Chapter 11

Tribal Engagement, Traditional Ecological Knowledge and Tribal Beneficial Uses

11.1 Introduction

This chapter describes the tribal outreach and engagement efforts related to the Sacramento/Delta update to the Bay-Delta Plan. This chapter also contains a brief overview and background on California Native American Tribes. The overview contained within this chapter, however, is not meant to be exhaustive and is instead provided as a contextual backdrop for the information that follows it related to Traditional Ecological Knowledge (TEK), Tribal Beneficial Uses (TBUs), and the impacts to tribes from harmful algal blooms (HABs). The discussion on TEK contained within this chapter recognizes the vast knowledge and experience held by tribes, the inherent difficulties associated with disconnecting that generational knowledge from tribes when attempting to describe it and highlights the benefits of incorporating TEK into water resource management. This chapter also includes a discussion on incorporating TBUs into the Bay-Delta Plan and the proposed designation of Tribal Tradition and Culture (CUL) beneficial use as part of the Sacramento/Delta update to the Bay-Delta Plan.

This chapter begins with this Introduction (Section 11.1), followed by a condensed background of California Native American Tribes and a short summary of the history of colonization and genocide that altered tribal communities' ways of life (Section 11.2). Section 11.3 outlines current state policies on outreach and engagement with California Native American Tribes and describes the tribal outreach and engagement efforts associated with the Sacramento/Delta update to the Bay-Delta Plan. The State Water Board and its staff are committed to ongoing engagement with California Native American Tribes throughout the processes to update and implement the Bay-Delta Plan. Section 11.4 provides an overview of TEK of northern California tribes, including the benefits of integrating TEK with western science and resource management to improve knowledge and management of aquatic resources for the benefit of western nations and tribal communities alike. This section connects TEK and traditional stewardship practices with the flow and habitat restoration actions being considered for updating the Bay-Delta Plan. Section 11.5 describes the TBUs that are being incorporated into the Bay-Delta Plan through the Sacramento/Delta update process. The chapter concludes with Section 11.6, which provides information on the impact of HABs on California Native American Tribes and State Water Board actions to address HABs.

A prior version of Chapter 11 was included in the 2023 draft Staff Report. Among other revisions, this chapter has been updated to reflect the additional tribal outreach and engagement activities that occurred following the release of the 2023 draft Staff Report, incorporate requested changes in response to comments received on the 2023 draft Staff Report, and provide new and expanded discussions on several topics related to tribes, such as water rights, HABs, and additional information on the proposed designation of CUL and incorporation of Tribal and Subsistence Fishing Beneficial Uses (T-SUB and SUB) in the Bay-Delta Plan. These updates also include content reorganization.

11.2 Background and History of Native American Tribes

The Sacramento-San Joaquin Delta watershed has sustained Indigenous Peoples since time immemorial. California is home to more people of Native American heritage than any other state, with tribes ranging in size from 5 up to 5,000 (Judicial Branch of California n.d.). Prior to colonization, more than 100 Indigenous languages were spoken (NPS 2004). The Bay-Delta watershed, which includes the Sacramento and San Joaquin River systems, the Delta, Suisun Marsh and San Francisco Bay, is home to nearly 100 California Native American Tribes that rely upon these waterways, the surrounding lands, and the native fish and fauna for subsistence, cultural, and religious purposes. The Bay-Delta watershed includes the ancestral lands of the Sierra Miwok, Lassik, Konkow, Lake Miwok, Atsugewi, Wintu, Pomo, Achumawi, Yana, Patwin, Yokuts, Yuki, Nisenan, Wappo, Maidu, Modoc, Nomlaki, Washoe, Northern Paiute, and Shasta Tribes (SCU n.d.).

At one point, the Delta may have supported a population of around 10,000 of the estimated 300,000 Indigenous Peoples California before European settlement (^Zedler and Stevens 2018). California Native American Tribes have stewarded California landscapes for generations to maintain and enhance the vitality of fish, wildlife, and plants. This multi-generational stewardship reflects a deep understanding of TEK and the ongoing relationship between Indigenous Peoples and the landscapes. Stewardship practices often include fire management for maintaining riparian vegetation and food productivity, harvesting fish and other native species sustainably, and tending to the land to prevent the overgrowth of vegetation (Hankins 2018; ^Norgaard 2014). Colonization, genocide, and disease have severely impacted Indigenous People's ability to practice traditional land stewardship and cultural ceremonies (^Zedler and Stevens 2018; ^Norgaard 2014).

The relationship between California Native American Tribes and water is profound, with water seen as foundational to tribal culture. Water is at the heart of traditional narratives about human origins and spiritual journeys as well as sacred in places used for story, ceremony, healing, and important practices. Culturally, individuals or tribes may view themselves as belonging to the water, and as stewards, which is distinct from the western notion of asserting individual ownership and dominion over natural resources (Hankins 2009).

California Native American Tribes, or the Indigenous Peoples of present-day California, endured waves of colonization by Spanish, Mexican, and American settlers. These periods of colonization deeply disrupted their connection to their ancestral lands, including culturally significant waterways, traditional practices involving plants and animals, and sacred sites. The forced relocation and acts of genocide severed vital ties to these essential aspects of Indigenous Peoples cultures. In addition to displacing Indigenous Peoples, colonization brought profound changes to the landscape through the imposition of Western agricultural practices, the introduction of livestock, and construction of dams and levees, all of which reshaped ecosystems and traditional ways of life.

The United States entered its first treaty with the Delaware Tribe in 1778 and continued to engage in treaty-making with Native American tribes until 1871, resulting in 370 signed and ratified treaties. At least 45 additional treaties were negotiated with various tribes but were never ratified by the U.S. Senate. Among these were 18 treaties specifically negotiated with California Native American Tribes in the 1850s, which were never ratified. These unratified treaties, often negotiated under duress and without genuine consent, reflected the federal government's shifting policies and disregard for Indigenous sovereignty (Heizer 1972). In some cases, the Senate unilaterally altered

treaty terms prior to ratification, and frequently, the U.S. government failed to honor the promises made in these treaties (BIA 2023; Howard 2023). In 1820, as the U.S population grew, the federal government sought to displace Native Americans to facilitate western expansion. This policy direction was codified in 1830 with passage of the Indian Removal Act. The Indian Removal Act displaced thousands of Native Americans from their homes including through the death march infamously referred to as the Trail of Tears, during which over 4,000 Cherokee tribal members perished (Howard 2023).

Between 1846 and 1873, state and federal governments undertook actions that led to the displacement, forced removal, violence, and murder of Native Americans (Claire and Surprise 2021). Fewer than 30,000 Native Americans were estimated to have survived the combination of disease, low birth rates, starvation, and the series of military campaigns and bounties known as the California Genocide. The 1850 Act for the Government and Protection of Indians institutionalized the practice of indenturing Native American children and adults to white settlers (^Ramos 2021). During this period, tribal members often were restricted to lands federally reserved by the U.S. government in a program of Americanizing tribes into communities of farmers. Native American children were forcibly sent to boarding schools, traditional ceremonies were outlawed, and ceremonial regalia was destroyed as part of a broader attempt to eradicate Indigenous cultures. Some Yurok tribal members described these events and contact with European colonizers as a time when "the government tried to break our culture" and "when your way of life becomes illegal" (Howard 2023; ^Ramos. 2021).

The California Genocide occurred alongside land reclamation policies that transformed California's landscape. In the 1850s, state and federal policies promoted land reclamation, allowing settlers to acquire large, inexpensive parcels of land. The 1855 Swamp Lands Act and the 1877 Desert Land Act were key pieces of legislation that allowed settlers to purchase land contingent upon reclaiming the land with a specific purpose. The 1855 Swamp Lands Act required reclamation of wetlands and overflow lands for agricultural use; the 1877 Desert Land Act required construction of a residence and irrigation system within 3 years. These policies encouraged drainage and enclosure of wetlands and semi-arid scrublands for agricultural use (Claire and Surprise 2021). As a consequence, traditional land stewardship practices were disrupted, leading to an overgrowth of vegetation, resulting in the closing of riparian forests and Delta marshes. Introduced vegetation replaced native grasses; with only 14 percent of the Delta supporting native vegetation today (^Zedler and Stevens 2018). Together, these events allowed settlers to exert greater control over California's landscape, resulting in a fundamental change as dams, canals, and reclaimed land replaced the natural landscape.

A decade after the Desert Land Act, Congress passed the Act of February 8, 1887, also called the General Allotment Act or the Dawes Act. Under this policy, tribes surrendered tribally owned land for individual allotments. In some cases, surplus land was sold to white settlers. As a result of this policy, the total amount of tribal land in the United States was reduced by about 90 million acres (GAO 2012). The Indian Reorganization Act of 1934 marked a brief period of self-government for Native Americans, allowing them to adopt constitutions and organize into federally recognized tribes, and reclaim surplus land on reservations if it was not previously acquired by another entity. Twenty years later, however, this self-government era was followed by a reversal of policies during the "Termination Era." On August 1, 1953, Congress adopted House Concurrent Resolution 108 and, subsequently, in the 1950s and 1960s terminated government-to-government relationships with over 100 tribes, removed over 1 million acres of land from trust, and transferred jurisdiction over Native American communities to the state through Public Law 280 (GAO 2012; Howard 2023;

University of Alaska Fairbanks n.d.). According to a 2012 report, among the 38 tribes whose federal recognition was terminated between 1955 and 1967 and later restored, over 70 percent (27 tribes) [1] were from California. Additionally, nine tribes in California[2] were terminated between 1961 and 1970 and have not had their federal recognition restored (GAO 2012).

Landscape alteration and the displacement of Native American communities have severely disrupted traditional practices such as hunting, gathering, and participating in culturally significant rituals (Claire and Surprise 2021; Kondrashova 2020). In northern California, lumber production in the Tahoe region displaced the Washoe People from Meeks Meadow, an area where they had traditionally fished, hunted, and harvested (Kondrashova 2020). In the Klamath region, the construction of dams along the Klamath River has contributed to the decline in salmon populations, resulting in a significant die-off event that has negatively impacted the health of tribal communities in that region, including Karuk tribal members who traditionally relied on salmon as a significant portion of their diet (Kondrashova 2020). The Klamath River dam removal project was completed in 2024 and offers a case study in restoration. In southern California, groundwater depletion in the Coachella Valley region has impacted tribal communities such as the Agua Caliente Band of Cahuilla Indians, who used groundwater sustainably until current land use practices and development led to an extraction of more groundwater from the aquifer than could be replenished (Kondrashova 2020).

Beginning in the late 1960s, as civil rights activism swept across the U.S., a new wave of tribal leadership emerged. The American Indian Movement (AIM) is a grassroots movement for Indigenous rights, founded in Minnesota in 1968. This new wave of tribal leadership sought to enhance tribes' inherent sovereign powers, foster economic development on tribal land, and encourage self-determination. This movement also addressed racial profiling, police brutality, demanded federal recognition of treaties, and cultural education and advocacy (George Mason University n.d.). The Indian Self-Determination and Education Assistance Act of 1975, amended in 1988 and again in 1994 to address criticisms, including a lack of tribal input in the rulemaking process, gives tribes the authority to contract with the federal government to operate programs serving their tribal members and other eligible persons (Pub. Law 93-638; 25 C.F.R. § 900 et seq.). Since that time, there has been a growing emphasis within tribal communities on environmental justice, reflecting the recognition that Indigenous Peoples are intricately connected to the land and its waters. For Native American peoples, the environment is not just a natural resource but a cultural resource and the struggle against "European colonization can be characterized as a fight to protect the cultural resources Native Americans inherited from their ancestors." (Howard 2023.)

