Chapter 2 – Understanding and Appreciating California’s Delta

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# Introduction to Interpretation

Authentic and accurate storytelling is a significant part of National Heritage Areas’ responsibilities. Designating legislation for the Sacramento-San Joaquin Delta NHA specifically requires that the management plan include an interpretive plan (Public Law 116-9 Section 6001.c.2.C.vii), which is represented by this chapter. The management plan is required to incorporate an integrated and cooperative approach for the interpretation of natural, cultural, historic, scenic, and recreational resources (c.2.A). Interpretation helps increase public awareness of, and appreciation for, natural, historical, scenic, and cultural resources (b.2.B.iv). Interpretive and educational programs and NHA partner projects directly support recognition, protection, and enhancement of the NHA's important resources (b.2.B.i).

As the local coordinating entity, DPC is directed to assist partners to establish and maintain interpretive exhibits and programs and to develop educational opportunities (b.2.B.ii,iii). Through collaboration, many NHA partners and stakeholders interpret the stories of their individual sites within the larger NHA context (b.2.B). DPC also assists partners in ensuring that clear, consistent, and appropriate signs identifying points of public access and sites of interest are posted throughout the NHA (b.2.B.vi).

Based on the legislative guidance, the Advisory Committee adopted the NHA's first goal:

Guided by interpretation, and through institutional leadership and community projects, promote and instill an evolving understanding and appreciation of the historical and ongoing changes in the Delta’s land, water, wildlife, and communities.

The management plan directly addresses the designating legislation’s requirements for interpretation and education through the information and strategies outlined in this chapter. The chapter serves as a long-range plan to guide interpretive and educational programming decisions for the NHA and its partners. The text identifies the NHA’s important stories and places, describes existing interpretive resources, and provides objectives and strategies for telling the region’s stories. NHA partners and interpreters will incorporate the interpretive themes and storylines as they develop content, programs, exhibits, interpretive panels, and online media related to their site and the NHA. These tools help partners discover common themes, coordinate content, and develop complementary interpretive services.

# Interpretive Thematic Framework

## Role of Interpretive Themes in the NHA

The stories of the Sacramento-San Joaquin Delta reflect a rich tapestry of Indigenous peoples and immigrants from around the world, natural beauty, wildlife, engineering marvels, bustling metropolitan areas, picturesque rural towns, and public access to a vast array of recreational opportunities. The Delta is the heart of California – both geographically and metaphorically. Nestled between Northern California’s largest and most influential metropolitan areas, the San Francisco Bay Area and Sacramento, the region is an important economic engine and transportation corridor connecting the agricultural powerhouse of the Great Central Valley to the world. The Delta is rich in history and the experiences of Delta communities enhance people's understanding of California and American history.

Interpretation fosters opportunities to make meaningful connections to resources. Interpretation goes beyond facts; it reveals the meaning and relevancy of an object, place, feature, or event. Connections are made through hands-on involvement with an object, a landscape, a natural feature, or a site. Interpretation helps people build intellectual, emotional, or spiritual connections with the ideas, beliefs, and values inherent in the resources.

The Delta, which here refers to the entire NHA, encompasses a large geographic area rich in natural history, biological diversity, cultural heritage, and abundant natural and historic resources. Connection to place can be found within the large landscape of the Delta’s meandering waterways, through a historic site or event, and through the stories of the many cultures, ethnic groups, and communities that have called the Sacramento-San Joaquin Delta home. Interpretation takes these interconnected pieces and organizes them into an inclusive, cumulative story that communicates important messages about the Delta’s significance and resources. Each story, event, location, and resource is linked to the other, with the waters of this rare inland delta serving as the universal lifeblood.

## Interpretive Concepts

The Sacramento-San Joaquin Delta is an area with countless stories grounded in cultural and natural heritage. An interpretive framework organizes these stories under themes that communicate important messages about the Delta’s significance and resources and what they mean. Themes reinforce the “sense of place” that makes the Delta special and unique. The following narrative provides a statement of significance, five primary themes and underlying storylines, and three supporting themes for the NHA.

A **statement of significance** describes how and why a place is important. **Primary themes** are the core ideas or concepts that visitors should understand after visiting an area. They inspire emotional connection and provoke deeper thought and reflection. Subthemes or **storylines** are derived from primary interpretive themes, are narrower in scope, and explore specific ideas in greater depth. Storylines are the ideas that drive the development of specific interpretive projects and programs. **Supporting themes** are like storylines but depart from the primary themes enough to warrant separate status.

NHA partners will use themes and storylines to connect their stories and places to the larger interpretive framework. Local stories can illustrate and bring themes to life, align them with authentic places, and connect the themes to the lives of real people to which visitors can relate. The themes are broad in scope. Every NHA partner will be able to find a place within the framework. The NHA theme statements will be incorporated directly or indirectly into interpretive content developed for local sites.

Each of the NHA themes and storylines is discussed below, including the general concept and publicly accessible sites where the storyline is currently presented or could be presented. The list of existing and potential interpretive sites is not meant to be exhaustive. Partner sites will further develop each storyline in conjunction with NHA staff. Implementation may begin with the most high-profile storylines and those already represented by existing visitor attractions and sites. Flexibility is encouraged, and some of the storylines may be modified and new storylines added.

## Statement of Significance

At the heart of California lies a vast tidal estuary where the state’s two largest rivers converge, forming a rare inland delta, the Sacramento-San Joaquin Delta, California’s most crucial water and ecological resource. The Delta is a place that nurtures a unique ecosystem and has been supported and shaped by a culturally diverse population for millennia. The region’s water, fertile land, and proximity to the San Francisco Bay fuels California’s economy and is a critical linchpin in California’s ongoing struggle to balance environmental conservation with critical water infrastructure. As California’s population has grown, the Delta has served as an important recreational respite for the surrounding bustling cities.

## Primary Themes

### Theme 1: Water – Precious Lifeblood for the Delta and California

**Theme Statement:** The Sacramento-San Joaquin Delta is California’s oasis, located at the center of the state’s water challenges and opportunities, and a water passage between the Pacific Ocean and inland California.

Water is the backbone of the Sacramento-San Joaquin Delta’s natural ecosystem, key to shaping the region’s settlement patterns, vital to the development of the Delta and its role in the American story, and crucial to the continued sustainability of its communities and economy. Freshwater from inland California meets saltwater in the Delta, Suisun Marsh, and Carquinez Strait and flows into the San Francisco Bay. Together, these waterways form the largest estuary on the West Coast of the Americas providing a critical corridor for fish, wildlife, and commerce.

Prior to European settlement, Native Americans settled at high points in the region and used the waterways and surrounding habitat for food, basketmaking materials, and other resources, a practice that continues to the current day. The rivers served as routes of European and American exploration and colonization under the Spanish and Mexican governments from the late 18th century to the middle of the 19th century. Starting with the discovery of gold in 1848, the Carquinez Strait and Delta rivers connected San Francisco and other Bay Area settlements with the Mother Lode mines. Many of the Delta’s small historic communities began as steamboat landings during and after the Gold Rush, where freight was transported to nearby urban centers for consumption or shipment overseas. The Delta’s waterways enabled California agriculture to be a key component of the world market.

Over the past century, the Delta has been the heart of California’s largest water supply delivery system, providing a large portion of the water necessary to support 25 million residents, the state’s $3.3 trillion economy, and more than three million acres of productive farmland.[[1]](#footnote-2) Rainfall runoff and snowmelt captured in upstream reservoirs is released for flood protection, maintenance of fish habitat, and preservation of low salinity In Delta waters for agricultural and human use and makes its way to the Delta. In the Delta, water is moved via pumps to urban and agricultural users in central and southern California, creating challenges for Delta farmers, residents, and wildlife.

#### Storyline 1.1:  Stewardship of a Precious Resource (1930s-Present)

**Storyline Statement:** A scarce and much-desired resource for California, Delta water is an ongoing lesson in stewardship by public and private partners that will grow more difficult with the impacts of climate change.

Water management has been integral to Delta life since early American settlers transformed an extensive area of tidal rivers, sloughs, and wetlands into farmland and communities. Periodic floods deposited fertile alluvial soils but also limited early development and necessitated development of the region’s flood control facilities. Many contemporary Delta waterways were constructed for water circulation, shipping, and irrigation and to obtain material for levee construction.

The Central Valley Project and State Water Project, both developed in the mid-20th century, have played a significant role in the environmental health of the Delta. The federal Central Valley Project, authorized by Congress in 1937, was for flood control and navigation, water supply for agriculture and municipal water uses, and hydroelectric power generation. The magnitude of water diversions through the Delta from the Sacramento River increased dramatically after the 1960s, when the State Water Project was implemented. The Central Valley Project and State Water Project are linked at Clifton Court Forebay south of Discovery Bay, where water is pumped into the California Aqueduct and the Delta-Mendota Canal.[[2]](#footnote-3)

Water quality issues in the Delta revolve around pollutants and salinity. There are many sources of pollution given the size of the watershed, including treated municipal and industrial wastewater, untreated urban stormwater, and agricultural runoff. Seasonal and annual salinity levels are driven by the amount of freshwater flowing into and through the Delta. Both natural and man-made actions affect salinity, including tidal forces, agricultural run-off, water diversions, and freshwater inflow from the Sacramento and San Joaquin Rivers.

Delta ecosystem health is strongly tied to water supply management in the Delta watershed. The Sacramento and San Joaquin Rivers’ flows are highly managed to support agricultural and urban water supply, maintain water quality, and reduce flood risk. Natural seasonal and year-to-year variability of river flows has given way to more stable, artificially regulated conditions. Less variable flow conditions interrupt natural estuarine processes and create improved habitat conditions for nonnative invasive species.

Existing and Potential Interpretive Sites in NHA

* Big Break Regional Shoreline Visitor Center, Oakley, and other East Bay Regional Park District regional shorelines
* Central Valley Project sites
* Clifton Court Forebay
* Discover the Delta Foundation Education Center (proposed), Isleton/Rio Vista
* Fishing access points
* Fishing tournaments
* Marinas
* Recreation areas
* State Water Project sites
* Urban waterfronts such as Benicia Waterfront, Rio Vista Waterfront Promenade, and West Sacramento River Walk

Existing and Potential Interpretive Sites Outside of NHA

* Bay-Delta Model, Sausalito
* California Indian Heritage Center (proposed), West Sacramento
* Museum of Science and Curiosity, Sacramento
* Urban waterfronts such as the Old Sacramento Waterfront and Stockton's Weber Point

#### Storyline 1.2: Northern California’s Water Highway (1840s-1940s)

**Storyline Statement:** The Delta’s maze of interconnected waterways and levees and narrow Carquinez Strait creates a vital transportation corridor from the Pacific Ocean to the Central Valley, bringing forty-niners to the goldfields, uniting small farming communities and larger metropolitan areas, and transporting agricultural and industrial goods.

The Delta’s natural waterways were the reason that boats were the primary mode of early transportation. Marshy ground made construction of trails and roads difficult, so most goods were transported by small watercraft, beginning with Native American boats constructed from harvested tules (a large bulrush plant, particularly *Schoenoplectus acutus*). Sacramento and Stockton, located on the eastern edge of the Delta, developed into large cities during the Gold Rush (1848-1855) because they served as transfer points for travelers arriving by boat through the San Francisco Bay and the Delta to overland transportation. Traveling through Delta waters was initially treacherous due to snags and obstacles.[[3]](#footnote-4) By the early 1850s, the steamboat was a common sight on the Delta and ferry routes were developed to move people across waterways. Communities such as Courtland, Isleton, Rio Vista, and Walnut Grove developed initially as steamboat stops and agricultural shipping points.

Despite the proximity of the transcontinental railroad, railroad routes through the Delta were slow in coming due to easy access to water transportation. Automobiles, which began widespread use in the 1910s, eventually replaced steamboats, ferries, and the railroad as the primary means of transportation through the Delta. The Delta landscape required creative roadway engineering. Highways were constructed along levee tops, which sometimes buckle due to settling of peat soils, and bridges were moveable to provide unobstructed boat traffic. These now historic bridges, including five Strauss Heel Trunnion Bascule bridges (see Chapter 3), are icons of the Delta.

While steamboats no longer travel through the Delta, the region still plays an important role for commercial shipping, particularly agricultural goods from the Delta and Central Valley, making use of the inland ports of Stockton and West Sacramento. The U.S. Army Corps of Engineers became active in maintaining and improving the Delta shipping lanes when runoff and debris impeded shipping (discussed more in Storyline 2.3). Most of the Delta’s $1.6 billion and the San Joaquin Valley’s $36 billion of agricultural commodities are exported through the Sacramento and Stockton Deep Water Ship Channels.[[4]](#footnote-5)

Existing and Potential Interpretive Sites in NHA

* Antioch Historical Museum, Antioch
* Carquinez Strait Loop
* Delta King, Sacramento
* Great California Delta Trail
* Howard Landing Ferry
* Juan Bautista de Anza National Historical Trail
* Pony Express National Historic Trail
* Port of West Sacramento, West Sacramento
* Ryer Island Ferry
* Sacramento Northern Railroad Route
* Sacramento Southern Railway Route
* Strauss-Trunnion Heel Bascule Bridges (Freeport Bridge, Isleton Bridge, Paintersville Bridge, and Walnut Grove Bridge)
* Tower Bridge, Sacramento/West Sacramento
* Vallejo Ferry
* Victory Highway Route

Existing and Potential Interpretive Sites Outside of NHA

* The *Alma*, San Francisco Maritime National Historic Park, San Francisco
* California Indian Heritage Center (proposed), West Sacramento
* California State Railroad Museum, Sacramento
* Delta King, Sacramento
* Port of Stockton, Stockton
* Western Railway Museum, Rio Vista

### Theme 2: The Beating Heart of Natural California

**Theme Statement:** The Delta lies at the center of California’s biological and physical environment, supporting numerous biologically diverse species and connecting California's freshwater resources to the Pacific Ocean.

The Delta and Suisun Marsh ecosystem before the late 19th century was once one of the most biologically productive and diverse ecosystems on the West Coast. The confluence of the two rivers formed a system of freshwater and brackish marshes from which spread a variety of habitat types: grasslands, seasonal wetlands, oak-woodland savannah, chaparral, and riparian habitats. Rich peat soils which dominated the Delta landscape had been formed from centuries of tule decay. Natural levees bordered the Delta waterways which were vegetated with oaks, sycamores, walnuts, willows, and more. The region was incredibly rich with a diversity of wildlife prior to human alteration.

The relative stability of the climate in the Carquinez Strait makes the area particularly abundant with endemic plant species in California. Several diverse plant communities are represented in the Carquinez Strait, including foothill and valley grasslands, oak/bay woodlands, central coastal scrub, northern coastal salt marsh, coastal brackish marsh, and coastal and valley freshwater marsh.

Native wildlife has been impacted by changes to the ecosystem over the past 150 years, including loss of habitat, loss of access to upstream habitat from dam construction, diking and draining for reclamation, urbanization, changes in flows, invasive species, pollutants, export pumping, and more. Large mammals such as bear and elk, which historically lived in and around the Delta, have either been eliminated or reduced to extremely low numbers. In recent years, fish populations have experienced significant declines in the Delta.

Today’s natural areas are remnants of the once extensive native habitats, but still reward visitors with skies filled with waterfowl and cranes calling in flight, runs of salmon and sturgeon beckoning anglers, or quiet evenings beneath starry skies. Delta farmlands also serve as valuable habitat, particularly for waterfowl and shorebirds. In response to a growing understanding of the importance of the natural environment over the last fifty years, efforts to protect or even restore the Delta’s wildlife and fish and their habitats have become more common at sites throughout the region.

