American River Parkway

NATURAL RESOURCES MANAGEMENT PLAN

SACRAMENTO COUNTY

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SPECIAL THANKS TO OUR FUNDING PARTNERS:

Wildlife Conservation Board
Sacramento Area Flood Control Agency
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American River Parkway

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FINAL | JANUARY 2023

Prepared for

Sacramento County and Sacramento County Regional Parks

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EXECUTIVE SUMMARY

PURPOSE AND SCOPE OF THE NRMP

The American River Parkway Natural Resources Management Plan (NRMP) is intended to provide relevant and defensible information to the Sacramento County Department of Regional Parks (Regional Parks) for making informed decisions for managing, maintaining, and enhancing Parkway resources. In general, the NRMP provides an understanding of existing Parkway resources, the effects of disturbances such as flood, fire, invasive species, and human impacts, as well as opportunities for protections and enhancements. The NRMP advises resource management for promoting healthy ecosystems and resource protections, while balancing concurrent Parkway goals of flood control, recreational opportunities, and public safety.

The NRMP builds on years of previous data collection conducted for the Lower American River Corridor Management Plan (RCMP) (2002), American River Parkway Plan (Parkway Plan) (2008), American River Watershed Common Features General Reevaluation Report EIR/EIS (2015), and efforts by Sacramento County, the American River Parkway Foundation (ARPF), the United States Army Corps of Engineers (USACE), the Sacramento Area Flood Control Agency's (SAFCA) Lower American River Task Force (LARTF) Bank Protection Working Group, and other agencies and organizations.

The NRMP is a guidance document that informs only Regional Parks' management of the Parkway and includes no directives applicable to other agencies and organizations with jurisdiction, or that conduct activities, in the Parkway. However, because management of the Parkway is a highly collaborative effort that involves numerous entities, the NRMP incorporates recommendations that inform how Regional Parks should collaborate with outside agencies and organizations to achieve the goals and objectives of the NRMP.

RELATIONSHIP TO THE PARKWAY PLAN

The Parkway Plan is the policy document for the American River Parkway that guides land use decisions affecting the Parkway. The Parkway Plan specifically addresses the Parkway's preservation, use, development, and administration. As described further in NRMP Chapter 2, Goals and Objectives, the Parkway Plan serves as the management plan for the portion of the Lower American River (LAR) designated as a Wild and Scenic River (WSR) by the Federal and State Wild and Scenic Rivers Acts (WSRA). The LAR from the Nimbus Dam to the confluence of the American River and Sacramento River is designated a "Recreation" river in the Federal and State WSR Systems. The Parkway Plan guides decision-making affecting the Parkway, which includes most of the area designated as WSR. The LAR from Hazel Avenue to Nimbus Dam is part of the Folsom Lake State Recreation Area and is managed by the California Department of Parks and Recreation (California State Parks).

The NRMP guides natural resources management of the same areas of the Parkway covered under the Parkway Plan; that is, the American River and adjacent floodplain from the river's confluence with the Sacramento River to Hazel Avenue. The Parkway Plan calls for the development of an integrated vegetation and wildlife management plan in Policy 3.5 and Implementation Measure 1.a. The NRMP serves as the plan that fulfills Policy 3.5 and Implementation Measure 1.a. The NRMP aligns with the goals and policies of the Parkway Plan.

NRMP DEVELOPMENT PROCESS

In 2008, Regional Parks began a process to develop a NRMP for the Parkway. The original NRMP Stakeholder Committee worked with Regional Parks from 2008 to 2010. The Committee was charged with gathering and evaluating natural resource data in order to provide recommendations to both protect and improve the health of the Parkway's ecosystems and natural values. In 2014, Regional Parks reinitiated the NRMP effort with the goal of creating a document that would be aligned with the goals and policies of the 2008 Parkway Plan. A new Stakeholder Committee convened in the spring and summer of 2015 to develop a set of recommended draft Plan Specifications to establish guidelines and parameters for the NRMP.

In 2018, Regional Parks solicited proposals for the NRMP and secured a team of consultants. Work on the NRMP began in late 2018, starting with data collection and preparation of a GIS database. Two administrative draft NRMPs were prepared, the first in February 2020 and the second in January 2021.

Beginning in June 2020, Regional Parks entered into an agreement with ICF consulting and SAFCA to launch a NRMP Task Force. The NRMP Task Force consisted of a group of technical experts with jurisdiction in the Parkway or with experience working on natural resources projects in the Parkway. The Task Force was tasked with providing input on the draft NRMP content, including the goals and objectives, resource management categories, potential projects, and other key aspects of the NRMP. From June 2020 through February 2021, the Task Force met in a series of nine meetings in the lead up to the release of the NRMP public drafts, including a preliminary public draft in February 2021 and a public review draft in March 2021. The Task Force reconvened in October and November 2021 and February and May 2022 to assist in the finalization of the NRMP and development of the accompanying Monitoring Plan.

The final NRMP was completed in the summer of 2022. Concurrent with the preparation of the NRMP, Sacramento County prepared a Supplemental EIR (SEIR) for the NRMP, as required under the California Environmental Quality Act. An SEIR was prepared because the NRMP is a plan that falls within the scope of the Parkway Plan, for which an EIR was prepared in 2008.

Throughout development of the NRMP, Regional Parks and its consultants conducted community and stakeholder workshops to engage and receive input from the public on the draft NRMP material. In 2020 and 2021, Regional Parks hosted a total of 11 public workshops. The feedback received from the community and stakeholder workshops is summarized in Appendix A Public Outreach Summary Report.

NRMP ORGANIZATION

The NRMP is intended to be a comprehensive, high-level document detailing the County's plan to conserve preserve, and rehabilitate Parkway natural resources; the regulatory requirements that guide and constrain Parkway management; the existing conditions of the Parkway, including biological resources, physical resources, cultural resources, recreational opportunities, and built infrastructure; activities that affect the health and integrity of Parkway resources; and recommended management actions and implementation measures to achieve the County's goals and objectives. The NRMP includes eight chapters that address these topics. The flow of the NRMP is such that the initial discussion of the NRMP background and goals and objectives first gives the reader an understanding of the scope and mission of the NRMP. Then, the NRMP documents the existing conditions, including resources infrastructure, and scientific understanding of Parkway dynamics, upon which the goals, objectives, and management actions are based. An overview of the impacts of human activities on Parkway resources follows. The first seven NRMP chapters contain the integral information that supports the recommended management actions and implementation and monitoring considerations contained within the final chapter. The eight chapters are as follows:

Picnic tables and bench in the Upper Sunrise area. Photo Credit: MIG

CHAPTER 1. INTRODUCTION

CHAPTER 2. NRMP GOALS AND OBJECTIVES

CHAPTER 3. PARKWAY SETTING

CHAPTER 4. BIOLOGICAL RESOURCES

CHAPTER 5. PHYSICAL RESOURCES

CHAPTER 6. CULTURAL RESOURCES

CHAPTER 7. HUMAN USE IMPACT REDUCTION

CHAPTER 8. MANAGEMENT, MONITORING, AND IMPLEMENTATION

The NRMP is accompanied by a set of appendices that detail the findings of the NRMP community engagement process, provide technical background and consideration on the hydrogeomorphology of the Parkway, provide important details on the special-status and invasive plant and wildlife species in the Parkway, and lay out the NRMP's resource monitoring plan, which provides Regional Parks with a tool to track and monitor the implementation of the NRMP's goals and objectives. The Monitoring Plan also includes suggestions for monitoring protocols and best practices.

