
Battle Creek Watershed Community Strategy

Prepared for the:
Battle Creek Watershed Conservancy

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EXECUTIVE SUMMARY

The Battle Creek Watershed Community Strategy is the framework for future watershed restoration and education activities in the Battle Creek Watershed. It was developed in response to the Anadromous Fish Restoration Program (AFRP) led by the U.S. Fish & Wildlife Service, which saw an opportunity to increase natural production of anadromous fish by augmenting and assisting restoration efforts presently conducted by local watershed workgroups. The program emphasizes strategies and actions to support the restoration of large runs of chinook salmon to Battle Creek and the continuation of a healthy, fully functioning watershed. Recognizing the stewardship responsibilities all landowners assume within the watershed, the strategies emphasize on-the-ground actions and best management practices to ensure the future continued health of the watershed.

The most significant part of this document consists of thirteen strategies and related recommendations to achieve the goal of the Battle Creek Watershed Conservancy: **“To preserve the environmental and economic resources of the Battle Creek watershed through responsible stewardship, liaison, cooperation, and education.”** The final section describes future plans, goals, and needs of the watershed.

The strategy was developed with information gathered during numerous community meetings held throughout the watershed during the first two years (1997-1999) of the Battle Creek Watershed Conservancy’s existence. Many of the meetings were sponsored by the Conservancy, or were jointly sponsored by both the Conservancy and the Battle Creek Watershed Project. The Conservancy also sponsored a series of six meetings from March-April 1999 to provide residents of the watershed communities with the opportunity to review the strategy document draft and to make comments and recommendations. The resulting document reflects the input received from stakeholders at the community meetings, then & more recently.

This document includes a general description and history of the Battle Creek watershed, its communities and resources. It also includes a description of the development of and distinction between the Battle Creek Working Group (BCWG) and the Battle Creek Watershed Conservancy (BCWC). There is a section which lists the many concerns, interests and recommendations made by various community members regarding the watershed and its future.

This community strategy is a living and adaptive management document and planning guide that will reflect new resource management issues and also guide implementation priorities. It provides us with the framework for continued responsible stewardship through effective management practices.

We look forward to working with our many stakeholders to provide the improvements necessary to protect and enhance our watershed, one of the most unique in California.

INTRODUCTION

Battle Creek, among other habitats in the Central Valley, was once home to a large population of salmon and steelhead. Little now remains of the historic habitat for these fish; present Battle Creek is degraded, primarily due to a lack of instream flow caused by hydroelectric generation (USFWS 1995). Now, Californians are seeking every opportunity to restore Central Valley salmon and steelhead runs.

Battle Creek is considered to be the watershed with the highest potential for restoring salmon and steelhead in the Sacramento River Watershed for a number of reasons, including: historic and current land uses, private stewardship of much of the land, and the minimal development of most of the watershed. The rural landscape, which is highly valued by the residents of the watershed, includes ranches owned by generations of the same family, timberlands, and higher alpine areas, which are economically and historically valuable.

In 1997, a stakeholder-based Battle Creek Working Group (BCWG) was formed to accelerate salmon and steelhead restoration in the watershed based on the AFRP. The BCWG includes stakeholder representatives from the State and federal resource agencies, and fishery, environmental, local, agricultural, power, and urban stakeholder communities. Also in 1997, the Battle Creek Watershed Conservancy (BCWC) was formed to provide representation for landowners, stakeholders, and residents of the watershed. Its purpose was to look beyond efforts to simply “fix” the creek, but to consider the long-term health of the entire watershed.

One of the species that the Battle Creek Restoration Project hopes to benefit are spring-run chinook, which behave much like summer steelhead. A study on the Middle Fork of the Eel River (Mike Ward 1988) indicated that migratory patterns of adult summer steelhead were dramatically affected by human presence and impact. The study showed that human impact over periods of time as short as 18-48 hours may force adult summer steelhead to leave preferred pools. The displaced fish are then forced to hold over in pools with less than optimal habitat qualities. It seems logical that as the restoration plans are developed for salmon and steelhead in Battle Creek, it is important to ensure a low level of human disturbance in order to minimize the risk to the recovery of the fish populations.

An opportunity exists for the landowners and residents of the Battle Creek watershed to retain their rural landscape and lifestyle while at the same time working to restore Battle Creek and its surroundings to a healthy environment for both fish and other wildlife. Preserving the rural lifestyle, agricultural heritage, and existing land uses of the Battle Creek watershed is recognized as essential for the resurgence of the anadromous fish populations. It is becoming widely recognized and accepted that maintaining farmland saves wildlife, including anadromous fish. The intent of this document is to provide watershed residents with the framework for continued responsible stewardship through effective management practices.

