

# Feather River Conceptual Plan

*"A VISION FOR THE LOW-FLOW CHANNEL OF THE FEATHER RIVER"*

OROVILLE, CALIFORNIA

**Final Plan**  
**September 5, 2018**



Prepared for:  
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# Acknowledgements

Funding for the Feather River Conceptual Plan was provided by the State Water Contractors and the California Department of Water Resources through an allocation to the Oroville Supplemental Benefits Fund.

The Plan development process was supported by the contribution of services from the National Park Service's Rivers, Trails, and Conservation Assistance Program, through community engagement and facilitation support and other work with the Plan Development Team.

Development of this Plan benefited from the instruction, comments, edits and research of the members of the Ad Hoc Committee and the SBF Steering Committee. The Plan Development Team greatly appreciates those members that have volunteered their time to provide support.

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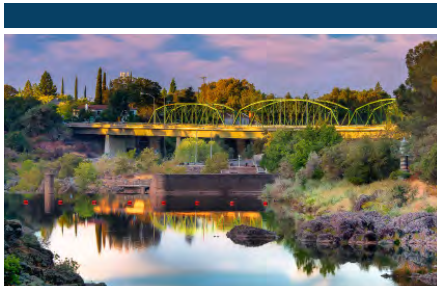
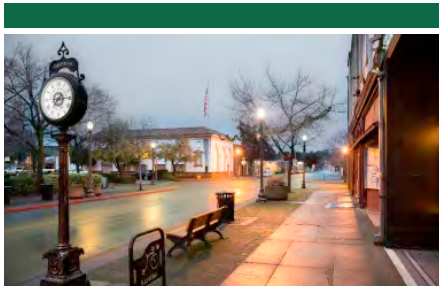


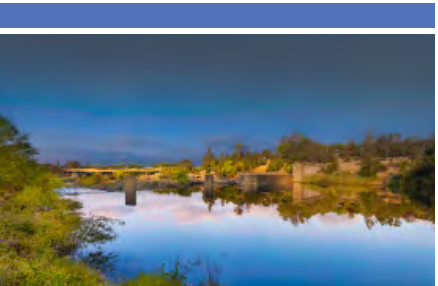
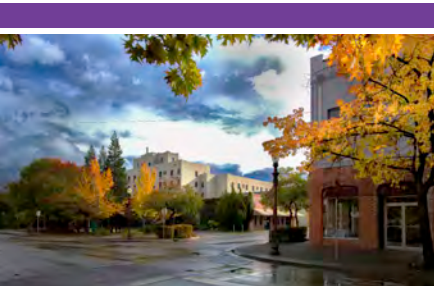

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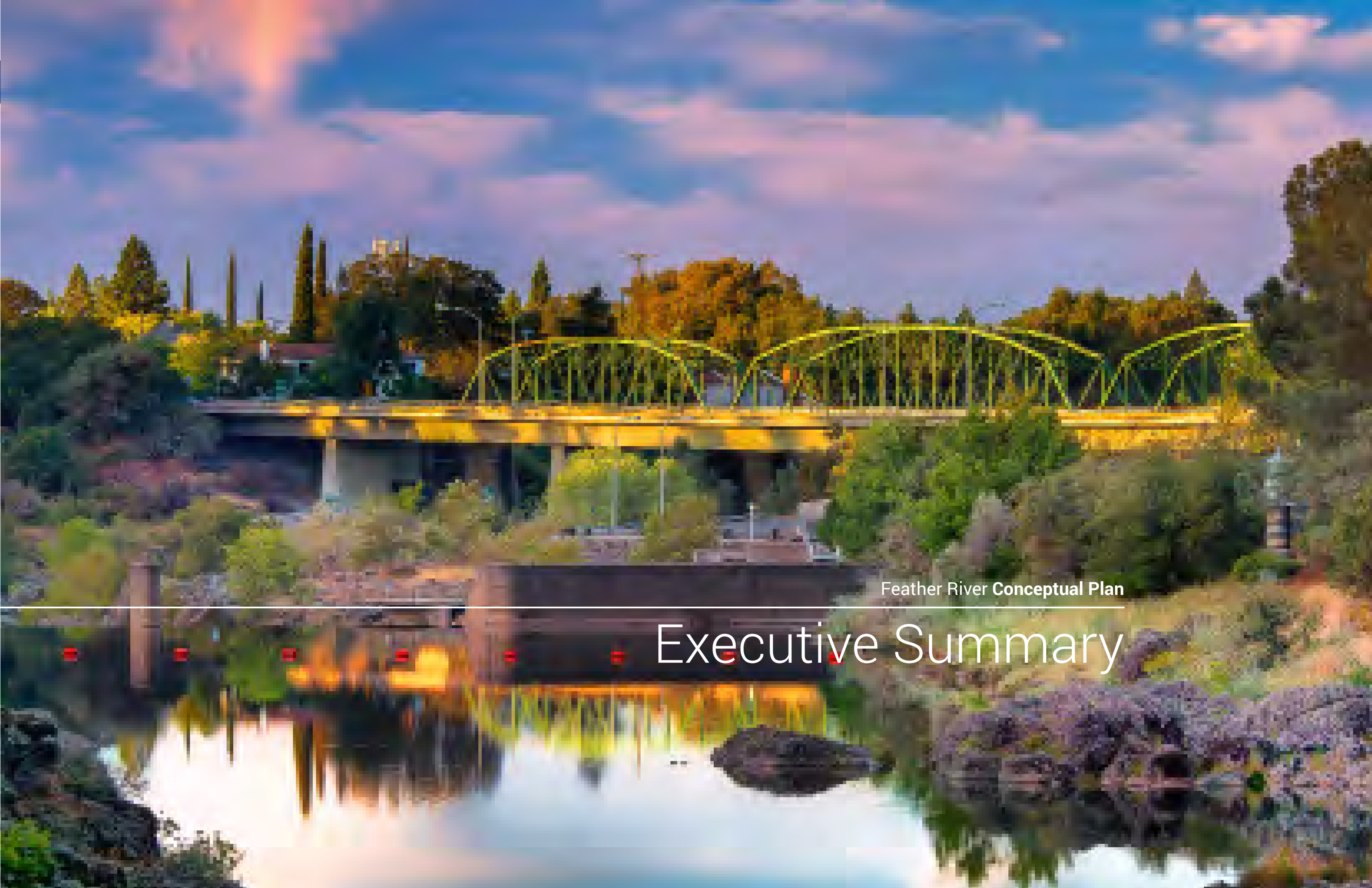




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Feather River Conceptual Plan

# Executive Summary



Table Mountain, with the Thermalito Diversion Dam in the foreground.



# Executive Summary

The Feather River Conceptual Plan (FRCP; or Plan) was originally envisioned by the Supplemental Benefits Fund (SBF) Steering Committee as a way: to "consolidate" into a single document all the best ideas from existing Oroville plans and includes future river-related projects, that might best improve the quality of life and stimulate economic development in the greater Oroville Region. Many projects might be collaboratively and synergistically implemented in coordination with the Department of Water Resources' (DWR's) implementation of the Federal Energy Regulatory Commission (FERC) license-required measures in and along the river. While that vision remains, the Oroville Dam spillways incident occurred in February 2017 as the FRCP was being developed. The associated response, recovery, and restoration as a result of this incident may bring opportunities to more-rapidly advance certain long-known projects and new project ideas that have emerged. Moreover, the need for a roadmap of community-supported projects has never been more pronounced. Because of these changing circumstances, this Plan identifies multiple immediate, high-priority projects that the California Department of Water Resources (DWR) and the community can undertake cooperatively that are anticipated to yield lasting benefits for the local community while DWR and the State Water Contractors (SWC) simultaneously complete necessary facility repairs and improvements.

The FRCP communicates a vision for each river reach by providing an umbrella strategy for the Feather River as a whole.

- **Chapter 1, Introduction and Background**, provides an overview of the purpose of the Plan, sets the Plan into the context of the Regional fabric, and articulates the relationship of the Plan to the FERC relicensing process.
- **Chapter 2, The Master Plan Development Process**, reflects the input received from the SBF Ad Hoc Committee and the community-at-large in the development of the Plan, identifies the range of potential projects that have been determined to have a river focus, and lays out the process of sorting and assigning the projects to reaches.

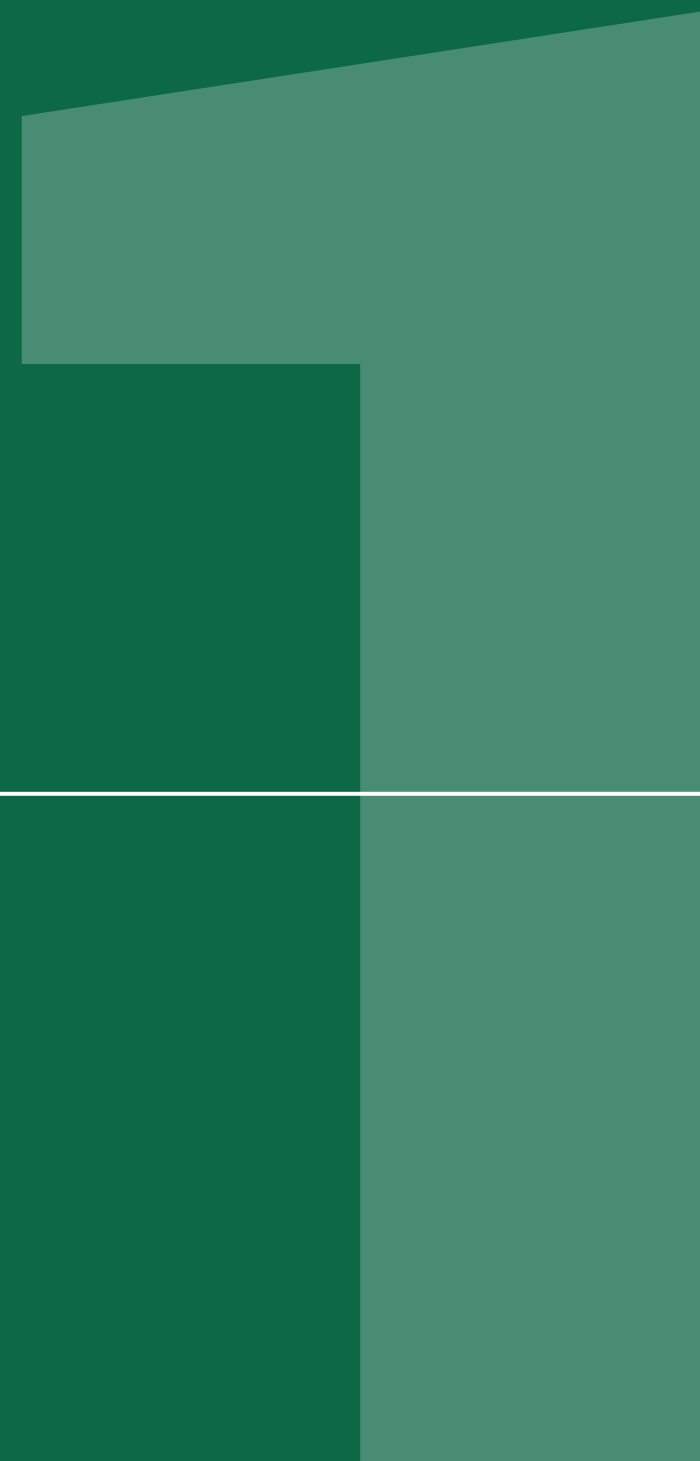
- **Chapter 3, Project Recommendations**, presents the opportunities and constraints by six identified river reaches, and concludes with a list of recommendations/changes/improvements, by reach.
- **Chapter 4, Economic Development Considerations and Strategies**, discusses sources of funding. This chapter puts the SBF funding in context and discusses how to: leverage private investments by creating certainty for developers, fund infrastructure, partner with other public agencies, create Public Private Partnerships (P3s), subsidize Operations & Maintenance, maximize the economic benefits of the SBF Fund and the use of bond funding.
- **Chapter 5, Priorities and Next Steps**, lays out immediate opportunities for implementation of improvements that could be partnered with the ongoing spillways recovery and restoration activities, dives deeper into financing and event programming, and discusses further the long-term investment of partnering with the State Water Contractors.
- **The Appendices** provide summaries of the stakeholder meetings, the extensive list of potential projects, other existing plans leveraged in this effort, Plan development criteria, and existing conditions summaries of the Plan area.

The FRCP was developed with input from local and regional stakeholders, including outreach conducted over the last several years and with focused engagement during Plan preparation. The Plan was developed and reviewed in multiple meetings with the Ad Hoc Committee of the SBF Steering Committee; three presentations/briefings to the SBF Steering Committee; and through a series of three public workshops to gain focused input on the Plan from community members, leaders, developers, teachers and others involved in education, recreationists, business owners, cultural leaders and elected officials. This outreach and engagement helped to strengthen the definition of the Feather River's "riverscape" and enhance its distinctive identity. It also helped Plan developers to connect with the community and allowed the developers to celebrate the many uses of the river in the Plan to ensure that the Feather River, from the Diversion Dam to the Afterbay Outlet, remains a treasure to the greater Oroville Region.

While there are a large number of projects identified in the FRCP that may be implemented, there are immediate opportunities for coordinated implementation of projects associated with spillways restoration that also meet local priorities for river and related recreation. The significant investment in the recovery and restoration of the Oroville Dam spillways and the related environment provides an opportunity for DWR and the SWC to support economic recovery in the greater Oroville Region and to make early progress on implementing key Protection, Mitigation and Enhancement Measures (PM&Es) in the new FERC license that are also agreed to in the Settlement Agreement. Implementation of the following high priority opportunities should begin as soon as possible with potential financial assistance from DWR and the SWC related to the 2017 Oroville Dam spillways incident; some of these projects are detailed in Chapter 5, Priorities and Next Steps:

- Develop floodplain habitat in the Oroville Wildlife Area (OWA, Reaches 4 & 5)
- Develop the Competitive Rowing Facility at the North Thermalito Forebay
- Develop enhanced trails and recreational amenities along the Diversion Pool/Burma Road (Reach 1)
- Augment sediment and spawning habitat in Reach 3
- Develop a new river "put-in" under Table Mountain Bridge (Reaches 2 & 3) and complete the missing link of the Brad Freeman Trail
- Develop the flexible event space (Reach 1)

It is the interest of the community that it gains the fullest of the benefits intended by the Settlement Agreement, by focusing and leveraging the projects supported by the SBF into successful, river-oriented public-private partnerships and other collaborative opportunities. The guidance provided by the SBF Steering Committee will assist in steering the direction of development along the River, and hopefully deliver in return, economic gains to the community. This contemporary and forward looking Plan for the River presents the roadmap for success and marks a milestone in the future planning of the greater Oroville Region.







Feather River Conceptual Plan

# Introduction & Background

1



Portions of the Oroville Facilities (FERC Project No. 2100) along the Feather River, such as the Thermalito Diversion Dam, are striking and highly-visible landmarks in the region and also serve to define project reach boundaries in this Plan.



# Introduction & Background

All around the world, in cities as diverse as Sydney, Baltimore, Reno, Pittsburg, and Bend, Oregon, savvy waterfront communities have discovered the power of treating their waterfronts as treasured community resources. Strengthening the river's distinctive identity, connecting it to the whole community, and celebrating its many uses does more than bring people back to the water; it brings life back to a city – and transforms a region's image. In Oroville, the question is: How can we do that here?

As this document, the Feather River Conceptual Plan, was being developed, the 2017 Oroville Dam Spillways emergency incident occurred. As this plan was finalized, the incident transitioned from response to recovery; restoration planning is to begin later this year (2017). With this incident and its associated response, recovery, and restoration come challenges and opportunities.

This plan was originally envisioned as a way for the Oroville community to "consolidate" into a single document the best ideas for future river-related projects to improve the quality of life and stimulate economic development in the greater Oroville Region, so that they can be collaboratively and synergistically implemented in coordination with DWR's implementation of the FERC license-required measures in and along the river. While that vision remains, there are now opportunities to more-rapidly advance certain long-known projects and potentially new project ideas. Moreover, the need for a roadmap of community-supported projects has never been more pronounced. Because of these changing circumstances, this plan identifies a set of immediate, high-priority projects that DWR and the community may undertake cooperatively that are anticipated to yield lasting benefits for the local community while DWR completes necessary facility repairs and improvements simultaneous to completing measures which may become a part of the FERC license.



An example of public/private partnerships is the revitalized Pittsburg Riverfront Park is the result of a \$35 million investment in rehabilitation and reconstruction on the northern banks of the Allegheny and Ohio Rivers. The park connects the community to the river through public and green spaces dedicated to a riverwalk, walkways, memorials, and

## Oroville Regional Setting

Since 1968, the California Department of Water Resources' Oroville Facilities — including Oroville Dam, the Thermalito Forebay, Thermalito Afterbay, and other facilities on the Feather River near Oroville, California — have provided power generation, water supply, flood management, and water quality improvements to the Sacramento-San Joaquin Delta, as well as recreation, and fish and wildlife enhancement benefits to millions of Californians. The facilities operate under a project license issued by the Federal Energy Regulatory Commission (FERC). The existence and operation of this project in the Oroville Region lends a distinct defining character to the area. From the Lake, to the Low Flow Channel, to the Forebay and Afterbay—the project and the community are intertwined.

## FERC Relicensing (License Approval Pending)

The previous FERC license expired on January 31, 2007, and as a part of attaining a new license via FERC's Alternative Licensing Process (ALP), the California Department of Water Resources (DWR) contacted over a thousand highly diverse stakeholders representing local interests and governments, State and Federal resource agencies, non-governmental organizations and Native American tribes to help develop proposed terms and conditions for a new license. In March of 2006 the Settlement Agreement (SA) for licensing of the Oroville Facilities was signed by over fifty people and agencies representing the interests of the greater Oroville area.

As agreed to in the Settlement Agreement (SA), DWR (under the terms of the FERC license) is responsible for a variety of protection, mitigation, and enhancement (PM&E) measures related to the natural environment and recreational amenities. Those PM&E measures recommended to be included in the new license are referred to as "A" articles; measures agreed to among the parties of the SA but not to be included in the new project license are referred to as "B" articles. Those measures relevant to the Feather River Conceptual Plan (this document; the FRCP; this Plan) area are listed in Table 1 (following page) and will change the river landscape, ostensibly improving habitat and recreational opportunities in and along the Feather River for visitors to, and residents of, the greater Oroville Region.



**Table 1 – Settlement Agreement articles applicable to the FRCP**

Article #	Description	Article to be Completed by When? (measured as months or years after date of license issuance)	
		Months	Years
A100	Ecological Committee	3	
A101	Lower Feather River Habitat Improvement Plan		3
A102	Gravel Supplementation & Improvement Plan		2
A103	Channel Improvement Program		1
A104	Structural Habitat Supplementation & Improvement Plan		2
A105	Fish Weir Program (Phases 1; 2)		1; 8
A106	Riparian & Floodplain Improvement Program	6	
A106	Riparian & Floodplain Improvement Program (Phases 1, 2, 3, 4)		1, 4, 15, 25
A107	Feather River Fish Hatchery Improvement Program	1	
A107.1	Feather River Fish Hatchery Fish Production Program	1	
A107.2	Feather River Fish Hatchery Water Temperature	1	
A107.3	Feather River Fish Hatchery Management Program		2
A107.5	Feather River Fish Hatchery Annual Operation & Maintenance		2
A108	Flow/Temperature to Support Anadromous Fish	0	
A108.1	Minimum Flow & other Measures in the LFC to support Anadromous Fish	0	
A108.2	Minimum Flow & Other Measures in the HFC to support Anadromous Fish	0	

Article #	Description	Article to be Completed by When? (measured as months or years after date of license issuance)	
		Months	Years
A108.3	Submittal of October 2006 Recon Study of Potential Facilities Modification(s)	2	
A108.4	Submittal of Feasibility Study & Implementation Plan for Facilities Modification(s)	3	
A115	Oroville Wildlife Area Management Plan		2
A116	Oroville Wildlife Area Access	0	
A127	Recreation Management Plan	0	
A128	Historic Properties Management Plan	Completed	
<i>*Note that B Articles are referenced to SA signature, not necessarily the License</i>			
B101	Feather River Whitewater Boating Opportunity Feasibility Study	Completed	
B102	Development of a Fuel Load Management	Completed	
B103	Additional Gauging	Unknown	
B104	Feather River Fish Hatchery Funding	In-Process	
B105	Gravel Supplementation	In-Process	
B106	Oroville Wildlife Management Plan	Completed	
B107	Revision of Speed Limit Regulation for Thermalito Afterbay	Completed	
B108	Flow/Temperature to Support Anadromous Fish	Unknown	
B109	Riparian/Floodplain Screening Level Analysis	Unknown	
B110	Analysis of Non-Motorized Water Trail Shoreline Access		1
B111	Oroville Wildlife Area Funding	Ongoing	

## The SBF and the Feather River Conceptual Plan

The Settlement Agreement also includes proposed benefits outside of FERC's jurisdiction. The benefits of the Settlement Agreement to the greater Oroville Region include increased recreational facilities and the provision of a community-controlled Supplemental Benefits Fund. The Supplemental Benefits Fund (SBF) will make available up to approximately \$61 million over the next 30 to 50 years, depending on the term of the FERC license. Additional benefits include improved opportunities for public involvement in implementation of the new FERC project license.<sup>1</sup>

The SBF is guided by a Steering Committee and the Regional Fund Strategic Plan (RFSP). The Steering Committee is comprised of voting representatives from the Feather River Recreation and Parks District (FRRPD) and the City of Oroville, and advisory representatives from American Rivers, the State Water Contractors (SWC), DWR, and the Oroville Area Chamber of Commerce.

The Regional Fund Strategic Plan serves as a strategy and procedural document supporting the Steering Committee; however, it does not provide guidance or recommendations on those projects or project types that will best meet the goals of the SBF, nor does it consider the priority and/or sequencing of those projects to best improve the quality of life and stimulate economic development in the greater Oroville area. The Feather River Consolidated Master Plan (this document; the FRCMP) provides important information, context, and detail in support of identifying and developing projects (and groups of projects) that meet the Mission of the SBF: "Investing in recreational and related projects with a nexus to the Feather River to improve the quality of life and stimulate economic development in the Oroville region." Moreover, the FRCMP also identifies a vision: there are opportunities for DWR and the SWC to work together with the community to rapidly repair the Oroville Facilities and implement FERC license requirements while simultaneously reinvigorating the greater Oroville area by improving and creating river-related recreational and economic opportunities that help replace what was lost from both the construction of the Oroville Dam and the damage from the spillway incident.

<sup>1</sup> At the publication of the FRCP the FERC license for the Oroville Project 2100 is still pending; however, DWR and SWC have provided advance project and administrative funding since 2005 totaling \$10,935,000.



The Oroville Wildlife Area is nearly 12,000 acres available for bird watching, hunting, fishing, and hiking.

The FRCP is not intended to replace the SBF Regional Fund Strategic Plan (RFSP), but to strategically align the interests of multiple parties in the planning and implementation of these PM&Es such that the outcomes enhance the community and SBF Steering Committee's identification of potential projects. While the SBF funded the development of this FRCP, this Plan enhances opportunities for public-private funding partnerships and grant opportunities that yield benefits and efficiencies for all parties involved. For example, as a part of the SA, the SWC have the responsibility of providing funding for a long term grant writer source to actively pursue grant opportunities beyond SBF funding. The benefits of a comprehensive river-focused Plan will include those projects that ultimately support the spirit of the Settlement Agreement which was to provide river-related recreational and economic opportunities that replace what was lost from the construction of the Oroville Dam and that ultimately adds an economic boost to the greater Oroville Region.

## Considerations for Plan Implementation

This Plan lays out conceptually-aligned projects that will require more-detailed planning to design, complete environmental regulatory compliance and permitting, and implement. Some projects may be within the Oroville Facilities' FERC license boundary, such as the Flexible Event Space near the Diversion Dam. Projects inside the boundary will need DWR and FERC approval. Some areas and projects may not be compatible with the Oroville Facilities Security Plan or operations plans, so must be coordinated accordingly. Further, any project implementation done in advance of issuance of the FERC license that includes integration with SA articles would need to be planned and implemented in a manner that ensures that DWR's interests in attaining license compliance via such early project implementation is confirmed. Integrated project planning and implementation will require coordination with already-established processes set out in the SA, specifically the Ecological Committee and its implementation of the A101 Lower Feather River Habitat Improvement Plan (LFRHIP), as well as the A127 Recreation Management Plan. The City, Chamber, and others, will be members of the Ecological Committee and Recreation Advisory Committee, but the specifics of how early and/or integrated project implementation would occur is an important consideration, but is yet to be determined.



A scenic view of a river with a sandy bank and trees. The river is calm, reflecting the sky and the surrounding greenery. The sky is overcast with grey clouds. The trees are mostly green, with some showing signs of autumn. The overall atmosphere is peaceful and natural.

Feather River Conceptual Plan

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# Master Plan Development Process

# 2



The North Table Mountain Ecological Reserve is located north of Oroville and is comprised of a basalt mesa with beautiful vistas of spring wildflowers, waterfalls, lava outcrops and rare vernal pool flower displays.





# Master Plan Development Process

## Guidance and Stakeholder Input

The Feather River Comprehensive Master Plan (FRCMP) was developed with support and guidance of an Ad Hoc Committee of the SBF Steering Committee, and stakeholders. The Ad Hoc Committee met several times during the development of the master plan to provide input, and the full SBF Committee was briefed twice during the FRCMP development. In addition to multiple meetings with staff from the City of Oroville and the Feather River Recreation and Parks District, a series of three stakeholder meetings were held in December of 2016, each with a particular focus: one was focused on downtown business, cultural, education and community resource issues; the second was focused on recreational and natural resource issues; and the third focused on real estate development and economics. These focused meetings provided valuable input that was integrated into master plan development.

## Development of Project Concepts

Ideas for potential projects—to be privately funded, planned and implemented or to be funded by the SBF—are abundant. These ideas for potential projects come from the City of Oroville's General Plan, input from the SBF Steering Committee and the Ad Hoc Committee during development of this plan; a list of potential projects generated at focused charrette/meeting of the SBF Steering Committee (held at the Table Mountain Golf Course in 2014, and three focused stakeholder meetings held in December 2016 during development of this plan. The stakeholder meetings included input on potential project concepts as well as opportunities (locations for new river access; ways in which SBF funding could influence PM&E development) and identification of issues and potential key constraints. See Appendix A for more detail on stakeholder input. Appendix B includes potential projects that were screened and determined to have a "river focus," making them suitable to consider in this master plan. These projects, along with opportunities and constraints, were considered relative to the Plan Development criteria, including "river



factors" (the ecosystem, cultural and recreational resources), "economic development factors," and "sustainability factors." To comprehensively support development of recommendations, draft Plan Development Criteria were reviewed and prioritized by stakeholders during the December 2016 stakeholder meetings. Based on the Plan Development Criteria, and an understanding of existing conditions and potential projects, a summary of key opportunities and constraints/challenges were identified. These opportunities and constraints/challenges were used to support prioritization and decision making in developing recommendations for each reach.

## Goals, Guiding Principles, and Criteria

A unique attribute of this river-focused plan is the fact that previous work has laid a firm foundation of goals and objectives for the community and the potential use of the SBF funding. However, translating existing goals, objectives and principles into a visionary Plan to transform a significant portion of an existing community is a challenge; particularly given the unique and broad ranging characteristics of the river within the planning area and the magnitude of past impacts to the river and the community. To do this, the plan development team defined a set of "Plan Development Criteria" (Appendix C) that are similar to the sections of development guidelines contained in community planning statutes—using them to help identify projects and define priorities.



Both the mission and vision of the SBF are focused entirely on the Feather River, and both highlight the importance of recreation related projects as a means of promoting economic development. The Mission Statement is: "Investing in recreational and related projects with a nexus to the Feather River to improve the quality of life and stimulate economic development in the Oroville Region." The Vision Statement is: "Reconnecting the beauty and diversity of the Feather River with the community will be the primary component of projects approved by the Supplemental Benefits Fund Steering Committee. The approved projects will provide additional recreational opportunities and economic benefits that enhance the lifestyle of the Oroville Region." See Table 2 for the RFSP's Goals.

Further, the RFSP includes a set of guiding principles. While intended to be used by the SBF Steering Committee as a framework for the selection of projects, these principles were incorporated into the FRCP to help guide plan development:

- Opportunities should be viewed in the context of "nexus with the Feather River."
- Opportunities should be evaluated as to the ability to mitigate for the impact of ongoing operations of the Oroville Facilities.
- Opportunities need to consider the ability to confer benefit broadly to areas in and adjacent to the Feather River throughout the Oroville Region.
- Opportunities should provide continuity and conformity with previous efforts on the Oroville Facilities re-licensing effort and be viewed against a long-term vision for the SBF to adhere to its mission statement as it relates to recreation, quality of life, economic development, and a nexus to the Feather River as defined in this document.

