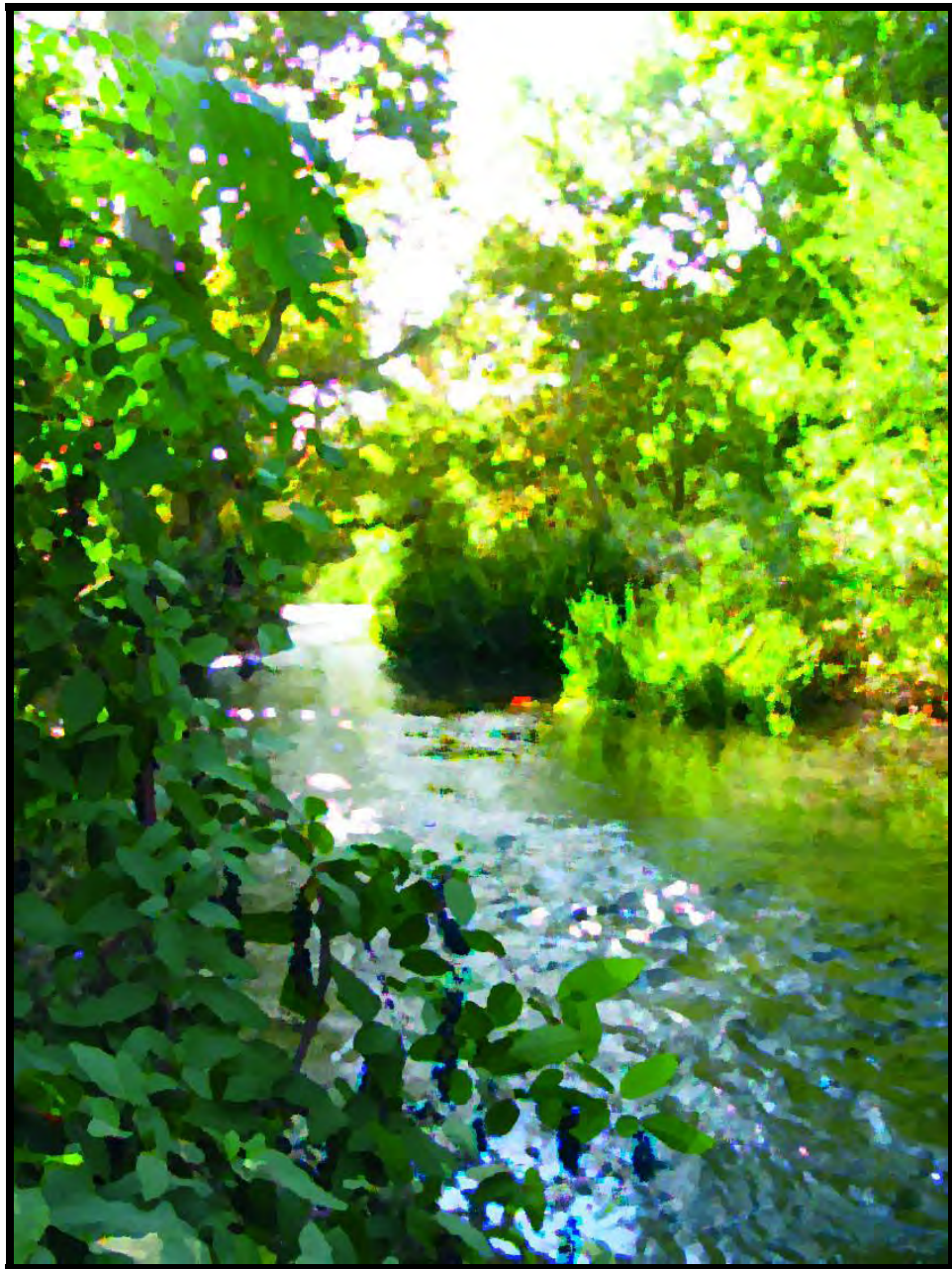


# Comanche Creek Greenway Management Plan

Chico, California

January 31, 2012



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## City of Chico

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**Appendix I.** Cost Estimates and Assumptions.

### Suggested citation:

City of Chico. 2012. Comanche Creek Management Plan. Chico, California. Adopted 1/30/12. General Services Department, Parks Division. Chico, California.

## I. INTRODUCTION

The City of Chico owns approximately 20 acres along Comanche Creek Greenway, shown in **Figure 1**. The City intends to enhance the site as a greenway providing habitat, public access to the creek, and a link in the City-wide circulation system, as described in the Comanche Creek Greenway Improvement Project document.

This management plan builds on the information contained in the Comanche Creek Vegetation Management Plan (CCVMP), prepared in 2008 (DCE 2008). The CCVMP is a detailed management guide for conservation, rehabilitation, enhancement and protection of the native resources in and along Comanche Creek. It will be referenced from this plan for specific information about vegetation management of the site.

### A. Purpose of the Management Plan

This plan provides a limited, focused approach to guide management and appropriate activities for the initial public opening of the Greenway. When possible, this plan will rely on existing sources of information (CRA 2007; DCE 2008; GCI 2007). The plan assumes that limited improvements have been made to the site to allow public access to the largely unimproved Greenway.