[1] The 27 California tribes whose federal recognition was terminated and subsequently restored includes: Robinson Rancheria of Pomo Indians of California, Wiyot Tribe, Bear River Band of the Rohnerville Rancheria, Big Valley Band of Pomo Indians of the Big Valley Rancheria, Blue Lake Rancheria, Buena Vista Rancheria of Me-Wuk Indians of California, Chicken Ranch Rancheria of Me-Wuk Indians of California, Cloverdale Rancheria of Pomo Indians of California, Elk Valley Rancheria, Greenville Rancheria of Maidu Indians of California, Mooretown Rancheria of Maidu Indians of California, Northfork Rancheria of Mono Indians of California, Picayune Rancheria of Chukchansi Indians of California, Pinoleville Rancheria of Pomo Indians of California, Potter Valley Tribe, Quartz Valley Indian Community of the Quartz Valley Reservation of California, Redding Rancheria, Redwood Valley Rancheria of Pomo Indians of California, Smith River Rancheria, Guidiville Rancheria of California, Lytton Rancheria of California, Scotts Valley Band of Pomo Indians of California, Mechoopda Indian Tribe of Chico Rancheria, United Auburn Indian Community of the Auburn Rancheria of California, Paskenta Band of Nomlaki Indians of California, Federated Indians of Graton Rancheria, and Wilton Rancheria.

[2] The nine tribes in California whose recognition was terminated and not restored includes: Cache Creek Rancheria, Mark West Rancheria, Ruffeys Rancheria, Strawberry Valley Rancheria, Alexander Valley Rancheria, Indian ranch Rancheria, Navada City Rancheria, El Dorado Rancheria, and Mission Creek Reservation.

Today, there are approximately 110 federally recognized tribes in California with around 81 tribes pursuing federal recognition (California Tribal Court-State Court Forum n.d). Federal recognition provides access to various federal benefits and legal protections, including eligibility for funding and services from the U.S. Department of the Interior, Bureau of Indian Affairs.

11.2.1 Tribal Reserved Water Rights

Where the federal government reserved land for a federally recognized tribe, that reservation is presumed to encompass sufficient water to fulfill the "primary purpose" of the reservation as of the date it is created. This principle, known as the Winters Doctrine, was established in the seminal case *Winters v. United States,* 207 U.S. 564 (1908). In instances where the federal government has reserved land for a tribe in California, California Native American Tribes may hold Federally reserved rights encompassing Winters rights and/or water rights tied to the 1887 Dawes or Allotment Act which established public domain allotments. Under the Dawes Act, Native Americans could apply for up to 160-acre parcels of land on the public domain that were held in trust by the Bureau of Indian Affairs. Although many of these allotments were lost, over 400 public domain allotments remain in California (California Public Domain Allotments 2025).

Federally reserved water rights are water rights explicitly or implicitly associated with lands the federal government withdraws from the public domain such as parks, forests, and Indian Reservations. These reserved water rights are tied to the date the land was set aside or the reservation was created (unless otherwise explicitly stated) and relate specifically to the intended purpose of the federally reserved land. Federally reserved water rights cannot be lost through non-use, and the quantity of said water rights are tied to the primary purpose of the reserved land.

The amount of water associated with a federally reserved right tied to a Native American Reservation relates specifically to the established purpose of the reservation. If the reservation was established to provide an agrarian way of life for a native American tribe, then the amount of water associated with the reservation's federally reserved water right would be based on the amount of tribal lands capable of sustained irrigation and applying the Practicably Irrigable Acreage (PIA) standard. If the reservation was instead established to be a permanent homeland for the tribe, then the amount of water associated with the tribal water right would be based on the minimal amount of water necessary to satisfy both the present and future needs for the reservation to serve as a permanent homeland factoring in the tribe's history, cultural practices, geography, and groundwater availability. Quantifying tribal reserved water rights can be a complex and litigious process and is typically done by a court ruling or through a settlement agreement subsequently ratified by Congress. For more general information on water rights in California, please see Section 5.2.2, *Water Rights*. Tribes without federally reserved water rights still have a significant interest in water management decisions that could support traditional practices or culturally significant species.

Tribal representatives and non-tribal stakeholders have highlighted the inherent unfairness of the water rights priority system. Tribes have pointed out that the water rights system of California was established with racist ideologies. As the State Water Board has acknowledged, "white supremacy led to the genocide and forced relocation of native American people to facilitate white resettlement and the enslavement of Native American and Black people for white economic gain." (State Water Resources Control Board, Resolution No. 2021-0050 (Nov 16, 2021)). This state-sponsored dispossession and oppression went hand in hand with the development of the modern California water rights regime, which accorded legal water rights to white settlers claiming to put the water to its first beneficial use while divesting Indigenous people from prior rights to the water and

excluding communities of color from access to water rights (Amicus Curiae Brief in Support of State Water Resources Control Bd., California Water Curtailment Cases, Nos. H047270 & H047927, pp. 15-36 (Sixth Appellate Dist. Ct. of App. Mar. 14, 2022) The State has acknowledged the disparity and historic wrongs in various resolutions detailed in this chapter. The State Water Board is responsible for administering the water rights system that exists today but will continue to explore ways to integrate tribal water rights and tribal water concerns.

11.3 Tribal Outreach and Engagement

Meaningful engagement with California Native American Tribes is fundamental to the mission of the water boards (SWRCB 2019). The Office of Public Engagement, Equity, and Tribal Affairs coordinates the water boards Tribal Affairs Program statewide. The water boards have designated tribal liaisons who oversee coordination of the Tribal Affairs Program. To help strengthen the Tribal Affairs Program and assist the liaisons, each of the water boards regions and divisions have designated regional/divisional tribal coordinators. Working with California Native American Tribes holds a special value at the water boards because of our parallel relationship to the people served and because of tribes' historic knowledge and experience stewarding California's water resources since time immemorial.

This section details State and State Water Board Policies on tribal outreach and engagement, and the tribal outreach and engagement for the Sacramento/Delta Update to the Bay-Delta Plan. Tribal input has and will continue to be considered during the public review and comment processes that inform development of Plan amendments for consideration by the State Water Board. In addition to the public process, State Water Board staff are available to engage with tribes individually to receive feedback and answer questions. The State Water Board is also committed to engaging with tribes throughout the adaptive implementation of the Bay-Delta Plan when the State Water Board considers and implements adaptive actions as needed, that are consistent with the Bay-Delta Plan, based on monitoring and special studies to improve the effectiveness of implementation actions. Finally, the State Water Board recognizes the importance of considering tribal perspectives in the evaluation phase where the State Water Board will evaluate the overall effectiveness of the implemented Plan and consider whether changes may be needed to the Plan or its implementation.

11.3.1 State Policies for Outreach and Engagement

The State of California has multiple policies, statutes and executive directives that guide state agencies when conducting tribal outreach, engagement, and consultation efforts. Listed below are the relevant policies that guide the State Water Board's outreach and engagement efforts with California Native American Tribes.

11.3.1.1 Executive Order B-10-11

On September 19, 2011, former Governor Gerald "Jerry" Brown issued EO B-10-11, which was "committed to strengthening and sustaining effective government-to-government relationships between the State and the Tribes by identifying areas of mutual concern and working to develop partnerships and consensus." In addition, "it is the policy of the administration that every state agency and department subject to my executive control shall encourage communication and consultation with California Native American Tribes."

11.3.1.2 Executive Order N-15-19

In response to and in recognition of the role the State of California has played in the maltreatment and exploitation of Indigenous Peoples in California, Governor Gavin Newsom issued Executive Order (EO) N-15-19 in June 2018. Through the EO, the Governor issued an apology to California Native American Peoples for the many instances of violence, mistreatment, and neglect inflicted on California Native Americans throughout the state's history. EO N-15-19 recognizes that "the State historically sanctioned over a century of depredations and prejudicial policies against California Native Americans." It commends and honors California Native Americans for their persistence and stewardship and apologizes for "the many instances of violence, maltreatment, and neglect." EO N-15-19 also established the Truth and Healing Council and reaffirmed and incorporated by reference the principles of EO B-10-11, issued by Governor Jerry Brown on September 19, 2011. The Truth and Healing Council is to provide an avenue for Indigenous Peoples to clarify and correct the historical record and provide their own historical perspective on the relationship between tribes and the state. This historical recognition further reinforces the need for robust outreach and engagement

11.3.1.3 Assembly Bill 52 (2014)

On September 24, 2014, Governor Brown signed into law Assembly Bill 52 (Gatto), Chapter 532, Statutes of 2014 (AB 52). AB 52 added CEQA requirements for consultation among California Native American tribal governments and lead agencies to protect tribal cultural resources (Pub. Resources Code, § 21084.3). AB 52 applies to any "project that has a notice of preparation (NOP) or a notice of negative declaration or mitigated negative declaration filed on or after July 1, 2015." (AB 52, § 11.) This means that agencies and tribal governments consulting on projects with NOPs filed before July 1, 2015, can utilize the B-10-11 process and those with NOPs filed on or after July 1, 2015, can avail themselves of either AB 52 or B-10-11. Although the Sacramento/Delta update is exempt from AB 52—since the project's NOP was filed before July 1, 2015—the State Water Board continues to actively seek consultation with California Native American Tribes consistent with EO B-10-11 and its Tribal Consultation Policy.

11.3.1.4 State Water Board Tribal Consultation Policy (2019)

The State Water Board Tribal Consultation Policy (Tribal Consultation Policy) affirms the State Water Board and regional water boards (collectively, the water boards) continued commitment to strengthening and sustaining government-to-government relationships with both federally and non-federally recognized California Native American Tribes. The water boards are committed to the foundation and principles outlined in the Tribal Consultation Policy. The intent of this policy is to guide State Water Board staff to engage with California Native American Tribes through timely and meaningful consultation and collaboration on actions that may affect tribal lands, tribal interest and/or tribal cultural resources consistent with the mission of the water boards. This policy establishes statewide general guidelines for tribal consultations across the water boards. Included within the Tribal Consultation Policy are the foundations and tools necessary for fostering and sustaining meaningful government-to-government relationships between the water boards and California Native American Tribes. Best practices include consulting with one tribe at a time unless otherwise agreed upon, and understanding the scope of a project that may affect tribes. (SWRCB 2019.) Specific to the water boards' projects and mission, this policy is consistent with and builds upon the 2020 California Environmental Protection Agency (CalEPA) Tribal Consultation Protocol.

11.3.1.5 CalEPA Tribal Consultation Protocol (2020)

The Tribal Consultation Protocol (Protocol) establishes a step-by-step process that will assist CalEPA and each of its boards, departments, and offices in engaging with California Native American Tribes broadly and in government-to-government consultations. The Protocol builds upon CalEPA's 2015 update to its policy on consultation with California Native American Tribes by providing CalEPA, its boards, departments, and offices with a process for determining which, if any, tribes or tribal communities their actions might affect. The Protocol establishes a set of best practices for CalEPA to use when engaging with tribes regarding the potential effects its actions and the actions of its boards, departments, and offices might cause, in a meaningful, inclusive, and mutually respectful way (CalEPA 2020).

This Protocol sets forth minimum process requirements that each board, department, or office and its staff should follow, in addition to all other separately applicable legal, procedural, and substantive requirements, as well as additional best practices that are specific to particular programs. Best practices include the early identification of interest and potentially affected tribes and familiarizing staff with tribal political structure, preference of consultation, and the scale and scope of affected areas. In some instances, the Protocol may not have the level of detail required for each of the Agency's boards, departments, and offices. Each board, department, and office may therefore elaborate on the Protocol's requirements where necessary, by developing a more appropriately tailored set of principles and practices for use in their specific programs and should communicate those principles and practices to CalEPA's executive office. (CalEPA 2020.)