GOALS AND OBJECTIVES

The management recommendations of the NRMP are guided by a set of five overarching Goal Areas and accompanying goals and objectives. The five Goals Areas include:

- Goal Area 1. Biological Resources
- Goal Area 2. Physical Resources
- Goal Area 3. Cultural Resources
- Goal Area 4. Human Use Impact Reduction
- Goal Area 5. Agency and Community Coordination

The NRMP's Goal Areas encompass the three categories of natural resources that exist in the Parkway and address management of human impacts and the cross-agency and organization coordination required to manage Parkway natural resources. Each Goal Area includes a set of overarching goals and corresponding objectives that serve as the main implementation measures of the NRMP.

MANAGEMENT RECOMMENDATIONS

The NRMP applies an adaptive management approach in which a flexible, iterative management process allows the County and its partners to make changes to the NRMP's goals, objectives, and actions after initial implementation of the NRMP. It is important that the County is allowed to make future changes to the NRMP content for several reasons: 1) to ensure the NRMP continues to be informed by the most recent scientific advancements in knowledge and technology and 2) to adjust goals, objectives, performance measures, and actions based on data and understandings gained through previous management and monitoring efforts. To facilitate adaptive management of the Parkway's natural resources, Regional Parks will revisit the NRMP annually to assess successes and challenges and will review the document at least every five years.

The NRMP's management recommendations are intended to be high-level. The NRMP does not make recommendations specific to every location in the Parkway. Rather, the NRMP lays out potential projects at the Area Plan level and provides details on site-specific resource management projects that are in-progress or conducted by a non-County agency.

Resource Management Categories

Management recommendations contained within the NRMP fall under four resource management categories. The management categories correspond with the degree of intervention involved in managing the natural resources in an area. The management categories are intended to guide management decisions, including implementation of the NRMP objectives, in the Parkway. The management categories and examples of management actions that would fall under each management category are provided below.

- **CONSERVATION (LOWEST LEVEL OF MANAGEMENT INTENSITY):** Areas designated as conservation currently meet most applicable natural resource goals and those values will be conserved. This includes existing mitigation sites that require protection in perpetuity, as well as non-mitigation sites that meet desired conditions and provide high quality habitat. Considering the dynamic nature of all natural habitats, additional actions (e.g., restoration/enhancement) may be deemed suitable in Conservation areas in order to maximize suitable habitat values. Implementing restoration/enhancement actions within existing formal mitigation sites should be consistent with existing regulatory agreements/commitments. Federal mitigation sites, which have long-term commitments to protect habitat values, are mapped as a unique subset of the conservation category.
  - Examples of Management Actions: Includes routine O&M activities such as:
    - » Weed management (e.g., mowing and herbicide application)
    - » Small-scale invasive plant removal (e.g., hand-pulling)
    - » Vegetation management for fire prevention
    - » Management of illegal camping sites consistent with County policies
- **RESTORATION (MODERATE LEVEL OF MANAGEMENT INTENSITY):** Areas designated as restoration generally meet desired conditions in their current form but have been degraded to varying degrees (e.g., fire, illegal camping, social trails, degraded understory, etc.) and should be improved (e.g., habitat restoration/ enhancement) to meet goals. The need for ongoing restoration of degraded areas is expected.
  - Example Management Actions: May include the activities above under Conservation, plus:
    - » Invasive plant removal
    - » Planting native vegetation
    - » Management of social trails
    - » Redesign or relocation of facilities

- **NATURALIZATION (HIGHEST LEVEL OF MANAGEMENT INTENSITY):** Areas designated as naturalization were substantially altered in the past and should be modified in order to improve existing natural resource conditions or otherwise modify to meet the management objectives of the ARPP, NRMP, and W&SR policies. This applies to areas previously altered and outcomes are generally native habitat types that would typically be expected to occur in the Parkway. Naturalization also includes converting areas that have not been altered by past actions (unaltered) to heighten, intensify, or improve highly valued resource functions that may have been lost or degraded over time. Generally, this entails conversion of land cover type.
  - Example Management Actions: May include the activities described above under Restoration, plus these types of actions in previously altered areas:
    - » Substantial earthwork to restore or create more natural hydrology and site features
    - » Material removal (e.g., cobble and dredge tailings)
    - » Replacement/amendment/modification of substrate for planting
    - » Removal of material (e.g., channel bed and bank)
    - » Addition of material (e.g., gravel)
- **REHABILITATION:** Rehabilitation is applicable to any area, whether it be Conservation, Restoration, or Naturalization, could be degraded or damaged in the future and require action to improve their condition. Rehabilitation is suitable in any of the other categories and can happen anywhere in the Parkway, just as all areas in the Parkway are subject to degradation or damage.
  - Example Management Actions: Generally may include those activities necessary to bring the site back to conditions prior to recent damage, which may include:
    - » Temporarily limiting public access
    - » Debris removal
    - » Post-fire cleanup
    - » Minor surface grading to address damaged conditions
    - » Large-scale planting of appropriate native vegetation
    - » Large-scale invasive plant removal (e.g., with mechanized equipment)

Chapter 8, Management, Monitoring, and Implementation, gives additional detail on the four management categories, including example projects, and depicts areas feasible for resources management (i.e., areas that are not developed with recreational amenities, hardscape, or other features that would preclude management) within the Parkway as one of the four management categories.

Four key indicators were used to help develop the natural resource management categories and guide potential future management actions. These include level of alteration, inundation, vegetation communities, and land use. Chapter 8 of the NRMP contains maps showing these indicators throughout the Parkway.

There are several past and future projects within the Parkway that require mitigation for their impacts to various Parkway resources. Example projects include flood control/bank protection projects, transportation/bridge projects, and utilities such as electric transmission and sewer. The Parkway key indicators and the resource management categories provide a framework for identifying locations in the Parkway that are likely suitable for mitigation purposes. Chapter 8 of the NRMP contains maps showing the potential mitigation areas in the Parkway.

Social trail in the Discovery Park Area. Photo Credit: MIG.

NRMP IMPLEMENTATION AND MONITORING PLAN

Included in Chapter 8 of the NRMP are criteria intended to assist Regional Parks in determining the acceptability of potential projects in the Parkway. The criteria are also intended for project proponents to self-evaluate their projects and document their process for inclusion in their submittal to Regional Parks.

