

Conceptual Site Plan Options





TOLAY LAKE MASTER PLAN CONCEPTUAL SITE PLAN OPTIONS

Concept Plan Description

This chapter describes the overall spatial design of Tolay Lake Regional Park. As noted in Chapter 2, the goals and objectives for the Park emphasize the importance of protecting the natural, cultural, and scenic resources of the property while accommodating reasonable active and passive recreational access.

Chapter 5 describes and illustrates the concepts for development of trails and facilities to accommodate the allowable recreational and educational uses that may occur in various locations throughout the Park. Using stakeholder and community input as described in Chapter 3, design concepts for trails and facilities and habitat restoration were created. During the public outreach efforts, Regional Parks discussed goals and objectives with the project stakeholders to guide the selection of allowable uses and the quality and type of development required to accommodate reasonable public access to the Park.

Proposed project features depicted on the conceptual site plans pertain to parking and circulation improvements, restrooms, a new visitor center, trails and places for interpretation, viewpoints, overnight facilities, cultural gathering area, new administrative buildings, new potable and wastewater infrastructure, new equestrian parking, and habitat restoration, including restoration of Tolay Lake. Existing features are presented for the Park Complex, which includes the area of the Cardoza Ranch buildings (Figure 1-3). The remaining portions of the Park are referred to as the Park Interior (Figure 1-2). The Park Interior also includes the South entrance from Highway 121. The level of detail provided in the figures in this chapter provide an overall sense of what facilities are to be built, re-built, or left in their existing condition; where these facilities are located, and their approximate size. This level of detail is sufficient to complete the Environmental Impact Report (EIR) that will need to be completed for Regional Parks to adopt the Master Plan. Additional design details will be developed following Master Plan adoption to enable facilities to meet permitting requirements and be constructed.

Interpretation Plan

The educational and interpretive elements (Chapter 7) includes both spatial and programming elements. Because of this spatial element, a brief overview is provided below. With community meeting input, and extensive input from the Tribe, Regional Parks has outlined potential interpretive concepts and story zones for the Park (Figure 7-1). These concepts and zones include:

- 1

Park Entrance / Visitor Center

Native American overview and significance | regional and site overview
 Vaqueros' story | Portuguese farmers' story | present agricultural uses and practices | duck pond integrated waste water system
- 2

Lake Vista

Native American significance, life, history, and values | ethnobotany
 living Tribe | story of the lake | hydrology | birds

Petaluma Marsh

Native American economy and life | values of prehistoric life, importance to living tribe | natural habitats and marsh/wetland | climate change and local effects | Lakeville town story | geology/geomorphology

3

Agriculture

Native American ethnobotanical uses, changes to the land pre to post euro-contact, ancient land management practices, living Tribe story | restoration agricultural ditching and diking | Portuguese ranchers' story | Vaqueros' story

4

Oak Woodland

Native American history - importance of oak trees to indigenous peoples living tribe restoration values | restoration of oak woodland

5

East Ridge View Point

Native American relationship of Tolay Lake to surrounding sacred mountains and communities | ancient place names | views with regional and park overview | geology/geomorphology.

6

Central Ponds

Native Americans' values and relationship with the land | comparison of Native American land management, European agricultural practices, and current BMPs | habitats and fresh water springs | historical route | birds

7

Middle Reach

Native Americans' relationship to the land and the living tribe | prehistoric cultural structure, ancient burning practices, and current traditional practices | native grasslands and wildflowers | BMPs for grazing | views | crash site memorial

8

Historical Route

Native American routes and local communities of the region | historic Lakeville Road | habitats and riparian corridors | restoration of riparian areas

9

Tolay Creek

Native American willow burning, basket weaving, economy, and village life grassland/wildflower habitat | riparian, bay, and oak woodlands | habitat and ecosystem restoration

10

11

Bay View Point

Native Americans' cultural structure and communities | living Tribe's values natural resources and the effects of modern day culture on climate change regional points of interest and views | serpentine habitats | climate change

12

South Entrance

Native American overview and story | regional and site overview

Additional details, including a map of the above referenced story zones, may be found in Chapter 7 of this Master Plan.

Developing Conceptual Site Plan Options

Three site plan options were developed for the Park. Options included built features and access to the Park, features that provide visitor services (e.g., kitchen, overnight bunkhouse) and addressing park administration, operations, and maintenance needs (e.g., new ranger residence). Proposed features were located to avoid impacts to natural and cultural resources.

As concepts were developed, options were evaluated against six screening criteria that included: support of the Park Vision, support of public interest, most compatible with stakeholder concerns, protection of public health and safety, minimizing environmental impacts, and avoidance of prohibitively high costs. Site plan options were evaluated in a "pass/fail" manner; all options had to pass each of the six criteria referenced above. The three options provide a range of intensity of development and are summarized below.

Alternative Option A

- Smallest footprint
- Stone Floor Barn becomes the Visitor Center
- Improve existing "Miwok Village"
- New equestrian staging area
- Overnight use in Yellow House
- Single unit camping
- ADA upgrades to existing roads/trails
- Minimum new hiking trails in southern area

Alternative Option B

- Larger footprint
- Tractor Barn becomes Visitor Center
- New tribal focused gathering area
- Expanded equestrian staging
- Overnight use in all former residences
- Limited single unit & group walk in camping in backcountry valley floor
- Expand multi-use & hiking trails

Alternative Option C

- Largest footprint
- New Visitor Center constructed
- Tribal focused area and multi-cultural gathering area at “Miwok Village”
- Overnight uses in all former residences
- Expanded group walk-in sites in backcountry valley floor and single unit sites
-

Appendix B shows the Preliminary Conceptual Site Plan Components and Options in greater detail.

Preferred Site Plan Option

During the second community meeting (held on January 16, 2014), meeting participants were asked to vote on which option they preferred for each portion of the Park (Table 5-1). For the northern core area, option A received the highest level of support, closely followed by option B; for the Park Interior, option B received the highest level of support; and the southern entrance of the Park, option C received the highest level of support.

Table 5-1 Meeting Participant Voting Patterns on Site Plan Options				
PARK AREA: NORTHERN CORE				
Options	Strongly Support	Support	Oppose	Strongly Oppose
A	4	11	0	2
B	6	8	1	2
C	2	5	2	7
PARK AREA: INTERIOR				
Options	Strongly Support	Support	Oppose	Strongly Oppose
A	5	2	3	4
B	6	5	2	3
C	3	2	6	4
PARK AREA: SOUTHERN TIP				
Options	Strongly Support	Support	Oppose	Strongly Oppose
A	4	4	1	6
B	4	7	2	3
C	5	6	3	4

Source: MIG 2015

Regional Parks and consultant staff used these voting preferences to develop a preferred site plan. The preferred option generally scaled back development in all 3 areas of the Park. Additional discussion with Park operations staff also influenced the preferred plan and resulted in retaining 2 working buildings (Buildings 12 and 14 from the Historic Structures Report, Appendix C) that will require some structural work. Administrative functions and visitor service functions will be separated to the extent feasible. For example, the equipment shed will be located to the north of the majority of ranch buildings and the North entrance. Additionally, an area was set aside for private Tribal ceremony that is separated from the visitor center and easy public access; the gathering area is located north east of the Park Complex overlooking Tolay Lake. Camping and trails in the Park Interior were substantially scaled back to address concerns about potential impacts on sensitive natural and cultural resources. The preferred site plan depicts two backcountry campsites (Figure 5-2) in the central portion of the Park interior and two overnight group camps one in the Park Complex and the other in the Park Interior at the Fish Pond. A list of quantities of the various

proposed features includes the following:

- Visitor Center
Approximately 10,000 SF Visitor Center including restroom facilities
- Trails with benches
Up to ~ 32 miles of trails¹ that consists of up to ~ 22 miles of Multi-Use trails (Hike, Bike, Equestrian) and up to ~ 10 miles of Hikers Only trails
- Viewpoints/Interpretive Vistas
Up to 12 Viewpoint/Interpretive Vistas
- Camping/Overnight Areas
Backcounty Sites—2 Single-family type site
2 Group Sites—Approximately 50 people each site
Group Bunkhouse—Potentially holding up to 60 guests (4,700 SF)
- Picnic Areas
5 Picnic Areas with tables scattered in appropriate spots along trails
Group Picnic Area - may include shade structures, trees, food prep facilities, and barbeques.
- Kitchen and Dining Area
To accommodate educational program or special events
2,400 SF indoor kitchen and 1,000 SF covered outdoor dining
- Auto Parking
North Entrance Parking Area – Up to 80 spaces
South Entrance – Up to 25 spaces
Events Parking, additional at Tolay Lake – Up to 1,000 spaces
Events Parking, additional north – Up to 300 spaces
- Equestrian Parking
Main North Park Entrance – Up to 30 pull through spaces
South Entrance – Up to 8 pull through spaces

Utilities and Infrastructure

POTABLE WATER AND WASTEWATER INFRASTRUCTURE

The existing Tolay Lake Regional Park currently includes two ranger residences and a park office utilized for Operations and Maintenance Staff, and Educational Programs. Park staff now uses water from an existing spring fed water system. The permitting requirement to utilize spring or surface water for public consumption is onerous, so potable water is not available for public use. With development of the Master Plan, a viable source of water for public use and consumption was needed to develop the Park to its full potential. Regional Parks and the consultant team concluded that a well would be needed for the visiting public.

A technical memorandum on groundwater availability for a potable water source is found in Appendix D. After three attempts to drill for water a source was found on the east side of the lake (Figure 5-3). The water system will pump water across the lake to the Park Complex. The well to be used for the visiting public will comply with all California State Water Resources Control Board legal requirements.

A technical memorandum on wastewater treatment options is found in Appendix E. The wastewater system (Figure 5-4) includes a dual chamber septic tank, a duplex pump system, grease trap, trickling filter, treatment wetland, and potential spray irrigation area. The septic tank and duplex

¹ Includes approximately 16 miles of new trails less ~ 8 miles of poorly designed decommissioned trails/ranch roads

pump system will be located within the Park Complex area, located northeast of the Old Stone Floor Barn and adjacent to the proposed new visitor center. The grease trap will be located near the proposed new kitchen building. The trickling filter, treatment wetland and irrigation area are located on the north and east sides of the Duck Pond

NORTHERN PARK ACCESS

Northern park access via Cannon Lane will be improved to serve the anticipated annual average daily vehicle traffic following build out of the Park. Currently, the paved width of Cannon Lane ranges from 14 to 24 feet, with degraded edges and potholes. Improvements include repaving, establishing uniform road width, and improved shoulders for bicycle use. To accommodate projected visitor increases as well as high traffic volumes during the Fall Festival, Cannon Lane will be expanded to a 22-foot standard pavement width as feasible, with two nine-foot travel lanes, two two-foot shoulders for bicycle travel, and a graded shoulder along both sides. These updates and components will apply to the entire roadway length (Figure 5-5).



