.8 California Range and Ecological Significance

SRKW are regular seasonal inhabitants of California waters, documented acoustically and visually as far south as Monterey Bay (Hanson et al. 2013; NMFS 2021; Balcomb et al. 2007). During periods of low prey availability in Puget Sound, SRKWs rely heavily on California-origin salmon (Hanson et al. 2021). Their persistence is thus directly linked to the restoration of California's riverine and coastal ecosystems.

4.9 Species Description and Taxonomy Summary

SRKW represents a unique and evolutionarily significant population of *Orcinus orca*, adapted to the California Current Ecosystem. Severe prey limitation, contaminant burden, disease, and inbreeding threaten its survival. These factors satisfy CESA's criteria for an Endangered Species under Fish & Game Code §§ 2050 et seq.

5. DISTRIBUTION, POPULATION, AND ECOLOGY

5.1 Historical and Current Distribution

SRKWs (*Orcinus orca*) historically ranged throughout the California Current Large Marine Ecosystem, extending from central California north to southeastern Alaska (Bigg 1982; Ford et al. 2000; NMFS 2008). Historical whaling, culling, and live-capture operations in the 1960s and 1970s removed at least 47 individuals, roughly one-third of the original population, from inland Washington and British Columbia waters (NMFS 2008).

Today, the Southern Residents occupy a reduced range but continue to traverse the same migratory corridor. Their core summer habitat centers in the inland Salish Sea (Strait of Juan de Fuca, Puget Sound, Haro Strait), while winter and spring ranges extend along the outer coast through Washington, Oregon, and California (Hanson et al. 2013; Bliss et al. 2024).

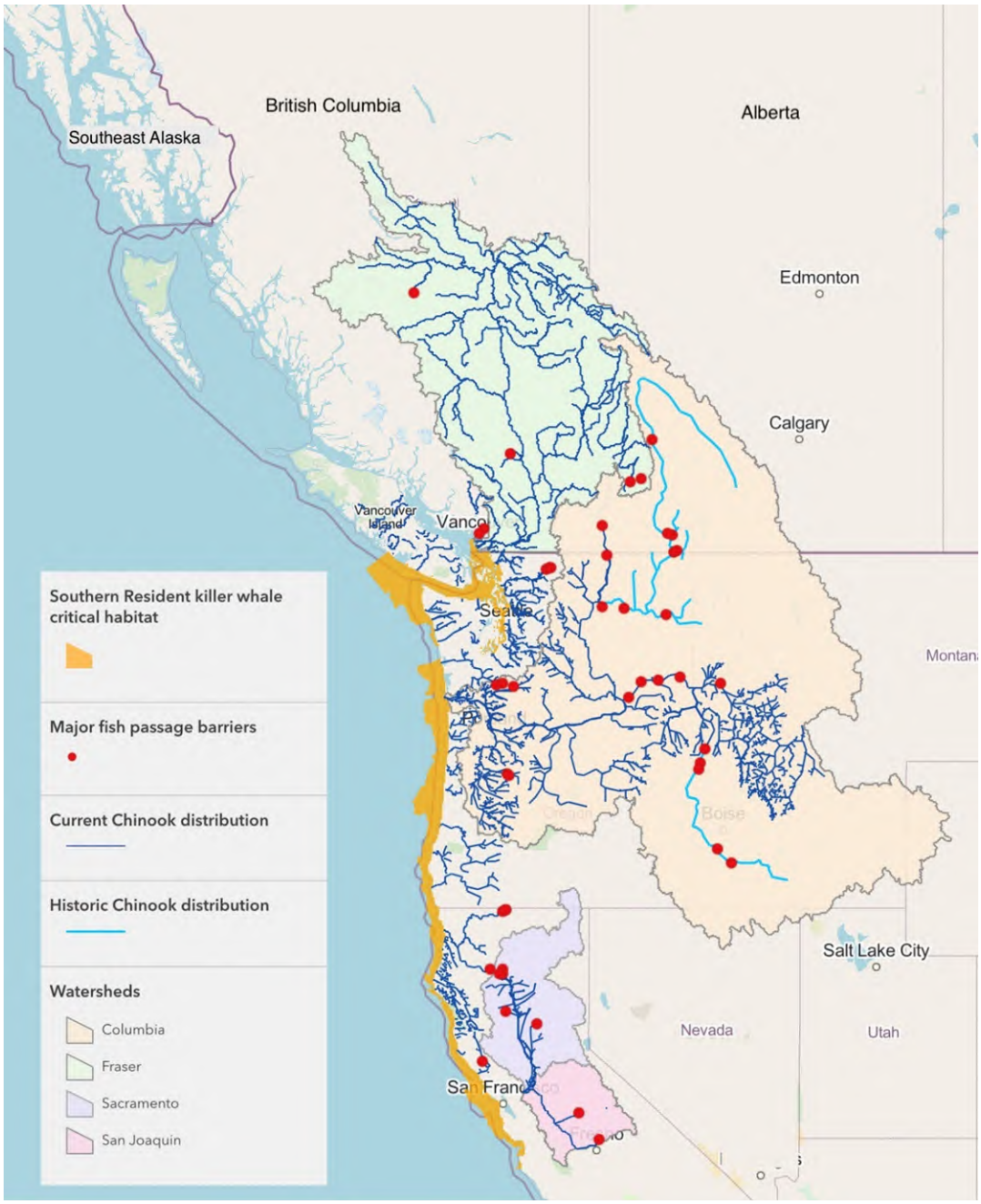
Telemetry and acoustic data document consistent coastal use of California waters, particularly along the continental shelf between Point Reyes, Fort Bragg, Cape Mendocino, and Monterey Bay (NMFS 2021). Historical photo-identifications and media reports also record *K* and *L* pod sightings off the Farallon Islands and Monterey Bay during salmon shortages in the Salish Sea (Victoria Times Colonist 2007).

California waters therefore represent a functional extension of the population's critical habitat, providing essential foraging grounds during winter and spring, when Northern salmon runs are depleted. NOAA recognized this ecological linkage by expanding federal critical habitat to Point Sur, California in 2021 (NMFS 2021).

Source: Wiles, G. J. (2004). Washington State status report for the killer whale (Orcinus orca), Washington Department of Fish and Wildlife.

5.2 Species Distribution

Current and seasonal coastal distribution of the Southern Resident killer whale (Orcinus orca) along the outer coast of Washington, Oregon, British Columbia, and California. Southern Residents (J, K, and L pods) predominantly occupy inland waters of the Salish Sea during spring, summer, and fall, and routinely disperse to outer coastal waters in winter and early spring, with documented movements of K and L pods extending into central California. This figure illustrates contemporary occurrence and seasonal distribution within California waters for purposes of evaluating present range and occupancy under the California Endangered Species Act (Fish & Game Code § 2062) and does not represent a designation of critical habitat.



Coastal distribution of the Southern Resident killer whale and Chinook salmon source watersheds affecting prey availability. The orange coastal band depicts the general near-shore distribution zone of the Southern Resident killer whale along British Columbia, Washington, Oregon, and California. Dark and light blue lines represent current and historic Chinook salmon distributions, respectively. Red dots indicate major barriers to Chinook migration (e.g., dams). This figure is provided to illustrate the spatial relationship between freshwater habitat degradation and prey availability for Southern Resident killer whales within waters that contribute to their historical and current range, including California. **Source:** Raincoast Conservation Foundation.

5.3 Seasonal Presence in California Waters

SRKWs occupy the California Current during late fall, winter, and early spring, coinciding with seasonal peaks in Chinook salmon returning to Central Valley and North Coast rivers (Hanson et al. 2013; Ford et al. 2016).

- **Winter movements:** Along the outer shelf and shelf-break canyons of the northern California Current (Bliss et al. 2024), and in California waters near Point Reyes, Cape Mendocino, and Monterey Bay based on tagging and sighting data (Hanson et al. 2013; NMFS 2021).
- **Spring foraging:** Offshore of the Eel and Klamath Rivers, where salmon migrations historically supported extended feeding bouts (Hanson et al. 2021).
- **Northward transitions:** In early summer, pods return to inland waters of Washington and British Columbia to target Fraser River salmon (Ford et al. 2016).

Acoustic detections confirm the presence of distinct SRKW call types along California's outer coast as far south as Monterey Canyon (Hanson et al. 2013; Hanson et al. 2017; NMFS 2021). These findings demonstrate that California constitutes recurring and predictable habitat within the whales' annual movement pattern.

5.4 Population Structure and Demography

The Southern Resident population is composed of three pods—J, K, and L—comprising approximately 74 individuals as of 2024 (Center for Whale Research 2024).

- **J Pod** (~25 individuals): The smallest pod, with the most consistent year-round use of inland Washington waters, particularly Puget Sound and Haro Strait. J Pod is less wide-ranging than K and L Pods and is rarely documented in coastal California waters.
- **K Pod** (~17 individuals): The most wide-ranging of the three pods, regularly using coastal waters from Washington through Oregon and north-central California. K Pod is the pod most frequently detected on California hydrophone arrays.
- **L Pod** (~32 individuals): The largest pod, with extensive seasonal use of coastal and outer-shelf habitats and repeated foraging excursions into California waters, especially during winter and spring.

The population's age and sex structure remains skewed toward older individuals, with a deficit of reproductive-age females (NMFS 2021). Between 2010 and 2024, only six viable calves were born, while more than a dozen adults were lost—insufficient to maintain long-term population stability.

Recent genomic analyses reveal inbreeding depression, low heterozygosity, and elevated runs of homozygosity, all of which constrain reproductive success and recovery potential (Kardos et al. 2023). Despite federal ESA protection since 2005, the Southern Residents have remained at or below ~75 individuals for nearly two decades, a demographic stasis strongly associated with chronic prey limitation (Lacy et al. 2017; Wasser et al. 2017)..

5.5 Social Structure and Cultural Ecology

SRKWs are highly social and matrilineal, forming stable family groups led by elder females ("matriarchs") who transmit vocal dialects and foraging knowledge across generations (Ford et al. 2000; NMFS 2008).

Each pod maintains distinct call types, echolocation patterns, and travel associations. Female longevity is among the highest in the animal kingdom—lifespans exceeding 80 years—with post-reproductive females playing essential roles in leadership, social cohesion, and prey localization (Brent et al. 2015).

Cultural transmission is particularly evident in foraging specialization on Chinook salmon, learned and reinforced through pod-specific traditions. Matriarchs guide pods to historically productive feeding grounds, including those in California waters. Studies show that survival of juveniles and adult males increases markedly when a post-reproductive matriarch is present (Brent et al. 2015).

This intricate social structure, rooted in culture as much as genetics, means that the loss of elder females or cultural fragmentation poses an additional extinction risk.

5.6 Prey Specialization on Chinook Salmon

SRKWs exhibit near-exclusive dietary specialization on Chinook salmon (Oncorhynchus tshawytscha), with limited seasonal reliance on coho and chum (Hanson et al. 2021; Ford et al. 2016). Chinook are large, energy-dense prey historically abundant throughout the California Current, but their populations have experienced steep long-term declines due to dams, water diversions, habitat loss, and climate-driven ocean changes (Moyle et al. 2008; Ohlberger et al. 2018). SRKWs depend heavily on California-origin Chinook during winter and spring, particularly from the Klamath, Eel, Russian, and Sacramento–San Joaquin systems (Hanson et al. 2021; NMFS 2008). As these runs diminish, whales face reduced caloric intake, declining body condition, increased miscarriage risk, and lower survival (Wasser et al. 2017).

California Chinook stocks in key northern river systems illustrate a dramatic regional contraction. The Eel River once produced an estimated 100,000–800,000 Chinook annually, but populations later collapsed to a small fraction of historical levels following extensive watershed degradation, logging impacts, and major flood events, particularly in 1955 and 1964 (Yoshiyama & Moyle 2010; California Trout 2017). The Mattole River — a 62-mile coastal watershed that historically supported substantial Chinook production — has experienced severe and prolonged declines, with estimated historical spawning runs of approximately 10,000 fish falling to fewer than 100 individuals by the early 1990s, and remaining at low levels in subsequent decades (Zuckerman 1997; Moyle et al. 2008). More recent analyses suggest that the current California Coastal Chinook population in the Mattole watershed is on the order of approximately 1,000 spawners annually, based on Mattole Salmon Group redd surveys conducted from 2012–2015 and summarized by California Trout (California Trout 2017; Mattole Salmon Group 2015). The Klamath River — formerly the third-largest Chinook-producing system on the West Coast — has also experienced severe long-term declines; although removal of four major dams beginning

in 2023–2024 has reopened more than 400 miles of historical salmon habitat, run sizes remain depressed and long-term recovery trajectories remain uncertain (NOAA Fisheries 2023; CDFW 2025; Yurok Tribe 2025). Collectively, reduced Chinook abundance in the Mattole, Eel, Klamath, and Smith River basins has substantially diminished the prey base available to Southern Resident killer whales along the northern California coast (Hanson et al. 2021; NMFS 2021).

Within this region, the Southern Oregon–Northern California Coast (SONCC) Chinook ESU—encompassing all naturally spawning fall-run and spring-run Chinook from the Rogue River south through the Smith River and lower Klamath River tributaries such as Blue Creek—constitutes one of the last relatively intact Chinook-producing lineages in California north of the Central Valley. Listed as Threatened under the federal ESA in 1999 due to widespread declines, habitat loss, migration barriers, and degraded hydrology, the SONCC ESU historically contributed substantially to the winter prey portfolio of SRKWs in California waters. Its continued decline poses a direct constraint on SRKW recovery.

Blue Creek, the lowermost major tributary of the Klamath River, originates in the Siskiyou Wilderness and drains a 47,000-acre watershed considered one of the most pristine refugia in the basin. Long within the ancestral territory of the Yurok people, the watershed has undergone significant ecological recovery following conservation and land-back initiatives led by the Tribe. Blue Creek provides essential cold-water refugia, juvenile rearing habitat, and spawning conditions for SONCC Chinook. Its confluence with the Klamath lies just downstream of the historically proposed Ah Pah Dam site; following removal of the Klamath's remaining dams in 2024, Blue Creek has become even more critical to recolonization and long-term restoration efforts within the ESU.