Under the adaptive management approach that governs this document, this plan will change over time as new information is integrated into the site management. For example, as the Comanche Creek Greenway Improvement Project is implemented, this plan will be updated to include the additional uses and improvements to the site.

### B. Vision, Goals, Objectives, and Implementation Strategies

This plan provides an adaptive guide for immediate management of the site, and estimates operational costs for implementation. The cost estimates may provide a basis for seeking funding.

**Table 1. Goals, Objectives, and Considerations for the Comanche Creek Management Plan.**

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<b>Plan Goals and Objectives</b>
<ul style="list-style-type: none"><li>• Consider management of site resources to allow public access.</li><li>• Define appropriate public access opportunities (parking, gates, trails, signage, education and volunteer opportunities), and activities on the site.</li><li>• Develop costs associated with site management and identify potential funding sources.</li><li>• Identify potential partners and resources to aid with site management.</li></ul>

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<b>Site Specific Considerations</b>
<ul style="list-style-type: none"><li>• Consider measures with features noted in the Comanche Creek Greenway Improvement Project (City of Chico, 2011).</li><li>• Encourage natural processes on site and minimize impacts to the creek as a wildlife corridor.</li><li>• Minimize impacts to the creek bank from increased activities and soil erosion.</li><li>• Incorporate measures that minimize the potential for homeless encampments.</li><li>• Consider initial low cost improvements to parking, trails, and installation of informational signage to enhance public access.</li></ul>

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**Site Specific Considerations**

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- Acknowledge that long-term improvements and funding sources for ongoing maintenance will be identified as the Improvement Project is implemented.
- 

**C. Funding**

No funding sources have been identified to implement this plan. The fiscal and staffing impacts of the project (especially regular maintenance) will be an important consideration and may determine the actions on the site. An estimate of costs associated with this plan is provided in Section IV below.

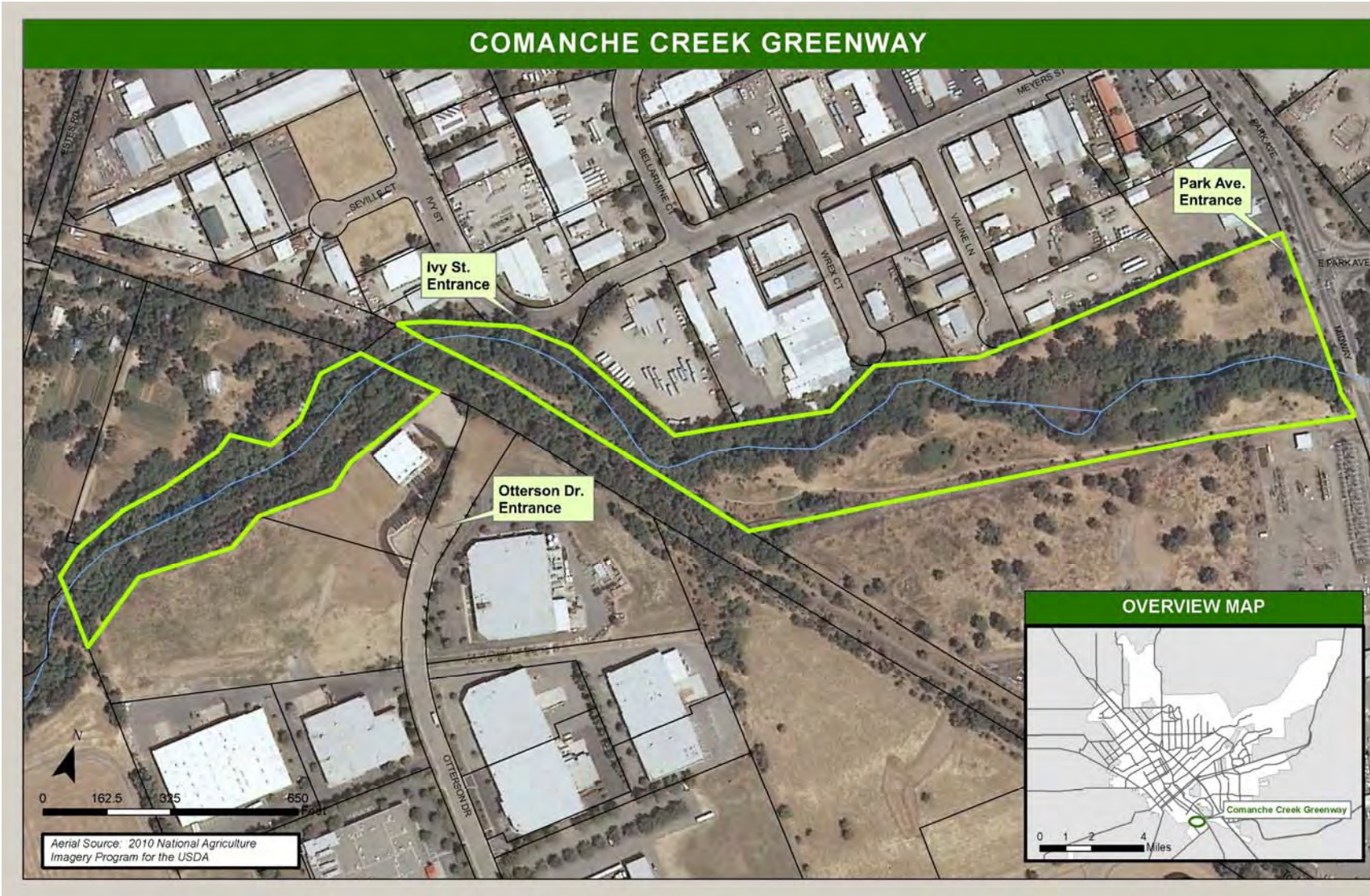
**D. Partners, Roles, and Responsibilities**