#### Storyline 2.1: The Delta’s Terrain as Foundation for Life

**Storyline Statement:** Weathered mountains, water flowing from the Sierra Nevada mountains through five rivers, and the tidal influences of the Pacific Ocean have supported the Sacramento-San Joaquin Delta’s abundant ecosystem.

Geologically, the Delta is a relatively recent creation. Warming temperatures at the beginning of the Holocene Epoch, approximately 11,700 years ago, caused glaciers to melt and sea levels to rise, creating a large tidal freshwater marsh. By 10,000 B.P. (before present), the Pacific Ocean advanced eastward from the edge of the Farallon Islands through the Golden Gate and soon flooded the valleys that became San Francisco Bay. By 6,000 B.P. the advancing ocean exerted tidal influence through the Delta and backed the Sacramento and San Joaquin rivers out of their channels, creating a labyrinth of hundreds of miles of sloughs.

Like many river deltas, the Sacramento-San Joaquin Delta is an evolutionary product of running water and erosion, sediment transport, and deposition. The Delta, however, is an atypical inverted river delta where the sediment from the Sacramento and San Joaquin drainage system fills the area of river confluence rather than exiting and dropping its sediment load into the San Francisco Bay. Sediment accumulated behind the narrow Carquinez Strait over the years formed low-lying peat islands and natural levees.

The pre-reclamation Delta was a heterogeneous landscape. The “tule” lands, or freshwater tide lands, were dominated by bulrush thickets and grasses. The higher lands along the island margins and on scattered mounds in the central Delta supported shrubs, predominately willows. Along the major rivers, and especially the Sacramento River, high natural levees formed by depositions from overbank flows supported woodlands. Wetland vegetation, partially decomposing over thousands of years, formed layers of peat up to 60 feet thick in the central Delta and thinner layers toward the inland fringes.

As described in Theme 4, the Delta landscape has been dramatically transformed from marshland into farmland. However, the Delta now includes a variety of types of protected lands, including some on which agriculture is managed to be compatible with wildlife. Although parts of the region have been restored to resemble the pre-reclamation era, maintenance of restoration projects requires direct human intervention, which demonstrates how highly engineered the Delta is. Profoundly affected by the consequences of statewide water projects, the Delta has suffered from a prolonged decline in water quality and the ability of its aquatic ecosystem to support life.

Existing and Potential Interpretive Sites in NHA

* Big Break Regional Shoreline Visitor Center, Oakley, and other East Bay Regional Park District regional shorelines
* Discover the Delta Foundation Education Center (proposed), Isleton/Rio Vista
* Fishing access points
* Fishing tournaments
* Great California Delta Trail
* Marinas
* Pacific Flyway Center, Fairfield (under construction)
* Publicly accessible restoration projects
* Recreation areas
* Wildlife areas

Existing and Potential Interpretive Sites Outside of NHA

* Bay-Delta Model, Sausalito
* California Indian Heritage Center (proposed), West Sacramento
* Museum of Science and Curiosity, Sacramento

#### Storyline 2.2: The Delta Shapes West Coast Ecology

**Storyline Statement:** The Delta is part of the largest freshwater tidal estuary on the West Coast of the Americas and a significant part of the wintering grounds for a variety of waterfowl along the Pacific Flyway.

The Bay-Delta Estuary’s watershed extends from the ridgeline of the Sierra Nevada mountains to the strait of the Golden Gate which connects the San Francisco Bay to the Pacific Ocean, including almost 60,000 square miles and nearly 40 percent of California. Half of the state’s surface water supply falls as rain or snow within this region. The estuary’s waters and wetlands are a biological resource of tremendous importance, providing critical winter-feeding habitat for over a million migratory birds, a productive nursery for many species of juvenile fish and shellfish, and a year-round home for a vast diversity of plants and animals.

The Pacific Flyway is the westernmost of the four great North American transcontinental flyways for migratory waterfowl and other avian species. The flyway stretches from the arctic and subarctic regions of Alaska and western Canada, across the western United States, to western Mexico and beyond. For thousands of years, migratory waterfowl of the flyway have bred in the far north during the short arctic summer, migrated southward during the fall to winter in places with more moderate climates, and returned to northern latitudes during the spring. The primary wintering grounds for the Pacific Flyway are in California’s Central Valley, including the Delta and Suisun Marsh. Although the valley’s estimated 4 million acres of permanent and seasonal wetlands at the time of statehood (1850) decreased to only 700,000 acres by the mid-20th century—primarily because of conversion to agriculture—the valley still supports an astonishing 60 percent of the wintering waterfowl of the Pacific Flyway.

The Cosumnes River Preserve, Stone Lakes National Wildlife Refuge, and Yolo Bypass Wildlife Area are the largest and perhaps the best-known protected areas in the Delta region, but there are other refuges such as Grizzly Island Wildlife Area, Hill Slough Wildlife Area, Woodbridge Ecological Reserve, and White Slough Wildlife Area. Together, these various refuges, created through efforts of nonprofit conservation organizations and the state and federal governments, have restored relatively small but ecologically important parts of the Delta for migratory waterfowl.

Existing and Potential Interpretive Sites in NHA

* Big Break Regional Shoreline Visitor Center, Oakley, and other East Bay Regional Park District regional shorelines
* Discover the Delta Foundation Education Center (proposed), Isleton/Rio Vista
* Fishing access points
* Great California Delta Trail
* Marinas
* Pacific Flyway Center, Fairfield (under construction)
* Publicly accessible restoration projects
* Recreation areas
* Wildlife areas

Existing and Potential Interpretive Sites Outside of NHA

* California Indian Heritage Center (proposed), West Sacramento
* Museum of Science and Curiosity, Sacramento

#### Storyline 2.3: The Downriver Environmental Legacy of the Gold Rush (1853-1884)

**Storyline Statement:** The environmentally destructive effects of hydraulic mining on the Delta and its watershed led to early court decisions that dramatically influenced federal and state environmental policy.

The Gold Rush (1848-1855) fundamentally changed the Delta in many ways, including the devastating effect on Native Americans, the growth of water transportation, and rapid urban development, but the environmental effects occurred well after the discovery of gold in 1848. Gold mining was initially focused on streambeds, but when that resource was exhausted, miners and mining companies turned to hydraulic mining starting in 1853. Water shot through a nozzle at high pressure onto the face of cliffs washed away boulders, gravel, dirt, and any gold.

Hydraulic mining dumped cubic miles of sediment and debris, including toxic mercury, into the Yuba and other rivers, which filled up the channels and caused widespread flooding in the Sacramento Valley and the Delta. By 1914, more than an estimated 800 million cubic yards of mining debris traveled through the Delta. This type of mining prevented boats from being able to navigate specific channels, the commercial fishery to collapse, and water tables in the Delta to rise. The higher water table reduced the quality and quantity of stone fruits (peaches, cherries, apricots) in the north Delta, eventually leading farmers to plant water-tolerant pears.

When legislative efforts to resolve the issue failed, farmers instituted injunction proceedings against the miners. *People v. Gold Run Ditch and Mining Company* (1881) and *Woodruff v. North Bloomfield Gravel Company* (1884) were landmark state environmental court decisions siding with the farmers. Hydraulic mining was effectively ended in the Woodruff decision. Nevertheless, it would take several decades for the detrimental sediment to be flushed downstream.

Existing and Potential Interpretive Sites in NHA

* Big Break Regional Shoreline Visitor Center, Oakley, and other East Bay Regional Park District regional shorelines
* Discover the Delta Foundation Education Center (proposed), Isleton/Rio Vista
* Fishing access points
* Great California Delta Trail
* Marinas
* Pear Fair, Courtland
* Port of West Sacramento, West Sacramento
* Recreation areas
* Strauss-Trunnion Heel Bascule Bridges (Freeport Bridge, Isleton Bridge, Paintersville Bridge, and Walnut Grove Bridge)
* Tower Bridge, Sacramento/West Sacramento
* Urban waterfronts such as Rio Vista Waterfront Promenade and West Sacramento River Walk
* Wildlife areas

Existing and Potential Interpretive Sites

* Museum of Science and Curiosity, Sacramento
* Port of Stockton, Stockton
* Urban waterfronts such as Old Sacramento Waterfront and Stockton's Weber Point

### Theme 3: Abundance, Diversity, Resistance, and Survival – Native Americans in the Delta

**Theme Statement:** Native Americans thrived in the Delta prior to European settlement, developing complex and diverse societies, deeply rooted in the landscape, that have endured despite existential threats such as disease and genocide.

From time immemorial, Nisenan, Yokuts, Miwok, and Patwin speaking people have called the Delta home. The Delta is the heart of their culture. Prior to European settlement in the late 18th century, the areas surrounding the marshlands in the Delta’s core were densely populated by Native Americans who actively managed the land and harvested plants and animals for their livelihood. European colonization brought the introduction of malaria into the Central Valley during the 1840s American and Californian genocidal policies in the mid-19th century, and reclamation projects from the 1860s to 1930s forever altered Indigenous Delta communities, pushing tribes off their ancestral lands. In the 21st century, Native Americans continue to use the Delta as a vital source of traditional foods, natural medicines, and materials for traditional arts and to celebrate their heritage and connection to the land.

Much of the history of Native Americans in the region has been researched and written by scholars, scientists, and first-hand accounts of settlers. The text that follows reflects this existing writing. These histories provide valuable and valid accounts of Native American culture and livelihoods before and after European contact, but do not reflect the Native American perspective.

During the management planning process, the Delta Protection Commission and California State Parks staff conducted intensive outreach to Native American Tribes to ensure that interpretive themes and strategies incorporate their perspective and needs. Tribal representatives provided numerous recommendations for the interpretive themes and other aspects of the NHA’s work, which are included in different parts of the management plan. They expressed a desire for time to work with their members to determine appropriate stories and locations to tell them. The NHA coordinating entity commits to partnering with Native American Tribes to tell their stories and history fully and accurately.

Tribes that are closely connected to the NHA and with whom all public agencies and the NHA will continue to consult include, but are not limited to:

* Amah Mutsun Tribal Band of Mission San Juan Bautista
* Buena Vista Rancheria of Me-Wuk Indians
* Cachil Dehe Band of Indians of the Colusa Indian Wintun Community
* Chicken Ranch Rancheria of Me-Wuk Indians
* Colfax-Todds Valley Consolidated Tribe
* Confederated Villages of Lisjan
* Cortina Rancheria Kletsel Dehe Band of Wintun Indians
* Costanoan Rumsen Carmel Tribe
* Guidiville Indian Rancheria
* Indian Canyon Mutsun Band of Costanoan
* Ione Band of Miwok Indians
* Muwekma Ohlone Indian Tribe of the San Francisco Bay Area
* Nashville Enterprise Miwok-Maidu-Nishinam Tribe
* North Valley Yokuts Tribe
* Ohlone Indian Tribe
* Pinoleville Pomo Nation
* Shingle Springs Band of Miwok Indians
* Tamien Nation
* Tsi Akim Maidu
* Tule River Indian Tribe
* United Auburn Indian Community of the Auburn Rancheria
* Wilton Rancheria
* Wuksache Indian Tribe/Eshom Valley Band.
* Yocha Dehe Wintun Nation

While the discussion of tribal culture here is limited to the NHA boundaries, Native Americans consider the Delta to be a much larger place than the conventional boundaries for the Delta. For them, the Delta includes the entire watershed, that stretches from the California-Oregon border to the Tehachapi Mountains north of the Los Angeles metropolitan area, and the area west to the Pacific Ocean. As a result, many tribes throughout California have an interest in the Delta and the NHA's work.

#### Storyline 3.1: The Delta is a Living Organism

**Storyline Statement:** The Delta is the heart and soul of Native American Tribal culture, society, and ecology within the Delta watershed.

The Delta is home – a sacred place at the heart of Native American culture. The region's trees, plants, insects, fish, shellfish, birds, and small and large mammals provided sustenance. Abundant tule and grasses provided materials for baskets, boats, clothes, and homes. Water provided nourishment for soil, food, shells for jewelry and money, and a place for travel. The land nurtured plant life, served as living space, and received ancestors' bodies. The Delta's water, plants, animals, and the most prominent geological feature in the region, Mount Diablo, have been integral to spiritual life, Native Americans have a deep history in the Delta and connections to the Delta are still deeply held.

Existing and Potential Interpretive Sites in NHA

* 1883 Clarksburg Schoolhouse
* Big Break Regional Shoreline Visitor Center, Oakley, and other East Bay Regional Park District regional shorelines
* Community museums
* Discover the Delta Foundation Education Center (proposed), Isleton/Rio Vista
* Great California Delta Trail
* Publicly accessible habitat restoration projects
* Recreation areas
* Tribal sites
* Wildlife areas

Existing and Potential Interpretive Sites Outside of NHA

* California Indian Heritage Center (proposed), West Sacramento
* Tribal community centers, interpretive centers, libraries, museums, and sites

#### Storyline 3.2: When the Delta is Healthy, the People are Healthy

**Storyline Statement:** Native American Tribes managed Delta landscapes to support permanent settlements and large populations sustainably and continue to utilize Delta resources, despite the loss of their traditional homeland.

For all time, the Delta’s waters, land, plants, and wildlife have nurtured the people, and they, in turn, have protected and managed the land to ensure its health continued. The sacred responsibility of Native American Tribes is to care for the Delta's land. When the land is healthy, the people are healthy.

Native Americans in the Delta region did not engage in Western agricultural practices prior to European settlement, but they capitalized on wetlands and waterways by harvesting and tending a variety of food sources: acorns, grasses and forbs, and various wetland plants; shellfish, including freshwater clams and mussels; fish, including chinook salmon and sturgeon; waterfowl; and large game, including deer, pronghorn antelope, and elk (West and Welch). They modified their environment in important ways, including using controlled fire, pruning, digging, selective harvesting, and other methods to sustain healthy habitats comprising hundreds of plants and animals. Central Valley inhabitants used fire widely to manage game, stimulate the production of food crops, decrease insect pests, and facilitate food gathering.[[5]](#footnote-6)

Today's residents now live on the ancestral lands of Native Americans, who are still here, and from whom contemporary society has so much to learn about this special place. Many Native American belief systems about the Delta have a common understanding that there is a reciprocity between the health of the natural landscape and cultural well-being. As such, restoration of the natural environment helps prompt revitalization of traditional Native American culture. Today's Native American Tribal members still use Delta foods, medicinal herbs, and traditional art materials. Government agencies are learning from and incorporating Delta Native American land management practices and values, often referred to as Traditional Ecological Knowledge (TEK), to address ecological challenges, while respecting and enhancing cultural values and properties.

Existing and Potential Interpretive Sites in NHA

* 1883 Clarksburg Schoolhouse
* Big Break Regional Shoreline Visitor Center, Oakley, and other East Bay Regional Park District regional shorelines
* Community museums
* Contra Costa County Historical Society History Center, Martinez
* Discover the Delta Foundation Education Center (proposed), Isleton/Rio Vista
* Fishing access points
* Great California Delta Trail
* Marinas
* Pacific Flyway Center, Fairfield (under construction)
* Publicly accessible restoration projects
* Recreation areas
* Tribal sites
* Wildlife areas

Existing and Potential Interpretive Sites Outside of NHA

* California Indian Heritage Center (proposed), West Sacramento
* Haggin Museum, Stockton
* Museum of Science and Curiosity, Sacramento
* San Joaquin County Historical Museum, Lodi
* Tribal community centers, interpretive centers, libraries, museums, and sites

#### Storyline 3.3: One People of the Delta, Many Communities

**Storyline Statement:** Native American cultures of the Delta and adjacent central California are exceptionally diverse in languages, histories, cultural practices, and world views.