BACKGROUND INFORMATION AND HISTORY

WATERSHED DESCRIPTION—GENERAL

The Battle Creek watershed is unique because of its volcanic origin and geology, and year-round, cold and plentiful streamflows. It contains diverse natural resources from the mouth of Battle Creek on the valley floor to its eastern boundary—the top of Lassen Peak and Latour Peak, the origins of the South and North forks of Battle Creek, respectively.

The watershed encompasses the southeastern portion of Shasta County and the northeastern portion of Tehama County, east of the Sacramento River. Its 240,126 acres range from the alpine areas high in Lassen Volcanic National Park, down through coniferous forests, oak woodlands and foothill areas, through rugged canyons to the flood plains and riparian forests, and on to the Sacramento River.

PRIVATE LANDS

The mid-reaches of the Battle Creek watershed include thousands of acres of private timberlands and private recreation lands with outstanding fish hatcheries. The small, rural communities are all unincorporated, and sustain a variety of economic enterprises, such as: apple orchards, vineyards, and Christmas tree and pumpkin farms in the Manton area; ranches and adjacent range lands; multiple private fish hatcheries; and hydroelectric power facilities;

•Timberlands

Timber resources are located from the upper reaches of the watershed into Lassen National Forest. They represent a vital part of the economic health of the area.

•Ranches and Farms

The Battle Creek Watershed contains many large family-owned ranches and small farms. The ranching livestock is, for the most part, beef cattle, while the farms produce a variety of products such as apples, alfalfa, Christmas trees, and grapes.

•Residential

The communities of the Battle Creek Watershed are small and unincorporated. (See section on communities for further details.)

LAND AND WATER USES

•Recreational Hunting and Fishing

Game birds abound in the foothill regions, and deer hunters find excellent fall sport in the timbered mountains. Battle Creek and its tributaries furnish hundreds of miles of trout, steelhead, and salmon fishing.

•Private Fish Hatcheries – Mt. Lassen Trout Farms, Inc

Mt. Lassen Trout Farms (MLTF), Inc. operates several hatcheries in the Battle Creek Watershed, as well as other facilities located around the base of Mt. Lassen, each with its own spring-fed water supply. Their 12 facilities rear rainbow and brown trout for stocking in private ponds and lakes throughout California, and eggs for shipment to out-of-state trout farmers.

MLTF utilizes a selective trout breeding program, one of the most extensive in the industry. Their goals are to produce the highest quality egg possible in terms of hatchability, survivability, more efficient conversion, and faster, more uniform growth.

As one of the largest private employers in the area, their business contributes significantly to the economic viability of the communities. Though these facilities do not interact with fish populations in the anadromous habitat of Battle Creek, some facilities, such as MLTF's main broodstock facility, are in close proximity to hydroelectric power canals.

The planned fish passage improvements in the Battle Creek watershed (e.g. removal of five hydropower dams, and screening/laddering of three other hydropower dams) is a source of concern for the operators of privately-owned hatcheries. These aquaculture facilities may experience increased disease outbreaks due to the potentially higher number of potentially infected salmon accessing the watershed, and thus, potentially transmitting fish disease into the hydropower canals that are close to the hatchery facilities.

•Hydro

Hydroelectric development began on Battle Creek with the construction of Volta Powerhouse by Keswick Electric Power Company in 1901. This was followed by South and Inskip powerhouses in 1910 and Coleman Powerhouse in 1911. This system of powerhouses was acquired by PG&E in 1919. Volta Powerhouse II was constructed in 1980.

As it exists today, PG&E's Battle Creek Hydroelectric Project (FERC No. 1121) consists of: five powerhouses (Volta, Volta II, South, Inskip, and Coleman), two small storage reservoirs (North Battle Creek and Macumber), three forebays (Grace, Nora, and Coleman), five diversion dams on North Fork Battle Creek (Al Smith, Keswick, North Battle Creek Feeder, Eagle Canyon, and Wildcat), three diversions on South Fork Battle Creek (South, Inskip, and Coleman), numerous tributary and spring diversions, and a network of some 20 canals, ditches, flumes, and pipelines.