Together, these northern California Chinook populations—especially those within the SONCC ESU—are vital to maintaining the diverse, region-wide salmon portfolio SRKWs require. Their decline represents a significant, ongoing reduction in prey availability and a primary threat to SRKW recovery under CESA.

5.7 Distribution, Population, and Ecology Summary

The SRKW population now occupies a constricted but ecologically vital coastal range spanning California to Alaska. Seasonal use of California waters underscores the state's responsibility under CESA to conserve the species and its critical prey. The whales' complex matrilineal structure, cultural learning, and salmon specialization make them uniquely vulnerable to demographic collapse once prey availability declines or elder leadership is lost.

Listing this population as Endangered under CESA would enable California to coordinate salmon recovery, noise reduction, and marine habitat protection efforts essential to the survival of this distinct, culturally rich population.

Members of L-pod | Moss Landing in Monterey CA
Photo Credit: Erica Wirth / March 18, 2023.

6. POPULATION STATUS AND TREND

Overview

The SRKW (*Orcinus orca*) population is one of the smallest and most intensely studied orca communities in the world. Despite five decades of federal and regional protection, the population has not recovered and remains at a precariously low level.

As of December 2024, the population consists of approximately 74 individuals across J, K, and L pods (Center for Whale Research 2024). This number represents no net population growth since the population's federal listing in 2005 and reflects a long-term decline from historical abundance estimated at 140–150 individuals in the mid-1960s (NMFS 2008).

Members of L-pod.
T. Kelley / Orca Conservancy, Nov. 2024.

6.1 Historical Population Decline

Before live-capture operations began in the 1960s, the Southern Resident population was believed to number at least 140 whales (Bigg 1982; Ford et al. 2000). Between 1962 and 1977, approximately 47 whales—one-third of the population—were captured or killed for marine parks, causing a severe demographic bottleneck (NMFS 2008).

Following cessation of captures, the population rebounded modestly to 98 individuals by 1995 (NMFS 2008). However, subsequent declines associated with salmon shortages and increased vessel traffic reduced the population to 78 whales by 2001 and 74 whales by 2024 (Center for Whale Research 2024; NMFS 2021).

This pattern represents a ~50% decline from pre-capture estimates and a failure to meet recovery targets established in NOAA's 2008 Recovery Plan (NMFS 2008).

6.2 Current Census Data

As of 2024, the population is structured as follows (Center for Whale Research 2024):

- **J Pod:** 25 individuals
- **K Pod:** 17 individuals
- **L Pod:** 32 individuals

Collectively, the population exhibits low recruitment, high adult mortality, and skewed age distribution. Adult females constitute less than 40% of the population, while reproductive-age females (< 40 years) number fewer than 15 individuals (NMFS 2021).

From 2010–2024, only six viable calves have survived to age five, compared with 15 adult mortalities, yielding a negative growth rate.

Population viability analysis by Lacy et al. (2017) predicts a 99% probability of further decline under current conditions of prey limitation and contaminant exposure. Without intervention, the model projects the population could fall below 50 individuals by mid-century (Lacy et al. 2017).

6.3 Reproductive Success and Calf Mortality

Southern Resident reproductive rates are among the lowest documented for any killer whale population.

- The mean calving interval now exceeds 8 years (NMFS 2021).
- Pregnancy failure rates exceed 75%, primarily due to nutritional stress and mobilization of blubber-stored contaminants during gestation (Wasser et al. 2017; Mongillo et al. 2016).
- Calf survival to age two averages less than 50%, with many calves lost in their first year of life (NMFS 2021).

Hormonal analyses of fecal samples reveal that low prey availability during late gestation causes spontaneous abortion and fetal resorption (Wasser et al. 2017). Females that carry pregnancies to term often show depleted blubber reserves and elevated contaminant mobilization, reducing lactational success.

6.4 Adult and Subadult Mortality

Adult survival has also declined. The annual mortality rate from 2010–2024 averaged 3.2%, exceeding the replacement threshold for a small population (NMFS 2021).

Deaths are typically associated with starvation, contaminant-related immune suppression, and vessel interactions. Several adult deaths since 2015 occurred following extended periods of emaciation, consistent with chronic energy deficit (Fearnbach et al. 2019).

Adult male mortality is notably high, likely due to bioaccumulation of PCBs and organochlorines that impair immune and reproductive systems (Mongillo et al. 2016; Krahn et al. 2009). The loss of breeding males further accelerates genetic erosion, already evident in recent genomic studies (Kardos et al. 2023).

6.5 Population Trend Analysis

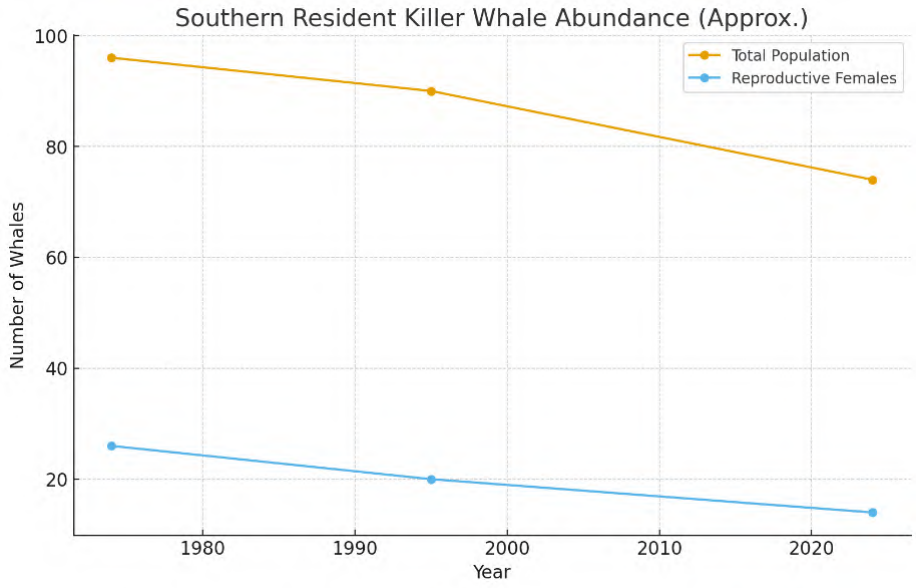


Figure 1. Southern Resident killer whale (SRKW) abundance, 1974–2024.

Census data from NOAA and the Center for Whale Research show a long-term decline from a peak of ~96 whales in 1974 to ~74 whales in 2024, reflecting a mean annual growth rate of –0.28% (NMFS 2021). The number of reproductive females has dropped markedly (from ~26 in the mid-1990s to <15 in 2024), further constraining recovery. Population-viability modeling identifies prey limitation, especially Chinook salmon, as the dominant demographic driver, explaining ~62% of modeled variation in population growth (Lacy et al. 2017; Ford et al. 2016).

6.6 Indicators of Population Health

- **Body Condition:** Aerial photogrammetry and drone-based morphometrics document declines in body condition and adult size among fish-eating killer whales over the past decade (Groskreutz et al. 2019; Fearnbach et al. 2019; Stewart et al. 2020). These studies show reduced blubber thickness, lower body-mass indices, and size declines consistent with chronic nutritional stress. Comparative morphometric analyses further demonstrate clear differences between fish-eating and mammal-eating ecotypes (Kotik et al. 2022), underscoring the vulnerability of salmon-dependent populations such as the SRKWs.
- **Toxicological Load:** Persistent organic pollutant concentrations exceed physiological thresholds for reproductive impairment (Mongillo et al. 2016).
- **Parasite and Skin Disease Prevalence:** *Anisakis* nematode infections (> 90% prevalence) and increasing dermal lesions (Gaydos et al. 2023; Mastick et al. 2025) suggest widespread immune stress.
- **Reduced Genetic Diversity:** Genome-wide analyses confirm severe inbreeding and reduced heterozygosity, compounding demographic instability (Kardos et al. 2023).

6.7 Climate and Ecosystem Effects

Climate change exacerbates these stressors by reducing salmon productivity and altering oceanic prey distribution.

The 2013–2015 “warm blob” event caused sharp Chinook salmon recruitment failures and concurrent SRKW emaciation events (Cavole et al. 2016; NMFS 2021). Projected future heatwaves and reduced freshwater inflow into California rivers threaten further contraction of salmon prey availability.

6.8 Population Status and Trend Summary

After 50 years of monitoring and nearly 20 years of federal protection, the SRKWs population remains functionally stagnant at ~74 individuals—less than half of its historical abundance.

Low reproductive success, high adult mortality, chronic malnutrition, and inbreeding depression collectively indicate that this population faces a very high risk of extinction within the foreseeable future. These conditions clearly satisfy the statutory definition of an “endangered species” under Fish & Game Code § 2062, as the species is “in serious danger of becoming extinct throughout all, or a significant portion, of its range.”

California’s listing of the SRKW under CESA is therefore scientifically warranted and legally required.

7. HABITAT AND RANGE IN CALIFORNIA

Overview

The SRKW (*Orcinus orca*) occupies the California Current Large Marine Ecosystem (CCLME) from southeastern Alaska to central California, with California forming the southern extent of its regularly used range (NMFS 2008; NMFS 2021).

Within this region, Southern Residents utilize nearshore and shelf waters that coincide with the migration corridors of Chinook salmon (*Oncorhynchus tshawytscha*), their primary prey (Hanson et al. 2021; Ford et al. 2016).

California’s coastal zone provides critical overwinter foraging habitat during periods when northern salmon runs are depleted. NOAA recognized this ecological connection in 2021 by expanding federally designated critical habitat to Point Sur, Monterey County (86 Fed. Reg. 41668 [Aug 2, 2021]).

7.1 Coastal Distribution in California

Telemetry, acoustics, and visual observations confirm consistent Southern Resident presence in California waters:

- **Northern California Coast (Crescent City to Cape Mendocino):** Autonomous passive-acoustic recorders have detected recurrent SRKW presence during winter–early spring along the northern California shelf (Hanson et al. 2013). Although direct foraging activity has not been confirmed, these detections coincide with seasonal Chinook movements from major river systems—including the Klamath and Eel Rivers—supporting the inference that SRKW passage through this sector is prey-linked.
- **Central California Shelf (Fort Bragg to Point Arena):** Pod-specific sightings in this region are infrequent, and extended foraging behavior has not been confirmed in the published record. However, winter habitat-association work in the northern California Current shows that large marine predators—including SRKWs—tend to associate with shelf edges, submarine canyons, and upwelling zones (Bliss et al. 2024). These features occur throughout the Fort Bragg–Point Arena sector, suggesting this region may act as a transit or opportunistic foraging corridor when prey distribution is favorable.
- **Monterey Bay Region:** A recognized winter–spring hotspot where Southern Residents exploit aggregations of salmon and groundfish near the Monterey Canyon rim. Members of L-pod have been repeatedly photographed here—most notably in March 2007, when an L-pod calf was documented off Monterey Bay (cataloged as L109 “Takoda,” offspring of L55 “Nugget”). Reporting on these sightings, Balcomb explained the whales’ southward shift into California waters amid declining Chinook returns, stating that the orcas were “not going to sit here and starve.” (Balcomb et al. 2007, Times Colonist, Mar. 28).

K-Pod individual traveling in Monterey Bay on March 10, 2025, with the Moss Landing power plant stacks visible in the background. – Photo Credit: Dane McDermott, Monterey Bay Whale Watch

K-Pod whale observed in Monterey Bay on March 10, 2025; the Pajaro Dunes shoreline is visible behind the animal, underscoring how Southern Residents occasionally travel close to coastal communities in the region. – Photo Credit: Dane McDermott, Monterey Bay Whale Watch

More recently, approximately 19 L-Pod individuals were documented in Monterey Bay on March 18, 2023, and K-Pod was photographed in Monterey Bay on March 10, 2025. These observations confirm that the endangered Southern Residents continue to intermittently utilize central-California coastal waters. Monterey Bay remains an active component of the broader southern extent of the SRKW coastal movement and foraging range.

K-Pod whales surfacing in Monterey Bay immediately offshore of Santa Cruz, California, on March 10, 2025. The Santa Cruz Beach Boardwalk can be seen in the background, showing that endangered Southern Residents occasionally pass within sight of the city's coastline. – Photo Credit: Dane McDermott, Monterey Bay Whale Watch

On March 10, 2025, members of K-Pod traveled along the Santa Cruz shoreline inside Monterey Bay. The Santa Cruz Beach Boardwalk, visible in the background, highlights how Southern Residents sometimes pass immediately offshore of local communities, bringing an endangered population directly into view of Santa Cruz residents. – Photo Credit: Dane McDermott, Monterey Bay Whale Watch

- **Farallon Islands and Point Reyes:** SRKWs occasionally transit this region, likely responding to coastal upwelling zones, salmon-rich frontal systems, and plume-associated prey from the Central Valley River network (NMFS 2021). These waters provide seasonal prey acquisition opportunities during offshore movements.

Passive acoustic monitoring by NOAA's Northwest Fisheries Science Center has detected distinct SRKW call types along the California shelf as far south as Monterey Canyon, confirming repeated occupancy of the state's outer-coastal waters (Hanson et al. 2013; Bliss et al. 2024).

7.2 Habitat Characteristics

California habitat use is governed by three interacting ecological features:

1. **Prey Availability** – Concentrations of adult Chinook salmon migrating to Central Valley, Eel, and Klamath Rivers provide seasonal high-energy forage.

2. **Oceanographic Productivity** – Persistent upwelling zones at Point Arena, Point Reyes, and Monterey Bay generate high biological productivity that aggregates prey (Cavole et al. 2016).
3. **Acoustic Environment** – Shelf and canyon bathymetry facilitate echolocation-based foraging; however, increasing vessel noise threatens habitat quality (Williams et al. 2016).

SRKWs preferentially occupy waters within 1–35 km of shore and depths less than 200 m, where salmon densities are highest (Hanson et al. 2021). They travel and forage along persistent ocean fronts and river plume boundaries, particularly near the Eel, Klamath, and Sacramento River mouths (Bliss et al. 2024).