The degree of evaluation required for a project varies depending on the applicable management category and level of prior landscape/channel alteration assigned to a given area. Regional Parks will consider this information in evaluating proposed projects. A determination will be made as to whether the project will:

- Contribute to meeting Parkway Plan and NRMP goals and objectives without unacceptable indirect or unintended adverse effects.
- Achieve specific goals and objectives stated in the Parkway Plan and NRMP.
- Resolve any potential indirect or unintended adverse effects.
- Be readily achieved and sustainable.
- Set reasonable expectations for success for the short-and long-term.
- Result in values substantially better than the values that would exist without the project, post construction, and three and five years later.

A high priority will be placed on projects that assist in the implementation of the NRMP. These potential projects are reflected either in the goals and objectives and/or the Area Plan maps. Chapter 8 of the NRMP contains additional detail on the recommended process of evaluation of potential projects.

Potential Funding

Funding the potential projects described within and prompted by the NRMP is a key concern in NRMP implementation. There are numerous potential funding sources to implement various aspects of the NRMP. Primary among these sources is the County's General Fund. However, these sources are often limited and are subject to variability due to year-to-year differences in tax receipts. Other sources come from partner agencies that are active in the Parkway including the Wildlife Conservation Board (WCB), the flood management agencies including USACE and SAFCA, and the Water Forum. Furthermore, state grant opportunities, federal funding opportunities through the Natural Resources Conservation Service (NRCS), U.S. Fish and Wildlife Service (USFWS) Section 6 grants, and NGO funding opportunities may be available.

Monitoring Plan

The NRMP Monitoring Plan is included as Appendix D of the NRMP. The Monitoring Plan was developed to ensure the successful implementation of the NRMP over time by providing a framework for documenting activities, monitoring the health of Parkway resources, determining if NRMP goals are being achieved, and identifying where adaptive management should be applied. The Monitoring Plan identifies what needs to be documented to understand 1) if management practices and projects are meeting the goals and objectives of the NRMP, and 2) how the Parkway's natural resources are changing. Regional Parks and a Technical Advisory Committee will take the further step of adapting the plan to new information and changing conditions. While the Monitoring Plan is a broad oversight tool, it includes metrics that are specific to tracking the NRMP goals and objectives. The Monitoring Plan lays out a framework for data reporting and data management, including a sample data management plan and a sample standardized monitoring form. It also establishes an adaptive management process for Regional Parks to assess the success of NRMP implementation over time through a comprehensive review of the NRMP every five years and adjustments to the NRMP goals and objectives if warranted.

1 INTRODUCTION

CHAPTER 1

INTRODUCTION AND OVERVIEW

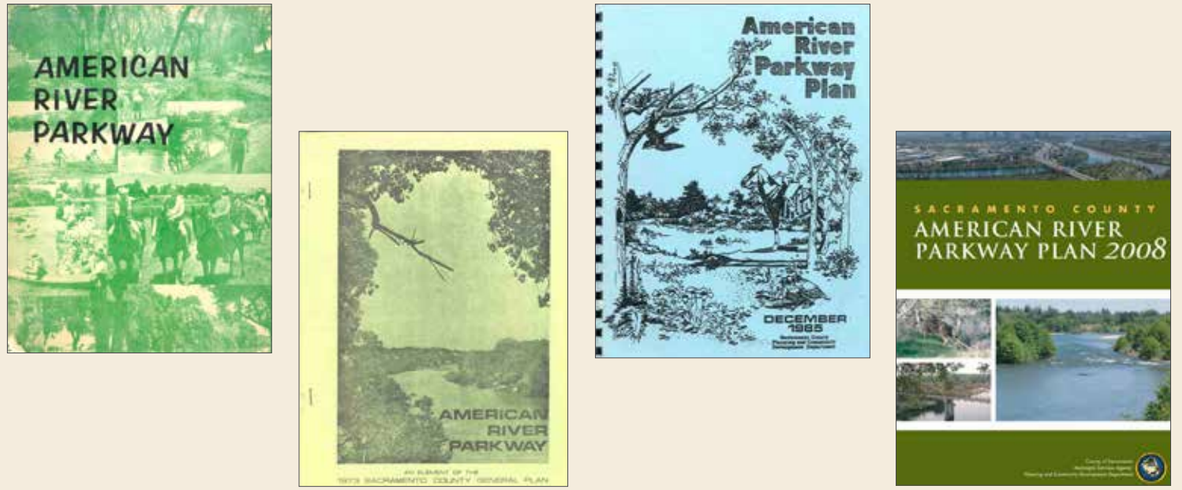
The American River is the lifeblood of the surrounding communities, sustaining residents with fresh air, clean water, access to nature, recreation, and a deep sense of place. The American River Parkway (Parkway) lands bordering the river are diverse civic spaces, spanning multiple jurisdictions and creating a sense of continuity and regional identity across the otherwise urban landscape.

The Parkway has been a focal gathering point over the centuries, and past generations have left behind rich layers of cultural artifacts that attest to human dependence on the river for nourishment, wealth, and respite from our increasingly urban lives.

The American River and its surrounding habitats are home to a diversity of plants and animals that rely on it to provide food, shelter, and movement corridors. Though many species are threatened due to habitat loss and fragmentation, the American River provides a sanctuary of uninterrupted habitat throughout an urbanized environment.

Maintaining these vital functions for both human and natural uses is of critical importance, and a holistic approach to resource planning and management must be applied. This approach honors the multifaceted nature of river systems and seeks to balance human needs and uses with the need to protect and enhance the extraordinary natural and cultural resources of the river and Parkway (see Figure 1-1). The Natural Resource Management Plan (NRMP) documents these resources, while creating a unified vision that seamlessly integrates recreational, cultural, and environmental protection within the Parkway.

FIGURE 1-1 NATURAL RESOURCES MANAGEMENT PLAN



The 1968, 1973, 1985, and 2008 American River Parkway Plan. Photo Credit: Regional Parks

The Parkway is an open space greenbelt extending approximately 29 miles and covers approximately 7,000 acres. The Sacramento County Department of Regional Parks (Regional Parks) manages lands on the lower 23 miles of the Parkway from the Hazel Avenue Bridge to the American River's confluence with the Sacramento River, approximately 5,000 acres. Several urban communities are located along the edges of the Parkway, including the City of Sacramento, the City of Rancho Cordova (on the south side), and portions of unincorporated Sacramento County, including the communities of Carmichael and Fair Oaks (on the north side).

The Parkway is surrounded primarily by urban development within Sacramento County. Undeveloped "bars" (elevated landforms near a river) contain larger areas of natural vegetation on both sides of the river in the upper half of the Parkway. These bars and designated parks (from upriver to downriver) include Sailor Bar, Sacramento Bar, Rossmoor Bar, Ancil Hoffman County Park, River Bend Park, and Arden Bar. Major vegetation types in the Parkway include grassland, oak woodland, willow riparian, cottonwood forests, ponds, marshes/seeps, introduced vegetation, and agricultural. Due to past mining activities along and in the river, there are also significant areas of barren land and mine tailings/rock piles.