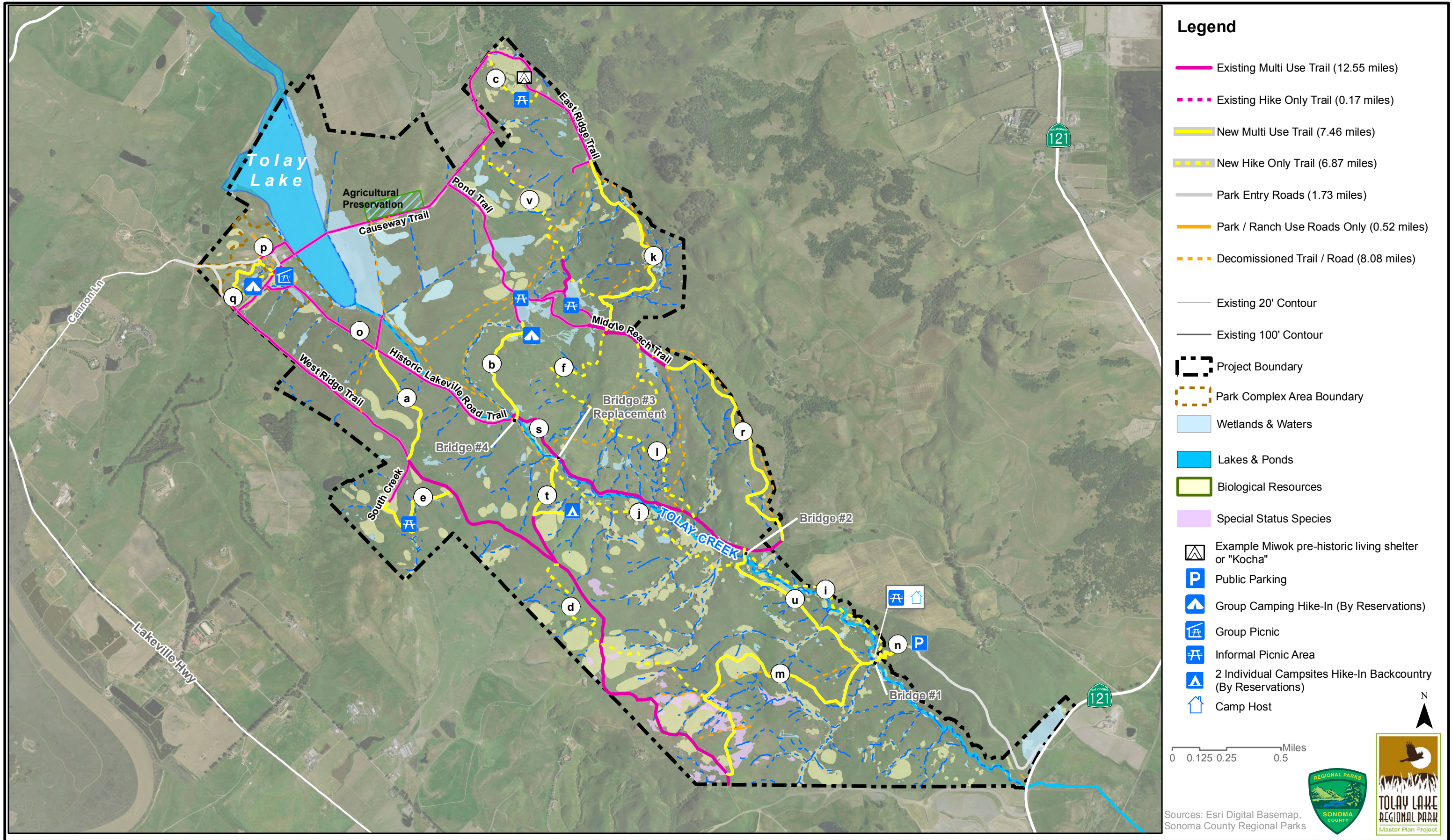
- Building Key**
- 1 - Cottage / Julie's House / Little Green House
 - 2 - Bunkhouse / Ranger Residence
 - 3 - John Cardoza Sr. House / Ranger Residence
 - 4 - DEMO George & Vera Cardoza / Green House
 - 5 - John Jr. & Beatrice Cardoza / Yellow House
 - 6 - Hay Barn / Old Stone Floor Barn
 - 7 - Old Dairy Barn
 - 8 - Creamery / Wine Storage
 - 9 - Granary / Museum
 - 12 - Old Shop / Work Shop
 - 13 - Tractor Barn / Equipment Barn
 - 14 - Storage Shed / Equipment Shed
 - 15 - Slaughterhouse
 - 17 - Modern Barn
 - 19 - Marvin's Garden
 - 20 - Corrals
 - 21 - Picnic Site / Group
 - 22 - Wildlife Viewing Platform
 - 23 - Rock Quarry Site
 - 24 - No-til Hay Production

*Building numbers correspond to Historic Structures Report

- Proposed Elements**
- A - Cultural Gathering Area
 - B - Viewpoint
 - C - New Equipment Shed
 - D - Screen Plantings
 - E - Ranch Manager Residence
 - F - Entry Road Improvements
 - G - Group Camping by Permit
 - H - Overflow Parking
 - I - Animal Pen
 - J - Move Historical Corral
 - K - Visitor Center
 - L - Preserve and Interpret
 - M - New Bunk House
 - N - Park Office
 - O - Group Picnic
 - P - Functioning Ranch Operations
 - Q - Culinary Ethno/Historic Garden-Formal Picnic
 - R - Temporary Residence (Artist, etc.)
 - S - Sales/Group Picnic Shelter
 - T - New Ranger Residence
 - U - Showers
 - V - Restroom
 - W - Riparian / Wetland Restoration
 - X - Kitchen and Dining
 - Y - Potential Spray Irrigation Area
 - Z - Equestrian Parking
 - AA - Boardwalk
 - BB - Outdoor Class / Stage

0 150 300 Feet

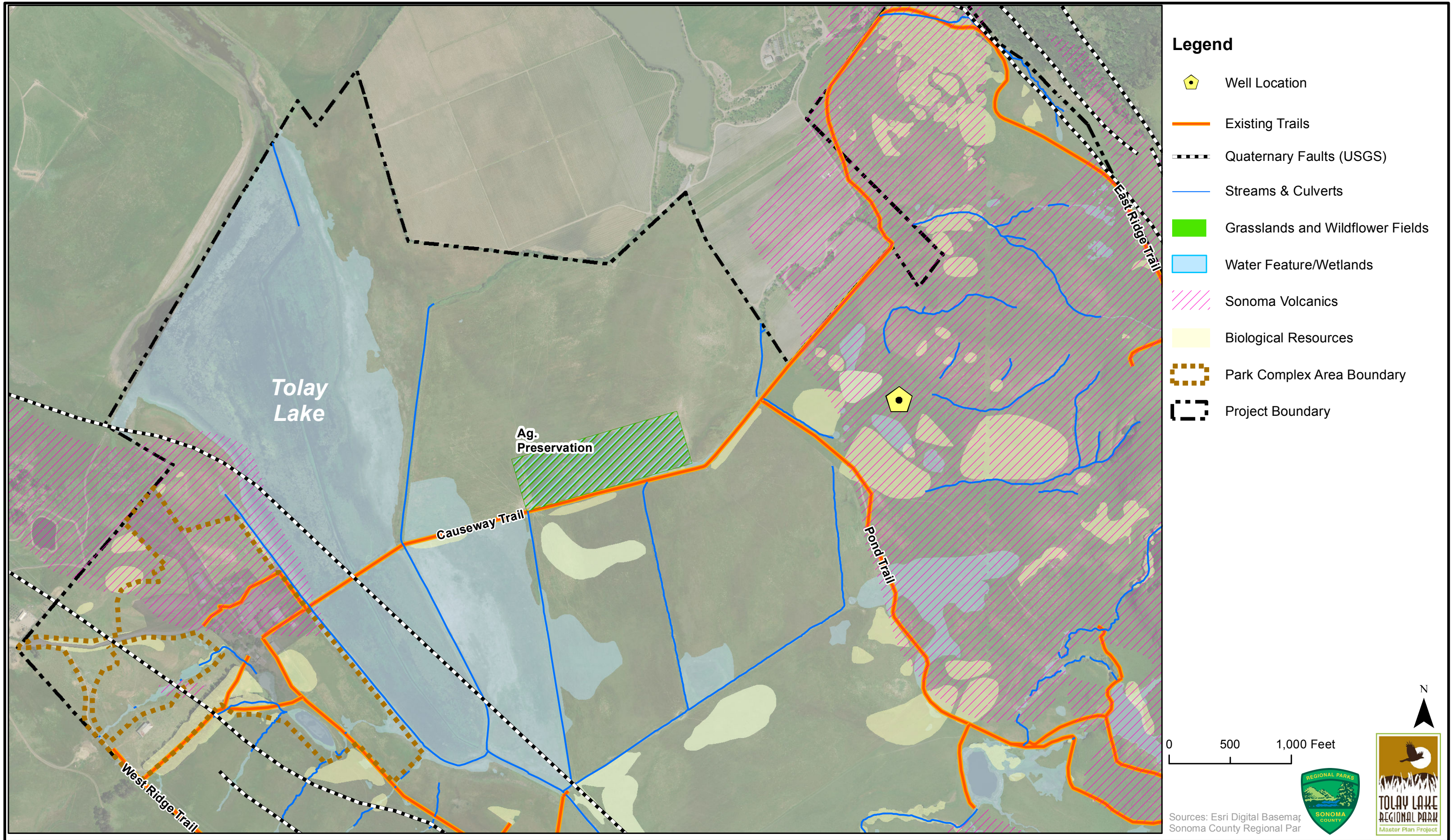
Sources: Esri Digital Basemap, Sonoma County Regional Parks