7.3 Critical Foraging Areas in California

Region	Approximate Extent / Key Features	Ecological Importance
Monterey Bay	Point Sur to Moss Landing; Monterey Canyon head and flanks	Recurrent SRKW detections; high Chinook biomass; acoustic calls recorded 2010–2023.
Point Reyes – Farallon Islands	Coastal upwelling zone and river plume influence	Transitional feeding corridor linking Central Valley salmon with offshore prey.
Fort Bragg – Cape Mendocino	Shelf break, canyon mouths, Eel River plume	Frequent winter foraging; association with local salmon returns.
Klamath – Crescent City	Klamath River mouth to Oregon border	Northern limit of California range; overlap with Oregon critical habitat.

These areas collectively form a coastal migration and foraging corridor essential to survival and recovery. The corridor also overlaps with major shipping lanes, naval training zones, and fishing grounds, exposing whales to cumulative noise and contaminant stressors.

7.4 Threats to California Habitat

1. **Prey Scarcity:** Dams, water diversions, and habitat degradation in the Sacramento–San Joaquin, Eel, and Klamath systems have drastically reduced Chinook abundance (Moyle et al. 2008; Hitt et al. 2025).
2. **Vessel Noise and Disturbance:** The San Francisco and Monterey Bay shipping lanes create chronic underwater noise > 105 dB that masks echolocation and reduces foraging efficiency (Williams et al. 2016).
3. **Chemical Pollution and Runoff:** Legacy PCBs and DDTs continue to bioaccumulate in Chinook salmon and magnify through the food web, resulting in high contaminant loads in SRKW blubber (Mongillo et al. 2016). Recent analyses also detect emerging contaminants—including PFAS and hexabromocyclododecane (HBCDD)—in both Southern Resident and Bigg's killer whales, with evidence of in utero maternal transfer (Lee et al. 2022). These compounds add to the cumulative toxic burden already known to impair immune and reproductive function.
4. **Spill Vulnerability:** Increased tanker traffic and offshore energy projects pose acute hazards to a small, slow-reproducing population.

5. **Climate Stressors:** Marine heatwaves ("the Blob") and altered upwelling regimes shift salmon distributions and decrease prey predictability (Cavole et al. 2016).
6. **Out-of-Basin Diversions**: Chinook availability in coastal waters is strongly influenced by freshwater production in the Klamath–Trinity system. However, decades of out-of-basin diversion of Trinity River flows via the Central Valley Project have reduced cold-water habitat and degraded salmon rearing conditions in the Trinity–Klamath Basin, constraining Chinook production and limiting prey available to SRKWs along the northern California coast.

7.5 Habitat Protection Under California Law

Listing the SRKW under CESA would:

- Trigger state-level consultation requirements under Fish & Game Code § 2081 for coastal projects potentially affecting SRKW habitat;
- Reinforce integration of orca-salmon recovery planning across state and federal agencies; and
- Promote coordinated monitoring of noise, pollutants, and prey availability in state waters.

7.6 Habitat and Range in California Summary

California's coastal ecosystem provides irreplaceable seasonal foraging habitat for the SRKW. Repeated use of Monterey Bay, Point Reyes, and the North Coast confirms that these whales depend on California's salmon runs and productive upwelling zones.
Protection of these habitats under the California Endangered Species Act is essential to the persistence and recovery of this genetically and culturally unique population.

8. FACTORS AFFECTING THE SPECIES' CONTINUED EXISTENCE

Overview

The SRKW (*Orcinus orca*) remains in serious danger of extinction throughout a significant portion of its California range. Despite nearly two decades of protection under the federal Endangered Species Act (ESA), the population has not recovered and continues to number fewer than 75 individuals (NMFS 2021; Center for Whale Research 2024).

Primary stressors — prey scarcity, toxic contamination, vessel noise, oil-spill risk, watershed degradation, and climate-driven ecosystem shifts, operate synergistically to suppress reproduction and increase mortality.

Under Fish & Game Code § 2062, these cumulative threats satisfy the statutory definition of an *endangered species*.

8.1 Prey Limitation

Southern Residents rely heavily on Chinook salmon (*Oncorhynchus tshawytscha*) for sustenance (Ford et al. 2016; Hanson et al. 2021).

Coast-wide datasets show steep declines in both Chinook abundance and body size (Ohlberger et al. 2018; Sullaway et al. 2021).

A 2024 *Nature Communications Earth & Environment* study documented an "accelerating energetic deficit" linking salmon collapse directly to SRKW malnutrition (Jorgensen et al. 2024).

In California, Chinook stocks from the Klamath, Trinity, Eel, Russian, and Sacramento–San Joaquin basins remain at historic lows due to dam construction, water diversion, and warming (Moyle et al. 2008; Hitt et al. 2025).

Although the 2024–2025 removal of the four lower Klamath River dams has reopened more than 400 miles of spawning habitat (CDFW 2025; Yurok Tribe 2025), full recovery will take a decade or more. Simultaneously, the Nimbus Fish Hatchery announced a 2025 reduction of Chinook releases by ≈ 50 percent—from 4.5 million to 2 million smolts—due to federal funding shortfalls (Secaira 2025). This contraction further limits prey availability during winter and spring when SRKWs depend on California waters.

Nutritional stress leads to pregnancy failure and decreased survival (Wasser et al. 2017; Fearnbach et al. 2019).

Population-viability models attribute ≥ 60 percent of growth variance to prey limitation (Lacy et al. 2017). Until sustained salmon recovery occurs, the SRKW population cannot stabilize.

8.2 Contaminant Exposure

Southern Residents accumulate persistent organic pollutants (POPs) above projected effects thresholds for marine mammals—ΣPCB > 40 000 ng/g lw; ΣDDT ≈ 200 000 ng/g lw (Mongillo et al. 2016; Krahn et al. 2009).

Emerging contaminants such as PFAS and tire-derived 6PPD-quinone are now found in SRKWS and their salmon prey (Kolpin et al. 2023; Mastick et al. 2025).

Fat mobilization during starvation re-releases POPs into circulation, causing immune and endocrine disruption (Ross et al. 2000).

Maternal transfer during gestation and lactation spreads these effects to calves, compounding inter-generational toxicity.

8.3 Vessel Noise and Disturbance

Ship and recreational-vessel noise above 100–110 dB re 1 µPa reduces prey-detection range by ≈ 50 percent (Holt et al. 2009; Williams et al. 2016).

A 2023 *Proc. R. Soc. B* study found a 30 percent increase in foraging success when noise was reduced (Thomsen et al. 2023).

A 2024 University of Washington study confirmed that Salish Sea sound levels "routinely exceed thresholds for effective foraging" (UW, 2024).

California's Monterey Bay and San Francisco approaches register > 20 dB above natural ambient (Erbe et al. 2019), forcing whales off productive feeding grounds.

8.4 Oil-Spill and Pollution Risk

Modeling indicates that a single medium-size spill in SRKW habitat could kill 20–40 whales (NRC 2019). Heavy tanker and container traffic through Monterey Bay, Point Reyes, and the Golden Gate poses equivalent risks.

Oil exposure causes respiratory and dermal damage (NMFS 2008). Because SRKWs travel in close matrilineal pods, one spill could eliminate an entire social unit .

8.5 Climate Change and Ecosystem Variability

The 2013–2015 "warm-blob" heatwave depressed salmon recruitment and triggered SRKW emaciation (Cavole et al. 2016). Oxygen-poor "dead zones" off California and Oregon have expanded > 30 percent (Feely et al. 2018). Reduced snowpack and drought in the Central Valley and Klamath basins further limit salmon productivity (Moyle et al. 2008; Hitt et al. 2025). A 2024 Raincoast report warned that warming, contaminants, and prey loss "act in concert to suppress recovery" of SRKWs (Raincoast, 2024).

8.6 Forestry Practices, Watershed Modification, and Water Diversions

Historic and ongoing timber harvesting, land conversion, and agricultural water diversions have severely degraded salmon-spawning and rearing habitat across California's coastal and Sierra-Nevada watersheds.

Intensive clear-cutting, road construction, and herbicide use from the 1970s–1990s caused chronic sedimentation, elevated stream temperatures, and riparian loss—conditions still limiting salmon recovery (Moyle et al. 2008; CDFW 2025).

North-coast systems. The Smith, Klamath, Trinity, Eel, Mad, Navarro, Gualala, and Russian Rivers historically supported robust Chinook runs but remain impaired by sediment input, flow alteration, and pesticide runoff. Although the Klamath dam removals (2024–2025) represent major progress, surrounding tributaries continue to suffer from legacy logging and upland erosion.

Central Coast and Marin watersheds. Lagunitas Creek in Marin County supports California's southernmost wild coho population, while the Russian and Gualala Rivers once produced

significant Chinook runs. Water withdrawals for agriculture and vineyards, groundwater pumping, and loss of canopy cover have diminished summer base flows and rearing habitat.

Sierra Nevada tributaries. Upstream forestry, grazing, and dam construction in the Feather, Yuba, Bear, American, Mokelumne, Cosumnes, Merced, and Tuolumne Rivers have reduced cold-water refugia and disrupted sediment balance critical for salmon spawning.

Massive agricultural diversions under the Central Valley Project (CVP) and State Water Project (SWP) routinely reallocate flows away from ecological needs, elevating temperatures and impairing juvenile out-migration. Despite ESA mandates for salmon, these diversions rarely consider downstream effects on SRKW that depend on those salmon populations.

Trinity River Diversion & Klamath Basin Salmon Collapse - The Trinity River, historically one of the largest salmon-producing tributaries of the Klamath Basin, has been heavily diverted out-of-basin via the Bureau of Reclamation's Trinity Division of the Central Valley Project. Water exported through Lewiston Dam into the Sacramento River system supports Central Valley agriculture but reduces cold-water flows essential to Chinook rearing and migration in the Trinity–Klamath system. In early operational years as much as ~90% of upper-basin flows were diverted, resulting in increased stream temperatures, decreased gravel recruitment, and significant loss of juvenile rearing habitat. Because SRKWs forage on Klamath-origin Chinook while in Oregon and northern California waters, these diversions directly suppress prey abundance and thereby impede SRKW recovery.

While the Z'berg–Nejedly Forest Practice Act (Pub. Res. Code §§ 4511 et seq.) and subsequent Forest Practice Rules (14 CCR §§ 895 et seq.) improved erosion control, Timber Harvest Plans (THPs) still seldom evaluate downstream ecological linkages between forest management and marine predators.

Similarly, federal timber sales and water-management projects under the National Forest Management Act and Federal Land Policy and Management Act limit ESA consultation to salmonids themselves, omitting higher-trophic-level impacts.

These cumulative watershed effects—forestry sedimentation, pesticide runoff, and chronic flow alteration—represent a continuing, under-recognized threat to the SRKW prey base and therefore to the whales' survival.

8.7 Disease and Parasitism

Nearly all SRKWs show parasites or skin lesions. *Anisakis simplex* infects > 90 percent of individuals; > 95 percent exhibit gray-patch disease (Gaydos et al. 2023; Mastick et al. 2025). These conditions reflect immune suppression from chronic nutritional and toxic stress.

8.8 Cumulative and Synergistic Effects

Prey loss forces fat mobilization that releases contaminants; noise reduces foraging efficiency; forestry and water-diversion impacts limit salmon recruitment; and climate change further alters

prey distribution. These interacting pressures collectively place the SRKW within the statutory definition of "endangered species" under Fish & Game Code § 2062.

8.9 Factors Affecting the Species' Continued Existence Summary

Despite federal and regional protections, the SRKWs continue to face escalating, interrelated threats.

Its survival depends directly on California's salmon-bearing rivers and coastal ecosystems—from the Smith and Klamath Rivers to the Russian and Lagunitas Creeks and Sierra tributaries of the Central Valley.

Given this dependence and the clear legal authority for listing based on the species' California range (*California Forestry Assn. v. FGC* (2007) 156 Cal.App.4th 1535; *Central Coast Forest Assn. v. FGC* (2018) 227 Cal.Rptr.3d 656), the SRKW meets the definition of *endangered* under Fish & Game Code §§ 2050 et seq.

9. EXISTING PROTECTIONS AND THEIR LIMITATIONS

Overview

Multiple regulatory frameworks currently provide varying degrees of protection for the SRKWs (*Orcinus orca*), yet none have succeeded in reversing population decline. Despite protection under the U.S. Endangered Species Act (ESA) since 2005, the population remains stagnant at fewer than 75 individuals (NMFS 2021; Center for Whale Research 2024).

Federal, state, and international measures address isolated threats but fail to provide comprehensive, coordinated conservation across the whales' full migratory range—particularly within California's coastal waters, which remain outside most state-specific recovery planning.

9.1 Federal Protections

Endangered Species Act (1973)

The SRKWs Distinct Population Segment ("DPS") was listed as *Endangered* under the ESA on November 18, 2005 (70 Fed. Reg. 69903). The listing prohibits take and mandates development of a Recovery Plan, finalized in 2008 and revised in 2021 (NMFS 2008; 2021).
The ESA has produced important research and vessel-distance regulations in Washington waters, yet its effectiveness is limited by:

- **Lack of prey-based recovery implementation.** Salmon-rebuilding commitments identified in the Recovery Plan remain largely unfunded or delayed. The 2025 Nimbus Hatchery reduction—cutting releases by roughly half—demonstrates the absence of a sustained federal mitigation framework (Secaira 2025).

- **No ESA Section 7 nexus in state-managed projects.** ESA consultation applies only to federal actions, leaving state and local fisheries, shipping, and coastal-development projects unreviewed for SRKW impacts unless voluntarily coordinated.
- **Limited enforcement in California waters.** Federal vessel-approach regulations under 50 C.F.R. § 224.105 apply only in Washington inland waters; no equivalent rule restricts approach distance or noise exposure in California's jurisdictional seas.

Marine Mammal Protection Act (MMPA, 1972)

The MMPA prohibits harassment or killing of marine mammals and requires incidental-take authorization for certain activities.