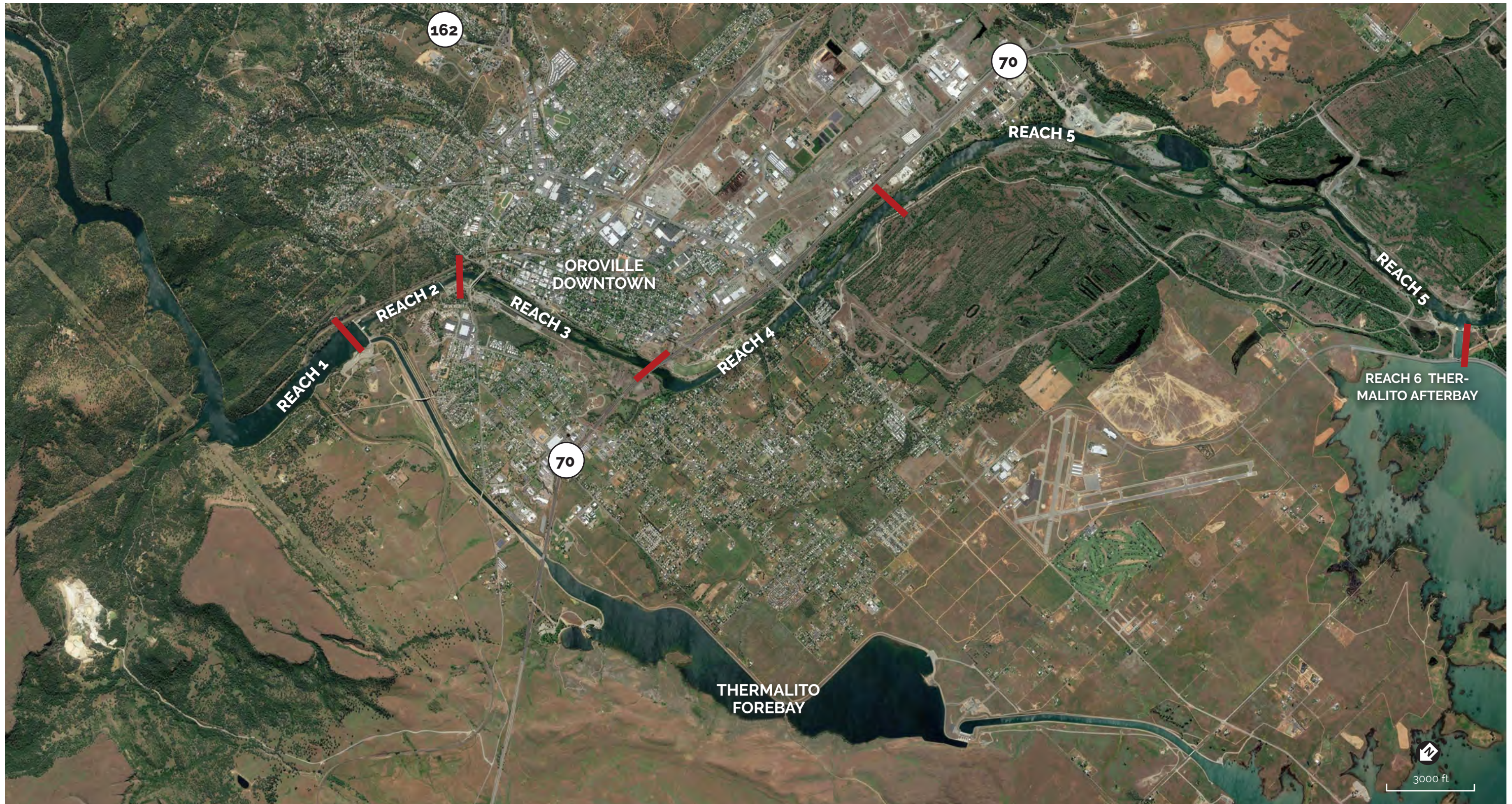
## Planning Reaches

The planning area (see map; opposite) is defined as a relatively large portion of the greater Oroville Region running along the Feather River, including other surface water areas (e.g., the Diversion Pool and the Thermalito Forebay and Afterbay). A description of the environmental setting is included as Appendix D. Because the Plan is focused on the Feather River, and the river exhibits unique characteristics across the planning area, the river and other water bodies were used to divide the plan area into a series of reaches. A river reach is a continuous piece of surface water with similar hydrologic and other physical characteristics, usually suggesting an uninterrupted stretch. The beginning and ending points may be selected for geographic, historical or other reasons, and may be based on landmarks such as dams, gauging stations, natural features, and topography (USGS, 2016). The rationale for breaking the planning area into reaches includes simplifying the complexity of planning and assessing the entire planning area at once, acknowledging the unique characteristics (physical, economic, aesthetic, etc.) inherent in the individual reaches, and supporting organized thinking about project prioritization and implementation sequencing. All references to the two sides of the river in this Plan are given from the perspective of looking downstream.

**Table 2 SBF Regional Fund Strategic Plan Goals**

<b>Goal 1</b>	Provide investment to stimulate recreation and tourism, economic development, and job creation along the Feather River in the Oroville Region.
<b>Goal 2</b>	Ensure proposed projects complement the DWR Recreation Management Plan (RMP).
<b>Goal 3</b>	Prioritize funding for projects that maximize SBF funding capacity.
<b>Goal 4</b>	Prioritize funding for projects that generate other benefits and revenue(s) to the local community.
<b>Goal 5</b>	Consider use of SBF funding toward sustainable development opportunities.
<b>Goal 6</b>	Determine appropriate allocations of the SBF to fund a potential project's administrative, capital, environmental permitting, and other costs.
<b>Goal 7</b>	Ensure that economic and recreational benefits are distributed appropriately in the region.
<b>Goal 8</b>	Strengthen and provide resources to the SBF Steering Committee and SWC partnership.
<b>Goal 9</b>	<b>Recreation Goal:</b> Provide multiple recreational opportunities that utilize and enhance access to existing resources with the boundaries of the Feather River Consolidated Master Plan.
<b>Goal 10</b>	<b>Access Goal:</b> Encourage secure and managed access for all segments of the population, with connections to the surrounding community and future development.
<b>Goal 12</b>	<b>Natural Environment Goal:</b> Ensure the continued success of habitat restoration and improve the ecological health of the river and floodplain in concert with river restoration goals.

Reach #/Name	Upstream End	Downstream End
1/Diversion Pool	Oroville Dam	Thermalito Diversion Dam
2/Fish Barrier Pool	Thermalito Diversion Dam	Table Mountain Bridge
3/Downtown	Table Mountain Bridge	Highway 70 Bridge
4/Riverbend Park	Highway 70 Bridge	Downstream end of Riverbend Park
5/Oroville Wildlife Area (OWA)	Downstream end of Riverbend Park	Thermalito Afterbay Outlet
6/Thermalito Forebay	Power Canal entrance to the North Forebay	South Forebay at Thermalito Powerhouse







Feather River Conceptual Plan

# Project Recommendations

# 3



The Thermalito Afterbay Outlet into the Feather River is a popular location for fishing for fall-run Chinook salmon as the fish are attracted to the relatively-high outflows from the Outlet.



# Project Recommendations

## Reconnect to the River

There are communities across the United States that have determined that water can be a cultural and recreational asset, not something to hide or pillage. While some communities have always maintained their river as a focal point and source of natural capital, others are reinventing themselves. The aesthetically-uninspiring, "backyard" of communities that were long ignored or abused, is being changed to the "frontyard" and is becoming the focal piece of these communities. In August 2016 Wired Magazine identified six major cities across the United States (Chicago, Oklahoma City, Los Angeles, Pittsburg, New York, San Antonio), all in the midst of river-focused projects referenced as greenway, redevelopment, revitalization, reinvention, or restoration efforts. More locally, communities as close as Truckee and Redding, CA, Ashland, OR, and Reno, NV have all successfully developed portions of their community with a focus on the rivers and creeks that have been a part of these cities since the day of each community's inception.

As people seek to recover the virtues inherent in city living, of values and places abandoned or forgotten across a century of industrial transformation and obsolescence, urban rivers lure us more than ever, and for a broader array of reasons. Along them it seems possible to accommodate the changing needs of society, to adapt and support contemporary urban dwellers, as society continues its shift from industrial-based economies (and their spatial demands) to service- and lifestyle-based economies and their requirements and desired amenities. It is even possible to incorporate means of resiliency to climate change into the design of water-focused communities.

The "natural capital" of the greater Oroville Region is highly valuable. Oroville is unique in California in that it has a large, cold-water river with an anadromous sport fishery flowing adjacent to its downtown center. Such an amenity is more-typical of California's North Coast communities, and towns and cities in Oregon, Washington, Idaho, and Montana. The aesthetic wonder and recreational opportunities that characterize Oroville are central in the recommendations of the FRCP.

## Operationalize the FRCP

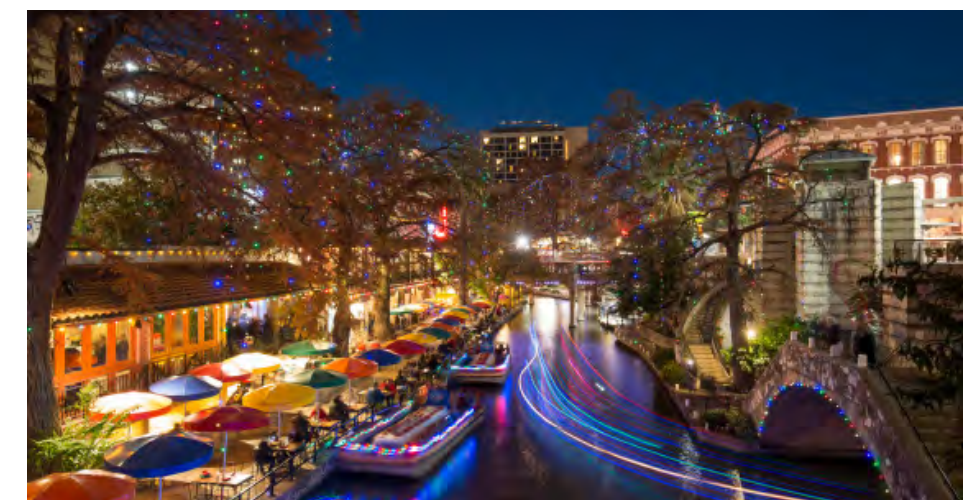
A key challenge facing this Plan is that time will not stand still. The pace of development along the riverfront is unknown; market forces change. To that end, this Plan must remain a living document to remain operational and effective. The project configurations in this Plan seek to prioritize certain shorter-term actions to enable the desired long-term trajectory of a revitalized and refocused riverfront. Effective initial investment must, in a relatively-short timeframe, sustain a new trajectory of growth and outside investment such that the funding from the SBF is maximized and leveraged into something greater than the value of the fund itself. This Plan lays out a vision, but ultimately the future will be defined by a series of individual decisions. Some initial recommendations to make operational the FRCP, project planning, and decision making are offered in Section 5, Priorities & Next Steps.

That all stated, the time for action is now and partnerships are vitally important. This Plan identifies opportunities—for immediate implementation—to partner with DWR and the SWC to develop projects that will implement important FERC license measures while simultaneously supporting recovery and restoration actions of the Oroville Dam spillways repairs that also offset the adverse effects the 2017 spillways incident had on the greater Oroville Region. These are concrete opportunities for making this plan immediately operational. Going forward, it is anticipated and desired that the SBF, DWR, and the community will work together to update this Plan, as appropriate, as they develop and implement projects.

## Develop River Projects

The following are suggested projects, segregated into individual river reaches. Projects, opportunities and constraints were considered relative to the Plan Development Criteria, specifically thinking of each project relative to "river factors" (ecosystem, cultural, and recreational resources), "economic development factors," and "sustainability factors." The result is a consolidated set of potential high-priority investments that represents a vision for projects and facilities along and through a vibrant and sustainable riverscape. Those project opportunities that include the **integration of articles from the Settlement Agreement** (that are likely to be included in the FERC license and DWR will need to implement) are **indicated in bold font**.

References to the sides of the river (e.g., right-bank or left-bank) **are from the perspective of looking downstream**. Icons in subsequent map figures indicating "Landmark & Identity" represent different things in various places throughout the Plan area. For example, this could indicate that a new bridge will serve as a landmark and generate a sense of identity for the region—or for that particular place in the Plan area. In other instances, the symbol may indicate the need for generation of a landmark concept that will "brand" and establish the identity of that location. In other instances, the location may be a natural "landmark/view that is iconic and noteworthy. The details of these locations/features are to be developed in subsequent, finer-scale planning and design efforts. Similarly, the orange "river view" arrow icons symbolize existing or potential future opportunities for the public to appreciate the natural and built landscape of the Plan area.



The intimate and well-connected San Antonio Riverwalk (example) is a famous tourist destination and is also popular with locals.



## Reach 1: Diversion Pool

Reach 1 is comprised of the Diversion Pool—running from the base of Oroville Dam downstream to the Thermalito Diversion Dam—and offers a secluded and tranquil on-water opportunity for recreationists because motorized watercraft are precluded and there is little current in this section of river. Trails run on both sides of the river, and the overall character of the reach is of dispersed recreation and nature viewing. Most of this area is within the FERC boundary.

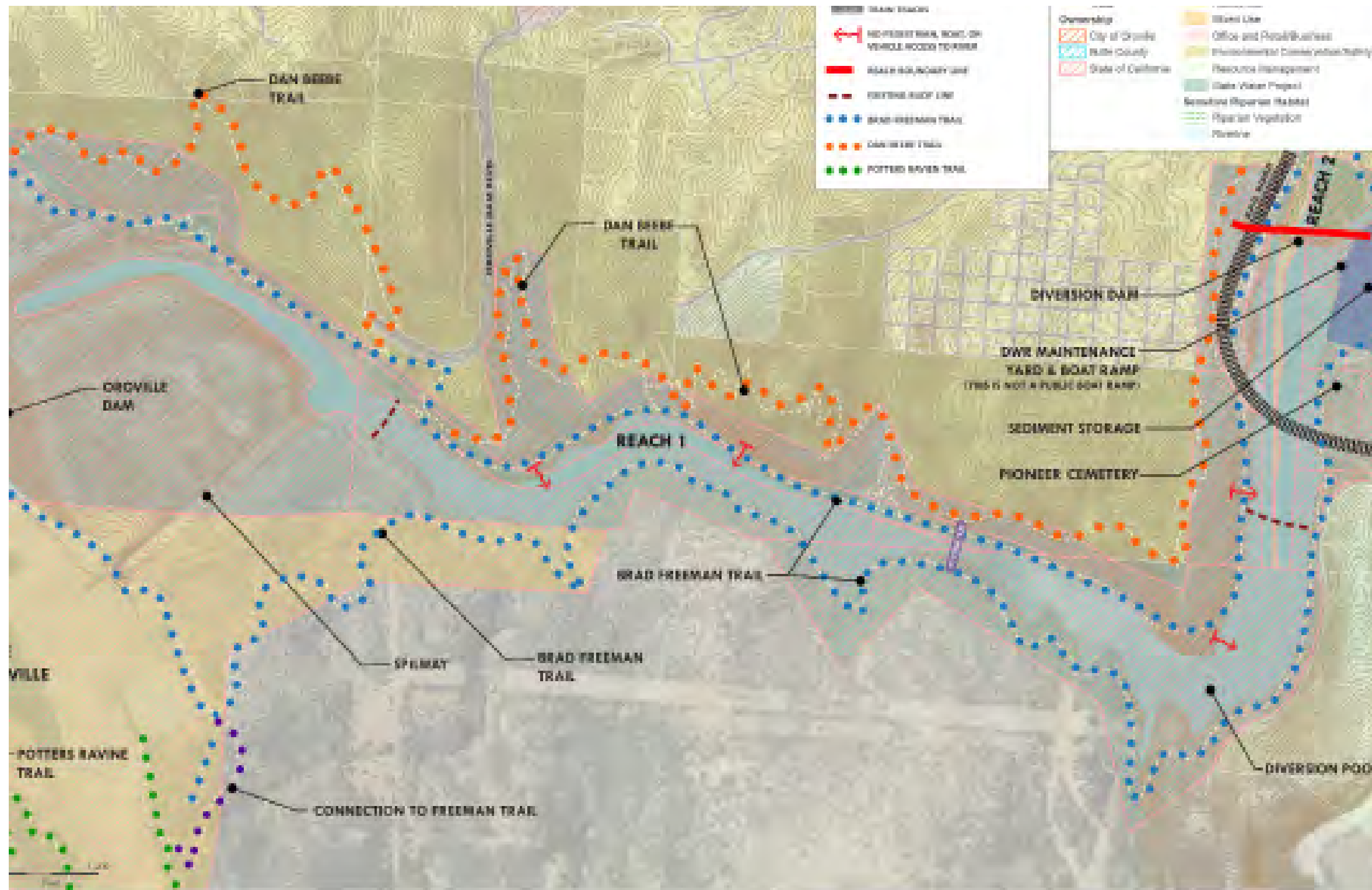
### Opportunities & Constraints/Challenges

- There is no connectivity across the river in this reach except for the Dam itself. This decreases use and increases the secluded feeling.
- Trails with distinct character run along the left and right banks of the river:
  - The Dan Beebe Trail offers steeper grades, more historical attributes including the Western Pacific Railroad Tunnel (1911), and isn't open for biking.
  - The Brad Freeman Trail climbs to the top of the Dam and connects to longer Mt. bike rides around the Lake; portions of it run on and near the recently-reopened Burma Road, now being used for spillways repairs.
- There are currently no camping opportunities in this reach. Trails are maintained in a manner inconsistent with best management practices and do not provide the best riding quality and experience.
- Land management allows cows from unfenced private lands (and public grazing leases) onto lands on the right-bank side of the river and they have direct access to the Diversion Pool itself; this changes the character of the experience.
- The spillways erosion areas and the spillways themselves offer viewing attractions (during the repairs and during operations).
- The spillways repairs and related activities have impacted the character of this reach. Spillways restoration efforts could be coordinated with a comprehensive recreation plan for this area, allowing for increased amenities and improvements in land and trail management.



Table Mountain (shown here in springtime at the Oroville "O") provides a scenic backdrop to downstream portions of the Diversion Pool.





Reach 1: Diversion Pool – Existing Conditions

NOTE: Applicable existing plans are summarized in Appendix D, Table D-2



## Recommendations

Overall, this reach offers secluded recreational opportunities in a semi-wilderness setting, just minutes from downtown. This attribute is to be leveraged and enhanced, with the goal being to increase both the "low-adrenaline" and "high-adrenaline" recreational character and opportunities in this reach. Given the current Oroville Dam spillways repairs, there is significant opportunity to make improvements to the trails on the right-bank side of the Diversion Pool in conjunction with the spillways "restoration phase," coming after repairs are completed and implemented in coordination with that restoration work. This opportunity would likely decrease the total cost for all features, would allow for a partial "decommissioning" of the Burma Road (by retaining key crossings and drainage features necessary for trail improvements), and could be completed in a manner that "closes out" the repair project in a positive and sustaining way.

- Develop the easy-ride cycling opportunities in conjunction with Burma Road restoration. Make the trail suitable for road bikes (upstream, to an overlook point/turnaround) and assess the potential for making portions of this section of trail ADA accessible.
- Repair and enhance the mountain biking experience. Construct a new, high-quality trail adjacent to, and incorporating portions of, the Burma Road alignment. Merge into the steeper section of the Brad Freeman Trail that leads up to the Dam and improve drainage and riding character. The central part of the trail is to be a downhill course that includes jumps and other elements (banked turns, wooden and earthen construction) intended to take riders on an exciting "Spillway Ride" from the Dam boat launch parking lot all the way to downtown (via improvements in other downstream reaches).
- Develop floating campsites that are anchored in different areas of the Diversion Pool. Each would include a two-story structure that provides a unique on-water camping experience and can accommodate up to 15 people, with living space and amenities such as cooking grill, table, sink, restroom, and sleeping area. Some would be boat-in only access; others would be accessible via floating "bridges" so that bikers and hikers can access them. Considering the trail access, one or more may be made to be ADA accessible.



### Flex Event Space

The area for the Flexible Event Space (delineated in yellow in this 2010 aerial photograph) is currently a storage area for sediment excavated from the Diversion Pool below the spillway. A potential bridge across the canal and enhanced trail are also shown, in red.

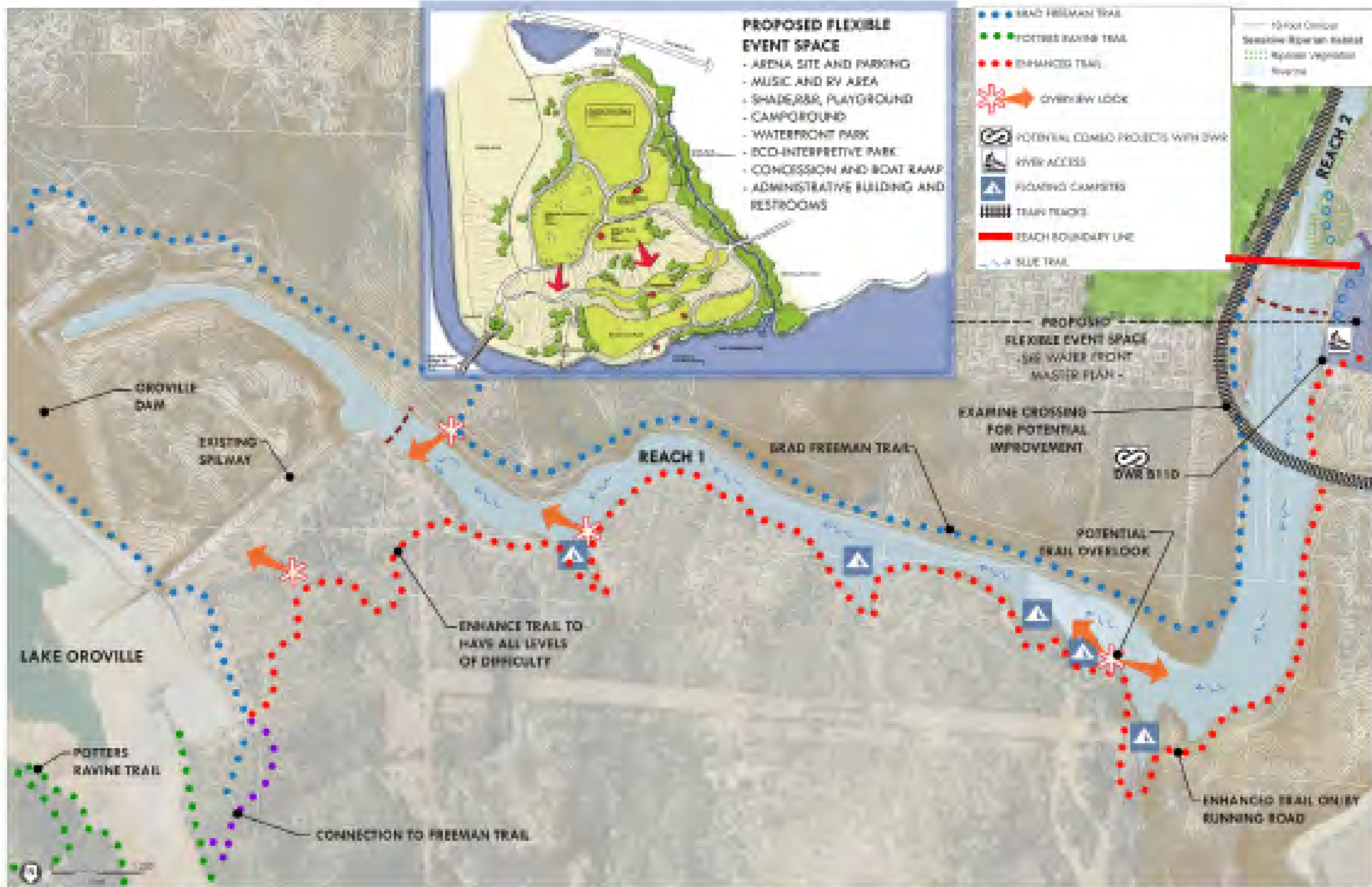
- At least one bathroom (bridge-accessed, floating-platform type) would be placed near the last ADA accessible campsite, and/or near the point where the trail begins the steep climb up near the emergency spillway.
- On the right-bank side, add overlook points with interpretive elements at locations on the Brad Freeman Trail to explain the erosion and features related to the 2017 use of the emergency spillway, and to explain the features of the Oroville Dam and the (new) flood control spillway. On the left bank side, add interpretation to the Brad Freeman and Dan Beebe trails, related to historical dam construction, spillways repair, and other noteworthy elements.
- Improve signage and wayfinding throughout the reach.

- Develop the proposed flexible event space. Originally conceived and fully described in the Oroville Waterfront Concept Plan & General Plan Amendment (also, the Oroville Downtown Waterfront Redevelopment Concept Plan), this space would provide for camping and multiple potential events. The proposed site is presently a storage area for sediment dredged from the Diversion Pool downstream of the spillways; it is unclear at this time if this material is to be relocated. There is a significant opportunity for this material to be utilized on-site to re-contour the area and develop it as described in the Waterfront Master Plan. **This could be done in a manner that decrease the costs for final sediment storage and could be integrated into the spillways restoration.**
- The flexible event space would also serve as a parking area and "Put-in" point for hiking, ADA access, and for non-motorized watercraft launch. **This is a potential combined project with DWR B110.**
- Consider inclusion of this reach of river as a designated Blue Trail. Blue Trails are river segments that serve as water-based recreational resources. Blue Trails are adopted by communities that are dedicated to improving family friendly recreation such as fishing, boating, hiking, and wildlife watching, and conserving rivers and lands.



### Mt Biker

The thrill of a well-designed mt. biking course is sought by riders of multiple abilities. Such a course would be unique in this part of California.



### Reach 1: Recommendations

- DWR A127 - Recreation Management Plan
- DWR B110 - Analysis of Non-Motorized Water Trail Shoreline Access
- Blue Trail
- Connectivity from the Dam to downstream areas
- Bicycle trails
- Floating campsites
- Improved trails and interpretive signs
- Flexible Event Space

Reach 1: Diversion Pool – Recommendations



## Reach 2: Fish Barrier Pool

Reach 2 runs from the base of the Thermalito Diversion Dam downstream to the historic, green-painted steel Table Mountain Bridge (built 1907 for vehicles; now a pedestrian bridge). This reach marks the beginning of the "low flow channel" of the river. The reach offers a section of river that is impounded and not swift, making it suitable for swimming; however, because of the steep and rocky shoreline, access is relatively limited. The left bank's trail includes a historical site and offers strolling and viewing of the river and shade structures for sitting and picnicking. Connection to upstream recreation on the right bank is blocked by the Thermalito Power Canal.

### Opportunities & Constraints/Challenges

- The sole connectivity across the river is via the Table Mountain Bridge; bikers and pedestrians (which typically originate in downtown) are generally restricted to the left bank unless they purposefully cross the Table Mountain Bridge to the fish ladder viewing area.
- The left bank Sewim Bo River Trail and shade structures offer limited locations for sitting and picnicking; the views of the river are high quality and with distance upstream the sense of seclusion increases—as do views of water spilling through the gates of the Thermalito Diversion Dam.
- The right bank is anchored by the fish ladder viewing area and parking lot; the view of fish barrier dam offers a waterfall-type aesthetic and fish attempting to jump the barrier are key attractions.
- The right bank trail upstream from the fish ladder viewing area is not marked and essentially access and use is restricted to this area on the right bank. The trail itself splits apart and property ownership/public access appears ambiguous. The trail is unimproved and ultimately it intersects with the Thermalito Power Canal at the Thermalito Diversion Dam. Because there is no crossing, access upstream is precluded.



View of the Fish Barrier Dam from Downstream

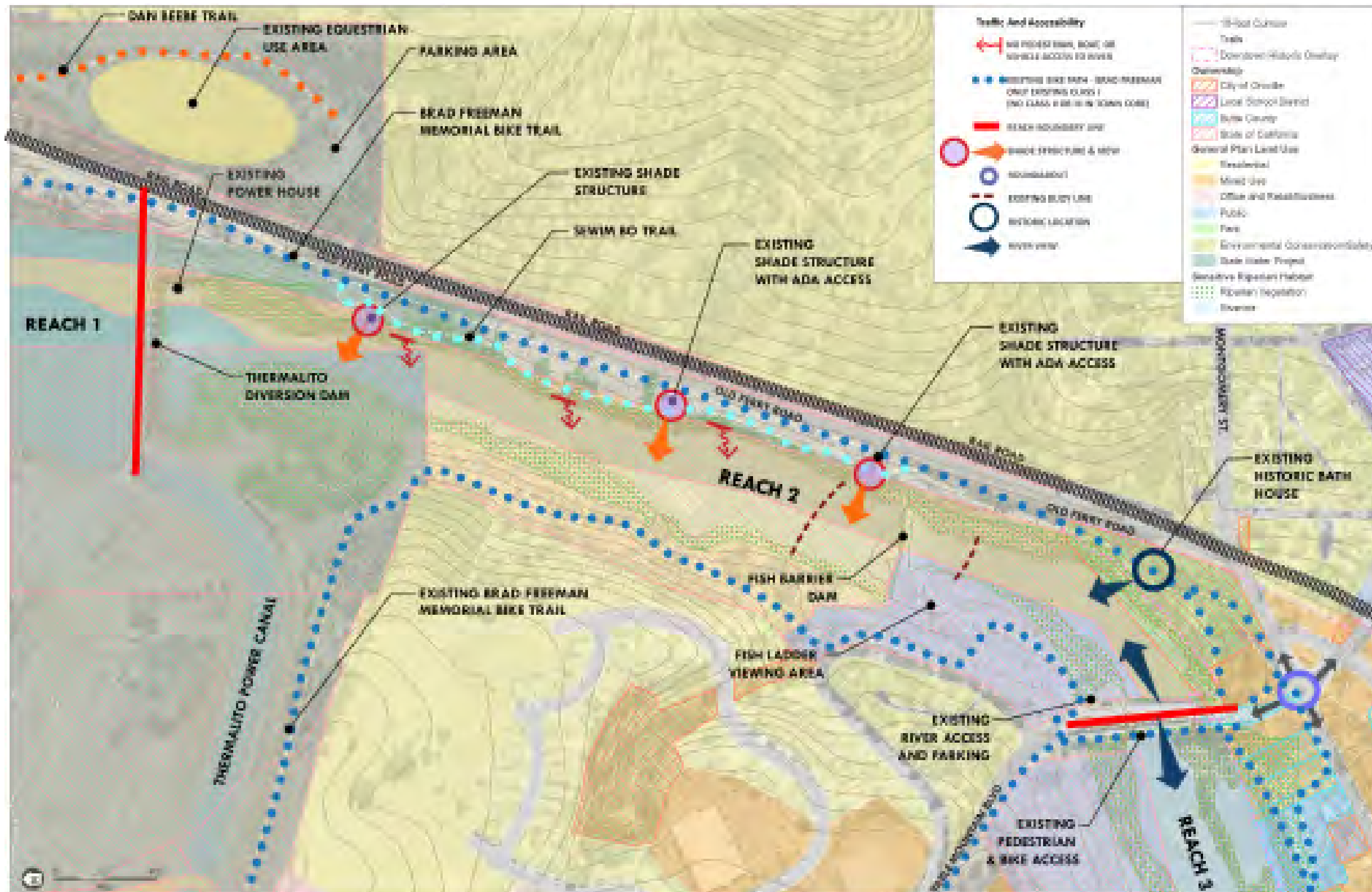
- The lack of access along the right bank creates a disconnection to the recreational opportunities upstream in Reach 1.
- The river "put-in" (launch) located under the Table Mountain Boulevard Bridge is inadequate; no trailer access for drift boats or larger rafts; no rigging space; no ADA access.
- As per Settlement Agreement Article A108, minimum flows in the low flow channel are being increased from 600 cfs to 800 cfs (from Sept. 9 – March 31); minimum flows will reduce to 700 cfs from April 1 – Sept. 8. This flow increase will improve the aesthetic character, the quality of boating, and the habitat in this reach.