NOTE: Letter labels correspond to DEIR Table 3.3

Figure 5-2



Park Interior Preferred Conceptual Site Plan



- Legend**
- Well Location
 - Existing Trails
 - Quaternary Faults (USGS)
 - Streams & Culverts
 - Grasslands and Wildflower Fields
 - Water Feature/Wetlands
 - Sonoma Volcanics
 - Biological Resources
 - Park Complex Area Boundary
 - Project Boundary

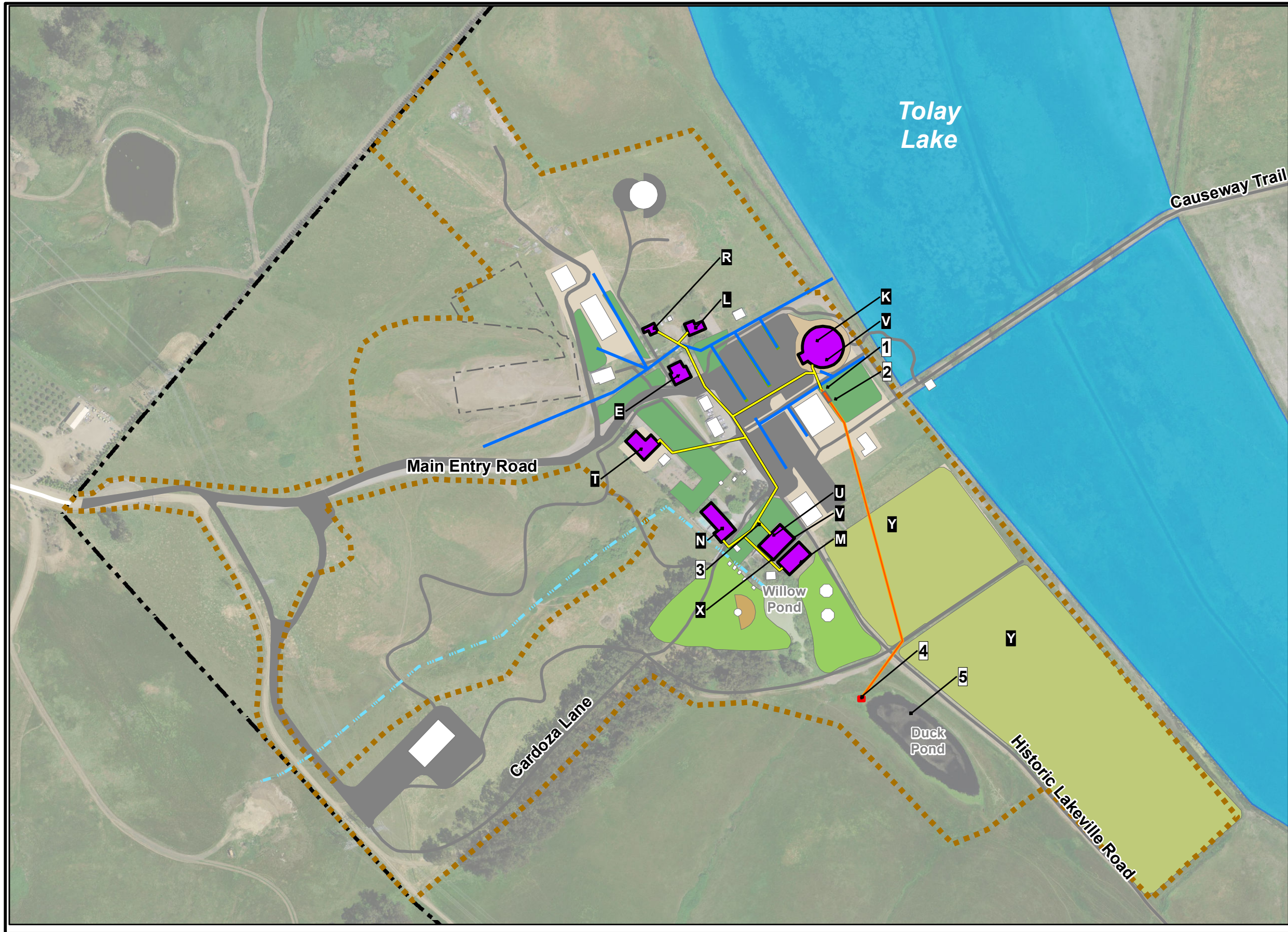
0 500 1,000 Feet

Sources: Esri Digital Basemap
Sonoma County Regional Par

N

Figure 5-3
Ground Water Availability



- Legend**
- Wastewater Collection System
 - Pipeline to Wastewater Treatment System
 - Storm Drainage
 - Creek
 - Building Connected to Wastewater System
 - Park Complex Area Boundary

- Proposed Wastewater Improvements**
- 1 - Dual Chamber Septic Tank
 - 2 - Duplex Pump System
 - 3 - Grease Trap
 - 4 - Trickling Filter
 - 5 - Potential Treatment Wetland Location

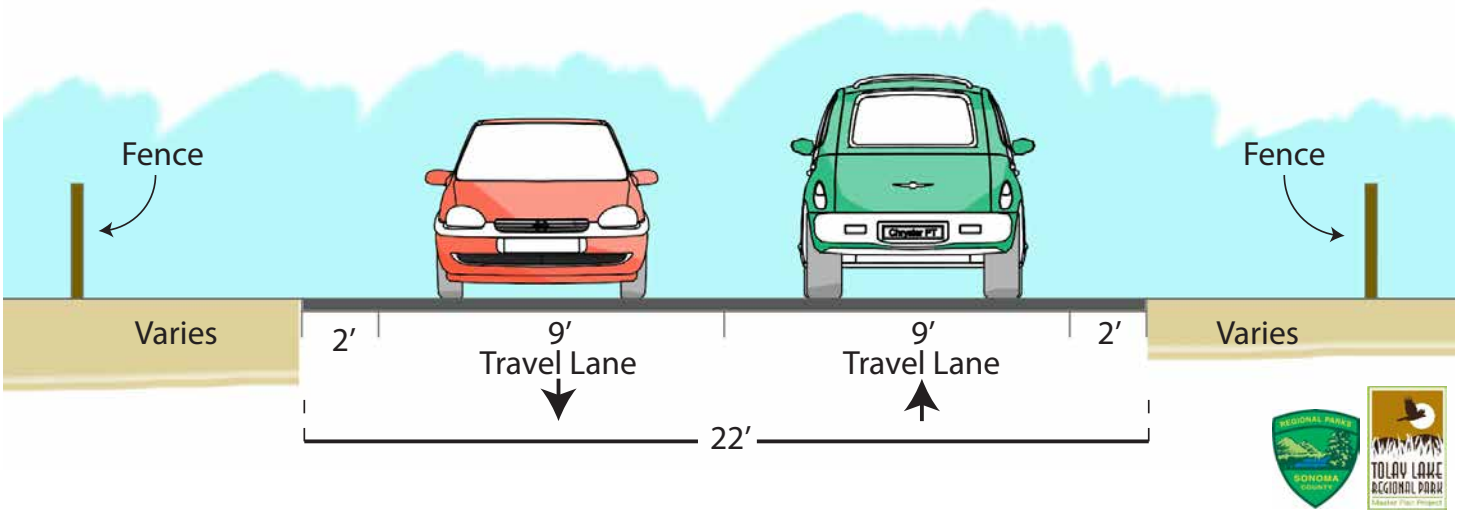
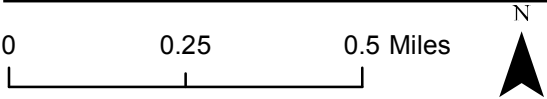
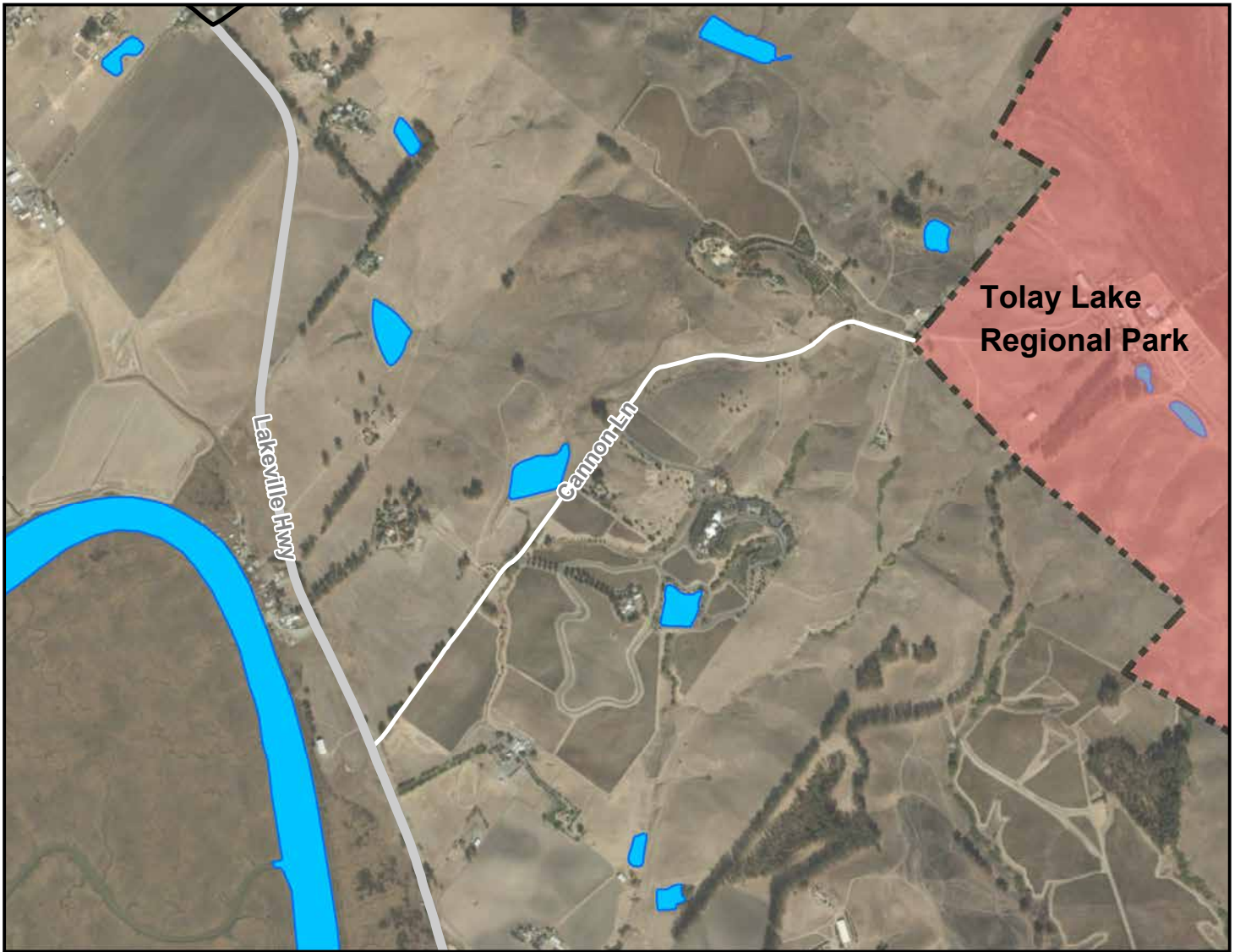
- Proposed Elements**
- E - Ranch Manager Residence
 - K - Visitor Center
 - L - Preserve and Interpret
 - M - New Bunk House
 - N - Park Office
 - R - Temporary Residence (Artist, etc.)
 - T - New Ranger Residence
 - U - Showers
 - V - Restroom
 - X - Kitchen and Dining
 - Y - Potential Spray Irrigation