11.3.1.6 State Water Board's Racial Equity Resolution (2021) and Racial Equity Action Plan (2022)

The State Water Board adopted the Racial Equity Resolution in November 2021, which directed staff to develop a plan of action to advance racial equity within the water boards. The Racial Equity Team released a draft of the plan for consideration during public workshops in summer 2022 and has now revised the plan with feedback received from the workshops, a fall 2022 public comment period, and the comments of water boards employees. The State Water Board's Racial Equity Action Plan is a compilation of goals, actions, and metrics intended to advance efforts to create a future where we equitably preserve, enhance, and restore California's water resources and drinking water for all Californians, regardless of race; and where water boards employees reflect the racial and ethnic diversity of California. The State Water Board *2023–2025 Racial Equity Action Plan* was released in January 2023 (^SWRCB 2023b).

The Racial Equity Action Plan identified that the State Water Board should consider impacts to Black, Indigenous, and People of Color (BIPOC) communities, TBUs and cultural resources, and related ecosystems when developing, implementing, and enforcing instream flow requirements, consistent with all applicable laws and requirements, including those related to water rights, basin planning, public trust resources, and endangered species. The State Water Board has considered these impacts in the Staff Report. Additional information can be found in Chapter 7, *Environmental* Analysis, Chapter 8, *Economic Analysis and Other Considerations*, Chapter 10, *Economically Disadvantaged Communities*, and Chapter 13, *Revised Proposed Plan Amendments*. The Racial Equity Action Plan also identified that the State Water Board should establish a single point of contact in the Division of Water Rights to serve as a coordinator on Bay-Delta tribal and BIPOC engagement to improve communication and outreach and conduct tribal outreach under AB-52 and B-10-11 for the Bay-Delta Plan implementation regulation for Lower San Joaquin River flows and Southern Delta

Salinity.[3] Contact information for the Tribal Coordinator for Bay-Delta Plan Update and implementation processes is available at https://waterboards.ca.gov/waterrights/water_issues/programs/bay_delta/tribal_coordination.html. On August 4, 2022, July 27, 2022, and October 5, 2022, a total of 633 letters offering formal consultation under AB-52 and EO B-10-11 on the Lower San Joaquin River implementation regulation were mailed out to California Native American Tribes identified within the Lower San Joaquin River watershed.

11.3.2 Tribal Outreach and Engagement on the Sacramento/Delta Update to the Bay-Delta Plan

In June 2019, the State Water Board finalized its Tribal Consultation Policy, reaffirming that collaboration and input from all California Native American Tribes helps the State Water Board advance decisions and policies that better protect California's water resources. California Native American Tribes can request government-to-government consultations on Water Board topics on an ongoing basis, consistent with the Tribal Consultation Policy. The Tribal Consultation Policy establishes the guiding principles to consult with California Native American Tribes on a government-to-government basis when requested and deemed to be appropriate through discussion with the requesting tribe(s), or as required by statute (e.g., AB 52 or Section 106 of the National Historic Preservation Act). *Consultation* is defined in the Tribal Consultation Policy as, "a meaningful and timely process of seeking, discussing, and considering carefully the views of others, in a manner that is cognizant of all parties' cultural values and, where feasible, seeking agreement. Consultation between government agencies and California Native American Tribes shall be conducted in a way that is mutually respectful of each party's sovereignty. Consultation shall also recognize a tribes' potential needs for confidentiality with respect to places that have traditional tribal cultural significance." (SWRCB 2019.)

Agencies and tribal governments consulting on projects with NOPs filed before July 1, 2015, can utilize the EO B-10-11 process and those with NOPs filed on or after July 1, 2015, can employ either AB 52 or EO B-10-11. The State Water Board issued the NOP to develop the environmental review document for the Sacramento/Delta update to the Bay-Delta Plan on January 24, 2012, which is 2.5 years before AB 52 took effect. Although the Sacramento/Delta update to the Bay-Delta Plan was initiated prior to the passage of AB 52, the State Water Board continues to engage with all interested parties throughout the planning process, including conducting consultation with interested tribes consistent with EO B-10-11 and its Tribal Consultation Policy. The State Water Board's Tribal Consultation Policy is consistent with and builds upon the 2020 CalEPA Protocol and guides the agency and its boards, departments, and offices in their daily operations to ensure that they work with tribes in a knowledgeable, sensitive, and respectful manner.

The State Water Board continues to actively seek consultation with California Native American Tribes consistent with EO B-10-11 and its Tribal Consultation Policy. Given the significant tribal interest in the Bay-Delta Plan, the State Water Board is moving forward with tribal consultations under the EO B-10-11 process to hear and learn from tribal perspectives on this project.

[3] The single point of contact for Bay-Delta planning and implementation can be found at: https://www.waterboards.ca.gov/waterrights/water_issues/programs/bay_delta/tribal_coordination.html

On January 13, 2023, State Water Board staff mailed EO B-10-11 letters offering formal consultation on the update and implementation of the Bay-Delta Plan to approximately 90 California Native American Tribes identified within the Bay-Delta and Trinity watersheds. The EO B-10-11 letters also contained general information on the Bay-Delta Plan and the efforts to update and implement the Bay-Delta Plan, as well as a timeline for milestones. Tribal contact information was obtained through the State Water Board's Office of Public Participation, Equity, and Tribal Affairs tribal consultation list, which is periodically updated with information from the Native American Heritage Commission.

11.3.2.1 Board Workshop on Draft Scientific Basis Report Supplement

On January 19, 2023, the State Water Board held a public workshop on the draft *Scientific Basis Report Supplement in Support of Proposed Voluntary Agreements for the Sacramento River, Delta, and Tributaries Update to the Bay-Delta Water Quality Control Plan* (Scientific Basis Report Supplement). The workshop followed a Board information item on the process and timeline for updating the Bay-Delta Plan and was attended by several Board members. The workshop consisted of a presentation by staff from the State Water Board, California Department of Fish and Wildlife, and Department of Water Resources, followed by public comments. Notice of the workshop was distributed via State Water Board email subscription lists, including a dedicated tribal matters list.

In response to the State Water Board release and workshop on the draft Scientific Basis Report Supplement, comments were submitted both verbally and in writing identifying the need for additional tribal consultation and inclusion of TEK in the Bay-Delta Plan Update and implementation processes, as well as the voluntary agreements (VA) processes. Comments were also received endorsing the incorporation of TBUs into the Bay-Delta Plan.

11.3.2.2 Tribal Listening Sessions, Workshops, Briefing, and Hearing on Draft Staff Report

In addition to consultation letters, the State Water Board held tribal listening sessions to provide background information on the Bay-Delta Plan Update and implementation processes and to hear feedback from interested tribal representatives. On March 15, 2023, staff held the first tribal listening session. Invitations for the tribal listening session were sent to approximately 100 tribes via email, using contact information provided by the State Water Board's Office of Public Engagement, Equity, and Tribal Affairs. Additional phone calls were made to these tribes promoting the listening session. The following five tribes participated: Winnemem Wintu, Shingle Springs Band of Miwok Indians, Yurok Tribe, Federated Indians of Graton Rancheria, and Santa Rosa Rancherí a Tachi Yokut Tribe.

During the first listening session, tribal representatives expressed concerns with the Board's tribal outreach and engagement efforts and with the VA process. Tribal representatives also expressed interest in the State Water Board moving forward with adding TBUs to the Bay-Delta Plan. The listening session was recorded and is available on the State Water Board ftp site. The presentation slides are posted on the State Water Board's Tribal Consultation webpage.

On May 4, 2023, staff held a second tribal listening session focused on the Sacramento/Delta Update to the Bay-Delta Plan and discussed efforts to incorporate TEK into the planning process and possible State Water Board consideration of TBUs as part of the Bay-Delta Plan Update. Tribal participants reiterated their interest in the State Water Board moving forward with the addition of TBUs to the Bay-Delta Plan and the value of incorporating TEK into the planning process. The staff

presentation portion of the listening session was recorded and is available on the State Water Board website.

On September 27, 2023, the day before the release of the 2023 draft Staff Report, the State Water Board held a briefing for tribal leaders and representatives. Staff provided a presentation on the Bay-Delta Plan Update and the contents of the draft Staff Report and answered questions from briefing attendees.

Following the release of the 2023 draft Staff Report and prior to the associated hearing, State Water Board staff were invited to attend an in-person meeting on November 6, 2023, with tribal leaders and representatives from the Bay-Delta watershed. At the meeting, State Water Board staff provided a presentation on the 2023 draft Staff Report and answered attendees' questions.

State Water Board staff hosted several workshops to provide information and answer questions related to the draft Staff Report. While the first two workshops were open to the public, the final informational workshop, held on November 9, 2023, was open only to tribal leaders, representatives, and tribal organizations. All three workshops began with a staff presentation followed by an opportunity for attendees to ask questions. All three workshops were held virtually with no physical meeting location. Additional information on the first two workshops can be found in Section 12.10, *2023 Draft Staff Report*.

Following the release of the draft Staff Report on September 28, 2023, the State Water Board conducted a public hearing to receive oral comments on the draft Staff Report. (Cal. Code Regs., tit. 23, § 3779.) The hearing began on November 17, 2023, continued on December 1, 2023, and concluded on December 11, 2023. The hearing included a physical meeting location at the California Environmental Protection Agency Headquarters Building in Sacramento, and an option to participate remotely via Zoom. Representatives from California Native American Tribes and tribal organizations participated at all three hearing dates.

11.3.2.3 In-Person Meetings with Tribes

State Water Board staff were invited to participate in a May 2, 2023, Tribal Coalition meeting related to the Bay-Delta watershed. At the meeting, State Water Board staff received input from participating tribes on the State Water Board's Bay-Delta Plan Update and implementation efforts and addressed questions. During the May 2 meeting, State Water Board staff were invited by tribal representatives in attendance to collaborate with them to document tribal feedback and TEK (see Section 11.4, *Traditional Ecological Knowledge*) for possible updates to the Bay-Delta Plan.

The State Water Board recognizes the outsized benefits gained from connection and interaction with smaller groups during in-person meetings. With this recognition, the State Water Board is committed to continuing individual meetings with interested tribes or tribal representatives to discuss Bay-Delta Plan Update and implementation efforts. Additional in-person meetings are described in the following sections.

11.3.2.4 Board Workshop on Proposed Voluntary Agreements

On March 8, 2024, the State Water Board noticed a multi-day public workshop scheduled for April 24 through 26, 2024, to discuss the proposed VAs (or HRL proposal) being considered in the Sacramento/Delta Update to the Bay-Delta Plan. The purpose of the workshop was for HRL participants to provide a detailed overview of the HRL proposal and receive input and answer

questions from State Water Board members. The workshop also served as an opportunity for California Native American Tribes to ask questions and provide input on the HRL proposal. Representatives from California Native American Tribes and tribal organizations participated in all three days of the workshop.

11.3.2.5 Board Workshop and Tribal Briefings on 2024 draft Bay-Delta Plan

On October 29, 2024, shortly after the release of the 2024 draft of Sacramento/Delta updates to the Bay-Delta Plan (2024 draft Bay-Delta Plan), the State Water Board held a briefing for tribal leaders, representatives, and tribal organizations. Similar to the briefing associated with the release of the draft Staff Report, staff provided a presentation on the Bay-Delta Plan Update and the contents of the 2024 draft Bay-Delta Plan and answered questions from briefing attendees.

From November 2024 to January 2025, the State Water Board held a multiday public workshop on the 2024 draft Bay-Delta Plan. At each workshop, staff provided a presentation on the topics identified for that day. This was followed by topic specific panels and individual comments. Tribal representatives and organizations participated in panels and provided individual comments at the November 22 workshop on VA provisions, the December 3 workshop on tribal focused topics, the December 12 workshop on VA flow accounting and general comments, and the January 23 workshop on alternative 5a and 6a.

On February 26, 2025, State Water Board staff attended an in-person meeting with tribal leaders and representatives from the Bay-Delta watershed. The purpose of this meeting was to discuss the 2024 draft Bay-Delta Plan and the upcoming tribal working meeting on the tribal provisions in the 2024 draft Bay-Delta Plan.