The Thermalito Diversion Dam marks the upstream end of Reach 2.



The tranquil nature of the pool upstream of the Fish Barrier Dam reflects the Table Mountain Bridge and downtown Oroville.



Reach 2: Fish Barrier Pool – Existing Conditions

NOTE: Applicable existing plans are summarized in Appendix D, Table D-2



## Recommendations

This reach would benefit from a connection to upstream recreational opportunities, linking together a section of river trail presently segregated by the Thermalito Power Canal, and from enhanced amenities within the reach for passive recreation (picnicking and sitting) and strolling/sightseeing. Improved river access would encourage and enable more recreation into Reach 3, downstream.

- Construct a pedestrian and bicycle bridge across the Thermalito Power Canal.
- Enhance the Brad Freeman Trail along the right bank for ADA access, ride bikes, and create an integrated and parallel Mt. bike trail/course, with elements.
- Add interpretive signage and wayfinding throughout this reach along existing and enhanced trails.
- Add equestrian event area.
- Construct additional shaded picnic structures along existing and enhanced trails on both banks.
- Plant additional trees along left bank, enhancing shade at existing and proposed picnic shade structures.
- The quiet nature of the pool and lack of through-flow trails and roadways on the left bank upstream of the Fish Barrier Dam make it one well-suited for quiet meditation and contemplation. Focus efforts is this area to preserve and enhance this character.
- Renovate the river put-in and parking area to include sitting areas, ADA access, improve access for car-top and trailer launch, and a boat drop (all for non-motorized watercraft). **This is a potential combined project with DWR's B110 – Analysis of Non-Motorized Water Trail Shoreline Access measure (to analyze water trail shoreline access; and/or construct or improve 3 access sites). This area would become a more-easily identified focal point in the City and along the river. The put-in area, adjacent areas of existing parking and all associated means of connection and circulation for vehicles and pedestrians/bicyclists should be the focus of a detailed recreation and circulation study/plan to maximize investments and increase the sense of identity of this area.**



This area—with the existing, large parking area adjacent to the Fish Barrier Dam and fish ladder viewing area and the river put-in—present a significant opportunity for a focused design effort to "place make." An enhanced version of this area would increase connection to the river, optimize circulation, and become a landmark for the river and a future Blue Trail.

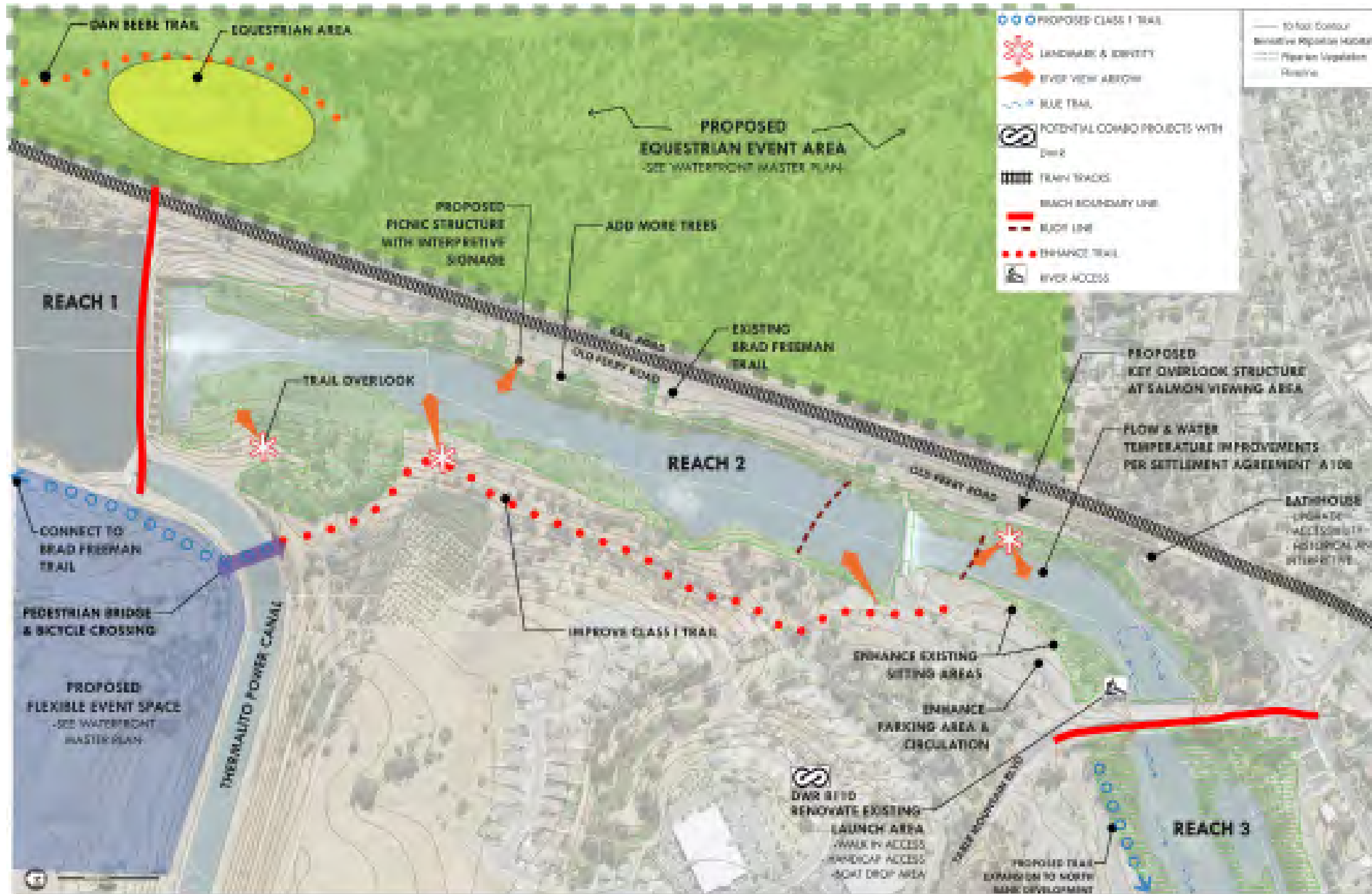
- Consider inclusion of this reach of river (from the put-in, downstream) as a designated Blue Trail. Blue Trails are river segments that serve as water-based recreational resources. Blue Trails are adopted by communities that are dedicated to improving family friendly recreation such as fishing, boating, hiking, and wildlife watching, and conserving rivers and lands.
- Integrate a trailhead and signage into the river put-in and parking area for the proposed blue trail (see Reach 3).



The pool upstream of the Fish Barrier Dam is scenic and tranquil. Enhanced shaded seating areas and dedicated efforts to preserve and focus on the quiet, contemplative character of this area will offer a unique experience for the community and visitors alike.



The existing boater put-in under the Table Mountain Boulevard bridge could benefit from enhancements.



### Reach 2: Recommendations

- DWR A101 - Lower Feather River Habitat Improvement Plan
- DWR A127 - Recreation Management Plan
- DWR B110 - Analysis of Non-Motorized Water Trail Shoreline Access
- Equestrian use area
- Overlooks; shade structures; enhanced seating
- Nature Center Trail, and completion of Brad Freeman Trail
- Nature Center & Bathhouse Improvements
- Boating/floating put-in at the Table Mountain Boulevard Bridge
- Blue Trail (in conjunction with Settlement Agreement Article B110)
- Hiking/bicycle trails & connectivity from the Dam to Downtown, including bridge over Power Canal
- Environmental & river stewardship information and kiosks

Reach 2: Fish Barrier Pool – Recommendations



### Reach 3: Historic Downtown District

Reach 3 extends from the historic, green-painted steel Table Mountain Bridge (built 1907 for vehicles; now a pedestrian bridge) at the upstream end to the Highway 70 bridge on the downstream end. The right bank (looking downstream) of the river in this reach includes a floodplain, albeit one that has been heavily disturbed by mining and grading. Additionally, the Feather River Fish Hatchery occupies a large area on the right bank, with this facility and the presently-vacant area downstream both flanked by steep cliffs. The left bank of the river is completely occupied by the historic Oroville downtown district, with a steep bank and "levee" separating the Historic Downtown District from the river. This section of river (particularly at the Table Mountain Bridge) is the upstream "put-in" onto the river for many recreational boaters/floaters, and anglers also frequent this reach.

### Opportunities & Constraints/Challenges

#### The River:

- The river includes the upstream-most spawning and holding habitat for salmon and steelhead, but it could be improved. This reach may be the location of the A105 segregation weir; the actual location likely won't be determined until after FERC license issuance and Ecological Committee and FERC approval.
- Settlement Agreement Articles A102 (Gravel Supplementation and Improvement Program), A103 (Channel Improvement Program), A104 (Structural Habitat Program) and potentially A105 (Fish Weir Program; Segregation & Count Weirs) may all be implemented or considered for implementation in this reach.
- Both river banks are steep and adjacent floodplains are essentially non-existent; side channels are limited.
- Below Auditorium Riffle, the morphology of the channel is rather homogenous and multiple reaches are degraded into plane-beds.
- Sediment supply from upstream is limited, and bank erosion is minimal to non-existent so there is minimal in-reach supply; thus the river is degrading and habitat and recreational features are diminishing in extent and quality.
- There is sufficient gradient in the river to create greater hydraulic diversity (increasing the quality of fish habitat and whitewater recreation) by altering the channel morphology.



Downtown Oroville is full of historical buildings and the storefronts along Montgomery Street define the character of this part of downtown. Areas closer to the river lack these historical structures and this marked character.

- Right bank land ownership in the available databases is undefined. DWR staff confirmed it is a combination of DWR, and State Lands Commission ownership. Public ownership provides the opportunity to increase habitat value by altering bank profile and creating new side channel and floodplain habitat. Floodplain width oscillation can be designed to support sediment retention and whitewater amenities.
- Right bank is relatively-high ground; left bank protected by levee
- As per Settlement Agreement Article A108, minimum flows in the low flow channel are being increased from 600 cfs to 800 cfs (from Sept. 9 – March 31); minimum flows will reduce to 700 cfs from April 1 – Sept. 8. This flow increase will improve the aesthetic character, the quality of boating, and the habitat in this reach.



The Feather River in Reach 3 is an important location for holding and spawning of Chinook salmon. Merging habitat enhancement and community revitalization offers tremendous opportunity to achieve multiple benefits and increase the connection of people and the adjacent river ecosystem.

#### Recreation:

- Only one put-in for the river at the Table Mountain Bridge (upstream in Reach 2).
- Banks are steep; river channel is dispersed and some areas can have mucky water at times; no restrooms or egress from river to the Historic Downtown District.
- Bike trail is limited to left-bank side of the river; no loop. Access along west side of river is nonexistent despite public ownership.
- Fishing access/trailheads are lacking.
- Poorly-defined sense of connection (and no trails or way-finding) to the river from the Historic Downtown District core.
- Existing viewing platform is in disrepair.
- Not much of a need for developing new green spaces: several existing parks, and the river is directly adjacent, but presently isolated and not highlighted.



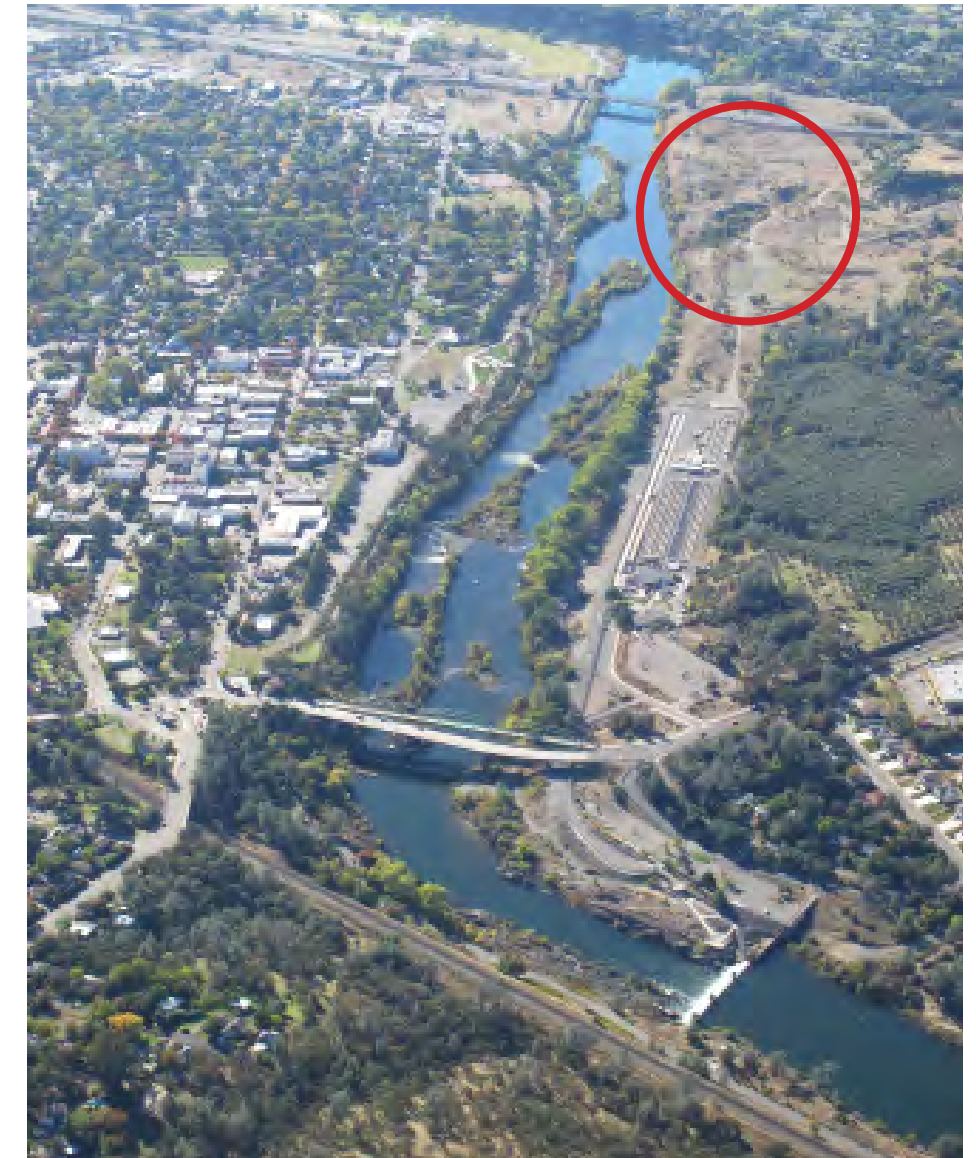


Trails & Auto Circulation:

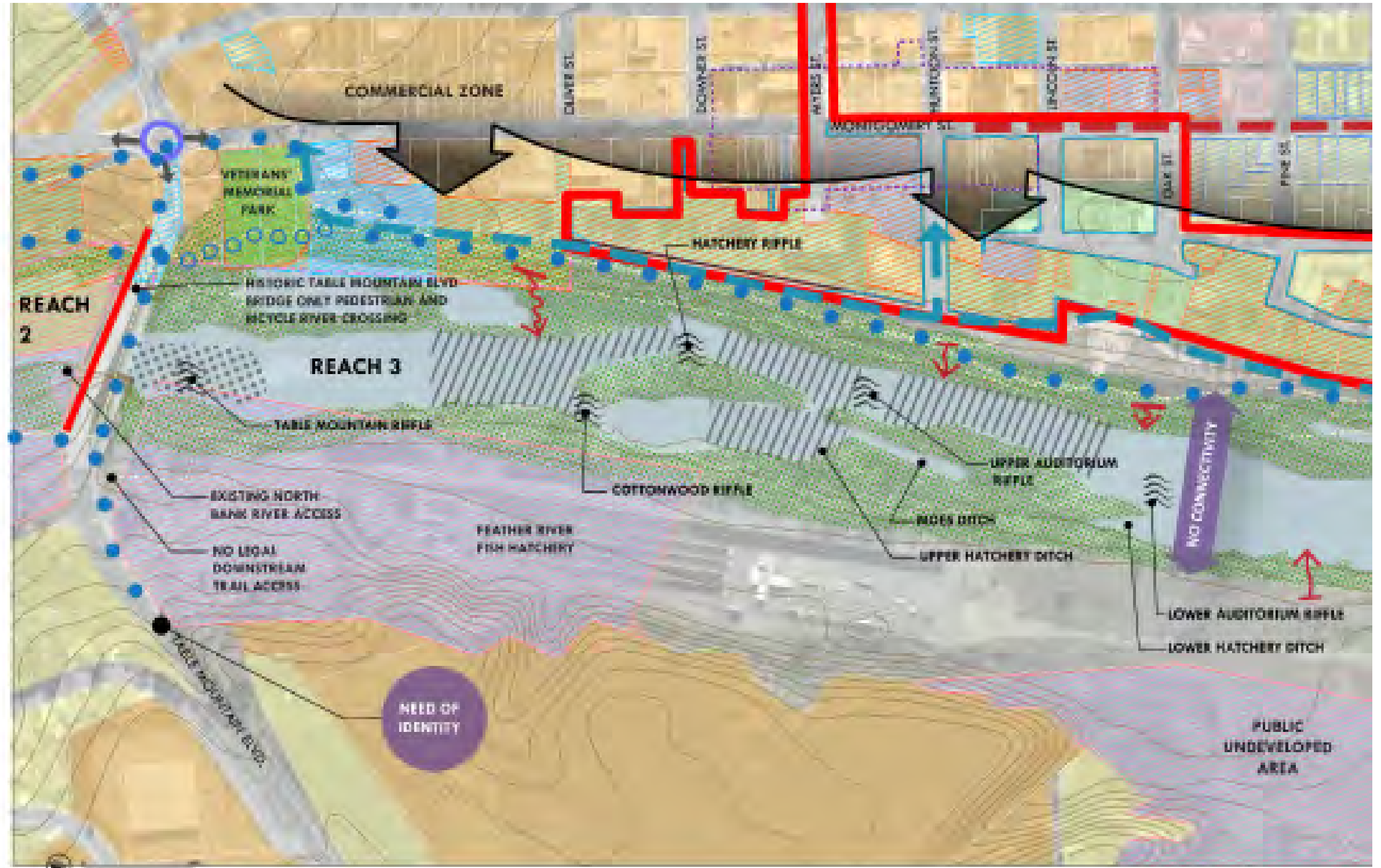
- The existing trail along the river is a strong connector and amenity; cross-river connections are limited.
- Auto circulation is bookended at either end of the reach by Table Mountain Boulevard Bridge and Highway 70 Bridge, but roundabout is in only in one location.
- The right bank, along Table Mountain Boulevard, lacks any identity marker or "entrance" to the river or the Historic Downtown District.
- The undeveloped portion of the right bank lacks access; future access is limited to through an existing residential neighborhood (not proximal to a thoroughfare).
- Traffic from Highway 70 is by default directed down Montgomery into the Historic Downtown District and congests a historical neighborhood. Visitors from northbound Highway 70 could come and go to the Historic Downtown District and never know the river is there.
- Aside from Montgomery street, east-west connectivity is limited; Arlin Rhine Memorial Drive isn't well-connected and wastes precious "real estate" close to the river.
- Connection to river from the Historic Downtown District is non-existent; roads connecting to Arlin Rhine Memorial Drive are limited.
- Bike trail is limited to left-bank side of the river; no loop.
- Only access for bikes and pedestrians to cross the river is to go to the Table Mountain Boulevard Bridge.
- Any new development on the right bank of the river would be isolated from the Historic Downtown District.

Development:

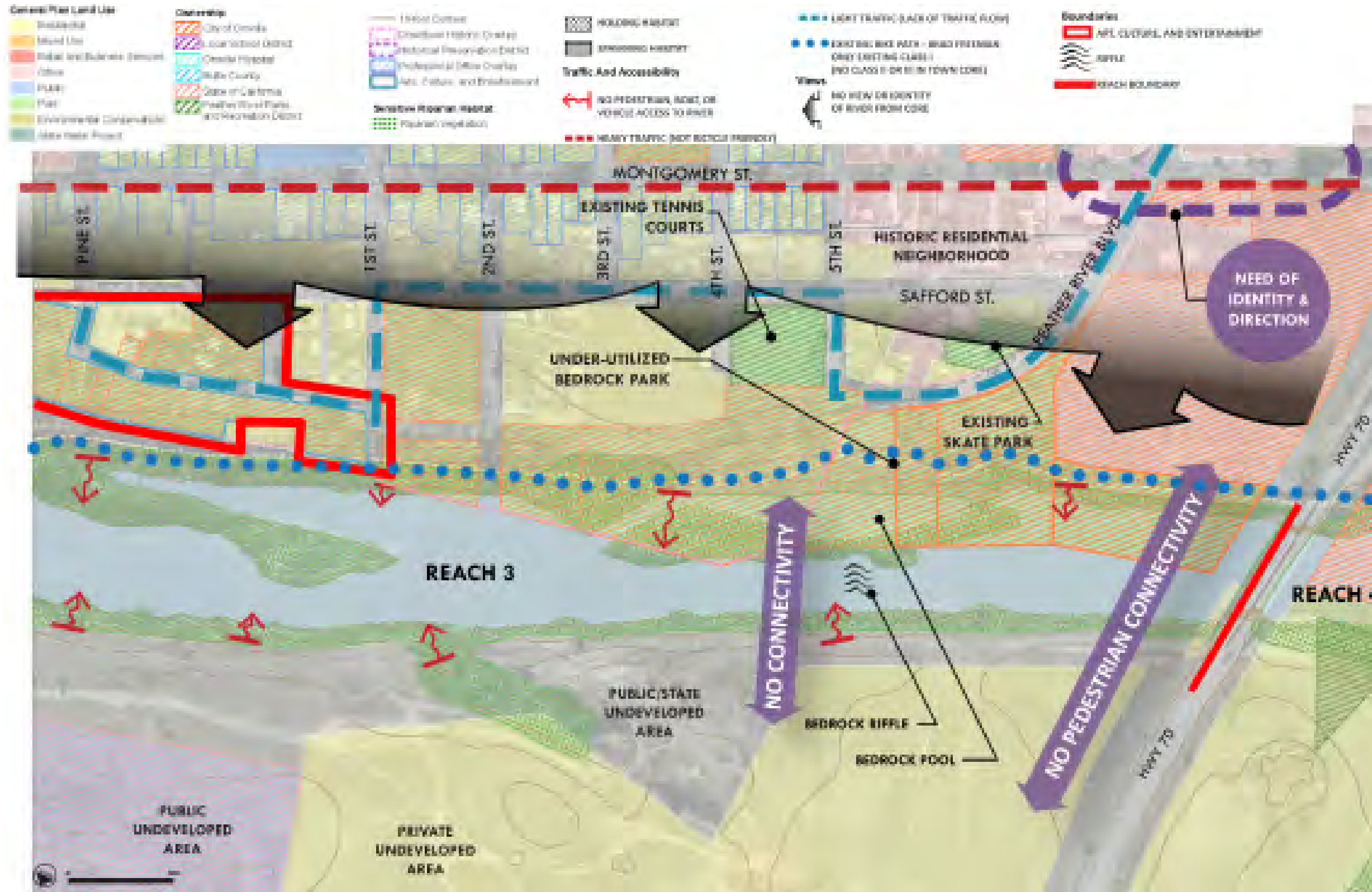
- Development on the levee and near the levee is limited. Much of the Historic Downtown District area near the river has room for infill and redevelopment.
- The oversized levee profile in the middle to upstream portions of the reach is an opportunity to reinforce the levee and integrate development.
- Much of the current development focus is justifiably on the Montgomery Street corridor, but it neglects the areas closer to the river.
- Ownership data is available through Butte County Public Records While state ownership is assumed, the land ownership needs to be confirmed along the river and especially on the left-bank levee in the Historic Downtown District.
- The present development focus on the Montgomery Street corridor currently creates an "old town" character and feel that could contrast nicely with new and infill development toward the river that convey a character that is river-focused.
- There is a need to get more people living, working and playing in the Historic Downtown District (and in Reach 3).



Significant and substantial space for infill and redevelopment is visible as open, paved areas on the left bank (as seen in looking downstream in this image) between the river and the Historic Downtown District.



Reach 3: Historic Downtown District – Existing Conditions



NOTE: Applicable existing plans are summarized in Appendix D, Table D-2



## Recommendations

Reach 3 is the keystone piece in creating connections (upstream to downstream) and catalyzing economic growth by revitalizing the Historic Downtown District with a river focus. The river is viewed as critical habitat—the best place for fish to complete key portions of their life cycles, and a place that can be made even better for listed species—but also a place that can be made to function for both people and fish in a mutually beneficial manner. Major changes in how the community moves into and through the Historic Downtown District allow for greater connection with the river and access to new areas for development. The area between the Historic Downtown District and the river (the "levee," currently underutilized) forms the connection between the two and (with right-bank development) serves as the core catalyst for new jobs and increased residency.

### The River & Recreation:

- Develop this reach of river (from the put-in, downstream) as a designated Blue Trail. Blue Trails are river segments that serve as water-based recreational resources. Blue Trails are adopted by communities that are dedicated to improving family friendly recreation such as fishing, boating, hiking, and wildlife watching, and conserving rivers and lands.
- Focus recreation downstream of key fish holding areas near the Table Mountain Boulevard Bridge. Design recreation elements that don't conflict with fall spawning season based on recreation seasonal use.
- Create multiple walking and biking connections between the Historic Downtown District and the river. Include convenient, easy and safe access to fishing and whitewater play features.
- Develop a new right-bank trail that starts at the Table Mountain Bridge river access/put-in, runs past the hatchery, leads along the habitat and riverfront open space areas, and connects with both of the new proposed bridges.
- Enhance Bedrock Park including its lagoon and amphitheater (in conjunction with the new promenade). Enhance the in-river portions of the park in conjunction with proposed habitat elements (see below).
- Develop in-channel morphologic features (artificial bedrock, natural boulders, augmented wood and sediment) to improve instream habitat, increase gravel retention in riffles, and create whitewater kayak play features (wave and/or hole). **This is a potential combined project with DWR's A102, A103, and A104.**



Whitewater kayak "rodeos" are exciting competitions where paddlers compete to perform the best tricks.

- Improve spawning and rearing habitat in this reach with targeted (riffle construction) and also significant (bulk) augmentation of sediment (spawning-sized, and other) to recover from the deficit caused by upstream dams and exacerbated by recent high flow events. **This is a potential combined project with DWR's A102.**
- Coordinate the design of habitat and recreation features with development of the gravel augmentation plan, gravel budget, and the construction and maintenance of side channels. **This is a potential combined project with DWR's A102, A103, and A104.**
- Develop floodplain and side channel habitat on the right bank on public property. **This is a potential combined project with DWR's A102, A103, and A104.**
  - Excavate and lay-back banks; longitudinal profile developed to create new side channel and floodplain habitats.
  - Floodplain width oscillation can be designed to support riffle sediment retention and whitewater and habitat amenities.
  - Floodplain width increases inundate larger areas for improved and increased habitat, and also increase flood conveyance which has benefits for the Historic Downtown District on the opposite bank. Coordinate floodplain/side channel design to maximize levee development and flood management benefits.
- Develop a "green amphitheater" (seasonal/removable stage in event space that floods in winter as floodplain/backwater habitat) in a portion of the excavated floodplain area downstream of the new proposed vehicle bridge. The space would be suitable for summer concerts and the banks would be configured for seating; native habitat plantings would be dispersed through the area.



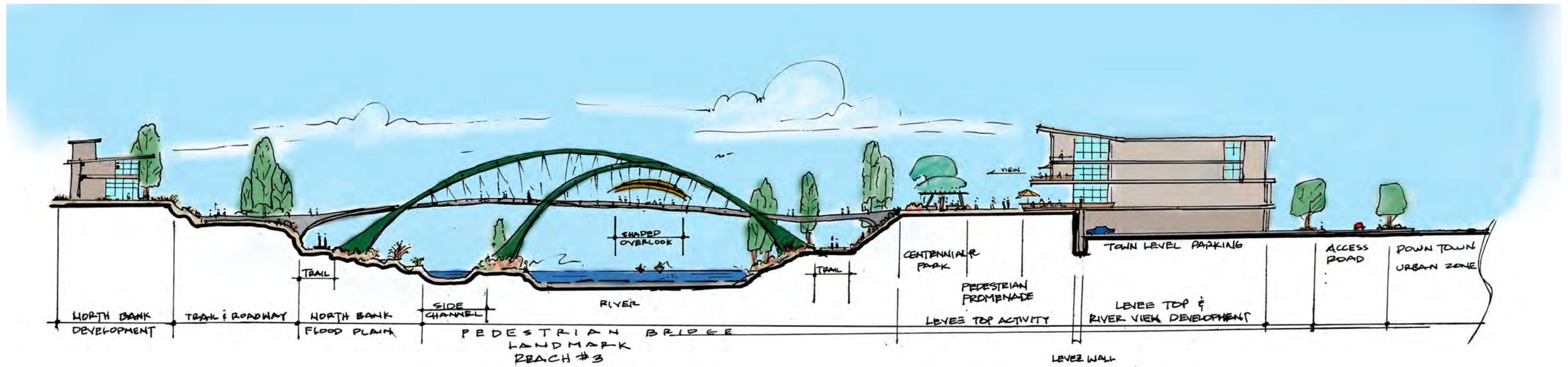
New development along the river will accentuate the historical character of existing downtown architecture and will increase the value of these irreplaceable historical resources. The melding of old and new will create a pronounced and vibrant character.