The City of Chico owns and manages the property. The City of Chico Parks Division has the lead responsibility for property management and implementation. Staff prepared this plan with input from the Southwest Chico Neighborhood Creeks Action Group (“Southwest Neighborhood Group”). City Staff from Planning Services and Housing and Neighborhood Services provide support and guidance for the Neighborhood Group. Surrounding businesses and neighborhoods have expressed interest in expanding access to the site as well as improving site conditions.

**II. SITE DESCRIPTION**

It is beyond the scope of this document to provide a comprehensive evaluation of the physical and biological resources on site. However, understanding of the site setting is important for making good resource decisions. This document only provides a brief summary of the main site attributes; more details are available in other documents (DCE 2008; GCI 2007; CRA 2007; City of Chico 2011a and 2011b; and NSR 2010).

The approximately 20-acre site lies between Estes Road and Midway (**Figure 1**). The site consists of dense riparian woodland, scrub, aquatic and other habitats along a 0.6 mile long corridor of Comanche Creek. Surrounding the site are largely urbanized lands to the north, east, and southwest, agricultural land to the west, and annual grasslands and woodlands to the immediate south. The site’s resources and characteristics such as geology, soil, topography, hydrology, water quality, geomorphology, and public access are summarized below in Table 2.



**Figure 1 Comanche Creek Location and Boundaries**

**Table 2. Summary of Pertinent Site Features**

Issue	Site Description
Geographical Setting and Property Location	Approximately, 20 acres along Comanche Creek, west of the intersection of Park Avenue/Midway and East Park Avenue. Approximately 3,500 lineal feet of the Comanche Creek channel lies within these two parcels.
Land-use History and Zoning	The General Plan designations for the site are Primary Open Space immediately around the creek and Secondary Open Space on the remainder of the site. Several cement pads that supported farm granaries are present on the site pointing to the past farming history. These structures were abandoned but left standing in the late 1970s, but only the pads remain today. The site is traversed by a railway right of way, which is no longer in use. Although the tracks have been removed the earthen embankment for the railway remains quite prominent.
Adjoining Properties and Potential Issues	Surrounding the site are largely urbanized lands to the north, east, and southwest, residential-agricultural land to the west, and annual grasslands and woodlands to the immediate south.
Soil Properties	Detailed soil information is available in the 2010 wetland delineation (NSR 2010) of the site and from NRCS soil maps and descriptions.
Topography	Detailed topography for the creek channel is depicted on Figure 3 of the wetland delineation study (NSR 2010).
Hydrology	Historically, Comanche Creek was an intermittent stream draining the Doe Mill Ridge until the construction of the Parrott-Phelan agricultural diversion (No. 50) on Butte Creek. Today, Comanche Creek receives additional water from this diversion as well as storm water run-off from Chico's urban areas, making it more hydrologically similar to a perennial stream than an ephemeral body of water. The creek has been deepened and rip-rap placed in locations.
Geomorphology	Some erosion/deposition occurs within the creek channel, but is limited by the nature of the water source (diverted water from Butte Creek). Flow velocity and sediment source is limited, although some erosion is evident along the creek. Outside of the channel, landforms are stable.
Vegetation	The site consists of dense riparian woodland and scrub, valley oak woodland, and non-native ruderal grassland. While most of the Plan area contains a mixture of native and non-native species which reflect the relatively high degree of past disturbance, segments of the creek corridor remain in excellent condition with an almost exclusive cover of native species. Notably, there are a number of large valley oak, California sycamore, and Fremont cottonwood trees dispersed along the corridor.
	<p>Although no occurrences of special status plant species have been reported in the California Natural Diversity Database (CNDDB) within the immediate vicinity of the site, the riparian habitat is considered to have a remote to low potential for occurrence.</p>
	<p>Targeted invasive species in the riparian woodland zone include Himalayan blackberry, periwinkle, English ivy, arundo, and tree of heaven. The freshwater marsh occurring in Comanche Creek is dominated by non-native plants, predominately Himalayan blackberry. The dominant non-native species to control in the valley oak woodland is the Himalayan blackberry. However, existing stands of periwinkle and poison hemlock should also be controlled. Native grassland species are rapidly being lost to thickets of Himalayan blackberry, poison hemlock, Johnson grass, and dallisgrass, and the spread of native and non-native saplings. Recently (2010), staff have observed puncturevine on site.</p>