From January 16, 2025, to March 4, 2025, the State Water Board held 11 working meetings on the 2024 draft Bay-Delta Plan. The purpose of the working meetings was for staff to receive specific input on the October 2024 draft Bay-Delta Plan. The input received during these meetings helped to inform a revised draft of proposed updates to the Bay-Delta Plan for additional public comment. Each working meeting began with brief introductions from staff on the topics that would be covered that day, followed by discussions on those specific topics. The eleventh working meeting, which was focused on the tribal provisions in the 2024 draft Bay-Delta Plan, was held on March 4, 2025. Participants included representatives from California Native American Tribes and tribal organizations. Representatives from tribal organizations also participated in additional working meetings. More information on the working meetings can be found in Section 12.12.2, *Working Meetings on 2024 Draft Bay-Delta Plan*.

11.3.2.6 Tribal Briefing on July 2025 Revised Draft of Bay-Delta Plan

On July 24, 2025, the State Water Board released a revised draft of updates to the Bay-Delta Plan (July 2025 revised draft Plan) for public review. The July 2025 revised draft Plan incorporated changes responding to public comments received on the 2023 draft Staff Report and the 2024 draft Bay-Delta Plan, updated information submitted by the VA parties, and continued coordination with the VA parties. Prior to the release, on July 23, 2025, the State Water Board held a briefing for tribal leaders, representatives, and tribal organizations. Similar to the briefing associated with the release of the 2023 draft Staff Report and 2024 draft Bay-Delta Plan, staff provided a presentation on the

Bay-Delta Plan Update and the contents of the July 2025 revised draft Bay-Delta Plan, and answered questions from briefing attendees

11.3.2.7 Hearing on December 2025 Revised Draft of Bay-Delta Plan and Chapter 13, *Revised Proposed Plan Amendments*

On December 12, 2025, the State Water Board released a revised draft of updates to the Bay-Delta Plan (December 2025 revised draft Plan) for public review and comment. The December 2025 revised draft Plan included refinements from the July 2025 revised draft Bay-Delta Plan, but the overall content and approach remained largely unchanged. The State Water Board conducted a multi-day public hearing on January 28 through 30, 2026, to receive oral comments on the December 2025 revised draft Bay-Delta Plan and Chapter 13, *Revised Proposed Plan Amendments*, of the Staff Report. On each hearing day, State Water Board staff provided an overview presentation followed by public panel presentations and individual public comments. Tribal panels were organized to provide input and feedback to the State Water Board on January 29, and 30, 2026.

11.3.3 Other Tribal Outreach and Engagement

11.3.3.1 California Tribal Water Summit

As a result of the 2005 update to the California Department of Water Resources' (DWR) California Water Plan, a recommendation to increase tribal engagement in statewide, regional, and local water planning initiated formation of a Tribal Communications Committee. The purpose of this committee is to advise DWR on how to improve outreach and communication with the more than 160 Native American tribes in California. The California Tribal Water Summit was created on recommendation by the Tribal Communications Committee, with the first summit held in November 2009. The goal of the Tribal Water Summit is to engage with tribes to develop strategies for preserving Native water rights and providing for the sustainable management of California's sacred waterways (DWR 2023).

In 2023, the second Tribal Water Summit was hosted by DWR from April 11 to April 13, 2023. The summit convened tribal, state, and federal leaders to discuss water issues and strategies toward watershed resilience of California's sacred waters. The State Water Board was invited to attend and participate in plenary discussions and individualized workshops on topics ranging from water rights to Federal Energy Regulatory Commission licensing issues. While at the Summit, State Water Board attendees engaged with tribal representatives from across the state of California and tribes specifically connected to the Bay-Delta watershed (DWR 2023).

11.3.3.2 Tribal EPA and U.S. EPA Region 9 Annual Conference

State Water Board staff attended the October 2023 Tribal Environmental Protection Agency (Tribal EPA) and U.S. Environmental Protection Agency (U.S. EPA) Region 9 Annual Conference in Alpine, California. Activities included staffing the State Water Board table and attending conference breakout sessions. The conference also gave staff assigned to the Bay-Delta Plan the opportunity to engage with tribal representatives as well as tribal coordinators from other State Water Board programs, the Regional Water Quality Control Boards, and other agencies.

In October 2024, State Water Board staff attended the Tribal EPA and U.S. EPA Region 9 Annual Conference in San Jose, California. While a group of State Water Board staff attended in-person, Bay-Delta Plan staff attended virtually.

11.3.3.3 U.S. EPA Region 9 Regional Tribal Operations Committee

On May 30, 2024, State Water Board staff attended the Spring 2024 U.S. EPA Region 9 Regional Tribal Operations Committee (RTOC) in Friant, California. The RTOC is structured around breakout sessions intended to inform tribal representatives about state and federal agency projects that they may be interested in. State Water Board staff provided a presentation on the Bay-Delta Plan, the process to update it, and answered questions from RTOC attendees.

11.4 Traditional Ecological Knowledge

This section provides an overview of TEK of California Native American Tribes within the Bay-Delta watershed and more broadly of tribal communities with a strong cultural connection to salmon and other native fish species and whose traditional lands are within northern California. In this section, the term "traditional ecological knowledge" means a way of knowing that is passed down through generations. This includes knowledge of and understanding of traditional land stewardship practices, and practices involving natural resources like plants, animals, ecosystems, and seasons. TEK is also developed and maintained through generations of Indigenous people observing the environment and developing science through those observations.

11.4.1 Consideration of Traditional Ecological Knowledge in the Bay-Delta Plan

During public outreach and engagement activities in support of proposed Sacramento/Delta updates to the Bay-Delta Plan, the State Water Board received requests from California Native American Tribes to incorporate TEK into Plan amendments and implementation measures to inform reasonable protection of beneficial uses, including TBUs. As a result of these requests, State Water Board staff have engaged in efforts to document TEK and traditional stewardship practices of federally recognized and non-federally recognized tribes whose historical lands fall within the Bay-Delta watershed, including its tributaries. Part of these efforts included a literature review of TEK, which has formed the bulk of the State Water Board's initial knowledge of TEK relevant to the Sacramento/Delta update to the Bay-Delta Plan and implementation process. However, the availability, applicability, and accuracy of TEK in the literature is limited due to many factors including the sensitive or sacred nature of TEK. Staff realize that any inclusion of TEK through literature review is disconnected, incorrect, or incomplete. The State Water Board learned through tribal engagement that appropriately incorporating TEK into the Sacramento/Delta update to the Bay-Delta Plan requires tribal participation in the process, tribal consent, relationship building and ongoing dialogue with tribal representatives.

In response to tribal comments on the Sacramento/Delta Update, and through conversations with tribal representations, State Water Board staff developed Bay-Delta Plan provisions for tribal input to inform decision-making, including the formation of a Bay-Delta Tribal Advisory Group to provide input to the State Water Board on the Bay-Delta Plan and its implementation, provisions to continue regular tribal listening sessions, informal meetings between tribal representatives and Staff, and the development of a tribal engagement plan the would further outline the process for outreach and engagement to ensure that TEK informs implementation of the Bay-Delta Plan and protection of TBUs. See Section 13.3, *Revised Proposed Plan Amendments* for more information.

The State Water Board heard and acknowledges that TEK includes the recognition of the Delta and its watershed, and the native species that depend on it as a tribal cultural resource. This acknowledgement is reflected in the State Water Board's decision to designate CUL beneficial use, and provisions that provide for tribal input in the Bay-Delta Plan moving forward.

The State Water Board acknowledges concerns about how tribal data, once submitted to or obtained by the water boards, would be treated. The State Water Board recognizes and respects the importance of protecting the confidentiality of tribal knowledge, cultural resources, sacred sites, objects, and features of cultural value to a tribe and honors the government-to-government relationship with Native American Tribes. Currently, there are no laws that offer confidentiality protections for all types of tribal information submitted to the water boards. For this reason, tribes and the water boards should first discuss what information is needed to protect TBUs and whether that information can be protected. As the State Water Board works to develop its own indigenous data protocols, it is envisioned that the Bay-Delta Tribal Advisory Group would provide valuable input and feedback on that process. While those protocols are developed, the State Water Board will uphold the uphold the Collective Benefit, Authority to Control, Responsibility, Ethics (CARE) principles for indigenous data governance (See 13.3, *Revised Proposed Plan Amendments*). As outlined in the revised proposed Plan amendments, to ensure adherence to the CARE principles, the State Water Board will request tribal review by the Bay-Delta Tribal Advisory Group of any Bay-Delta Plan related documents incorporating TEK and will revise documentation of TEK based on that feedback.

11.4.2 Description of Traditional Ecological Knowledge

Traditional Ecological Knowledge is often defined in the academic literature as "a cumulative body of knowledge, practice, and belief, evolving by adaptive processes and handed down through generations by cultural transmission, about the relationship of living beings (including humans) with one another and with their environment" (Berkes et al. 2000). TEK can be considered a form of adaptive management. From conversations with California Native American Tribes, we have learned more about what TEK is; California Native American tribal members and representatives have described TEK as knowledge of lived experiences in the environment, passed down through many generations. Yurok tribal members described TEK as a "way of life" that includes aspects of science, spirituality, and cultural traditions. Yurok TEK includes knowing how and when to gather, hunt, harvest, and prepare traditional foods. The essence of Yurok TEK can be expressed through a word in the Yurok language that means "to take care of the Earth" (^Ramos 2021).

Whereas western ecological knowledge is often quantitative, TEK may be qualitative, incorporating knowledge, teaching, practices, and spiritual beliefs (^Tolowa Dee-ni' Nation et al. 2017). TEK is also place-based; TEK from one tribe is not representative of TEK from all tribes in a region. In addition, all types of ecological knowledge are interconnected (e.g., fire, fish, rivers, estuaries, and more). Therefore, the parceling of management categories among U.S. state and federal agencies can be in direct conflict with how tribes conceptualize these vital ecological and cultural resources (Save California Salmon 2021). The Western conservation perspective of limited human involvement with the environment is problematic for many Indigenous communities because, for them, Indigenous landscape stewardship practices necessarily include Indigenous people. Indigenous people have stewarded landscapes since time immemorial; the landscapes were not pristine and untouched (^Ramos 2021).

When incorporated with western ecological knowledge, TEK can improve the spatial and temporal resolution of environmental monitoring data and provide knowledge that predates that obtained by practitioners of western science. For example, TEK can provide knowledge about native fish species like Chinook salmon and native vegetation that are culturally significant to tribes and were prevalent prior to the arrival of European settlers (^Tolowa Dee-ni' Nation et al. 2017), as well as information about environmental conditions prior to and during development of the landscape by European settlers (^Usher 2000). Indigenous knowledge may also provide historical information about geographic distributions of native species (^Tolowa Dee-ni' Nation et al. 2017) and how they are influenced by environmental conditions.

TEK could improve ongoing monitoring and assessment of native species. For example, several tribes were interviewed to inform the California North Coast Marine Protected Area baseline (^Tolowa Dee-ni' Nation et al. 2017) for a 2017 collaborative project between the State Coastal Conservancy, the Tolowa Dee-ni' Nation, InterTribal Sinkyone Wilderness Council, Cher-Ae Heights Indian Community of the Trinidad Rancher[ía], the Wiyot Tribe, Ecotrust, and University of California, San Diego. Representatives from 10 tribes provided knowledge about changes over time in populations and geographic distributions of several culturally important keystone species (^Tolowa Dee-ni' Nation et al. 2017). In these interviews, tribal representatives were asked how species changed in abundance from harvests in childhood and early adulthood to 2015. Tribal members reported that harvests of culturally significant species, including abalone, clams, and smelt, were lower in 2015 than in childhood (^Tolowa Dee-ni' Nation et al. 2017). The interviews enhanced existing geospatial monitoring data by providing specific locations where tribal members harvested abalone throughout their lives, resulting in a fine-scale mapping of changes in abalone occurrence over time (^Tolowa Dee-ni' Nation et al. 2017). Overall, the findings demonstrated that smelt and abalone experienced significant declines.