For example, the river promenade and bridge entering Adelaide, Australia. A similar orientation and view could be enabled in Reach 3 as an entrance to downtown and the new North Bank river-focused development.

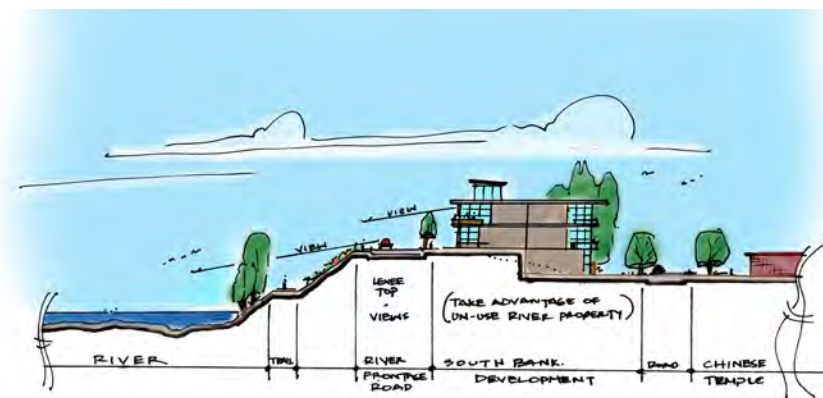
### Trails & Auto Circulation:

- Route traffic from Highway 70 to the Historic Downtown District through a new roundabout and onto a river-focused promenade atop the downstream end of the levee.
  - Montgomery Street still open, but signage and roundabout configuration channel majority of through-traffic onto promenade.
  - Road construction could include increasing the stability (and federal accreditation) of the levee.



## DOWNTOWN/RIVERFRONT DEVELOPMENT

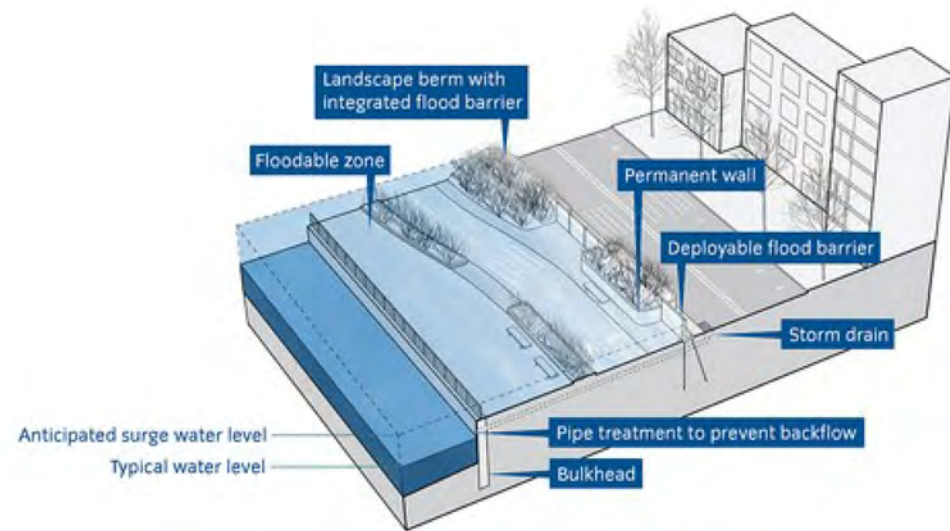
New development adjacent to the river can integrate a flood wall and other flood defenses (see insets) while offering extraordinary opportunities for riverside view properties with a character unique to the Central Valley. From approximately Pine Street upstream, development is pedestrian access only along the river with underground parking and vehicle access from downtown.



### RIVER FRONTAGE ROAD

By routing traffic along the top of the levee, visitors are instantly connected to the Feather River as they enter

- Possible new traffic flow atop riverfront promenade decreases congestion and improves the character of the historical neighborhood along Montgomery Street.
- Visitors would arrive in the Historic Downtown District core via this route, while also gaining an increased sense of Oroville's river identity.
- Traffic routing to a river-focused promenade also focuses traffic adjacent to the entrance to the Gateway Project/Hospitality Area.
- Develop two new bridges:
  - Downstream bridge is a "landmark feature" for bicycles and pedestrians. It could provide vehicle access into the new right-bank development and greatly expands the visual connection to the river. Provides important right-bank to left-bank pedestrian and bicycle connection that Highway 70 does not provide.
  - Upstream bridge is a pedestrian and bicycle bridge that "ties in" with the existing Centennial Plaza and is also near the new right-bank research and education campus, allowing for easy access to Historic Downtown District amenities without use of automobiles. The bridge also serves as a "landmark feature," drawing persons on either bank toward the bridge (and the river).



**INTEGRATED FLOOD PROTECTION SYSTEM**

Integrated flood protection designs can account for high water as a landscape feature rather than a solely as a hazard.

- 
- Create multiple walking and biking connections between the Historic Downtown District and the river. The levee creates a visual barrier and is a design challenge, but it need not be a fatal constraint. The rivers that have defined New Orleans and San Antonio are both hidden from their immediately adjacent downtowns, and yet people easily find their way to river oriented attractions.
- Connect the bicycle/pedestrian trail under the Table Mountain Boulevard Bridge so that cyclists can avoid the Montgomery Street corridor if they simply wish to pass upstream on the left bank side of the river.
- New right-bank trail and bridges create multiple potential walking and/or biking loops.

**Development:**

- Focus on river-centric, multi-story mixed-use development (see pink areas in the Downtown area in the Recommendations figures).
  - Generate a new character in this area that compliments the "old town" character to the east, along the Montgomery Street corridor.
  - Opportunity footprints are adjacent to available infill/redevelopment areas and greatly expand the development opportunity area beyond the conventional Montgomery Street corridor "grid" development concept.
  - Focus on increasing livable spaces and higher-end office/tech spaces along the river to increase the magnitude of higher-income level residents/visitors. Consider millennials and baby boomers as target residents that want "lock and leave" residences with direct access to high-quality recreation.
- Focus development on and within the oversized levee profile in the middle to upstream portions of the reach (see pink areas in the Downtown area in the Recommendations figures).
  - This is an opportunity to reinforce the levee (increasing the stability and supporting federal accreditation) while simultaneously and efficiently integrated new development.
  - Development in the levee footprint could integrate underground parking and integrated floodwalls. This new development could functionally reduce the visual obstruction



Flood protection and development can be fully integrated into functional and inspiring landscapes suitable for living or working. This includes operable barriers that stay hidden except for during floods.



by lowering the overall profile of the levee and also enhancing connectivity to the Historic Downtown District.

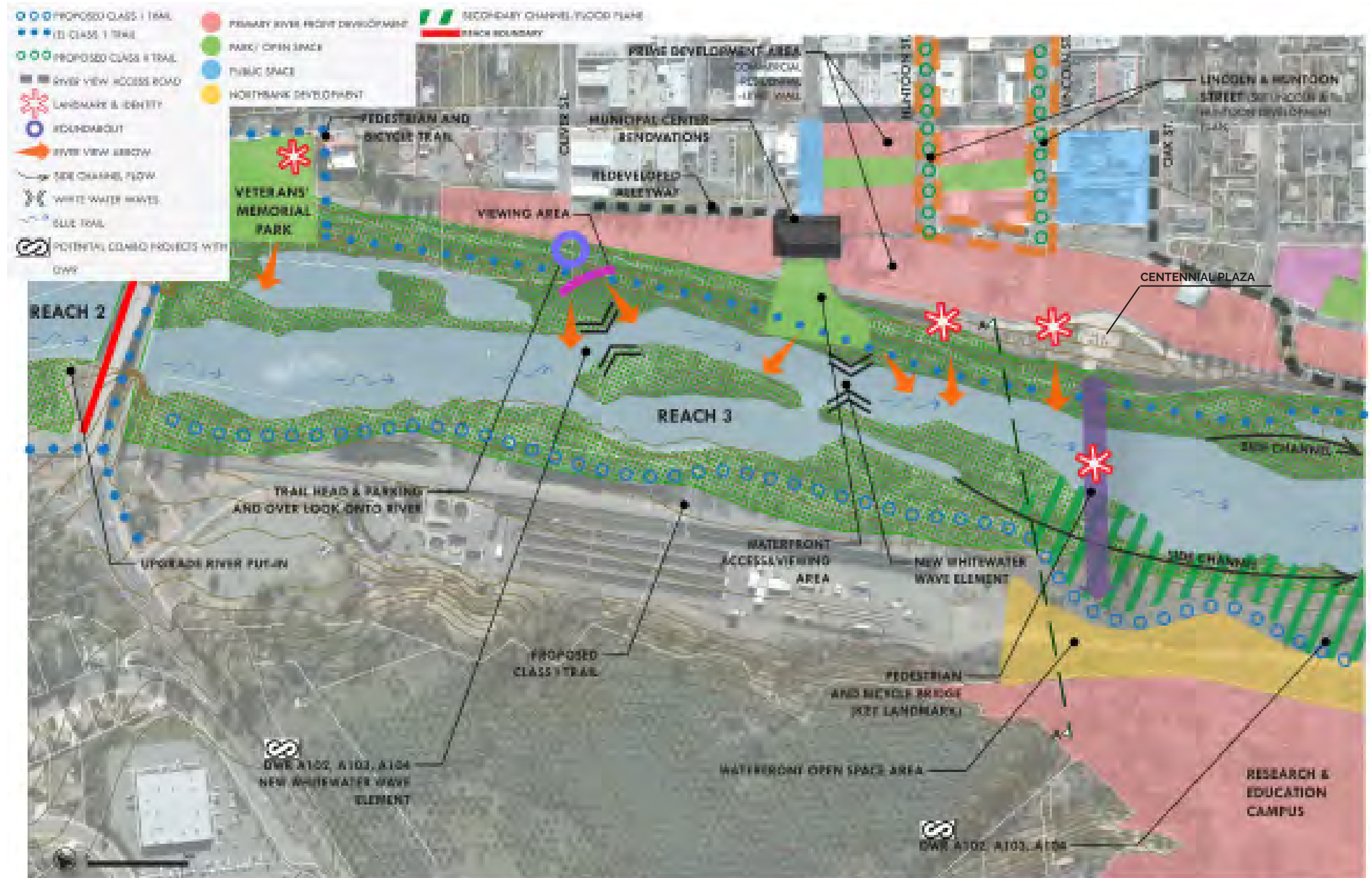
- Operable flood barriers (see photos, opposite page) can be designed into open spaces between buildings that include fully-integrated and hidden flood walls. These barriers are hidden except for times of flooding and they increase the height of flood protection during floods while still allowing for a lower ground-surface elevation the majority of the time.
- Use new/infill development to create multiple walking and biking connections between the Historic Downtown District and the river. Focus development around one or more identity/landmark/trailhead/river put-in sites, such as the one envisioned at the end of Oliver Street. Design these to support connection with new river recreation elements (such as whitewater play features and viewing area). These connections and access should be for both river recreationists and event spectators.
- Develop a right bank river-focused community development and ecological preserve.
- This development configuration leverages the publically-owned habitat areas along river (**developed in coordination with DWR's A102, A103, and A104**) as a means to increase habitat for in-river spawning and rearing, and floodplain habitat, reserving private land for development.
- Develop a research and education campus that is physically adjacent to the fish hatchery and is also focused on research and application of aquaculture, salmonid habitat restoration and monitoring, and related topics. Develop means for graduate research and programs to support the monitoring of PM&Es in the new FERC license, and in particular the Lower Feather River Habitat Improvement Plan; **developed in coordination with DWR's A101**.
- Design the urban developed space around the "green amphitheater" floodplain/backwater habitat area (described



The whitewater features in the Truckee River in Reno, NV are used by recreational paddlers, for annuals competitions, and by inner tubers. Is an example of how the interspersing of recreation, the river, and business creates an exciting and appealing place to live, work and play.



Feather River Conceptual Plan "A Vision for the Low Flow Channel of the Feather River"



Reach 3: Historic Downtown District – Recommendations





### Reach 3: Recommendations

- DWR A101 - Lower Feather River Habitat Improvement Plan
- DWR A102 - Gravel Supplementation and Improvement Program
- DWR A103 - Channel Improvement Program
- DWR A104 - Structural Habitat Program
- DWR B110 - Analysis of Non-Motorized Water Trail Shoreline Access
- Complete the Veterans Memorial Park
- Municipal Auditorium and Cultural Center Improvements including waterfront access & better view to river
- Increased Parking
- Connection to River from Town
- Levee lowering (where feasible) and redevelopment of levee footprint
- Increased residential, commercial/professional, restaurants & retail near the river; upstairs residential & professional lofts, downstairs businesses
- A public K-8 charter school based on river science and culture
- New roundabout and river promenade access for vehicles into Downtown
- Vehicle, pedestrian, and bicycle connectivity between the north and south banks via new bridges
- Whitewater play waves/river complexity features (at Bedrock Lagoon; at other locations on river)
- River bank seating (in conjunction with whitewater play features); reconfigured banks
- North of River Development: Residential/Commercial, & new amphitheater
- North bank: ecosystem restoration along river, integrated with multiple SA articles
- Bicycle trails
- Blue Trail (in conjunction with Settlement Agreement Article B110)
- A river-focused research facility and/or college campus annex
- Gateway: Hotel/Rest./Conference; Chamber/California Visitor Center; improved landmark/signage/structure
- Bedrock Park Improvements, including lagoon and amphitheater
- Skate Park Improvements
- Solid infrastructure: sufficient sewer capacity and highspeed internet (need for improvements noted)



above) as a focal point in the downstream end of the right bank community.

### Reach 4: Riverbend Park

Reach 4 runs from the Highway 70 bridge to the downstream end of Riverbend Park—a point about 0.9 miles downstream of the Oro Dam Boulevard (Highway 162) bridge. The major element of the reach is the Feather River Recreation and Park District's (FRRPD's) Riverbend Park, a 210-acre facility located on the left bank of the river and running the entire length of the reach. It includes four pavilions, each containing a barbecue area and seating, and two restroom facilities are within walking distance of the pavilions. The park also hosts a rock structure play area, a splash water feature, paved trails, a sandy beach, boat dock, fishing ponds, a Disc Golf Course, several soccer/all purpose fields, a large of parking area, and connects to a dog park. The opposite bank through much of the reach is a tall, very steep bluff; downstream of the Highway 162 bridge is a privately owned RV Park campground and then the Oroville Wildlife Area (OWA).

### Opportunities & Constraints/Challenges

- The right bank is very steep and topped with private homes; apart from the small continuation of the development opportunity from Reach 3, no opportunities exist until downstream at the OWA.
- The left bank is entirely a part of Riverbend Park.
- The downstream end of the park does not include an outside entrance (just the internal road and trail from under Highway 162); with minimal vehicle or pedestrian traffic, homeless encampments are common.
- Portions of the park are undeveloped or underdeveloped, including a location close to and in easy sight from Highway 70 that is outside the FEMA floodplain and could be developed by the FRRPD.
- Access from the left bank (where access from Reach 3 comes into the Park via the Brad Freeman Trail and Montgomery Street) to the OWA is only via circuitous routes and even then only via a long, indirect and uninspiring trip on Highway 162 and through non-recreation areas.
- As per Settlement Agreement Article A108, minimum flows in the low flow channel are being increased from 600 cfs to 800 cfs (from Sept. 9 – March 31); minimum flows will reduce to 700 cfs from April



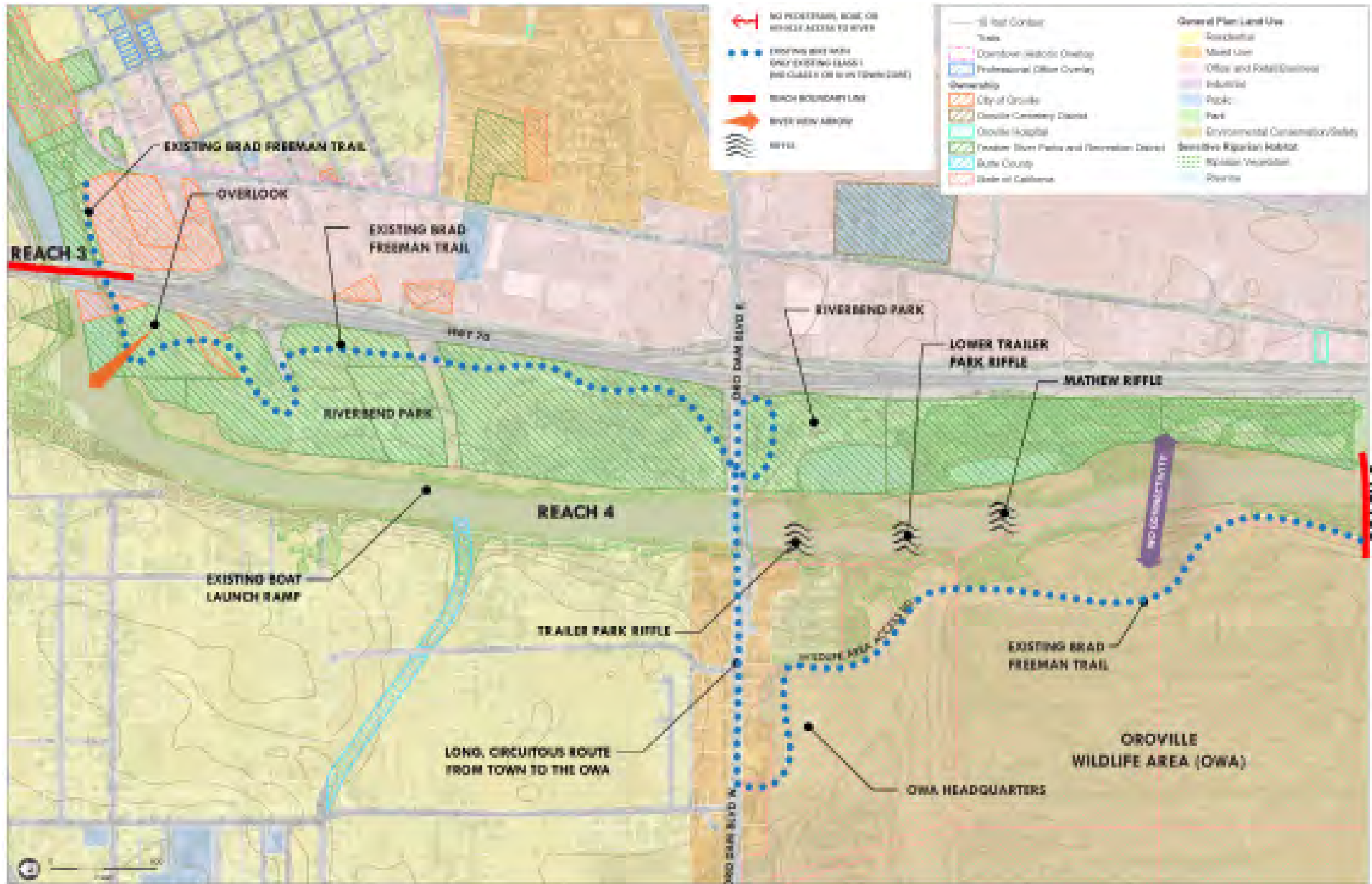
Reach 4 runs from the Highway 70 bridge downstream to the lower end of Riverbend Park. The left bank is entirely available for recreation; the right bank is high and occupied by homes and a mobile home park.



Riverbend Park was purposefully-designed as a recreation area located in the river's active floodplain. However, higher flows such as those shown here during the 2017 spillway event can damage park infrastructure.

1 – Sept. 8. This flow increase will improve the aesthetic character, the quality of boating, and the habitat in this reach.

- The 2017 spillway event caused damage to the irrigation, electrical, and vegetation at Riverbend Park. Site repairs (covered by Flood Insurance) and mitigation efforts were ongoing at the time of publication of this Plan.
- As per Settlement Agreement Article A108, minimum flows in the low flow channel are being increased from 600 cfs to 800 cfs,



Reach 4: Riverbend Park – Existing Conditions

NOTE: Applicable existing plans are summarized in Appendix D, Table D-2



improving the aesthetic character, the quality of boating, and the habitat in this reach.

## Recommendations

- Enhance key elements of Riverbend Park to increase recreational amenities, including:
  - increased turf field space,
  - an ADA accessible disc golf course,
  - realigned and enhanced trails/roads, including surfacing suitable to support road bikes riding from a start in Reach 3 and continuing to the new pedestrian and bicycle bridge into the OWA (see below), and
  - development of an aquatic center, community center or other recreational elements at the development opportunity site.
- Construct a new pedestrian and bicycle bridge across the Feather River into the OWA.
  - Links Riverbend Park to the OWA via a Class 1 trail that keeps the river in sight from downtown to the OWA.
  - Examine the public land lease immediately downstream (currently occupied by Mathews Ready Mix) to determine opportunity to integrate this land into access/open space/trailhead with the bridge.
- Excavate new floodplain areas on the right bank in the OWA (in conjunction with similar work downstream in Reach 5); **this is a potential combined project with DWR's A102, A103, A104, A106, and potentially A105.**
  - Provides increased **floodplain habitat and opportunity for side channels for A106 and A103 and A104.**
  - Floodplain width oscillation can be designed to enhance riffle sediment retention in **support of A102.**
  - Would increase flood conveyance and decrease flood water surface elevations; may decrease backwater/upland flooding issues in the industrial areas adjacent to, and east of, Highway 70.
  - Portions of the excavated material:
    - May serve as a local source of aggregate for spillways repairs and/or upgrades, decreasing GHG emissions for materials transport, lowering costs, while simultaneously

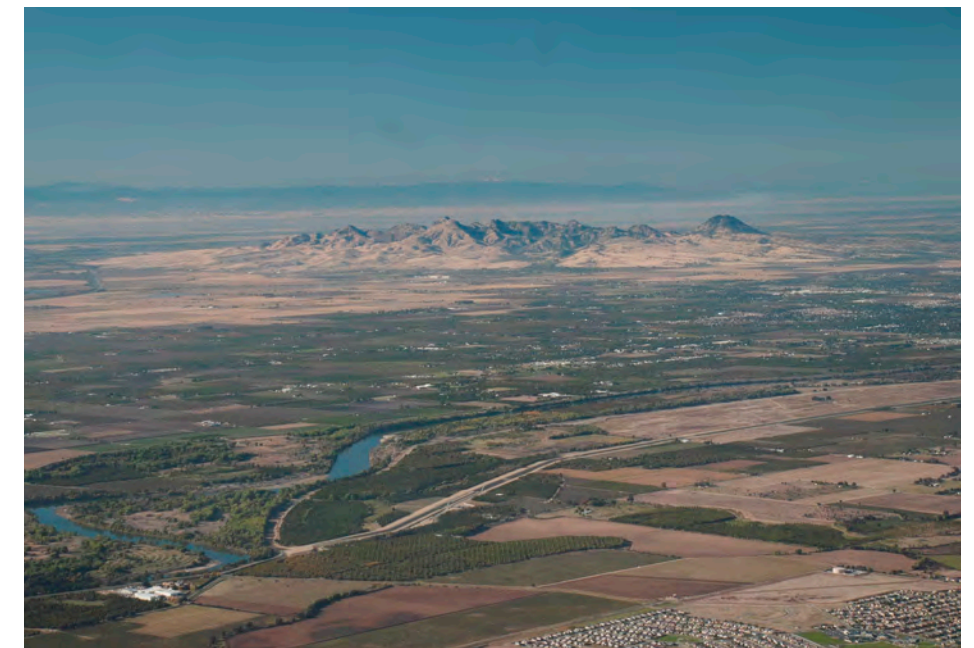


The Sundial Bridge in Redding, CA is a well-known example of an iconic, "place-making" structure that was developed with private funds as a core feature in Redding's successful river revitalization.

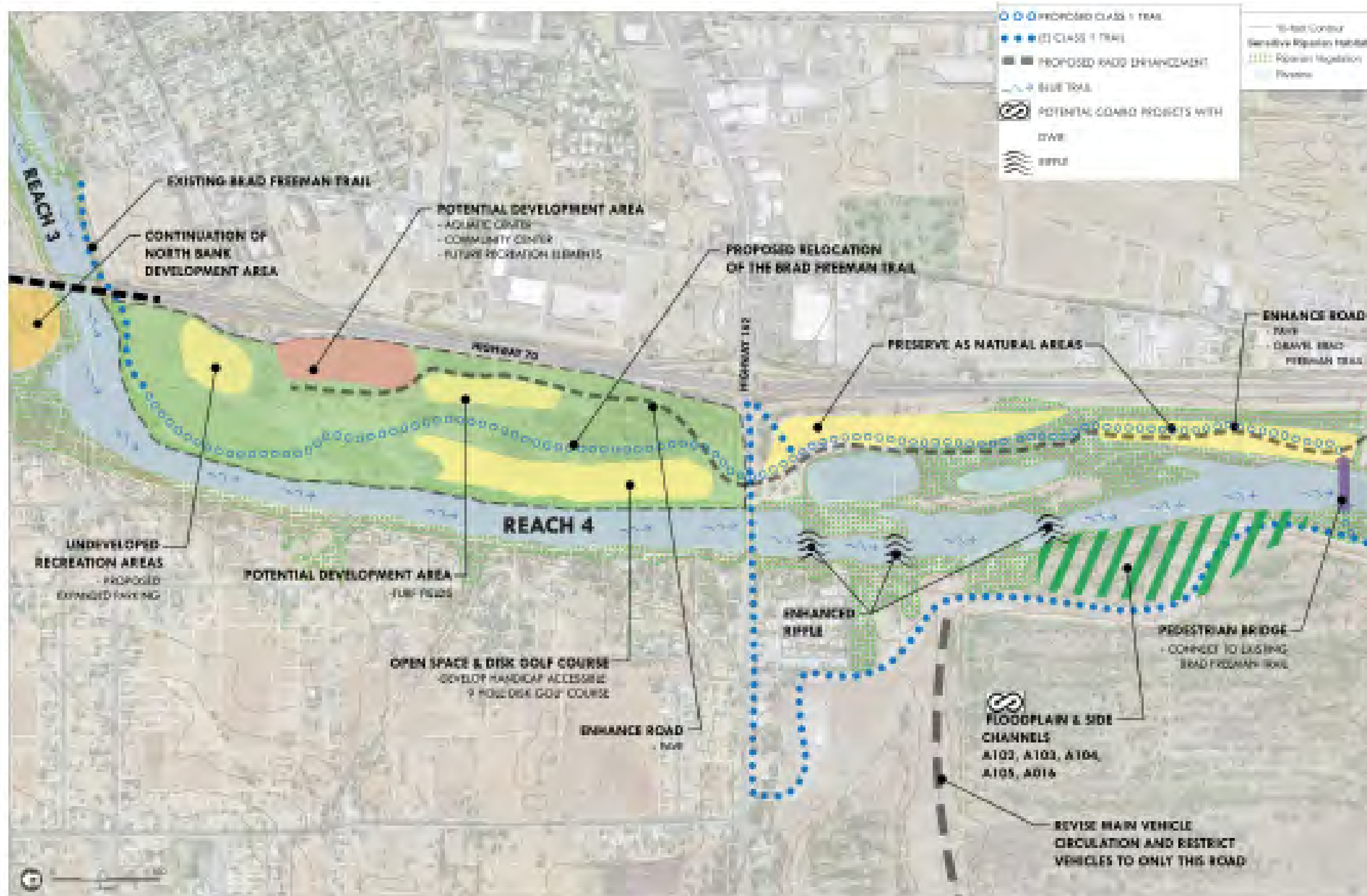
- providing an immediate use for excavated material.
  - May also be used for gravel augmentation to **support A102.**
- Would allow for new trail design and construction with increased aesthetics and opportunity to segregate vehicular traffic in the OWA for this portion of the trail system.
- Can be configured to support development of a pilot (and long-term) fish count and/or segregation weir for A105.
- Views from the bridge of fish passing and/or below such a weir would offer similar attraction to that of the fish barrier dam.
- Use of the segregation weir (separating listed fish runs from those that could be available for the sport fishery) could support changes in the Fish and Game Code to allow for increased fishing opportunities for salmon and steelhead in the Feather River, increasing recreation and spurring economic recovery.
- Construct new trails thru the OWA, including surfacing suitable to support road bikes riding from a start in Reach 3 and continuing from the new pedestrian and bicycle bridge downstream into Reach 5. This configuration and design would be sufficient to support triathlons, bike races, and adventure events.
- Develop this reach of river as a designated Blue Trail. Blue Trails are river segments that serve as water-based recreational resources. Blue Trails are adopted by communities that are



There are many other examples of river footbridges that span large rivers and create a strong landmark presence that can help to define an area. Competitive design contests are one way to gain diverse ideas on design concepts.



The Feather River Levee Setback project (the new levee is visible in the mid-ground of this photograph looking upstream) expanded the river's floodplain for increased flood conveyance and creation of floodplain habitat. The project envisioned in Reaches 4 & 5 could provide similar "multiple benefits."



### Reach 4: Recommendations

- DWR A101 - Lower Feather River Habitat Improvement Plan
- DWR A102 - Gravel Supplementation and Improvement Program
- DWR A103 - Channel Improvement Program
- DWR A104 - Structural Habitat Program
- DWR A105 - Fish Weir Program (Segregation & Count Weirs)
- DWR A106 - Riparian & Floodplain Improvement Program
- DWR A115 - Oroville Wildlife Area Management Plan
- DWR A127 - Recreation Management Plan
- DWR B110 - Analysis of Non-Motorized Water Trail Shoreline Access
- New pedestrian bridge, with viewing area
- Blue Trail (in conjunction with Settlement Agreement Article B110)
- A trail connecting downtown to the OWA, including new pedestrian bridge
- New floodplain, side channels, and augmented riffles, integrated with multiple SA articles
- Connectivity from the Dam to the Outlet
- Bicycle trails - road and mountain
- Way to get to Oroville Wildlife Area from Riverbend Park
- Warm-water recreation/FRRPD Aquatic Center

Reach 4: Riverbend Park – Recommendations



dedicated to improving family friendly recreation such as fishing, boating, hiking, and wildlife watching, and conserving rivers and lands.

