

## **EXECUTIVE SUMMARY**

### **Tomales Bay Watershed Stewardship Plan: *A Framework for Action***



Prepared by:

The Tomales Bay Watershed Council

March 2003

## EXECUTIVE SUMMARY

*“When you come over some low summit or around some curve of road and find that you are looking at Tomales Bay – whether for the first time or for the five-thousandth time — you know that you have come to a place that is valuable and strange. This flooded rift, blue under sunlight or gray under fog, always takes you partly by surprise.”*

-- John Hart, A Sense of Place, Tomales Bay Environmental Study, 1972

The Tomales Bay watershed is remarkable for its beauty, wildlife, and diverse human history. At the juncture between the ocean and the land, Tomales Bay is created by the San Andreas Fault and underlying geology. The result is a striking contrast between the oak woodland and open grasslands to the east of the Fault, with dark and thick conifer and hardwood forests to the west. Many people who live here and those who come to visit are deeply connected to and inspired by the rolling hills, forests, beaches and cool waters, marshes and meadows of this watershed. For both human and non-human communities that live here, and for others that migrate through, Tomales Bay and the surrounding watershed is a refuge.

Tomales Bay watershed includes a broad diversity of both aquatic and terrestrial habitats. A rich diversity and abundance of plant and animal life depends on habitats in the bay and surrounding watershed for shelter, foraging, nesting and rearing needs. Nearly 900 species of plants, 490 species of birds, hundreds of invertebrate species, and numerous sensitive, threatened and endangered species inhabit the watershed and nearby Point Reyes peninsula. Sensitive species include federally listed species such as coho salmon, steelhead trout, brown pelican, Steller sea lion and red-legged frog. Other sensitive species that have state or local significance include tule elk, Point Reyes jumping mouse, and river otter, as well as numerous endemic and rare plants.

During the last two centuries, the watershed’s rich natural resource base has supported a local agricultural community, mariculture industry, and commercial and recreational fisheries that have provided high quality products both locally and to the San Francisco Bay Area and beyond. Today, the region has a resident population of approximately 11,000 people, mostly clustered in eleven villages. Residents continue to share in a continuation of food production and local self-reliance through local creameries, cheese makers, organic farms and other agricultural production systems; the local oyster industry; and the collection of firewood, berries, herbs and other goods. Additionally, much of the local economy has shifted and is predicated upon the demand for recreation-oriented goods and services ranging from over-night accommodations to kayak rentals to numerous eateries that serve approximately 2.5 million visitors annually. Visitors make trips to the Point Reyes National Seashore, take boating excursions on the bay, go birdwatching, hike hills and valleys, and frequent local restaurants and markets.

Past and present human uses of the Bay and watershed have had significant cumulative impacts on water quality, habitats, and species, resulting in a need for comprehensive

watershed management. Sedimentation from tributary streams has reduced the area of the bay over the last 200 years. Salmon habitat has been diminished to less than half of the original range, and remaining habitat has been compromised by human activities over the last century. During recent years, water quality monitoring has resulted in the posting of human health advisories for the bay and tributaries for water contact, and the consumption of seven species of sport fishes regularly caught in Tomales Bay. Human activities that have affected the watershed include: residential development, agriculture, forestry, impoundment of water and the creation of large-scale reservoirs, mining, recreation, road construction, septic and waste disposal, and shellfish harvesting.

Comprehensive watershed management or watershed stewardship must consider all of the ecosystems that comprise a watershed, and many dynamic interactions and inherent connectivity between these natural systems. Effective management understands, respects, and works with natural processes. Due to the complexity of these systems, watershed planning requires an inter-disciplinary, stakeholder-based process for natural resource management. In California and elsewhere, councils have been created to develop watershed-based strategies to protect and restore habitats and open space, while promoting sustainable land-use practices and the health of coastal watersheds.

The Tomales Bay watershed is a place of riches - a place that is both beautiful and livable for its residents and visitors. In order to protect and restore the health and vitality of the bay and watershed community, local residents have joined public agencies and conservation organizations to form the Tomales Bay Watershed Council. Together, we have developed this Watershed Stewardship Plan. By working together with an expanded sense of community, we can protect the aquatic and terrestrial habitats that are essential to Tomales Bay as well as preserve the culture and heritage of the region.

Past accomplishments that preceded the creation of the Council and this Plan include: the preservation and protection of open space and agricultural lands, implementation of soil and water conservation projects, and the restoration of aquatic and riparian habitats. These efforts have contributed to the relatively healthy natural state of our bay and watershed, and to the viability of local enterprises and small communities. These efforts also demonstrate the considerable local, regional, and national capacities and commitments to protect and preserve many of these shared watershed values. The future of many of these values will depend on our diligence in continuing and hopefully expanding these conservation, preservation and restoration efforts. This plan is intended to communicate and guide actions to achieve our shared vision for the bay and watershed.

