

CARNEROS CREEK WATERSHED MANAGEMENT PLAN

Napa County Resource Conservation District · 1303 Jefferson Street, Suite 500B · Napa, CA 94559 · (707) 252-4188 · www.naparcd.org

INTRODUCTION

The Carneros Creek watershed is a relatively small valley in the southwest portion of the greater Napa Valley. Active faults, seasonal rainfall, mild winters, and warm dry summers influence the local vegetation and landscape and result in an aesthetically beautiful backdrop to a peaceful rural setting. The residents of the watershed value the lifestyle provided by this setting and recognize the inherent pressure on the watershed associated with human population and intensive land management.

In 2001, the Carneros Creek Watershed Stewardship (Carneros Stewardship), an apolitical, non-advocacy group of landowners and managers in the Carneros Creek watershed, formed to promote an open dialogue among interested individuals regarding local natural resource concerns and issues. The group developed the following goals:

- Assess the physical features of the watershed on an on-going basis,
- Provide education about the watershed,
- Protect and restore natural resources, including native fish and wildlife species,
- Protect and enhance the economic and human resources, and
- Create a sustainable, enduring watershed stewardship.

Through group dialogue and community meetings, the Carneros Stewardship decided in late 2001 that they were interested in conducting a watershed assessment and developing a watershed management plan to guide future restoration and land management activities. Through a grant received by the Napa County Resource Conservation District (RCD) from the California Bay-Delta Authority Watershed Program in 2002, a team of technical specialists from the San Francisco Estuary Institute (SFEI), Pacific Watershed Associates (PWA), and Napa County RCD set out to understand and document the physical, biological and human aspects of the Carneros Creek watershed. The following types of data collection and/or review of existing information were carried out over a period of several months: historical ecology, flora and fauna, channel form and function, hillslope form and function, sediment, fish habitat and macroinvertebrates, water quality and water budget.¹

With improved information about current and historic natural resource conditions in the watershed, the Carneros Stewardship formed a subcommittee to guide the development of a watershed management plan that would reflect the interests of the larger group. The subcommittee worked in close collaboration with technical specialists from SFEI, PWA and Napa County RCD to develop this management plan. The plan integrates the results of the technical reports and provides recommendations for management, monitoring and further research. The management plan is meant to be used as a tool for the local community and is meant to be voluntary in nature. It also builds upon a history of on-going community efforts to protect and restore the natural function of the watershed, some of which will be discussed in the following section.

¹ The watershed assessment technical reports are available on CD from the Napa County Resource Conservation District; executive summaries of the reports are included as Appendix XX in this document.

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A Reference Document was developed as a companion to this Management Plan. The Reference Document provides a more thorough discussion of existing watershed conditions and recommended actions and monitoring. To a large degree, the Reference Document synthesizes the information contained in the technical reports and provides the reader with information that is beyond the scope of this Management Plan. Much of the information in the Reference Document may be useful if a specific project is being considered or if a specific topic is of particular interest.

THE CARNEROS CREEK WATERSHED

Carneros Creek is a tributary to the Napa River that flows southeast from the west side of the Napa Valley into the Napa River near Cuttings Wharf and Bull Island, 5 miles south of the town center of Napa (Figure 1). The Carneros Creek watershed is 8.9 square miles, nearly rectangular in shape, and approximately 9 miles in length and 1 mile in width. Elevations in the watershed range from mean sea level at the confluence with the Napa River to approximately 1,660 feet above mean sea level in the headwaters. The watershed contains approximately 25 miles of stream: the mainstem is approximately 11 miles in length and an additional 14 miles of tributary streams drain to the mainstem. The lowest 1,640 feet of Carneros Creek is confined within levees designed to protect property from flooding of the Napa River; the remaining miles are not levied.