Anthropologists divided the 19th century Native Americans of the Delta into five linguistic groupings. The Nisenan occupied the far northeastern part of the Delta, occupying lands to the east of the Sacramento River between the Cosumnes and American rivers. The Plains Miwok occupied both banks of the Sacramento River from just below Sacramento to Rio Vista as well as much of the eastern Delta from the Cosumnes River to the Mokelumne River. The territory of the Northern Valley Yokuts included the southern Delta. The Bay Miwok occupied the far western portion of the Delta from Rio Vista to the southern shore of Suisun Bay (and as far south as Mount Diablo). The Patwin occupied the extreme northwestern portion of the Delta from west of the Montezuma Hills to the north shore of Suisun Bay, and beyond to the northeastern tip of San Pablo Bay (as well as far into the Sacramento Valley to the north).[[6]](#footnote-7)

Prior to European settlement, Native American communities in the Central Valley were organized in small sovereign nations, sometimes called triblets or village communities. These nations had complex relationships with other nations based on intermarriage, trade, and ceremonial reciprocity, but there was no overarching governance. Triblets had no compelling need for political or military alliance under one leader or a confederated polity. Nor did they need to farm to be fully self-sufficient, if not relatively affluent. Archeologists Kent Lightfoot and Otis Parrish stated:

California Indians [prior to European settlement]…have always been the exception to the rule. These Pacific Coast people do not fit any of the classic anthropological models devised to explain the evolutionary progression from simple, mobile hunter-gatherers to larger, sedentary, and more complex agrarian societies…Although technically they are hunter-gatherers, many Native California communities exhibited traits more typically associated with well-developed agrarian societies. That is, they enjoyed sizeable population densities, had relatively sedentary villages, amassed significant quantities of stored foods and goods, and maintained complex political religious organizations.[[7]](#footnote-8)

Existing and Potential Interpretive Sites in NHA

* 1883 Clarksburg Schoolhouse
* Big Break Regional Shoreline Visitor Center, Oakley, and other East Bay Regional Park District regional shorelines
* Community museums
* Contra Costa County Historical Society History Center, Martinez
* Discover the Delta Foundation Education Center (proposed), Isleton/Rio Vista
* Great California Delta Trail
* Tribal sites

Existing and Potential Interpretive Sites Outside of NHA

* California Indian Heritage Center (proposed), West Sacramento
* Haggin Museum, Stockton
* San Joaquin County Historical Museum, Lodi
* Tribal community centers, interpretive centers, libraries, museums, and sites

#### Storyline 3.4: Resistance and Survival in the Delta Tules (1790s-1840s)

**Storyline Statement:** Native Americans in the Delta resisted colonialism by defending their homeland with force, lost their land due to disease, genocide, and force, yet survived to carry on traditional knowledge and culture.

The 1769 Portolá expedition was the beginning of Spanish efforts to establish the new colony of Alta California, construct a network of missions and presidios (forts), and, overall, fortify the northern frontier of New Spain. The Juan Bautista de Anza National Historic Trail marks the travels of a party under the command of de Anza, which entered the Delta in 1776. Delta Native American freedom fighters actively resisted the Spanish, protecting Native Americans who fled the missions on the coast and fighting to prevent the Spanish from penetrating into California’s interior.

Arriving in the early 19th century, Hudson's Bay Company fur trappers Inadvertently introduced malaria into the Delta and Central Valley, which had devastating consequences for Native Americans and their culture. The Native American population in the affected parts of the Central Valley may have been reduced by as much as 75 percent between 1833 and 1846 (Cook 1955). Such profound depopulation reduced survivors’ resistance to the wave of white settlers who arrived during the Gold Rush in 1848 and appropriated Native American territory, precipitating the final collapse of independent Delta cultures. Beginning in the 1850s, many of the remaining Native Americans were driven onto reservations away from economically valuable areas or killed by California- and Federal-sponsored genocide campaigns and bounties.[[8]](#footnote-9)

In 2019, Governor Gavin Newsom formally apologized on behalf of the State of California for the historical violence, exploitation, dispossession, and attempted destruction of Tribal communities, which dislocated Native Americans from their ancestral land and sacred practices. Despite tribes being violently removed from their ancestral lands, Native American traditions, languages, and traditional land management practices are very much alive in the Delta and evolving to meet today’s challenges and needs.

Existing and Potential Interpretive Sites in NHA

* Community museums
* Contra Costa County Historical Society History Center, Martinez
* Discover the Delta Foundation Education Center (proposed), Isleton/Rio Vista
* Great California Delta Trail
* Juan Bautista de Anza National Historic Trail
* Tribal sites

Existing and Potential Interpretive Sites Outside of NHA

* California Indian Heritage Center (proposed), West Sacramento
* Haggin Museum, Stockton
* San Joaquin County Historical Museum, Lodi
* Tribal community centers, interpretive centers, libraries, museums, and sites

### Theme 4:  The Delta Emerges as California’s Cornucopia

**Theme Statement:** Through capital, human labor, and technology, the Delta became one of the nation’s most productive agricultural regions, with the ability to grow a large variety of crops, farmed by large and small operations.

An important part of the Delta story since the Gold Rush is the dramatic transformation of the area from marshlands to one of the most productive agricultural areas in the world. Reclamation of the Delta was achieved by innumerable hours of human labor, particularly by Chinese immigrants and others, significant financial investment, especially in the low-lying central Delta, and innovations and technologies for earth moving and levee building that would eventually be used on agricultural fields and construction sites throughout the world. Despite the ever-present threat of flooding, the pioneers of Delta agriculture knew that this effort was worthwhile. The Delta’s rich peat and silt soils, flat land, and freshwater availability made growing crops easier than in other regions of California. The rivers provided easy access to markets in Sacramento, San Francisco, Stockton, and elsewhere.

Delta agriculture experienced several phases of development as the popularity of different crops rose and fell, and new crops and processing methods were introduced. Today, the garden of the Delta grows over 70 different crops on 415,000 farmed acres. Pasture and field crops dominate the west and central Delta where elevations and water quality are typically lower than other areas of the Delta. Higher-value vineyards and deciduous fruit and nuts such as pears and almonds, are commonly found along the northern, eastern, and southern perimeter of the Delta. Vegetable and berry crops are common in the south Delta. In 2016, Delta farms and related food and beverage manufacturing supported over 23,000 jobs across California and $4.6 billion in output.[[9]](#footnote-10)

#### Storyline 4.1: Transforming Wetlands into Farmland (1860s-1930s)

**Storyline Statement:** Conversion of the Delta from wetland to farmland was one of the most significant land reclamation projects in United States history; the technologies, techniques, and infrastructure that were invented locally revolutionized agricultural and earth-moving practices around the world.

The prevailing 19th-century view of wetlands was that they represented an obstacle to cultivation, settlement, and the fulfillment of America’s Manifest Destiny. The outbreak of malaria in the Central Valley provided an additional incentive to drain and reclaim the wetlands. In 1850, the federal Swamp and Overflow Land Act conveyed over 2 million acres of wetlands to the state, including nearly 500,000 acres within the Delta. Reclamation in the Delta was slow at first since farmers were focused on higher and more easily reclaimed lands but accelerated after 1868 when the state removed limits on the number of acres an individual could purchase. Reclamation of deep tule lands, such as those of the central Delta, required larger capitalized efforts only possible with large properties.[[10]](#footnote-11) Investors and farmers quickly purchased marshland and land in the Delta was predominately privately owned.

Chinese laborers constructed the bulk of early levees in the 1870s and 1880s, although some Hawaiians were also hired. Many Chinese emigrated from the Pearl River Delta, a region like the Delta, and used construction techniques from their homeland. Sloughs were sometimes dammed or gated to create a larger reclamation area or integrated into internal drainage works, turning small islands into larger islands. Unfortunately, much of these levee building methods would eventually prove inadequate, which led to the development of innovative government organizations and pioneering earth-moving equipment to build a more resilient system. By 1930, levees and drainage systems were largely complete and most of the area was reclaimed for agricultural use.

Levee building and soft peat soils made Delta agriculture challenging, but also made the region a center for developing innovative farming and earth-moving equipment. Companies in San Francisco, Stockton, and elsewhere in the Delta manufactured dredges, which Is a floating barge used to bring up from a riverbed, to support the region’s reclamation through the late 19th and early 20th centuries. These firms played an important part in Stockton’s development as a center for equipment manufacturing and industry. In 1904, one company, Holt Manufacturing, led by Benjamin Holt, first added a caterpillar tread to a steam tractor, allowing it to travel more easily across peat soils. In 1906, Holt sold his first gasoline-powered Caterpillar tractor, which would soon revolutionize farming and earth-moving, not only throughout the Delta, but throughout the United States and the world. Antone Dutra, a Portuguese Immigrant, established a dredging business in Rio Vista that has evolved into an international company that remains family owned.

Beginning in 1922, Stockton mechanic and construction contractor Robert G. LeTourneau invented a series of new scrapers, earthmovers, and grading equipment to better level Delta and other Central Valley land for irrigation and drainage. By the 1940s, his company had grown so that LeTourneau machines represented nearly 70 percent of the earth moving and engineering equipment used by the Allied forces during World War II. Other notable equipment invented in the Delta included a sugar beet harvester, the first bean harvester, the asparagus ripper, the asparagus plow, the mechanical tomato harvester, and several other plows, discs, backhoes, cultivators, and subsoilers.

Existing and Potential Interpretive Sites in NHA

* Community museums
* Contra Costa County Historical Society History Center, Martinez
* Discover the Delta Foundation Education Center (proposed), Isleton/Rio Vista
* Dutra Museum of Dredging, Rio Vista
* Great California Delta Trail
* Haggin Museum, Stockton
* San Joaquin County Historical Museum, Lodi

Existing and Potential Interpretive Sites Outside of NHA

* Rio Vista Army Base

#### Storyline 4.2: Development of a National and Global Market for Delta Goods (1880s-1950s)

**Storyline Statement:** The Delta’s productive farmland, rich fishing opportunities, and access to waterways inspired the development of industries to facilitate the distribution of food to the nation and world.

Wheat and later barley were the first widely planted crops in the Delta. More grain was produced and exported from the upper San Joaquin Valley and western Delta in the 1870s than the entire Mississippi Valley at the time.[[11]](#footnote-12) The Southern Pacific and Central Pacific railroads collected the wheat harvest from throughout the Central Valley and delivered it to waiting ships in San Francisco Bay and in the Carquinez Strait at Port Costa, the busiest wheat-shipping point in California at that time. The ships then carried the wheat around the world, especially to China, Australia, and Great Britain.[[12]](#footnote-13)

During the early days of the Delta's agricultural enterprises, most of the region’s produce was traded in Bay Area cities. Fruit and vegetable growing expanded when eastern markets opened with the completion of the transcontinental railroad in 1869. Refrigerated railroad cars became far more commonplace after the turn of the century, due in part to the efforts of local farmer cooperatives and investors, and made it possible to ship fresh, rather than canned, asparagus – as well as other fresh Delta produce – throughout the country. Companies established canneries throughout the Delta at the turn of the 20th century to pack and ship produce, such as asparagus, to distant markets. As a result, asparagus became one of the defining crops of the Delta.[[13]](#footnote-14)

The Carquinez Strait's strategic location between the Pacific Ocean and inland California made the area a magnet for industrial uses, not just agricultural manufacturing but also fossil fuel production and chemical plants. The history of the towns that developed along the strait has been indelibly intertwined with these industries. Crockett's shoreline and economy has been defined by the giant C&H Pure Cane Sugar sign and refinery. Hercules was named after the now defunct Hercules Powder Works, an explosive manufacturer responsible for several deadly incidents over a half-century. Pittsburg's former name Black Diamond alludes to the importance of coal mining in the hills south of the city in the 19th century. Four oil refineries, located in Benicia, Martinez, and Rodeo, have provided transportation fuels for Northern California and Nevada for decades.

Existing and Potential Interpretive Sites in NHA

* 1883 Clarksburg Schoolhouse
* Antioch Historical Museum
* Benicia Historical Museum
* Contra Costa County Historical Society History Center, Martinez
* Crockett Museum
* Former cannery sites
* Great California Delta Trail
* Isleton Museum
* Martinez Museum
* Port of West Sacramento, West Sacramento
* Pittsburg Historical Museum
* San Joaquin County Historical Museum, Lodi

Existing and Potential Interpretive Sites

* California State Railroad Museum, Sacramento
* Haggin Museum, Stockton
* Port of Stockton, Stockton
* San Joaquin County Historical Museum, Lodi

#### Storyline 4.3: Challenges of a Reclaimed Delta (1930s-Present)

**Storyline Statement:** While large-scale land engineering has allowed people to harvest the Delta’s rich resources, the Delta continues to face natural and manmade stresses that resulted from reclamation and the Impacts of climate change.

Humans have physically transformed the Delta landscape over the past 170 years, resulting in a substantial conversion of wetland, riparian, and floodplain ecosystems. Large-scale levee construction, draining of wetlands, forest clearing, and grazing began in the mid-1800s. Many of the levees were raised to keep floodwaters from entering uplands, even though the subsequent higher flood levels resulted in increased flooding of unprotected lands. As a result, approximately 95 percent of the native ecosystems and vegetation communities were lost in the late 1800s and early 1900s. The loss of riparian and wetland vegetation, and construction of fish migration barriers, have limited the space on the landscape that can serve as species habitat, straining the resilience of Delta ecosystems.

Draining and farming the Delta’s historical wetlands exposed the Delta’s peat soils to oxidation, compaction, and wind erosion, resulting in widespread land subsidence. Due to historic and ongoing subsidence, much of the Delta lies substantially below mean sea level – by as much as 26 feet in the interior Delta. Many Delta islands lie well below intertidal elevation and, if flooded, would become deepwater habitat (as happened with Franks Tract and Mildred Island) instead of tidal marsh. The widespread conversion of the Delta’s natural communities has had several interrelated consequences for the Delta ecosystem, including: 1) a reduction in habitat extent, 2) loss of habitat diversity, 3) loss of connectivity within and among habitat types, 4) degradation of habitat quality, and 5) disconnection of habitats from the physical processes that form and sustain them.

The geometry of the Delta’s main tidal channels has also been highly modified since the mid-1800s. Most of the channels in the modern Delta are lined with steep, constructed levees armored with bank protection that isolate the channel from adjacent habitats and prevent the channel from naturally meandering and shifting course over time. The large channels of the Delta were straightened with meander cutoffs, as well as dredged and widened to facilitate navigation through the Delta. These modifications created channel networks with more homogenized abiotic conditions (e.g., salinity, temperature, nutrients, etc.) that reduced the ability for native fish to find and remain within areas with preferred habitat conditions. The altered geometry of the Delta channels also tends to flush water through the Delta more quickly, compared to historical conditions when water slowed down within highly sinuous channels and regularly overflowed laterally onto tidal wetlands and seasonal floodplains. These changes inhibit the productivity of the aquatic food web.

While the complexity of the Delta’s ecosystem and the large number of competing stakeholders have thus far caused recovery efforts for the Delta’s waterways to falter, significant progress has been achieved in wetland protection and restoration along the margins of the Delta. Various refuges, created through the efforts of nonprofit conservation organizations and the state and federal governments, have restored relatively small but ecologically important parts of the Delta, and although these refuges are managed landscapes, they offer a glimpse of the Delta and its abundance of wildlife in a time before reclamation.