Issue	Site Description
Wildlife	The aquatic and terrestrial habitats of the creek corridor and woodlands support a diverse assemblage of plant and animal species, providing important protective cover and serving as movement corridors for fish and wildlife. The grasslands also provide habitat for a variety of wildlife species, although the establishment and spread of several highly invasive species such as Himalayan blackberry and areas of soil compaction, caused by human activity, compromise their habitat value. Several special status species have a low to moderate potential for occurring on the site, and there is a high potential for some occurrence of valley elderberry longhorn beetle.
Public Access and Recreational Uses	The site has had restricted access since public acquisition. However, several dirt trails cross the site, and homeless camps are a recurring phenomenon. Currently, public access on site requires permission and occurs only through periodic tours or volunteer cleanup efforts. Homeless encampments are common, and the site is part of regular encampment surveys and clean-up efforts.

### III. CONCEPTUAL SITE MODEL

The Conceptual Site Model (CSM) synthesizes and crystallizes what is already known about a site that is pertinent to decision-making. CSMs use available information to distill what is known about a site to develop management strategies or to identify additional information needed to achieve project goals.

CSMs evolve as projects progress. At any given point in time, the maturity of the CSM reflects the level of site understanding and the amount of information and complexity of analysis required to support the decisions that need to be made. This Plan includes a simple model that lays out the current understanding of the site and the rationale for management decisions. This conceptual site model:

- 1) Presents our understanding of the physical and biological factors that influence site ecology and how it integrates with management objectives,
- 2) Describes uncertainty and information needs (data gaps), and
- 3) Outlines our management strategy and identifies recreational and ecological benefits

The principles described in this section will guide the implementation of this plan.

#### A. Adaptive Management Approach

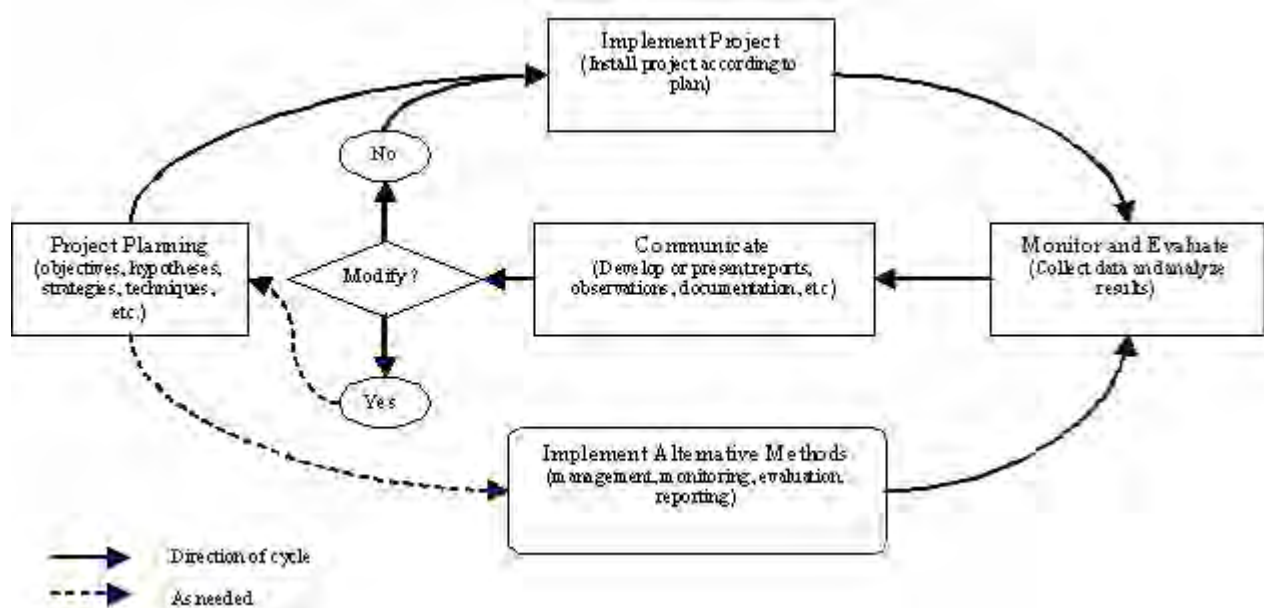
This project will be implemented using an adaptive management approach (Figure 2). While there are many definitions of adaptive management, they share similar elements. Adaptive management is a decision process for continually improving management policies and practices by learning from the outcomes of operational programs. Adaptive Management promotes flexible decision making that can be adjusted in the face of uncertainties as outcomes from management actions and other events become better understood. Careful monitoring of these outcomes helps to adjust policies or operations as part of an iterative learning process.

Resource management policy will acknowledge uncertainty and accommodate course corrections that arise from changing conditions, or new information gathered during

implementation. Evaluating the success of management strategies is vital for long-term successful restoration and natural resource management.

**Figure 2** is a diagram of a general adaptive management cycle, showing the feedback between project planning with its objectives and hypotheses, implementation, monitoring, and evaluation.