Indigenous knowledge was also incorporated into research and management of beluga and bowhead whales and forage fish in Alaska. This collaboration in monitoring and management between government scientists and Eskimo whalers has provided temporally and geographically extensive observations of herring and other forage fish dating from the 1930s, which has substantially improved the accuracy of population censuses of both fish and whales, enabling the government to increase the Eskimo bowhead-hunting quota (^Huntington 2000). These examples emphasize that TEK can improve resource management by offering a deeper understanding of environmental conditions over a longer time span and at finer spatial or temporal resolution than western science.

In addition to improving environmental monitoring and assessment, inclusion of TEK in science-based decision-making can benefit tribes if effects on tribal resources are explicitly considered in environmental policy and management (^Runge et al. 2015; ^Zedler and Stevens 2018). A salient example is the structured decision-making process undertaken by the U.S. Geological Survey to evaluate alternatives in the environmental impact statement and adaptive management of water releases from Glen Canyon Dam on the Colorado River. Performance metrics for the decision-making process were developed by the U.S. Bureau of Reclamation and National Park Service in collaboration with federal, state, tribal, and private experts; several tribes and the Bureau of Indian Affairs were cooperating agencies in development of the environmental impact statement. By considering TEK and spiritual resources, the collaborators developed scientifically based performance metrics for evaluating how well alternative scenarios for water management protected tribal resources (^Runge et al. 2015).

TEK is complementary to western ecological knowledge, and the two approaches combined can provide a more holistic and effective approach to adaptive resource management (^Zedler and Stevens 2018). Native Americans tend the landscape, observing and applying different practices to improve yield of culturally important plant species; these principles can be applied to adaptively managing habitat restoration sites. Zedler and Stevens (^Zedler and Stevens 2018) propose a process of including TEK in restoration and adaptive management that they term "ecocultural restoration." They developed a framework for the ecocultural restoration of floodplains in the Sacramento-San Joaquin Delta and suggested establishing a network of ecocultural restoration sites throughout the region. Their framework includes restoring culturally significant plant species during the floodplain restoration process and incorporating Indigenous land stewardship practices into the adaptive management of the restored sites. They suggested that Indigenous people should be engaged during the planning and decision-making to combine TEK and traditional stewardship practices with the adaptive management of floodplain restoration sites.

In their framework, Western ecological knowledge would provide hydrological modeling and TEK would provide the knowledge about assemblages of culturally significant native plant species that would improve the restoration sites. Culturally significant plants could include plants that are more likely to establish successfully and outcompete nonnative plant species. Once the initial restoration activities are complete, traditional stewardship practices could guide adaptive management of restoration sites. For example, tending plantings and prescribing selective burns can favor ecoculturally important species in plant assemblages. Several restoration sites in the Bay-Delta watershed already incorporate Native American heritage, such as Cache Creek Nature Preserve, which includes a tending and gathering garden created by the California Indian Basketweaving Association (^Zedler and Stevens 2018).

11.4.3 Tribal Connections to Native Fish and Plant Species

Native fish species are culturally significant to many tribes in Northern California and the Bay-Delta watershed. Delta smelt, Chinook salmon, and green sturgeon are important food species for the Plains Valley Miwok (Hankins 2018), and green sturgeon are also significant to the Yurok people (^Ramos 2021). Salmon (called "Nur" by the Winnemem Wintu [Middle Water People]) are integral to the Winnemem Wintu's way of life in the McCloud River watershed. Their creation story tells of the connection between the Winnemem Wintu and the salmon, where the first humans had no voice until the salmon gave their voice to the people; from then on, the fish were silent and the Winnemem Wintu promised to always speak for them (Mulcahy 2023). Salmon nourish their people; in return, the people speak for, protect, and care for the salmon (Middleton-Manning et al. 2018). Chinook salmon also play a significant role in the Karuk's creator story and traditionally have provided half of the diet for Karuk tribal members in California (^Norgaard 2014; ^Long and Lake 2018). Prior to colonization by European settlers, fish species including pacific lamprey (*Entosphenus tridentatus*) and steelhead (*Oncorhynchus mykiss*), coho (*Oncorhynchus kisutch*), sockeye (*Oncorhynchus nerka*), pink (*Oncorhynchus gorbuscha*), and Chinook salmon (*Oncorhynchus tshawytscha*) were abundant on Karuk tribal lands (Kondrashova 2020). The Karuk collectively imposed sustainable limits on harvests so that all tribes could depend on salmon as a primary food source (^Norgaard 2014).

Plants hold profound significance for California Native American Tribes. In addition to fish species, Native Californians likely harvested over 500 plant species from the Delta region (reviewed by ^Zedler and Stevens 2018). Along the San Joaquin River and its tributaries, people clustered near oak groves to harvest abundant acorns. The Northern Valley Yokuts' diet was diverse, including fish,

fowl, acorns, tule roots, freshwater bivalves, small mammals, and corms, bulbs, grass, and forb seeds. California Native Americans also harvested plants for medicinal, spiritual, and ceremonial uses (reviewed by ^Zedler and Stevens 2018). In the Delta, mugwort (*Artemisia douglasiana*) is an important medicine plant. Riparian plant species, including white root (*Carex barbarae*), willow (*Salix* spp.), deergrass (*Muhlenbergia rigens*), California hazelnut (*Corylus cornuta*), and western red bud (*Cercus occidentalis*), are used as basketweaving materials. Other plants such as milkweed (*Asclepias californica*) and Indian hemp (*Apocynum cannabinum*) are used to make fish and deer nets and for ceremonial regalia. Tule (*Schoenoplectus acutus*) is particularly culturally significant; every part of the plant is utilized, serving a variety of purposes, including food, building boats, and making duck decoys for fishing and hunting.

11.4.4 Traditional Land Stewardship Practices

Before modern development, California's grasslands, wetlands, oak chapparals, old growth forests, and other environments were not untouched wilderness, as they were tended for millennia by Native Americans through practices such as selective burning, planting, harvesting, and hunting (Claire and Surprise 2021). Traditional land stewardship improves landscape diversity and biodiversity and favors the growth of culturally important species (^Zedler and Stevens 2018). Traditional land stewardship practices also improve stream flows. For instance, before 1850, the lower Cosumnes River watershed was managed through planned burning to achieve more open riparian woodlands, reducing evapotranspiration and thereby prolonging stream flow during the wet season (^Zedler and Stevens 2018). This practice improved the availability of water in natural springs in the upper watershed and enabled more water to flow into tributaries.

Traditional land stewardship practices also improve food yield. Roughly 75 percent of Karuk food and cultural species are enhanced by fire (^Norgaard 2014). The Karuk manage fire to increase the prevalence of preferred plant species, including acorns, berries, roots, and fibrous materials and to improve the overall food quality of the forest for culturally important game species like deer and elk (^Norgaard 2014). Selective burning also improves the yield of acorns, mushrooms, and lilies that the Karuk gather. Indigenous People selectively harvest fish based on their developmental stage or time of year, such as restricting harvests during spawning, to manage fish populations (^Zedler and Stevens 2018). In the Delta, Plains Miwok land stewardship is believed to have managed the fishery in the lower Cosumnes River streams and sloughs to increase production and abundance of native fishes to supply up to one-third of Plains Miwok diet (^Zedler and Stevens 2018).

11.4.4.1 Importance of Flow and Water Quality to Tribal Uses of Water

Tribal uses of water are connected to the hydrology and ecology of the Bay-Delta watershed. California Native American Tribes rely on functional flows that resemble natural patterns of flow variability to sustain cultural uses of water (Moloney 2023). Flows support geomorphic, chemical, and biological processes that contribute to water quality and maintain tribal subsistence fishing and other tribal cultural uses of water. For example, Native Americans rely on cottonwood (*Populus* spp.) for building materials and medicine, and cottonwood tree seed germination relies on natural riverine processes. In addition, peak river flows help to support tribal cultural and subsistence fishing by benefiting salmon populations through floodplain inundation and cueing salmon migration (Moloney 2023).

Tribes in the Bay-Delta watershed need access to clean water as a spiritual and cultural resource and to protect human health (Moreno 2023). The Winnemem Wintu utilize cultural sites for

ceremonies along the McCloud River. Girls Puberty Rock is the site of a coming-of-age ceremony, and Children's Rock is where Winnemem Wintu children begin their journey along their spiritual and cultural path (Mulcahy 2023). Other important sites include burial sites and medicinal gathering sites. The Winnemem Wintu hold the girls coming-of-age ceremony along the shore of the McCloud River; during the ceremony, they gather herbs and meditate, and they complete the ceremony by swimming across the river. Access to clean water for these ceremonies is a TBU (Mulcahy 2023.).

The Buena Vista Rancheria of Me-Wuk Indians in Amador County, California of the Mokelumne River watershed, the lower San Joaquin River, and the southern Delta call water "Ki-ku" (Moloney 2023). The river's name "Mokelumne" is a Miwok term meaning "people of the fish net" derived from "mok" meaning "fish net" and "-umne", translating to "people of" (Moloney 2023). To the Me-Wuk, "Ki-ku is life, Ki-ku is a relation," and Ki-ku connects their people to the past, present, and future. The Me-Wuk consider all water to be connected as "an entity with a life of its own, a relative who connects all things," a teacher and a guide, and a cleaning agent; therefore, water itself is a significant resource (Moloney 2023). Cultural uses of water include sustenance and maintenance of basic needs, for use as a material, to maintain health, provide medicine, hold ceremonies, and produce food. Water also sustains species that the Me-Wuk rely upon to meet their cultural needs. For example, willow is an important riparian plant that is used in basket weaving and building sweat lodges. Tribal uses of water are the historical human use and management of water in California; these uses have been affected by colonization, genocide, and other aquatic ecosystem stressors (Moloney 2023).

As discussed elsewhere in this Staff Report, the State Water Board is in the process of updating and implementing the Bay-Delta Plan to provide for the reasonable protection of native fish and wildlife. Accordingly, the implementation of instream flow requirements for the Sacramento/Delta update to the Bay-Delta Plan would be expected to result in positive effects on ecosystems that support native fish species, including salmon, which in turn would provide benefits to California Native American tribal communities. More natural flow conditions, like those that would be expected under the flow scenarios, may reduce reliance of the tribal subsistence populations on salmon substitutes and, as a result, mitigate negative financial and health effects from consumption of such substitutes. More information can be found in Section 8.6, *Fisheries Economic Analysis*.

11.4.5 Effects of Aquatic Ecosystem Stressors on Tribal Uses of Water

Land development, water management infrastructure, flow alteration, climate change, nonnative species, and harmful algal blooms (HABs) are some of the aquatic ecosystem stressors that negatively affect aquatic resources in the Bay-Delta watershed that are significant to California Native American Tribes. Those stressors in turn affect the physical, cultural, and spiritual health of tribal communities. Drained wetlands, diverted streams, and decimated fisheries disrupt not only the ecology of the region but also the traditional ways of life of tribal communities (Claire and Surprise 2021).

Water management infrastructure such as channelization, levees, dams, and hydrologic alteration of streams affect tribes across the Bay-Delta watershed. These and other ecosystem stressors degrade the abundance, accessibility, and quality of freshwater mussels, salmonids, lamprey, and sturgeon in northern California (^Long and Lake 2018). Anadromous fish species, a staple of traditional tribal diets, have declined substantially. Salmon and tanoak traditionally provided half of the diet among

members of the Karuk Tribe. However, consumption of salmon has dropped from an average of 200 kilograms per person per year to 2.25 kilograms per person per year. The reduction in salmon harvest has resulted in low food security and poor health of tribal members, disrupted social relationships, and resulted in an overall decline in quality of life. Other aquatic ecosystem stressors such as climate change, invasive species, extirpations of culturally important animals, and contamination of streams by toxins also reduce the availability of ecoculturally important resources (^Long and Lake 2018).