The Parkway was conceptualized in 1915 when a City of Sacramento planner created a plan for a continuous park called the "American River Parkway" along the Lower American River (LAR). Sacramento County officially adopted a concept master plan for the Parkway in 1962, which was then incorporated into the County General Plan. The 1962 Parkway Plan was then revised and bolstered considerably in 1968 when the County added administrative policies to the document. It was subsequently updated in 1976, 1985, and most recently in 2008. The NRMP acknowledges the complex nature of the Parkway as it seeks to balance natural resource protection with maintenance of recreational opportunities and access, along with flood management activities (Figure 1-1).

1.1 PURPOSE OF THE PLAN

In 2008, Regional Parks began a process to develop a NRMP for the Parkway. The original NRMP Stakeholder Committee worked with Regional Parks from 2008 to 2010. The Committee was charged with gathering and evaluating natural resource data in order to provide recommendations to both protect and improve the health of the Parkway's ecosystems and natural values. In 2014, Regional Parks reinitiated the NRMP effort with the goal of creating a document that would be aligned with the goals and policies of the 2008 American River Parkway Plan (Parkway Plan). A new Stakeholder Committee convened in the spring and summer of 2015 to develop a set of recommended draft Plan Specifications to establish guidelines and parameters for the NRMP.

The NRMP is a guide for implementation of a multifaceted natural resource management program for the Parkway. It integrates ecological resource management and conservation with cultural resources protection, recreational use and impacts, and other human uses in the Parkway. The NRMP informs the management, conservation, and rehabilitation of Parkway land and natural resources, and helps to ensure compliance with environmental laws and regulations. Utilizing an adaptive management approach, the effectiveness of natural resource management efforts in the Parkway will be re-evaluated and the NRMP will be updated periodically.

The purpose of the NRMP is to establish resource management guidelines to minimize the impact of human uses on the Parkway and the environment. The NRMP includes goals and objectives designed to maintain natural communities located within the Parkway and identifies projects for implementation to accomplish goals and objectives. The NRMP takes an integrative approach to planning for ecological resources, cultural resources, and human use. However, it is important to note that the emphasis of the NRMP is to manage human uses in a manner that minimizes impacts to natural and cultural resources while maintaining recreational access.

Gathering area at Soil Born Farms in the River Bend Park Area. Photo Credit: Wildlife Conservation Board

1.2 PLANNING FRAMEWORK

The NRMP takes an integrative approach by considering the overlapping nature of ecological resources, human uses (e.g., utilities, electrical infrastructure, recreation), and cultural resources. A challenge associated with natural resource planning is determining an appropriate scale of analysis. The Parkway covers a relatively large area (23 miles under County jurisdiction covering over 5,000 acres), and is within and adjacent to multiple jurisdictions. As such, the natural and social systems within the Parkway vary substantially. The NRMP considers a Parkway-wide scale and is not intended to address every natural resource detail or issue that may occur at the site level. Taking a large-scale approach acknowledges that what happens in one area may impact what happens in an adjacent area. Planning recommendations are made within the 19 areas or area plans (described in detail in Chapter 3.0 Parkway Setting). The projects (or potential management actions) identified in this plan are programmatic in nature. Some projects, if implemented, will require a separate environmental review consistent with CEQA and/or NEPA, if applicable. Furthermore, planning at larger scales involves collaborating and cooperating with other agencies that have overlapping authority or jurisdiction (Haas 2001).

Planning at a broader scale acknowledges that some ecological processes require larger areas. Begon et al. (2006) note that the overall goal of conservation is to separate the species of interest in a region from the processes that threaten it (e.g., invasive species). Also, larger protected areas are more likely to have greater species diversity compared to that of a smaller area. Currently, the Parkway provides a rare linear connection between the Sierra Nevada foothills and the Sacramento River through an area that has rapidly urbanized over the past decades. Overall, the Sacramento Valley region has been converted from grasslands and wetlands to agricultural and urbanized land uses. Therefore, the Parkway provides habitat protection in a critical riparian area surrounded by areas altered by development.

This planning approach seeks to maintain the diversity of recreational opportunities while limiting the impact of these activities on ecological and cultural resources. The Parkway provides a wide array of recreational opportunities in highly developed areas, such as Discovery Park, but also has areas where natural features predominate and recreation use is less prevalent. The Plan assumes that maintaining diverse ecosystems is consistent with providing quality recreational experiences.

Another key aspect of the NRMP is the integration of key resource categories found within the Parkway, including: (1) biological resources, (2) physical resources, (3) cultural resources, and (4) human uses. Overall, the NRMP seeks a sustainable solution to manage these, at times, conflicting resource needs. This Plan acknowledges that recreational use is a major component of the Parkway and seeks to develop approaches to reduce recreational impacts on natural resources rather than limit or eliminate recreational opportunities.

It is acknowledged that there are many issues facing the Parkway but this Plan focuses on issues that: (1) impact natural resources in the Parkway; and (2) can be addressed by Regional Parks. Therefore, some key issues, such as climate change or upstream water releases from dams, are considered and discussed, but are outside of the scope of what Regional Parks can change through management. Overall, policies and management action recommendations will be provided Parkway-wide and at the Area level, where appropriate.

In addition to considering issues within the Parkway, the NRMP considers regional resources in the Greater Sacramento area. For example, the ecological resources discussion considers how the natural communities within the Parkway fit into the larger context of the Sacramento Valley and Sierra Nevada foothills. Also, regional recreational resources, managed by Regional Parks and other agencies, are considered when discussing the recreational resources available in the Parkway. Pastor et al. (2009) argue that regional approaches are appropriate because issues or problems do not always fit within “neat” boundaries. As discussed previously, this supports the notion that these planning processes require cooperation and/or oversight with other agencies and organizations.

1.3 BACKGROUND

It is important to understand the physical and social context of the Parkway. In this section, key issues for managing natural resources in the Parkway are discussed, including climate change, population growth and urbanization, upstream water releases (from dams), salmonid habitat enhancement, homelessness, wildland fire, habitat protection, sensitive species, and vegetation enhancement. These topics are addressed throughout the NRMP.

Climate Change

Climate change results when greenhouse gases accumulate in the atmosphere and trap the sun's energy, resulting in a warming effect (CACC 2019). Climate change has the potential to alter natural systems and increase the occurrence and severity of weather events, such as flooding and drought (National Aeronautics and Space Administration (NASA) 2019). Addressing the causes of climate change is outside Regional Parks' purview and this document. However, considering how climate change impacts the Parkway is important and consideration for potential mitigation strategies, such as increasing resiliency, is consistent with the Plan.