However, the MMPA focuses on acute mortality rather than chronic disturbance or nutritional stress and has no mechanism to address prey depletion or toxic contamination—primary drivers of SRKW decline (NMFS 2021).

National Environmental Policy Act (NEPA)

NEPA requires environmental review for federal projects but lacks substantive prohibitions; it cannot compel mitigation for cumulative ecosystem stressors such as vessel noise or salmon harvest management.

9.2 Regional and Interstate Measures

Washington State

Washington listed all killer whales as *Endangered* in 2004 and implemented the Governor's Orca Recovery Task Force (2018–present). The state adopted 300-yard vessel-distance and 7-knot speed-limit rules, but these apply only within Puget Sound and the San Juan Islands. Washington's regulatory reach ends at the state line; SRKWs spend much of each year along the outer coast and in California waters, where these measures are absent (Bliss et al. 2024).

Oregon State

Oregon listed the SRKWs as Endangered under its state Endangered Species Act on February 16, 2024, aligning with federal protections. However, the Oregon rule primarily addresses coastal-planning coordination and does not confer direct regulatory authority over fisheries or vessel noise. California remains the last major jurisdiction within the whales' range without comparable state protection.

9.3 International Protections

Canada

Southern Residents are protected under Canada's federal Species at Risk Act (SARA). Following an Endangered assessment by the Committee on the Status of Endangered Wildlife in Canada

(COSEWIC) in 2001, the population was formally listed on Schedule 1 of SARA in 2003, triggering statutory prohibitions against harm, the development of a federal Recovery Strategy, and designation of critical habitat in the Salish Sea and along the outer coast of Vancouver Island. SARA obligates federal agencies to prevent the destruction of critical habitat, and Canada has implemented seasonal vessel slow-down zones, voluntary rerouting, and localized Chinook fishery restrictions intended to reduce noise and improve prey availability in core northern foraging areas.

Despite these measures, Canadian implementation has been widely criticized as insufficient to support population recovery. In June 2024, several conservation organizations petitioned the federal government for an Emergency Order under SARA § 80, citing continued population decline and the cumulative impacts of vessel noise, inadequate Chinook-salmon recovery, and major coastal industrial development. Although federal ministers agreed that the whales face "imminent threats to their survival and recovery," the government ultimately declined to issue the requested Emergency Order, opting instead to rely on existing regulatory tools.

Importantly, Canada's protections apply only within Canadian waters and do not regulate prey management, vessel-traffic impacts, or habitat conditions in the United States, including in California coastal waters, which comprise the southern portion of the whales' range. As a result, Canadian protections—while significant—do not address prey availability or disturbance risk to Southern Residents when they occupy California waters.

International Treaties and Guidance

SRKWs receive limited recognition under international conservation frameworks. The population is included within broad protections provided by the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), which lists killer whales on Appendix II, regulating international trade but offering no habitat, fisheries, or vessel-management authority relevant to SRKW conservation.

The Convention on the Conservation of Migratory Species of Wild Animals (CMS) identifies the global importance of cooperative management for migratory cetaceans; however, neither the United States nor Canada is a Party to the Convention, and therefore no binding CMS instruments apply to SRKWs. CMS does encourage cross-border coordination among range states, but this guidance is voluntary and non-regulatory.

Multiple international scientific bodies, including the International Union for Conservation of Nature (IUCN), have assessed the Southern Resident population as Endangered (Red List), emphasizing threats from prey limitation, noise, and contaminants. Although IUCN designations carry no legal force, they underscore the global scientific consensus on the population's imperilment. IUCN has additionally urged the United States and Canada to improve binational management, particularly with respect to restoring Chinook salmon and reducing vessel noise.

Overall, international frameworks highlight the need for cooperation across jurisdictions but provide no enforceable mechanisms to protect SRKW habitat, prey resources, or foraging

conditions. As a result, responsibility for meaningful conservation and recovery measures remains with domestic agencies in the United States and Canada.

9.4 California Law and Programmatic Gaps

California currently affords no species-specific protection for the SRKW. While the species is indirectly referenced in state marine-mammal protection and pollution-control statutes, these frameworks are reactive, not preventative, and lack explicit consultation triggers.

- **California Endangered Species Act (CESA):** The species has never been evaluated for listing under CESA, leaving the Department of Fish and Wildlife without authority to consult on state actions affecting SRKWs (Fish & Game Code § 2081).
- **Marine Protection, Research, and Sanctuaries Act (1972)** and the **California Coastal Act (1976)** address habitat generally but do not mandate prey recovery or vessel-noise reduction.
- **California Ocean Protection Council** initiatives recognize orcas as apex indicators but have no binding requirements or recovery funding mechanisms.

9.5 Hatchery Mitigation Shortfalls and Prey Limitation

The federal and state hatchery programs originally established to offset the loss of salmon production caused by major dam construction are now contracting. At Nimbus Fish Hatchery, the 2025 cutback in Chinook releases reflects a reduction in mitigation output relative to the salmon-production losses created by the Central Valley Project (Secaira 2025). Because hatchery releases were intended to compensate for blocked access to historical spawning grounds, diminished production further reduces the abundance of Chinook available to SRKWs during coastal foraging.

Similarly, the Central Valley Project Improvement Act (CVPIA) has not consistently provided the ecosystem-restoration flows necessary to support recovery of California's Chinook runs (Moyle et al. 2008). Nearly three decades after enactment, many key flow and habitat objectives remain unmet, contributing to depressed salmon returns.

Together, these shortfalls perpetuate prey limitation and demonstrate that existing management frameworks are not achieving the conditions needed to sustain Chinook populations. As a result, the already diminished food base available to SRKWs remains inadequate to support population stability and long-term recovery.

9.6 Enforcement and Monitoring Limitations

Even where regulations exist, enforcement remains limited by funding and jurisdictional fragmentation. NOAA's 2021 Five-Year Review identified insufficient data on contaminant exposure, prey consumption in California waters, and effectiveness of vessel-noise measures (NMFS 2021). California agencies lack mandates to collect this information absent CESA listing.

9.7 Why Federal and Regional Protections Are Insufficient

1. **Jurisdictional Gaps:** Federal measures do not regulate most state-managed activities, fisheries, vessel traffic, and coastal infrastructure within California waters.
2. **Implementation Delays:** ESA Recovery-Plan actions, particularly those related to prey restoration, hydrologic connectivity, and contaminant reduction, remain largely unimplemented 17 years after adoption.
3. **Lack of California Representation:** California is not formally part of NOAA's regional SRKW recovery-planning structure, leaving the State without a coordinated role in shaping prey-recovery, habitat, or vessel-management strategies.
4. **Funding Shortfalls:** Federal mitigation responsibilities continue to erode. The recent reduction of production capacity at Nimbus Hatchery, combined with CDFW's 2024 decision to close the Mad River Fish Hatchery due to aging infrastructure, regulatory constraints, and declining salmon returns, illustrates the absence of a comprehensive, multi-state plan to sustain Chinook availability for SRKWs.

9.8 Existing Protections and Their Limitations Summary

Existing laws and programs - federal, interstate, and international - have not halted or reversed the decline of the SRKWs. Key protections stop at the Washington border, and no comprehensive mechanism currently integrates California's salmon management, shipping regulation, and pollution control into SRKW recovery.

Only a listing under the California Endangered Species Act will empower the Department of Fish and Wildlife to consult on state projects, secure habitat-use monitoring, and coordinate prey-recovery actions necessary for the species' survival.

10. RECOMMENDED MANAGEMENT ACTIONS AND RECOVERY MEASURES

Overview

Listing the Southern Resident Killer Whale (*Orcinus orca ater*) as *Endangered* under the California Endangered Species Act (CESA) will empower the California Department of Fish and Wildlife (CDFW) and the Fish and Game Commission to coordinate recovery efforts across state, federal, and tribal jurisdictions.

Because SRKW survival depends on prey abundance, acoustic quality, contaminant control, and watershed integrity, a CESA listing will close the remaining regulatory gap in California's portion of the species' range and ensure full ecosystem coordination from headwaters to the ocean.

The following actions derive from the NOAA Recovery Plan (2008, 2021), current scientific literature, and statutory authority under Fish & Game Code §§ 2052 et seq., 2081, 2090.

10.1 Prey Recovery and Salmon Restoration

1. **Integrate orca-prey objectives into salmon-management planning.**
    - Require CDFW and the Department of Water Resources to include SRKW prey requirements when setting flow and temperature standards for the Sacramento–San Joaquin, Eel, and Klamath systems.
    - Incorporate these objectives into Water Board instream-flow proceedings and watershed-restoration funding priorities.
2. **Support and monitor large-scale habitat restoration.**
    - Build on the 2024–2025 Klamath River dam removals, which reopened more than 400 miles of salmon habitat (CDFW 2025; Yurok Tribe 2025).
    - Prioritize sediment-control, barrier-removal, and riparian-shade projects in the Eel, Mad, Smith, Navarro, Gualala, and Russian Rivers, and in Lagunitas Creek, where Chinook and coho recovery will enhance prey availability to SRKWs.
3. **Increase and modernize hatchery mitigation.**
    - Restore full funding to mitigation hatcheries such as Nimbus, Coleman, and Iron Gate to meet statutory production obligations (Secaira 2025).
    - Coordinate release timing with NOAA Fisheries to optimize adult Chinook presence during SRKW winter–spring foraging off California.
4. **Advance wild-stock recovery in Sierra tributaries.**
    - Focus on the Feather, Yuba, Bear, American, Mokelumne, Cosumnes, Merced, and Tuolumne Rivers—critical cold-water refugia for Central Valley Chinook.
    - Reduce sedimentation from forestry and grazing, restore floodplain connectivity, and protect groundwater-fed summer flows.
5. **Address forestry and watershed impacts on salmon production.**
    - Require coordination among CalFire, CDFW, and the State Water Resources Control Board when reviewing Timber Harvest Plans (THPs) to evaluate cumulative downstream effects on salmon and, by extension, SRKW prey.
    - Include SRKW prey considerations in CalFire cumulative-watershed-effects analyses under the Z’berg–Nejedly Forest Practice Act (Pub. Res. Code §§ 4511 et seq.) and Forest Practice Rules (14 CCR §§ 895–1115).
    - Encourage the U.S. Forest Service and Bureau of Land Management to integrate SRKW-prey impacts into NEPA and ESA § 7 consultations for timber and vegetation projects.
6. **Integrate water-management reform with salmon and orca recovery.**
    - Direct the State Water Resources Control Board to condition water-rights and export permits under the Central Valley Project (CVP) and State Water Project (SWP) to maintain ecological flows supporting salmon migration and rearing.
    - Coordinate with irrigation districts to implement drought-year flow triggers that protect salmon smolt outmigration through the Sacramento–San Joaquin Delta.
    - Include SRKW prey linkage in CVP/SWP Biological Opinions and Delta-flow criteria revisions.

10.2 Vessel Noise and Disturbance Reduction

1. Adopt state-level vessel-approach and speed standards: minimum 300 yards, 7 knots within ½ mile of detected whales.
2. Establish Quiet Transit Corridors through Monterey Bay and Point Reyes shipping approaches, coordinated with the U.S. Coast Guard and State Lands Commission.
3. Incentivize low-noise vessel technologies via CARB and Ocean Protection Council programs.

10.3 Contaminant and Water-Quality Management

- Target PCB, DDT, and PBDE cleanup in the Sacramento–San Joaquin Delta, San Francisco Bay, and North Coast estuaries.
- Implement PFAS and 6PPD-quinone monitoring in stormwater and tire-wear runoff.
- Coordinate with CalEPA and the Water Board to adopt aquatic-life criteria protective of salmon and orca prey.
- Fund toxicology partnerships with California universities and nonprofits (e.g., Orca Conservancy affiliated research by Chloe Kotik, M.S., Ph.D. Candidate, University of Alaska Fairbanks).

10.4 Oil-Spill and Pollution Preparedness

- Designate SRKWs as a species of special concern in the California Oil Spill Contingency Plan.
- Conduct annual multi-agency spill-response exercises in Monterey Bay, Point Reyes, and the San Francisco approach corridors.

10.5 Research and Monitoring

- Establish a California SRKW Monitoring Program within CDFW's Marine Wildlife Branch for passive-acoustic and satellite-tracking coverage along California's coast.
- Create an open-access SRKW data portal linking prey, contaminant, vessel-noise, and flow-condition data.
- Support graduate, tribal, and nonprofit studies quantifying post-Klamath-removal salmon recolonization and SRKW foraging response.

10.6 Public Awareness and Outreach

- Expand educational exhibits—such as the Nimbus Fish Hatchery's salmon-and-orca display—to highlight the predator-prey linkage.
- Partner with State Parks, aquaria, and schools to integrate SRKW conservation into environmental-education curricula and coastal-cleanup programs.

10.7 Interagency Coordination

- Form a California SRKW Task Force co-chaired by CDFW and NOAA Fisheries.

- Coordinate with Washington, Oregon, and tribal governments on recovery metrics, data sharing, and salmon-management objectives.
- Include CalFire, State Water Resources Control Board, Department of Water Resources, and Ocean Protection Council as core task-force members to ensure integration from forest to sea.

10. 8 Recommended Management Actions and Recovery Measures Summary

California's listing of the SRKWs will activate the consultation, funding, and monitoring mechanisms necessary to address prey depletion, contaminants, vessel noise, forestry, and water-management impacts.

By coordinating upland restoration, river-flow management, and marine-habitat protection, California can play a decisive role in preventing the extinction of this distinct, culturally significant population while restoring the salmon ecosystems that sustain it.

11. POTENTIAL ECONOMIC AND SOCIAL IMPACTS OF LISTING

Overview

Listing the SRKWs under CESA will primarily affect state-agency planning and interagency coordination, not private property or small businesses. The listing will align California's fisheries, water, toxic-substance, and coastal-management policies with existing federal and tribal restoration efforts, while supporting economic resilience in fisheries, ecotourism, and scientific research.