Shasta and Friant Dams, part of the Central Valley Project (CVP), flooded the land of the Winnemem Wintu and North Fork Mono Indians, respectively (Claire and Surprise 2021; Mulcahy 2023). Middleton-Manning et al. (2018) review how three nations, the Pit River, Winnemem Wintu, and Mountain Maidu, have advocated for restoration and preservation of their homelands, as hydrologic alteration of rivers has significantly affected the tribal resources of these northern California Native American Tribes. In 1947, Shasta Reservoir flooded over 90 percent of the Winnemem Wintu's homelands and prevented salmon from returning to their natal spawning sites in the McCloud River (Mulcahy 2023). Shasta Reservoir also affected traditional lives of the Pit River, Shasta, Modoc, and other nations, who relied on salmon that historically migrated upstream past the dam and whose homelands were flooded by the reservoir (Middleton-Manning et al. 2018).

Mountain Maidu homeland is situated in the headwaters of the North Fork Feather River in Plumas County and extends into parts of Lassen and Butte Counties. Today, the federally recognized Mountain Maidu nations include the Greenville and Susanville Rancherias, while the United Maidu Nation and Tsi' Akim Maidu are seeking federal recognition. The Maidu people's way of life has been affected by the powerhouses and dams constructed in the Feather River Canyon. A part of the circle of life for the Maidu is the annual trek to the canyon to harvest salmon and eels (Pacific lamprey). Aside from reducing their access to salmon, eels, turtles, river otters, beavers, and other aquatic animals, their religious ceremonies and sites associated with the harvest as well as their spiritual relationship with the salmon have been affected. Other food sources important to the Maidu, from animals that consume the salmon, have also diminished (Middleton-Manning et al. 2018).

Climate change has a significant effect on tribes' concepts of time and seasons and access to their culturally significant resources. The alteration of long-standing associations between phenological events essentially challenges "the fundamental belief about how elements of the natural world are connected, as well as the timing of when traditional patterns occur and behaviors are performed" (Hatfield et al. 2018). For example, traditional burning practices rely on predictable environmental cues that are being disrupted by climate change, with the potential to affect historical means of subsistence (Flores and Russell 2020). Climate change has also affected California Native American Tribes through increased reliance on groundwater, decreases in native vegetation and wildlife, and degraded aquatic habitat (OEHHA 2022). Sea level rise has limited access to traditional sites along shorelines, and warm temperatures have increased toxins due to HABs in lakes, rivers, and streams, threatening tribal communities' access to clean water and food. Elevated temperatures along with reduced streamflows have harmed native fish, including salmon, which are of cultural and spiritual importance to many tribes. Invasive plants, such as water primrose (*Ludwigia* spp.), have increased in abundance due to climate change and outcompeted native plant species of cultural and spiritual importance to tribes (OEHHA 2022). HABs have also contributed to the decline of culturally important species for tribes in the Bay-Delta watershed (Kondrashova 2020).

11.4.6 Incorporating Traditional Ecological Knowledge into Bay-Delta Plan Implementation

Provisions for incorporating tribal input and TEK into implementation and adaptive management of the Bay-Delta Plan are described Section 13.3, *Revised Proposed Plan Amendments*. As described there, the State Water Board will work with California Native American Tribes to incorporate TEK in the Bay-Delta Monitoring and Evaluation Program that will inform annual and periodic reviews of the Bay-Delta Plan. Partner monitoring with California Native American Tribes may help fulfill monitoring requirements and fill geographic gaps (e.g., on tributaries) or gaps in monitoring elements. Any component of monitoring and assessment incorporating TEK will follow the CARE principles.

TEK could be helpful in implementing the adaptive implementation provisions for the regulatory pathway of the revised proposed Plan amendments (see Section 13.3, *Revised Proposed Plan Amendments*). As described there, provisions for adaptive implementation of the numeric inflow requirements are provided to optimize flows to benefit native fish and wildlife while also minimizing water supply impacts, and for the numeric inflow requirements to be implemented in a coordinated fashion with the cold water habitat and inflow-based Delta outflow requirements. Adaptive implementation may be allowed on a seasonal, annual, or long-term basis as part of local cooperative solutions or may be required by the Executive Director or State Water Board. Any decision to approve or direct adaptive implementation must be informed by best available scientific information, encompassing TEK, including monitoring and evaluation of the effectiveness of the measures in meeting the narrative objectives, and biological goals when available.

TEK could also inform implementation of other ecosystem protection measures, including habitat restoration, as part of local cooperative solutions. Water right holders may propose local cooperative solutions to comply with the applicable Sacramento/Delta inflow and cold water habitat requirements identified in the revised proposed Plan amendments. Local cooperative solutions may utilize the adaptive management provisions referenced above and described in Section 13.3, *Revised Proposed Plan Amendments*, including shaping of flows and operating lower in the required inflow range by implementing those flows in combination with other complementary ecosystem protection measures, including habitat restoration. Prior to submittal of any proposed local cooperative solution to the State Water Board, participants must consult with the California Department of Fish and Wildlife, appropriate California Native American Tribes, the United States Fish and Wildlife Service, the National Marine Fisheries Service, and other appropriate entities and provide any comments to the State Water Board for consideration.

The revised proposed Plan amendments also include provisions for the VA parties to engage with tribes on implementation of the VAs. As described in Section 13.3.4.9, *HRL Governance*, of the Staff Report, the VA parties will be required to engage with California Native American Tribes and consider their input in decision-making affecting governance of the VAs, including but not limited to tribal participation in the VA science committee. In addition, the revised proposed Plan amendments contain provisions specific to the VA non-flow habitat restoration actions, including that VA habitat restoration projects must include provisions for incorporating input from California Native American Tribes and other interested parties during the development, implementation, and assessment of non-flow habitat restoration measures, including input from tribes on TEK and other relevant information.

11.5 Tribal Beneficial Uses

In 2017, the State Water Board adopted Part 2 of the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries of California—Tribal and Subsistence Fishing Beneficial Uses and Mercury Provisions (ISWEBE), which established: (1) three beneficial uses pertaining to tribal traditional and cultural use, tribal subsistence fishing use, and subsistence fishing use by other cultures or individuals; (2) one narrative and four numeric Mercury Water Quality Objectives to protect numerous beneficial uses of water involving human health and aquatic dependent wildlife; and (3) a program of implementation to control mercury discharges. The State Water Board worked with interested tribes and environmental justice representatives to develop and adopt the set of TBU definitions that are now incorporated in the Bay-Delta Plan.

Through Resolution No. 2017-0027, the State Water Board defined two beneficial uses unique to California Native American Tribes and a third beneficial use unique to people and communities who engage in subsistence fishing. (^SWRCB 2020).

Tribal and Subsistence Fishing Beneficial Uses are defined as follows.

- Tribal Tradition and Culture (CUL) – Uses of water that support the cultural, spiritual, ceremonial, or traditional rights or lifeways of California Native American Tribes, including but not limited to, navigation, ceremonies, fishing, gathering, or other consumption of natural aquatic resources (including fish, shellfish, vegetation, and abiotic materials).
- Tribal Subsistence Fishing (T-SUB)* – Uses of water involving noncommercial catching or gathering of natural aquatic resources, including fish and shellfish, for consumption by individuals, households, or communities of California Native American Tribes to meet needs for sustenance.
- Subsistence Fishing (SUB) – Uses of water involving non-commercial catching or gathering of natural aquatic resources, including fish and shellfish, for consumption by individuals, households, or communities, to meet needs for sustenance.
    - *The SUB beneficial use does not explicitly pertain to "California Native American Tribes," as that phrase is defined but may, nevertheless, reflect activities of tribal governments as well as tribal members, tribal-focused organizations, and the public. As a result, this document collectively refers to the three beneficial uses as the "Tribal Beneficial Uses (TBUs)."

In Part 2 of the ISWEBE, all three of the new beneficial uses (CUL, T-SUB, SUB) form the basis of more specific human health protections under the Clean Water Act and the Porter-Cologne Act. The State Water Board explained that the consumption of fish and shellfish activities within the new beneficial uses describe uses of water to be protected from risks to human health from consumption of noncommercial fish or shellfish (Part 2, ISWEBE, chpt. II.). The two subsistence fishing beneficial uses involve higher rates of consumption of fish or shellfish than those protected under the CUL and Commercial and Sport Fishing (COMM) beneficial uses. The State Water Board also stated that the new beneficial uses are not intended to protect or enhance fish populations or aquatic habitat, as explained in Part 2 of the ISWEBE at chapter II. Specifically, fish populations and aquatic habitats are generally protected and enhanced by aquatic life beneficial uses, including but not limited to, Fish Spawning (SPN), Migration of Aquatic Organisms (MIGR), Estuarine Habitat (EST), Warm Freshwater Habitat (WARM), and Cold Freshwater Habitat (COLD).

California Native American Tribes use California's surface waters in a manner unique to tribal culture, tradition, ceremonies, and lifeways. TBUs provide a way to reasonably protect certain uses of water that directly relate to Native American cultures. California Native American Tribes have potential for increased exposure to water pollutants due to greater ingestion of water, dermal exposure, ingestion of plants, and ingestion of fish and shellfish through tribal traditional and cultural practices and subsistence fishing. In some cases, the levels of waste allowed to be released into California waters (discharge requirements) or existing water quality standards may not reasonably protect TBUs.

11.5.1 Incorporation of Tribal Beneficial Uses in the Bay-Delta Plan

In response to feedback received on TBUs received during the Sacramento/Delta Update process, at its meeting on June 7, 2023, the State Water Board included an Informational Item on consideration of adding TBUs to the Bay-Delta Plan. Staff presented the current status of the Bay-Delta Plan Update, provided a summary of tribal outreach and engagement efforts to date, and outlined the tribal and subsistence fishing beneficial uses under consideration for addition to the Plan. Following the staff presentation, a California Native American tribal panel addressed the State Water Board on the significance of TBUs to California Native American peoples, their culture, heritage, and way of life, along with sharing TEK surrounding tribal perspectives on water and its significance to Native American lifeways. The tribal panel comprised representatives from the Winnemem Wintu Tribe, Shingle Springs Band of Miwok Indians, Buena Vista Rancherία of Miwuk Indians, and an additional tribal individual representing the non-governmental organization Save California Salmon.

A public comment period followed the staff presentation and tribal panel, during which the State Water Board heard substantial support for adding tribal and subsistence fishing beneficial uses to the Bay-Delta Plan. Commenters also called for the State Water Board to recognize that these beneficial uses should apply throughout the watershed, avoiding the specific designation process employed by the regional water boards. Based on the substantial evidence provided to the State Water Board through subsequent tribal outreach and engagement efforts and input as part of the public process, the revised proposed Plan amendments designate CUL for the Bay-Delta watershed and incorporate the other TBUs (T-SUB and SUB) in the context of the Plan's provisions for the reasonable protection of fish and wildlife (see Chapter 13, *Revised Proposed Plan Amendments*).

Aquatic life beneficial uses identified in the Bay-Delta Plan form the basis for implementation actions related to flow, water project operations, and physical restoration for the reasonable protection of fish and wildlife. However, during the Bay-Delta Plan Update outreach efforts, tribal members and representatives expressed that numerous Tribal Beneficial Uses are intrinsically reliant on a healthy aquatic ecosystem and inherently encompass the deep connection many tribes have with fisheries, specifically salmon; and that flow-based actions to support aquatic life would also strengthen or further those connections. That is, numerous cultural and other uses of water by the tribes within the state are predicated in significant respects on vital and healthy fisheries.

The State Water Board recognizes the centrality that vital fish populations and aquatic life have for cultural, spiritual, ceremonial, and traditional rights and lifeways. Except in large part the health-based, consumption-related activities within the TBUs as specified in the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries of California, activities within the CUL use may be directly supported by flow actions, including for example, navigation, gathering of natural

resources, immersion ceremonies, and ceremonies that involve thriving fisheries (see Section 11.4.4.1, *Importance of Flow and Water Quality to Tribal Uses of Water*).