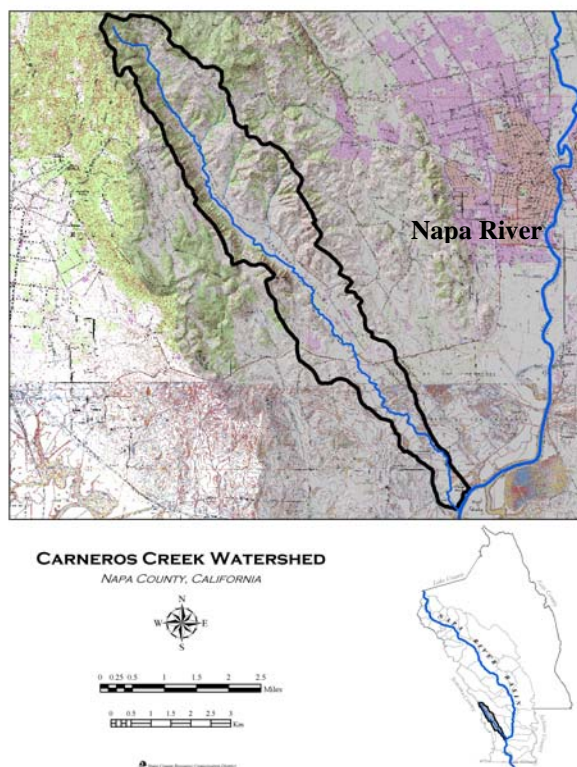


Figure 1: Map of the Carneros Creek Watershed
Source: Napa County Resource Conservation District, 2004

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The Carneros Creek watershed is privately owned and is primarily composed of agricultural land (38.2%), forest land (29.9%), shrub and grass land (25.8%), urban/suburban development (4.7%), and water (1.4%). Vegetation in the Carneros Creek watershed is dominated on the eastern side by annual grasses and oak woodlands. The western side of the basin is dominated by mixed conifer and hardwood species. The Carneros Creek watershed has experienced grazing and other agricultural activities since the 1820's. To date, much of the agricultural land within the watershed has been converted to vineyards and residential property and the upper eastern side of the watershed is being commercially grazed.

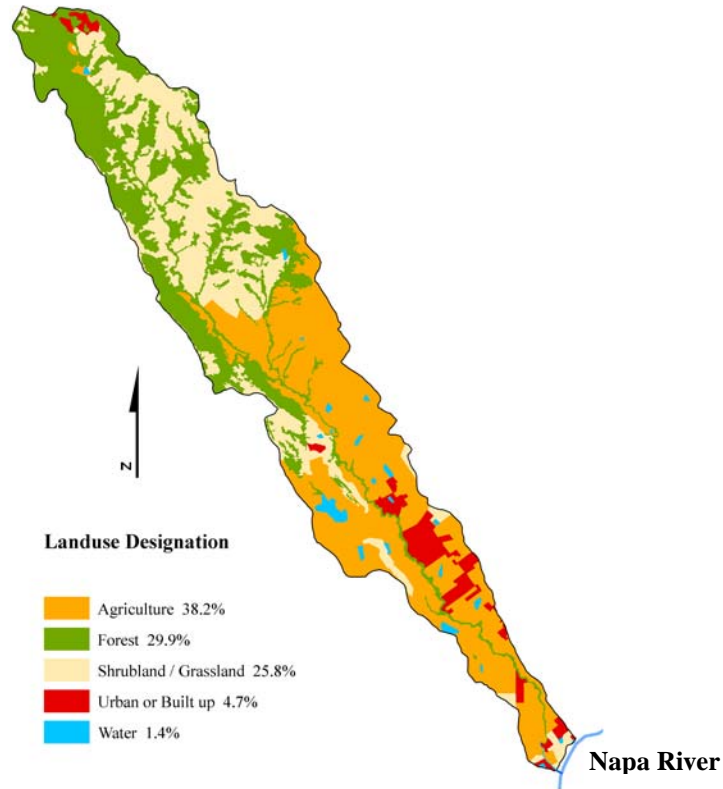


Figure 2: Land use in the Carneros Creek watershed (1993)

Source: Napa County Resource Conservation District, 2004

The watershed supports a native steelhead population and provides habitat in relatively close proximity to the Bay. Steelhead are listed as a threatened species under the Endangered Species Act due to a long term decrease in their populations over the past several decades. Because of their life history, which includes migration from freshwater streams to the ocean and back again, several factors may be contributing to their decline including, but not limited to ocean conditions, predation, low summer flows, increased fine sediment supply, and fish migration barriers.

As previously mentioned, there is an active local community stewardship in the watershed addressing some of the existing resource issues. Over the past several years voluntary efforts have been made to improve fish habitat and collect additional watershed information. Specific

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efforts include enhancing the riparian corridor, establishing native plant habitat, and collecting information relative to surface and groundwater supplies. With continued community participation and an understanding of historic and existing watershed conditions, the Carneros Creek watershed is an excellent example of how landowners and managers can collectively and individually strive to protect and improve local resources.