11.1 Administrative and Compliance Costs

- **Agency coordination:** Minor administrative adjustments for CDFW, the Department of Water Resources, the State Water Resources Control Board, and the Ocean Protection Council can be absorbed within existing conservation budgets.
- **Fisheries management:** Improvements to flow regimes, cold-water releases, and hatchery coordination complement ongoing salmon-recovery programs, including the 2024–2025 Klamath River dam removals that have reopened more than 400 miles of salmon habitat and are expected to increase Chinook productivity within a decade (CDFW 2025; Yurok Tribe 2025).
- **Vessel-noise initiatives:** Voluntary speed-reduction zones may slightly affect vessel-transit times but reduce fuel consumption and emissions, yielding long-term net savings (Thomsen et al. 2023; Erbe et al. 2019).
- **Toxic-substance management:** Increased scrutiny of pesticide, herbicide, and rodenticide pathways into salmon-bearing watersheds can be integrated into existing state toxics-control, stormwater, and water-quality programs with minimal administrative cost.

11.2 Economic Benefits

1. Ecosystem Services and Fisheries Resilience

Rebuilding salmon populations to support SRKW recovery enhances commercial and recreational fisheries, coastal tourism, and tribal economies. Klamath River restoration alone is projected to produce long-term regional economic returns that far exceed project costs through renewed salmon harvest, improved water quality, and revitalized watershed productivity.

2. Tourism and Public Engagement

Whale watching contributes hundreds of millions of dollars annually to West Coast economies (NOAA 2021). Protecting SRKWs strengthens California's ecotourism sector and expands educational and outreach opportunities in aquaria, coastal parks, and local communities.

3. Scientific and Educational Innovation

Listing promotes grant opportunities for California universities, tribes, and nonprofit research institutions, supporting jobs and training in marine science, climate adaptation, conservation technology, and toxic-substance monitoring.

11.3 Social and Cultural Benefits

Protecting SRKWs advances California's Biodiversity and Climate Resilience Goals (Executive Order N-82-20) and reinforces the State's public-trust obligations to safeguard native wildlife. For tribal nations such as the Yurok and Karuk Tribes, salmon and killer whales are culturally interconnected indicators of watershed and marine health. Listing SRKWs complements tribal co-management efforts developed through Klamath River restoration.

11.3A The Cost of Inaction: Longstanding Regulatory Failures Have Already Caused Far Greater Harm

Wild salmon and SRKWs that depend on them have declined not because of uncertainty in science, but because state and federal regulatory systems repeatedly failed to protect the watersheds and marine habitats these species require to survive. For decades, agencies have permitted land-use practices known to harm salmon, including logging adjacent to streams, cumulative sediment delivery from road networks, riparian canopy loss, channel simplification, and water diversions, while providing inadequate cumulative-impact analysis and insufficient enforcement under the Forest Practice Act, Clean Water Act, and state water-quality laws.

11.4 Chemical and Toxicant Pathways

California's rivers and nearshore marine ecosystems have also been chronically exposed to toxic chemicals; pesticides, herbicides, fungicides, rodenticides, PAHs, PCBs, DDT residues, and emerging PFAS compounds, despite well-documented harms to salmonids and marine mammals. These toxicants impair salmon olfaction, juvenile growth, immune function, predator avoidance,

and reproductive success. Persistent contaminants accumulate in Chinook salmon and magnify in SRKWs, where they contribute to immunosuppression, reproductive failure, and increased calf mortality. Continued approval and use of toxic substances harmful to listed species reveals longstanding deficiencies in pesticide registration, water-quality oversight, and enforcement of chemical-use restrictions adjacent to waterways.

11.5 Flow, Temperature, and Water-Management Failures

Similarly, state and federal water-project operations have repeatedly produced lethal river temperatures, inadequate instream flows, and migration barriers in the Sacramento, Trinity, Klamath, Scott, Shasta, and Russian River systems—despite decades of recommendations from agency scientists, tribal governments, and independent science reviews. These systemic failures have contributed to widespread declines in wild Chinook, coho, and steelhead populations across California.

The species affected by these regulatory outcomes cannot speak for themselves. Wild salmon, and the SRKWs that rely on them, are voiceless; their survival depends on the effectiveness of state action, enforcement, and habitat protection. Listing under CESA provides a necessary corrective by requiring that state decisions be made through the lens of species recovery and ecological integrity, rather than allowing continued degradation under existing regulatory gaps.

11.4 Long-Term Economic Perspective

Recovered salmon and orca populations provide enduring ecological and economic value far exceeding the modest administrative costs of CESA implementation. Investments in watershed restoration, noise reduction, toxic-substance regulation, and pollution prevention yield long-term dividends in sustainable fisheries, carbon sequestration, and coastal-community resilience.

11.5 Summary of Economic and Social Impacts

The economic and social costs of listing are minimal and absorbed within existing programs, while the benefits are substantial; restored fisheries, enhanced tourism, scientific advancement, cultural revitalization, and fulfillment of California’s environmental-justice and public-trust responsibilities.

Listing the SRKWs under CESA is a cost-effective, necessary, and forward-looking investment in California’s marine ecosystems, salmon watersheds, and the survival of species that cannot speak for themselves.

12. REQUEST FOR DETERMINATION

Pursuant to Fish & Game Code §§ 2050, 2062, 2067, 2072.3, & 2072.7; Title 14 CCR § 670.1

Petitioner Orca Conservancy, through its President Steven C. Christianson, J.D., respectfully submits this Petition to List the SRKW (*Orcinus orca*) as Endangered under the California Endangered Species Act (CESA).

This petition presents substantial scientific information demonstrating that the SRKW is in serious danger of extinction within its California range, satisfying the statutory definition in § 2062. Under § 2067 and consistent with *California Forestry Assn.* (2007) and *Central Coast Forest Assn.* (2018), the Commission may list distinct population segments or evolutionarily significant units where scientific evidence shows unique genetic and ecological attributes. The Southern Resident DPS meets these criteria.

The Commission's authority under § 2072.7 to treat Departmental recommendations and citizen petitions equivalently ensures full scientific review under §§ 2073.5–2074. Considering the continuing population decline and prey scarcity, CESA listing is both warranted and necessary.

12.1 Request

Petitioner respectfully requests that the California Fish and Game Commission:

1. Accept this petition as complete pursuant to *Title 14 CCR* § 670.1(g);
2. Refer the petition to the California Department of Fish and Wildlife (CDFW) for evaluation under § 2073.5;
3. Upon receipt of CDFW's evaluation, determine under § 2074.2(a)(2) that substantial evidence indicates listing may be warranted, thereby designating the Southern Resident Killer Whale as a Candidate Species; and
4. After full status review and public comment, adopt a regulation listing the SRKW as an Endangered species under CESA and direct the necessary rulemaking under Fish & Game Code §§ 2080 et seq. and Title 14 CCR § 670.5.

12.2 Certification

Pursuant to *Title 14 CCR* § 670.1(f), I certify that the information and supporting documents submitted herein are true and correct to the best of my knowledge and belief, and that this petition is made in good faith based on the best available scientific evidence.

Respectfully submitted,

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November 25, 2025
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CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE

Signed original on file,
received March 17, 2026

MEMORANDUM

Date: March 12, 2026

To: Melissa Miller-Henson, Executive Director
California Fish and Game Commission

From: Meghan Hertel, Director

Subject: **Submission of Evaluation of the Southern Resident Killer Whale Petition (*Orcinus orca*)**

On November 25, 2025, The Orca Conservancy (Petitioners) submitted a petition (Petition) to the California Fish and Game Commission (Commission) to list the Southern Resident killer whale (*Orcinus orca*) as endangered pursuant to the California Endangered Species Act (CESA). On December 4, 2025, the Commission referred the Petition to the California Department of Fish and Wildlife (Department) for a 90-day Petition Evaluation.

On February 11, 2026 the Department requested a 30-day extension of time pursuant to Fish and Game Code section 2073.5 to allow the Department additional time to analyze and evaluate the Petition. The extension changed the due date for the Department's evaluation to April 3, 2026.

The Department is submitting this Petition Evaluation for public review and Commission consideration at the June Commission meeting. If you have any questions or need additional information, please contact Dr. Craig Shuman, Marine Regional Manager, at (916) 373-5491.

ec: **California Department of Fish and Wildlife**

Chad Dibble. Deputy Director
Wildlife and Fisheries Division

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Petition Evaluation for Southern Resident Killer Whale (*Orcinus orca*)

Report to the California Fish and Game Commission
April 2026

Cover page photo credit: Microsoft stock image

Suggested citation: California Department of Fish and Wildlife (CDFW). 2026. Petition evaluation for Southern Resident Killer Whale (*Orcinus orca*). A report to the California Fish and Game Commission, California Natural Resources Agency, Sacramento, CA, USA.

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LIST OF ABBREVIATIONS, ACRONYMS, AND TERMS

CESA – California Endangered Species Act

CITES - Convention on International Trade in Endangered Species of Wild Fauna and Flora

Commission – California Fish and Game Commission

Department – California Department of Fish and Wildlife

DDT – Dichlorodiphenyltrichloroethane

DPS – Distinct Population Segment

ESA – Federal Endangered Species Act

HBCDD – Hexabromocyclododecane

MMPA – Marine Mammal Protection Act

NEPA – National Environmental Policy Act

NMFS – National Marine Fisheries Service

NOAA – National Oceanic and Atmospheric Administration

OESA – Oregon Endangered Species Act

PBDE – Polybrominated Diphenyl Ether

PCB – Polychlorinated biphenyl

PFAS – Per and Polyfluoroalkyl substances

SARA – Canadian Species at Risk Act

SRKW – Southern Resident Killer Whale

EXECUTIVE SUMMARY

This petition evaluation for Southern Resident killer whale (*Orcinus orca*; SRKW) has been prepared by the California Department of Fish and Wildlife (Department) in response to the petition to list Southern Resident killer whale as endangered under the California Endangered Species Act (CESA). The petition was received by the California Fish and Game Commission (Commission) November 25th, 2025, and referred to the Department on December 5th, 2025. The purpose of this petition evaluation is to provide a recommendation to the Commission on whether the petition provides sufficient information to indicate the petitioned action may be warranted.

SRKW is a distinct population segment of Northeastern Pacific killer whale with a near-coastal distribution ranging from Central California to Southeast Alaska. Unlike the mammal-eating Biggs (transient) killer whale, SRKW feed primarily on fishes, with a large portion of the diet made up of Chinook Salmon and to a lesser degree other salmon and groundfish species. The overall SRKW population is made up of three distinct pods including the J, K, and L pods, with presence in California waters documented for the K and L pods.

The Department has determined that the petition addresses each of the required petition components listed in Fish and Game Code section 2072.3 and California Code of Regulations, title 14, section 670.1, subdivision (d)(1):

- Life history
- Range
- Distribution
- Detailed distribution map
- Kind of habitat necessary for survival
- Abundance
- Population trend
- Factors affecting the ability to survive and reproduce
- Degree and immediacy of threat
- Impact of existing management efforts
- Suggestions for future management
- Availability and sources of information

In completing its petition evaluation, the Department considered the information in the petition and other relevant information the Department possesses. Based upon the information contained in the petition and other relevant information, the Department has determined that there is sufficient scientific information to indicate that the petitioned action to list Southern Resident killer whale as endangered under CESA

satisfies the “may be warranted” legal standard (Fish & G. Code § 2073.5). However, Fish and Game Code section 4500 and the federal Marine Mammal Protection Act (MMPA) (16 U.S.C., § 1379(a)) raise significant questions regarding this petition. The MMPA prohibits states from regulating take of marine mammals unless the Secretary of Commerce has transferred authority for the conservation and management of a species to the state (16 U.S.C., § 1379(a)). Fish and Game Code section 4500(b) states: “At such time as federal laws or regulations permit the state to assume jurisdiction over marine mammals, the commission may adopt regulations governing marine mammals and the taking thereof.” The Secretary of Commerce has not transferred authority for the conservation or management of SRKW to California. The Department recommends accepting this petition if the Commission determines it is authorized to do so in light of Fish and Game Code section 4500(b).

1 INTRODUCTION

1.1 Petition Evaluation Overview

This petition evaluation serves as the basis for the California Department of Fish and Wildlife's (Department) recommendation to the California Fish and Game Commission (Commission) on whether the petition to list Southern Resident killer whale (*Orcinus orca*; SRKW) as endangered under the California Endangered Species Act (CESA) should be accepted and considered. The recommendation is based on the sufficiency of scientific information in the petition, as well as other relevant information that was reviewed by the Department during the evaluation period.

A petition to list a species under CESA must include "information regarding the population trend, range, distribution, abundance, and life history of a species, the factors affecting the ability of the population to survive and reproduce, the degree and immediacy of the threat, the impact of existing management efforts, suggestions for future management, and the availability and sources of information. The petition shall also include information regarding the kind of habitat necessary for species survival, a detailed distribution map, and any other factors that the petitioner deems relevant" (Fish & G. Code, § 2072.3; Cal. Code Regs., tit. 14, § 670.1, subd. (d)(1)).

Once a petition is submitted to the Commission, the Department has 90 days (120 days with extension) to prepare a petition evaluation that assesses each of the petition components and make a recommendation to the Commission as to whether there is sufficient scientific information to indicate that the petitioned action to list the species under CESA may be warranted (Fish & G. Code, § 2073.5, subds. (a) through (b)). Once completed by the Department, the petition evaluation is delivered to the Commission and placed on the agenda for receipt at the next available meeting of the Commission. At that time, the petition evaluation will be made available to the public for a 30-day public comment period prior to the Commission taking any action on the petition. The Commission then considers the petition, the Department's petition evaluation and recommendation, written comments received, and oral testimony, and will then make a finding at the next available meeting of the Commission as to whether the petition provides "sufficient information to indicate that the petitioned action may be warranted" (Fish & G. Code, § 2074.2, subd. (e)(2)). The standard for accepting a petition for consideration and assessing sufficiency of information is addressed in *Center for Biological Diversity v. California Fish and Game Commission* (2008) 166 Cal.App.4th 597.