T-SUB and SUB are not designated in the Bay-Delta Plan for any waterbodies in the Bay-Delta watershed. However, while T-SUB and SUB relate to the risks to human health from consumption of noncommercial fish or shellfish at higher rates and were not developed to in and of themselves protect aquatic life, a thriving fish population, especially salmon, which are a key sensitive species in the Bay-Delta Plan, could support fishing at higher consumptive rates; therefore, flow actions for the reasonable protection of fish and wildlife are related to the T-SUB and SUB beneficial uses on the same waters. Implementation measures for the reasonable protection of fish and wildlife also will inure to the benefit of subsistence fishing by tribes and non-tribal communities. Individual stream segments could also be designated for T-SUB and SUB beneficial uses as appropriate by the regional water boards.

The revised proposed Plan amendments include provisions for increasing instream flows, changing reservoir storage levels, and could reduce the availability of surface water supplies under certain circumstances or conditions. There are many important water uses that must be considered carefully when determining regulatory flow requirements for fish and wildlife, including municipal, industrial, agricultural, hydropower, and recreational uses as well as other environmental uses such as wetlands and refuges. Implementation mechanisms are intended to be flexible to encourage innovative solutions by various parties and accommodate a variety of different watershed circumstances and needs. Reconciliation of the Bay-Delta ecosystem will require an unprecedented level of coordination and cooperation with agencies, water users, environmental groups, tribes, and other interested parties. Incorporating TBUs into the Bay-Delta Plan recognizes the tribes' participation in this process.

California's Porter-Cologne Water Quality Control Act envisions that *most* water quality control planning will be accomplished on a regional, hydrologic basis by the regional water boards. (Wat. Code, §§ 13000, 13240–13245.) In addition to the Bay-Delta Plan, there are two foundational water quality control plans (basin plans) that designate the beneficial uses of waterbodies within the two regions, including the waterbodies in the Bay-Delta watershed, which includes portions of both regions. These two basin plans are the Central Valley Regional Water Board's Water Quality Control Plan for the Sacramento and San Joaquin River Basins and the San Francisco Bay Regional Water Board's Water Quality Control Plan for the San Francisco Bay Region. For waters subject to the Clean Water Act, the beneficial uses designated in these two basin plans serve as designated uses under the Clean Water Act, and the water quality objectives to protect those uses serve as criteria under the Clean Water Act. (33 U.S.C., § 1313(c); 40 C.F.R. §§ 131.2, 131.4.) The water quality standards for the Bay-Delta watershed are largely established in these two basin plans.

While the two regional basin plans serve as the bedrock water quality standards-setting function of the Porter-Cologne Act and the federal Clean Water Act, the State Water Board has adopted an additional water quality control plan, the Bay-Delta Plan, that overlays the two basin plans in the Bay-Delta watershed. The State Water Board's Bay-Delta Plan is a recognition that discharges of waste, including discharges regulated through National Pollutant Discharge Elimination System (NPDES) permits and waste discharge requirements for nonpoint-source discharges, are not the only sources of pollution affecting the Bay-Delta ecosystem. Instead, water diversions from the Bay-Delta watershed's rivers and streams, including large export diversions from the Delta by the CVP and SWP, have created an additional, significant nonpoint-source of pollution that has degraded the ecosystem, contributing to the decline of native fish populations. The State Water Board developed

the initial Bay-Delta Plan and subsequent updates to focus on impacts from, and regulatory actions potentially available to address, the water quality and beneficial use impacts from water diversions in the Bay-Delta watershed. The State Water Board could do so because, unlike the regional water boards, it has direct authority to regulate diversions of water, including through its permitting and licensing of post-1914 appropriative water rights. (Wat. Code, §§ 174, subd. (c), 1200-1851, and 13170.)

The three plans work together to provide the foundational requirements for protecting beneficial uses of the Bay-Delta watershed. All NPDES permits issued within the Bay-Delta watershed by the State Water Board, Central Valley Water Board, and San Francisco Bay Water Board include provisions to require compliance with applicable water quality standards. (33 U.S.C., § 1311(b)(1)(C).) Likewise, waste discharge requirements and conditional waivers issued under the Porter-Cologne Act (which governs all discharges of waste—not just from point-sources—to all waters of the state—not just navigable waters) by the State and the two regional water boards protect beneficial uses identified within the three basin plans. (Wat. Code, §§ 13263, 13269). The State and the two regional water boards also issue water quality certifications to implement section 401 of the Clean Water Act and assure compliance with state water quality standards and other applicable provisions of state law, including those specified in the three basin plans. (33 U.S.C., § 1341; Wat. Code, § 13160.) Put simply, the State Water Board and the two regional water boards have a comprehensive program for water quality protection that draws on the three distinct plans and myriad authorities to implement them. No one plan provides all the solutions, and actions are taken under a variety of authorities to implement the three plans and to protect beneficial uses of water.

Additional work and collaboration are needed among the tribes, the State Water Board, and the regional water boards to define the proper scope and identify the effects of future designations as applicable to the geographical area of the Bay-Delta watershed. The CEQA component of the Staff Report for the Bay-Delta Plan Update may be used to support flow-related actions that support TBUs and water quality actions in a programmatic way. Prior to formal designation of the subsistence fishing focused TBUs (T-SUB and SUB), the State Water Board and the two regional boards will exercise their existing authorities to protect all the TBUs on a case-by-case basis where supported by the evidence. This applies to discharge permitting and specific water right actions. In addition, the State and regional boards recognize that actions taken to protect aquatic habitat also benefit many of the tribes' connections to the fish and the waters, regardless of the status of TBU designations.

11.5.2 Designation of Tribal Tradition and Culture (CUL)

The revised proposed Plan amendments designate Tribal Tradition and Culture (CUL) specifically due to the cultural and spiritual importance of native fish and wildlife that migrate throughout the watershed, particularly salmon, to tribes. The reasonable protection of CUL as it relates to the tribes' cultural ceremonies and spiritual lifeways to salmon overlaps with the reasonable protection of the aquatic life beneficial uses identified in the Bay-Delta Plan (where salmonids are as key indicator species) or designated in the applicable regional water coards' water quality control plans, including EST, COLD, WARM, MIGR, SPWN, WILD, and RARE (also referred to as fish and wildlife beneficial uses). Although the CUL beneficial use does not itself authorize implementation actions aimed at protecting fish populations, there is a practical overlap: implementation actions taken to protect aquatic life beneficial uses related to flow, water project operations, and physical habitat

restoration, also support the healthy fish populations on which tribal cultural uses depend. Other tribal uses and activities encompassed within the CUL use may be directly supported by flow actions, including for example, navigation, gathering and consumption of natural resources, and immersion ceremonies. See Section 13.3.7, *Designation of Tribal Tradition and Culture (CUL) and Incorporation of Tribal and Subsistence Fishing Beneficial Uses* for more information.

The designation of CUL within the Bay-Delta watershed is based on substantial evidence provided to the State Water Board through tribal outreach and engagement efforts. Tribal representatives shared through written and verbal testimony the significance of salmon within tribal culture, including in creation stories, as a centerpiece of traditional ceremonies and feasts (such as traditional salmon bakes), and the general correlation of Native American life ways with the timing and locations of northern California salmon runs. The State Water Board recognizes the centrality that vital fish populations have for cultural, spiritual, ceremonial, and traditional rights and lifeways of tribes in the Bay-Delta watershed. Salmonids utilize the watershed both temporally and spatially at various life stages, and the tribes' cultural and spiritual use is centered on the connectivity between themselves and their ancestors with these species and the ecosystem that supports them.

11.5.2.1 Tribal Uses within the Watershed

The Bay-Delta watershed supports many tribal uses of water as encompassed by Tribal Tradition and Culture (CUL) beneficial use. During the development of the Sacramento/Delta updates to the Bay-Delta Plan, tribes, tribal representatives, and representatives of tribal affiliated organizations offered numerous examples of tribal uses of water as encompassed by CUL beneficial use within the watershed that would fall under the CUL beneficial use designation. Many of those examples of tribal uses were described at Board meetings, workshops and hearings, including the June 7, Informational Item on Tribal Beneficial Uses.

At the June 7 meeting, tribal representatives described how riparian vegetation provided by a healthy river ecosystem can be used as traditional building materials, to craft tools, jewelry and art, or as a form of medicine. Tribal representatives also spoke of how certain sites within the watershed have been traditionally used for cultural ceremonies, including a girl's coming-of-age ceremony specific to the Winnemem Wintu Tribe's culture held on the McCloud River. Tribal representatives offered testimony on the importance of water and the central role water plays within tribal culture. Many tribal cultures hold water as the foundation or basis through which all life springs. Many tribes view water itself as a relation and connected to all things.

Another example of the Native American cultural connection to water was submitted by the Buena Vista Rancheria of Me-Wuk Indians located within the Bay-Delta watershed. The comment letter reads as follows; "The Buena Vista Rancheria of Me-Wuk Indians (BVR) is a federally recognized Indian tribe with ancestral homelands spanning six counties, including Sacramento, Amador, San Joaquin, El Dorado, Calaveras, as well as the northern part of Stanislaus County. The Tribe's ancestral lands stretch from the eastern bounds of the Sacramento and San Joaquin River Delta to the western slope of the northern Sierra Nevada mountains. Bay-Delta waters have sustained the Tribe since time immemorial. Significant tributaries and rivers that feed into the San Joaquin and Sacramento River Delta flow through Buena Vista Rancheria territory, including, among others, the Mokelumne, Consumnes, and San Joaquin Rivers (Kauhane 2024).

For the Buena Vista Rancheria of Me-Wuk Indians, Ki-ku (Me-Wuk for water) is the foundation of the world. Me-Wuk and Yokut creation stories describe water as a relation, and tribal members

trace family lines through water. Water is understood as connected to all things and a life force of its own. In addition to supporting ecosystems and subsistence uses, water is revered for the pivotal role it plays in the Tribe's spiritual, cultural, and traditional lifeways and practices. The Tribe's traditional village sites were located near waterways, and family lines are still understood to be connected to BVR ancestral land through relations to water and spaces near water." (Kauhane 2024).

Through the submission of comments and input delivered at Board workshops, meetings, and hearing dates, tribal representatives have offered numerous instances detailing tribal uses of water within the watershed and the significance salmon and water, including a healthy ecosystem, has to tribal culture. Section 11.4, *Traditional Ecological Knowledge*, and the following sections detail many of these examples, though it is not intended to be an exhaustive compilation of all possible examples. These examples offer insight into the Native American paradigm and reveal the sacred connection many tribes have to the natural world. This connection was best articulated at the November 17, 2023, hearing date, when Vice Chair of Shingle Springs Band of Miwok Indians made the following statement, "And so when we talk about protecting the health of our rivers and watersheds, we are simultaneously talking about protecting and preserving our culture, our indigenous life ways, and our identity. Culture is ecology, ecology is culture. It is all connected." (Tayaba 2023).

11.5.2.2 Tribal Cultural Connection to Salmon

Throughout the scoping period, tribal representatives shared the prominent role salmon hold within tribal culture. The Winnemem Wintu Tribe submitted a comment describing the tribe's background and cultural connection to salmon and the ecosystem. "The Winnemem Wintu are an Indigenous tribe whose identity and existence are intertwined with the headwaters of the Bay-Delta. In the Winnemem language, "Winnemem Wintu" translates to "Middle Water People," reflecting the Tribe's identification with its ancestral homelands along the McCloud River lying between the Sacramento and Pit Rivers. Traditionally, the Winnemem Wintu's historical territory spanned the upper Sacramento River and McCloud River watersheds, which provide freshwater flows into the Bay-Delta. These waters have sustained the life and spirituality of the Tribe since time immemorial (Kauhane 2024).