As applied to this project, the cycle begins with Project Planning and is followed by implementation. Routine monitoring and evaluation occur throughout the year. Communication will also occur with an annual report that briefly summarizes progress and notable observations or changes on the site. This management plan will be updated as the need for significant management changes arises.



**Figure 2. Adaptive Management Model**

**B. Identification of Pertinent Site Features and Factors**

The site features with the most critical management implications include:

Site environmental conditions

- The presence of year round water and good soil creates conditions near the creek similar to a year-round riparian area (rather than an ephemeral creek).
- The site supports a number of large specimen riparian trees (valley oak and California sycamore).
- The vegetation and creek provides a wildlife corridor across an increasingly urban landscape.

Likely successional patterns

- The Vegetation Management Plan (DCE 2008) notes that while the dense thickets of Himalayan blackberry and other non-native species currently limit



plant diversity along much of the Creek, much of the riparian habitat continues to provide important wildlife resources to a wide variety of species.

- Non-native annuals dominate open areas competing with native woody species that may colonize the area.
- The potential for special status plant species to be found on site is low (DCE 2008).
  - Adobe lily, Ahart's paronychia, fox sedge, and round leaf filare were identified as having a moderate potential for occurrence (GCI 2007).
  - About 18 special status animal species have a low to moderate potential to be found on site (DCE 2008). The valley elderberry longhorn beetle, Swainson's hawk, and white-tailed kite were judged to have a high potential of using a portion of the site; giant garter snake, and burrowing owl were noted as having a moderate potential (GCI 2007).
- The site's good soils and ample moisture support a wide variety of native plants with good recruitment; however, favorable site conditions also make the site prone to invasion by a variety of non-native plants. While there is some lasting legacy from the mature native trees on site; over time, plants such as Himalayan blackberry and ailanthus threaten the site's biological integrity. If left unmanaged, invasive plants are likely to continue displacing native plants, and becoming more difficult and costly to remove.

#### Public Access

- Neighborhood interest in site access is high.
- Numerous surveys, vegetation management efforts, and removal of homeless encampments have occurred on the site.

### **C. Management strategies**

Based on our understanding of the site, we recommend the following strategies:

- Develop basic infrastructure improvements to educate users and minimize conflicts, minimize unauthorized use of the property, and ease maintenance over the long-term.
- Use aggressive management efforts on priority invasive plants.
- Use measures to protect existing native seedlings (mulch, plant protectors, weed control, and potentially some supplemental irrigation).
- Consider targeted plantings of native woody plants in areas of poor recruitment.
- Consider the planting of understory plants such as native grasses and forbs to increase the wildlife value and beauty of the site, decrease the potential for invasion by new plants, increase native plant cover, and increase wildlife habitat diversity.
- Allow public use of the site to help in the timely reporting of homeless encampments.
- Consider non-intensive recreational uses that minimize the disruption to wildlife that use this corridor.
- Increase ranger patrol efforts to enforce rules and discourage unauthorized uses, increase safety, and educate users.
- Promote a pack it in, pack it out and low environmental impact ethic.

- Use neighborhood volunteers and citizen support to supplement property management efforts.
- Develop initial minor improvements to provide public access with minimal cost.
- Utilize an adaptive management approach that incorporates new information and evolving site goals in future versions of this document.

#### **IV. MANAGEMENT IMPLEMENTATION**

##### **A. Regulatory Compliance and Issues**

This plan is considered for the Initial Study and Mitigated Negative Declaration for the Comanche Creek Greenway Improvement Project to comply with the California Environmental Quality Act (CEQA). Other permits such as a floodway encroachment permit or stream bank alteration permit will not be required. Herbicide applications will be applied according to the label, and subject to county herbicide permitting and reporting requirements.

##### **B. Public Access and Appropriate Activities**

Given current site conditions, non-intensive uses are the most appropriate for the site. The Bidwell Park Master Management Plan (EDAW 2008) defines non-intensive uses as uses that generally do not result in substantial disturbance or removal of natural (e.g., plants, wildlife, soils, and hydrology), cultural, visual, aesthetic or other resources individually or cumulatively. Non-intensive uses are non-motorized activity that:

- Offers constructive, restorative, and pleasurable human benefits and fosters appreciation and understanding of open space and its purpose
- Is compatible with other passive recreation uses
- Does not significantly impact natural, cultural, scientific, or agricultural values
- Requires only minimal visitor facilities and services directly related to safety and minimizes passive recreation impacts

Examples of non-intensive uses include use of well-designed multi-use trails in sensitive areas and limited amounts of off-trail foot traffic in non-sensitive areas; fishing (as per DFG regulation), and nature observation. Dogs will be allowed on leash. Activities prohibited include overnight camping, alcohol, intensive recreation uses, motorized activity, or any activity that alters the site or requires equipment installation. Because of the sometimes swift moving water, steep slopes, dense vegetation, and underwater debris and hazards, swimming on site will not be encouraged. Public access to the site will be limited to hours consistent with other greenways (closed between 12:00 am and 5:00 am).

Improvements related to this plan are planned only for the Park Avenue entrance to the property, with parking and access allowed on the north side of the creek and access allowed on the south side of creek (walking across the Park/Midway Bridge). Access from Otterson Drive will also be allowed, and a sign will be placed there. Access from other areas or additional trash cans or doggie pot locations will be developed later. These future features are depicted in the Comanche Creek Greenway Improvement Project (City of Chico 2011a).