The opportunities to develop hydroelectric power in the late 1800's and early 1900's dramatically changed the ability of the watershed to support Chinook salmon and steelhead trout as the area once did. Other human uses of the watersheds may have impacted the natural aquatic system, but none as severely as the dams and diversions transporting water to the powerhouses of the hydroelectric system. It is appropriate to note and recognize that numerous alterations outside the Battle Creek watershed, to the Sacramento River system, the delta and the ocean, have also likely had a tremendous impact on the areas' Chinook salmon and steelhead trout populations.

PUBLIC LANDS

-Lassen Volcanic National Park –National Park Service

Lassen Peak holds the distinction of being the most recently active volcano of the seventeen major volcanoes dominating the Cascade Range. Between 1914 and 1917, 392 separate volcanic events were observed on Lassen's summit. The largest eruption, on May 22, 1915 sent a cloud rising over 30,000 feet and brought much needed attention to the area, prompting its inclusion into the new National Park Service. Lassen became the 13th National Park established on August 9, 1916. The goal: to "preserve each park unspoiled for the enjoyment of future as well as present generations."

Lassen Volcanic National Park is unique in many ways: it contains four major geophysical regions; four National Recreation Trails; the world's largest plug dome volcano; a lava tube cave; a 900 foot escarpment created when the earth fractured along a fault; habitat for over 360 species of wildlife, including bald eagle, osprey, black bear, and two kinds of deer; lake and stream trout fishing; and expansive vistas of sage, pine and fir; and intimate views of Sierra Mountain streams.

-Lassen National Forest – U.S. Forest Service

The Lassen National Forest, established in 1905, surrounds Lassen Volcanic National Park and encompasses 1.2 million acres. Its mission is to "Achieve quality land management to meet the diverse needs of people. This includes helping States and communities to wisely use the forests to promote rural economic development and a quality rural environment."

(<http://www.fs.fed.us/intro/mvgp.html>)

It is located in what is called the "crossroads" area of California; it is where the granite of the Sierra Nevada, the lava of the Cascades and the Modoc Plateau, and the sagebrush of the Great Basin meet and blend. The National Forests are managed for timber for homes, forage for livestock, water, minerals, and many other resources.

-Darrah Springs Hatchery – California Department of Fish and Game (CDFG)

Darrah Springs Hatchery is a State run facility located at Darrah Spring on Baldwin Creek, a tributary of Battle Creek. It is a key hatchery of the CDFG inland fisheries program and raises trout for sport fisheries using a wide variety of strains, including Eagle Lake rainbow trout, Pit River rainbow trout, and Mt. Shasta rainbow trout. Darrah Springs serves as an outdoor laboratory for students attending area schools for the study of both fish and mammals and their habitats.

-Coleman National Fish Hatchery – U.S. Fish and Wildlife Service (USFWS)

The Sacramento River in northern California is the only river in the world which has four distinct runs of chinook salmon (fall, late-fall, winter and spring). In 1942, the upper most drainage was blocked by the construction of Shasta Dam which is the keystone of the Central Valley Project. Shasta Dam resulted in the permanent blockage of approximately 187 river miles of critical salmon and steelhead spawning and rearing habitat. To partially mitigate for this habitat loss, Coleman National Fish Hatchery (NFH) was constructed on Battle Creek (a tributary of the Sacramento River). Fish culture operations at the hatchery began in 1943. The hatchery rears fall, late-fall chinook and steelhead trout, and until

recently, endangered winter chinook (rearing of winter chinook salmon was transferred to Livingston Stone NFH in 2000).

In the last ten years, over \$23,000,000 has been spent rehabilitating the hatchery, including a large water treatment plant capable of treating 30,000 gpm of fish production water with ozone and sand filtering 45,000 gpm. Coleman NFH is now a modern state-of-the-art fish rearing facility. Water is supplied from Battle Creek, either from the Coleman Canal (water coming from PG&E's Battle Creek hydropower facilities) or from the creek itself. In concert with Battle Creek Restoration, the facility's water intakes will be screened with structures meeting the 1997 National Marine Fisheries Service and California Department of Fish and Game screening criteria to avoid impacts to naturally-produced fish in the system. This will be the first Service hatchery meeting these criteria. Also, in conjunction with Battle Creek (Hydropower) Restoration, a 1.7 million dollar proposal to modify/improve the hatchery's barrier weir [and upstream ladder] has been funded by CAL-FED. Work has begun & is scheduled for completion February 2009.