Winnemem Wintu culture and identity are inextricably connected with the Nur, or Chinook salmon, which once flourished in the Bay-Delta's waterways. Ceremonies, songs, dances, and prayers about the relationship between the Nur and the Winnemem Wintu are the fabric of Winnemem Wintu culture, religion, and spirituality." (Kauhane 2024). Further evidence of the connection between salmon and tribal culture can be found in the names of the rivers themselves. The Cosumnes River, an eastside tributary to the Delta and within the geographical region of the Sacramento/Delta update to the Bay-Delta Plan, is likely derived from the Miwok words kosum, meaning salmon, and umne, a suffix meaning "of the people," translating to People of the Salmon.

Salmon in northern California watersheds, including the Bay-Delta watershed, serve as a keystone species within the ecosystem performing the essential function of transporting nutrients from nutrient rich marine environments to nutrient poor freshwater habitats. Salmon transport marine-derived phosphorous and nitrogen from the ocean to freshwater streams and rivers when they spawn and die. As they decay, salmon carcasses deposit nutrients into the surrounding soil and water, benefiting trees and plants. Salmon is also a crucial food source for a variety of species including bears, birds, and other fish. Their presence supports the Bay-Delta watershed food chain and overall biodiversity of the ecosystem.

The statement, "Culture is ecology, ecology is culture. It is all connected" reflects the intrinsic connection Native American Tribes have with the ecosystem and all the plants and animals that comprise it. This connection is represented through TEK, further discussed in Section 11.4, *Traditional Ecological Knowledge*. The prominent role salmon play within the Bay-Delta watershed as a foundational or cornerstone species of the ecosystem is equivalent to the prominence salmon hold within Native American tribal culture. Salmon are foundational to tribal culture as they are foundational to the ecosystem.

11.6 California Native American Tribes and Harmful Algal Blooms

Harmful algal blooms (HABs) impact California Native American Tribes in unique ways. By creating conditions that prevent traditional, religious, and cultural practices and ceremonies from taking place, HABs can impact TBUs as well as tribes' ability to pass on TEK to future generations. As an example of this, tribes have indicated to State Water Board staff that HABs have caused them to cancel tribal youth fishing trips. These trips are intended to teach youth about traditional diets and food sovereignty. A similar incident occurred where a language camp was cancelled due to the presence of cyanotoxins in the river. Because tribes are culturally connected to ceremonial sites, relocating practice sites and ceremonies during a HAB event is not an option. For more information on HABs, including the drivers of HABs, and HAB monitoring programs, please see Section 4.3.2, *Harmful Algal Blooms*.

The State Water Board is committed to supporting actions to address HABs. These include supporting science, research, monitoring, and special studies that are needed to develop HAB-predictive models and identify possible management and mitigation measures that could be used to control HABs in the Delta, in addition to supporting incident response and other actions to address HABs. These commitments are described in Section 5.6.1.3, *Proposed Changes to Monitoring, Assessment, Special Studies, and Reporting*. See Section 13.3.9.2, *Harmful Algal Blooms*, for a description of the provisions to monitor for HABs in the Sacramento/Delta and commitments to address HABs in the revised proposed Plan amendments.

11.7 References Cited

11.7.1 Common References

^Carroll, S. R., E. Herczog, M. Hudson, K. Russell, and S. Stall. 2021. Operationalizing the CARE and FAIR Principles for Indigenous data futures. *Scientific Data* 8:108.

^Huntington, H. P. 2000. Using Traditional Ecological Knowledge in Science: Methods and Applications. *Ecological Applications* 10(5):1270–1274.

^Long, J. W. and F. K. Lake. 2018. Escaping Social-Ecological Traps through Tribal Stewardship on National Forest Lands in the Pacific Northwest, United States of America. *Ecology and Society* 23(2):10.

^Norgaard, K.M. 2014. *Karuk Traditional Ecological Knowledge and the Need for Knowledge Sovereignty: Social, Cultural and Economic Impacts of Denied Access to Traditional Management.* Report prepared for the Karuk Tribe Department of Natural Resources.

^Ramos, S. C. 2021. Understanding Yurok Traditional Ecological Knowledge and Wildlife Management. *The Wildlife Society* DOI: 10.1002/jwmg.22140.

^Runge, M. C., K. E. LaGory, Kendra Russell, J. R. Balsom, R. A. Butler, L. G. Coggins, Jr., K. A. Grantz, John Hayse, Ihor Hlohowskyj, Josh Korman, J. E. May, D. J. O'Rourke, L. A. Poch, J. R. Prairie, J. C. VanKuiken, R. A. Van Lonkhuyzen, D. R. Varyu, B. T. Verhaaren, T. D. Vesekla, N. T. Williams, K. K. Wuthrich, C. B. Yackulic, R. P. Billerbeck, and G. W. Knowles. 2015, Decision Analysis to Support Development of the Glen Canyon Dam Long-Term Experimental and Management Plan: U.S. Geological Survey Scientific Investigations Report 2015–5176.

^State Water Resources Control Board (SWRCB). 2020. *Tribal Beneficial Uses Fact Sheet*. November.

^State Water Resources Control Board (SWRCB). 2023b*. 2023–2025 Racial Equity Action Plan*. January.

^Tolowa Dee-ni' Nation, InterTribal Sinkyone Wilderness Council, Cher-Ae-Heights Indian Community of the Trinidad Rancherí a, and Wiyot Tribe (Tolowa Dee-ni' Nation et al.). 2017. *Informing the North Coast MPA Baseline: Traditional Ecological Knowledge of Keystone Marine Species and Ecosystems.* May.

^Usher 2000. Traditional Ecological Knowledge in Environmental Assessment and Management. *Arctic* 53(2):183–193.

^Zedler, J., M. L. Stevens. 2018. Western and Traditional Ecological Knowledge in Ecocultural Restoration. *San Francisco Estuary and Watershed Science.* 16 (3): 2-15.

11.7.2 Section References

Berkes, F., J. Colding, and C. Folke. 2000. Rediscovery of traditional ecological knowledge as adaptive management. Eco*l Appl* 10:1251-1262. https://doi.org/10.2307/2641280

California Department of Water Resources (DWR). 2023. *2023 California Tribal Water Summit*..

California Environmental Protection Agency (CalEPA). 2020. *Tribal Consultation Protocol*. February.

California Public Domain Allotments. 2025. *California Public Domain Allotments: Sustaining and protecting California Indian lands (CA Public Domain)*. Last revised: May 29, 2025. Available: https://pdallotments.ucdavis.edu/. Accessed: 6/4/2026.

California Tribal Court-State Court Forum. n.d. *Frequently Asked Questions: Indian Tribes and Tribal Communities in California.*

Claire, T. and K. Surprise. 2021. Moving the Rain: Settler Colonialism, the Capitalist State, and the Hydrologic Rift in California's Central Valley. *Antipode* Vol. 0 No. 0 2021 ISSN 0066-4812, pp. 1-21.

Flores, D., and G. Russell. 2020. Integrating Tribes and Culture into Public Land Management. Northeastern California Plateaus Bioregion Science Synthesis. Gen. Tech. Rep. RMRS-GTR-409.

Fort Collins, CO: US Department of Agriculture, Forest Service, Rocky Mountain Research Station 177–185.

George Mason University (GMU). n.d. *"Self Determination of Free Peoples": Founding Documents of the American Indian Movement.* Available: https://historymatters.gmu.edu/d/6897/. Accessed: May 19, 2025

Hankins, D. K. 2018. Ecocultural Equality in the Miwko? Waali?. *San Francisco Estuary and Watershed Science.* 16(3): 1–9.

Hankins, D. L. 2009. *Water as Sacred*, invited essay in *Tribal Water Stories: A Compilation of California Tribal Stories, Position Papers & Briefing Papers in Conjunction with the 2009 Tribal Water Summit.*.

Hatfield, S. C., E. Marino, K. P. Whyte, K. D. Dello, and P. W. Mote. 2018. Indian Time: Time, Seasonality, and Culture in Traditional Ecological Knowledge of Climate Change. *Ecological Processes* 7, 25. https://doi.org/10.1186/s13717-018-0136-6.

Heizer, R. F. 1972. *The Eighteen Unratified Treaties of 1851-1852 Between the California Indians and the United States Government*. Prepared for University of California Berkeley Department of Anthropology. Berkeley, CA.

Howard University School of Law (Howard). 2023. *A Brief History of Civil Rights in the United States: Indigenous Peoples' Civil Rights.* January 6. Available: https://library.law.howard.edu/civilrightshistory/indigenous. Accessed: September 17, 2023.

Judicial Branch of California. n.d. *California Tribal Communities*. Available: https://courts.ca.gov/programs-initiatives/tribalstate-programs/california-tribal-communities#:~:text=California%20has%20the%20highest%20Native,tribes%20and%20the%20United%20States.. Accessed: March 14, 2025.

Kauhane, Makena, Attorney for the Delta Tribal Environmental Coalition, Stanford Environmental Law Clinic. January 19, 2024 - Public comment received on the September 2023 draft Staff Report, sent to Joaquin Esquivel, Board Chair, State Water Resources Control Board, Sacramento, CA.

Kondrashova, L. 2020. *Decolonization through Environmental Restoration and Stewardship in Native American Communities.* Baccalaureate. University of California, Berkeley. Senior Research Seminar. Berkeley, CA.

Middleton-Manning, B. R., M. S. Gali, and D. Houck. 2018. Holding the Headwaters: Northern California Indian Resistance to State and Corporate Water Development. *Decolonization: Indigeneity, Education & Society*. 7(1):174-198.

Moloney, E. June 7, 2023. Board Meeting Informational Item on Addition of Tribal Beneficial Uses to Bay-Delta Plan [Speaker]. https://www.youtube.com/watch?v=L2OsfAYaots&t=274s

Moreno, K. June 7, 2023. Board Meeting Informational Item on Addition of Tribal Beneficial Uses to Bay-Delta Plan [Speaker]. https://www.youtube.com/watch?v=L2OsfAYaots&t=274s

Mulcahy, G. June 7, 2023. Board Meeting Informational Item on Addition of Tribal Beneficial Uses to Bay-Delta Plan [Speaker]. https://www.youtube.com/watch?v=L2OsfAYaots&t=274s

National Park Service (NPS). 2004. *A History of American Indians in California: Introduction*. Available: https://www.npshistory.com/publications/california/5views/5views1.htm. Last revised: November 17, 2004. Accessed: May 8, 2026

Office of Environmental Health Hazard Assessment (OEHHA). 2022. *Indicators of Climate Change in California*, Fourth Edition, California Environmental Protection Agency.

Santa Clara University (SCU). n.d. *The Indigenous Tribes of California*. Available: https://dh.scu.edu/exhibits/exhibits/show/california-history/indigenous-history-in-californ/cali-tribes. Accessed: April 14, 2025.

Save California Salmon. 2021. Presentation on What is Traditional Ecological Knowledge? Traditional Ecological Knowledge Webinar Series. Available at https://www.californiasalmon.org/traditional-ecological-knowledge-series. April 9,

State Water Resources Control Board (SWRCB). 2019. *Tribal Consultation Policy*. June.

Tayaba, M. 2023. Board Hearing on draft Staff Report [Speaker]. November 17. Hearing transcript.

U.S. Department of the Interior, Bureau of Indian Affairs (BIA). 2023. *Frequently Asked Questions*. Available: https://www.bia.gov/frequently-asked-questions. Accessed: September 17, 2023.

U.S. Government Accountability Office (GAO). 2012. *Report to the Honorable Dan Boren, House of Representatives. Indian Issues: Federal Funding for Non-Federally Recognized Tribes.* April. GAO-12-348.

University of Alaska Fairbanks. n.d. *Termination Era, the 1950s, Public Law 280*. Available: https://www.uaf.edu/tribal/academics/112/unit-2/terminationerathe1950spubliclaw280.php. Accessed: May 19, 2025.