Existing and Potential Interpretive Sites in NHA

* Big Break Regional Shoreline Visitor Center, Oakley, and other East Bay Regional Park District regional shorelines
* Discover the Delta Foundation Education Center (proposed), Isleton/Rio Vista
* Fishing access points
* Fishing tournaments
* Great California Delta Trail
* Marinas
* Pacific Flyway Center, Fairfield (under construction)
* Publicly accessible restoration projects
* Recreation areas
* Wildlife areas

Existing and Potential Interpretive Sites Outside of NHA

* Bay-Delta Model, Sausalito
* California Indian Heritage Center (proposed), West Sacramento
* Museum of Science and Curiosity, Sacramento

### Theme 5: Cultural Influences of the Delta – Enduring Legacies of American, Asian, European, and Latin American Immigrants

**Theme Statement:** Bringing their own ambition and skills to the Delta, cultural and ethnic communities from Asia, Europe, Latin America, and the United States shaped the region’s agriculture and industry during the late 19th century and early 20th century and continue to leave an indelible imprint on the landscape.

The Delta was an important crossroads during the post-Gold Rush period, and the inhabitable lands of the Sacramento and San Joaquin valleys proved enticing to settlers. Diverse cultures forged distinct communities during the Delta’s land reclamation phase and subsequent agricultural development. The Delta included corporate farming and agribusiness in the late 19th century as well as the small family farms that epitomized much of North American agriculture at the time. Meanwhile, commercial fishing and early industrial development were more common along the Carquinez Strait. The diversity of labor opportunities in the area led to different experiences among cultural and ethnic communities.

The Delta’s ethnic communities share a tale of sequential occupancy, but on two tracks – one led to prosperity and community, while the other provided few options and pathways towards advancement. Many large employers sought agricultural, industrial, and other types of labor from a series of different immigrant groups from around the world: Chinese, Italians, Portuguese, Japanese, FIlipinos, Mexican, and Immigrants from Central American countries. Settlers were initially drawn to the Delta’s promise of agricultural development and employment, but groups experienced differing access to agricultural employment, owning land, and building family and community.

The same employers who sought labor from these groups then lobbied for federal and state legislation that prevented further immigration and land ownership. Some overcame barriers and were able to establish settlement enclaves with Chinese and Japanese housing and commercial districts in several Delta towns. European groups did not face the same levels of discrimination as other groups and were able to enjoy higher levels of prosperity in the region.

Seasonal work was common in the Delta. It forced many to leave the region for long periods of time and did little to enhance long-term community-building in the Delta. Some ethnic groups dedicated themselves to specialized crops that allowed for economic mobility and the establishment of small communities. The lack of family support or even the ability to form families due to miscegenation laws, which prevented relationships between people of different ethnic groups, often hindered community formation. The Sikhs and Japanese found unique ways to circumvent these policies and create communities despite these barriers, but in the end, few stayed in the region. These issues prevented the development of a long-term, sustainable presence of workers, the primary population in the Delta. In most cases, people simply left the region when their work was done.[[14]](#footnote-15)

#### Storyline 5.1: Development of Robust Physical and Social Communities with American, Asian, European, and Latin American Influences (1860s-1940s)

**Storyline Statement:** Through adversity and perseverance, immigrants from Asia, Europe, Latin America, and the United States built their lives in enduring Delta communities.

Since the mid-19th century, numerous ethnic groups made the Delta home, including Italians, Portuguese, Chinese, Japanese, Filipinos, South Asian, African Americans, and Mexican and other Latinos groups. Some of these groups congregated in the rural towns along the Sacramento River and far east Contra Costa County; others preferred urban areas such as Sacramento, Stockton, and larger communities along the Carquinez Strait.

Italians started settling in the Delta region during the Gold Rush, though the most significant wave of immigration began in the 1880s. Many Italian immigrant families settled near Stockton and the town of Freeport and owned and operated small farms that supplied produce to Sacramento, while others focused on farming and fishing on the Carquinez Strait. Portuguese immigrants, who largely immigrated from the Azores Islands, preferred rural areas, particularly in the northern reach of the Sacramento River from Sacramento’s Pocket neighborhood to Clarksburg. The Lisbon School District near Clarksburg, which operated until 1923, was one of the few ethnic-run school districts in the state.[[15]](#footnote-16)

Asian immigrants faced greater challenges in establishing themselves in the Delta. When Chinese, Japanese, and South Asian immigrants experienced success in agriculture in the Delta and other parts of California, federal, state, and local authorities responded to public anti-Asian sentiment with discriminatory laws, beginning with the federal 1882 Chinese Exclusion Act. The state barred most Asian immigrants from owning land in California in 1913 and allowed the establishment of separate schools in 1921. Delta school districts such as Courtland, Walnut Grove, and Isleton, established separate schools for Asian children. Discrimination also applied to Filipinos, even though they were nationals until 1934 and were entitled to American passports and allowed to come and go freely. At one time, Stockton was home to the largest Filipino population in the world outside of Manila, but the Little Manila neighborhood was largely destroyed when the Crosstown Freeway was built in the early 1970s.[[16]](#footnote-17)

In contrast to more urban parts of California, the physical infrastructure of some of these Sacramento River ethnic enclaves is still present. For example, Chinese districts that developed along the Sacramento River from 1870-1915 are still preserved in Courtland, Isleton, Rio Vista, Walnut Grove, and most significantly, Locke, which is a National Historic Landmark. Japanese districts are still present In Isleton and Walnut Grove. Portuguese culture remains in areas such as Clarksburg, Freeport, and Rio Vista. Italian Immigrants were common in communities throughout the Delta and Northern California, though the abandoned fishing village of Collinsville is the most distinctly Italian community in the area.

More recent ethnic groups to the region include African Americans, Mexicans, and other Latino groups. The African American population in the San Francisco Bay Area remained low until the second wave of the Great Migration from 1940 to 1970. Wartime jobs in the shipyards and post-war jobs in manufacturing increased the African American population by more than 300,000 people in just 30 years. African American populations are highest in Carquinez Strait communities and Stockton. A significant Mexican population in California emerged in the 1920s due to labor shortages from restrictive immigration policies from Asian countries. The Delta is considered the epicenter of the federal Bracero program, which sought Mexican labor during World War II. Braceros faced myriad injustices and abuses, including substandard housing, discrimination, unfulfilled contract agreements, and being cheated out of wages, which would contribute to the formation of the agricultural labor movement. Mexican and other Latino groups now form the largest minority group within the Delta and constitute the largest farmworker group.

Existing and Potential Interpretive Sites in NHA

* 1883 Clarksburg Schoolhouse
* Community museums
* Courtland Chinese District
* Isleton Chinese and Japanese Commercial Districts
* Italian communities (such as Freeport, Martinez, Pittsburg, or Rio Vista)
* Jean Harvie Community Center, Walnut Grove
* Locke Historic District, including the Locke Boarding House Museum State Historic Park, Dai Loy Gambling House Museum, Jan Ying Chinese Association Museum, and Joe Shoong Chinese School Museum
* Locke Chinese School
* Portuguese communities (such as Clarksburg, Freeport, Isleton, or Rio Vista)
* Walnut Grove Chinese-American and Japanese American Historic Districts
* Walnut Grove Gakuen (Japanese Language School)

Existing and Potential Interpretive Sites Outside of NHA

* Filipino American National Historical Society Museum, Stockton

#### Storyline 5.2: American, Asian, European, and Latin American Immigrants as the Foundation of Delta Agriculture and Industry (1860s-1970s)

**Storyline Statement:** Delta agriculture and industry was built on the tireless labor, knowledge, and skill of people from many cultures, including those who fought for labor rights that impacted the development of the United Farm Workers.

People of many different nationalities and ethnic backgrounds used their skills to transform the region’s physical and geographical attributes into one of the world’s most productive agricultural regions. As one of the earliest immigrant groups in the Delta, Chinese immigrants were particularly important in the evolution of agriculture. Their experience with agricultural production in the Pearl River Delta provided the ideal opportunity for land developers in the Delta to launch large-scale reclamation projects. As they shifted to become tenant farmers, they were credited with transforming California from growing wheat and cattle ranching to an agricultural cornucopia of diversified crops. They were particularly responsible for the increase in potato and asparagus crops in the Delta.

Ethnic groups arriving later built on these advancements. Japanese farmers are credited with high-quality standards and effective practices that created California’s successful large-scale agricultural operations. Italian Americans introduced Mediterranean crops that were important in their homeland, pioneered mechanized tomato harvesting and packing companies, and were instrumental in founding growers’ organizations in Stockton and San Joaquin County. They were involved in the distribution and marketing of commercial agricultural products, both throughout the state, and to eastern markets.[[17]](#footnote-18)

The Delta attracted agricultural entrepreneurs of many different ethnicities. Chinese immigrant Chin Lung and Japanese immigrant George Shima each became known as "potato kings" for their business acumen in the potato cultivation business. Unfortunately, their success made them targets for xenophobic state laws preventing land ownership by Asian immigrants, which ultimately destroyed their considerable empires.[[18]](#footnote-19) Tillie Lewis, the daughter of Austrian Jewish immigrants raised in Brooklyn, revolutionized Delta farming in multiple ways starting during the Great Depression when she partnered with an Italian investor to build the first tomato cannery in the region in Stockton. Tomatoes soon became a large-scale crop in the Delta and Central Valley.[[19]](#footnote-20) When she faced labor shortages in supplying foods for American troops, she was instrumental in bringing Mexican workers through the Bracero program.

The Delta was critical to the creation of the modern agricultural labor movement. Laborers experienced poor working conditions, substandard housing, discrimination, corrupt hiring practices, unfulfilled contract agreements, and low or missing wages. One example of poor working conditions was the use of the short-handled hoe, known as *el brazo del diablo* or "devil's arm," which caused long-term, debilitating back injuries because workers had to continuously bend over.[[20]](#footnote-21)

Following the example of earlier Japanese workers, Filipinos staged work slowdowns and strikes, and they fought head-to-head with police and armed guards to protect their jobs. Filipino American labor leaders Larry Itliong, Rudy Delvo, Philip Vera Cruz, and Pete Velasco were among those who formed the Agricultural Workers Organizing Committee within the American Federation of Labor and Congress of Industrial Organizations in 1959. Headquartered in Stockton, the Committee first organized Delano’s Filipino American grape workers to strike in 1965. The Agricultural Workers Organizing Committee partnered in the Delano strike with the National Farm Workers Association, led by Cesar Chavez and Stockton's Dolores Huerta. The two organizations merged in 1967 to become the United Farm Workers.[[21]](#footnote-22)

Existing and Potential Interpretive Sites

* Community Museums
* Dutra Museum of Dredging, Rio Vista
* Jan Ying Museum, Locke
* Locke Boarding House State Park

Existing and Potential Interpretive Sites Outside of NHA

* Dolores Huerta Plaza, San Joaquin Delta College, Stockton
* Filipino American National Historical Society Museum, Stockton
* Haggin Museum, Stockton
* San Joaquin County Historical Society and Museum, Lodi

## Supporting Themes

### Supporting Theme 1: Northern California’s Inland Defense (1850s-1940s)

**Theme Statement:** A place of both defense and defiance, the military installations of the Delta and Carquinez Strait tell a story of local support for U.S. military operations throughout the Pacific and incalculable sacrifice by African American sailors.

In the early period of California statehood, most American military installations were devoted to maintaining domestic order, including quelling Native American-white violence in the state's remote areas. The military constructed few permanent facilities during this period. The core of the American military was a string of small army camps and forts.

Benicia Arsenal, a 252-acre parcel of land adjoining the east side of Benicia city limits, was one of a few early permanent facilities. The Benicia Arsenal played a role in many wars, including use as a western staging area for Union troops in the Civil War and a garrison until 1898 when troops moved to the Philippine Islands during the Spanish-American War. The arsenal provided ordnance support to all large western army installations during World War I and to American expeditionary forces in Siberia following the war.[[22]](#footnote-23) The post was decommissioned in 1963. The installation is known for housing the only Camel Corps, a group of camels intended for military service, which was an idea advocated by then-Secretary of War Jefferson Davis. Although the Camel Corps was only active for eight years, the Camel Barns, built in 1855, still exist and serve as the home of the Benicia Historical Museum.

As the United States ramped up support for the war effort during World War II, the Delta saw an increase in the number of military installations, particularly because the region was more insulated from possible foreign attack than coastal areas. Camp Stoneman in Pittsburg was an Army troop staging area used for transporting soldiers, materials, and supplies to the Pacific Theater from World War II through the Korean War. The Delta was the location of temporary Prisoner of War (POW) camps and the western United States' secret interrogation center at Byron Hot Springs, a former resort hotel. Active from June 1942 to September 1945. German and Italian prisoners of war arrived for a brief stay at Byron Hot Springs, which was made to look like a processing center, before being sent to an established POW camp. The U.S. Army employed this deception to circumvent Geneva Convention provisions on interrogating prisoners.[[23]](#footnote-24)

Naval Weapons Station Concord was established in 1942 and is best known for the disaster at the portion of the facility known as the Point Chicago Naval Magazine. On July 17, 1944, munitions being loaded on the SS E.A. Bryan exploded and killed 320 men and injured 390 – the most extensive domestic loss of life during World War II. Approximately two-thirds of the dead and injured were African American. When white officers ordered African American sailors to return to loading munitions without sufficient safety precautions, they revolted, resulting in the largest Naval mutiny in U.S. history. The court martial of 50 men after the mutiny, which involved civil rights pioneer and future Supreme Court justice Thurgood Marshall, was a significant event in the fight to desegregate the U.S. military.[[24]](#footnote-25)  Port Chicago Naval Magazine was established as a National Memorial in 1992 and became a unit of the National Park Service in 2009.

Existing and Potential Interpretive Sites in NHA

* Benicia Arsenal
* Benicia Historical Museum
* Camp Stoneman site, Pittsburg
* Former Prisoner of War Camps (multiple locations)
* Port Chicago National Naval Memorial, Concord

Existing and Potential Interpretive Sites Outside of NHA

* Byron Hot Springs
* Rio Vista Army Base
* Vallejo Naval and Historical Museum

### Supporting Theme 2: The Creative Inspiration of the Delta (1900s-Present)

**Theme Statement:** Distinctive urban, rural, and aquatic landscapes, labor and leisure, and relaxed lifestyle have drawn many writers and artists to the Delta for solace and inspiration.

Flanked by the urban fringes of both the Bay Area and Central Valley, the region faces development and population pressures from all sides, and commuters and city dwellers alike seek refuge on its back roads and in its culturally diverse communities. For writers and artists, the region’s unique rural landscape and urban rimlands have multiple meanings: a region of intense beauty and recreation; a symbol of either the success or the failure to achieve the American or, more accurately, the Californian dream; a place of labor conflict, inequality, and exclusion; and a place of cultural diversity.

Stories of the Delta begin with the oral history traditions of the Native Americans who live in the Delta. Although not printed, they were cultural records and continue today. Writers who have chronicled the region include Joan Didion, William Everson, Erle Stanley Gardner, Ernesto Galarza, Leonard Gardner, Bret Harte, Maxine Hong Kingston, Ursula Le Guin, John Muir, Frank Norris, Mark Twain, and numerous local historians and residents. Joan Didion, one of California's greatest writers, wrote her first novel, *Run River* (1963), about wealthy Delta farmers, using the Delta as a place where she could explore shifting perspectives on California life. Leonard Gardner's *Fat City* (1969) provides a different perspective, looking at the lives of itinerant laborers who work the land and of the working-class city dwellers whose lives are nonetheless shaped by the agricultural community that surrounds Stockton. Erle Stanley Gardner, who was most well-known for the Perry Mason novels, wrote three books -- *The World of Water*, *Gypsy Days on the Delta*, and *Drifting down the Delta* -- about his leisurely days drifting down the thousand miles of inland waterways in the Delta. Like Gardner, Jack London enjoyed the region's waterways and port towns, boating throughout the region and haunting saloons along the Carquinez Strait. Writers who have focused on Delta history and life include Carol Jensen, Phil Pezzaglia, and Hal Schell. A project supported by the DPC, Robert Benedetti's *Imagining the Sacramento-San Joaquin River Delta: An Anthology of Voices Across Centuries* (2022), provides excerpts from these and other writers.