N

0 150 300 Feet

Sources: Esri Digital Basemap, Sonoma County Regional Parks

Figure 5-4
Preferred Wastewater Treatment System



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Trails

The trail system proposed in this Master Plan is the principal means for providing comprehensive public access to the Park. Access to nature provides the user with an opportunity to enjoy an increased awareness of the site’s natural and cultural treasures. Coupled with protecting cultural resources and enhancing the site’s natural resources, access for recreational and educational enjoyment was one of the primary reasons behind the acquisition of the properties that comprise the Park.

The Park has many scenic and interesting destinations for park visitors who will travel along the trail system by foot, bike, or horse. Points of interest along these trails can be found in Chapter 7, Education and Interpretive Elements. Trail users will be able to experience a mixture of settings and environments, including the many native plants and micro-climates found on the varied terrain throughout the Park. The trail system was conceived after extensive public input, intensive consultation with the Tribe, consultation with the Land Trust, District, and neighbors, and consideration of the site’s many unique opportunities and prehistoric cultural and natural resource constraints.

Trail Types

The Park will include multi-use and pedestrian only trails, including educational nature trails and accessible trails. The majority of trails will be multi-use trails and are open to the general public for hiking, mountain biking, and equestrian use. Approximately one third of the trails will be pedestrian only trails to provide space for a more peaceful interaction with the land. Multimedia interpretation in many areas of the Park along trails will provide educational opportunities regarding the natural, historical and cultural resources of the Park. Trails will be designed to comply with ADA guidelines and will be accessible and utilized by people who are physically impaired, seniors, parents with strollers, and wheelchair users.

Proposed trails are described in greater detail in Chapter 8, Trails Plan.



Photo credit: Regional Parks staff



Tolay Lake Restoration

This section describes the lake restoration strategy selected by Sonoma County Regional Parks to best meet:

1. Ecological and environmental conditions and potentials,
2. Master Plan goals, and
3. Public desires and interests

This section provides a brief discussion of historic and current lake conditions; the alternative lake restoration options considered; and the preferred restoration choice of Regional Parks: Lake Outlet at Elevation 215 feet (Alternative 1). The primary source material for this chapter is found in Appendix G - Water Budget Analysis, Tolay Lake Restoration Alternatives and Appendix H - Tolay Lake Conceptual Ecological Model for Restoration Goals.

Background

Tolay Lake is a naturally occurring lakebed which when unaltered, flooded up in the wet season and was followed by a draw down in spring through summer. Tolay Creek is the dominant drainage within the Park, running 4.5 miles through the length of the property with numerous tributaries discharging into Tolay Creek from both West and East Ridge. Tolay Creek has been channelized within the lake approximately three-tenths of a mile, presumably to drain the lake for agriculture; dredge spoils are in several locations along the upper reach of Tolay Creek. The entire run of Tolay Creek below Tolay Lake is within a confined and incised channel with historic floodplain terraces present in the lower reach. The upper reach is approximately 4 to 10 feet deep, and 10 to 20 feet in width, while the lower reach is approximately 8 to 15 feet in width with similar depths.

Flows of Tolay Creek are seasonal with active, flowing water observed in late fall through spring months, but dry by summer, while the tributaries are ephemeral to intermittent with winter through spring flows. Deeper pools in the lower reaches of Tolay Creek typically remain wetted year-round, and pools in several tributaries remain into summer. The surface area of Tolay Lake varies throughout the year, depending on rainfall. Through the spring, as the water in Tolay Lake evaporates, the lake functions as a large vernal pool.

Currently, Tolay Lake is a relatively shallow lake, averaging between 4 – 8 feet in depth, filling in the winter, draining in the spring, with a surface area of approximately 200 acres during the rainy season. In the winter, Tolay Lake provides an important refuge for migrating waterfowl and lies within the Pacific Flyway. The lake's water surface elevation and size can vary greatly depending on annual rainfall, and can be thought of as an intermittent lake. This intermittent lake ecosystem is more like a vernal pool-freshwater marsh gradient than a perennial deep water lake ecosystem. Comparable lakes within Sonoma County include Ledson Marsh and Laguna Lake (refer



Photo credit: Regional Parks staff

to Section 5.4.3 below). Restoration goals are based on ecosystem dynamics and structure of an intermittent perennial/seasonal fishless lake, comparable to Ledson Marsh or Laguna Lake.

As discussed in Chapter 2, Purpose, Objectives, and Goals, the primary goals for lake restoration are:

- Enhance the frequency and duration of inundation to the extent feasible
- Identify and reduce artificial constrictions to flow
- Enhance the habitat for migratory waterfowl to the extent feasible
- Restore seasonal wet meadow habitat
- Enhance/restore/create habitat for red legged frogs to the extent feasible
- Enhance/restore/create habitat for western pond turtles to the extent feasible

Restoration of Tolay Lake is a key component of the master planning process. It also provides an opportunity to restore and improve quality seasonal wetland habitat in the region.

Historic and Current Lake Conditions

During the late Holocene (within the last 11,000 years), droughts in the San Francisco Bay Area lasted from decades to centuries, punctuated by extreme floods and relatively benign, moderate climates relative to the historical period (Malamud-Roam et al. 2007). These alternating hydrologic states, driven by long and short-term climate cycles would have had Tolay Lake shifting between wet and dry phases; the lake environs would have lacked a balanced steady-state ecosystem. As a result, the lake environs' vegetation type, distribution, and abundance would be varied. Submerged aquatic vegetation and freshwater marsh would expand rapidly during wet cycles when perennial shallow water or soil saturation would occur for multiple consecutive years. During prolonged dry phases, vegetation communities would die back and become displaced or marginalized by seasonal marsh vegetation tolerant of dry soil conditions. Submerged aquatic vegetation would only survive in deepest depressions or local seeps and springs where freshwater marsh conditions could persist during extreme droughts. The nature of these aquatic ecosystems would have been highly fluctuating, with recurrent episodes of extreme wetness and dryness.

Historically, Tolay Lake was the largest natural freshwater lake in Sonoma County - in particularly wet years, Tolay Lake may have been a perennial lake. The cultural and historic resources at the lake have been determined to be of statewide and national importance. Numerous charm stones, which are carved rock objects used by Native Americans for both ritual and practical purposes, have been found in the lakebed. The charmstones are of various types, and thought to be of various ages, dating back 4,000 years.

Historical accounts indicate that the lake surface area reached between 300 – 450 acres when full in winter. In the mid-to-late 1800s, the natural dam that created the lake was removed to facilitate farming of the rich lakebed soils. Multiple diversion ditches (Figure 5-6) were created to remove water from the lakebed. The lake bottom was drained and used for agricultural purposes until the property was purchased by the District and Tribe in 2005. The primary use and visions changed to reflect the land's operation as a park. The land is now being managed to conserve cultural and natural resources.

Currently, Tolay Lake is prone to flooding during the rainy season – see photos below. Lake surface water elevation is controlled by the farm bridge, located on the downstream end of the lake. However, additional structures contribute to flooding including: the causeway, the causeway culverts, and the culvert at the downstream end of the lake (area known as the horseshoe). Ensuring that adequate water supply reaches the lake and that flooding upstream properties is minimized will be important features of the preferred lake restoration design.



Left: Prior to Lake flood.



Right: Following Lake flood.

Ecological Processes of a Late Holocene Period Tolay Lake

In addition to the alternating, unsteady-state aquatic ecosystem likely to have occurred in the past, other ecological processes would have occurred during this period, including those influenced in part by native settlement (i.e., Coast Miwok or Paleoindian) burning and hunting practices.

VARIATION IN WETLAND/AQUATIC SOIL BIOGEOCHEMICAL PROCESSES.

During wet phases, de-nitrification (net loss of available nitrogen) and carbon sequestration would be significant in lakebed and freshwater marsh soils. During droughts (increased frequency/duration wetland soil drainage), soil nitrogen would be nitrified (i.e., the process whereby organic nitrogen is changed into nitrate) and released from soil as available, elevated nutrients; soil carbon would be released by decomposition of vegetation.

PERMANENT FISHLESS LAKE WITH DOMINANCE BY INVERTEBRATES AND AMPHIBIANS; AND WADING BIRDS AS TOP PREDATORS.

The episodic emergence of the lakebed during droughts, and the natural disconnection of the lake from potential fish dispersal habitat, indicate that the lake was normally fishless. Such a naturally fishless intermittent lake would be dominated by invertebrates (crustaceans, insects) and microzooplankton grazers of algae. Suppression of algae would maintain high water clarity and water quality, and promote primary productivity through vascular plants (submerged aquatic vegetation and emergent marsh vegetation). Absence of fish predators would promote high abundance of amphibians that can complete life-cycles in one season.

HERBACEOUS VEGETATION DOMINANT ALONG THE INTERMITTENT LAKE MARGINS.

Woody riparian vegetation at lake margins would likely have been limited by frequent (annual) burning during Coast Miwok occupation. The Coast Miwok utilized prescribed burning for annual post-harvest (pinole) grassland management or for hunting drives. Frequent or recurrent burning would likely select for herbaceous vegetation, and limit riparian scrub to small groves and limit oak woodland to isolated mature trees. Sedge beds would likely occur in seeps of lower hillslopes bordering the lake and along some lake margins.