-Sacramento River Management Area – Bureau of Land Management

The Sacramento River Management Area includes lower Paynes Creek and Battle Creek below Manton Road. The area is managed for natural values, semi-primitive recreation opportunities and protection of archaeological resources. (BLM 1993 pg. 2) Enhancement of natural and cultural values would result in major public land consolidation of lands deemed as excess and acquisition efforts to occur in the Sacramento River/Battle Creek/Paynes Creek areas. (BLM 1993 pg10)

The demand for public lands for outdoor recreation uses continues to increase in both intensity and diversity throughout the Redding Resource Area. In many places public lands provide the only readily accessible opportunities to pursue wildland recreation opportunities. Most counties and communities rely upon public lands to fulfill the "Open Space" requirements of the recreation elements of their general plans. (BLM 1993 pg. 5)

Completion of implementation of the plan delineated in the Record of Decision has occurred over several years. The Bureau of Land Management has agreed to work with the Battle Creek Watershed Conservancy on all acquisitions and land activities above Coleman National Fish Hatchery. The Battle Creek Watershed Conservancy continues to follow the work of BLM to ensure compatibility with restoration plans and watershed goals. The concern of the BCWC is to protect the fish in the creek from the possibility of increased poaching and/or human disturbance caused by public access to the creek. The BCWC is also concerned that private landowners may experience disturbance from the public having potential access to their adjoining land.

Battle Creek Wildlife Area – California Department of Fish and Game

The 418-acre Battle Creek Wildlife Area (BCWA) on lower Battle Creek straddles the Shasta-Tehama County line. It includes land on both sides of the creek 3 miles upstream northeast of the confluence with the Sacramento River. The community of Cottonwood is about six miles west of BCWA on the other (west) side of the Sacramento River. The community of Anderson (west of the Sacramento River) is approximately 7 miles northwest of the BCWA.

Acquisition of lands for the BCWA began with an initial purchase in 1981 of 24.9 acres. In 1983, it was formally designated by the California Fish and

Game Commission as a wildlife area when additional lands were purchased fronting Battle Creek. There are two distinct units: a western unit, including the western curve of Battle Creek, and the eastern unit adjacent to Coleman National Fish Hatchery and divided by Battle Creek into a northern and southern portion.

As stated in the Draft Land Management Plan for the Battle Creek Wildlife Area (Department of Fish and Game, March 1995), the overall purpose of the wildlife area is: "to protect, enhance, and develop riparian and wetland habitats; to protect and enhance salmon and steelhead spawning habitat; and to provide public use with an emphasis on interpretive and educational use."

COMMUNITIES OF THE WATERSHED

Within the watershed are 5 distinct communities of varying size populations, concerns and interests.

MANTON

Manton, located in the middle of the watershed, has a population of approximately 1,200-1,400; an elementary school presently serving 70+ students; a store; diner and numerous cottage businesses, several with international clients. Crops in the area include vineyards, historically-grown Manton apples and hay. Cattle are raised by numerous ranchers, some of whom also operate private hunting and fishing clubs on their properties, including deer hunting, fishing, as well as catch-and-release fishing. Oak woodlands are harvested for firewood, lava rock for landscaping has become another income source for some landowners.

MINERAL

Mineral, on the southeastern edge of the watershed, flourished as a winter resort community, especially from the 1920s to the 1950s, as a result of downhill skiing in nearby Lassen National Park. In 1992 the commercially operated ski lift was closed, leaving a significant void in the community. Most of the housing in the Mineral area provides retreats for visitors primarily for summer usage. There are approximately 29 full-time households in Mineral, and about 60 full-time residents. The Battle Creek Meadows Ranch is a predominate feature of the area, adding to the aesthetics of community with its vast open spaces, and signature split rail fences surrounding the property.

SHINGLETOWN

Shingletown, located on the northern edge of the watershed beginning at the 3,488 ft. elevation, is situated at the lower or western edge of a forested plateau. Shingletown was founded as a trading post but quickly became a lumber center around the 1880's, and by the 1890's, over a million board feet of lumber, a million shakes and ten thousand posts a year were hauled out of the area to the Sacramento River. The book, *Hardscrabble* describes poachers of yesteryear working public lands or quickly, on private property, to cut trees and split them into posts, pickets and shakes, which were sold to buyers from the Central Valley.