### Reach 5: Oroville Wildlife Area (OWA)

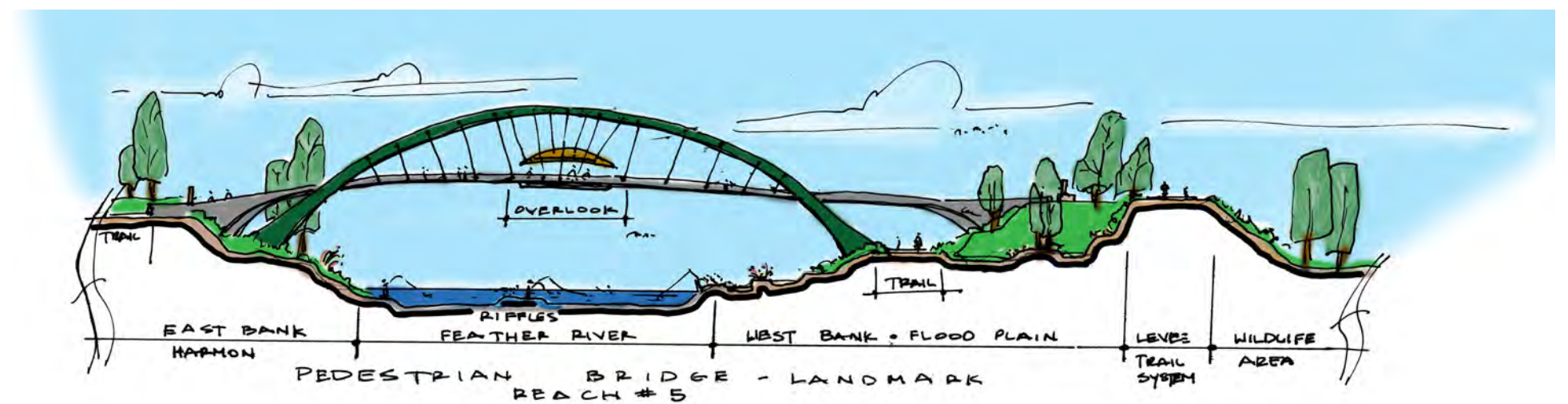
Reach 5 runs from the downstream end of Riverbend Park to the Thermalito Afterbay Outlet. This reach is dominated by the Oroville Wildlife Area (OWA), which occupies the entire right bank, and much of the left bank. This section of river offers seclusion and great fishing opportunities, with most roads and infrastructure hidden from view, creating a semi-wilderness experience for boaters. A private riverside campground/RV park provides a unique recreational opportunity and access to the river.

### Opportunities & Constraints/Challenges

- The OWA offers nearly 12,000 acres of primarily riparian woodland habitat along the Feather River and grasslands around the Thermalito Afterbay; it is available for hiking, wildlife viewing, hunting, fishing, target shooting,
- The river through this reach offers many important riffles and typically affords the best fishing in the planning area.
- The Thermalito Afterbay Outlet boat launch is located on the Feather River immediately upstream of the Afterbay Outlet. It provides a good location for a take-out after a float from put-in in Reach 3 or 4; however, the ramp is steep, unpaved and even 4WD vehicles may have difficulty using this ramp, particularly when muddy.
- There is a vault toilet at the Thermalito Afterbay Outlet area. There also are designated primitive camping areas at the Thermalito Afterbay Outlet, but no developed camping facilities. Shade is lacking, and dust and litter are common problems; there is no fish cleaning station and water is not provided.
- The left bank River Reflections RV Park and Campground (privately owned) offers a unique opportunity to camp near the river; no other such opportunity exists in the planning area.
- There is an available private parcel of land on left bank that includes mature native vegetation (shade) and access to the river.
- As per Settlement Agreement Article A108, minimum flows in the low flow channel are being increased from 600 cfs to 800 cfs (from Sept. 9 – March 31); minimum flows will reduce to 700 cfs from April

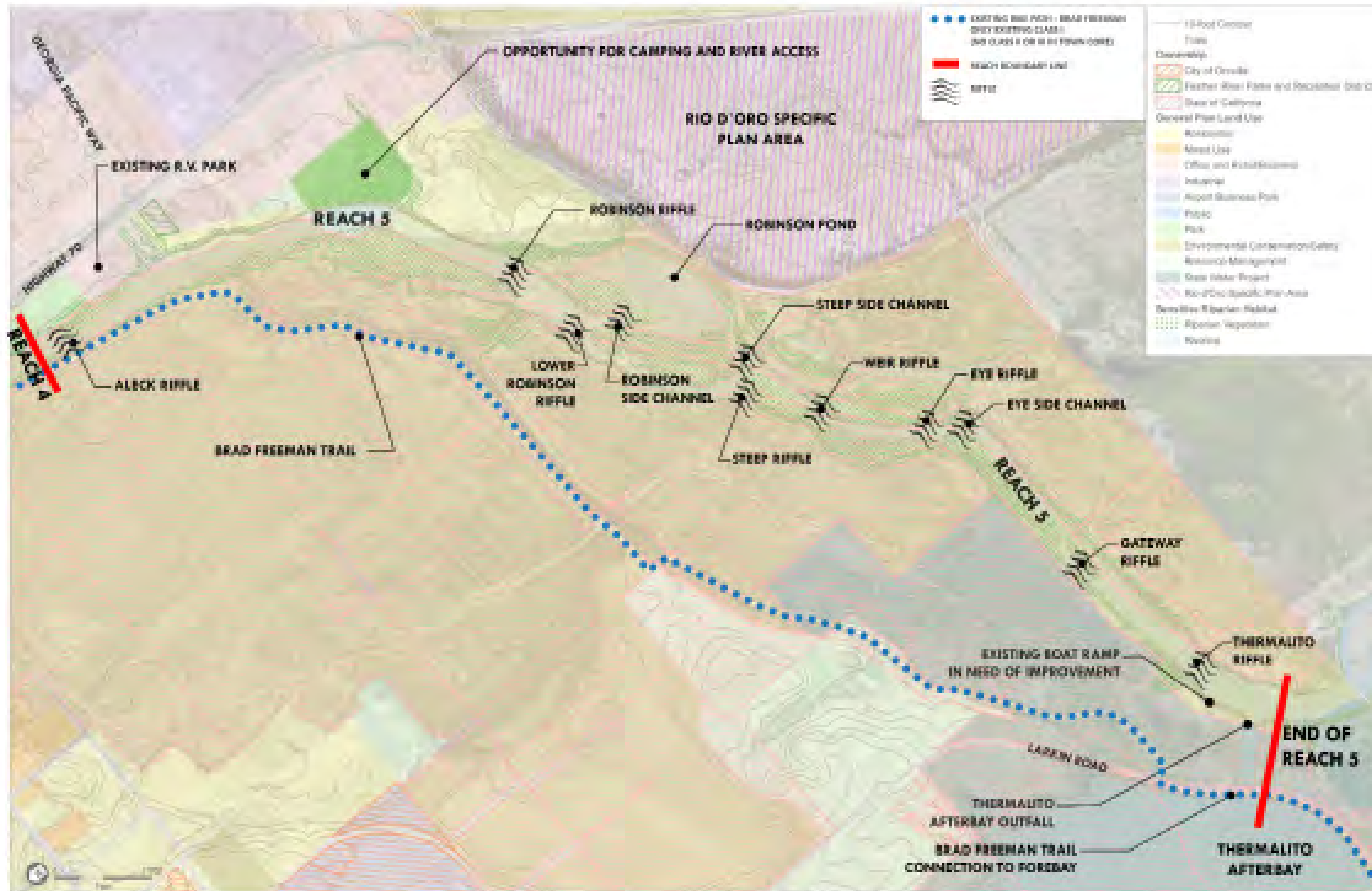


An isolated and relatively-intact section of riparian forest on the left bank of the river is visible in the center of the photo upstream of the gravel processing facility. The parcel currently is privately owned.



### REACH #5 - RIVER CROSSING

A new river crossing from the left bank at the end of Reach 4 to the right bank at the start of Reach 5 would be a gateway to this downstream-most portion of the plan area.



Reach 5: Oroville Wildlife Area (OWA) – Existing Conditions

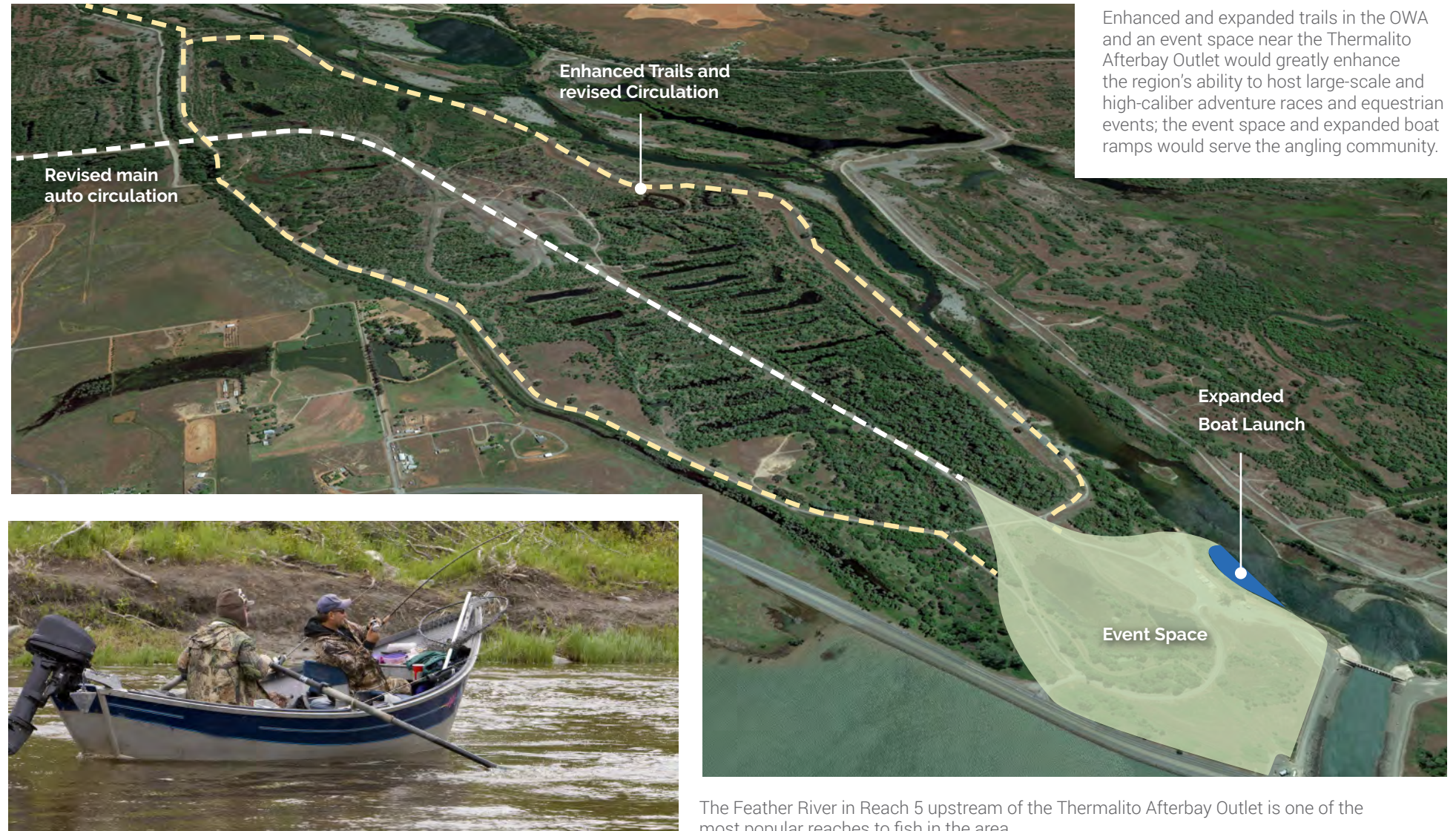
NOTE: Applicable existing plans are summarized in Appendix D, Table D-2



1 – Sept. 8. This flow increase will improve the aesthetic character, the quality of boating, and the habitat in this reach.

## Recommendations

- Construct a new pedestrian and bicycle bridge across the Feather River into the OWA (at the boundary with Reach 4). Examine the public land lease at Mathews Ready Mix to determine opportunity to integrate this land into access/open space/trailhead with the bridge.
- In conjunction with the work in Reach 4, excavate new floodplain areas on the right bank in the OWA; **this is a potential combined project with DWR's A102, A103, A104, A106, and potentially A105.**
  - Provides increased **floodplain habitat and opportunity for side channels for A106 and A103 and A104.**
  - Floodplain width oscillation can be designed to enhance riffle sediment retention in **support of A102.**
  - Would decrease flood water surface elevations and may decrease backwater/upland flooding issues in the industrial areas east of Highway 70.
  - Portions of the excavated material:
    - May serve as a local source of aggregate for spillways repairs and/or upgrades, decreasing GHG emissions for materials transport, lowering costs, while simultaneously providing an immediate use for excavated material.
    - May also be used for gravel augmentation to support A102.
  - Would allow for new trail design and construction with increased aesthetics and opportunity to segregate vehicular traffic in the OWA for this portion of the trail system.
  - Can be configured to support development of a pilot (and long-term) fish count and/or segregation weir for A105.
  - Views from the bridge of fish passing and/or below such a weir would offer similar attraction to that of the fish barrier dam.
  - Use of the segregation weir could support changes in the Fish and Game Code to allow for increased fishing opportunities for salmon and steelhead in the Feather River, increasing recreation and spurring economic recovery.
- Revise the main vehicle circulation in the OWA. Construct new trails thru the OWA along the river for pedestrians and bicycles, including



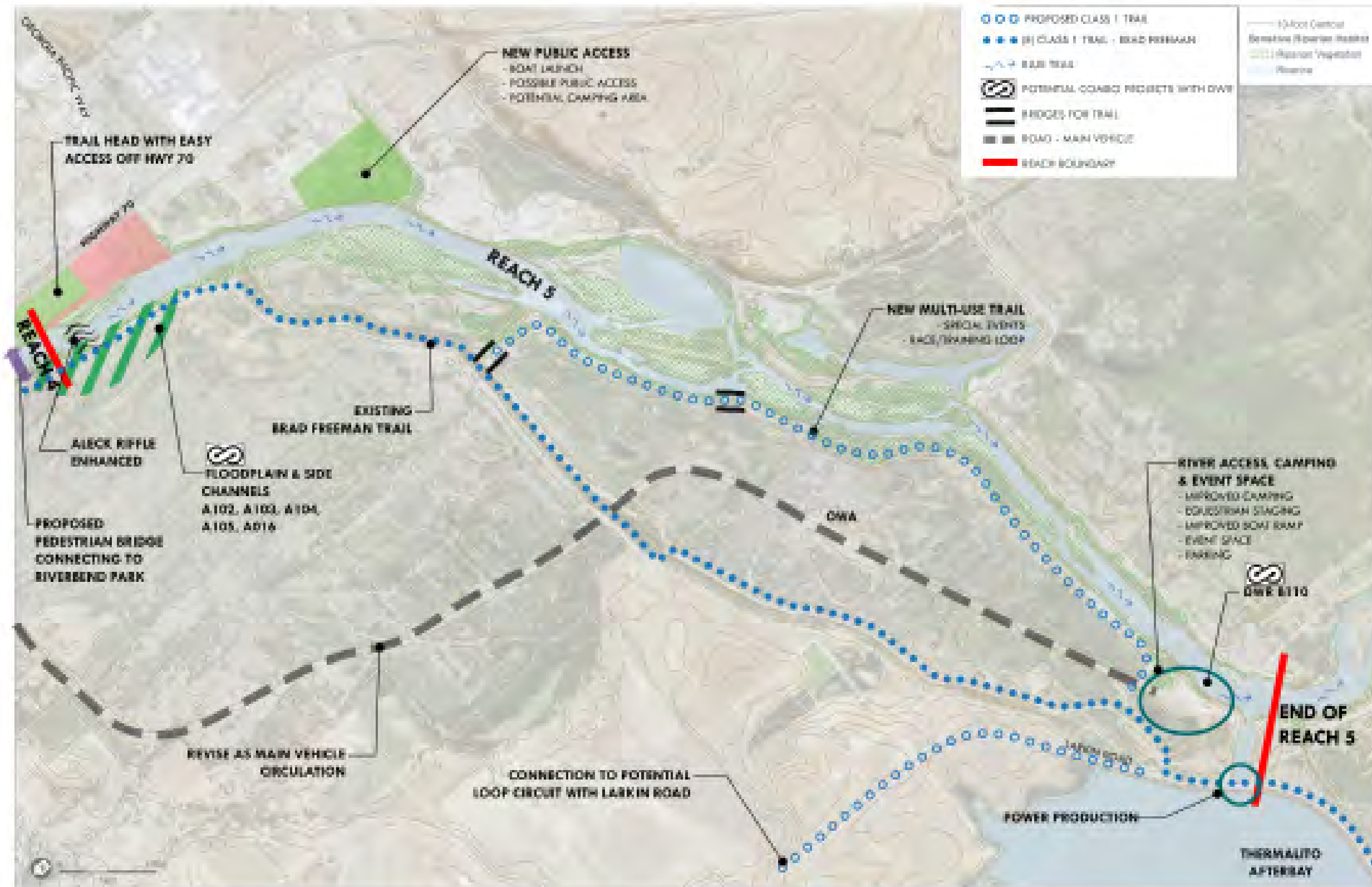
Enhanced and expanded trails in the OWA and an event space near the Thermalito Afterbay Outlet would greatly enhance the region's ability to host large-scale and high-caliber adventure races and equestrian events; the event space and expanded boat ramps would serve the angling community.

The Feather River in Reach 5 upstream of the Thermalito Afterbay Outlet is one of the most popular reaches to fish in the area.

surfacing suitable to support road bikes with a configuration and design that would be sufficient to support triathlons, bike races, and adventure events.

- Re-develop the site of the existing Thermalito Afterbay Outlet boat launch and primitive campground. **This is a potential combined project with DWR B110.**
  - Construct a new boat ramp, large enough to support multiple boat trailers and/or many participants in a swimming or paddling race (similar to the Eppie's Great Race).
  - Develop a larger campground and an event staging space (large shaded pavilions, restrooms, water) with sufficient parking to support a large race/event.
- Include an equestrian staging area for parking, access, shade, tie-ups, and related amenities in an area secluded away from the outlet.
- Develop the land on left bank into a public campground and river access point. Leverage the mature native vegetation in the design and provide trailered boat access to the river.
- Develop this reach of river as a designated Blue Trail. Blue Trails are river segments that serve as water-based recreational resources. Blue Trails are adopted by communities that are dedicated to improving family friendly recreation such as fishing, boating, hiking, and wildlife watching, and conserving rivers and lands.





### Reach 5: Recommendations

- DWR A101 - Lower Feather River Habitat Improvement Plan
- DWR A102 - Gravel Supplementation and Improvement Program
- DWR A103 - Channel Improvement Program
- DWR A104 - Structural Habitat Program
- DWR A105 - Fish Weir Program (Segregation & Count Weirs)
- DWR A106 - Riparian & Floodplain Improvement Program
- DWR A115 - Oroville Wildlife Area Management Plan
- DWR A127 - Recreation Management Plan
- DWR B110 - Analysis of Non-Motorized Water Trail Shoreline Access
- New floodplain, side channels, and augmented riffles, integrated with multiple SA articles
- New trailhead access off Highway 70
- New campground and boat launch, left bank
- New multi-use trail
- Outlet area: Improved parking, camping & boat ramp; new event space
- Blue Trail (in conjunction with Settlement Agreement Article B110)
- Bicycle/hiking trail connecting downtown to the OWA/Outlet, suitable for a riding loop, marathons, triathlons, etc.

Reach 5: Oroville Wildlife Area (OWA) – Recommendations



- Investigate the opportunity to develop a hydropower generation facility on the Outlet with profits used to endow O&M of improved recreational facilities proposed in this plan.

### Thermalito Forebay

The Thermalito Forebay is comprised of a single body of water, roughly divided into two parts by a narrow section where the Nelson Avenue bridge crosses the Forebay. The North and South Thermalito Forebay Recreation Areas offers picnicking, swimming, boating and limited camping.

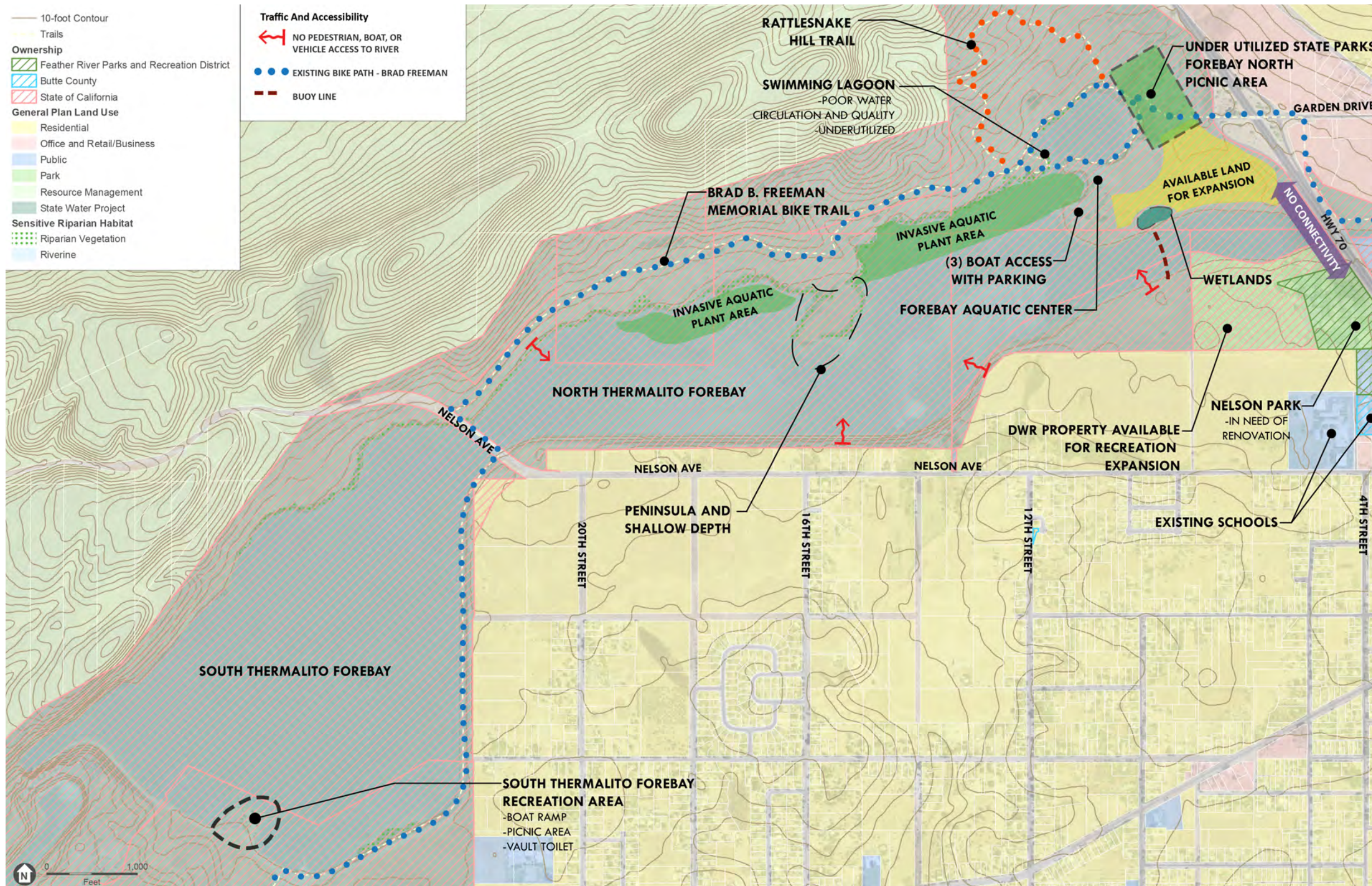
### Opportunities & Constraints/Challenges

- The North Thermalito Forebay Recreation Area offers picnicking, swimming, and en-route camping (in parking lot space for RV camping; one-night maximum stay).
- Boating is reserved exclusively for sailboats, canoes, and other non-powered boats. The boat launch area has two multi-lane boat launch ramps.
- There are numerous picnic tables, group facilities and shade ramadas, a disabled accessible fishing pier, and a sand beach area adjacent to the lagoon.
- The Forebay Aquatic Center is located adjacent to the lagoon and is a nonprofit organization existing as a collaborative effort between the Table Mountain Rowing Club, Butte Sailing Club, Chico State Rowing Club, and California Department of Parks & Recreation: Boating & Waterways. The Center offers itself as a knowledgeable resource for safe boating and environmentally sustainable practices, providing rentals, courses, and aquatics camps focused on rowing, sailing, kayaking, canoeing, stand-up paddleboards (SUP) and SUP yoga, hydrobikes, pedal boats, and windsurfing.
- The Brad Freeman trail runs along the northern shore of the North Thermalito Forebay, allowing pedestrians, bicyclists, and equestrians; the Rattlesnake Hill Trail loop is for pedestrians only.
- Portions of the North Thermalito Forebay are plagued with invasive aquatic weeds, limiting boating opportunities.
- The North Thermalito Forebay is a fine rowing area; however, an existing peninsula and adjacent shallow areas limit the ability to develop a full 2,000 meter competitive rowing course.
- The lagoon swim area may be underutilized because water quality testing has indicated that bacteria levels are consistently high in the area during the summer.



The North Forebay (upper right of photo) is located at the end of the Thermalito Power Canal. There is easy access off of Highway 70 and is relatively close to downtown (by river; left side of image); however, there is not an easy bicycle or pedestrian connection to the Historic Downtown District. Overnight facilities are currently restricted, but could be enhanced.

- The South Thermalito Forebay Recreation Area provides outdoor recreational activities such as boating, picnicking, fishing, and swimming.
- The shoreline access site has a parking lot, four lane boat launch ramp, picnic tables and grills, a beach, and a handicap-accessible chemical toilet; no shade or drinking water available.
- Powerboating is allowed in 330 acres of the South Thermalito Forebay.
- The Brad Freeman trail crosses the Nelson Avenue bridge near the South Thermalito Forebay shoreline access and boat ramp, but does not run back east along the southern shoreline.
- The FRRPD Nelson Sports/Softball Complex offers several fields for practice, games and tournaments. It is connected to a nearby park enabling children to play in an adjacent area. The adjoining FRRPD Nelson Swimming Pool is located immediately south.



**Thermalito Forebay – Existing Conditions**

NOTE: Applicable existing plans are summarized in Appendix D, Table D-2



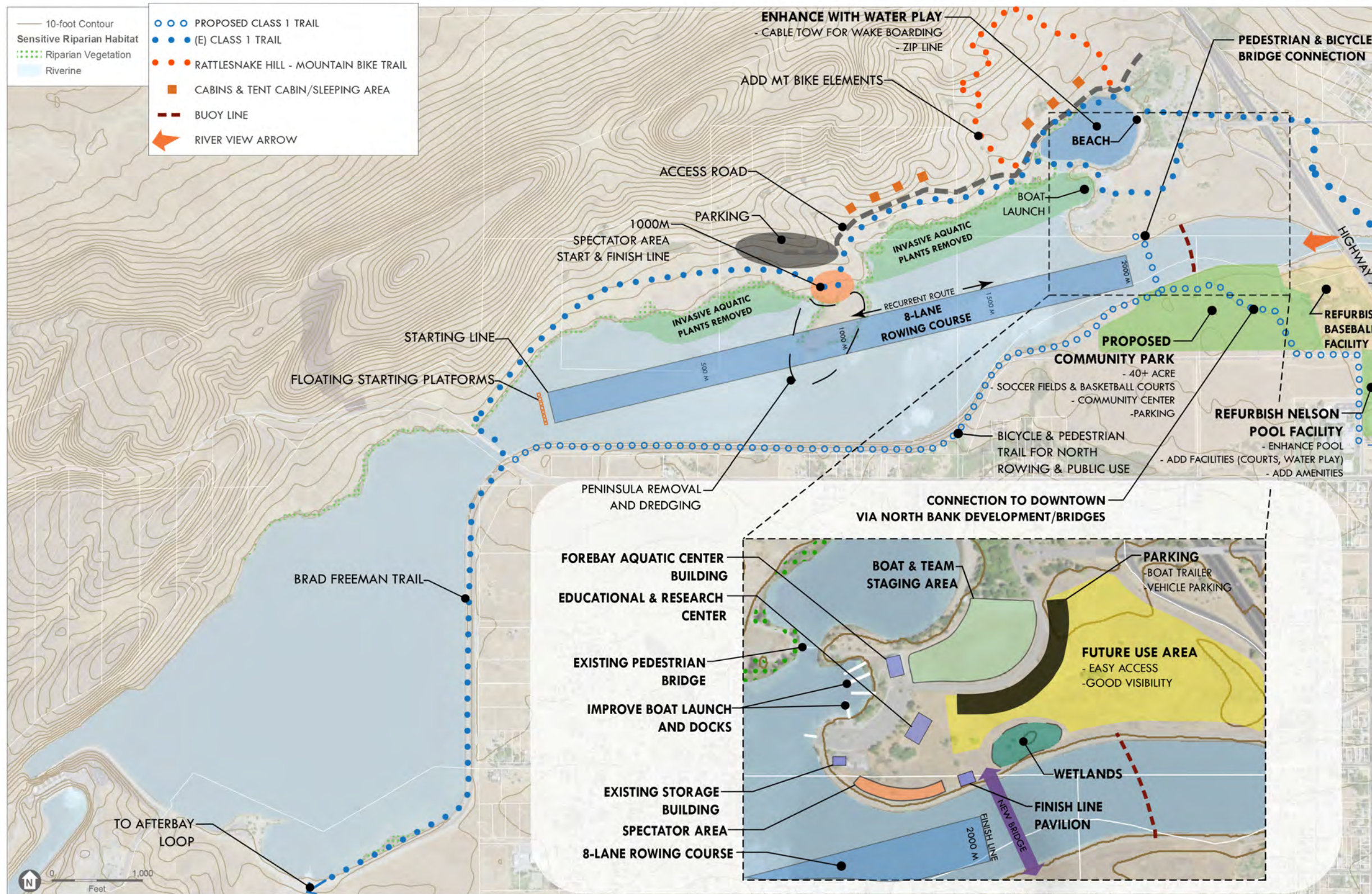
## Recommendations

- Develop the North Thermalito Forebay to support 8-lane, 2,000-meter competitive rowing events, including appurtenant facilities for staging, spectators, and competitors, including camping.
- Excavate the peninsula and dredge portions of the Forebay to enable a straight course alignment; install platforms and course buoys, etc.
- Develop boat staging/launch area and docks; rowing vehicle/trailer parking; spectator viewing areas; related access roads and trail improvements.
- Develop improved and expanded camping, including cabins and tent cabins/sleeping areas, restrooms and showers. Develop the camping infrastructure so that the event space is able to house a portion of the competitors, on-site.
- Differentiate and surpass the infrastructure at Lake Natomas to make Oroville a unique and desirable location for events; collegiate athletes and spectators will come for the event, and return to replicate their experience and enjoy the river, Lake Oroville and the Historic Downtown District.
- Enhance the North Thermalito Forebay lagoon for water play.
- Cable tow for wakeboarding training and competitions
- Zip line and inflatable water playground features
- Improve water quality in lagoon. This is likely to be a FERC-license PM&E (evaluate different methods that could be used to help protect water quality) and possible actions resulting from the study would have to be evaluated. This effort should be **coordinated with A112 and A113**. One option that would increase circulation is a bored pipe conduit from the canal.