Artists and photographers have been drawn to the region's unique landscapes such as the geometric aerial images and the interplay between waterways, land, and the distant Mount Diablo. Renowned artist Wayne Thiebaud began a series of Delta paintings in the 1990s, which featured unusual vantage points, playful colors, and toy-like scale. His friend and colleague Gregory Kondos' Delta paintings tended to focus on a particular image or set of images such a houses and trees, often utilizing the Sacramento River and other waterways as a reflection of the image or a simpler counterpoint to the landside. Chinese-born Ning Hou, who settled In Locke, has focused on the beauty of the Delta's agricultural landscape. Local favorite Marty Stanley's paintings were complex portrayals of the Delta landscape, often utilizing bright colors that dramatized the beauty of the region. Stanley's son, Skyler, James Motlow, and Rich Turner are also established photographers of the Delta. The legendary Dorothea Lange traveled through the Delta In the early 1940s to capture images of laborers on local farms.

Existing and Potential Interpretive Sites in NHA

* Art galleries
* Community museums, particularly along the Carquinez Strait
* Libraries and bookstores

Existing and Potential Interpretive Sites Outside of NHA

* Art galleries
* California Museum, California Hall of Fame, Sacramento
* Crocker Art Museum, Sacramento
* Haggin Museum, Stockton
* Jan Shrem and Maria Manetti Shrem Museum of Art, Davis

### Supporting Theme 3: Delta as Recreational Retreat (1950s-Present)

**Theme Statement:** The Delta’s waters and rural communities provide a retreat from our busy lives and reconnect us to the land and each other.

Many visitors are often introduced to the Delta through the tremendous diversity of recreation opportunities, including fishing, motorized and non-motorized boating, windsurfing, bird watching, hunting, bicycling, and hiking, though the most common activities involve the water. One of the first forms of recreation in the Delta was duck hunting, which occurred as early as the 1860s in the Suisun Marsh. Facilitated by railroad access between Benicia and Suisun City, the first duck clubs were established in the western portion of the marsh beginning in 1879. Reclamation efforts there eventually faltered and many of the islands were intentionally reflooded and managed as freshwater wetlands for the benefit of ducks and duck clubs. At least 380 clubs have existed in the marsh at one time or another since 1879.[[25]](#footnote-26)

Although fishing initially started as a commercial industry in the Delta and Carquinez Strait, it also has a long history as recreational activity. Today’s fishermen target striped bass (a species introduced to the region in 1879), salmon, largemouth bass, smallmouth bass, crappie, bluegill, shad, catfish, crawdads, and sturgeon. Area festivals reflect the importance of fishing. An annual October Bass Derby and Water Carnival has been held in Rio Vista since 1933 with a ceremonial gift of a striped bass presented to California’s governor. Bay Point hosts a parallel Sturgeon Derby mid-winter, while the Great Isleton Crawdad Fest is held in June, followed by a Seafood Festival on the Pittsburg waterfront in September. For many years Walnut Grove hosted a Catfish Jubilee in August.[[26]](#footnote-27)

Delta marinas, resorts, and boat launches are prevalent throughout the Delta, though they are concentrated in area such as the Delta Loop southeast of Isleton, the south end of the Antioch Bridge, Bethel Island, Stockton, and Walnut Grove. Many private marinas date back to the Great Depression, Including Korth's Pirates’ Lair Marina on the Delta Loop.[[27]](#footnote-28) There are also twenty private yacht clubs within the SSJDNHA. In contrast to marinas, yacht clubs are focused on being social organizations, sponsoring formal groups events and informal time together at club restaurants and bars. The Sacramento Yacht Club, located in West Sacramento, dates to 1929. Another popular water recreation activity is windsurfing. The Sacramento River between Rio Vista and the tip of Sherman Island remains one of the best windsurfing areas in the world.

Existing and Potential Interpretive Sites in NHA

* Big Break Regional Shoreline Visitor Center, Oakley, and other East Bay Regional Park District regional shorelines
* Fishing access points
* Fishing tournaments and events
* Isleton Crawdad Festival
* Marinas
* Recreation areas
* Sherman Island County Park
* Suisun Marsh
* Wildlife areas

# Context for Interpretation and Education

## Existing Interpretation

The storylines described in the previous section can be experienced in programs hosted by a collection of institutions, organizations, and informal groups with a variety of missions and resources. Each has developed loyal volunteers and delivered significant service to audiences ranging from national and international visitors to residents of small communities. There are also many publicly accessible but non-staffed sites, trails, preserves, natural areas, communities, and other locations that are appropriate for inclusion in SSJDNHA-wide interpretation.

Together, the region’s attractions offer a broad and high-quality set of interpretive experiences for visitors and a solid foundation for SSJDNHA's network of partnerships. Current efforts to coordinate these partners to tell broader stories about the region owe a debt to the team responsible for Delta Narratives, a DPC-sponsored project that issued a 2015 report with action steps, four scholarly essays on different topic areas, and a directory of Delta cultural and heritage institutions.

While the broader region is host to several larger institutions featuring public programming with professional staff, and a full range of visitor services, few of these are located within the SSJDNHA boundaries. There are notable exceptions. Two National Park Service units are within the NHA. John Muir National Historical Site in Martinez preserves the home, orchards, and gravesite of conservationist and national park advocate John Muir, and features a visitor center, interpretive signs, and self-guided and ranger-led tours. The other National Park Service unit in the NHA, Port Chicago Naval Magazine National Memorial, located just north of Concord, commemorates the site of the largest homeland disaster during World War II. The memorial has significant limitations on site access and currently no dedicated visitor center, although ranger-led tours are offered periodically, and a new regional park nearby will eventually include a joint-agency visitor center. The Benicia Capitol State Historical Park, managed by California State Parks, is staffed by park rangers. The Benicia Historical Museum, which is focused on the city of Benicia, has staff and numerous events throughout the year. The Big Break Regional Shoreline includes a visitor center with displays about the Delta, outdoor interpretation that features an interactive scale map of the Delta, and staffing by park district naturalists. Cosumnes River Preserve, which is owned by seven partners, contains a visitor center that features permanent indoor and outdoor interpretive exhibits and physical and virtual self-guided tours of three different trails.

NHA staff can work with potential gateway partners, larger institutions outside of the NHA. These potential partners, many of them only within 1/4-mile of the boundary, Include:

* California Automobile Museum (Sacramento)
* California Museum, which contains the California Hall of Fame featuring people with strong connections to the Delta (Sacramento)
* California State Capitol Museum (Sacramento)
* California State Railroad Museum (Sacramento)
* Crocker Art Museum, the oldest art museum In the West that features Delta artists (Sacramento)
* Haggin Museum, which features both art and history of the region (Stockton)
* Old Sacramento State Historical Park
* Sacramento History Museum
* San Joaquin Historical Society and Museum (Lodi)
* SMUD Museum of Science and Curiosity (Sacramento)
* Vallejo Naval and Historical Museum
* Western Railway Museum (west of Rio Vista)

Another potential gateway partner currently in development outside of the NHA Is the California Indian Heritage Center in West Sacramento.

Within the boundary of the SSJDNHA there are 12 smaller museums that are primarily volunteer run and open to the public on a limited basis. For the most part they offer self-guided exhibits that are supplemented with public programming and events. They represent an important part of overall interpretation within the region and of local community history.

* Twelve are dedicated to a particular community or subregion, including:
* 1883 Clarksburg Schoolhouse
* Antioch Historical Museum
* Crockett Museum
* East Contra Costa Historical Society Museum
* Isleton Museum
* Martinez Museum
* Pittsburg Historical Museum
* Port Costa Museum
* Rio Vista Museum
* Four museums focus on specific parts of Locke's history -- California State Parks' Locke Boarding House Museum State Historic Park, Dai Loy Gambling House Museum, Jan Ying Chinese Association Museum, and Joe Shoong Chinese School Museum.
* Two museums focus on a particular topic of regional significance:
* Dutra Museum of Dredging (Rio Vista)
* Sacramento Regional Fire Museum (West Sacramento)

Not specifically included in the list of smaller museums is the West Sacramento Historical Society History Gallery, which is in an alcove of the West Sacramento Community Center and is not staffed. The Filipino American National Historical Society Museum in Stockton, which is outside of the SSJDNHA boundary, is focused on a national audience, but given the number of Filipino immigrants who lived and worked in the Delta, has an important relationship to the region.

There are also numerous historical societies not directly connected to a museum that have developed collections such as the Contra Costa County Historical Society, organized programs such as the Sacramento Historical Society, published books such as the Sacramento River Delta Historical Society, and frequently do these activities and more. Tribes whose traditional homeland is in the Delta, including Confederated Villages of Lisjan, Shingle Springs Band of Miwok Indians, United Auburn Indian Community, and Wilton Rancheria, offer educational and outreach programs and interpretive services for local institutions and museums. Valuable archival collections are housed at the Center for Sacramento History in Sacramento and the University of the Pacific Holt-Atherton Special Collections in Stockton, which were both active participants in the Delta Narratives project. Other archives include local libraries and two state-government entities in Sacramento – the California State Archives and California State Library.

There are also a number of sites that feature education programs, guided tours, and self-guided tours. Sites include federal, state, and local parks, preserves, and trails such as Carquinez Strait Regional Shoreline, Grizzly Island Wildlife Area, Napa-Sonoma Marshes Wildlife Area, Radke Martinez Regional Shoreline, Rush Ranch Open Space, Stone Lakes National Wildlife Refuge, Woodbridge Ecological Reserve (AKA Isenberg Crane Reserve), and Yolo Bypass Wildlife Area. The Juan Bautista de Anza National Historic Trail, which extends from Nogales, Arizona to San Francisco and passes through north Contra Costa County, features interpretive exhibits at the John Muir National Historic Site, Antioch/Oakley Regional Shoreline, Big Break Regional Shoreline, and Carquinez Strait Regional Shoreline. The National Park Service also includes an online interactive map that provides the diary entries from the de Anza expedition for every stop in the SSJDNHA. When taken as a whole, these sites provide opportunities for significant enhancement of self-guided interpretive experiences.

Cultural, natural, and agricultural festivals and special events draw visitors to the region and highlight the NHA’s interpretive themes. Special events are important for the local economy and are important venues for partners to raise interest in the NHA. Events like the Courtland Pear Fair and the Taste of the Delta celebrate the Delta’s agricultural history. Cultural events like the Locke Asian Pacific Spring Festival, Isleton Asian Festival, Antioch Multicultural Festival, and free-admission days at museums invite people to explore the region’s cultural history. Fishing and boating events and guided hikes encourage people to recreate safely and responsibly. Several events explore the environment, raise awareness of plants, wildlife, and habitat health, and promote stewardship and conservation, such as the California Duck Days, bird counts, winter bird festivals, and clean-up days. Many of these events offer hands-on activities for families, children, and visitors, and directly involve them in citizen science and restoration efforts.

Although these centers of activity are significant, they only begin to touch the surface of interpretation in the region. For example, there is no site presenting Native American patterns of life in the Delta except for limited displays at the Haggin Museum, the San Joaquin County Historical Society and Museum, and one in development at the 1883 Clarksburg Schoolhouse. Although the California Indian Heritage Center will be near the SSJDNHA boundary, the center will be focused on Native American culture statewide.

The objectives and strategies outlined in this chapter will build on this existing interpretation to accomplish Goal 1. Every interested organization and site with stories or programs related to the themes, storylines, and supporting themes in this chapter is invited to participate in SSJDNHA interpretation. Participation may include support and promotion through SSJDNHA and the ability to coordinate with other sites. Threshold levels of quality and experience will be required for participating sites.

### Audiences for Interpretation

Good interpretation must consider a wide array of audiences and learning styles. Needs and interests of different audiences shape the information content visitors are seeking, as well as the format in which they take in information, whether written, visual, auditory, or experiential. The casual visitor may only look at a few images or read a headline, or only listen to the introduction of a program. The mainstream visitor will look at images and a sampling of the text and will pay attention to the parts of the program that interest them. The serious visitor will read nearly everything, pay close attention to the program, and will want to learn more.

Designing interpretive experiences that satisfy the most serious, without boring the casual visitor, is a real challenge. In many cases, different types of products or program experiences may be needed to reach the full range of audiences. The following section describes known audiences, as well as strategies and specific actions that will enable SSJDNHA’s network of partners to reach them. Chapter 4 will discuss the need for market research to define current and potential audiences.

Out-of-area or out-of-state visitors have varied interests, as described below. Most of these visitors will not be familiar with the history, culture, and natural amenities of the region, particularly since the Delta is very different than more visited parts of California and Northern California. They may be interested in stories of the region and how that history relates to their own interests and experience. Out-of-area and out-of-state visits Include:

* **Get-away trips or long weekends** -- This type of visitor Is often from urban areas within less than a day’s drive. If they have a positive experience and see more of interest they would like to experience, this is a prime group for return visits and increased engagement.
* **Long vacations** -- While the traditional long vacation may have declined in recent years, still the San Francisco Bay Area and Sacramento regions attract visitors from outside Northern California, those on longer road trips, and international travelers. They will want to learn about, absorb, and experience the variety of the area. They may need more contextual information about an area they have not experienced before, and in some cases may need translation from other languages. Often, this may be their only trip to the area.

Local and regional resident visitors are from the region or within day-trip distance. They will have a variety of interests but are more likely to be familiar with the area and to have intrinsic interest in, and connection to, special places and stories. This group has more potential for repeat visitation and can share word of mouth about their experiences. They are also potential supporters of the NHA and/or of individual sites and programs.

* **Residents from NHA communities** -- Residents may visit sites multiple times, attend special events, and bring friends. They will be more likely to attend off-season events and activities. There are also underserved residents and those with accessibility challenges, whether cultural, financial, transportation, or disability. Dedicated efforts will be needed to engage them and offer opportunities and participation that may reach their community, family, or personal interests.
* **Day travelers from within the region** -- Day travelers may explore sites in other communities and may also be repeat visitors and attend multiple events. This audience could be more difficult to reach than in other parts of California because nearby residents are often not familiar with the Delta despite its proximity to them.