If the Commission determines that the petitioned action may be warranted, the species becomes a candidate for CESA listing and proceeds to the status review stage of the CESA listing process. The Department then prepares a peer-reviewed report that advises

the Commission on whether the petitioned action is warranted, based upon the best scientific information available (Fish & G. Code, § 2074.6). Finally, the Commission determines whether the petitioned action to list the species as threatened or endangered is warranted, based on the Department's status review and other information in the administrative record (Fish & G. Code, § 2075.5).

1.2 CESA Petition History

On November 25th, 2025, the Orca Conservancy submitted a petition to the Commission to list Southern Resident killer whale as endangered under CESA. On December 4th, 2025, the Commission referred the petition to the Department for evaluation. At its meeting on December 10th, 2025, the Commission officially acknowledged receipt of the petition. At its meeting on February 11th, 2026, the Commission granted the Department's request for a 30-day extension of the period to review the petition and prepare this petition evaluation.

1.3 Federal Status

The SRKW distinct population segment (DPS) was listed as endangered by the National Oceanic and Atmospheric Administration (NOAA) Fisheries under the Federal Endangered Species Act (ESA; 16 U.S.C. § 1531 et seq.) on November 18th, 2005 (50 CFR Part 224). As a federally listed species, SRKW are afforded protection from federal actions that jeopardize the continued existence of the species. The ESA also restricts the "take" of SRKW, with take defined as "harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct." The original petition for listing was submitted by the Center for Biological Diversity and 11 co-petitioners on May 2nd, 2001. Since this time, NOAA has conducted 5-Year Status Reviews in 2010, 2016, and most recently in 2021. The most recent status review (2021) reaffirmed that the species continues to face a high risk of extinction and should remain listed as endangered.

SRKW are also protected under the Marine Mammal Protection Act (MMPA; 16 U.S.C. § 1361 et seq.), enacted in 1972. Much like the ESA, the MMPA regulates the "take" of marine mammals, including SRKW, with take defined as "harass, hunt, capture, or kill, or attempt to harass, hunt, capture, or kill" (16 U.S.C. 1362 Sec. 3). Unlike the ESA, the primary objective of the MMPA is to maintain the health and stability of the marine ecosystem. Notably, the MMPA states that, "no State may enforce, or attempt to enforce, any State law or regulation relating to the taking of any species (which term for purposes of this section includes any population stock) of marine mammal within the State unless the Secretary has transferred authority for the conservation and management of that species to the State" (16 U.S.C. 1379 Sec. 109). As of March 12, 2026, the Secretary of the

Department of Commerce has not transferred authority of SRKW to the State of California.

1.4 Additional Species Status Designations

1.4.1 Washington Conservation List

Killer whales, including SRKW, were listed as "state endangered" under the state's list of threatened and endangered species by the Washington Fish and Wildlife Commission on April 3rd, 2004. State endangered is defined as, "a species native to the State of Washington that is seriously threatened with extinction throughout all or a significant portion of its range within the state." Washington law (RCW 77.120.120) restricts the take of endangered species, including SRKW, with take defined as hunting, fishing for, possessing, maliciously harassing, or killing endangered fish or wildlife. Killer whales are also identified as a *Species of Greatest Conservation Need* under the State Wildlife Action Plan and as a *Priority Species* under the Washington Department of Fish and Wildlife's Priority Habitat and Species Program. Washington affords protection to SRKW through vessel approach regulations (RCW 77.15.740).The Secretary of Commerce has not delegated MMPA take authority for SRKW to the state of Washington.

1.4.2 Oregon Endangered Species Act

The Oregon Fish and Wildlife commission listed Southern Resident Orcas (also known as Southern Resident Killer Whales) as endangered in February 2024 after receiving a petition from the Center for Biological Diversity, Defenders of Wildlife, and Whale and Dolphin Conservation in February 2023. Listing under the Oregon Endangered Species Act (OESA) affords listed species certain protections and conservation measures, as well as take prohibitions, except for when a species is also listed under the federal ESA. As a federally listed species, take of SRKW is not regulated under the OESA. Given this limitation, listing under OESA is focused on studying and addressing environmental threats, including pollutants, vessel traffic, and prey availability. The Secretary of Commerce has not delegated MMPA take authority to the state of Oregon.

1.4.3 Canadian Species at Risk Act

SRKW was listed as endangered under the Canadian Species at Risk Act (SARA) at the Act's proclamation in 2003. Since listing, SRKW has been reaffirmed as endangered under SARA in 2009 and 2024. The SARA is Canada's closest equivalent to the ESA, with the primary goal of preventing the extinction of Canadian indigenous species, subspecies, and distinct populations.

2 SPECIES DESCRIPTION AND TAXONOMY

CESA defines the "species" eligible for listing to include "species or subspecies" (Fish & G. Code, §§ 2062, 2067, 2068) [and courts have held that the term "species or subspecies" includes "evolutionarily significant units" (Central Coast Forest Assn. v. Fish & Game Com. (2018) 18 Cal.App.5th 1191, 1236, citing Cal. Forestry Assn., *infra*, 156 Cal.App.4th at pp. 1542, 1549)].

2.1 Species Description

The petition describes SRKW as having distinctive black and white markings, a tall triangular dorsal fin, and stable pigmentation patterns (NMFS 2008). Adult males reach 8-9 m in length and adult females reach 6-7 m in length. The petition states that the species is distributed from Central California to Southeast Alaska (Bigg 1982, Ford et al. 2000, NMFS 2008) and moves seasonally between core summer habitats in the inland Salish Sea and winter and spring ranges along the California, Oregon, and Washington coasts (Hanson et al. 2013, Bliss et al. 2024).

2.2 Species Taxonomy

The petition describes the taxonomy of SRKW as belonging to the order Cetacea, suborder Odontoceti, family Delphinidae (dolphins), genus *Orcinus*, and species *orca*. The petition also states that proposals have been made to revive the subspecies designation *Orcinus orca ater* for SRKW, however, no taxonomic authority currently recognizes this name.

2.3 Population Structure and Genetics

The petition describes killer whales generally as a single species but with several genetically, morphologically, behaviorally, and dietarily distinct ecotypes (Ford et al. 2000, Hoelzel et al. 2007, NMFS 2008). Of these ecotypes, SRKW are considered "resident" killer whales and are recognized as a DPS due to evolutionary separation from other killer whale populations. The petition also states that within the SRKW DPS there are currently three distinct pods (social groups), including the J, K, and L pods.

The petition discusses the genetic distinctness of SRKW as determined through mtDNA and nuclear microsatellite analysis (Hoelzel et al. 2007, Parsons et al. 2013), as well as modeling that suggest divergence from Northern Resident killer whales approximately 700,000 years ago (Foote et al. 2011). The petition also states that there is extreme inbreeding and low heterozygosity within the SRKW population (Kardos et al. 2023).

2.4 Similar Taxa

The petition describes other ecotypes of killer whale, including transient (Biggs) and offshore ecotypes, which while within the same species, are genetically and socially isolated. All three ecotypes co-occur along the U.S. West Coast but have not been observed to interbreed (Hoelzel et al. 2007).

3 SUMMARY OF PETITION COMPONENTS

Pursuant to Fish and Game Code section 2072.3 and California Code of Regulations, title 14, section 670.1, subdivision (d)(1), the Department evaluated whether the petition contained information on each of the following petition components:

- Life history;
- Range;
- Distribution;
- Detailed distribution map;
- Kind of habitat necessary for survival;
- Abundance;
- Population trend;
- Factors affecting the ability to survive and reproduce;
- Degree and immediacy of threat;
- Impact of existing management efforts;
- Suggestions for future management; and
- Availability and sources of information.

The Department did not receive new information from the public during the petition evaluation period (Fish & G. Code, § 2073.4). Pursuant to Fish and Game Code section 2073.5, the Department evaluated the petition to determine whether there is sufficient information to indicate that the petitioned action may be warranted. A summary of the relevant information from the petition for each of the petition components is presented below. The Department has grouped similar components together and renamed components to create a more cohesive and readable document.

3.1 Life History

This section summarizes the information in the petition regarding the species' life history (Fish & G. Code, § 2072.3; Cal. Code Regs., tit. 14, § 670.1, subd. (d)(1)). The petition discusses several aspects of the Life History of SRKW under subsection 5.4: *Population Structure and Demography* (pg. 10), section 5.5: *Social Structure and Cultural Ecology* (pg. 11), and subsection 5.6: *Prey Specialization on Chinook Salmon* (pg. 11-12).

In subsection 5.4, the petition discusses the pod structure and current demographics of the SRKW population. The SRKW population is made up of three distinct pods (J, K, L) that range in number of individuals and habitat use. The petition states that the J pod remains in inland Washington waters year-round, the K pod is the most wide-ranging and regularly ventures into California waters, and the L pod is the largest and seasonally uses coastal and outer-shelf habitats, including foraging excursions into California waters.

Next, in subsection 5.5, the petition discusses the social structure and communication dynamics of SRKW. The petition describes the social and matrilineal nature of SRKW, in which the population is organized into stable family groups with distinct learned vocal dialects and foraging behavior. Females may live to be over 80 years old and post-reproductive females are important for pod leadership, social cohesion, and for locating prey.

Finally, in subsection 5.6, the petition describes the diet of SRKW and its reliance on Chinook salmon, and to a lesser (seasonal) extent on Coho and chum salmon, as prey sources. The petition states that California-origin Chinook stocks are an important food source for SRKW during winter and spring. The petition identifies the Klamath, Eel, Russian, and Sacramento-San Joaquin watersheds as important to SRKW for producing Chinook salmon as prey.

3.2 Range and Distribution

This section summarizes the information in the petition regarding the species' range and distribution and provides a detailed distribution map (Fish & G. Code, § 2072.3; Cal. Code Regs., tit. 14, § 670.1, subd. (d)(1)). A species' range for the purposes of CESA and this petition evaluation is the species' range within California (Cal. Forestry Assn. v. Cal. Fish and Game Com. (2007) 156 Cal.App.4th 1535, 1551). Range describes the general geographical area in which a species occurs. Distribution describes the actual sites where individuals and populations of the species occur within the species' range.

The first map provided in the petition (Figure 1; subsection 5.2: *Species Distribution*, pg. 12) shows the historical range of the species, while the second map (Figure 2; subsection 5.2: *Species Distribution*, pg. 13) is a closer approximation of the current distribution (as critical habitat designated by NOAA). The petition also includes text descriptions of the historical range and current coastal distribution of SRKW in subsections 5.1: *Historical and Current Distribution* (pg. 11) and 7.1: *Coastal Distribution in California* (pg. 22-23). In these descriptions, the petition states that the historical range of SRKW is Central California to Southeast Alaska, but that the current range is reduced. The petition also states that SRKW core summer habitat is in the Salish Sea, and winter and spring habitats are generally along the coast from

Washington to California, with documented SRKW detections along the Northern California Coast (Crescent City to Cape Mendocino) and in the Monterey Bay region.

Figure 1. Historical range of SRKW provided from petition in subsection 5.2, pg. 11 (From Wiles 2004).

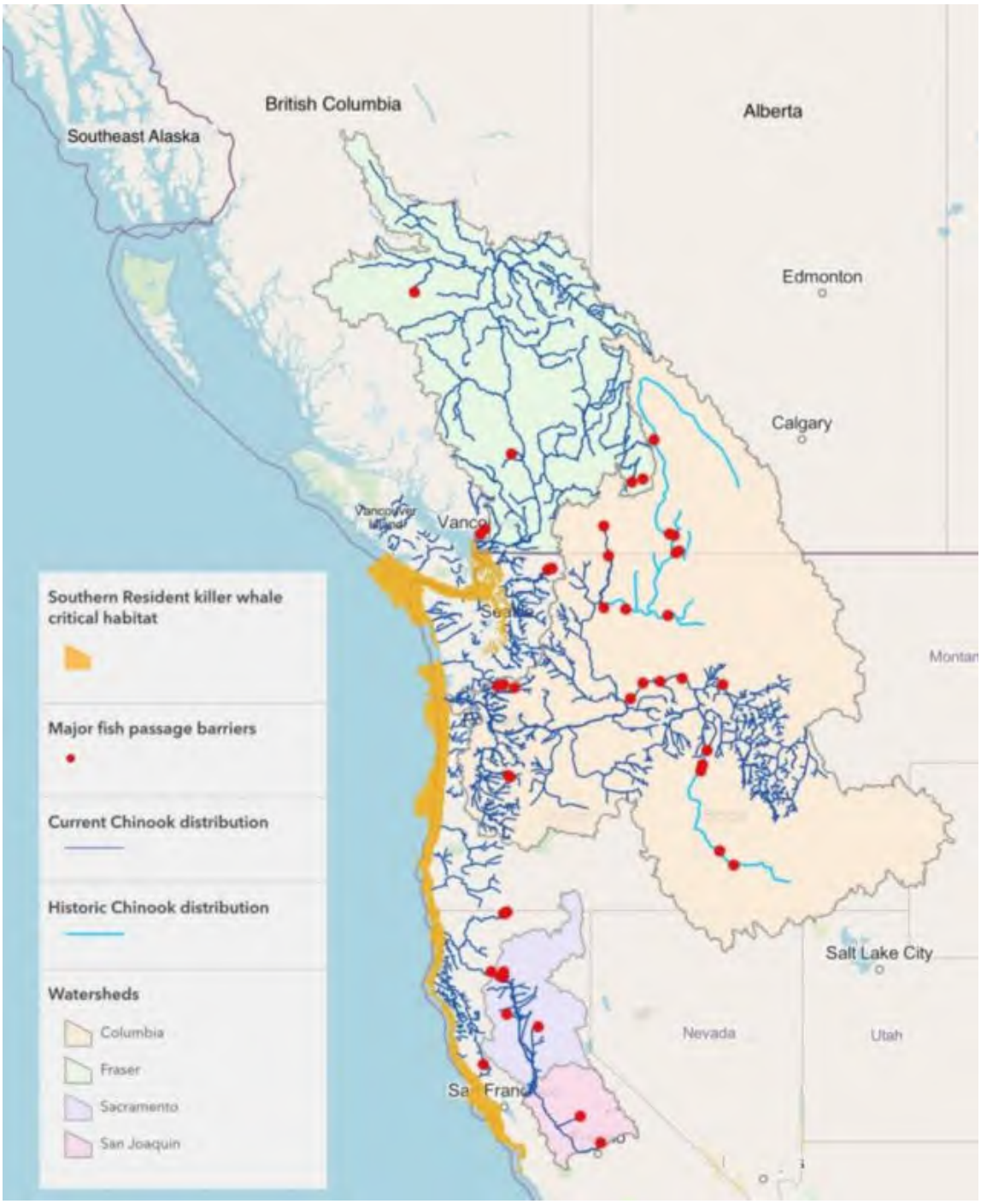

Figure 2. Current coastal distribution of SRKW (yellow shading) from petition in subsection 5.2, pg. 12 (From Raincoast Conservation Foundation).