An enhanced competitive rowing facility at the North Forebay would better serve the existing recreational rowing community and also attract collegiate competitors at a scale that could significantly boost visitation—during and after the event.

- Enhance the Rattlesnake Trail with Mt. Bike features and jumps; potential for training jumps into lagoon.
- Develop a new community park on the south side of the Thermalito Power Canal
- Refurbish the Nelson Sports Complex (softball, pool facilities).
- Develop a pedestrian and bicycle bridge across the Thermalito Power Canal to connect the North Thermalito Forebay Recreation Area/Forebay Aquatic Center with the proposed community park and other recreational amenities to on the south side of the canal.
- Extend the Brad Freeman Trail along the southern shoreline of the North Thermalito Forebay.
- Connect with the new bridge over the Thermalito Power Canal
- Connect the North Thermalito Forebay area with downtown via a trail network that runs through the refurbished Nelson Sports Complex to connect back to downtown via right-bank development and bridges in Reach 3.



### Thermalito Forebay - Recommendations

- Warm-water recreation enhancements: wake boarding tow, beach, inflatable water play structures
- 8-lane competitive rowing course with competitor staging, spectator areas, etc.
- Camping and overnight tent cabins and sleeping areas
- Mountain biking trails including freeride structures and obstacles; extended and connected Brad Freeman Trail
- Pedestrian bridge, with viewing area
- New community park & refurbished Nelson Sports Complex

Thermalito Forebay – Recommendations

4



Feather River Conceptual Plan

# Economic Development Considerations & Strategies

# 4



Resistent bank material forms bluffs along the Feather River.





# Economic Development Considerations & Strategies

While the projects in this Plan can be implemented without funding from the SBF, when it comes time to make decisions on how to spend the SBF funding, consideration should be given to how to most-effectively and efficiently dedicate those funds. Foremost is consideration of the context of the available funds (fluidity of cash; total amount; spending restrictions; etc.) and consideration of the various economic development mechanisms that are available, and the related benefits and impacts those mechanisms may convey. So, while this master plan does not require the use of the SBF, it is important to consider how SBF funds may catalyze progress and/or provide a solid foundation from which private investment or other funding sources may take over.

## SBF Funding Context

In March of 2006 the Settlement Agreement was signed by over 50 stakeholders to facilitate the FERC relicensing of the Oroville Dam. Among other things the agreement established the Supplemental Benefits Fund (SBF) created by assessments to individual water users (rate payers). If the license is granted for a 50-year term, the total funding for the SBF could add up to \$61,270,000. A portion of the money has already been allocated, and much of that has already been spent to develop Riverbend Park and other projects. The majority, however, will be provided in equal payments spread over the term of the license. The maximum payment will be \$1,000,000 per year for a 50-year term, but if the license is issued for a shorter term the payment will be less per year, and for a shorter time period. Should the license be granted for 30 years the flat annual payments would be \$800,000 per year.



The Oroville Veterans' Memorial Park has been supported with donations and other funds and received an SBF grant to assist with construction of the memorial wall and other improvements. The project currently is about 65% completed.

When decision makers take into account the time value of money, it is obvious that the \$61 million maximum size of the SBF is misleading. First, most of the \$11 million or so in upfront money has already been deployed. And second, a million dollars 50 years from now is worth much less than a million dollars today. The RFSP analyzed the net present value of the funding streams for the SBF and found they ranged from \$16 to \$26 million in current dollars depending on the term of the license. The implication is that future deployment of financial resources from the SBF needs to be strategic. Some of the best SBF investments will be those that leverage additional private investment in achieving the mission and vision of the SBF.

Economic support for candidate Feather River related projects in the SBF priority consideration area can be analyzed as coming from four concentric market areas radiating out from the river.

- People living or working within convenient walking or cycling distance of the river.
- Residents of the City of Oroville.
- The commercial trade area for Oroville.
- Visitors, both day visitors and overnight visitors.

Market support from these sources has been analyzed repeatedly in recent years and is presented in such documents as the RFSP (2010), and the Arts, Culture & Entertainment (AC&E) District Concept Plan (2013).



## Maximizing the Economic Benefits from SBF Funding (Public-Private-Partnerships)

Goals, objectives, and guiding principles are presented in Section 2, **Plan Development Process**. The top goal is to stimulate recreation and tourism, economic development, and job creation along the Feather River. The inherent limitation of the net present value of the Special Benefits Fund, and its inability to simply pay for all desired improvements along the river corridor, is recognized by Goal 3, which seeks to prioritize funding for projects that maximize SBF funding capacity. Objectives in service to this goal are to

- Reward a project's leverage (bring additional public or private funding forward).
- Reward a project's ability to return funding.
- Assess a project's ability to selffund annual operation and maintenance costs.
- Assess the applicant's ability to complete a phase of, and/or the entire project.
- Assess opportunities where project partners have more to gain by partnering than going forward alone.

In service to these economic development goals and objectives, there are a wide variety of strategies that can be pursued. Many of them can be pursued simultaneously, and synergistic effects can sometimes be gained by doing so, creating excitement in the market place and attracting further rounds of investment. The partnership at the Forebay Aquatic Center is an example of a successful partnership, spurred by SBF stimulus. Some possible strategies are as follows:

## Partner with the DWR on FERC license measures and/or Spillway-related Recovery & Restoration

Where appropriate, partner with DWR on coordinated, and potentially consolidated, projects that meet the goals of this plan while simultaneously addressing actions related to spillway recovery and restoration and/or measures in the SA/pending FERC license. As DWR addresses recovery and restoration of the spillway and the new FERC license, the SBF (and DWR) can identify opportunities where DWR's efforts may serve as an example of "matching funds" with projects identified in this Plan. Section 5 of this Plan, Priorities & Next Steps, identifies a set of deeply-integrated projects that could be jointly implemented in such a partnership.

## Leverage private investment by creating certainty for developers

The largest cluster of impediments to private investment is risk: risk in gaining approvals, risk of time delay, market risk, construction price risk, etc. To the extent that SBF projects can reduce some of those risks, privately funded projects with a connection to the Feather River are more likely to proceed.

- After decades of missing one market cycle after another, the City of Oakland proceeded during the most recent recession with several Specific Plans and EIRs covering different neighborhoods in and around the city's downtown. The benefit was that as the market began to improve over the last five years or so developers were able to move forward rapidly with projects that were essentially "pre-approved" because they fit within the plan guidelines and were consistent with a certified EIR. Private lenders saw the environment that the approved plans created as low risk and were willing to infuse private capital into the projects.
- Stakeholders in Oroville have noted the value of a well thought out land use plan. Furthermore, strategic public investments that can bring "backbone infrastructure to the front door" have the power to attract private sector/businesses to the table.
- Implementation of the Arts, Cultural and Entertainment District Concept Plan could be a candidate along these lines for Reach 3.

## Direct funding of key infrastructure

In addition to direct funding of planning and environmental clearance efforts as described above, the private sector will also depend on the public sector to make key infrastructure investments that are public goods, which do not produce a sufficient return to induce any one business or group of businesses to invest in them. A good example of this along the Feather River could be public trail connectivity and continuity. A significant segment of the American population is becoming more active, participation in bicycling is expanding, and virtually all of them desire opportunities to stroll, walk and hike through pleasant environments for recreation and health. Such publicly funded facilities become a component in the green infrastructure supporting a vibrant economy.

- The City of Portland, Oregon, found that one of the most important elements of their plan to revitalize the "eastbank" district of the Willamette River flowing past the city's downtown was the creation of pedestrian and bicycle path links across the river in multiple locations and development of a continuous trail along the east side of the river that allowed a user to make a complete circuit, without having to double back on the route they started on. The number of people attracted to the trails already developed along the downtown side of the river increased as a result, in addition to attracting a new market to the east side of the river.
- There are many other examples of rivers that have become major attractors of people and their spending by simply creating long and continuous trails, such as the American River Parkway, the Spokane River, Alameda Creek, San Antonio River, and many more.



## Partnerships with other public agencies

For the Feather River there may also be opportunities to leverage other public funding if the interests of the SBF align sufficiently with other agencies making needed improvements along the low flow channel (e.g., DWR, Fish & Wildlife, etc.) To the extent that SBF funds allow Oroville to conduct the local advance planning, complete initial parts of projects, and focus attention on desirable improvements, Oroville and the SBF can have an impact on the priorities and funding from other public agencies in the region.

## Public-Private-Partnerships, or PPP

This catch-all label covers functional business partnerships that can take a thousand different forms. In many cases, the public partner needs to provide the "early" funding to get a project up and running, and once it has attracted market support, the project can carry itself, create a profitable business for the private partner, and sometimes even pay back the initial investment to the public partner. Example PPP strategies include:

- A **revolving loan fund** using SBF monies as seed capital. This would be for projects that have the potential to repay their initial investment through creation of a profitable business venture, but for which the risk may be too high to procure private financing. The expectation would be that a series of these types of projects would tie up some of the SBF capital but not consume it.
- **Making the capital investment with public funds**, by assigning Operating and Maintenance (O&M) responsibilities to the private partner going into the future. The expectation here is that the private business partner would be able to operate profitably, but would not be able to exist without the initial public money, which would consume some of the SBF resources.
  - An example of this type of strategy could be a recreational concession operation such as an outfitter which might be able to offer seasonal fishing, kayaking or river rafting experiences, but which could not afford the capital cost of developing put-in and take-out staging areas.
  - Another example might be with a private, non-profit organization that can organize volunteers, pay minimal field staff costs, and administer programs, but which could not afford suitable facilities in the Feather River corridor to support their activities.

## Subsidizing O&M during start up years

Some land uses serve as amenities, which enhances quality of life and promotes the area for more substantial economic development. While a private business may eventually be able to thrive while providing the amenity service, in the initial years, however, before a market presence is established the private partner may require some subsidy or guaranteed minimum income just to stay in business.

- An example of this could be a recreational concessionaire in a startup business in an unproven location. An operator of a new campground and events area on public lands may need concession terms in the initial contract that provide public assistance, with perhaps little or no net lease payment. A few years later, however, once the operation has built up volume, the next lease negotiation can produce terms that provide a positive net cash flow back to the public partner. Performance rent terms can be added which will produce substantial payments to the public if the entire business venture takes off.
- Another example could be a food and beverage provider attempting to set up shop in an existing building in a location close enough to serve fishermen, trail users, and other visitors to the Feather River corridor. To create this amenity for the river, some public subsidy may be required to lower costs of doing business, for example by subsidizing rents. Private developers of complex mixed-use projects often do this in order to have amenity-creating retail, dining, and entertainment uses available from the beginning of project absorption.

## Use of bonds to accelerate SBF investment

Another strategy is to change the sequencing of cash flows available to the SBF through use of bonds or other public finance mechanisms. If a project requiring a very large single capital investment were to emerge as a big priority, a bond backed by future payments into the SBF could be issued.





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# Priorities & Next Steps

# 5

Develop enhanced trails and recreational amenities along the Diversion Pool/Burma Road (Reach 1)

Develop the flexible event space

Develop a new river "put-in" under Table Mountain Bridge (Reaches 2 & 3)

Augment sediment and spawning habitat in Reach 3

Develop the Competitive Rowing Facility at the North Thermalito Forebay

Develop floodplain habitat in the OWA (Reaches 4 & 5)



# Priorities & Next Steps

## Immediately Implement Opportunities on the River

The significant investment in the recovery and restoration of the Oroville Dam spillways and the related environment provides an opportunity for DWR to support economic recovery in the greater Oroville region and to make early progress on implementing key PM&Es in the new FERC license that are also agreed in the Settlement Agreement. There are also opportunities for coordinated implementation of projects associated with spillways restoration that also meet local priorities for river and related recreation. Planning and implementation of the following high priority opportunities should begin as soon as possible; some immediately:

**Develop floodplain habitat in the OWA (Reaches 4 & 5):** This is a potential combined project supporting DWR complete Settlement Agreement Articles A102, A103, A104, A106, and potentially A105. This project is supported by the local **Oroville Strong!** stakeholder coalition, improves habitat, decreases flood hazard, is efficient and promotes sustainability at multiple levels, and could save the SWC and DWR money if implemented appropriately.

**Develop the Competitive Rowing Facility at the North Thermalito Forebay:** New facilities could be quickly enhanced and constructed, within a year, to support competitive collegiate rowing events in spring/summer of 2018. This project is at a scale that provides immediate and significant economic benefits (hotel and restaurant revenues; facility fees) and for this reason **would help create a place to play on the river/lake..**

**Develop enhanced trails and recreational amenities along the Diversion Pool/Burma Road (Reach 1):** Trails in this area are presently closed during spillways construction, and impacts to them are yet to be quantified. DWR should partner with the community to **develop a robust plan for demobilizing from this area during the spillways restoration phase while simultaneously developing trails and other amenities that meet the objectives outlined in this plan.**



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Significant progress on spillways response and recovery has occurred since Spring, 2017. Opportunities for integration of project concepts in this plan with ongoing recovery and restoration efforts exist.



**Develop the flexible event space:** This potential project site is presently impacted by sediment dredged from the Diversion Pool; however, the rehabilitation of this site and permanent storage of this material would meld well with the re-contouring necessary to develop the amenities of the flexible event space. **Integrate this opportunity into the spillways restoration phase,** thereby decreasing costs and increasing the opportunity for this amenity to be developed more quickly.

## Dive Deeper on Financing & Implementation and on Events & Programming

### Financing & Implementation

- As the FRCMP is used and adapted through time, it will be possible to make more detailed recommendations as to how projects might be phased, taking into account organic opportunities of the market and the state of cash flow streams generated by the SBF and other funding sources. Other strategies for how to leverage financing and steps towards implementation can be developed and described at that point.
- Develop short-term project priorities and phasing aligned with market intelligence and partnerships, developed with guidance from new staff (see recommendations under Long-term Investment and Partnerships, below).
- Revisiting the RFSP sooner than later seems to make sense. Perhaps updating that document so that all projects are aligned with available planning documents and other activities is a key place to focus upon.
- From an economic development perspective, implementation recommendations may be summarized as follows:
  - Keep the focus on the nexus to the river as described in the Mission and Vision Statements of the SBF.
  - Adhere to the prescription described in RFSP Goal No. 1 to stimulate recreation and tourism, economic development, and job creation along the Feather River.
  - Follow the priorities described in RFSP Goal No. 3 to select projects that are economically efficient and maximize the leverage and longevity of SBF financial resources.



### Events & Programming

New projects open up the opportunity for new events and programs, and even new concessions (such as river outfitters for fishing and wildlife viewing). Additional effort should be placed on designing specific projects via design criteria developed with new events/programs in mind. The master plan makes mention of some (such as races like Eppie's Great Race) but does not include comprehensive recommendations for events and programming. However, the following list provides some initial suggestions that should be considered going forward:

- Running races (including marathons) and/or triathlons that benefit from a contiguous trail system from the Dam to the Afterbay Outlet. Consider the success of the Eppie's Great Race along the American River Parkway.
- Mt. bike races that begin and end in Downtown but include routes up to the Dam and beyond; potential for sprint races through the adventure elements (jumps, berms, etc.) in Reach 1. Marketing to include names that take advantage of the spillways incident.
- Historical and interpretive programming for the contiguous trail systems (both sides of river in Reaches 1 and 2) and downstream along the river to the Afterbay Outlet.





- River safety education and instruction in conjunction with new whitewater elements and/or the new/improved river access areas.
- Whitewater "rodeo" event at the new whitewater play feature; including manufacturer product demos and river education.
- Enhanced marketing and development of guided and self-guided fishing for fall-run Chinook salmon (and steelhead) after successful petition to the Fish and Game Commission for regulations changes downstream of the segregation weir.

## Support Long-term Investments and Partnerships

Investment in the projects outlined in this Plan will be from the SBF as well as public and private sources of funding. Additionally, there is the opportunity to partner with DWR as it implements the PM&Es in the FERC license—completing coordinated, and potentially consolidated, projects to yield efficiencies and generate benefits that would otherwise not be possible. Similarly, the State Water Contractors (SWC) have a vested interest in working with the greater Oroville region to assess impacts from the spillways incident and quickly and fairly address any identified impacts. Such a coordinated effort will require inputs of time and resources from all parties.

The SWC have agreed in the Settlement Agreement (SA, Appendix B, Section B100, Part F) to partner with the SBF Steering Committee to solicit grant funding and in so doing are committed to making available staff resources in an amount not to exceed 50% time of one full-time equivalent (FTE), to remain in effect until five years prior to expiration of the new license. This plan recommends strengthening this partnership by increasing the staffing and making this staffing full time (instead of 50% FTE) and "front-loading" this staff resource into the first half of the license term to better facilitate coordination and planning of projects amongst all parties and to pursue PPP funding and outside grants. Funding for this and the SBF Program Specialist would be dedicated to: 1) rapidly assessing impacts from the spillways incident, including consideration of longer-term impacts; 2) immediately implementing priority "partnership projects" (this section, above) in response to the spillways incident, and 3) generating coordinated and consolidated projects with DWR's implementation of the PM&Es of the new license. These activities would gradually merge with the grant writing function stated in the SA. Indeed, the grant writing opportunity can be most-effectively leveraged by focusing on multi-benefit projects where outside funding could be brought as cost-share to projects that have funding from the SBF, other private- or public-sources, and/or DWR's implementation of PM&Es.<sup>1</sup>

<sup>1</sup> It is understood that many grants, particularly State bond-funded grants, are not to be used for mitigation and thus certain components of consolidated projects would be the focus of grant funds, with other components paid for as PM&E components.





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Stakeholder Meeting  
Summaries

A





# Appendix A: Stakeholder Meeting Summaries

## Summary of December 8 2016 Stakeholder Meetings

On December 8, 2016 the FRCMP Planning Team hosted three (3) stakeholder meetings with invitations sent via email to identified interested parties as well as posting the invitation on the City of Oroville website. Invitees were provided the opportunity to attend a meeting with the following focus, or all meetings:

- Meeting #1 - Downtown business, cultural education & community resource issues (31 attendees)
- Meeting #2 - Recreational and natural resource issues (27 attendees)
- Meeting #3 - Real estate development and economic issues (12 attendees)

The following are summaries of comments received at the three meetings. The views expressed in these summaries were noted during input provided at multiple public meetings. They represent input from the meeting participants, but this does not necessarily represent the opinions of the SBF, City, FRRPD or other affiliated individuals.

### MEETING #1 – Focus: downtown business, cultural, education & community resource issues

What is your vision of the river in the next 20 years?

- Combine the city's attributes of: 1. Historic gold rush downtown 2. Pristine natural river. 3. Great migration of natural species, to improve recreation and enhance access.
- The blocking levee between downtown and the river needs to be addressed.
- Residential and commercial development is desired along area of levee.
- Leverage economic opportunity and create river-based tourism.
- Boating, with put-ins at the hatchery and bathrooms along the river.
- A safe cleaned up river that is free of trash.
- River areas that are accessible and integrated for everyone not just the homeless.
- Bicycle trails.



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- Entertainment areas where people can sit outside and eat near river while watching river activities; river-centric businesses (i.e., "the deck overlooking the kayak play spot where you can order a burger and a beer").
- Activities where people would use entire commercial corridor (i.e., kayaking) and that would bring in tourism. Something that would bring local, state and national recognition as well as green dollars.
- Reconfigured banks (too steep), extend Bedrock Park along length of river, improve access and natural identity for the river. Make it more river like, natural and not a ditch.
- Include educational component about river stewardship, i.e., pick up trash. Tubers are a big problem in keeping river clean. Enhance education that includes information kiosks.
- Recreation connected up and down the river.
- Connectivity between the north and south banks.
- The Preservoir development in conjunction with hatchery is an education opportunity. We don't market community well enough.
- Salmon Preservoir provides infill need. Great natural space that provides an opportunity for park land and second hatchery. Community needs to think of highest and best use of the space.
- Potential Preservoir attributes include becoming Oroville as Salmon City USA; an incredible education and attraction opportunity. Visitors could snorkel with the salmon.
- River trail for non-motorized boats.
- Challenge: Growing homeless population. This makes it difficult for any development, particularly parkland development.
- Challenge: Vegetation management - Homeless camps are found behind brush growth. People tend to stay away when they see homeless.
- There is the expectation that the city becomes a part of the Settlement Agreement's Ecological Committee (EC). Acknowledge the EC in plan.
- Enhance education and interpretation. Include First Nations component and recognition in plan.
- There is no integration between ecological committee and the SBF. (Reno and Truckee River Plan was suggested as an example in addressing social services, community issues).
- Leverage funding. Combine funding pots from DWR and SBF during coordinated implementation.

In terms of implementation, what will coordination and alignment look like and what will it take to partner?

- Projects can be refined and discussed more. Money can be mingled to make some projects happen. Coordinate with DWR on mixing various types of funding.
- Ecological committee, recreation group, SBF community, can all be involved and integrated.
- DWR commented that the management process will be integrated. It's up to community where funding is directed. There will be multiple ways to engage, through representation on committees and public involvement.
- If access or amenities are increased, who will maintain? Challenges influence access and facilities infrastructure improvements.





How are the town and river connected?

- River needs to be active with people and social interaction – there needs to be a reason to walk along the river area—town is away from the river.
- Projects create synergy and have multiplying effect on community. Need to find out where money is, who controls it and how to get it released. People take ownership with investment in area. Concern about homeless. Funding will have a dramatic effect on the community.
- Helpful if SBF can match grants.
- Zoning can stimulate investment and development. SBF shouldn't be reactive. A way is needed in which entities can look at large projects. Think big with large projects that create synergy.
- Reach 3 as a jumping off place for activities or the centerpiece to initiate activities. You should look upstream also in identifying opportunities.
- Education Opportunities:
  - Funding can be used to get students out to river and provide water tours, salmon tours, bird tours. Feather River should be participating in the Snow Goose Festival. Expand opportunities to kids from lower income areas.
  - Need high quality programs for schools that tie into common core curriculum.
  - Tie history of gold town mining with access to river.

Meeting #2 – Focus: recreational and natural resource issues

What impedes more (recreation/education/commerce) from occurring on the river?

- Vagrants, public safety
- Lack of access points and ramps
- River visibility
- The Levee! Can it be moved, reconfigured or removed?
- Lack of riverfront stores and restaurants where people boat by.
- Cold temperature and natural features of the river
- Lack of access (blue trail) for floating and kayaking.
- Transportation. Develop public shuttle service for reach #3 and downstream.
- Other locations like Petaluma have proposed ideas such as a boat house, short term rentals, wayfinding signs along river.

Will the FERC license measures (gravel/large wood/habitat/etc.) positively impact your organization?

- If so, how will the FERC license measures further your organization's mission?
- If not, what measures need to change so that there is alignment with your mission?



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- Tie recreation into habitat restoration. Ecological and recreation measures may impact boating opportunities.
- Swimming education and safety will need to be promoted, some of which is being done by the YMCA.
- Once license is issued, there will be conversion to multipurpose trails, which is good.
- Homelessness. Important to get more citizens out there to the river to see the issues; providing better visibility and river restoration initiatives will help address this problem.
- Tie recreation, education and restoration together. Integrate natural resource and education around that topic.
- Access from Pacific Heights to Riverbend (identified one private parcel crossing).
- Brad Freeman trail can be dangerous in regards to hunting activities. Connect route so that users don't go through gun fire.
- American River Parkway is a great example where they've dealt with a lot of these issues (20 mile bike ride along river).
- Blue trail concept is wonderful; could include upper watershed where whitewater degree varies.
- East Gridley Bridge is a good spot for a blue trail.
- Community could benefit from a gateway.
- Trail connectivity. Trail development could be tied to Brad Freeman trail.
- Trails and development status – for regular requirements most everything has been done

What access improvements would you like to see along the river?

- Shuttle service
- East Gridley Bridge is a beautiful route for a longer float.
- A river guide book and river trail map.
- Improve safety so people feel comfortable leaving their car.
- Place information throughout area so people are aware of amenities – places to eat, orientation and guidance. Possible locations: Kiosks, Riverbend Park, Bedrock Park.
- Make information user friendly, include lots of organizations, regional marketing of recreational opportunities, one stop shopping on one website.
- Park watch program that connects people.
- Collaboration in funding and maintenance efforts. With different partners, figure out how they can collaborate on marketing and programs.

What are the most complementary activities that have a nexus with the river?

- Fishing and hunting
  - There are boat ramp plans at Afterbay outlet to improve river access.



- Signage and more information identifying where the public can fish is also needed.
- Develop an app identifying where the public can go to fish and hunt.
- Birding
- Camping (would require change in wildlife requirement; i.e., Afterbay outlet); there are plans to expand Outlet and with State Park improvements at Bidwell and Forebay
- Legally designated camping area with RV park (private) at Riffles that can accommodate tents, ramp and access to river (Reach 4).
- More accommodations are needed.
- Bike parks and pump tracks.
- Interconnected trails.
- There are a lot of users on the river, especially with tubers who access the river. Safety is a problem.
- Access at hatchery is tough. Walk-in ramp for tubers.

What is your vision of the river in the next 20 years?

- Something for everyone. A river for all.
- Oroville as a recreation destination.
- A lot more naturally produced salmon, steelhead – - river improvements - healthy fisheries.
- Bringing the river back to the center of Oroville.
- Envision a river that people enjoy, where they can swim. The observation platform is not being used- many areas are not accessible and it is difficult to walk given high grade. Bring back historic uses, improved access, and maintenance of the area.
- Warm water swimming/recreation.
- Refurbish low flow channel and eliminate invasive species.
- Large aquatic center that will help bring in economic development. Include swimming pools, areas for education and recreation to mitigate loss of swimming in river where at times it is too cold.
- Riverbend Park wrapping around the entire river with trails, crossing, diversion pool and destination park.
- Integration of wildlife refuge.
- Bicycle and multi-purpose access.

Final comments from participants:

- Some family business has been very successful at creating facilities near river – weddings, RV park, Paint Ball – business is good.
- Pay attention to cultural resource protection, such as historic preservation and Native American



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recognition. Get representatives from tribes involved.

- Want to see levee restored back to natural habitat. Issue: Where is the line? DWR doesn't own levee, and it is much higher than it needs to be.
- Is the levee state lands? State lands to the High Water Mark?
- Need to know who owns or controls land along river so if question arises you know where to go. How much levee can we remove? Need a land ownership map and understanding of the areas controlled by regulatory agencies. Need to understand process for modifying the levee.
- How close to the river can development occur? Levee is an import issue.
- Mountain biking: What is the status with cows? Issues with trail maintenance and balancing grazing and trail interests in Diversion Pool area. DWR Response: They will revisit lease issue with private property owner when they get a license.

### MEETING #3 – Focus: real estate development and economics issues

What would it take for you to make a significant investment in downtown development?

- Solid infrastructure, such as sufficient sewer capacity.
- A well thought out land use plan. Bring "backbone infrastructure to the front door." If this could be established beforehand, then private sector/businesses can be brought to the table.
- Reconnect downtown to the river. What would happen if there was developable space here, what is the value, how big an incentive is there to have that developed?
- Challenge: Levee is a barrier, but if it could be lowered then the beauty of the river could be seen.
- Dining options in Oroville. There are not many places to eat in the downtown area. People drive to Chico and Marysville for dinner.
- Napa cited as an example of active engagement of a waterfront.

What will bring more jobs/residents/visitors to downtown?

- If restaurants are built, housing and people will follow.
- No bank will fund a development project based on speculation, making it difficult to get a project off the ground. The biggest drivers downtown are multilevel office buildings, which could possibly be leased by tech companies. Downtown buildings could be redeveloped for that purpose. SBF funding could be used as financial catalyst to kick-start redevelopment.
- Places for social gatherings would generate economic development for the downtown area.
- Jobs, a workforce and something for them to do.
- Internet commerce. Get local entrepreneurs (from Oroville) to start tech companies. There is a need for broadband—currently town doesn't have good internet!
- Massive change in real estate will be attributed to lifestyle attraction of the baby boomers. Active adult model suggested (where access to medical, outdoor recreation and education is provided; think Redding). This group doesn't necessarily want to live in an age restricted community. They are looking for: mixed ages, lock and leave, smaller homes, less emphasis on yardwork. Two main demographics to attract: baby boomers and Millennials. To attract these groups there needs to be downtown activities.