Whether visitors are from out of the area or are residents of the region, audience interests will likely have different interests:

* **General interest audience** -- Traveling for multiple reasons, this audience often includes adult small groups and families. They may be exploring the area and communities, driving for scenic beauty, or looking for something to do. Interpretation can provide an overview and pique their interest in interpretive stories.
* **Family groups with children** –- This audience also travels for multiple reasons, but interpretation and experiences for them needs to account for the varying interests and needs of different family members and a variety of ages. Children should be provided with interpretations specific to them, not just a simplified version of adult messages.
* **Generational audiences** –- Audiences may be categorized by generational groups. Age and generational characteristics may affect interests and activity levels, as well as, in some cases, learning style preferences and comfort with technology.
* **Niche interest visitors** –- Individuals interested in specific topics will be looking for different types of interpretation than more general visitors. Many of them will be studiers looking for in-depth information with a high degree of accuracy. This audience is also a source of long-term support, contributing to stewardship of the resources. Niche interest topics may include:
* *People interested in specific historical eras or topics* –- Topics include the Gold Rush, agricultural or industrial history, steamboats, architecture, etc.
* *Cultures and ethnic groups* –- This audience may include Native Americans, Chinese, Filipino, Italian, Japanese, and Portuguese immigrant groups, and other groups with ties to the region.
* *Family or community history buffs* -- This audience includes genealogists and family or community reunion visitors.
* *Visitors seeking California culture, food, art, and music* – People who want to experience the culture, in addition to learning about it, may engage in local experiences through media or in-person connections, events, performances, participation, and shopping opportunities.
* *Nature studiers* – This audience includes birders or people interested in wildlife or habitats.
* **Outdoor recreation visitors** – Many of these visitors come to participate in specific recreational experiences and may be less likely to intentionally engage with interpretation. They can be offered opportunities, both in preparation for their trip and while recreating, to learn more about the outdoor experience, stewardship of the environment, and the historic events that occurred on the landscape they are traversing.
* **Group tours** – Motorcoach tours and groups will usually be following pre-planned itineraries, often with step-on guides. Quality training for these guides as interpreters can help reach a larger audience. Sites visited by groups can offer enhanced interpretive experiences adapted to their interests and demographics.
* **People with specific accessibility challenges** – This audience includes people with physical, visual, hearing, learning, and language challenges. It is important to provide accessible interpretation within the primary interpretive experience to the extent possible, and with alternative access options when needed.
* **Interpreters and front-line tourism workers** – This audience includes group tour operators and guides, visitor center and heritage site managers and docents, bait shops, and hospitality industry front-line workers who can be trained to share effectively both interpretation about themes and information about the area. They can be offered training so they can share interpretive messages and support cross-promotion to encourage broader visitation.
* **Curriculum-oriented visitors** – This educational audience includes participants in workshops and learning opportunities for specific topics, life-long learners, and college students. They will often want more depth, and to devote more time, than other visitors.
* **Youth groups** – This audience includes school groups in classroom and out-of-school enrichment, field trips, and activities, for classes, home schooled students, and youth groups such as scouts and Future Farmers of America. Interpretation needs to be engaging for student interest, to be keyed to the appropriate age group(s), and whenever possible tied to curriculum standards for specific classes or programs. Interpretive roles can include both directly delivered youth interpretation, and train-the-trainer opportunities for teachers and youth leaders.

# Interpretation Objectives and Strategies

A planning effort that spans a large area, such as the Delta, will have many distinct opportunities and challenges. Government entities with jurisdiction over managing public lands and resources have diverse missions and management requirements. Private and non-profit organizations providing interpretive services in the Delta also have diverse missions and areas of expertise. The Delta encompasses many cultures with different needs and stories to share. Interpretive providers discussed the need for additional staff and funding to develop, maintain, and carry out interpretive services. Many providers, like small historical societies and museums, are run solely by volunteers.

Such an environment requires a strong and skilled lead organization to bring these varied partners and community groups together to implement the interpretive plan. As it assumes this role, the NHA coordinating entity will:

* Direct the interpretive program,
* Lead a network of interpretive providers.
* Support interpretive providers by connecting them with resources and interpretation and volunteer management training.
* Provide funding and grant assistance for interpretive projects.
* Review and approve NHA-wide interpretive signs, exhibits, online content, and other interpretive messaging.
* Maintain a central repository and clearinghouse for Delta NHA interpretive programs, resources, providers, special events, content, exhibits, and other relevant information,
* Lead Tribal consultation efforts for interpretive planning.
* Provide visitors with seamless and integrated trip planning and orientation tools to easily locate NHA sites, information, events, programs, and recreational opportunities (this effort is detailed in Chapter 4).

Public engagement is incorporated into every aspect of interpretation, particularly with cultural organizations, Native American Tribes, and underserved communities.

The Interpretive Planning Task Group collaborated with California State Parks to develop objectives and strategies. Since interpretation Is related to other NHA goals, some interpretation objectives and strategies are incorporated into other chapters of this plan. This section, which corresponds with the Implementation Table for Goal 1 (see Appendix I), provides a narrative description of actions the NHA will take to bridge gaps and provide long-term guidance in developing and delivering interpretive services.

These objectives and strategies are a starting point. They reflect the challenges and opportunities present when the management plan was developed and will be revised or augmented as conditions change.

## Objective 1.1 A network of interpretive providers supported by the NHA serves as the foundation for interpretation.

The Sacramento-San Joaquin Delta NHA brings the region’s natural and cultural landscapes and sites under one umbrella, promoting them as an integrated experience and coordinating interpretation at individual sites through a thematic structure. Unique stories at each site are connected to the regional themes and to each other. NHA interpretation will build on existing programming offered through interpretive providers and will coordinate, enhance, and expand interpretive experiences over time.

The fundamental building block of this effort is the NHA’s interpretive provider network. This network allows the region's interpretive providers to come together and work with the NHA as a broad and unified partnership with opportunities for connection between different providers. The strategies below describe the process of building and strengthening this network through coordination, research, training, funding, and volunteer support.

To carry out the strategies below, the DPC will develop a position for an interpretive specialist as the primary staff contact on NHA-wide interpretation. The DPC will retain professional assistance either through employing permanent staff, hiring an independent contractor, or sharing staffing with a partner agency or organization. This and all other staffing needs are addressed in Goal 5 (see Chapter 6, Strategy 5.2.2).

### Strategy 1.1.1 Continue the Interpretive Planning Task Group to support NHA interpretive planning and projects.

The Interpretive Planning Task Group played a critical role in the formation of the interpretive thematic framework and the management plan's objectives and strategies. This group will continue to advise on interpretive planning and projects within the NHA. The task group's membership will be expanded to provide geographic representation, cultural diversity, and expertise in a wide range of fields. Professional interpreters from the region’s cultural and natural heritage sites can support partners who are less experienced in preparing interpretive exhibits or content and/or have limited resources.

The task group will meet periodically, while NHA staff will manage day-to-day implementation with partner support. NHA interpretation efforts will engage the wide range of existing and potential interpretive sites, seeking to enhance, enrich, and expand coordinated interpretation under the thematic framework and oversee the implementation of the management plan's interpretive objectives and strategies. The task group and staff will provide guidance in focusing proposed exhibits on key themes, advising on the selection of sites and media, assisting with interpretive content, and providing overall quality control. Exhibits may be self-guided exhibits located in publicly accessible sites. New exhibits that are funded through the NHA must comply with the task group’s recommended process and guidance.

### Strategy 1.1.2 Encourage collaborative opportunities among NHA interpretive providers to develop and implement interpretive programs and media.

The NHA has a wealth of interpretive providers with similar interpretive emphases, including agricultural, Asian cultural, military, and technological history. NHA interpretive efforts will identify opportunities for visitors to tour existing interpretive sites with similar themes through the VisitCADelta website and social media platforms, including driving and walking tours. Junior Ranger materials for young children can also highlight these sites.

The NHA coordinating entity's interpretive specialist and the Interpretive Task Group will collaborate with partners to develop plans for enhancing and expanding exhibits and programming both at existing sites and at potential new sites. New sites may emphasize self-guided exhibits and experiences, such as in parks or preserves, along trails, or in communities. NHA interpretation can be enhanced and expanded over time as resources and priorities permit.

Interpretation provides visitors with connections to NHA assets and stories. Interpretation may include:

* Programming (personal interpretation) where the interpreter is interacting directly with the audience. This includes programs such as talks, guided tours, presentations, living history, and demonstrations. Interpretation may be individually presented by staff or docent volunteers, based on an outline, concept or a script. In some cases, interpretation may be recorded for audio, video, or digital presentations.
* Physical media products (non-personal interpretation) generally offer a self-guided experience, including products such as exhibits, waysides, signs, and brochures.
* Digital/virtual media, including the VisitCADelta website and social media, interactive programs, webinars, livestreams, internet-based videos, or smart phone tours or apps offer interpretive experiences without in-person contact. These may be self-guided experiences or may convey a program with interaction such as a live-streamed presentation or video-conference experience.
* Audio/video media using recorded or live programming also offers interpretation without in-person contact. This may be audio only, images, or video programming, either presented live or recorded. These may be incorporated into digital media, as a component of exhibits, or stand-alone such as audio driving tours.
* Interactive experiences include visitor participation in the interpretive activity. Examples include hands-on interactive museum exhibits, learning to make a cultural craft, or participating in an event such a dance or cooking demonstration.

### Strategy 1.1.3 Broaden interpretive content and resources through scholarly research into the NHA's interpretive themes.

As noted earlier in this chapter, efforts to bring Delta cultural institutions together to develop interpretive content owe a debt to the DPC-sponsored Delta Narratives project. The project, which concluded in 2015, set out to document the historical and cultural themes that tie the experience of the Delta to regional and national history. Through this project, a team of scholars and regional cultural institutions worked together to produce four scholarly essays on different topics in Delta history. These essays provide a foundation for the interpretive themes in this management plan. Throughout the intervening years, the DPC has sponsored the annual Delta Heritage Forum, a one-day conference focused on preserving and telling Delta stories, and providing opportunities for partnerships, collaboration, and networking, and assisted with the initial research necessary for a recent 2022 book by Delta scholar Robert Benedetti titled *Imagining the Sacramento-San Joaquin River Delta: An Anthology of Voices Across Centuries*.

DPC, in coordination with the Interpretation Task Group and scholars at local and national universities, will continue these research efforts, guided by the interpretive themes presented earlier in this chapter. DPC staff and NHA partners will develop and share research, narratives, and bibliographies to be used to support interpretive products and programs. These efforts will be particularly important to provide more Information on under-researched topics and topics that require a wider range of viewpoints. For example, a short-term project could include a contextual narrative on Native American history and culture, which would be developed in coordination with the Tribal advisory council described in Strategy 1.4.2 and experts in the field. This project would set an example for research on other under-represented topics.

### Strategy 1.1.4 Provide technical assistance to NHA interpretive providers to develop interpretive plans and projects.

The NHA and Interpretive Planning Task Group will work with experienced NHA partners such as the National Park Service, California State Parks, East Bay Regional Park District, and larger regional institutions to assist partners in developing interpretive plans and projects. They will utilize best practices and interpretive planning guiding principles to identify unique aspects of the Delta and suggest how they might be presented and experienced. These interpretive guiding principles include:

* **Experience of Place:** Interpretive providers will use the natural and cultural landscape as the vehicle through which stories are told, relating stories to real places and tangible features and evoking sense of place. They will use authentic physical features – landforms, plant communities, waterways, farmland, roads, buildings, and other resources – to tell the stories. Natural and cultural influences are inseparable within the Delta landscape. Ecosystems evolved and were in part shaped by the successive human cultures that depended upon them. This co-evolution of the landscape continues today.
* **Sense of Time:** The Delta is defined by some places that reflect previous eras and other places that are continually changing. Its ecosystems evolved over thousands of years of climatic change. Its successive human cultures share continuity in their relationships to the living landscape.
* **Sense of Scale:** The NHA is vast and comprised of large landscape areas that differ from each other yet are closely connected. The scale of the landscape and the gradual ways in which it changes are aspects to be communicated and experienced.
* **Adaptation and Resilience:** The ability of ecosystems and human cultures to adapt to evolving conditions is fundamental to the stories of the Delta.
* **Significance and Meaning:** Interpretation goes beyond conveying a story’s facts – drawing connections, significance, and meaning to audiences. In developing interpretive content, each subject or story must be examined for its significance, for a key message to be conveyed by the story or exhibit. Providers will communicate this significance or message to audiences in ways that connect to people's life experiences.
* **Shared Human Experience:** Interpretation should help audiences relate storylines and resources to experiences in their own lives. Using the authentic stories of real people in their words in the actual places where events occurred is encouraged wherever possible. The expression of universal concepts such as love, loss, uncertainty, and success to which everyone can relate in their lives helps forge personal connections to a story.
* **Points of View:** Stories will be presented from multiple perspectives in their thematic and historical context to help audiences appreciate how different people from diverse cultures see things and communicate differently. Interpretation will encourage audiences to connect with the stories from their own experiences and points of view.
* **Acknowledge the Unpleasant:** The stories associated with Delta history sometimes reflect difficult experiences that impacted various groups within the region. In particular, the challenges that Native Americans, Asian and Mexican immigrant groups, African Americans, and others had to face over the past two hundred years are not always pleasant or uplifting. These difficulties and conflicts will be accurately represented in the storytelling.
* **Context:** While individual stories may be unique, they will all connect to the NHA themes. Stories will illustrate the themes and connect to the bigger picture in ways that make them immediate and understandable.
* **Connections**: Where applicable, local stories will connect to the stories of other communities and sites within the NHA as part of the communication of context, significance, and meaning. Providers will encourage visitors to visit multiple places to learn about other aspects of related themes and stories.
* **Accuracy:** Stories and content will be well researched and accurate. If the stories are based upon legend, lore, or oral tradition, that will be clearly stated.
* **Quality:** Each interpretive installation and media experience will meet the highest standards of quality in terms of location, design, orientation to resource, storytelling, physical installation, accessibility, and visitor experience. Guidelines, review processes, and technical assistance will be used to help maintain quality standards.
* **Experiential Learning:** People learn and remember things better when they physically do them. Providers will emphasize communication that is visual and tied to authentic places and features over the reading of waysides and text. Physical activities will provide visitors with various sensory experiences—the sights, the distances, and the sense of landscape and landforms associated with places and events.
* **Variety of Experiences:** Providers will offer a variety of interpretive approaches to satisfy the interests and capabilities of different age groups, temperaments, and orientations. Options will include varying levels of activity, timeframes, and levels of required concentration, as well as alternative ways to experience interpretation for individuals with physical limitations or disabilities. Providers will make use of cutting-edge technology when possible.
* **Opportunities to Explore:** Providers will present themes and stories in ways that encourage audiences to explore other places and sites by drawing interpretive connections, inserting tempting leads, and providing the information and tools needed to follow through on interests. This approach will encourage audiences to explore the landscape physically by inviting them to experience other aspects of the stories in other locations.
* **Depth of Information:** Primary interpretive content will be succinct and well written, emphasizing key messages, context, and connections. In addition, providers will develop information and guidance for exploring subjects in greater detail to encourage people to explore subjects in more depth if they are interested.
* **Opportunities to Engage and Support:** Providers will make audiences aware of the mission, programs, and initiatives of the NHA’s partnership organizations. Raising awareness of the broader NHA effort will encourage visitors to engage in programs and activities that support partnership initiatives and help address environmental and cultural challenges.

### Strategy 1.1.5 Provide virtual and in-person interpretive training to NHA partners to enhance interpretation skills, interpretive site management, exhibit development, and related skills.

California State Parks, the National Park Service, and the East Bay Regional Parks District offer their staff in-depth training for front-line interpreters and managers on volunteer management, planning, recreation, and on specific interpretive topics. Several non-profit interpretive providers have existing volunteer and interpretive training, such as the Yolo Basin Foundation with volunteer naturalist training, and Project WET (Water Education Today) Foundation with water education training for teachers. The NHA will work with these government agencies and non-profits to extend these training opportunities to NHA partners.

The National Association for Interpretation (NAI) also provides interpretive training on various topics like interpretation skills, volunteer management, writing, planning, and graphic design techniques. NAI conducts at least two monthly webinars focused on front-line skills and individuals working in interpretive management, planning, media, and more. The NHA will secure membership and facilitate partner organizations in doing so in order to participate through the packages offered for individuals and organizations.

Finally, the American Association for State and Local History (AASLH) provides multiple resources for museums and history organizations. Their professional development offerings, including the Standards and Excellence Program for History Organizations, the History Leadership Institute, webinars, online courses, and workshops are designed for professionals, students, and volunteers.

### Strategy 1.1.6 Provide interpretive training opportunities to recreation business staff and interpretive materials for visitors who use their services.

According to the DPC's 2020 Recreation and Tourism update to the Economic Sustainability Plan, recreation by residents and visitors generates a total of roughly 12 million visitor days of use annually and a direct economic impact of more than $200 million in spending per year. Supporting Theme 3 demonstrates that recreation is not just an important part of the Delta economy, but also the Delta culture. The NHA can capitalize on the importance of recreation by bringing interpretation to recreation visitors through recreational businesses. For example, the NHA coordinating entity could develop training for boating excursion companies for guided tours and develop self-guided boating tours highlighting NHA themes. The DPC has built strong relationships with regional recreational providers through their work on the NHA, the Great California Delta Trail, VisitCADelta, Delta Leadership Program, and other programs and projects. The DPC staff and Interpretive Planning Task Group can continue to grow these relationships with existing and other partners in the recreation industry.