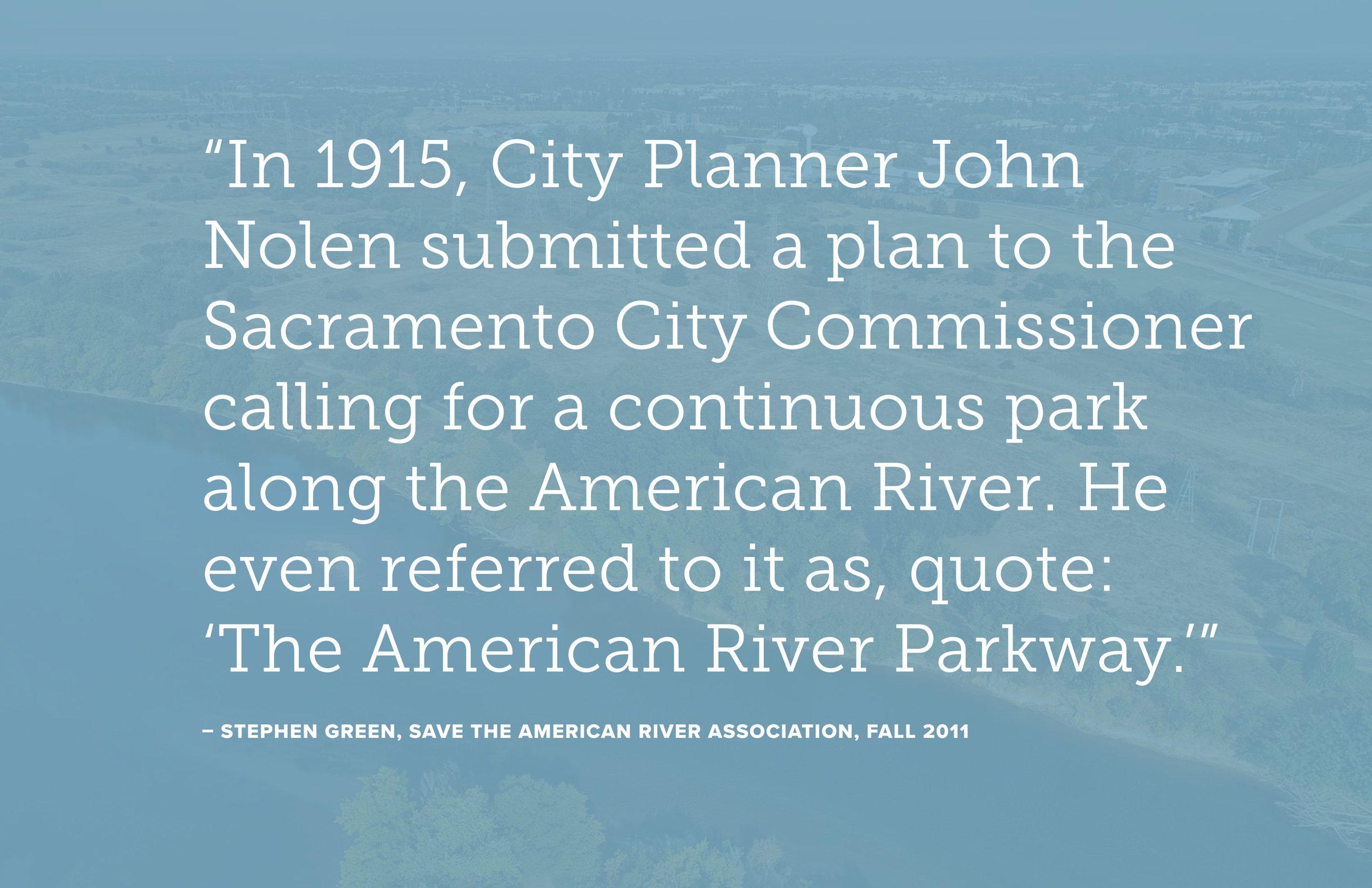
Population Growth and Urbanization

Population growth has been significant in Sacramento County since the Parkway was established. According to the U.S. Census Bureau (Forstall 1996) and the California Department of Finance (2019), the population of Sacramento County increased by approximately 180 percent in the 50 years between 1960 and 2010. The rate of population growth in Sacramento County between the present year and the mid-twenty-first century is projected to slow compared to the growth of 1960 to 2010. Though the rate of population growth is expected to slow, the County would still see an approximate 40 percent increase in population from 2020 to 2060, adding about 700,000 people. Assessing future population growth is critical in determining the future of the Parkway. Continuing population growth will likely result in an increase in recreation use in the Parkway and increased strain on natural resources. Along with significant population growth, the Greater Sacramento area has experienced increased urbanization, which typically results in increased urban runoff due to a decrease in permeable surfaces. Urbanization may also result in habitat modification and/or destruction. While population growth and urbanization have impacted and may continue to impact the Parkway, Regional Parks must consider what these two trends mean for future use in the Parkway and potential associated impacts.

Upstream Water Releases

Water levels and flows of the LAR are dictated by release operations at both the Folsom Dam and at the Nimbus Dam (Sacramento County 2008a). The Folsom Dam and Reservoir and Nimbus Dam and Lake Natoma Reservoir are part of the Central Valley Project (CVP), regulated and operated by the U.S. Bureau of Reclamation (USBR). The main function of the dams is to provide flood control protection, but the dams also store water for electrical power generation, domestic use, and irrigation uses (Sacramento County 2008a). Water releases from these dams are outside the purview of Regional Parks, but still impact the Parkway.

Aerial view of the Paradise Beach and Cal Expo Areas.
Photo Credit: John Hannon



"In 1915, City Planner John Nolen submitted a plan to the Sacramento City Commissioner calling for a continuous park along the American River. He even referred to it as, quote: 'The American River Parkway.'"

– STEPHEN GREEN, SAVE THE AMERICAN RIVER ASSOCIATION, FALL 2011

Water releases from these dams have the potential to directly impact flood control, fishery preservation, and recreational activities. Both dams release water prior to intense storm events in order to prevent flooding in the areas directly adjacent to the American River (Sacramento County 2008). Water releases may impact the river flows, water temperatures, and habitat enhancement features key to sustaining spawning fish species in the LAR (Welcomme, et al. 2006). Although USBR regulates and operates the dams, local associations collaborate with federal agencies to ensure the preservation of cultural, ecological, and recreational resources. USBR, and associated federal resource agencies, have agreed on flow management standards for the LAR, including water flows, water temperature, and establishment of a management group of water resource managers, biologists, monitors, and stakeholders (Sacramento County 2008a). Collaboration and communication with USBR and other water resource agencies, such as the Water Forum, will be essential to achieve recreational and ecological goals for the Parkway.

Aerial view of the Nimbus Fish Hatchery and American River Trout Hatchery (photo foreground, right) in the Upper Sunrise Area and the Nimbus Dam (photo background). Photo Credit: John Hannon

Salmonid Habitat Enhancement

From the mid-nineteenth century through the late-twentieth century, mining activities and dam construction significantly altered natural resources in the Parkway. Gold mining in the nineteenth century resulted in dredge tailings throughout the Parkway. Mining deposited silt and aggregate materials into the river channel. As a result, terrestrial habitat areas were degraded and mining debris raised the riverbed, which reduced salmonid survival rates (Sacramento County 2008a). The construction of the Old Folsom Dam in 1893, and the modern Folsom Dam and Nimbus Dam as part of the CVP in 1955, further modified the river channel. The dams blocked the upstream migration of anadromous species, which removed access to the majority of salmonid spawning habitat and some areas of salmonid rearing habitat (Sacramento County 2008a). Construction of the dams involved moving aggregate from the LAR, which lowered the riverbed elevation that was previously raised by mining activities. In addition, the dams blocked the natural downstream transportation of sediments.