3.3 Habitat

This section summarizes the information in the petition regarding the kind of habitat necessary for species survival (Fish & G. Code, § 2072.3; Cal. Code Regs., tit. 14, § 670.1,

subd. (d)(1)). The petition includes a description of SRKW habitat in California waters in subsection 7.2: *Habitat Characteristics* (pg. 23-24) as 1-35 km from shore, at depths less than 200 m, and along persistent ocean fronts and river plume boundaries. It also notes that SRKW preferentially select habitat based on prey (e.g., Chinook salmon) availability, oceanographic productivity, and areas where echolocation is most effective.

The petition draws attention to specific habitats that meet the above criteria in subsection 7.3: *Critical Foraging Areas in California* (pg. 24). These habitats include Monterey Bay, Point Reyes/Farallon Islands, Fort Bragg/Cape Mendocino, and Klamath/Crescent city and are primarily identified due to the presence of high densities of Chinook salmon and/or past incidents of SRKW detection.

3.4 Abundance and Population Trend

This section summarizes the information in the petition regarding the species' abundance and population trend (Fish & G. Code, § 2072.3; Cal. Code Regs., tit. 14, § 670.1, subd. (d)(1)). The petition addresses SRKW abundance and trends in section 6: *Population Status and Trend* (pg. 17-21). Subsection 6.2: *Current Census Data* (pg. 18-19) describes the current abundance of the population (74 individuals) as determined by the Center for Whale Research census, with additional breakdown of the size of each individual pod. Further, the petition describes the recent age structure of the population.

The petition includes a trend analysis of SRKW abundance from 1974 to 2024 in subsection 6.5: *Population Trend Analysis* (pg. 20). The included figure shows three data points and a nearly linear decline for the total population size as well as for reproductive females. Although the Department possesses population trend information that differs from that contained in the petition, for purposes of this petition evaluation the Department will assume the population information in the petition is correct.

The petition also describes population decline pre-census (subsection 6.1: *Historical Population Decline*, pg. 18), including a major decline in the 1960s and 1970s driven by removals of whales for marine park attractions. The petition states that approximately one third (47 individuals) of the presumed population (~140 individuals) was either killed or captured during this time period.

3.5 Threats

This section summarizes the information in the petition regarding the factors affecting the ability of the species to survive and reproduce, and the degree and immediacy of threats (Fish & G. Code, § 2072.3; Cal. Code Regs., tit. 14, § 670.1, subd. (d)(1)). The petition discusses threats to SRKW primarily in Section 8: *Factors Affecting the Species' Continued Existence* (pg. 21-29), although threats are also discussed in sections 2, 4, 5,

6, and 7. The petition outlines threats from prey limitation, contaminant exposure, vessel noise and disturbance, oil-spill and pollution risk, climate change and ecosystem variability, forestry practices, watershed practices, water diversions, disease and parasitism, and the cumulative and synergistic effects of these threats.

Regarding prey limitation, the petition states that Chinook salmon are SRKW's primary prey and have declined in both abundance and body size coast wide. The petition then presents that this decline in food quantity and quality has been linked to malnutrition in SRKW. The petition states that the resulting malnutrition leads to reproductive failure and decreased survival, meaning that much of the population viability can be attributed to prey limitation, specifically Chinook salmon.

Given the effects of prey limitation on the SRKW population, the petition links many of the identified threats to SRKW through their effects on Chinook salmon. For example, it identifies reduced snowpack and drought under climate change as limiting factors for Chinook productivity in Central Valley and Klamath Rivers. Likewise, it presents dams, water diversions, land use (timber, roads, and agriculture), herbicides/pesticides, and changes to sediment transport as major limiting factors for salmon spawning, rearing, and outmigration. The petition discusses the Klamath River dam removals as a potential benefit for Chinook abundance (and thus SRKW); however, it also states that the benefits from this action are unlikely to be realized for a decade or more and may be offset by reduced production at Nimbus Fish Hatchery in 2025.

The petition discusses the threats to SRKW from vessel noise and disturbance through reduced prey detection range and resulting decreasing in foraging success. The petition cites research that noise levels in shipping lanes in the San Francisco and Monterey Bays are chronically elevated due to ship traffic, reducing the effectiveness of echolocation and resulting foraging efficiency.

Next, the petition presents threats to SRKW from oil spills. Oil spills represent a risk of respiratory and dermal damage, potentially resulting in death. The petition references modeling that indicates that an oil spill in SKRW habitat could result in the death of 20-40 individual whales, and that the conditions for this type of spill exists through Monterey Bay, Point Reyes, and the Golden Gate due to tanker and container ship traffic.

The petition also discusses negative immune and reproductive effects from other environmental contaminants, including the bioaccumulation of Polychlorinated biphenyls (PCBs), Dichlorodiphenyltrichloroethane (DDT), per and polyfluoroalkyl substances (PFAS), and Hexabromocyclododecane (HBCDD) chemicals in SRKW. It ties the effects of these chemicals on immune function to increased levels of parasitism and skin lesions in SRKW. The petition states that greater than 90 percent of SRKW are

infected with parasitic nematodes, and greater than 95 percent exhibit grey-patch disease.

3.6 Existing Management

This section summarizes the information in the petition regarding the impact of existing management efforts on the species (Fish & G. Code, § 2072.3; Cal. Code Regs., tit. 14, § 670.1, subd. (d)(1)). The petition addresses current management in Section 9: *Existing Protections and Their Limitations* (pg. 29-33). The petition describes federal protections under the ESA, MMPA, and National Environmental Policy Act (NEPA), state protections in Washington and Oregon, international protections within Canada, and protections governed by international treaties and guidance. The presented protections include prohibitions on take and/or harm, production of recovery plans, environmental review for impactful projects, vessel distance and speed requirements, habitat protections, and prohibitions on trade.

The petition discusses the 2005 listing of SRKW under the ESA, which prohibits take and mandates adoption of a recovery plan. The petition lists several limitations of the ESA listing, including a shortcoming of the ESA in addressing prey availability, a lack of Section 7 consultation authority over state-managed projects, and limited enforcement in California waters. The petition states that these shortcomings have resulted in unfunded or delayed actions from the recovery plan and insufficient protection from vessel noise or proximity due to regulations that only cover Washington waters.

The petition goes on to describe the protections afforded by the MMPA, which prohibits the harassment or killing (take) of marine mammals (including SRKW) and requires incidental take authorization in some instances. The petition identifies the focus on take prohibitions and the lack of mechanisms to address issues concerning prey availability or pollutants as a limitation of the MMPA.

Similar to the ESA and MMPA, the petition identifies limitations concerning the protection afforded to SRKW by NEPA. The petition states that although NEPA requires environmental review of federal projects, it lacks adequate protections in that it cannot require mitigation for indirect stressors that cause underwater noise (vessel traffic) or reduced salmon prey availability.

The petition then discusses the protections afforded by the states of Washington and Oregon, as well as the limitations of those protections. The petition states that in Washington SRKW were listed as endangered in 2004, an Orca Recovery Task Force was formed in 2018, and the state currently has distance and speed requirements for vessels within Puget Sound and in the vicinity of the San Juan Islands. Oregon listed SRKW as endangered in 2024, allowing for special considerations in coastal planning.

The petition identifies limitations with these state protections due to jurisdictional boundaries and a lack of regulatory authority over fisheries.

Next, the petition outlines current management and protections in Canada under the SARA. SARA regulates harm of SRKW, requires the development of a recovery strategy, requires the designation of critical habitat, and protects critical habitat. The petition states that Canada has also implemented vessel restrictions and Chinook fishery restrictions to reduce noise and improve prey supply, respectively. Despite these protections, the petition lists several issues including continued population decline, insufficient vessel noise regulation, inadequate prey supply, and coastal industrial development. The petition also discusses the jurisdictional limitations of Canadian laws to Canadian waters, which limits their effectiveness when SRKW are in southern habitats.

Finally, the petition outlines SRKW protections afforded under international treaties, namely the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES). CITES lists killer whales on Appendix II, which regulates the trade of animals or animal parts. The petition states that despite this protection, CITES does not offer any habitat, fisheries, or vessel-management authority.

The petition does not discuss the protections for SRKW contained in the California Fish and Game Code. California state law prohibits the take of marine mammals except in accordance with federal laws (FGC Section 4500), and the California Orca Protection Act restricts holding orcas in captivity, as provided (FGC Section 4502.5).

3.7 Future Management

This section summarizes the information in the petition regarding suggestions for future management (Fish & G. Code, § 2072.3; Cal. Code Regs., tit. 14, § 670.1, subd. (d)(1)). The petition presents suggestions for future management in Section 10: *Recommended Management Actions and Recovery Measures* (pg. 33-36). The proposed management actions focus on increased prey (Chinook salmon) production, reduction in vessel noise, contaminant and water quality management, oil-spill and pollution preparedness, increased research and monitoring, increased public awareness and outreach, and increased interagency coordination.

In subsection 10.1: *Prey Recovery and Salmon Restoration*, the petition lists recommendations to consider SRKW prey needs when planning instream flows, to support large-scale habitat restoration in Northern California rivers, and to ensure that salmon hatcheries meet their production goals. The petition also suggests that wild salmon stocks be recovered in Central Valley rivers and that effects of forestry be considered in the context of SRKW. The petition lists multiple state and federal agencies that would require engagement to meet these management recommendations.

In subsection 10.2: *Vessel Noise and Disturbance Reduction*, the petition lists several recommendations to limit the effects of vessel noise on SRKW. These recommendations include vessel approach and speed standards of 300 yards and no faster than 7 knots within 0.5 miles of detected SRKWs, quiet transit corridors through the Monterey Bay and Point Reyes shipping approaches, and incentivizing low noise vessels. As with the recommendations in subsection 10.1, the petition lists several state and federal agencies that would be necessary collaborators to implement these management recommendations.

In subsections 10.3: *Contaminant and Water-Quality Management* and 10.4: *Oil-Spill and Pollution Preparedness*, the petition lists several management actions related to chemicals present or potentially present in California inland and coastal waters. The petition calls for clean-up of PCBs, DDT, and Polybrominated Diphenyl Ethers (PBDEs) in the San Francisco and north coast estuaries, monitoring of PFAS and 6PPD-quinone in stormwater runoff, and coordination with state agencies to adopt protective water quality standards. The petition also suggests that SRKW be specifically included in the California Oil Spill Contingency Plan and that oil spill response exercises be conducted in the vicinity of Monterey Bay, Point Reyes, and the San Francisco shipping corridors.

In subsections 10.5: *Research and Monitoring*, 10.6: *Public Awareness and Outreach*, and 10.7: *Interagency Coordination*, the petition discusses CDFW led and collaborative efforts that would benefit SRKW. For example, the petition mentions establishing SRKW monitoring programs, public data portals, public displays, and an interagency task force to support SRKW management. The petition lists a wide range of state and federal agencies, as well as tribes and universities, that should be included in this work.

3.8 Availability and Sources of Information

This section summarizes the information in the petition regarding availability and sources of information (Fish & G. Code, § 2072.3; Cal. Code Regs., tit. 14, § 670.1, subd. (d)(1)). The petition provides a list of 81 references in Section 13: *References Cited* (pg. 41-49), including 64 scientific or technical publications and 17 agency or tribal references. The petition also includes reference to legal code sections from 14 acts, rules, or executive order as well as three instances of case law. The references listed in section 13 were provided to the Department by the Petitioner through the Commission, however, full citations and associated documents were not provided for the in-text citations “Center for Whale Research 2024” and “Parsons et al. 2013.”

4 OTHER RELEVANT INFORMATION AVAILABLE TO THE DEPARTMENT

Pursuant to Fish and Game Code section 2073.5, the Department also evaluates petitions in relation to other relevant information the Department possesses or receives. The Department has not been able to locate other relevant information currently in its possession for SRKW.

If the Commission accepts the petition for consideration, all reasonable attempts will be made by the Department to notify affected and interested parties and to solicit data and comments on the petitioned action (Fish & G. Code, § 2074.4). At that time, the Department will commence a review of the status of the species and produce a written peer-reviewed report, based upon the best scientific information available to the Department, which indicates whether the petitioned action is warranted (Fish & G. Code, § 2074.6).

5 SUFFICIENCY OF SCIENTIFIC INFORMATION AND RECOMMENDATION TO THE COMMISSION

The Department evaluated the petition components set forth in Fish and Game Code section 2072.3 and California Code of Regulations, title 14, section 670.1, subdivision (d)(1) for sufficiency of information pursuant to Fish and Game Code section 2073.5. Based upon the information contained in the petition and other relevant information, the Department has determined that there is sufficient scientific information to indicate that the petitioned action to list Southern Resident killer whale as endangered under CESA satisfies the "may be warranted" legal standard (Fish & G. Code § 2073.5). However, Fish and Game Code section 4500 and the federal Marine Mammal Protection Act (MMPA) (16 U.S.C., § 1379(a)) raise significant questions regarding this petition. The MMPA prohibits states from regulating take of marine mammals unless the Secretary of Commerce has transferred authority for the conservation and management of a species to the state (16 U.S.C., § 1379(a)). Fish and Game Code section 4500(b) states: "At such time as federal laws or regulations permit the state to assume jurisdiction over marine mammals, the commission may adopt regulations governing marine mammals and the taking thereof." The Secretary of Commerce has not transferred authority for the conservation or management of SRKW to California. The Department recommends accepting this petition if the Commission determines it is authorized to do so in light of Fish and Game Code section 4500(b). If the Commission accepts the petition for further consideration, the Department will commence a review of the status of the species at that time pursuant to Fish and Game Code section 2074.6 and California Code of Regulations, title 14, section 670.1, subdivision (f).