VARIATION IN WATERFOWL AND WADING BIRD HABITATS.

Submerged aquatic vegetation habitat would become available both for diving ducks and dabbling ducks in deeper water areas during wet phases when vegetation canopies can reach the water surface and provide foraging habitat (seed, herbage, invertebrates) at all depths. Dabbling habitat would not be limited by water depth when these canopies were extensive. In dry phases (a seasonal marsh period), dabblers would be excluded in freshwater tall emergent marsh, and forage primarily in more extensive short wetland vegetation during submergence in winter-spring (seasonal marsh or vernal pool flats). Principal food items for dabbling ducks would shift with climate phases: chironomid midge larvae and seed and broadleaf forbs and spikerush from seasonal marsh; pondweed turion, tuber, and seed and smartweed seed). Sedge beds and tall continuous canopies of wet meadow fringing the lake could have provided nesting habitat for dabbling ducks. Tall emergent freshwater marsh, or (limited) riparian scrub such as California rose stands could have provided nesting habitat for tricolor blackbirds.

VARIATION IN AMPHIBIAN AND REPTILE HABITATS.

A naturally fishless aquatic ecosystem would also have supported large populations of amphibians with larval stages lasting only one water year: Pacific chorus (tree) frog and California red-legged frog, California tiger salamander, and other salamander and newt species. Though breeding habitat quality and extent could vary with the extent of shallow-submerged marsh, western pond turtles would have likely re-colonized the intermittently perennial lake from channel pools in Tolay Creek during wet phases with deep perennial water.

Comparable Aquatic Ecosystems

Peter Baye (Baye 2014) assessed the Tolay Lake ecosystem and found it to be comparable to two other aquatic ecosystems in Sonoma County: Ledson Marsh and Laguna Lake. According to Baye, the seasonal (winter-spring) lake hydrology of these two aquatic ecosystems in relation to their wetland vegetation in the 1970s, and their historical or active agricultural settings (ranching and farming), are similar to the current Tolay Lake ecosystem. The Tolay Lake ecosystem exhibits extensive wetland lake beds that grade from vernal pool-like summer-desiccated flats, to later-emerging, moister seasonal marsh, and core areas of perennial saturated or flooded freshwater marsh, which is comparable to Ledson Marsh, as described below:

The entire area of Ledson Marsh is normally flooded in winter, but in the summer, only central parts contain water, being surrounded by extensive marshy ground. Peripheral areas dry up completely, and they are the ones that exhibit a rich vernal pool flora. In some summers the entire lake dries up, but...[1974-1975] it still had much water even in late summer. (Baye 2014)

Laguna Lake was still being drained for corn farming (the operations ceased in 1991) when this description of the lake's hydrology was made:

Most of the area is a winter lake over 1 mile long and ½ mile wide. During the summer it dries up, exposing extensive muddy flats, but usually does not dry up completely until late summer, leaving just a strip of moist mud with a stand of tules in the middle. The area is under heavy agricultural use, being plowed regularly as water recedes and the exposed mud dries. Nevertheless, a vernal pool has time to develop before plowing. (Baye 2014)

Kamman's (2003) characterization of the pre-agricultural hydrology of Tolay Lake is consistent with these accounts of intermittent lakes and seasonal ponds in southern Sonoma County. Kamman determined that the original natural dam outlet was probably a bedrock feature at least in part and was 14 feet above the lowest lakebed elevation. This would indicate that the maximum potential depth of lake flooding in wet years prior to dam breaching for agricultural drainage in the late 19th century (Florsheim 2009).

Habitat Values and Species

Vegetation within Tolay Lake varies spatially, seasonally, and annually; variation largely depends on the amount of rainfall and position of depth within the lake. Generally, soils around the perimeter or elevated areas on the lake are saturated throughout the wet season and start drying out in early summer. These areas are flooded only in above-normal water years. The lower lake margin experiences saturation throughout most of the year to year-round, and is frequently inundated. The lakebed experiences frequent and repeated inundation within the wet season, which may remain into the dry season depending on volume and timing of rainfall. As a result, a shift from meadow to freshwater marsh habitat is evident between the upper lake margin, the lower margin, and the lakebed, effectively dividing the lake into approximately three vegetation alliances: meadow barley patches, water smartweed marsh, and mixed-annual wetland forb patches.

Tolay Lake provides an important year-round or nearly year-round water source for a variety of wildlife, from large mammals to migratory birds. Black-tailed deer, raccoon, long-tailed weasel (*Mustela frenata*), striped skunk (*Mephitis mephitis*), and Virginia opossum are likely to water in and around the lake, and the occasional occurrence of beaver (*Castor canadensis*) and river otter (*Lontra canadensis*) wander up Tolay Creek to the lake.

Tolay Lake is also recognized as an important wintering area for migratory waterfowl. The spatial extent and relatively shallow depth of the lake attracts ducks and other water birds, while the extensive vegetation provides important forage for over-wintering waterfowl. Eleven duck species have been identified, eight of which are dabblers, and include gadwall (*Anas strepera*), American widgeon (*Anas americana*), mallard (*Anas platyrhynchos*), cinnamon teal (*Anas cyanoptera*), northern shoveler (*Anas clypeata*), northern pintail (*Anas acuta*), green-winged teal (*Anas cracca*), canvasback (*Aythya valisineria*), greater scaup (*Aythya marila*), bufflehead (*Bucephala albeola*), and ruddy duck (*Oxyura jamaicensis*) (LSA Associates, 2009). Other birds observed in and around Tolay Lake and associated water bodies include Canada goose (*Branta canadensis*), pied-billed grebe (*Podilymbus podiceps*), double-crested cormorant (*Phalacrocorax auritus*), American coot (*Fulica americana*), and Caspian tern (*Hydroprogne caspia*) (LSA Associates 2009).

The shallow water and productive vegetation provide forage and cover for wading birds such as great blue heron (*Ardea herodias*), great egret (*Ardea alba*), and snowy egret (*Egretta thula*), which forage along the lake edge. Egret rookeries have been observed in blue gum groves along Lakeville Highway and downtown Petaluma, which may utilize Tolay Lake among other waterbodies in southern Sonoma County. The shallower margins of the lake likely provide foraging habitat for wintering and migrating shorebirds such as killdeer (*Charadrius vociferous*), greater yellowlegs (*Tringa melanoleuca*), least sandpiper (*Calidris minutilla*), western sandpiper (*Calidris mauri*), and long-billed dowitcher (*Limnodromus scolopaceus*).

Though the importance of Tolay Lake as habitat for invertebrates would benefit from a more in-depth investigation, it is reasonable to conclude that the seasonal drawdown of the lake likely reduces macro-invertebrate diversity. Insect hatches are likely in spring and early summer, providing important forage resources for bats, swallows, and other insectivores. The lake provides suitable breeding habitat in most years for western toads and Sierran tree frogs, and California red-legged frog in protected areas when waters remain into early summer (LSA Associates, 2009). Although American bullfrogs utilize the lake for forage and cover, potential for breeding may be limited due to the depth and seasonal drawdown.

Following selection of the preferred lake restoration design, Regional Parks will coordinate with the appropriate resource agencies to verify appropriate species-specific goals.

Opportunities and Constraints

The following is a partial list of opportunities related to restoring the lake.

- The static water line of the lake could be adjusted carefully, which would allow for more predictable, sustainable, and maintainable operations.
- Several flow constrictions could be removed or improved such as: the culvert at the causeway, the culvert at the horseshoe, and the channel cross section at the farm bridge. This would decrease the frequency, duration, and extent of flooding of the upstream adjacent properties.
- The drainage channels in the adjacent upland could be filled, which would restore the wet meadow habitat adjacent to the lake and direct more surface water runoff into the upper and lower section of the lake.
- The drainage channels within the lake can be removed, which would improve wetland habitat by reducing the extent of the summer draw down of the ground water table.
- The elevations along the property boundaries of the adjacent upstream properties include areas that are at the current static water line of the lake, which is 215 feet. If the lake water elevation was raised, then the lake would extend onto the upstream properties.
- The existing wetland habitat within the lake is under the jurisdiction of the US Army Corps and cannot be filled or impacted without permits. Impacts to jurisdictional wetlands in most cases require compensatory mitigation.
- The County has made an agreement with the Native American community to avoid significant excavation within the lake to prevent damage and/or disturbance of archeological artifacts within and adjacent to the lake.
- It is unlikely that there is enough surface water runoff from the watershed to support a significant increase in the area and surface volume storage of the lake.
- The existing wetland habitat requires consistent surface saturation or shallow inundation.
- The project should not increase the frequency, duration, and extent of flooding of the upstream adjacent properties without permission from the adjacent landowners.
- Any increase in flooding extent would also require an exception/exemption from the relevant regulatory agencies (i.e., Army Corps of Engineers, the County of Sonoma) in addition to private property owners.

Lake Restoration Alternatives

Over the past several years, Regional Parks has considered several approaches to lake restoration based on the concept that a large lake would be beneficial to park visitors by providing recreational opportunities like boating, kayaking, or swimming, in addition to providing valuable habitat for wildlife.

One alternative was a lake configuration with a capacity of 2,550 acre-feet, which represented the maximum size based on downstream topography and the potential to raise the outlet elevation significantly. A second alternative was a smaller lake configuration with a capacity of 1,100 acre-feet, which from hydrologic studies appeared to fit within the hydraulic region of the current lakebed. Both alternatives were rejected because of insufficient water available to substantially increase the size of the lake from its current size and the infeasibility of creating a significant amount of area with perennial hydrology.

Original lake restoration concepts required a Water Right from the State Water Resource Control Board. An existing water right application (started by the previous landowner, the Cardoza's) was amended in 2006 by Regional Parks for a lake with 1,100 acre-feet of capacity for a conceptual restoration plan that called for a downstream dam to collect and store stream water. As a result of additional lake, biotic, and aquatic studies and the process of developing the restoration plan, the Master Plan staff developed a better understanding of the lake's natural systems. The final lake restoration design includes minimally built structures (new culverts for the causeway) and mostly relies on natural systems. The State Water Resources Control Board reviewed current lake restoration

design concepts and determined that Tolay Lake Alt #1 Conceptual Restoration Plan would not require a State Water Resources Control Board approved Water Right.