Need to have demand exceed supply, then rents will increase.

- Good bike lanes.
- Riverfront homes with views, a community center or club house (good setting for baby boomers).
- Remove the levee and things will change in terms of development desirability.
- Views from north side into downtown will help sell what we are trying to do.
- Are the historic elements of Oroville an economically attractive aspect?
- Not really. Quaint, but this is not an economic driver. The river/lake is the driver.
- Develop a community at the lower end of reach 3.
- Have open space near river and levee, need to build site for boat rentals and river launch. Aquatic center is not convenient to downtown but there could be a satellite center downtown. Invest in levee and area as a gateway.
- Recreation opportunity: Lower end of reach has a nice canyon which Park and Rec owns.
- Great interest in the area from "equity migrants" (baby boomers from Bay Area). Wave of homebuyers and migrants from the Bay Area is anticipated, starting in 2018 and lasting over the next 20 years. Developers are focusing efforts just outside Bay Area prime but are beginning to look outside these areas as well.
- A downtown college annex for Butte Community College or Cal State University - Chico.
- Hospital expansion, renovation of the Oroville Inn which houses students. Cars and people are downtown.
- A vision for downtown. Outdoor dining is in demand.
- Lower the levee and put in trail ways.
- Levee is the barrier, taking it down will be a game changer.
- A downtown plan; nothing can be done without one. There is an Arts and Cultural Entertainment (ACE) Plan that was completed 2 years ago and emphasizes mixed use development.

What is needed to make this happen?

- Funding.
- Lower the levee.
- Foster development by eliminating obstacles.
- Flush out a downtown vision, infrastructure and wifi.
- Incentives would help to get people in early. Most subsidies trigger prevailing wage, but because this is a settlement (not a bond or other type of government funding), unlikely that such strings are attached to the SBF funding.

What is your vision of the river in the next 20 years as it relates to community development?

- Bring good paying jobs to the community.



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- A deck where people can eat and view river and recreational activities.
- Hotel with views, nightlife and shops.
- What can private sector do to foster private sector investment?
  - Invest heavily in the community, in jobs and retail. Focus on new job growth and population growth. In terms of tech development, Chico will be out of land in 20 years. This presents an opportunity for Oroville. Government's role is to support new development. Make recreation more attractive so people come to the area.
- Job growth. Figure out what your assets are then market what your strengths are. This dictates what type of industry will come. It could be tourism industry as it relates to river.
- Downtown development has challenges. There is no consistent wifi and broadband. People will be attracted downtown when we have a beautiful landscape and wifi.
- Are there opportunities for access at other reaches?
  - Focus has been on reach #3 because of nexus to downtown.



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# Potential Projects

# B







# Appendix B: Potential Projects

The following are project ideas collected from a variety of sources, including input from the SBF Steering Committee and the Ad Hoc Committee during development of this plan; a list of potential projects generated at focused charrette/meeting of the SBF Steering Committee (held at the Table Mountain Golf Course in 2014, three focused stakeholder meetings held in December 2016 during development of this plan. The stakeholder meetings included input on potential project concepts as well as opportunities (locations for new river access; ways in which SBF funding could influence PM&E development) and identification of issues (litter, vandalism, evidence of drug use) and key constraints. See Appendix A for more detail on stakeholder input. Additional, new project concepts are also included in the Plan.

Those project concepts received/collected during Plan development that are included as recommendations in the Plan are listed below, by Reach, with project concepts not included in the plan listed at the end of the lists. Related Settlement Agreement articles are integrated in multiple Reaches and are listed immediately below.

Related Settlement Agreement Articles to be Implemented by DWR:

DWR A101 - Lower Feather River Habitat Improvement Plan

DWR A102 - Gravel Supplementation and Improvement Program

DWR A103 - Channel Improvement Program

DWR A104 - Structural Habitat Program

DWR A105 - Fish Weir Program (Segregation & Count Weirs)

DWR A106 - Riparian & Floodplain Improvement Program

DWR A115 - Oroville Wildlife Area Management Plan

DWR A127 - Recreation Management Plan

DWR B110 - Analysis of Non-Motorized Water Trail Shoreline Access

## **Reach 1:**



Blue Trail (in conjunction with Settlement Agreement Article B110)

Connectivity from the Dam to the outlet for walking running or biking---all along the river

Bicycle trails – road and mountain (including freeride structures and obstacles)

Think big with large projects that create synergy.

### **Reach 2:**

Nature Center Trail

Nature Center Improvements

Boating/floating put-in at the Table Mountain Boulevard Bridge; bathrooms there and at key places along the river

Blue Trail (in conjunction with Settlement Agreement Article B110)

Connectivity from the Dam to the outlet for walking running or biking---all along the river

Environmental & river stewardship information and kiosks

Bicycle trails – road and mountain (including freeride structures and obstacles)

### **Reach 3:**

Complete the Veterans' Memorial Park

Bedrock Park Improvements, including lagoon and amphitheater

Municipal Auditorium Improvements

Cultural Center Improvements

Municipal Auditorium Waterfront Access / Better View to River from the Municipal Auditorium

Redevelopment of levee footprint: Increased residential, commercial/professional, restaurants & retail near the river; upstairs residential & professional lofts, downstairs businesses

Levee lowering/removal (where feasible)

Levee: trails; lighting; access; better connection to river—too perched and no-man's land between trail and town

Recruit river-centric businesses



A public K-8 charter school based on river science and culture

Myers Street Plaza

More parking (multiple locations)

Vehicle, pedestrian, and bicycle connectivity between the north and south banks; a new river pedestrian bridge (at Lincoln and/or at Bedrock)

North of River Development: Residential/Commercial

North bank: ecosystem restoration along river

Bicycle trails – road and mountain (including freeride structures and obstacles)

Open Space Connection from Gateway to Downtown

Open Space Connection to River from Town

River Trail Interpretive Design

ACE Town Square (parking Lot A)

ACE Commercial and Retail Improvements

Whitewater play waves/river complexity features (at Bedrock Lagoon; at other locations on river)

River bank seating (in conjunction with whitewater play features)

Blue Trail (in conjunction with Settlement Agreement Article B110)

A lot more naturally-produced salmon, steelhead, yielded by river improvements. Healthy fisheries = healthy river economy.

A trail connecting downtown to the OWA. Left bank side through Riverbend is probably the best route. Think about a riding loop, marathons, triathlons, etc. Example: American River Parkway bike trail

Restaurant/entertainment areas where people can sit outside and eat near river while watching river activities; river-centric businesses (i.e., "the deck overlooking the kayak play spot where you can order a burger and a beer").

Hotel with views, nightlife and shops

A river-focused research facility and/or college campus annex for Butte Community College, CSU, Chico, or a University of California campus.

Connectivity from the Dam to the outlet for walking running or biking---all along the river



## Feather River Conceptual Plan

Reconfigured banks (too steep), extend Bedrock Park along length of river, improve access and natural identity for the river. Make it more river like, natural and not a ditch.

River needs to be active with people and social interaction – there needs to be a reason to walk along the river area—town is away from the river.

Think big with large projects that create synergy.

Reach 3 as a jumping off place for activities or the centerpiece to initiate activities: Central plaza with environmental interpretive center, charter school based on river, recreation kickoff point.

Bedrock Lagoon Improvements

Solid infrastructure: sufficient sewer capacity and highspeed internet. (need for improvements noted)

Reconnect downtown to the river. Create developable space: it has a value and is a big incentive to have that developed.

Riverfront Commercial (both banks)

Riverfront Residential (both banks)

Riverfront homes with views, a community center or club house (good setting for baby boomers & millennials).

Gateway: Hotel//Rest./Conference; Chamber/California Visitor Center (Gateway)

Improved Landmark/Signage/Structure

Downtown Levee: trails; lighting; access; retail/restaurant connection to river

Riverfront Mixed Use (existing plans)

Amphitheater (Downtown or near downtown)

Skate Park Improvements

**Reach 4:**



Blue Trail (in conjunction with Settlement Agreement Article B110)

A lot more naturally-produced salmon, steelhead, yielded by river improvements. Healthy fisheries = healthy river economy.

A trail connecting downtown to the OWA. Left bank side through Riverbend is probably the best route. Think about a riding loop, marathons, triathlons, etc. Example: American River Parkway bike trail

Connectivity from the Dam to the outlet for walking running or biking---all along the river

Bicycle trails – road and mountain (including freeride structures and obstacles)

Way to get to Oroville Wildlife Area from Riverbend Park

FRRPD Aquatic Center (in-town location; Riverbend location; Forebay location)

## **Reach 5:**

Blue Trail (in conjunction with Settlement Agreement Article B110)

A lot more naturally-produced salmon, steelhead, yielded by river improvements. Healthy fisheries = healthy river economy.

A trail connecting downtown to the OWA. Left bank side through Riverbend is probably the best route. Think about a riding loop, marathons, triathlons, etc. Example: American River Parkway bike trail

Bicycle trails – road and mountain (including freeride structures and obstacles)

Connectivity from the Dam to the outlet for walking running or biking---all along the river

## **Thermalito Forebay:**

Warm-water recreation: Large aquatic center that will include swimming pools, areas for education and recreation to mitigate loss of swimming in river where at times it is too cold. (Potential locations in Reach 4 and at a site on Mitchell Ave [outside plan area])

Bicycle trails – road and mountain (including freeride structures and obstacles)

Projects concepts not presently included in the Plan that may be incorporated in the future as conditions change



## Feather River Conceptual Plan

ACE Chinese Heritage Park

ACE Open Space Park Improvements

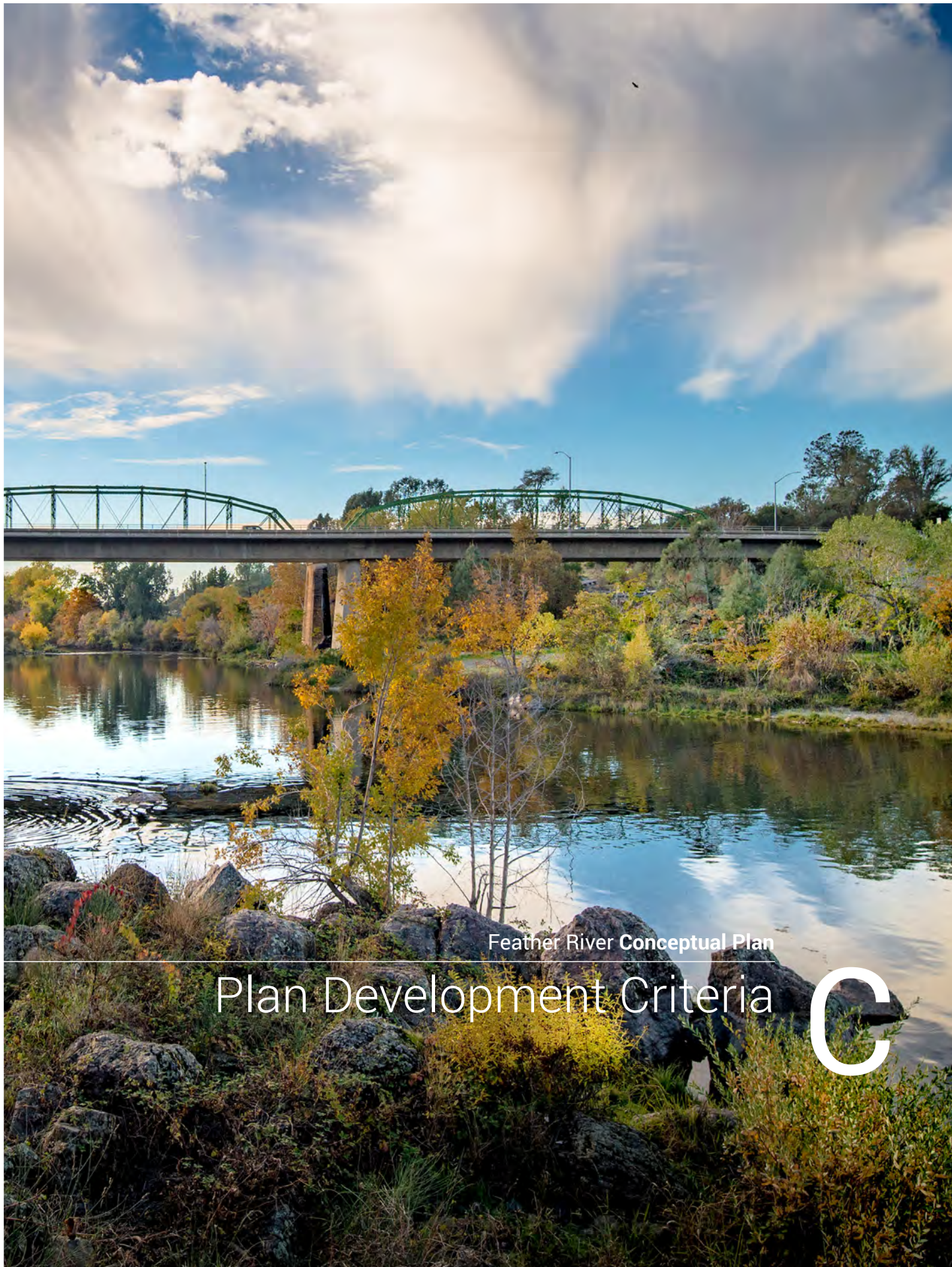
Riverbend Commercial (salmon village)

North of River Salmon Reservoir Development Concept

Reach 3: boat house, short term rentals, wayfinding signs along river

Transportation. Develop public shuttle service for Reach #3 and downstream.

Riverfront Lodge (North side of river, downstream of Hwy 70)



Feather River Conceptual Plan

# Plan Development Criteria

C







# Appendix C: Plan Development Criteria

A unique attribute of this river-focused conceptual plan is the fact that previous work has laid a firm foundation of goals and objectives for the community and the use of the SBF funding. However, translating existing goals, objectives and principles into a visionary Plan to transform a significant portion of an existing community is a challenge; particularly given the unique and broad ranging characteristics of the river within the planning area and the magnitude of past impacts to the river and the community. To do this, the plan development team defined a set of “Plan Development Criteria” (listed below) that are similar to the sections of development guidelines contained in community planning statutes—using them to help identify projects and define priorities. The plan development team gained additional feedback on these criteria during the three focused stakeholder meetings held in December 2016 during development of this Plan by having meeting participants add a “vote” for the most important criteria, yielding an approximation of the community’s interest and values for Plan development.

- 1. Economic Enhancement – Enhance and stimulate economic growth along the river through downtown.**
  - a. Brings more tourists/residents/consumers to Oroville Region.
  - b. Viable for other funding opportunities such as public/private investments, SBF match, or grants.
  - c. Provides key benefits and revenue to the community through new development/commerce.
  - d. Supports all segments of the community and increases diversity (socioeconomic, etc.).
  - e. Provides short- and long-term economic growth.
  - f. Meets requirements of other planning documents.
- 2. Recreation Enhancement – Create a connection to the river and enhance experiences**
  - a. Creates or enhances access to, or opportunities on, the river.
  - b. Enhances circulation between existing facilities and new facilities, downtown, and the river.



- c. Enhances existing recreation opportunities as per local Master Plans.
- d. Provides additional facilities and/or programming that enhances health, education, and interpretation.
- e. Provides synergies with ecosystem sustainability.

### **3. Ecosystem Stewardship and Environmental Consciousness – Restoring habitat to recover species**

- a. Enhances or enriches recreation on or adjacent to the river.
- b. Restores and/or increases the function and value of natural habitat.
- c. Provides interpretive environmental education.
- d. Self-mitigating and low impact.
- e. Supports FERC license PM&E implementation, or other agency restoration activities.

### **4. Sustainable Development - Environmentally responsible and financially resilient**

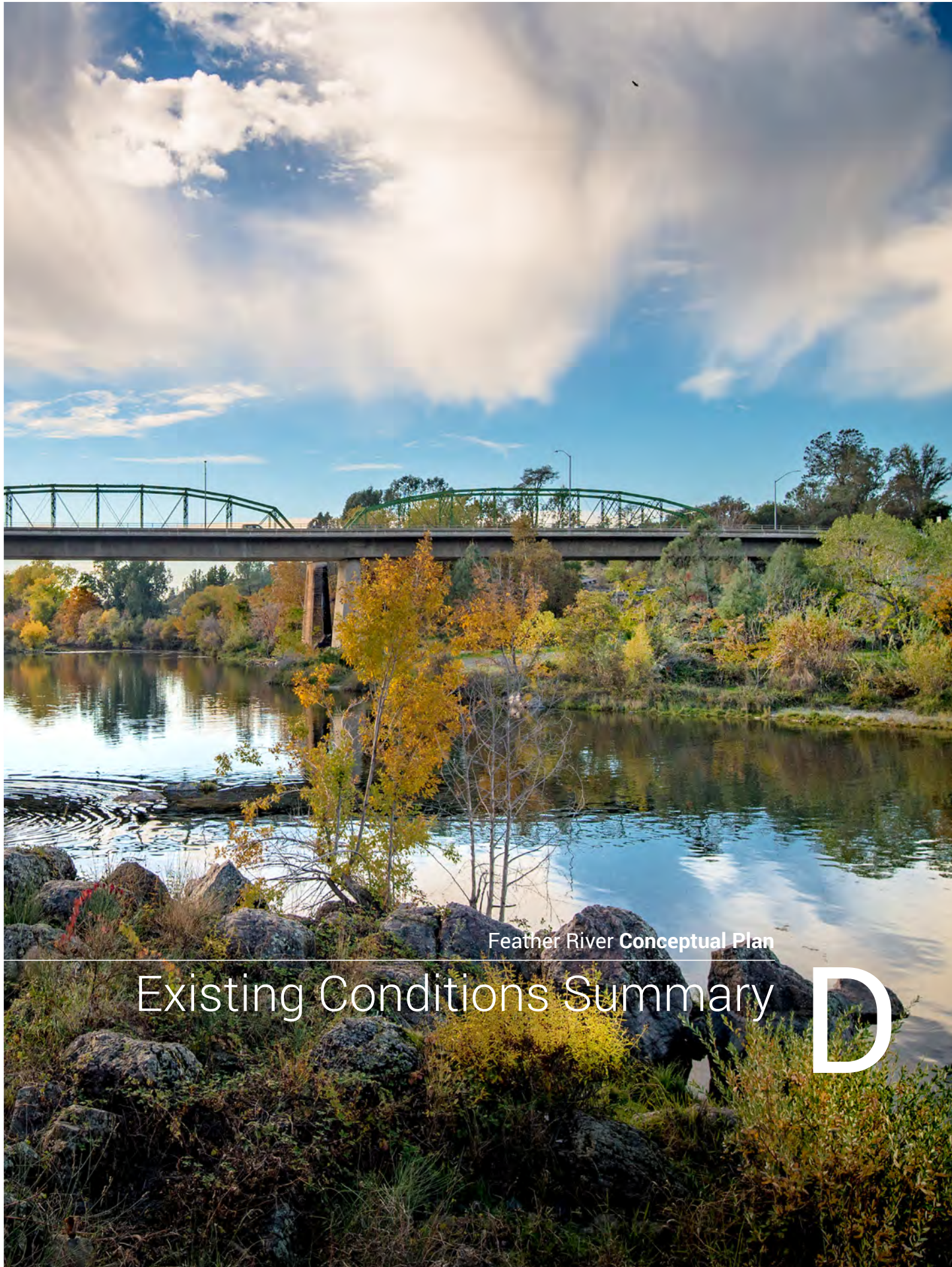
- a. Supports the vitality of foundational recreational and ecological elements of the river.
- b. Activates the users of the community and region with enduring opportunities.
- c. Increases the economic base for downtown and the region.
- d. Benefits accrue initially and in the long-term.
- e. Serves as a catalyst for other necessary projects and/or has the ability to adapt to changing conditions.
- f. Yields low-impact, sustainable outcomes that are resilient.

### **5. Preservation and promotion of cultural values**

- a. Enhances the current local culture and create elements to preserve it.
- b. Creates new cultural with new elements that enhance community.

### **6. Establishment of good governance**

- a. Establishes and upholds a level of quality for long term benefit of community.
- b. Commits to the direction of this Plan and supports related agency planning guidance.



Feather River Conceptual Plan

# Existing Conditions Summary

D





# Appendix D: Existing Conditions Summary

Oroville is primarily a single-family residential community with a historic and charming downtown district located along the Feather River and a main commercial corridor along Oroville Dam Boulevard. As of 2017, the city has approximately 18,985 residents and the greater Oroville area is home to over 55,000 people. Known as the "City of Gold," the history of Oroville began along the Feather River before the Gold Rush of 1848. Presently located downstream of Oroville Dam, many of Oroville's historic homes and mansions are remnants from early settlers of this time who made their fortunes from the Gold Rush.

This river-focused master plan recognizes that the beauty of the river is in the aesthetic qualities of the natural environment, and not in the adjacent development or built environment. The existing natural landscapes of the Plan area are briefly summarized, below.

## Hydrology and Geomorphology of the Feather River

The Feather River emerges from the Sierra Nevada and enters the Sacramento Valley downstream of Oroville Dam. Downstream of Oroville Dam, the Thermalito Diversion Dam diverts significant flows of the Feather River into the Thermalito Forebay and then into the Afterbay. Upstream of the Thermalito Diversion Dam the Feather River is impounded in what is known as the Diversion Pool. Downstream, the "low flow channel" section of the Feather River extends to the Thermalito Afterbay outlet (River Mile 59; measured as miles upstream from the confluence with the Sacramento River), downstream of which is the "high flow channel," where flows diverted through the Thermalito Complex are returned to the river.

The river channel downstream of the fish barrier dam is bedrock, covered in most places by a veneer of cobbles and boulders up to 10 feet thick. Spawning gravel supplementation is conducted in this area. Sediment input from upstream or bank erosion is minimal to non-existent and because this is part of the low flow channel, flows are regulated. A high floodplain characterizes much of the right bank area downstream of the fish hatchery; downtown Oroville lies on the left bank, with a tall, cobble berm (commonly called a levee, but not a formal flood control structure and not a part of California's "State Plan of Flood Control") rising steeply from the edge of the water. After passing under the Highway 70 bridge, the river bends left (south) as it encounters a tall resistant bluff on its right bank, which inhibits channel migration.



Downstream, in the Oroville Wildlife Area (OWA), the low flow channel is characterized by coarse dredge tailings composing both the bed and banks. Riffles, point bars, mid-channel islands, and multiple channels are common, but cobbles and boulders armor most of these depositional features. Remnant dredger tailing piles that form tall, levee-like embankments severely constrict the floodplain along the upper portion of this reach (especially the right bank downstream of Highway 162). There are overflow weirs into the OWA in at least four places. Much of the reach has been mined for gravel, resulting in many pits, multiple channel areas, and somewhat jumbled floodplain topography. The Thermalito Afterbay Outlet marks the point of re-introduction of bypassed flows, increasing discharge and beginning the high flow channel.

Oroville Dam, Thermalito Diversion Dam, and the fish barrier dam all block gravel contribution to the Feather River. High flow releases from the Oroville Facilities mobilize smaller substrate particles. The smaller substrate sizes are not replaced by upstream gravel, resulting in a gradual coarsening of the particle size distribution of the substrate in the upper portions of the Feather River. Coarsening and armoring of the substrate can affect fish spawning habitat suitability, quality, and distribution for salmonids and other fish species. In general, the reach of river with the highest proportion of coarse substrate components is the upstream-most portion of the Feather River downstream of the fish barrier dam and above the Thermalito afterbay outlet.

Minimum flows and ramping criteria in the Feather River were established in the August 1983 agreement between DWR and the California Department of Fish and Wildlife (CDFW). The agreement specifies that DWR release a minimum of 600 cubic feet per second (cfs) into the Feather River from the Thermalito diversion dam for fisheries purposes. Therefore, the low flow channel is operated at 600 cfs all year with variations in flow occurring rarely, only during flood control releases, or in the summer to meet downstream temperature requirements for salmonids. Under the new license, minimum flows will be increased to 800 cfs.

Flows in the high flow channel are maintained between the minimum flow and a flow no greater than 2,500 cfs from October 15 through November 30 to prevent Chinook salmon redd dewatering, in the event that flows were to decrease during the egg incubation period. The flow regime in the reach of the Feather River extending from the Thermalito afterbay outlet (RM 59) to the confluence of the Feather and Sacramento rivers (RM 0) varies depending on runoff and month.

Water temperatures tend to be coldest in the upper-most portions of the Feather River near the fish barrier dam, and they warm progressively with distance downstream during the spring, summer, and fall. The low flow channel water temperatures have been managed to comply with terms of the October 2004 NMFS' biological opinion (BO) about the effects of the long-term operations, criteria, and plan of the State Water Project and the federal Central Valley Project, which superseded all previous biological opinions regarding the CVP and SWP long-term operations, criteria, and plan. A new NMFS BO for the Oroville Facilities was released in December 2016; terms of that BO will be incorporated into the new FERC license.

## Flooding and FEMA Floodplain Mapping

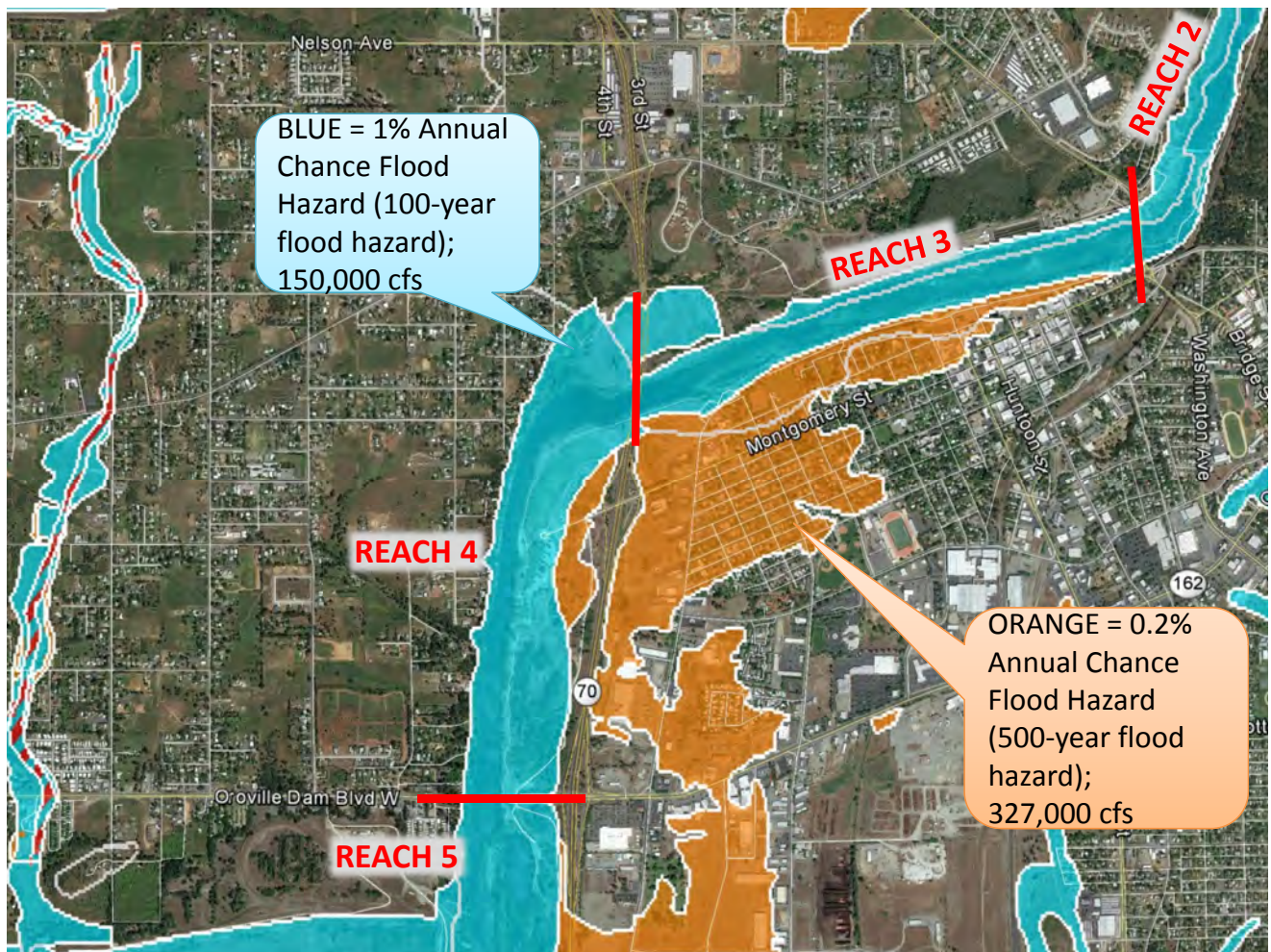
Flooding is a natural hazard for communities adjacent to rivers and creeks. Flooding is one of the most destructive among many natural disasters, bringing catastrophic and costly damages to human lives. As the most-frequently occurring natural disaster (impacting more people worldwide than any other natural disasters), understanding floods and assessing the risks associated with it is an important consideration in developing a river-focused plan along the Feather River.

Understanding flood hazards requires knowledge of the different types of flooding, their probabilities of occurrence, how they can be modeled and mapped, and the relevance of that information to the community and its planning process. Flood risk can also evolve over time—for example, as a community develops,



paving and causing more runoff, flood risk on smaller creeks and drainage ditches may occur where it was once not an issue. Along larger rivers, communities may need to assess how flood risk evolves over time in light of anticipated climate changes and explore how these decisions will need to change. The placement of dams can also change flood risk.