ACKNOWLEDGEMENTS

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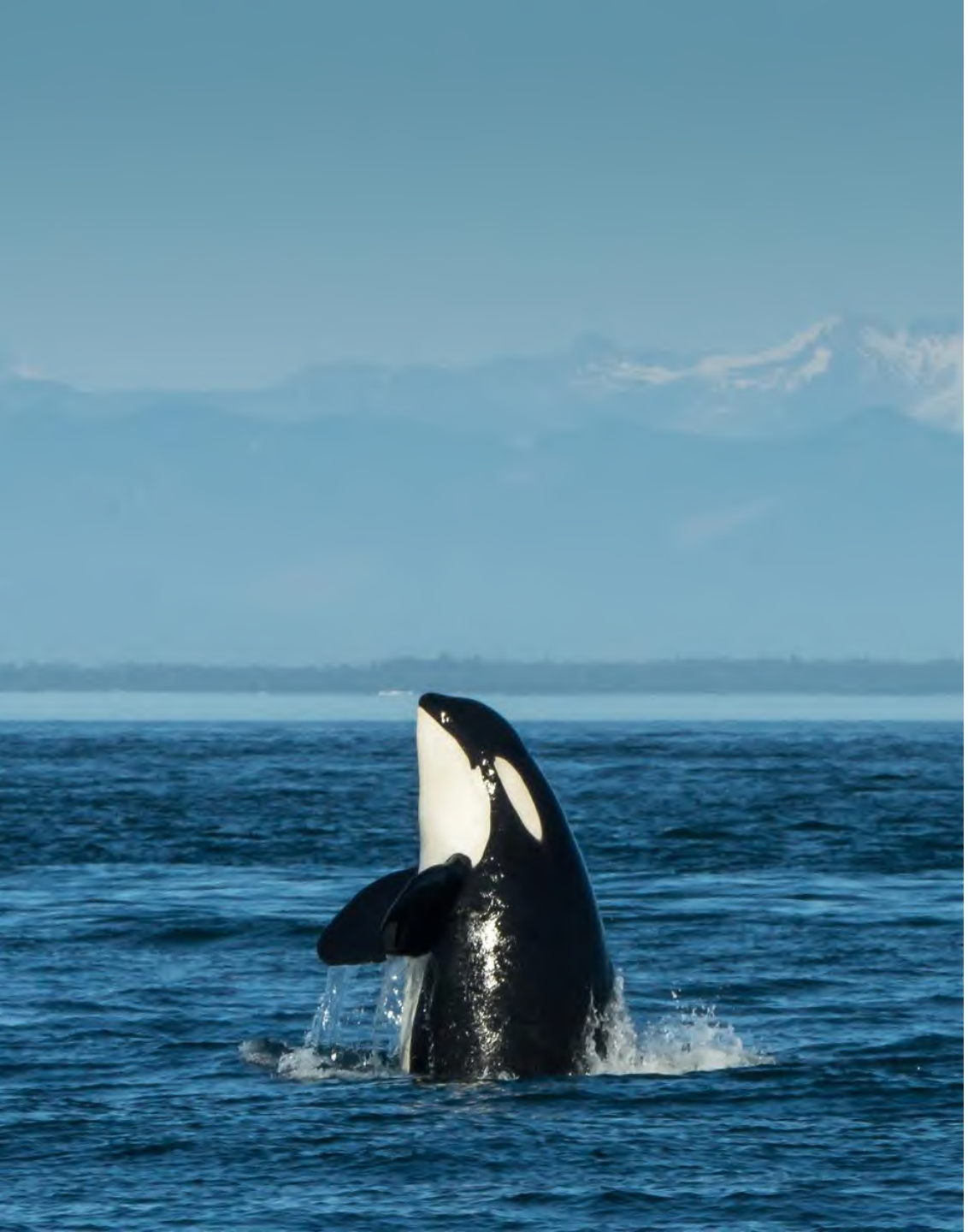


Southern Resident Killer Whale

CDFW Petition Evaluation

Presentation to the California Fish and Game Commission

June 17, 2026

Dr. Dylan Stompe

Marine Region (R7)

Photo: Microsoft stock image

Presentation Overview

- Petition History
- Petition Components
  - Life History
  - Range and Distribution
  - Habitat
  - Population Abundance and Trends
  - Threats
  - Existing and Future Management
- CDFW Recommendation

Photo: Brad Hanson, NOAA Fisheries

Petition History

- **Petition Received:** Nov. 25th, 2025
  - List Southern Resident Killer Whale as Endangered
  - Petitioner: Orca Conservancy
- **Transmitted to CDFW:** Dec. 4th, 2025
- **30-Day Extension Approved:** Feb. 11th, 2026
- **Petition Evaluation Transmitted:** Mar. 12th, 2026

Photo: NOAA Fisheries

Life History

- Resident, fish-eating
- Overlapping distribution with other life history types, but limited interaction
- Primary reliance on Chinook salmon for food
- Strong social grouping (pods)

Photo: Oregon State University

Range and Distribution

- Nearshore coastal waters from Northern British Columbia to Central California
- Primarily reside in Salish Sea (WA/BC) in spring, summer, and fall
- May venture in California waters during winter months

Map: Wiles, 2004.

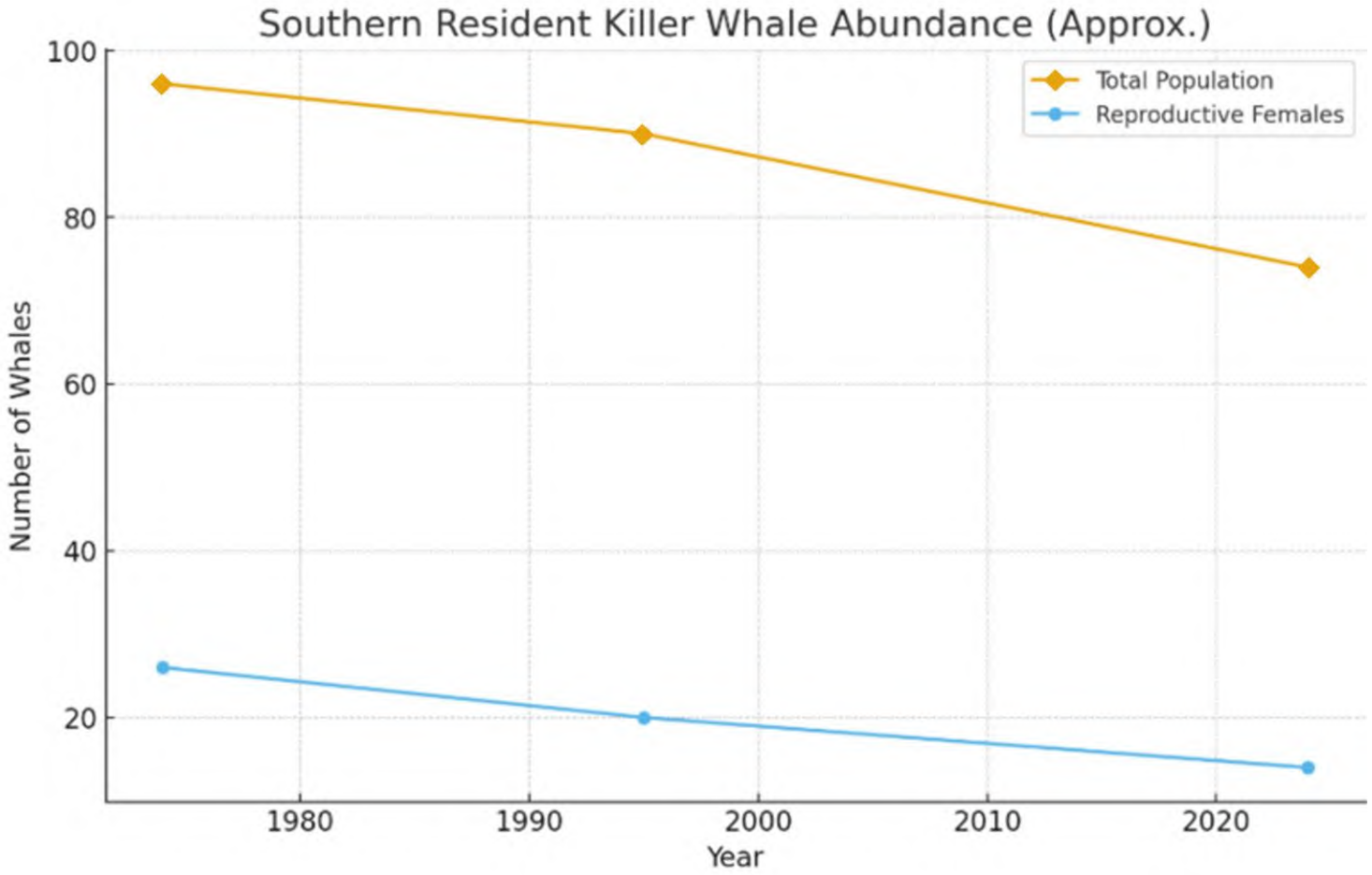
Habitat

- Nearshore (Shelf) coastal waters
- Productive, upwelling habitats with high food density
- Petition Identifies:
  - Monterey Bay
  - Point Reyes/Farallon Islands
  - Fort Bragg/Cape Mendocino
  - Klamath River Mouth/Crescent City

Photo: NOAA Fisheries

Population Abundance and Trend

- **Population Census:** 74 whales (2025)
- Low abundance, fluctuating trends
- Large reductions in 1960s-1980s for live display



Petitioner Provided Figure

Threats

- Prey Limitation/Malnutrition
  - Forestry Practices
  - Watershed Practices
- Vessel Noise and Disturbance
- Climate Change/Ecosystem Variability
- Disease and Parasitism
- Contaminant Exposure
  - Oil-spills and Pollution

Photo: CDFW Image

Current and Future Management

- **Protected under:**
  - Federal Endangered Species Act
  - Marine Mammal Protection Act
  - Oregon Endangered Species Act
  - Washington State Law
  - Canadian Species at Risk Act
- **Current Management:**
  - Federal take prohibitions
  - Incorporated into Federal salmon FMP
  - Federal Recovery Plan
- **Future Management**
  - The petition lists seven main areas for improvement in future management

Photo: NOAA Fisheries

Summary

- Southern Resident Killer Whales are a fish-eating distinct population segment that sometimes inhabits California waters
- Population size has fluctuated over the period of record but has mostly declined since 1990s
- Prey limitation (Chinook salmon) is generally considered a primary driver of decline
- Current management and protections are robust

Photo: Kevin Nichols

CDFW Recommendation

In completing its Petition Evaluation, the Department has determined that the Petition **does provide sufficient scientific information** that the petitioned action to list Southern Resident Killer Whale as endangered under the California Endangered Species Act **may be warranted.**

However, Fish and Game Code 4500(b) and section 109(a) of the Marine Mammal Protection Act raise questions regarding the petitioned action.

The Department recommends accepting the petition if the Commission determines it may do so under FGC §4500(b).

Questions | Contact

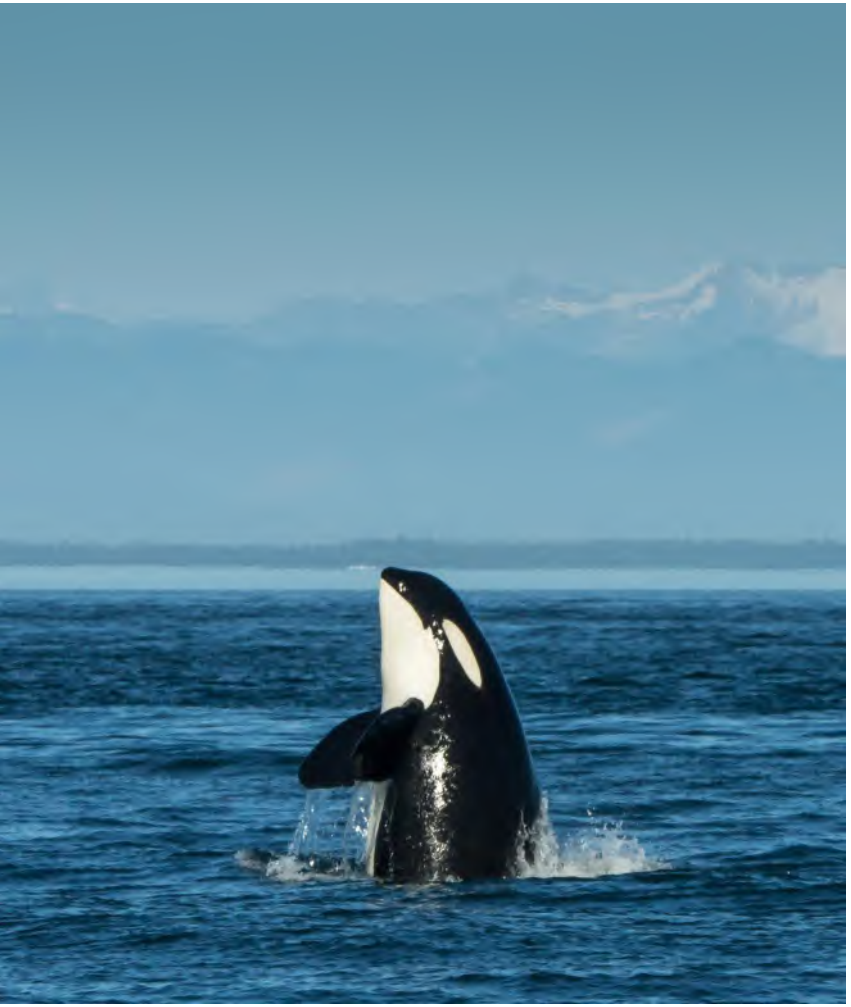


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Photo: Microsoft stock image