### Strategy 1.1.7 Connect people with volunteer opportunities at NHA sites.

Finding and retaining volunteers is an ongoing challenge for many interpretive providers. This problem is particularly difficult in the rural areas in the central and eastern portions of the NHA that lack significant local population. There simply are not enough people to do the work that needs to be done. Getting more people involved is a challenge, and even in places with substantial involvement, the small population results in not having enough capacity to get the work accomplished. Many museums and public lands are relatively close to large urban areas, but residents of these areas are not aware of these resources and the volunteer opportunities available there.

As interpretive planning efforts expand throughout the Delta, DPC staff and Interpretive Planning Task Group will work with interpretive providers to identify opportunities for volunteers to be involved. Volunteer assistance within the NHA network will include:

* Supporting recruiting outreach, including to mission-oriented groups such as civic service and environmental organizations. Wide exposure can highlight the needs of many organizations who continue to rely on local, word-of-mouth recruiting.
* Developing contacts for youth and college groups, such as scouts, Future Farmers of America, and service programs.
* Providing robust and practical volunteer management training and resources for NHA partners. Training includes assessing and developing volunteer programs, recruitment, training, management, retention, recognition, and evaluation. Training will be offered on a regular basis, to reinforce and keep information available as personnel change.
* Incentivizing volunteerism with awards, recognition, and other benefits that reduce overall cost to individual organizations for doing the same activities at a smaller scale.

As resources become available, DPC and Interpretive Planning Task Group can create a regional volunteer program to connect volunteers with opportunities and needs across heritage sectors, such as citizen science, museum docents, and event support. DPC can develop a volunteer program clearinghouse that collates volunteer position opportunities and the names and interests of people interested in volunteering. Program success will take active participation from partner sites to connect with their own volunteer needs, and dedication of time and effort to communicate, make the connections, manage the volunteers, and track results.

### Strategy 1.1.8 Explore grants and other funding opportunities for interpretive planning and projects.

During the outreach for preparation of the interpretive plan, interpretive providers noted that they apply for many grants, but would like training in grant writing and grant administration. The DPC will work with other state agencies, larger interpretive providers in the region, and non-profit organizations specializing in grant support to both offer this type of assistance to NHA partners and apply for grants for NHA-wide projects. The following are examples of federal and state grant opportunities for interpretive projects and museums:

* The federal Institute of Museum and Library Services gives grants for museum conservation, preservation, collections assessments, digital projects, training, and more.
* The National Endowment for the Humanities offers a variety of grant programs to individuals and organizations that promote the humanities, such as research, education development, exhibits, digital media, and more.
* The U.S. Environmental Protection Agency offers Environmental Education Grants that provide financial support for projects that design, demonstrate, and disseminate environmental education practices, methods, or techniques.
* California State Parks, Division of Boating and Waterways administers several grant and loan programs designed to improve and safeguard the user boating experience.
* California State Parks, Office of Grants and Local Services develops grant programs that provide funding for local, state, and non-profit organization projects. Grant projects generally address park, recreation, and resource-related needs.

## Objective 1.2 Interpretation orients residents and visitors to the NHA through outreach programs, special events, and signs.

NHA-wide Interpretive efforts will suggest itineraries for how residents and visitors may best explore the storylines (see Strategy 3.1.4 in Chapter 4 for more information about trip planning), but there is no predicting how they will visit and the order in which they may see interpretive sites. Residents and visitors will experience NHA interpretation in any order and over varying periods of time. Consequently, participating interpretive sites will be able to provide basic orientation information about the NHA and the relationship of that site to the overall NHA experience. A key part of these orientation efforts will be tied to regional tourism Information through NHA media and social media as described In Objective 3.1 In Chapter 4. The strategies described below will refer to these NHA sources where possible.

### Strategy 1.2.1 Promote Delta-wide themed special events, such as "Delta Days" or “Delta250” at NHA sites.

Delta-wide themed special events that reflect the Interpretive themes discussed earlier in this chapter are important for the NHA in several ways. First, they draw attention to the Delta as a distinct region. Portions of the Delta are typically divided into the neighboring San Francisco Bay, Sacramento, and Central Valley regions. Special events bring Vallejo, Martinez, Antioch, Walnut Grove, and Stockton together in the eyes of the public. Second, such events draw attention to the NHA, which is relatively new and has not received significant media attention to date. Finally, and perhaps most important, a diverse group of interpretive providers, community groups, and economic development organizations from throughout the Delta need to organize Delta-wide events. Such a common effort develops relationships and increases cooperation in the future, even outside of these events.

The Interpretive Planning Task Group will be important in developing themes for these events, getting the word out to different organizations, and assisting in managing the events along with DPC staff. The concept of a "Delta Days" regional event traces back to the 2015 Delta Narratives report, which recommended creating such an event to celebrate the region and encourage visitors to sample a variety of sites.

The upcoming America250 celebration of the 250th anniversary of the Declaration of Independence, which will culminate in 2026, also provides an opportunity for the Interpretive Planning Task Group and various Delta organizations to work together on a unified marketing strategy and incorporate many participating organizations. For example, annual events such as the Courtland Pear Fair, Taste of Oakley, and Valley Waterfront Weekend before and during 2026 could place a Delta250 logo on their materials, include booths for the overall celebration, and reference other events that are tied to the celebration. The American Association for State and Local History has a program that provides guidance to museums and history organizations about how to develop programs in observance of the 250th anniversary at <https://aaslh.org/programs/250th/>,

### Strategy 1.2.2 Prepare an interpretive sign plan to aid in the placement, design, funding, and placement of interpretive panels in the NHA.

The NHA coordinating entity will lead the preparation of an interpretive sign plan, utilizing the Interpretive Planning Task Group and the NHA Advisory Committee. As part of the preparation of the plan, the DPC staff will identify sites that would benefit from interpretive panels and could improve the presentation of the interpretive storylines described earlier in this chapter. Sites will include existing and potential recreation trails, historic resources that are pedestrian accessible and lack indoor interpretation, and urban areas and public lands that have high foot traffic. The plan will prioritize sites that are critically important to interpreting key NHA storylines, sites operated by willing partners, places that have traditionally lacked interpretation, and places that can reach a large audience. The plan should emphasize the importance of interpretive signs that connect to online information, videos, and other media related to NHA themes by utilizing QR codes or similar technology.

### Strategy 1.2.3 Fund plaques for National and California Register sites in the NHA.

The NHA coordinating entity will collaborate with the California Office of Historic Preservation, Interpretive Planning Task Group, other interpretive providers, and community groups to identify specific sites on the National Register of Historic Places and the California Register of Historic Places that are publicly accessible, are in areas where there is pedestrian traffic, could benefit from the placement of plaques, and where the property owner is willing to participate. The NHA coordinating entity will provide funding to develop and install plaques at the identified sites. These plaques should reference the overall NHA and interpretive storylines where possible. Organizations that will assist with placing plaques on historic structures and in historic districts include E Clampus Vitus and Native Daughters of the Golden West/Native Sons of the Golden West fraternal organizations focused on the history of the region.

### Strategy 1.2.4 Develop thematic trail messaging that connects interpretive sites throughout the NHA.

Recreational users, such as hikers, bicyclists, boaters in motorized and non-motorized watercraft, and equestrians, are a particularly important Delta audience. They are more likely to travel to different parts of the NHA using trails, perhaps as part of a solo or group self-guided trip through the area. Such travel could be part of the trip planning efforts identified in Strategy 3.1.4 in Chapter 4. These trips provide an opportunity for the NHA to give connected interpretive tours of the area. This approach can be incorporated into the interpretive sign plan set forth in Strategy 1.2.2 and trail planning efforts, including those for the Great California Delta Trail.

## Objective 1.3 Interpretation connects people to the NHA’s culture, economy, history, and natural environment, and inspires them to protect the region’s precious natural resources.

The NHA is woven together by a complex network of rivers, wetlands, and roads that connect people to farms, communities, historic sites, and natural areas. Interpretation connects people to the stories and natural landscapes that make the Sacramento-San Joaquin Delta important to the state and the nation. Interpretive messaging and experiences will emphasize NHA stories with concepts meaningful to residents and visitors.

### Strategy 1.3.1 Develop interpretive content, programs, and materials that place the NHA in the context of state and national history and economy.

The NHA coordinating entity's role is to convene partners and communicate a common narrative among partners and visitors. The common narrative is based not only on the themes and storylines, but also on the ongoing conversation among partners about the narratives, and the ways these stories are shared with diverse audiences. The Interpretive Planning Task Group will be an important forum for assessing what types of content, programs, and materials best communicate the stories of the Delta. The significance of the Delta as an agricultural, cultural, and natural resource has generated difficult questions about economic sustainability, ecosystem restoration, and water management. The NHA’s role is not to provide answers to these questions; rather the NHA is committed to creating an open setting to discuss those viewpoints, to help move toward finding common ground where there can be agreement, and to encourage civil and responsible expression of viewpoints where partners disagree.

The NHA's Interpretive Planning Task Group will assess which topics are under-represented within the region, such as the Delta’s significant contributions to land reclamation engineering and technology. Museums such as the Dutra Museum of Dredging and the San Joaquin Historical Society and Museum, which feature this story, noted they lack funding and staff to offer more interpretation and educational services. Collaboration and partnerships with pertinent government agencies, academic organizations, and businesses such as the U.S. Army Corps of Engineers, local reclamation districts, University of the Pacific, and the Caterpillar Corporation started in Stockton, can uncover historical documents and photographic archives. Staff from these agencies, businesses, and organizations could be engaged to assist with further theme development and educational programs.

### Strategy 1.3.2 Promote the area’s agricultural heritage through exhibits, programs, and events, including culinary experiences.

Many Californians and visitors to California are unaware of the importance of the state's agricultural bounty for consumers and the state and national economy. As described in Theme 4, the Delta is a critical part of the story of California's role in providing food to the nation. Food and where that food comes from is something that resonates with people, making the storyline a valuable way to connect with residents and visitors.

There are long-standing and new efforts to promote Delta agriculture to a broader audience, including agritourism, events, and interpretation at local museums. As described further in Chapter 3, the Delta has a lively agritourism industry, exemplified by the more than 60-year-old Bachinni’s Fruit Tree u-pick operation in Brentwood, the Delta Farmers Market between Isleton and Rio Vista, and the Old Sugar Mill wine-tasting venue in Clarksburg. The Courtland Pear Fair has been held annually, except during the pandemic, since 1972. Taste of the Delta, sponsored by the California Delta Chambers, and Taste of Oakley, organized by the City of Oakley, provide additional opportunities to sample Delta food and drink. Over the last decade, Sacramento has embraced its agricultural and culinary heritage by proclaiming the city America's Farm-to-Fork Capital and hosting the Farm-to-Fork Festival, which Includes a well-known dinner on the historic Tower Bridge that lies within the NHA. The Dutra Museum of Dredging, Haggin Museum, San Joaquin County Historical Museum, and numerous community museums have exhibits interpreting different aspects of the Delta's agricultural history.

These varied places and events are a robust foundation for interpreting Delta agricultural heritage. The NHA coordinating entity and Interpretive Planning Task Group will convene potential partners in agritourism, the overall agriculture industry, local and state farm bureaus, agricultural nonprofit organizations, farm worker organizations, interpretive providers focused on agriculture and farm labor, and academic institutions about communicating an agricultural heritage narrative among partners and visitors. The DPC staff and NHA partners can help local museums work together on shared exhibits, programming, events (see Strategy 1.2.1 for description of Delta-wide events), and video production. Interpretation also will extend beyond museums to agritourism, agriculture and food-oriented events, the ports of Stockton and West Sacramento, recreation areas, and trails.

### Strategy 1.3.3 Highlight the work of past, present, and upcoming artists and writers whose work includes the NHA through exhibits, presentations, and artist-in-residency programs.

As described In Supporting Theme 2, there is a long history of artists and writers that have drawn inspiration from and lived in the Delta. Interpretation of this supporting theme within the NHA is currently limited. The two primary art museums in the region, the Crocker Art Museum in Sacramento and the Haggin Museum in Stockton, are outside of the NHA, in the case of the Crocker, less than an eighth of a mile away. Public art, such as murals and sculptures, is found in Antioch, Brentwood, Clarksburg, Hercules, Isleton, Martinez, Pittsburg, Rio Vista, Walnut Grove, and West Sacramento, some of which is accompanied by interpretation and guides. The cities of Benicia, Brentwood, and Vallejo have poet laureates. Acclaimed author Jack London's haunts are celebrated along the Carquinez Strait. Numerous art galleries, bookstores, and libraries are located throughout the region.

A more organized and comprehensive interpretive focus on art and writing is needed. There Is precedent for Delta-wide projects, including several sponsored by the DPC. The 2015 Delta Narratives project included a paper on art and writing by Gregg Camfield of University of California, Merced. The DPC was involved with the Delta Forever art exhibit, featuring paintings by Ning Hou and Gregory Kondos, which debuted In Courtland and traveled to two locations in Sacramento during 2015 and 2016. Initial development of Robert Benedetti's *Imagining the Sacramento-San Joaquin River Delta: An Anthology of Voices Across Centuries* was supported by research assistance from the DPC. Another Delta-wide art project is photographer Rich Turner's Delta Grandeur exhibition, which toured throughout California in addition to Delta locations.

The NHA and Interpretive Planning Task Group will work with governmental art programs at the federal, state, and local level, art-oriented non-profit organizations, local universities, and artist and writers to fund and promote projects that establish the Delta as a distinct region for the visual arts and writing, commemorate past artists and writers, celebrate the diversity of styles and viewpoints, support emerging artists and writers, and beautify Delta communities. Projects can include a revival of the Delta Forever art exhibition, permanent and traveling exhibits, artist-in-residency programs, a public art program, guides to public art in the region, interpretive panels that describe local art and writing, guided and self-guided tours, a Delta poet laureate, books and literary journals, and artist and writer directories,

### Strategy 1.3.4. Share natural resource-themed interpretive content, including existing water education programs and training, with NHA sites and along established land and water trail networks.

The NHA has almost forty sites and organizations that offer interpretive programs and education related to the Delta’s natural resources, environmental protection efforts, and resource stewardship. Likely, many more exist in the immediate San Francisco Bay Area and Sacramento metropolitan regions. Current interpretation from the Cosumnes River Preserve, East Bay Regional Park District, Sacramento County Regional Parks, US Fish and Wildlife Service, and Yolo Basin Foundation includes guided walks and programs about local wildlife, field trips, virtual classroom programs, and self-guided trails with interpretive signs. These organizations offer school programs tied to California’s K-12 education curriculum, and Science, Technology, Engineering, Arts, and Math (also known as STEAM) approaches to education.

Project WET’s program, led by the Water Education Foundation, promotes awareness, appreciation, knowledge, and stewardship of water resources through classroom-ready teaching aids. The local coordinator organizes workshops for K-12 educators across the state through the California Water Institute for Teachers. Project WET includes comprehensive online educational materials, tours of key watersheds, water news, water leadership training, and conferences.

During interviews with the California State Parks team, these organizations, along with the National Park Service and California Department of Fish and Wildlife, expressed interest in collaborating with other NHA partners to share resources, training, and education opportunities, but they needed locations and hosts for their programs. For example, Project WET needed site coordinators to host training for interpretive providers, teachers, volunteers, and other interested parties. The NHA coordinating entity and Interpretive Planning Task Group will work with partners to identify locations for natural resource-themed programs.