The Central Valley Project Improvement Act (CVPIA) was passed by Congress in 1992 as part of a group of 40 titles for water resources-related projects in the western United States (USBR 2019). The CVPIA mandates that the Department of the Interior implement a program for replenishing spawning gravel and restoring salmonid habitat in the LAR from the Nimbus Dam to the confluence of the American and Sacramento Rivers. Beginning in the late 1990s, multiple groups and agencies became involved in planning and conducting the Lower American River Anadromous Fish Habitat Restoration Project, which aims to fulfill the CVPIA mandate. The gravel bars that have formed as a result of the project can create an attraction for recreationists who may congregate on these bars. This can be an issue for Regional Park staff if illegal activities occur on bars accessible only by patrol boats.

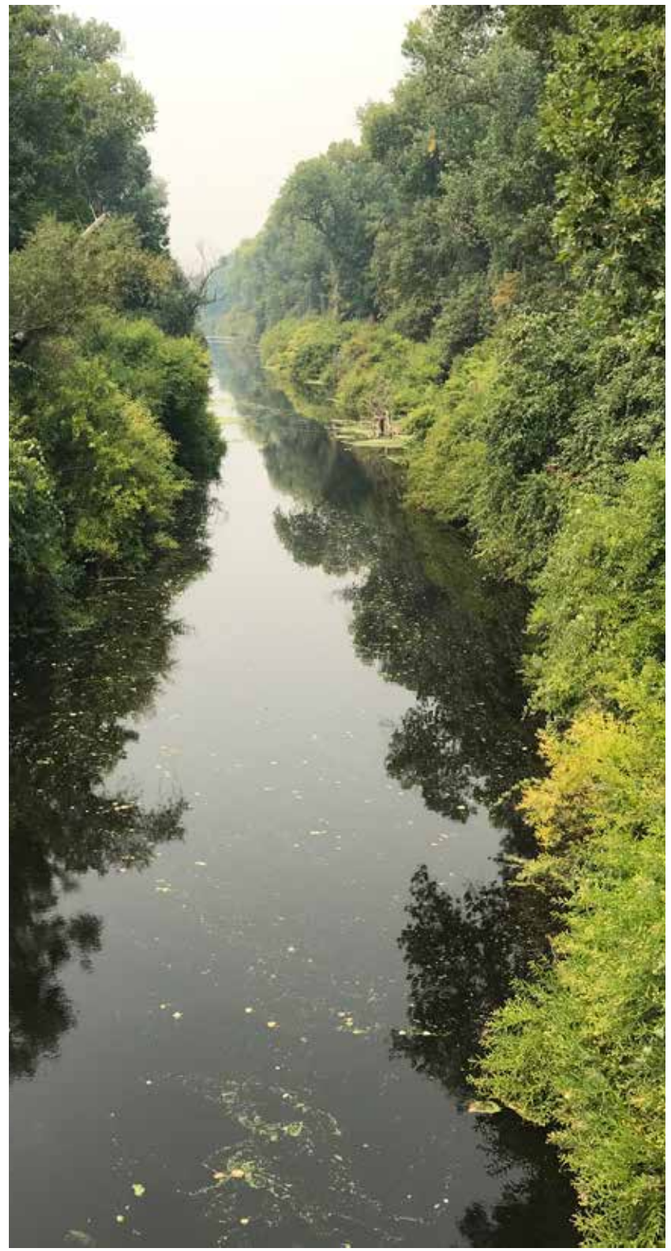
Homelessness

Homelessness is a statewide issue that impacts the Sacramento area and often results in encampments in the Parkway. This is primarily due to the high cost of living in urban areas and the moderate winter temperatures that allow for long-term living outside. These encampments occur in the riparian forest and woodlands throughout the Parkway. It is particularly prevalent in the approximate 6-mile area of the Parkway from the Discovery Park to Cal Expo Areas. On January 30, 2019, California State University, Sacramento (CSUS) and the Institute for Social Research (Baiocchi et al. 2019) conducted a "Point in Time" (PIT) count of homelessness in Sacramento County. The assessment counted 5,570 homeless individuals, a 19 percent increase in the number of homeless individuals counted in the countywide CSUS 2017 PIT Count. The assessment also found that 70 percent of the homeless people in the 2019 Homeless Count were unsheltered (e.g., living outside, in a vehicle, or in a tent). While the 2019 PIT report did not discuss homelessness specific to the Parkway, the 2017 PIT report (Baiocci et al. 2017) provided the following conclusion: "Individuals who reported continuous homelessness tended to be substantially older and were often encountered in encampments near the American River Parkway, in contrast to younger homeless who were interviewed nearer downtown Sacramento" (p. 4).

The 2017 PIT report notes that chronically homeless individuals are more likely to be suffering from PTSD (post-traumatic stress disorder) and/or have a mental health condition. It is also noted that changing river flows impact where individuals can sleep. A Sacramento Bee article reports that in 2019 park rangers and maintenance staff had cleared 767 abandoned camps per month by April; the article cites an estimate of 500-700 people camping in the Parkway every night (Yoon-Hendricks 2019). It is outside of the scope of this document to solve the homeless issue in the region, but the NRMP will consider strategies to potentially decrease natural resource impacts associated with the issue. Impacts related to encampments include those caused by unregulated campfires, vegetation clearing, potential disturbances to wildlife, and water quality impacts. Regional Parks will need to continue collaboration with other agencies (such as the Sacramento County Department of Health and Human Services) and nonprofits with expertise in addressing this issue.

Wildland Fire

As with much of California, wildland fire is a concern in the Parkway. A large portion of the outer boundary of the Parkway is wildland-urban interface (WUI) in which the probability of wildland fires is increased. Wildland fires are often directly caused by human activities (both accidental and intentional). Numerous wildland fires occur in the Parkway every year. Fuel loads, including dry, dead plant materials and highly flammable invasive species, are abundant throughout the Parkway. There is also the potential for wildland fires to occur because of campfires or barbecues placed in unregulated locations. Although wildland fire can be beneficial to natural resources as a restoration tool, it can also be damaging to other natural resources, as well as structures within and outside the Parkway. Regional Parks works to minimize potential impacts of wildland fire in the Parkway through collaborative fuel reduction projects.



Bannon Slough in the Discovery Park Area. Photo Credit: Regional Parks

Habitat Protection, Sensitive Species, and Vegetation Enhancement

The Parkway supports a diverse range of habitats and ecosystems, including riverine, riparian, wetland, and oak woodland habitats. Each of these habitats provide unique opportunities for food, cover, and breeding for local and migrating plant and wildlife species. The LAR is home to sensitive, protected species including steelhead. Riparian habitat is extremely valuable in the Parkway because it provides connectivity to the river and maintains wildlife linkages (corridors by which wildlife travel) through the interface between regional natural and urban lands.