In Oroville, the frequency and magnitude of flooding from the adjacent Feather River has been mitigated by regulation of the upstream Oroville Dam. As defined by the Federal Emergency Management Agency (FEMA, 2011), because the Feather River is regulated by Oroville Dam, the area defined as the 1% Annual Chance Flood Hazard (100-year flood hazard) corresponds to a flow of 150,000 cfs on the Feather River at Oroville; the area defined as the 0.2% Annual Chance Flood Hazard (500-year flood hazard) corresponds to a flow of 327,000 cfs on the Feather River at Oroville (See Inset Flood Map). Generally, the area defined by FEMA as the 1% Annual Chance Flood Hazard in Reaches 1-3 is restricted to the Diversion Pool and the river channel itself, owing to the restricted nature of the river canyon and steep banks immediately-adjacent to the river. In Reach 4, the river spreads out and inundation is estimated across Riverbend Park and in areas on the right bank (north) side of the river near the Highway 70 crossing. Downstream of Highway 162/Oro Dam Boulevard, which marks the approximate end of the high cliff on the right bank of the river, the area defined by FEMA as the 1% Annual Chance Flood Hazard spreads out significantly on the right (and, to a lesser extent, the left) bank into the Oroville Wildlife area.



Flood Map



The currently-available FEMA mapping (FEMA, 2011) is based on hydraulic modeling and an engineering assessment of the river's hydrology (presently managed based on operation of Oroville Dam). However, as the hydrologic record lengthens and the potential influence of climate change becomes more evident, new information will need to be integrated into any future assessment of Feather River flood hazard for the plan area. For example, during the 48-year history of Oroville Dam, there have been two major flood incidents that bring into question the flood hazard for downstream communities: during the flood event of January 1997, with the main spillway releasing the "100-year" discharge of approximately 150,000 cfs, the reservoir continued to rise and was within one foot of reaching the crest of the emergency spillway. Recently, the damage to the main spillway in February 2017, and the ensuing challenges with operation of the reservoir resulted in flow through the emergency spillway and evacuation of nearly 200,000 downstream residents, including all of downtown Oroville.

## Biological Resources of the Feather River

The Feather River is an important resource for California, and beyond. For example, commercially-harvested fall-run Chinook salmon are caught along the coast of California, Oregon and Washington, and even in the Gulf of Alaska. As such, an understanding for and appreciation of the biological resources of the Feather River, including species with state and federal Endangered Species Act protection, is vital in developing a FRCMP that is integrated with Settlement Agreement measures that were developed to protect and enhance these resources.

Fish species of primary management concern present in the Feather River include spring-run Chinook salmon, fall-run Chinook salmon, Central Valley steelhead, rainbow trout, brown trout, brook trout, green sturgeon, river lamprey, American shad, hardhead, and Sacramento splittail. Chinook salmon are very abundant in the Feather River as an estimated 30,000 to 170,000 Chinook salmon spawn in the Feather River annually. Releases to the low- and high-flow channels are currently managed to primarily benefit coldwater fisheries. Table D-1 lists those fish species present within the planning area, along with their specific known occurrences, status relative to population level and to state and federal Endangered Species Act protection, and whether they are an introduced (non-native) species.

It is estimated that 97 percent of the sediment from the upstream watershed is trapped in Lake Oroville, resulting in sediment starvation downstream, with only very fine sediment discharged from the Lake to the River. Depletion of the sediment load in the Feather River results in reduced formation of sediment benches, which coupled with altered hydrology, affects riparian vegetation colonization and succession. The riparian vegetation provides overhanging cover for rearing fish, riparian shade, invertebrate contributions to the fish food base, and future large woody debris (LWD) site contributions. LWD is an important functional component in the development and maintenance of habitat diversity and contributes to instream cover complexity. Logs, rootwads, and undercut banks provide juvenile salmonid rearing cover from predators, velocity refuges, and increased concentrations of drifting food organisms. Debris-formed pools also provide adult salmonid holding habitat. The Oroville Facilities block upstream contribution of LWD to the river, and survey data indicates that LWD is unevenly distributed in the Feather River with the low flow channel containing the lowest amount (28.5 pieces per mile on average). Slightly more LWD (104.4 pieces per mile, on average) exists from the afterbay outlet to Honcut Creek, the river's only tributary upstream of the Yuba River. (The reach downstream of Honcut Creek to the Yuba River contains a significantly higher amount of LWD, with 238.5 pieces per mile on average—suggesting that Honcut Creek [free of major dams] is a major source of LWD).





**Table D-1.** List of fish species within the Plan Area

Common Name <i>Scientific Name</i>	Regulatory Status <sup>a</sup>	Primary Management Concern Species <sup>b</sup>	California Native or Introduced	Location Within Study Area <sup>c</sup>	Abundance/ Mgmt Status <sup>d</sup>
Pacific lamprey <i>Lampetra tridentata</i>	FSC	No	Native	LFR	DFG watch list
River lamprey <i>Lampetra ayresi</i>	CSC	Yes	Native	LFR	DFG watch list
Green sturgeon <i>Acipenser medirostris</i>	FSC	Yes	Native	LFR	DFG watch list
White sturgeon <i>Acipenser transmontanus</i>	CSC	No	Native	LO, LFR	Stable or increasing
American shad <i>Alosa sapidissima</i>	FCe	Yes	Native	LFR	Special concern
Threadfin shad <i>Dorosoma petenense</i>	--	No	Native	LO, LFR	Stable or increasing
Common carp <i>Cyprinus carpio</i>	--	Yes	Introduced	LFR	Widespread and stable
Golden shiner <i>Notemigonus crysoleucas</i>	--	No	Introduced	LO, TA, LFR	Widespread and expanding
Hardhead <i>Mylopharodon conocephalus</i>	--	No	Introduced	UT, LO, TF, DP, TA, LFR, OWA	Widespread and expanding
Hitch <i>Lavinia exilicauda</i>	--	No	Introduced	LO, DP, TF, TA, OWA	Widespread and expanding
Sacramento pikeminnow <i>Ptychocheilus grandis</i>	CSC	Yes	Native	LO, TF, DP, TA, LFR	DFG watch list
Sacramento splittail <i>Pogonichthys macrolepidotus</i>	--	No	Native	TA, LFR	DFG watch list
Sacramento blackfish <i>Orthodon microlepidotus</i>	--	No	Native	UT, LO, TF, DP, TA, LFR	Stable or increasing
Sacramento sucker <i>Catostomus occidentalis</i>	CSCf	No	Native	UT, LO, TF, DP, TA, LFR, OWA	Stable or increasing
Black bullhead <i>Ameiurus melas</i>	FSC	Yes	Native	LFR	Special Concern
Brown bullhead <i>Ameiurus nebulosus</i>	--	No	Introduced	LFR, OWA	Widespread and stable
White catfish <i>Ameiurus catus</i>	--	No	Introduced	LO, LFR, OWA	Widespread and stable
Channel catfish <i>Ictalurus punctatus</i>	--	No	Introduced	LO, LFR, OWA	Widespread and stable



## Feather River Conceptual Plan

Common Name <i>Scientific Name</i>	Regulatory Status <sup>a</sup>	Primary Management Concern Species <sup>b</sup>	California Native or Introduced	Location Within Study Area <sup>c</sup>	Abundance/Mgmt Status <sup>d</sup>
Wakasagi <i>Hypomesus nipponensis</i>	--	No	Introduced	LO, TF, DP, TA, LFR	Widespread and expanding
Fall-run Chinook salmon <i>Oncorhynchus tshawytscha</i>	csc.	Yes	Native	FRFH, LFR	DFG watch list
Spring-run Chinook salmon <i>Oncorhynchus tshawytscha</i>	FSCg	Yes	Native	FRFH, LFR	DFG watch list
Central Valley steelhead <i>Oncorhynchus mykiss</i>	ST	Yes	Native	FRFH, LFR	Threatened or endangered
Rainbow trout <i>Oncorhynchus mykiss</i>	FT	Yes	Native	FRFH, LFR	Threatened or endangered
Brown trout <i>Salmo trutta</i>	FT	Yes	Native	FRFH, LFR	Threatened or endangered
Brook trout <i>Salvelinus fontinalis</i>	--	Yes	Native	UT, LO, TF, DP, TA, LFR	Widespread and stable
Western mosquitofish <i>Gambusia affinis</i>	--	Yes	Introduced	UT, LO, LFR	Widespread and stable
Prickly sculpin <i>Cottus asper</i>	--	Yes	Introduced	TF, DP, TA, LFR	Widespread and stable
Riffle sculpin <i>Cottus gulosus</i>	--	No	Introduced	OWA	Widespread and expanding
Striped bass <i>Morone saxatilis</i>	--	No	Native	UT, LO, TF, DP, TA, LFR, OWA	Stable or increasing
Bluegill <i>Lepomis macrochirus</i>	--	No	Native	UT, LO, TA, LFR, OWA	DFG watch list
Green sunfish <i>Lepomis cyanellus</i>	--	Yes	Introduced	LFR	Widespread and stable
Redear sunfish <i>Lepomis microlophus</i>	--	No	Introduced	LO, LFR, OWA	Widespread and stable
Warmouth <i>Lepomis gulosus</i>	--	No	Introduced	LO, OWA	Localized
Black crappie <i>Pomoxis nigromaculatus</i>	--	No	Introduced	LO, DP, TA, OWA, LFR	Widespread and stable
White crappie <i>Pomoxis annularis</i>	--	No	Introduced	LO, TA, OWA, LFR	Widespread and stable



Common Name <i>Scientific Name</i>	Regulatory Status <sup>a</sup>	Primary Management Concern Species <sup>b</sup>	California Native or Introduced	Location Within Study Area <sup>c</sup>	Abundance/ Mgmt Status <sup>d</sup>
Largemouth bass <i>Micropterus salmoides</i>	--	Yes	Introduced	LO, TF, DP, TA, LFR, OWA	Widespread and stable
Smallmouth bass <i>Micropterus dolomieu</i>	--	Yes	Introduced	LO, DP, TA, LFR	Widespread and stable
Redeye bass <i>Micropterus coosae</i>	--	Yes	Introduced	LO, LFR	Localized
Spotted bass <i>Micropterus punctulatus</i>	--	Yes	Introduced	LO, TA, LFR	Widespread and expanding
Tule perch <i>Hysterothorax traski</i>	--	No	Native	DP, TF, TA, LFR	Stable or increasing

Notes:

- a FT – listed as threatened under ESA; ST – listed as threatened under CESA; FE – federally listed as endangered; SE – state listed as endangered; FC – candidate for listing under ESA; CC – candidate for listing under CESA; FSC – federal species of concern; CSC – California species of special concern.
- b Species of primary management concern evaluated in this analysis include those that are recreationally or commercially important, state- and/or federally listed species within the project study area under the ESA or CESA, candidate species for listing under ESA or CESA, and California species of special concern.
- c Frequently or infrequently observed in the following: UT – upstream tributaries; LO – Lake Oroville; DP – Thermalito diversion pool; TF – Thermalito forebay; TA – Thermalito afterbay; FBP – fish barrier pool; FRFH – Feather River fish hatchery; OWA – Oroville Wildlife Area ponds; LFR – Lower Feather River.
- d As defined in Moyle (2002).
- e However, on April 6, 2005, after reviewing new and updated information about the status of green sturgeon and considering whether green sturgeon is in danger of extinction now or in the foreseeable future throughout all or a significant portion of its range, NMFS published a proposed Rule Federal Register (70 FR 17386 to list the Southern Distinct Population Segment of green sturgeon as threatened under the ESA), but reaffirmed its earlier finding that the Northern Distinct Population Segment does not warrant listing under the ESA at this time. They did, however, recommended that it remain on NMFS Species of Concern List (69 FR 19975) due to remaining uncertainties about its status and threats.
- f FWS removed the Sacramento splittail from the list of threatened species on September 22, 2003, and did not identify it as a candidate for listing under ESA. Sacramento splittail is identified as a California species of special concern and, informally, as a federal species of concern.
- g Although late-fall-run Chinook salmon does not occur within the project study area, the Central Valley fall-run/late-fall-run Chinook salmon is identified as one evolutionarily significant unit (ESU). In 1999, the Central Valley ESU underwent a status review after NMFS received a petition for listing. Pursuant to that review, NMFS found that the species did not warrant listing as threatened or endangered under ESA, but sufficient concerns remained to justify addition to the candidate species list. On April 15, 2004, NMFS published a notice in the Federal Register acknowledging establishment of a species of concern list, addition of species to the species of concern list, and revision of the candidate species list. In this notice, NMFS announced the Central Valley Fall-run and Late Fall-run Chinook Salmon ESU change in status from a candidate species to a species of concern. Therefore, according to NMFS' April 15, 2004, interpretation of ESA provisions, the Central Valley ESU now qualifies as a species of concern, rather than a candidate species (69 FR 19977).
- h These special-status species designations pertain only to coho salmon within their native habitats. Coho salmon occur within the project study area because of stocking programs and are managed for their recreational importance only.

Source: DWR, 2005a, 2001b



The majority of in-river spring-run Chinook salmon spawning is concentrated in the uppermost 3 miles of accessible habitat in the Feather River downstream of the Feather River fish hatchery, although spawning may extend to the downstream portion of the low flow channel above the Thermalito Afterbay Outlet. The high flow channel is considered a migratory corridor for adult spring-run Chinook salmon, and few, if any, of these fish are thought to hold or spawn there. Most of the natural steelhead spawning in the Feather River occurs in the low flow channel, particularly in the upper reaches near Hatchery Ditch, a side channel located between RM 66 and 67 between the Table Mountain Bicycle Bridge and Lower Auditorium Riffle. Limited steelhead spawning also occurs downstream of the Thermalito Afterbay Outlet. The smaller substrate size and greater amount of cover (compared to the main river channel) likely make these side channels more suitable for juvenile steelhead rearing. Currently, this type of habitat comprises less than 1 percent of the available habitat in the low flow channel.

The Oroville Wildlife Area (OWA) contains more than 75 warmwater ponds and sloughs, along with complexes of emergent marsh and flooded cottonwood, willow, and sycamore trees, totaling about 12,000 acres. The OWA pond water levels are replenished, in part, by the Feather River, which seeps through the porous levees and substrates, or floods into the OWA during high flow events. These permanently inundated areas increase the amount of fish and wildlife habitat in the OWA, but species of invasive aquatic plants are growing to densities that reduce the quality of or eliminate potential fish habitat, and many of the ponds are dominated by invasive species (see TABLE D-1). The OWA ponds are currently managed as a warmwater fishery. Largemouth bass, channel catfish, white catfish, bluegill, green sunfish, and carp are all abundant in the OWA ponds, along with populations of black and white crappie. While inundated floodplains and wetlands are known to be highly-beneficial habitats for juvenile salmonids for rearing and production of food during the winter and early spring months, the OWA ponds and wetland areas become too warm during the late spring to sustain salmonids, so any salmonids that are present at this time typically do not survive. Connectivity and egress for juvenile salmonids has not been studied and the extent of this periodic salmonid presence has not been determined.

## Cultural Resources in the Planning Area

Investigations and chronologies suggest occupation of the Feather River region by Native American peoples for at least 3,000 years and continued up to and beyond the arrival of European-American immigrants in the mid-1800s. The Feather River provided fresh water, abundant fish and other riverine resources, and a transportation corridor. The adjacent woodlands provided oaks, numerous other plants, and game, such as deer. These resources, supplemented by trade with neighboring tribal groups, provided the Konkow-Maidu with the resources they needed for food, shelter, clothing, and the pursuit of a variety of ceremonial and sacred practices. On the far northeastern frontier of Spanish California, the Feather River area was first explored by the Spanish in the early nineteenth century and later explored by fur trappers in the 1820s and 1830s. The Mexican rancho period in northeastern California began in the 1840s, but it was soon interrupted, first by the American acquisition of California in 1848 and then by the Gold Rush. Three months after gold was discovered at Sutter's Mill near the town of Coloma, John Bidwell found gold on the Feather River at what became known as Bidwell's Bar. The Feather River was a major gold-producing area with all the social, economic, and environmental consequences found elsewhere in mining areas across the West. The earliest settlements along the Feather River were at the sites of gold discoveries at Bidwell Bar, Long Bar, Hamilton, and Thompson's Flat. The miners quickly outnumbered the sparse Mexican population and the much larger indigenous population inhabiting the area and began to reshape the landscape. By the 1880s, as hydraulic mining activities decreased, mining towns were abandoned. In the areas near the FRCMP area, Butte County



maps of the late 1800s and early 1910s show only a few small communities in addition to the towns of Bidwell Bar and Oroville, which became the county seat in 1856. Where other towns disappeared, Oroville's gradual development as a trading center first for mining and then for lumbering and agriculture, along with arrival of the railroad in 1864, reinforced its position.

As mining operations became more complex and costly, mining corporations began to dominate the local industry, with the construction of reservoirs, dams, and extensive ditches. In 1898, a form of mining newly developed in New Zealand was first used successfully in California on the Feather River. Dredge mining left vast fields of cobble tailings that still dominate the landscape of the Feather River south of Oroville. About 8,000 acres of the project area within the OWA is a dredge field. These tailings provided much of the material used to construct Oroville dam. Mining remained an important part of the economy along the Feather River well into the twentieth century, a fact that is reflected in the local archaeology as one-quarter of the historic era sites identified in during cultural resource surveys for the FERC relicense studies involve mining. There are also numerous Native American sites as well as sites of occupation by the large Chinese population that played an important role in mining on the Feather River. The Chinese had a reputation for reworking apparently unsuccessful or played-out digging and finding gold. For a 10-year period from 1872 to 1882, the largest Chinese mining settlement in the United States existed a few miles south of Oroville. At the height of this period, there were 5,000 to 8,000 Chinese living just south of Oroville.

## Community Characterization and Policy Base

Oroville is primarily a single-family residential community with a historic and charming downtown district located along the Feather River and a main commercial corridor along Oroville Dam Boulevard. As of 2017, the city has approximately 18,985 residents and the greater Oroville area is home to over 55,000 people. Known as the "City of Gold," the history of Oroville began along the Feather River before the Gold Rush of 1848. Presently located downstream of Oroville Dam, many of Oroville's historic homes and mansions are remnants from early settlers of this time who made their fortunes from the Gold Rush.

Today, Oroville is most famous for being the site of the Oroville Dam and is the starting point for the State Water Project, which stores and delivers water to over two-thirds of California's population. Despite the economic "bust" that occurred subsequent to the completion of Oroville Dam in the 1960s, Oroville is beginning to see pressures for growth, as the housing markets in both Chico to the north and Sacramento to the south become more constrained. From 1990 to 2000, Oroville's population increased by 8.7 percent, from 11,960 to 13,004 residents, and the City saw a 12.2 percent increase in housing units, from 4,831 to 5,419. This trend continued from 2000 to 2014, during which time Oroville's population increased by approximately 23 percent from 13,004 to 15,980 residents. This growth in population is a result of annexation and the comparative affordability of single-family housing in Oroville compared to the larger region. Over the next 25 years, Oroville is likely to see this trend continue, with significant residential and employment expansion.

Oroville's employment is expected to continue to grow and diversify. According to the Center for Economic Development (as reported in the Oroville 2030 General Plan [2015], 30 percent of the new jobs expected between 2008 and 2018 were to be in the arts, entertainment, and recreation industry. Other leading job growth industries are wholesale trade (19 percent of expected job growth); healthcare and social assistance (17 percent of expected job growth); and administrative, support, waste management, and remediation services (16 percent of expected job growth).



## Feather River Conceptual Plan

There are many existing plans, policies, and regulations that have been adopted or proposed which provide guidance and requirements that are applicable to development of this plan (see TABLE D-2). The recently-completed General Plan (2015) provides some specific guidance to the planning and development of this plan. The General Plan envisions a significant concentration of new residential development at medium-high densities in both mixed-use development and single-use development throughout the downtown area. Indeed, the Vision Statement for the General Plan states: "Tourists and residents alike will be drawn to the attractive historic downtown, which will be home to local businesses as well as mixed-use buildings, housing, stores, offices and apartments." Further, the General Plan includes several relevant goals (see inset text box) in the Economic Development Element's framework of goals, policies, and actions that address the enhancement and diversification of Oroville's economy; the Historic Downtown; commercial, office, and industrial development; and tourism and recreation.

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**Goal ED-2: Revitalize Historic Downtown Oroville by increasing daytime and evening commercial activity.**

Policy P2.3: Incorporate the Feather River into Downtown arts, culture, and entertainment activities.

Policy P2.5: Provide amenities in the Arts, Culture, and Entertainment Overlay that support tourism and recreation.

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**Goal ED-6: Establish a branded and marketed tourism identity that attracts both daytime and overnight visitors.**

Policy P6.1: Promote the development of high-quality tourist amenities, such as hotels and restaurants, in Oroville.

Policy P6.2: Encourage a full range of recreational and tourism uses along the Feather River and Lake Oroville.

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**Table D-2. Applicable Existing Plans, Policies, and Regulations**

#	Description	Purpose
1	Downtown Historic Overlay	The purpose of this overlay is to promote the public health, safety and general welfare by providing for the identification, protection, enhancement, perpetuation and use of historic resources within Downtown Oroville that reflect special elements of the City's architectural, artistic, cultural, political and social heritage, for the following reasons: 1) To safeguard the City's heritage by encouraging the protection of significant elements of its history; 2) To foster civic pride and a sense of identity based on an appreciation of the City's past and the recognition and use of historic resources; 3) To enhance the visual character of the City by preserving diverse architectural styles reflecting various phases of the City's history, and by encouraging complementary design and construction for contemporary buildings; 4) To allow for a diversity of housing types that reflect the traditional scale and character of residential neighborhoods in Downtown Oroville; 5) To strengthen the economy of the City by protecting and enhancing the City's historic attractions for residents and visitors; 6) To stabilize and improve property values within the City by protecting areas of historic buildings from encroachment by incompatible designs; 7) To promote the enjoyment and use of historic resources appropriate for the education and recreation of the people of the City; 8) To integrate the preservation of historic resources, and the consideration of relevant information about these resources, into public and private land management and development processes; 9) To conserve valuable building materials and energy resources by ongoing use and maintenance of the existing built environment.
2	Professional Office Overlay (along Montgomery Street between 5th Ave and Oak St)	The purpose of the PO-O district is to allow professional office uses in addition to the uses allowed by the underlying district to support a vibrant downtown with a diversity of commercial, residential, and office uses.
3	Hillside Development Overlay (north end of Feather River due to steep slopes)	To provide for orderly, harmonious development of the City's foothills with a minimum amount of disturbance of natural terrain by relating residential density to natural topography, and to encourage and provide incentives for excellence of design and engineering techniques. Limitations are imposed upon development and disturbance of natural terrain in order to minimize grading, erosion, runoff, fire hazards, geologic hazards and removal of vegetation, and to help ensure utilization of land in balance with its natural capabilities to support development.
4	Oroville Waterfront Concept Plan (October 2004) – Superseded by AC&E District	The Oroville Waterfront Concept Plan aspires to maximize the many opportunities offered by the Feather River and capitalize on the recreational potential of the region to the benefit of downtown Oroville and the greater Oroville community. The river, especially as it flows through the downtown area, is a unique natural resource and a high quality amenity around which recreational, commercial and residential types of redevelopment can occur. Existing and proposed regional recreational resources further enhance the potential for Oroville's economic development. Thus, this Concept Plan proposes how the City can take advantage of these multiple resources by recommending public space improvements along with recreational and redevelopment opportunities.



**Table D-2. Applicable Existing Plans, Policies, and Regulations**

#	Description	Purpose
5	Oroville Area Urban Greening Plan (December 2015)	The Oroville Area Urban Greening Plan provides a vision for “greening” the community to improve public health and create a more vibrant and enjoyable outdoor environment, such as by increasing shade for pedestrians and bicyclists, green space for outdoor activities, and green infrastructure for storm water management. The Plan evaluates existing multimodal transportation infrastructure, recreational space, and the urban forest through data analysis, site analysis, and discussion with community members. Based on this information, the Plan identifies and prioritizes specific opportunities for green interventions. By providing best practices, conceptual designs, and suggestions for phasing, funding, and collaboration, the Plan serves as a guiding document for implementation of greening projects in the greater Oroville community.
6	Historical Preservation District	All structures built, remodeled, rehabilitated, or altered in this designated area shall conform to a “Turn of the Century” theme; the facade of each building in the area, when altered, shall conform to this theme.
7	Recycling Market Development Zone (Economic Development Element)	The Recycling Market Development Zone (RMDZ) program combines recycling with economic development to fuel new businesses, expand existing ones, create jobs, and divert waste from landfills. RMDZ areas are designed to attract businesses that will convert goods from the waste stream into recycled products by providing attractive loans, technical assistance, and free product marketing to businesses that use materials from the waste stream to manufacture their products.
8	HUB Zone (Economic Development Element)	The US Small Business Administration (SBA) has mapped “Historically Underutilized Business Zones” (HUBZones) throughout the country based on economic data available from various federal agencies like the Census and Bureau of Labor Statistics. Within HUBZones, the SBA promotes job growth, capital investment, and economic development by providing incentives for government agencies to purchase goods and services from certified small businesses. The program’s benefits for certified companies include competitive and sole source contracting, price evaluation preferences, and subcontracting opportunities. The federal government has a goal of awarding 3 percent of all dollars for federal prime contracts to HUBZone-certified businesses. Oroville has three different Census tracts that are located in a HUBZones.
9	Gateway Project (NW corner of Montgomery St and Feather River Blvd)	The project is located at the corner of Montgomery Street and Feather River Blvd on a 12.87-acre site. This is will be an approximately \$35 million project which will include a high quality hotel, several restaurant pads, along with a mix of commercial and retail space.
10	Feather River Recreation and Park District 2020 Master Plan	The FRRPD Master Plan is a comprehensive planning tool designed to provide the District with the framework to implement its mission and vision. It effectively establishes a link between the District as it exists today and its objectives for the future. It has been developed with input and cooperation from the general public, community leaders, the City of Oroville, Butte County and other agencies.
11	Feather River Blvd Revitalization Plan (between Montgomery Street and Oro Dam Blvd)	The purpose of this plan is to analyze the existing physical conditions of Feather River Boulevard and to develop a commercial corridor revitalization plan for street improvements. The combined efforts of the plan include transportation and circulation planning, determining infrastructure needs and conceptual design. The Revitalization Plan is an integrative process with the overall intention to create a cohesive community and environment for commerce to thrive.





**Table D-2. Applicable Existing Plans, Policies, and Regulations**

#	Description	Purpose
12	Lincoln & Huntoon Streets Restoration Plan (between Ehmann St and Montgomery St)	The purpose of this plan is to analyze the existing physical conditions of the Lincoln/Huntoon couplet and prepare conceptual plans that restore this one-way couplet back to its original bi-directional flow with planters and street furniture. The purpose of the plan is not to debate the tradeoffs of converting the streets form one-way to two-way, but rather to provide concepts for improvements should the conversion take place. This plan provides direction for streetscape and traffic improvements in an effort to enhance pedestrian safety, bring continuity to the downtown area and create a more vibrant experience that will attract new business and shoppers alike.
13	Climate Action Plan	The ultimate goal of this Climate Action Plan (CAP) is to reduce GHG emissions to 11% below 2010 levels—a goal referred to as the 2020 emissions reduction target. The CAP ties together many of City’s existing climate change initiatives and provides a blueprint for a more sustainable future. The City’s 2020 emissions reduction target is consistent with larger statewide efforts established by Assembly Bill (AB) 32, the California Global Warming Solutions Act. New development proposed within the city can use the CAP to address GHG impacts and streamline project-level environmental review under the California Environmental Quality Act (CEQA). The CAP therefore serves as a mechanism to facilitate sustainable development as well as a tool to support community-wide reductions in GHG emissions. The CAP also outlines a forthcoming climate change adaptation plan that will better prepare the City to address potential economic, environmental, and social effects of climate change. The CAP identifies key areas of potential vulnerability and establishes a framework for responding to potential climate change threats in an effective and coordinated manner that promotes long-term community resiliency.
14	Balanced Modal Circulation Plan	The Balanced Mode Circulation Plan guides the development of bicycle and pedestrian facilities in Oroville. The City is dedicated to the health and happiness of its residents and the environment; this Plan supports that goal by making Oroville a more pleasant, convenient, and safe place for people to walk and bike. By encouraging and supporting walking and bicycling for both recreation and transportation, the Plan promotes healthy lifestyles and supports the City’s sustainability goals.
15	Airport Influence Area Overlay	This overlay identifies limitations on the density, intensity, height, and other aspects of the use of property within the Oroville Municipal Airport overflight area that are necessary to protect persons on the ground and in the air from adverse impacts that may result from operation of an airport, in the manner described in the 1990 Master Plan for the Oroville Municipal Airport. The limitations established in this section are consistent with Airport Compatibility Criteria described in the Butte County Airport Land Use Commission’s 2000 Airport Land Use Compatibility Plan.
16	Foothill Overlay	The purpose of the F-O district is to preserve and enhance the special character of foothill areas in Oroville. Properties within the F-O district are subject to land use and infrastructure standards that reflect the low-density and rural character of these areas.



**Table D-2. Applicable Existing Plans, Policies, and Regulations**

#	Description	Purpose
17	Arts, Culture, and Entertainment District Planning Document	In an effort to revitalize its historic Downtown, in 2012 the City of Oroville initiated a planning process to establish an Arts, Culture and Entertainment District (AC&E District) that would capitalize upon existing cultural, historic, and natural resources of the area. This document is a result of that planning process with the goal of revitalizing the downtown as a recreational, community and tourist destination. The plan serves as a guide for future development within the City of Oroville's AC&E District.
18	Arts, Culture, and Entertainment Overlay (ACE)	The purpose of the ACE-O district is to revitalize the historic Downtown as a recreational, community and tourist destination by establishing an Arts, Culture, and Entertainment District (AC&E District) that will capitalize upon existing cultural, historic, and natural resources of the area.
19	Bicycle Transportation Plan	This BTP is formalizes the location and class of future bikeways and provides a supporting document for the pursuit of bicycle and transportation funding opportunities. The plan also establishes implementation priorities for the continued development of bikeways in the Oroville area. Improvements will be constructed as funding becomes available and will focus on connecting existing facilities and enhancing existing bicycle routes.