The Tomales Bay Watershed Council has 24 members that are drawn from local stakeholder groups and agencies affected by or responsible for the watershed, including: 1) residential and community groups, 2) agricultural interests, 3) environmental groups, 4) maricultural interests, 5) recreational interests and 6) public agencies. The aim is to provide a continuing, collaborative forum that will improve local capacity to comprehensively manage and protect the watershed, Tomales Bay, and the interests of these stakeholders. More specifically, Council members are committed to a watershed wherein:

- human activities in the watershed -including agriculture, recreation, commercial fishing, and residential use - coexist with high, sustainable or improving levels of ecosystem health and watershed function;
- natural habitats and a broad diversity of wildlife species, including salmonid populations, are restored throughout the watershed;
- water quality of the Bay and its tributaries meets State standards for shellfish mariculture (as a benchmark for clean water);
- sustainable agriculture is one of the primary land uses in the watershed;
- the rural character and quality of life for local residents and communities is preserved; and
- the public participates in planning and managing the watershed.

To achieve this shared vision, this Plan has been written by the Council to redress the actions that have lead to cumulative watershed impacts, to resolve user conflicts, and to address management needs in ways that recognize and support beneficial watershed activities. More specifically the goals of the Plan are to:

- Ensure water quality in Tomales Bay and tributary streams sufficient to support natural resources and beneficial uses;
- Restore and preserve the integrity of natural habitats and native communities;
- Develop strategies to implement the Plan and to protect the watershed; and
- Involve and educate the public to become watershed stewards.

To achieve these goals, four actions have been developed including:

**Action 1.0    Develop a coordinated and comprehensive water quality monitoring plan for Tomales Bay and tributary streams:** Clean water is essential to aquatic, coastal and marine, and adjacent terrestrial environments. In the Tomales Bay watershed, water quality and healthy aquatic habitats are influenced by tidal circulation, by activities that occur nearby on land, and by pollutants delivered via surface run-off and subsurface seepage. A comprehensive long-term monitoring program is needed to document baseline conditions and identify trends for pollutants of concern. This would provide the information needed to evaluate water quality in the Bay and its tributaries, as well as the efficacy of educational programs, projects to reduce non-point sources of pollution, and management practices intended to improve water quality. With a database to determine action efficiency in place, management and conservation strategies and future actions in the watershed will be based on the most current and best available monitoring data.

**Action 2.0    Support implementation of practices and projects that will reduce nonpoint sources of water pollution and enhance habitats in Tomales Bay and its watershed:** During the past 20 years, significant steps have been taken on private and public lands to improve water quality and aquatic and terrestrial habitats in the Tomales Bay watershed. The

momentum that has been created by partnerships between private landowners, local organizations and agencies has resulted in an increased understanding of water quality issues, the condition of Tomales Bay and tributary streams, and linkages between sources of pollutants and water quality. In addition, these activities have improved local awareness about native habitats in the Bay and watershed. Future collaboration will be necessary to maintain this progress and to increase these local programs.

**Action 3.0 Assess, protect and restore key habitats for species of local interest:** According to a recent report by the California Department of Fish and Game, habitat destruction and exotic species are the two largest threats to the survival of endangered species. Although some habitats in the Tomales Bay watershed are relatively healthy, many have been seriously compromised and need to be restored and protected. For example, the construction of large dams and reservoirs in the Lagunitas and Walker Creek watersheds has resulted in the loss of more than half of the historic spawning grounds for coho salmon and steelhead trout. Development, sedimentation, and destruction of riparian vegetation threaten what remains. Little is known about the extent and distribution of invasive exotic species in the Tomales Bay watershed.

**Action 4.0 Promote and support public outreach and education about Tomales Bay and its watershed:** The Tomales Bay watershed comprises a diverse community of private and public landowners, villages and residents from the slopes of Mount Tamalpais to the town of Tomales and eastward to Chileno Valley. An engaging public outreach and educational program directed at residents and visitors to the watershed will be essential to the reduction of the impacts of ever-intensifying patterns of use.

Further detail for each action is provided within the respective sections of the Plan, and includes: prioritized projects, studies, and programs complete with preliminary budget estimates, time lines and potential lead and partner agency(s) and/or organization(s). In this manner, the public and members of the Council can use this Plan either collectively or individually for direction on the development and implementation of watershed stewardship activities. In addition to supporting such activities through the actions, this Plan provides in-depth background information and a literature review for water quality, and erosion and sedimentation, and a glossary of watershed terms within respective appendices. The extensive work needed requires the support and participation of residents and the communities in West Marin. The Council provides a venue for the expression of concerns and ideas for the collective management of the watershed and supports any effort to achieve the Plan goals.