Over time, the Parkway has been altered by both natural and anthropogenic processes that have led to a decline in the amount of riparian habitat along the river. Excess debris and trash, wildland fires, habitat loss, bank erosion, water quality issues, and human encroachment all threaten the natural ecosystem of the Parkway. Additionally, invasive plant species occur in every habitat type that is present within the Parkway. The prevalence of invasive species can inhibit native plant establishment, provide poor habitat quality for wildlife, increase hydraulic roughness during high-flow events, increase bank erosion, and exacerbate fire potential.

There is ample opportunity for habitat improvement and continued maintenance within the Parkway. Improvement of sensitive riparian vegetation, specifically in areas no longer able to support natural regeneration, should be a top priority (Lower American River Task Force (LATRF) 2002). Recreational activities should be actively managed in highly sensitive areas to avoid further reduction and degradation of existing ecological resources. In addition, floodway and recreational management strategies occurring within the Parkway need to be compatible with long-term goals for natural resource sustainability.

The NRMP assumes that there are future projects that will be proposed in the Parkway that would result in impacts to natural resources. As such, the Parkway was divided into several categories to advise Regional Parks as to where future mitigation or restoration projects, for example, should occur. These maps may also be used for targeting areas for restoration and enhancement. The following describes the management categories (the maps are included by Area Plan in Chapter 8):

- *Conservation* (lowest level of management intensity): Areas designated as conservation currently meet most applicable natural resource goals and those values will be conserved. This includes existing mitigation sites that require protection in perpetuity, as well as non-mitigation sites that meet desired conditions and provide high quality habitat. Considering the dynamic nature of all natural habitats, additional actions (e.g., restoration/ enhancement) may be deemed suitable in Conservation areas in order to maximize suitable habitat values. Implementing restoration/enhancement actions within existing formal mitigation sites should be consistent with existing regulatory agreements/commitments. Federal mitigation sites, which have long-term commitments to protect habitat values, are mapped as a unique subset of the conservation category.
- *Restoration* (moderate level of management intensity): Areas designated as restoration generally meet desired conditions in their current form but have been degraded to varying degrees (e.g., fire, illegal camping, social trails, degraded understory, etc.) and should be improved (e.g., habitat restoration/ enhancement) to meet goals.

View of ponds remnant of historical mining activities in the Sacramento Bar Area. Photo Credit: John Hannon

The need for ongoing restoration of degraded areas is expected.

- *Naturalization* (highest level of management intensity): Areas designated as naturalization were substantially altered in the past and should be modified in order to improve existing natural resource conditions or otherwise modify to meet the management objectives of the ARPP, NRMP, and W&SR policies. This applies to areas previously altered and outcomes are generally native habitat types that would typically be expected to occur in the Parkway. Naturalization also includes converting areas that have not been altered by past actions (unaltered) to heighten, intensify, or improve highly valued resource functions that may have been lost or degraded over time. Generally, this entails conversion of land cover type.
- *Rehabilitation*: Rehabilitation is applicable to any area, whether it be Conservation, Restoration, or Naturalization, could be degraded or damaged in the future and require action to improve their condition. Rehabilitation is suitable in any of the other categories and can happen anywhere in the Parkway, just as all areas in the Parkway are subject to degradation or damage.

Human Uses in the Parkway

Recreation is a key human use in the Parkway. The Parkway contains approximately 82 miles of single use and multi-use paved and unpaved trails (Regional Parks 2009). The Parkway has beaches and boating access areas that facilitate swimming and boating activities. Fishing is permitted throughout the year in most locations and occurs along the riverbanks from boats in the river channel and at fishing ponds. The Parkway's active recreational facilities include the Discovery Park archery range, the Campus Commons Golf Course, and the Ancil Hoffman Golf Course. These are recognized as incompatible uses under the Parkway Plan. Unstructured field sports are allowed on the turf fields located in Discovery Park, Ancil Hoffman County Park, and River Bend Park. Additional recreational activities include periodic special events and organized group activities, such as races, festivals, and concerts; these activities are permitted dependent upon issuance of County recreation permit(s). A common issue within recreation areas, including the Parkway, is improper disposal of solid waste (i.e., littering). Solid waste is an aesthetic impact, but it can also have an impact on ecological resources if it enters water or is consumed by wildlife. Solid waste disposal is particularly of concern along the river where boaters may dispose of their waste on shore or in the water due to the inability to access waste bins. Litter can accumulate on the bottom of streams or along the shore where it attracts aquatic and/or terrestrial species that may be harmed by ingestion.

Utility infrastructure exists in the Parkway, including electrical power transmission towers and lines, sewer and water supply pipelines, drainage mains and outfalls, roads, and bridges. Of note, some of these facilities have rights-of-way, including the electrical transmission lines. The areas under the transmission lines are subject to regulations due to wildfires. However, these areas within the Parkway may present an opportunity for vegetation enhancement.

Protection of Cultural Resources

The Parkway encompasses an area rich with remnants of prehistoric, historic, and industrial activity. Cultural resources in the Parkway include prehistoric era (archaeological) resources (e.g., tools and burial sites), historic era resources (e.g., landmarks and buildings representative of historic architectural styles), and industrial era resources (e.g., bridges and railroads). Cultural resources are important, not only as evidence of prehistoric and historic activities, but also as tools for educating the public and as a form of recreation. Balancing the multiple roles of cultural resources in the Parkway requires careful, strategic management. Cultural resources are valuable to indigenous successors and critical in informing our knowledge of historical peoples and events. Furthermore, identification of cultural resources instills in the public recognition of the Parkway as an epicenter of its rich cultural history. Interpretive areas and centers attract users who enjoy forming a connection with the Parkway's history. Though interpretative centers are recreational in nature, they can be differentiated from other recreational opportunities in that cultural resource locations should remain confidential whenever possible to protect the resources from overuse and degradation (Sacramento County 2008).

Special Events Management

Special events are allowed in the Parkway with a recreation permit. Large special events are allowed only in Discovery Park. Small special events are allowed in Discovery Park, Ancil Hoffman County Park, River Bend Park, the William B. Pond Recreation Area, and the Effie Yeaw Nature Center (Sacramento County 2008). Regional Parks issues recreation permits for special events in the Parkway, though permits from additional agencies, such as the Sacramento County Environmental Health Division, may be required depending on the size and scope of the event. Special events must be conducted in a manner and at a frequency at which natural resources are not degraded. A recreation permit is issued with conditions of approval specific to the event. It is important to continue to allow for special events, which provide unique recreational opportunities and a source of funding for the County, while minimizing their impact on natural resources.