Many government agencies are conducting scientific studies and restoration efforts within the Delta. Organizations such as Audubon Society, Ducks Unlimited, the Nature Conservancy, and Sierra Club, also support and work on restoration projects. These agencies, along with academic institutions, are potential interpretive partners to develop the NHA’s natural resource interpretive themes, education materials, and programs. Areas of focus include water quality, water reclamation, flood control measures, fish and waterfowl protection, integrating agriculture as a resource protection measure, salinity, sea level rise, and climate change.

## Objective 1.4 Interpretation inspires people to learn about the NHA's Indigenous and immigrant communities and to appreciate their contributions to the region's culture and history.

As the only National Heritage Area in California and one of three on the United States' continental Pacific coast, the Sacramento-San Joaquin Delta NHA can provide important new stories for the National Heritage Area Program. One of the most distinctive aspects of the Sacramento-San Joaquin Delta NHA is the tremendous diversity of Native American cultures in the region (described in Theme 3), as well as the number and type of immigrant communities that settled here (described in Theme 5). Thus, interpretation in the NHA will carefully research and continually develop associated themes and storylines and share these stories with a variety of audiences. The NHA will work in partnership with Tribal governments, Tribal organizations, cultural organizations representing immigrant groups, scholars, and other researchers in this effort.

### Strategy 1.4.1 Establish an advisory council with Tribal representatives to develop culturally sensitive educational content.

Continued relationship-building and conversation with Tribes is required to refine the interpretive themes and storylines presented in this chapter and to develop Delta-wide and location-specific interpretive content based on those themes and storylines. Time is a critical part of these conversations, in part because some stories can only be told at certain times of the year due to Tribal traditions. Therefore, the NHA will form a Tribal advisory council to work with NHA staff and partners in preparing interpretation that is sensitive to Tribal values and needs over the long term.

The NHA and Tribal representatives will create a charter for the advisory council and convene initial meetings. Early meetings could adopt a workshop format since participants might require more interaction to discuss different Issues about interpreting Native American heritage, such as which stories to highlight and locations for interpretation. One potential issue for the council would be the preparation of a land acknowledgment statement that can be used for NHA-related events and places (see Strategy 2.4.1).

### Strategy 1.4.2 Collaborate with Native American Tribes to develop interpretive content about traditional Indigenous land management practices and perspectives.

Native American heritage is the least interpreted theme in the NHA. The Haggin Museum in Stockton and the San Joaquin Historical Society Museum in Lodi, which both lie outside the NHA, have exhibits and interpretive programs developed in partnership with Tribes. Within the NHA boundary, the Friends of the 1883 Clarksburg Schoolhouse are partnering with local Tribes to incorporate Native American stories as they complete their work on the schoolhouse and surrounding grounds. Clearly, there is much more work to be done for the NHA and partner interpretive providers in collaboration with Tribes to share Tribal stories, world views, and contributions. A critical undertaking for the NHA and Interpretive Planning Task Group is to work with Tribes and partner interpretive providers to develop more interpretive content at locations throughout the NHA.

As the management plan was in development, there were significant challenges to creating interpretive themes with Tribal representatives. Even under ideal circumstances, an NHA requires years to establish strong relationships with Tribal governments and representatives. An additional challenge that contributes to the difficulty of this type of relationship-building is the number of requests for consultation that Tribal representatives regularly receive from federal and state agencies. Strategies 1.4.2 and 1.4.3 below seek to mitigate these challenges. Finally, there are 24 Tribes whose traditional homeland lies within the NHA. It Is natural that there may be differences in their approaches to Interpretation.

The DPC values and appreciates ongoing collaboration and partnership with Tribes when developing interpretive themes, storylines, exhibits, programs, and educational content. As noted in Chapter 1, public agencies in California such as the DPC are subject to requirements regarding Tribal consultation that affect the NHA. The DPC must consult with Tribes on a variety of projects per Governor Executive Orders B-10-11 and N-15-19, and Assembly Bill 52, which amended the California Environmental Quality Act. While not legally required, nonprofit organizations and private NHA partners should consult regularly when developing new interpretive content about Native Americans to ensure that information is appropriate, accurate, and relevant. They should also revisit existing interpretive content and consult with Tribes to update the information as new scholarship emerges.

### Strategy 1.4.3 Establish a funding source for Native American Tribes and other cultural groups to assist with their time and expenses related to developing interpretive programs and educational content for the NHA.

The requirement that public agencies in California engage in consultation with Tribes regarding many projects means that Tribal representatives are frequently inundated with requests for consultation. Since the NHA coordinating entity and Interpretive Planning Taks Group are seeking in-depth conversations with Tribal representatives over interpretation, the DPC will provide stipends and expense reimbursement for Tribal consultation. This effort could be organized in coordination with the Delta Stewardship Council and Sacramento-San Joaquin Delta Conservancy, both of which have similar needs to consult with Tribal representatives.

### Strategy 1.4.4. Develop interpretive content and programs that describe the connections of cultural groups to the NHA landscape.

The story of Native Americans in the Delta – the natural bounty that led to high population densities, the tending and harvesting of plants that resembled traditional agriculture (see Storyline 3.2), and the ability of to easily evade the Spanish in the lush and wet landscape – was only possible here. Although many of the immigrant groups that settled in the Delta arrived in other parts of California and the American West, the relationship of these groups to the water, land, and communities in the Delta make the Delta' cultural landscape unique. The story of Chinese immigrants from the Pearl River Delta who transplanted their knowledge of levee-building to a Delta thousands of miles away and then diversified the types of crops grown, first in the water-rich Delta and later in California as a whole, is only possible here. The story of Italian immigrants who began the commercial fishing industry in the area pioneered the growing of Mediterranean crops like tomatoes and olives and served as an important customer base for the Bank of Italy before it became the banking industry titan Bank of America, is only possible here.

The NHA coordinating entity and the Interpretive Planning Task Group will develop exhibits, programming, education, and other interpretive content with NHA partners that celebrate the strong bond that many cultural groups have to the Delta's distinct landscape. While interpretive content can focus on specific stories, there are opportunities for NHA partners to broaden these efforts to include a wide range of stories for a particular cultural group, set of groups, or interactions between different cultural groups. These histories provide rich avenues for research as described in Strategy 1.1.3. An example of a collaborative opportunity within the NHA is an interpretive focus on Asian cultural history at numerous sites, which provides an opportunity to promote an interconnected, cohesive Asian cultural experience throughout the NHA. Asian cultural sites are located throughout the NHA, but there is a concentration in the small communities along the Sacramento River, including Locke, which is a National Historical Landmark, and National Register districts in Isleton and Walnut Grove. The NHA, Interpretive Planning Task Group, and NHA partners can initially focus on interpreting resources in these communities, while working to expand and enhance interpretation both in these communities and at other sites in the region.

### Strategy 1.4.5 Promote NHA-themed interpretive materials and programs through cultural organizations.

The DPC staff, in collaboration with the Interpretive Planning Task Group, will partner with regional, state, and national cultural organizations to conduct scholarly research, develop content, and promote interpretive materials and programs. Partnerships with cultural organizations provide access to archives, including oral histories, mailing lists, facilities, and expertise, while the organizations can benefit from NHA funding, technical assistance. training, interpretive sign program, and promotion. Examples of organizations that the DPC and NHA have worked with include the Delta Education and Cultural Society, Filipino American National Historical Society, which has their national museum in Stockton, and Locke Foundation. State and national cultural organizations can promote virtual and in-person exploration of history in the NHA to their members, including potential excursion tours.

## Objective 1.5 Support regional educational programming and curriculum tied to NHA themes.

Education provides people of all ages with insight into the issues that face the world and cultivates the ability to think critically about potential strategies to manage those issues. The NHA coordinating entity and Interpretive Planning Task Group will encourage opportunities for students and adult learners to discover and experience Delta history, culture, geography, biology, and environment in the context of the NHA themes and to learn about local connections to the broader world. These opportunities may include traditional classroom activities, youth programs, out of class enrichment and field trips, and lifelong learning classes. The NHA will present messages in entertaining formats with scholarly accuracy, balanced presentation of differing viewpoints, and respect for the complexity of the issues.

### Strategy 1.5.1 Connect schools to existing NHA curriculum and educational program opportunities.

Although there are gaps in curriculum and educational programs related to the NHA's interpretive themes, there are existing programs that the NHA and partner organizations can support and promote. Strategy 1.3.4 includes descriptions of numerous natural resource educational programs in the NHA that are tied to California’s K-12 education curriculum, and Science, Technology, Engineering, Arts, and Math (STEAM) topics. The California Foundation for Agriculture in the Classroom develops materials that increase awareness and understanding of agriculture for K-12 students and provides programs and training opportunities for educators. The California Historical Society, in partnership with the California History-Social Science Project, created Teaching California, which provides classroom-ready resources to help teach California's History-Social Science Framework. DPC previously funded a fourth-grade curriculum focused on Delta culture and history prepared by the Sacramento County Office of Education. The DPC will continue to work with local county offices of education, school districts, schools, and educators to promote these and other existing curriculum and educational programs.

### Strategy 1.5.2 Provide funding to develop additional NHA interpretive programs and educational content tied to California Content Standards for education.

While the DPC may take the lead on some educational programming, the DPC staff and Interpretive Planning Task Group will play an Important role in encouraging and supporting educational programs. Programs include age-appropriate, content-rich, engaging, and participatory educational opportunities for children that may be used in schools, for out-of-school enrichment, and by youth groups such as Future Farmers of America and scouts. Support will include grants and promoting educational opportunities to wider audiences. NHA partners will develop specific curricula and experiential opportunities for youth groups, including schools and enrichment programs that are connected to NHA themes, local resources, and stories. Partners also will help make these opportunities available for more students and youth groups.

Stewardship education, including environmental awareness, historic preservation, and cultural conservation, will be integral to NHA educational and interpretive programs, leading students to understand issues, raise awareness of stewardship needs, and to act in their own lives to care for the world around them.

### Strategy 1.5.3 Encourage the development, promotion, and implementation of citizen science programs.

According to the National Park Service, "citizen science is when the public voluntarily helps conduct scientific research. Citizen scientists may design experiments, collect data, analyze results, and solve problems."[[28]](#footnote-29) The Delta Science Program and the Delta Independent Science Board, both of which are part of the Delta Stewardship Council, engage community members in citizen science programs because, as the Delta Independent Science Board stated, they "offer opportunities for expanded [Delta] monitoring activities" and "increase public awareness of environmental issues."[[29]](#footnote-30) The NHA will support the Delta Stewardship Council's efforts by working with NHA partners to create and fund citizen science programs and promoting them to potential volunteers. Topics can include monitoring of invasive species, plant and animal populations, water quality, and levee safety.

### Strategy 1.5.4. Sponsor hands-on experiences and field trips for students related to the NHA's interpretive themes.

While classroom learning is an important tool in learning about Delta heritage, getting students out to interpretive sites within the NHA is an invaluable way to ensure that the Delta becomes truly real for young Californians and strengthens their curiosity and appreciation for the region. Examples include:

* A Delta Discovery Voyage field trip, sponsored by the Central Contra Costa Sanitary District, where fifth graders can experience a three-and-a-half-hour excursion aboard a research vessel where they learn about the source of their drinking water and the importance of pollution prevention.
* A field trip of the Dutch Slough tidal marsh restoration site near Oakley, where elementary school students can learn about wildlife in the area and observe science in action as a working tower of scientific instruments measures greenhouse gasses moving between the wetland and the atmosphere.

Fully staffed interpretive sites can support on-site education programs and educational outreach for schools and youth groups; sites with minimal or all-volunteer staffing have greater difficulty. The NHA coordinating entity can support a broad range of sites in ways that address their capabilities. The DPC is committed to enabling interpretive sites throughout the NHA to connect directly to schools to provide educational programs, including but not limited to school tours and service learning. Smaller interpretive sites can be supported through grants and additional assistance. These programs should offer opportunities for multi-disciplinary, place-based team learning for students and families that are prized by educators but difficult to present in classroom settings.

1. Public Policy Institute of California, "The Sacramento-San Joaquin Delta," October 2016, https://www.ppic.org/wp-content/uploads/content/pubs/report/R\_1016JM5R.pdf, accessed on December 1, 2023; California State Assembly Committee on Jobs, Economic Development, and the Economy, "Fast Facts on the California Economy," https://ajed.assembly.ca.gov/sites/ajed.assembly.ca.gov/files/1-%20CA%20Economy%20Fast%20Facts%20updated%20Nov%2015%202022.pdf. Accessed December 1, 2023. [↑](#footnote-ref-2)
2. Phillip Garone, "Managing the Garden: Agriculture, Reclamation, and Restoration in the Sacramento-San Joaquin Delta" [↑](#footnote-ref-3)
3. Swagerty and Smith, 25. [↑](#footnote-ref-4)
4. [↑](#footnote-ref-5)
5. Phillip Garone, "Managing the Garden: Agriculture, Reclamation, and Restoration in the Sacramento-San Joaquin Delta," in *Delta Narratives: Saving the Historical and Cultural Heritage of The Sacramento-San Joaquin Delta*, 2015, pp. 4-6. [↑](#footnote-ref-6)
6. Garone 2015, p. 4. [↑](#footnote-ref-7)
7. William R. Swagerty and Reuben W. Smith, "Stitching a River Culture: Communication, Trade and Transportation to 1960," in *Delta Narratives: Saving the Historical and Cultural Heritage of The Sacramento-San Joaquin Delta,* 2015, p. 3; Kent G. Lightfoot and Otis Parrish, *California Indians and Their Environment: An Introduction* (Berkeley: University of California Press, 2009), 2-13, [↑](#footnote-ref-8)
8. Garone 2019, p. 11-13. [↑](#footnote-ref-9)
9. Delta Protection Commission 2020 [↑](#footnote-ref-10)
10. John Thompson, “Early Reclamation and Abandonment of the Central Sacramento-San Joaquin Delta,” *Sacramento History: Journal of the Sacramento County Historical Society* VI, no. 1–4 (2006): 46. [↑](#footnote-ref-11)
11. [↑](#footnote-ref-12)
12. Phillip Garone, p. 38. [↑](#footnote-ref-13)
13. Garone, p. 46. [↑](#footnote-ref-14)
14. Helzer, pp. 38. [↑](#footnote-ref-15)
15. Helzer, pp. 28-33. [↑](#footnote-ref-16)
16. Helzer, pp. 17-28, 33-36. [↑](#footnote-ref-17)
17. Helzer, pp. 18-32. [↑](#footnote-ref-18)
18. Garone, pp. 42-44. [↑](#footnote-ref-19)
19. Garone, p. 41. [↑](#footnote-ref-20)
20. Helzer, pp. 35, 37-38. [↑](#footnote-ref-21)
21. National Park Service, "Larry Itliong", https://www.nps.gov/people/larry-itliong.htm, accessed October 16, 2023. [↑](#footnote-ref-22)
22. National Park Service 2020 [↑](#footnote-ref-23)
23. Osbourne 2017 [↑](#footnote-ref-24)
24. National Park Service 2022 [↑](#footnote-ref-25)
25. Garone, p. 37. [↑](#footnote-ref-26)
26. Swagerty and Smith, p. 89. [↑](#footnote-ref-27)
27. Swagerty and Smith, p. 89. [↑](#footnote-ref-28)
28. National Park Service, "What Is Citizen Science?" https://www.nps.gov/subjects/citizenscience/citizen-science.htm, Accessed December 5, 2023. [↑](#footnote-ref-29)
29. Delta Independent Science Board, "Review of the Monitoring Enterprise in the Sacramento-San Joaquin Delta," March 2022, p. 106. [↑](#footnote-ref-30)