



INTRODUCTION

There are creeks in the Oakland hills that remain deeply forested, exhibiting a sense of wildness similar to historic conditions. Peralta Creek at Butters Canyon is one of these creeks. The canyon's forest of native trees shields views of the surrounding neighborhood, provides shade over a seasonal creek and a narrow winding drive, and creates a distinct East Bay hills landscape. Butters Canyon lies at the headwaters of Peralta Creek off Joaquin Miller Road. Butters Drive leads along the southern edge of the site atop a steep, north facing slope above Peralta Creek. The drive and the creek are heavily shaded by mature bay, redwood, and oak trees, and underlain by both native and invasive understory species. Although invasive species such as ivies and periwinkle have colonized the site, Butters Canyon still exhibits intact native plant communities.

Over the past century, the colonization of the site by invasive plants has reduced native plant and habitat diversity. Invasive plants, coupled with the absence of natural disturbances such as fire and disease, have allowed the site to evolve into plant associations dominated by bay trees and underlain by an understory comprised of large areas of non-native ivies. The isolated nature of the canyon, now cut off from larger regional open space lands, has exacerbated the decline of ecosystem health and affected the canyon's plant community integrity, making it increasingly susceptible to large-scale changes such as fire and Sudden Oak Death.

In 2000, active interest in preservation and restoration of the Butters Canyon ecosystem took on a new direction, when as an outgrowth of the Friends of the Last Wild Canyon, the Butters Land Trust was founded to acquire land and conservation easements in the canyon. Preservation of Butters Canyon's unique character was the Trust's motivation. As a result, a need arose to develop a management tool to preserve the Canyon's future. To help fill this need, the City of Oakland approached the Butters Land Trust with the opportunity to work with restoration consultants funded through Measure DD funds. Their common goal was to develop a community based land management plan for the canyon.

This community based plan evolved to become the Butters Canyon *Long-term Management Plan (LTMP)*. The plan developed out of site investigations and restoration proposals that were explored with the community through a series of meetings. The *LTMP* looked at existing conditions, past restoration efforts, and the future vision for the canyon. The Butters Land Trust, community advocates, and City of Oakland representatives all took part in its creation and will all be involved in its implementation.

Urban Ecological Restoration Strategy

The *LTMP's* restoration approach for Butters Canyon is not an attempt to recreate its historic ecology and habitat. Today, the canyon and its surroundings have been altered to the point that striving to meet historic restoration goals is neither appropriate nor feasible. In the early to mid 19th century, when the canyon was still integrated into the larger East Bay landscape, it weathered fire and disease. These disturbances were regular events that naturally ran their course and as a result increased biodiversity and the canyon's resiliency. After a natural disturbance, native plants and animals re-colonize the area and create a patchwork of disturbed areas in differing stages of recovery. Now that Butters Canyon is an isolated island of wildland with substantially less biodiversity than historic levels, the rate of native re-colonization is substantially reduced and the risk of a dramatic disturbance to the canyon has increased.

As a consequence of its isolation and urban location, Butters Canyon is now facing these ecological challenges:

- Reduction in small scale episodic natural disturbances such as fire has reduced biodiversity and increased the risk of larger more detrimental disturbances
- Opportunistic invasive and non-native vegetation has colonized the site, displacing native plants and disrupting native plant communities
- Loss of biodiversity has reduced the integrity of the native plant communities and weakens the canyon's resiliency to change
- Urban disturbances such as the introduction of garden plant species and illegal dumping of waste and plant debris.

The context and current condition of Butters Canyon necessitates active management to maintain its native plant communities. A hands-off approach will only result in further native plant community degradation; an increase in non-native, invasive plant colonization; and an increase in the canyon's susceptibility to detrimental change.

To address Butters Canyon's restoration challenge the *LTMP* strategy focuses on these three elements:

1. Increase the canyon's resiliency to disturbance by increasing and managing plant diversity.
2. Defend the site's special areas and native plant communities.
3. Restore the canyon incrementally and at a scale that ensures efforts are sustainable.

Since Butters Canyon is more susceptible today than in the past, protecting the canyon from large-scale disturbances is imperative. To meet this goal, canyon management needs to reduce the likelihood of disturbance and the resulting impact. Examples of disturbance reduction include: removing dead branches and vegetative debris that form fire fuel loads to decrease fire risk; increasing plant diversity to help to reduce the impact of Sudden Oak Death within the canyon; policing illegal dumping that can lead to the spread of invasive species and the displacement of native plant communities.

The *Urban Ecological Restoration Strategy* for Butters Canyon acknowledges its urban neighborhood, the feasibility of restoration implementation, and future maintenance and monitoring efforts. The strategy strives to work thoughtfully and incrementally to enhancing ecological integrity and sustainability. It purposely avoids overly ambitious goals such as full eradication of non-native species, and instead focuses on the promotion and protection of native plant communities.

How to Use this Document

The *Long-Term Management Plan* has been created to guide restoration efforts within Butters Canyon. It is intended to serve restoration volunteers, City of Oakland staff, Butters Land Trust members, and the greater Butters Canyon community through both initial and long-term canyon restoration efforts. The *LTMP* offers specific goals and activities for restoration, as well as a vision for its future stewardship. In addition, it outlines the steps to successfully plan and run a restoration event and includes an *Assessment Checklist* and a *Work Plan / Diary* complete with a tools and materials list. In addition, the *LTMP* includes restoration plans and specifications to guide an initial contractor-led restoration project. And finally, it serves as a resource document for restoration techniques and contacts.

The *Long-Term Management Plan* approach to restoration is divided into *Initial Restoration Goals and Activities* and *Long-Term Restoration Vision and Activities*. The former lays out recommended near-term measures volunteers as well as restoration contractors can initiate to begin the restoration process. These initial goals and activities are then complemented by longer term measures which layout a sustainable vision for the canyon.

The *LTMP* is intended for three users: (1) those interested in investigating the ecology of the site and the long-term vision of restoration at the canyon; (2) volunteers seeking guidance towards restoring the site; (3) restoration contractors working at the site. Below are some of the ways the plan can be utilized:

- Readers interested in an introduction to the canyon's setting and ecology can use sections of the *LTMP* to learn about local plant communities and some of the forces acting on its health and integrity.
- Reviewing the plan's *Introduction* and *Initial and Long-Term Restoration* sections will give the user an overview of the site and its potential for restoration.
- For volunteers, either led by the City of Oakland, the local Butters Land Trust, or other group, the *LTMP* offers step by step measures for planning restoration work. Volunteer group leaders should first get acquainted with the overall document

and vision for the canyon restoration and then turn to the section on *Planning a Restoration Event*. This section spells out the necessary steps to plan a successful restoration event, from assessing site conditions using the *Assessment Checklist*, to developing the *Work Plan / Diary* for the "day of" volunteer restoration activities.

- Contractors can use the document to guide a variety of professional restoration activities.
- The *Techniques* section outlines specific measures for restoration implementation from *Controlling Invasive Species* to installing *Erosion Control* and *Soil Bioengineering* methods.
- As a reference, a *Resources* section is included with contacts and links to restoration information.