## **C. Resource Protection**

### **1. Vegetation Management and Restoration**

The CCVMP (DCE 2008) acts as a guide for vegetation management on the site, including eradication of invasive species and planting of native plant species.

The plan notes 6 invasive plants of greatest concern on the site and provides treatment, disposal, and follow-up management details. The plants identified (DCE 2008) are:

- English ivy, (*Hedera helix*, *H. canariensis*)
- Giant reed (*Arundo donax*)
- Himalaya blackberry (*Rubus armeniacus*)
- Periwinkle (*Vinca major*)
- Poison-hemlock (*Conium maculatum*)
- Tree-of-heaven (*Ailanthus altissima*).

The CCVMP divides the vegetation management into 3 phases: short (invasive plant removal), medium (revegetation and maintenance), and long-term (maintenance) recommendations. It recommends that consultants and contractors carry out the major initial work with the California Conservation Corps (CCCs) assisting with removal and planting, and volunteers be used for the initial invasive removal and on-going efforts.

To carry out this plan, aggressive short-term efforts should be carried out over a 3 year period. These efforts will help make the site more visitor-friendly and allow for easier access for the public and patrols.

If only minimal funding is available, volunteers should be used to clear and remove roots and herbicide applied to any re-sprouts. Work should proceed from the eastern edge of the site. Initial treatment for blackberry and tree of heaven began in 2011 with volunteer days in the spring (on the blackberry) followed by an herbicide application (on re-sprouting blackberry and tree of heaven).

If funding is available, planting woody species should be considered in areas that have poor natural regeneration or bare areas that require erosion protection measures. In addition, in many areas existing native plants may benefit from the application of mulch, weed control around the plants, and the installation of plant protectors. The removal of asphalt and debris (such as at the Park Avenue entrance) would allow for plantings to enhance the site and should be considered as part of future improvements. A native grass planting is also recommended along pathways and areas that are likely to be mowed on a regular basis.

### **D. Site Improvements and Infrastructure**

The focus of this document is to allow near term public access to the Greenway. Some basic improvements will be necessary or at least considered for granting public access to the site (Figure 1). These improvements include:

- Re-gravel and grade parking lot;
- Install site signage (identifying the property and providing an information kiosk/bulletin board for greenway rules);

- Remove a section of fence and install bollards or a chicane to allow pedestrian access (and restrict vehicles);
- Grade/import material to allow better emergency vehicle access across the site from the gate on the south side of the creek;
- Install and service a trash can and doggie pot bag dispenser in the main parking area;
- Make appropriate traffic signal and intersection changes (an asphalt apron from the intersection into the parking lot, which is not considered in the cost estimate).

Larger scale improvements are considered as part of the Comanche Creek Improvement Project which envisions trails, features that enhance public access, safety, resource protection, circulation, and non-intensive recreation (such as information and directional signs, picnic areas, and a pedestrian/bicycle bridge across the creek).

### **E. Maintenance and Operations**

Currently, City staff visits the site on an as needed basis with homeless encampment surveys and clean-up, mowing, and fence repairs the most frequent activities. In 2011, the City has begun addressing elements of the vegetation plan for the site, through the use of volunteer days (spring and fall) and an herbicide application to treat tree of heaven and blackberry (fall).

Even with minimal improvements, opening the site will require additional maintenance efforts for health and safety reasons. These include more regular mowing and clean-up, trash pick up, trail repairs, more aggressive vegetation management; and maintenance on signage and fencing. Increased ranger patrols will also help with enforcement of rules and education.

### **F. Public Safety and Emergency Services**

Emergency and patrol vehicles may access the site from the Park Ave and Otterson Drive entrances but full access is limited. Some areas of the site are only accessible by foot. Flooding is not anticipated, so contingency plans beyond those already in place are not needed. While the increased public presence on site may alter fire patterns and the number of reported accidents, no significant changes in fire or medical personnel response are anticipated. The site will be subject to closure under hazardous conditions (fire, flood, etc.). As use of the site evolves, Parks staff will coordinate with and seek input from the Fire and Police Departments.

Security issues will evolve as the site receives more use. While issues that are common in other greenways are likely to occur at the site, the following issues are anticipated to be the greatest concerns:

- Illegal camping – The City conducts periodic illegal camp clean-ups. Although in the long run more public use will likely discourage camps, the number of complaints is likely to increase initially with increased interactions.
- Dogs - Leash and pet waste issues will likely be an issue. Consistent enforcement and education will help minimize such issues.
- Trash – Increased public use may increase the amount of trash on the site.

A regular presence, patrol, and education of users will help minimize conflicts. Ideally, a Ranger should patrol the area once during the morning and evening shifts daily during the recreation season. However, a more modest schedule (2-3 times a week) is assumed for purposes of the budget.

**G. Monitoring and Reporting**

As part of the adaptive management approach, staff will conduct an annual review of the site to evaluate responses and develop adjustments. The annual review will document changes in our understanding of the site and changes to management. The information will be reported to the public and shared with the Bidwell Park and Playground Commission. Significant future changes to the site would be incorporated into a revised management plan.