As part of this master planning process, Regional Parks considered five restoration alternatives with reduced surface areas and lake capacities. Under all alternatives habitat restoration would occur in the multiple drainage ditches that were constructed to drain the lake to facilitate agricultural use of the lakebed. Figure 5-6 depicts the drainage ditches and proposed habitat restoration actions. The five restoration design alternatives for the lake include the following:

- Alternative 1 – Lake Outlet at Elevation 215 feet;
- Alternative 2 – Lake Outlet at Elevation 218 feet without a Back-berm;
- Alternative 3 – Lake Outlet at Elevation 218 feet with a Back-berm;
- Alternative 4 – Mid-berm Alternative;
- Alternative 5 – Lake Outlet at Elevation 215 feet with Enhanced Southeast Basin.

Table 5-2 shows the estimated lake size and storage volume for each of the alternatives.

Table 5-2 Size and Storage Volume for Each of the Restoration Alternatives		
Alternative	Size (acres)	Storage Volume (acre-feet)
Alternative 1	71.1	97.7
Alternative 2	171	439
Alternative 3	150 ¹	350 ¹
Alternative 4	93.3 ¹	115.5 ¹
Alternative 5	93.3	115.5

¹ Approximate measurement

Of these alternatives, Regional Parks chose Alternative 1, Alternative 2, and Alternative 5 for a water supply analysis to determine which alternative would be most feasible (see Appendix G, “Technical Memorandum – Water Budget Analysis, Tolay Lake Restoration Alternatives”; WRA, November 11, 2014). Regional Parks determined that Alternatives 3 and 4 were not feasible for several reasons, including the need for complex water control structures. These alternatives were not evaluated further. From Alternatives 1, 2, and 5, Regional Parks staff chose Alternative 1 as the preferred option. Alternative 1 is discussed in greater detail below, and shown in Figure 5-1 and Figure 5-2.

ALTERNATIVE 1 – LAKE OUTLET AT ELEVATION 215 FEET.

Alternative 1, as shown in Figure 5-7, was evaluated because previous analysis indicated that this wetland size is in balance with the available water from the watershed and this alternative would not increase flooding on the adjacent upstream properties.

This alternative would maintain the elevation of the lake outlet at 215 feet for both the northwestern and southeastern segments of the lake. It would include reducing the frequency and duration of flooding by increasing the flow capacity of the causeway culvert, eliminating the horseshoe culvert, and increasing the cross-sectional area at the farm bridge. This alternative would establish a stable water elevation and reduce flooding. This alternative would have a maximum lake size and storage volume of 71.1 acres and 97.7 acre-feet, respectively.

Based on the results of the water budget analysis and hydrologic and environmental considerations, Regional Parks has determined that “Lake Outlet at Elevation 215 feet” (Alternative 1) provides the best approach to restoration of Tolay Lake. This alternative provides the greatest diversity of habitat and is based on natural hydrological systems. Alternative 1 also protects cultural resources in the lake bed and is the most cost effective. See Figure 5-8.

Table 5-3 Specifications for the Preferred Lake Restoration Alternative					
Restoration Alternative	Storage Volume (acre-feet)	Area (acres)	Percent Year with Inundation (%)	Potential Adverse Impact on Existing Habitat	Potential Insufficient Hydrology on Proposed New Habitat
Lake Outlet at Elevation 215'	97.7	71.1			
Shallow Seasonal Wetland		11.3	42%	None	None
Deeper Seasonal Wetland		29.8	100%	None	None
Emergent marsh		34.0	100%	None	None
Open Water		None	N/A	N/A	N/A

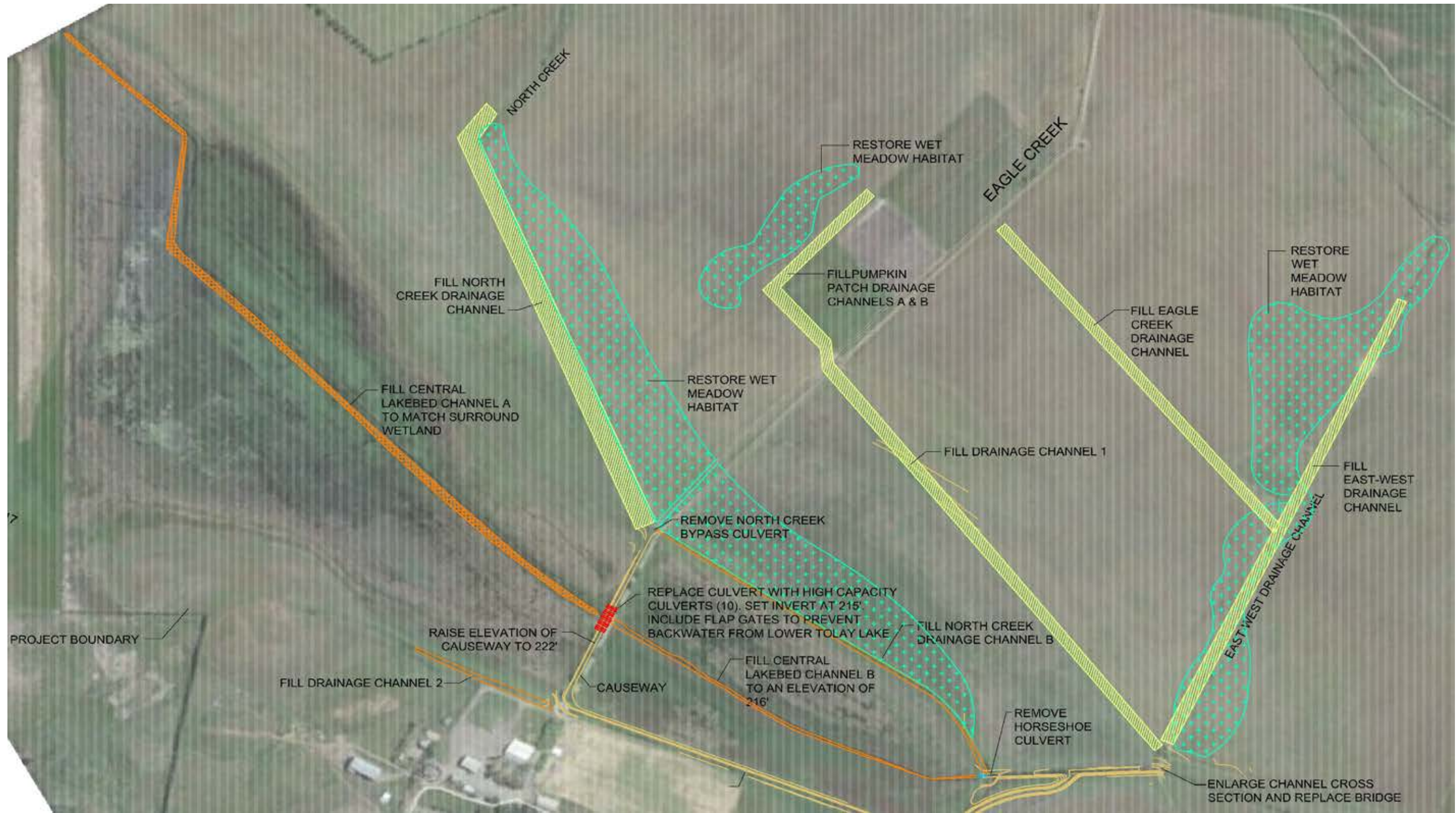
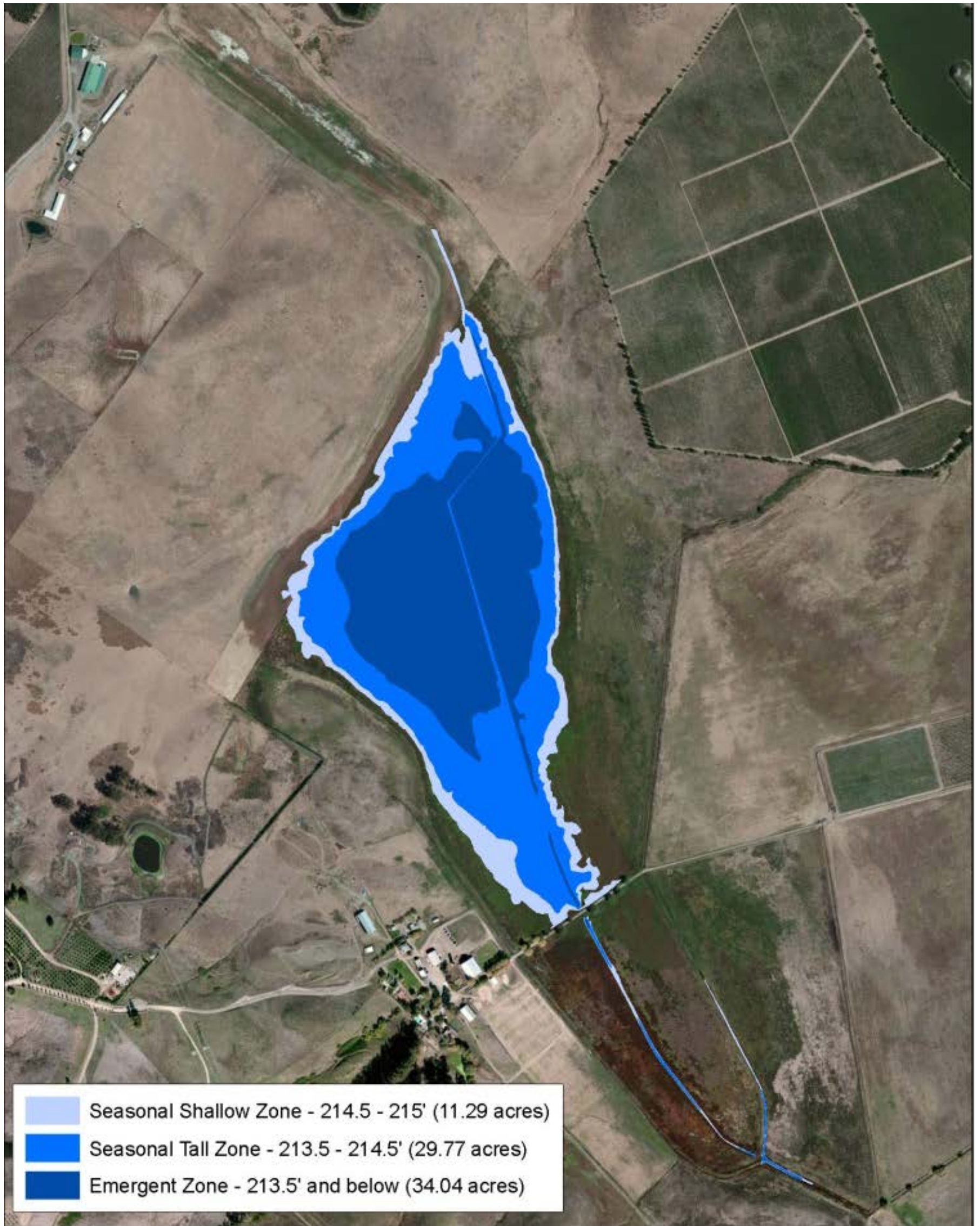
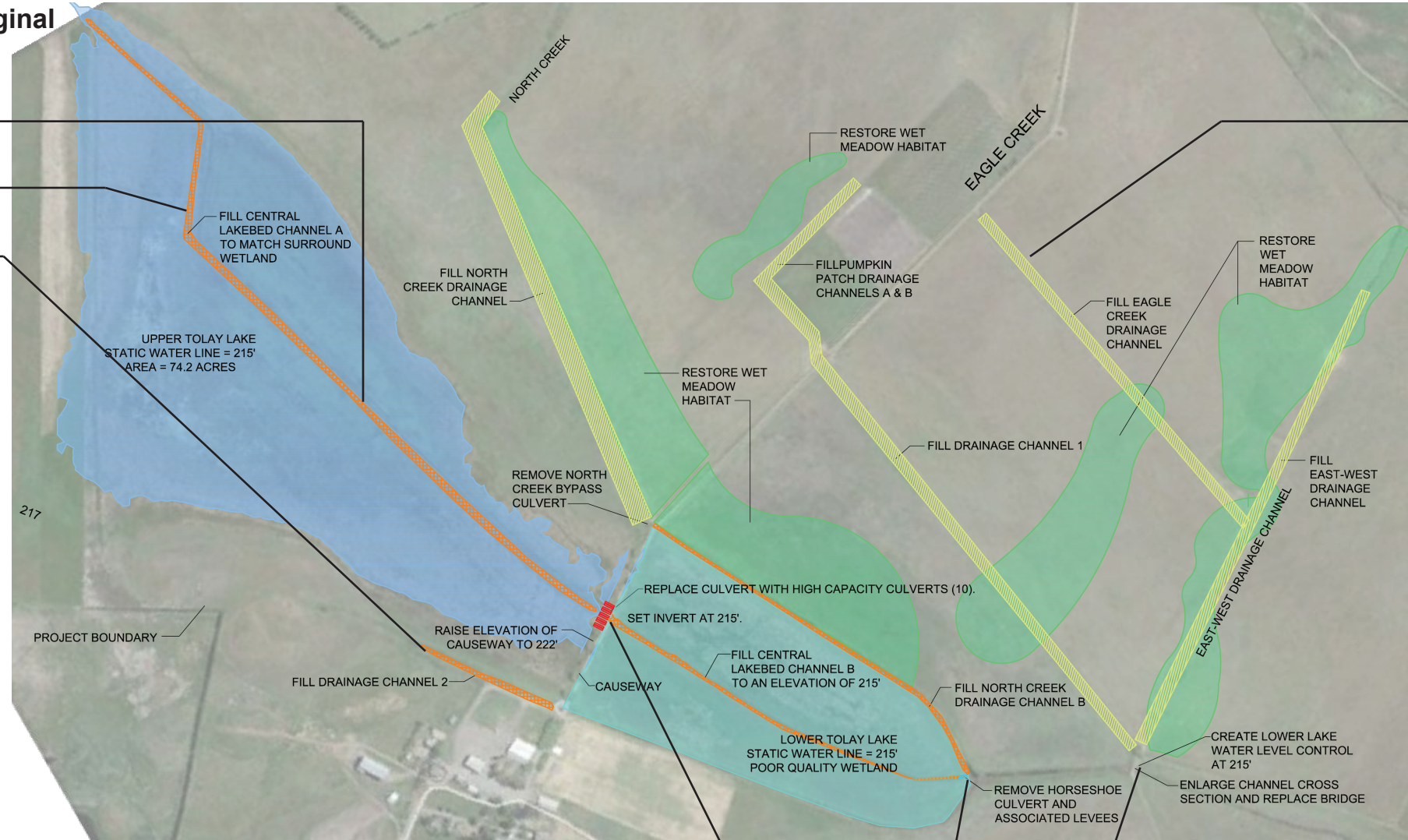