1.4 OVERVIEW OF THE PLAN

The NRMP is designed to be accessible to both the general public and environmental professionals. The Plan is also designed to be practical and implementable. In order to efficiently implement this Plan, it is necessary to first understand the existing conditions within the Parkway and to define the natural resource management goals and objectives. The NRMP is organized in the following manner:

CHAPTER 1 introduces the planning approach applied in the NRMP;

CHAPTER 2 outlines the goals and objectives of the Plan;

CHAPTER 3 describes the Parkway setting in greater detail with a focus on Area-specific attributes (including land use);

CHAPTERS 4 provides a description and analysis of existing biological resources in the Parkway;

CHAPTER 5 describes the physical resources in the Parkway;

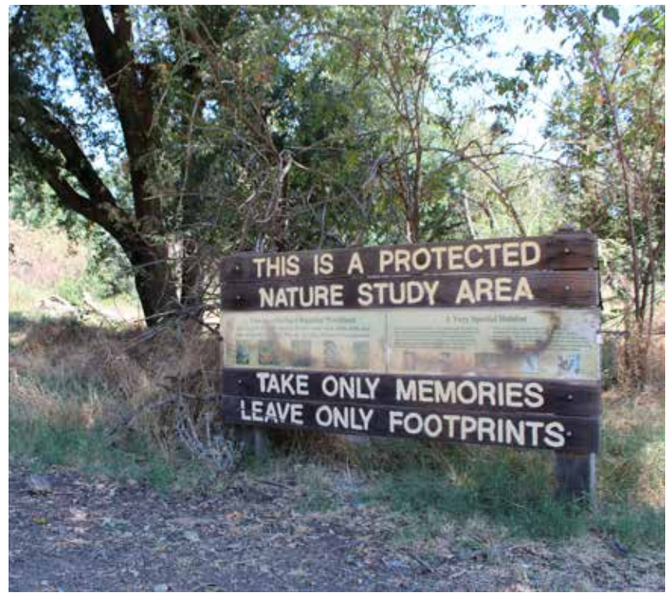
CHAPTER 6 describes the Parkway's cultural resources;

CHAPTER 7 discusses human use impact in the Parkway, and how these impacts can be reduced; and

CHAPTER 8 addresses management, implementation, and monitoring, including potential funding sources and agency roles and responsibilities.

Multi-agency and departmental communication and cooperation is necessary in order to effectively implement the NRMP. This Plan will provide recommendations, including policies, to manage natural resources in the Parkway. This Plan is designed to consider several key issues, but it is not designed to address every single site-specific issue that occurs within the Parkway. There are important issues, such as homelessness, that are considered, but clearly require policy solutions that may be beyond Regional Parks' purview. However, natural resource impacts associated with encampments are discussed. Overall, the NRMP will provide goals and objectives that will lead to implementable actions in order to provide for the sustainable management of natural resources. Additionally, it is important to consider the practical limitation on what can be implemented given financial constraints and limited time.

Concurrent with this Plan, other agencies that have responsibilities in the Parkway are developing plans and/or implementing projects that will impact natural resources in the Parkway. As an example, the U.S. Army Corps of Engineers (USACE), CA Central Valley Flood Protection Board, State Department of Water Resources, and the Sacramento Area Flood Control Agency (SAFCA) are actively engaged in planning and implementing their American River Common Features (ARCF) Project. As a part of this effort, the project sponsors are preparing a Conservation Strategy (CS) that will guide habitat restoration and mitigation efforts of the ARCF, specifically those within the Parkway. The CS will identify areas of conservation opportunities that meet ARCF mitigation needs. The needs and timing of this process lends itself to coordination and cooperation with the NRMP and its task force, with stakeholder input, and utilization of a wide variety of existing plans. Additionally, the work of the Water Forum, including their program of improving habitat for spawning and rearing of listed fish species, also serves as an opportunity for coordination and cooperation. This Plan will lay down broad guidelines as to how these projects can be implemented consistent with the NRMP. Additionally, these projects will need the approval of the County and this may lead to required mitigation strategies that benefit both the project proponent and the Parkway. These projects may also provide a funding source to meet the goals and objectives of the NRMP.



Nature Study Area signage at the Effie Yeaw Nature Center. Photo Credit: MIG

Agricultural plantings at Soil Born Farms in the River Bend Park Area. Photo Credit: MIG

Soil Born Farms in the River Bend Park Area. Photo Credit: MIG

1.5 NRMP TASK FORCE

As part of the NRMP development, Regional Parks determined that an interagency task force was needed to create a fully informed and implementable NRMP. The NRMP Task Force ("Task Force") has been tasked with: (1) providing recommendations to Regional Parks on the preparation of the NRMP; (2) identifying recommended strategies and actions for addressing natural resources impacts on the Parkway that are aligned with parallel processes and projects; (3) identifying existing or future projects that align with the NRMP; and (4) identifying funding sources for NRMP implementation.

The NRMP will reflect the input and direction provided by Task Force members. The Task Force is composed of the following agencies and organizations:

- County of Sacramento Department of Regional Parks (Regional Parks)
- Sacramento Area Flood Control Agency (SAFCA)
- The Water Forum
- cbec eco engineering
- U.S. Army Corps of Engineers (USACE)
- Wildlife Conservation Board (WCB)
- Central Valley Flood Protection Board (CVFPB)
- American River Parkway Stakeholders
- WRC Environmental
- County of Sacramento Division of Planning and Review
- U.S. Fish and Wildlife Service (USFWS)
- Sacramento Municipal Utility District (SMUD)
- California Department of Water Resources (DWR)
- MIG
- ICF

The Task Force first convened in June 2020. The eleventh and final Task Force meeting occurred in June 2022.

1.6 NRMP COMMUNITY OUTREACH AND ENGAGEMENT

Concurrent with the establishment of the Task Force, an NRMP Community Engagement Plan was devised to solicit public input on draft NRMP concepts and materials, including goals, objectives, and maps. Feedback from community outreach activities have been reviewed and incorporated into the NRMP. Regional Parks conducted the following community engagement activities:

- Four open community workshops to provide an opportunity for the public to provide early input on the NRMP (July 16 & 17, 2020; March 22 & 26, 2021);
- Major NRMP concepts presentation (July 10, 2020) and public review draft NRMP presentation (March 19, 2021) to the American River Parkway Advisory Committee;
- Major NRMP concepts presentation (July 23, 2020) and public review draft NRMP presentation (March 25, 2021) to the Sacramento County Recreation and Parks Commission;
- Public Maptionnaire survey hosted on the County website to seek public feedback on the draft NRMP goals and objectives (July 2020 – September 2020);
- Two Parkway Stakeholders meetings to obtain input on the NRMP draft maps and management actions (December 4, 2020 and January 8, 2021); and
- One Fisheries Stakeholder meeting on February 5th, 2021.

A summary of the public input is provided in the Public Outreach Report, included in the appendices. Public input was incorporated into the NRMP and many of the items are included in the Chapter 8 Area Plans and Area Plan write-ups.

Native trees leafing out along riverbanks in River Bend Park Area. Photo Credit: Wildlife Conservation Board