**H. Outreach and Education**

Because of neighborhood interest, citizens that frequent the site will be important stewardship allies. Rangers will conduct outreach efforts to explain the rules and recruit volunteers to aid with clean-up and vegetation efforts. This may take the form of tours, signage, mailers, or meetings. In addition, staff will explore the potential for Park Watch volunteers at the site. Use of the site for educational purposes is an appropriate use and groups will need to work with the site for access and projects.

**I. Funding**

Funding has yet to be identified for the site management as described in this plan. To consider the fiscal impacts of implementing this plan, rough cost estimates are provided in Table 3 below for the 1) Installation of basic infrastructure improvements, and 2) Estimated annual operating and maintenance costs. Baseline assumptions for these costs are presented in Appendix I.

**Table 3. Rough Cost Estimates for Plan Implementation.**

<b>Task No.</b>	<b>Task</b>	<b>Description</b>	<b>Timing</b>	<b>Estimated Total</b>
1	Installation of basic infrastructure improvements	Material, equipment, and labor necessary to improve gate access for pedestrians, bollard, kiosk (1), 2 doggy-pot dispensers, and signs. Trash cans (2), parking lot improvements.	Initial cost.	\$9,000 - \$12,000
2	Estimated annual operating and maintenance costs	Includes yearly maintenance of trail head parking, modest time (2 hours x 3 days a week for trash removal, vegetation maintenance, infrastructure repair, outreach, and supporting volunteer days).	Annual estimate for first 3 years.	\$15,000 - \$25,000

**V. SUMMARY**

This document provides an interim management plan for the Comanche Creek Greenway, including a guide to activities on site and anticipated City duties. The plan uses an adaptive management approach and is anticipated to be updated as the site changes over time. The site is well suited for non-intensive recreational uses that

capitalize on the natural resources of the property. Basic improvements will be necessary to reduce user conflicts, educate visitors, and ease maintenance duties. A cost estimate is provided for the installation of improvements and maintenance over time. Volunteer efforts will be incorporated into the site management.

## **VI. REFERENCES**

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## Appendix I - Cost Estimates and Assumptions.

The following worksheets provide the details used to develop the cost estimates for 1) Installation of Basic Infrastructure, and 2) Annual Maintenance Costs. The assumptions for these estimates are provided below.

### 1) Installation of Basic Infrastructure

#### Assumptions:

- Regravel (import base rock) and grade parking lot.
- Install site signage at the Park Avenue and Otterson Drive entrances to identify the property. One information kiosk/bulletin board for greenway rules would be installed at the Park Avenue entrance.
- Remove a section of fence and install bollards or a chicane to allow pedestrian access (and restrict vehicles) on both sides of creek on the east side of the property.
- Grade or import material to allow better emergency vehicle access across the site from the gate on the south side of the creek (mostly near the railroad embankment).
- Install and service a trash can and doggie pot bag dispenser in the main parking area at the Park Avenue entrance.
- Includes materials and equipment needed for installation.
- Includes labor (preparation, installation, and supervision).
- Depending on the lag time, a more refined estimate with updated material and labor costs, should be used to develop a project budget.

### 2) Annual Maintenance Costs

#### Assumptions:

- The values represent an average annual estimate for the first 3 years.
- The quantity of materials includes the replacement lifespan. For example, since a doggie pot dispenser lasts about 10 years, the quantity indicates an annual average of 0.1. To replace two dispensers the annual fraction becomes 0.2. In any one year, vandalism or inadvertent damage may require a more frequent replacement, but the estimate provides a normalized average.
- Annual minor re-grading and repair of the parking lot (depending on usage, a more extensive repair or import of material is required typically every 5-10 years).
- Install site signage at the East entrance and at (identifying the property and providing 1 information kiosk/bulletin board for greenway rules).
- Labor assumptions include:
  - Time for overall supervision and 3-4 site visits for the Park and Natural Resource Manager, plus minimal time for outreach, planning, and review.
  - Field Supervisor and Senior Maintenance provide 1 hour/month for supervision.
  - The time estimate for Maintenance Workers provide for a modest 2 hours per week estimate during the off season (November to April) and 4 hours

per week during the peak season (May to October). Included is time for annual maintenance on the parking lot and signs, 2 days to supervise workdays, and mowing the site 2-3 times a year.

- The Administrative Analyst/Volunteer Coordinator will coordinate 2-3 workdays.
- Rangers are assumed to spend on average 2 hours in the off-season and 5 in the peak season associated with the site. Time includes patrol, developing and posting signs, and education of the public.
- When travel time is considered, the time estimates are extremely modest and represent a baseline estimate to care for the site. An estimate of optimal coverage (for example, daily visits from the rangers during the peak season) will increase the estimate on the order of \$5,000 to \$10,000.