Figure 5-6
Diversion Ditch
Restoration



Restoration Activities to Restore Original Hydrology Within the Lake:

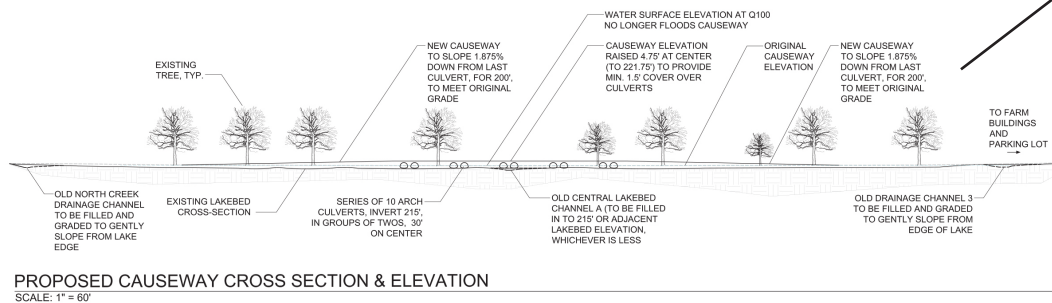
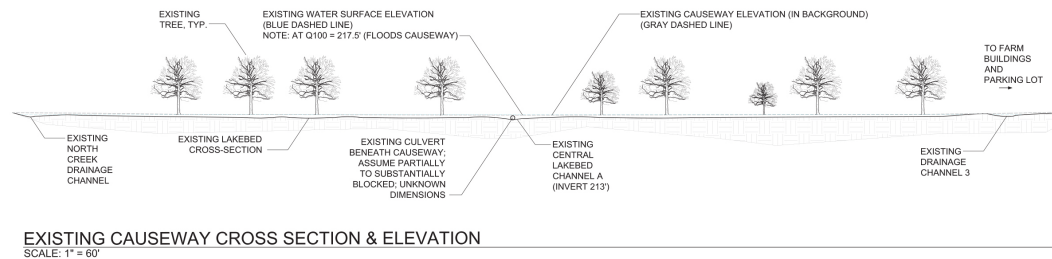
- Fill Central Lakebed Channel B
- Fill Central Lakebed Channel A
- Fill Drainage Channel 2



Restoration Activities to Restore Wet Meadow:

- Eliminate hillside drainage ditches as listed below, to keep water on-site; wet meadows will form where topography allows:
- Remove North Creek Drainage Channel and Culvert
 - Remove Eagle Creek Drainage Channel
 - Fill the East-West Drainage Channel
 - Fill Pumpkin Patch Drainage Channels A & B
 - Fill Drainage Channel 1

Restoration Activities to Reduce Flooding of Upstream Properties:



- Replace Causeway Culvert (Raise Causeway to 222')
- Remove Horseshoe Culvert
- Increase outlet cross-sectional area at Farm Bridge

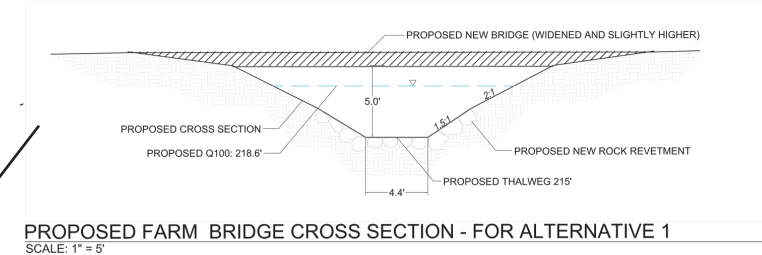
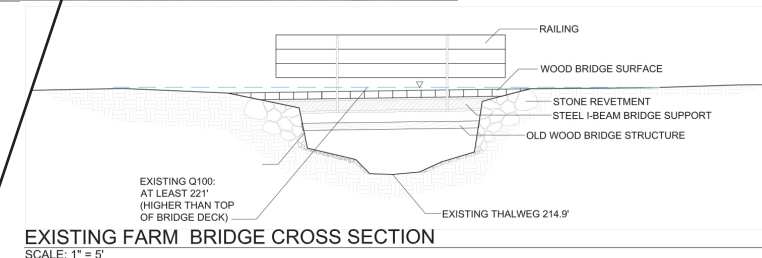


Figure 5-8

Implementation and Phasing Strategy

Project Types

The Park Master Plan has a number of distinct project areas that can be implemented in both the near and long term. Some of these improvements can be completed as stand-alone projects, while others are dependent on other projects or project areas being completed or constructed concurrently. The main project type categories, followed their respective examples, include:

- Trail Network, Camping and Picnic Areas: new trails construction, trail bridges for creek crossings, decommissioning trails, viewpoints, picnic areas and tent camping areas
- Buildings and Utilities: visitor center, wastewater treatment plant, spray irrigation, restrooms, showers, historic buildings (i.e., Creamery/wine storage building)
- Interpretive Features: story zone locations
- Traffic and Circulation Improvements: Cannon Lane improvements, traffic signal additions, parking facilities improvements
- Tribal Projects: cultural gathering area
- Environmental Restoration: Tolay Lake, native grassland, and riparian/wetland restoration

Various design requirements and permits will be required depending on the specific details of individual projects. Projects will be implemented in close coordination with relevant permitting agencies and in full compliance with permit conditions. Some of the relevant permitting agencies include:

- Army Corps of Engineers
- California Department of Fish and Wildlife
- Regional Water Quality Control Board
- Sonoma County Agricultural & Open Space District
- Sonoma County Permit and Resources Management Department
- Sonoma County Regional Parks
- Sonoma County Transportation and Public Works
- State Historic Preservation Office

Implementation Phases

Development of any components identified in this Master Plan may be done as one project or in multiple sub-phases, based on numerous factors including but not limited to funding sources and availability, capital improvement plan priorities, available infrastructure, cultural and other environmental constraints, and community volunteerism and support. Table 5-4 summarizes the actions that will be implemented over the life of the Master Plan. The following sections identify some of the more significant phasing and priority considerations for some of the Master Plan components.