**CITY OF CHICO**  
**DEPARTMENT OF PUBLIC WORKS**  
**OPERATIONS AND MAINTENANCE DIVISION**  
**DAILY OPERATIONS WORK ORDER**

PROGRAM	DESCRIPTION	ADMIN. PROCEDURE	CREW SIZE
	Cost Estimate	150-6	2-4

DATE: \_\_\_\_\_ LOCATION: Proposed Commanche Creek Infrastructure Improvements

CLASSIFICATION	EMPLOYEE	NUMBER OF HOURS	HR. RATE	TOTAL
Mgt	Dan Efsseff Natural resources Manger	4	\$ 50.43	\$ 201.72
Field Supervisor		4	\$ 49.62	\$198.48
Sr Maint Wkr		24	\$ 39.28	\$471.36
Sr Maint Wkr		24	\$ 39.28	\$785.60
Maint Wkr		40	\$ 34.16	\$785.68
Maint Wkr		40	\$ 34.16	\$ 956.48
Admin Analyst			\$ 42.06	\$ -
Ranger				
		<b>TOTAL</b>		<b>\$3,399.32</b>

EQUIPMENT USED (DESCRIBE)	NUMBER OF HOURS	HR. RATE	TOTAL
Grader	8	51	\$ 408.00
Loader	6	30	\$ 180.00
Water Truck	3	\$35.00	\$ 105.00
Roller	3	20	60
		<b>TOTAL</b>	<b>\$ 753.00</b>

MATERIALS (DESCRIBE)	QTY	COST	TOTAL
Doggi Pot Dispenser	2	\$329.00	\$658.00
Trash Can With Holder	2	\$168.00	\$336.00
Kiosk	1	\$2,196.00	\$2,196.00
Signs	2	\$100.00	\$200.00
Concrete	24 bags	\$2.00	\$48.00
Base Rock	48 Tons	\$12.75	\$612.00
Fence Posts	4	\$19.99	\$79.96
Tension Bars	4	\$3.99	\$15.96
Tension bands	20	\$0.79	\$15.80
Post Caps	4	\$1.19	\$4.76
		<b>TOTAL</b>	<b>\$4,166.48</b>
		<b>Sub Total</b>	<b>\$8,318.80</b>
		Contingency 10%	<b>\$ 831.88</b>
		<b>GRAND TOTAL</b>	<b>\$9,150.68</b>

DESCRIPTION Install Signs, Build gate openings & Improve Parking Area

ACTION TAKEN: \_\_\_\_\_

**CITY OF CHICO  
DEPARTMENT OF PUBLIC WORKS  
OPERATIONS AND MAINTENANCE DIVISION**

**DAILY OPERATIONS WORK ORDER**

PROGRAM	DESCRIPTION	ADMIN. PROCEDURE	CREW SIZE
Parks	Cost Estimte	150-6	2-4

DATE: \_\_\_\_\_ LOCATION: Proposed Commanche Creek Annual Maintanance C

CLASSIFICATION	EMPLOYEE	NUMBER OF HOURS	HR. RATE	TOTAL
Mgt	Park and Natural Resources Manger	8	\$ 50.43	\$ 403.44
Field Supervisor		12	\$ 49.62	\$ 595.44
Sr Maint Wkr		12	\$ 39.28	\$ 471.36
Sr Maint Wkr			\$ 39.28	\$ -
Maint Wkr		156	\$ 34.16	\$ 5,328.96
Maint Wkr		32	\$ 34.16	\$ 1,093.12
Admin Analyst		24	\$ 42.06	\$ 1,009.44
Ranger		182	\$ 32.00	\$ 5,824.00
	TOTAL			\$ 14,725.76

SERVICES	QTY	COST	TOTAL
Herbicide Application	5	\$ 500.00	\$ 2,500.00
CCC Contract	4	\$ 250.00	\$ 1,000.00
	TOTAL		\$ 3,500.00

EQUIPMENT USED (DESCRIBE)	NUMBER OF HOURS	HR. RATE	TOTAL
Grader	2	\$ 51.00	\$ 102.00
Loader	1	\$ 30.00	\$ 30.00
Water Truck	2	\$ 35.00	\$ 70.00
Roller	2	\$ 20.00	\$ 40.00
	TOTAL		\$ 242.00

MATERIALS (DESCRIBE)	QTY	COST	TOTAL
Doggi Pot Dispenser	0.2	\$ 329.00	\$ 65.80
Trash Can With Holder	0.2	\$ 168.00	\$ 33.60
Kiosk	0.1	\$ 2,196.00	\$ 219.60
Signs	0.5	\$ 100.00	\$ 50.00
Concrete	2.8	\$ 2.00	\$ 5.60
Base Rock	4.8	\$ 12.75	\$ 61.20
Fence Posts	0.4	\$ 19.99	\$ 8.00
Tension Bars	0.4	\$ 3.99	\$ 1.60
Tension bands	2	\$ 0.79	\$ 1.58
Post Caps	0.4	\$ 1.19	\$ 0.48
	TOTAL		\$ 447.45
	<b>Sub Total</b>		<b>\$ 15,415.21</b>
	Contingency 10%		\$ 1,541.52
	<b>Grand Total</b>		<b>\$ 16,956.73</b>

DESCRIPTION Install Signs, Build gate openings & Improve Parking Area

ACTION TAKEN: \_\_\_\_\_