PHASING AND PRIORITY SETTING

Development of any project identified in the Master Plan is prioritized depending on whether these actions are dependent on the implementation of previous actions. For example, the wastewater plant needs to be in place before overnight facilities (including additional restrooms) at Tolay Lake are added. The Master Plan also prioritizes each project based on available funding, anticipated duration of the project, and permitting requirements.

POTENTIAL FUNDING SOURCES

Funding for projects in the Tolay Lake Regional Park will come from a variety of sources, including, but not limited to: donations of time and services, park in-lieu fees, development impact

fees, state-wide bond initiatives (e.g. Proposition 84), local bond measures, federal grants, and state grants. Preliminary statements of construction and maintenance costs for individual projects should be prepared to assist Regional Parks with priority setting.

Potential grant funds and state-wide bond initiatives are summarized below.

The Foundation for Youth Investment received a \$10.7 million grant in 2013 from the PG&E Stewardship Council. The Foundation will use these grant funds to provide greater resources to connect children, youth, and young adults in the PG&E service territory to nature, parks, open spaces, and the outdoors, and will particularly serve the needs of underserved youth.

The Ford Foundation makes grants in the categories of project planning and support; general support; and endowments. The Foundation receives about 40,000 proposals and makes about 1,400 grants. Requests range from a few thousand to millions of dollars.

The National Trust for Historic Preservation offers limited grants from their National Trust Preservation Funds program to encourage preservation at the local level by providing seed money for preservation projects. These grants help stimulate public discussion, enable local groups to gain the technical expertise needed for particular projects, introduce the public to preservation concepts and techniques, and encourage financial participation by the private sector. The National Trust is particularly interested in projects that relate to building sustainable communities, reimagining historic sites, promoting diversity and place, and protecting historic places on public lands. Grants generally start at \$2,500 and range up to \$5,000, though larger grants may be available. The application deadlines are February 1, June 1, and October 1.

The San Francisco Foundation's Environment Program seeks to improve the environmental health and well-being of the Bay Area's most vulnerable and impacted communities while protecting and preserving the region's natural environment. It supports organizations that shape policies and regulations at the local, regional, and state level to maximize equity, environmental justice, and environmental health outcomes for all communities and looks for opportunities to leverage funds and projects through public private partnerships and donor aligned giving.

The Land and Water Conservation Fund program (administered nationally by the National Park Service and California State Parks at the state level) provides matching funds to the states for statewide planning, and for acquiring and developing outdoor recreation areas and facilities. Priority development projects include trails, campgrounds, picnic areas, natural areas and cultural areas for recreational use. The National Park Service is currently reviewing California State Park's Statewide Comprehensive Outdoor Recreation Plan. The new Application Guide for local and state agencies will be available soon. The 2015 Statewide Comprehensive Outdoor Recreation Plan (SCORP) is being reviewed by the National Park Service. Upon SCORP approval, State Park's Office of Grants and Local Assistance (OGLA) will post a new draft Application Guide here. OGLA anticipates that the next application cycle due date for local agencies will be February 3, 2016. Land and Water Conservation Funds were used to purchase the Tolay Lake property.

Proposition 40. The State's Wildlife Conservation Board's website shows a remaining balance of \$89,000,000 for "Threatened Species, Wildlife Corridors & Landscapes, Public Access, and Land Management." The Board has received and is currently evaluating a substantial number of new projects to be funded with the remainder of these funds and will continue to accept and consider new project proposals until all funds are exhausted.

Proposition 50. Proposition 50 made \$940 million available to the Wildlife Conservation Board (WCB) for habitat protection (e.g. fee and conservation easements), restoration, and enhancement. The WCB's website shows a remaining balance of \$23,261,963 for the San Francisco Bay Area and notes that these funds are continuously appropriated. The website also states that the Board has received and is currently evaluating a substantial number of new projects to be funded with the remainder

of these funds, and will continue to accept and consider new project proposals until all funds are exhausted.

Proposition 84. The program focuses on safe drinking water and water quality and includes multiple programs, one of which is oriented towards projects that facilitate public access. The Nature Education Facilities Program provides funds to institutions that combine the study of natural science with preservation, demonstration and education programs that serve diverse populations, institutions that provide collections and programs related to the relationship of Native American cultures to the environment, and institutions for marine wildlife conservation research.

Table 5-4 Tolay Lake Master Plan Phasing		
Phase	Type of Project	Project Name
Phase 1 First 5 Years	Trails/Camping/Picnic	TCR Entry to West Ridge (Multi-Use Trail)
		Bridge #1 (Vehicle Bridge)
		South Springs (Service Road)
		Lake Vista (Story Zone 2)
		Burrowing Owl (Multi-Use Trail)
		Fish Pond (Multi-Use Trail)
		Equestrian to Park Center (Multi-Use Trail)
		Oak Knoll (Hiking Trail)
		West Ridge Interpret (Hiking Trail)
		South Creek (Multi-Use Trail)
		Ghost Rock (Hiking Trail)
		Picnic Tables and Benches
	Buildings and Utilities	New Equipment Shed (Conceptual Site Plan Item C)
		Screen Plantings (Conceptual Site Plan Item D)
		Old Dairy Barn – Partial Preserve (Conceptual Site Plan #7)
		Park Center Landscape and Culinary Garden (Conceptual Site Plan #19, Item Q)
		Well and Water System
	Traffic and Circulation	Maintain existing conditions for opening
		Equestrian Parking (Conceptual Site Plan Item Z)
		Overflow Parking (Conceptual Site Plan Item H)
		Park Center Service Yard Road
		Equestrian Entry Road and Viewpoint (gravel) (Conceptual Site Plan Item B)
		Cannon Lane Improvements
		Pave Park Center Entry Road (Conceptual Site Plan Item F)
	Interpretive Features	Park Center at Open
		Lake Vista (Story Zone 2)
	Environmental Restoration	Various wetland restoration areas

Table 5-4 Tolay Lake Master Plan Phasing		
Phase	Type of Project	Project Name
Phase 2 5-10 years	Trails/Camping/Picnic	Middle Reach (Hiking Trail)
		Middle Ridge (Multi-Use Trail)
		Group Camping Park Center (Hiking Trail)
		Group Camping Park Center (Group Site Facility)
		Historic Lakeville Eastside Link (Multi-Use Trail)
		Bridge #4 (Vehicle Bridge)
		East Ridge Canyon (Multi-Use Trail)
	Trails/Camping/Picnic (continued)	Coyote Camp (Multi-Use Trail)
		Coyote Camping (Backpacking Individual Sites)
		Camping (Backpacking Individual Sites)
		Tolay Creek West Creek (Hiking Trail)
		Group Picnic (Hiking Trail)
		Group Picnic (Facilities Park Center)
		Buildings and Utilities
Additional Overflow Parking (Conceptual Site Plan Item H)		
Sales/Group Picnic Shelter (Conceptual Site Plan Item S)		
Park Office (Conceptual Site Plan Item #5, Item N)		
Vera/Green House Demolition (Conceptual Site Plan #4)		
New Ranger Residence (Conceptual Site Plan Item T)		
John Sr. House – Ranch Manager Residence (Conceptual Site Plan #3, Item E)		
Traffic and Circulation	South Entry Road – A/C Pave	
	South Parking Lot	
	South Intersection Signal	
Interpretive Features	Comprehensive Plan	
	Entry Road Vista	
	East Ridge View Point (Story Zone 6)	
	Oak Woodland (Story Zone 5)	
	Park Center Interpretive Programs (Story Zone 1)	
	Ghost Rock	
	Agriculture (Story Zone 4)	
	Petaluma Marsh (Story Zone 3)	
South Entrance		
Environmental Restoration	Lake Restoration (Conceptual Site Plan Item W)	
FIGR Projects	Cultural Gathering Area (Conceptual Site Plan Item A)	

Table 5-4 Tolay Lake Master Plan Phasing		
Phase	Type of Project	Project Name
Phase 3 10-20 Years	Trails/Camping/Picnic	East Ridge Canyon (Hiking Trail)
		Bridge #2 – Near Mengel Road (Trail Bridge)
		Bridge #3 – Replacement (Trail Bridge)
		Meadow (Multi-Use Trail)
		Middle Reach Connect (Multi-Use Trail)
		Top of Slope (Hiking Trail)
		Group Camping Ponds
Phase 3 10-20 Years (continued)	Buildings and Utilities	Waste Water Facility (Conceptual Site Plan Item Y, includes spray irrigation)
		Visitor Center with Restroom (Conceptual Site Plan Item K & V)
		Boardwalk (Conceptual Site Plan Item AA)
		Visitor Center Parking and Stormwater/Drainage for Parking
	Interpretive Features	Outdoor Class Stage (Conceptual Site Plan Item BB)
		Central Ponds (Story Zone 7)
		Middle Reach(Story Zone 8)
		Historical Route (Story Zone 9)
		Tolay Creek (Story Zone 10)
	Environmental Restoration	Bayview Point (Story Zone 11)
Portable Interpretation Display		
Phase 4 20-35 Years	Trails/Camping/Picnic	Lake Restoration (Conceptual Site Plan Item W)
		Parkwide Assessment of Additional Trail Needs
		One Tree Knoll (Hiking Trail)
		Tolay Creek South (Hiking Trail)
	Buildings and Utilities	Middle Ridge Connect (Hiking Trail)
		Hay Barn/Stone Floor Barn – preserve (Conceptual Site Plan #6, Item L)
		Animal Pen (Conceptual Site Plan Item I)
		Temporary Residence/Artist Residence (Conceptual Site Plan #1, Item R)
		Kitchen and Dining (Conceptual Site Plan #9, Item X)
		New Bunk House (Conceptual Site Plan Item M)
		Showers (Conceptual Site Plan Item U)
		Restroom (Conceptual Site Plan Item V, with Item U)
		Creamery – preserve (Conceptual Site Plan #8, Item L)
		Old shop – preserve (Conceptual Site Plan #12, Item P)
		Equipment shed – preserve (Conceptual Site Plan #14, Item P)
Slaughter house – preserve (Conceptual Site Plan #15, Item L)		
Bunkhouse – preserve (Conceptual Site Plan #2, Item L)		
Ranch Manager Residence (Conceptual Site Plan Item #3, Item E)		

Source: Tolay Lake Regional Park and MIG (2015)