Summer range for cattle, as well as numerous timber operations, helped define the land uses in years past. During the past two decades, Shingletown Ridge has seen significant growth in population (present estimate is 8-12,000),

as a bedroom community for the greater Redding area. Those changes are reflected in the diversity of the community members and somewhat different interests in the future of the area. Improvements to State Highway 44, from Shingletown to Redding, both enables and encourages continued growth of the corridor. Such growth will have an impact on the upper watershed and needs to be considered in terms of successful restoration of the anadromous fishery well into the future.

McCumber vs. Macumber

Confusion exists regarding the spelling of areas around Shingletown known as McCumber Lake, Reservoir, Camp and Flat. Local residents of Shingletown and the surrounding areas refer to Lake McCumber (McCumber Reservoir), Camp McCumber and McCumber Flats, as do USGS maps. Pacific Gas and Electric Co., current owners of the reservoir and its surrounding lands, refer to Macumber Reservoir. McCumber Flats, Camp McCumber, and McCumber Reservoir all bear the same namesake, originating apparently from a George McCumber who owned a mill in the area in the 1850's (Johnson, 1989).

A mill from years past is referred to as McComber Mill (Amesbury, 1967), however is referenced as being on Mill Creek (Millseat Creek) in the same general vicinity as other references to McCumber's Mill. The "Klotz Place in McCumber Flat – 1887", is shown in a photograph (Strong, 1973). Further reference to the mill states that a "Mr. Weimer had built a mill that was soon sold to George McCumber" (Johnson, 1989).

For purposes of this document, the selected reference to the areas will be McCumber. Readers should be aware that maps and literature in the Battle Creek Salmon and Steelhead Restoration Plan, Kier Associates, 1999 use the reference Macumber Reservoir. This is one and the same to areas known as Lake McCumber.

VIOLA

In years past, Viola was a significant logging hub of the mountain areas. Summer range for cattle and sheep developed as an additional use of the area. Highway 44 became a major transportation corridor and continues to play an ever-increasing role for linkages from the Redding valley area to the mountain areas and beyond to Nevada. The area now plays host to numerous recreation enthusiasts, primarily in the summer but also for winter activities. Summer grazing pasture continues to be utilized as well.

PEOPLE WORKING TO IMPROVE THE WATERSHED

GREATER BATTLE CREEK WATERSHED WORKING GROUP

The Battle Creek Working Group convened in early 1997, sensing Battle Creek's tremendous salmon and steelhead restoration potential. Convening with federal and state agencies were the water community, the Pacific Coast Federation of Fishermen's Association (PCFFA), the major stakeholder of hydroelectric production, Pacific Gas and Electric Company, and local interests. The group met to determine the efficient restoration of anadromous fish in the watershed.

In 2003, the Battle Creek Working Group became the Greater Battle Creek Watershed Working Group with the objective of including the entire Battle Creek watershed from its confluence with the Sacramento River to its headwaters and its major tributaries and associated riparian and upland areas as well as the upper Sacramento River to the extent that the Livingston Stone National Fish Hatchery is connected to the Battle Creek hatchery program. In 2004, an official MOU was signed by the members of the GBCWWG to formalize the previously established forum for identifying, reviewing and coordinating various watershed activities in the Greater Battle Creek watershed and evaluating the activities' consistency with a Greater Battle Creek Watershed strategy. For more information, current GBCWWG meetings & activities go to BCWC's website: www.battle-creek.net

FUTURE OF THE GREATER BATTLE CREEK WATERSHED WORKING GROUP

The GBCWWG functions as a Watershed Advisory Committee. Additionally, the Working Group provides a forum for agency input in the future on issues beyond the in-stream issues. A partial list of participating organizations and agencies that comprise the Battle Creek Working Group follows:

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| <p>Battle Creek Watershed Conservancy (BCWC) Bureau of Reclamation (USBR) California Department of Fish and Game (CDFG) California Department of Water Resources (CDWR) Metropolitan Water District of Southern California (MWDSC) National Marine Fisheries Service (NMFS) Nor-Fishing Guides and Sportsmen's Association Pacific Gas and Electric Company (PG&E) The Nature Conservancy (TNC) United States Bureau of Land Management (BLM) United States Fish and Wildlife Service (USFWS) United States Forest Service-Lassen National Forest (USFS-LNF)</p> |
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BATTLE CREEK WATERSHED CONSERVANCY HISTORY

The Battle Creek Watershed Conservancy (BCWC) was organized in 1997 to provide representation for landowners, stakeholders and residents of the watershed in planning for the restoration of Battle Creek. Early in the process the BCWC Steering Committee noted that the Battle Creek Working Group's plans to expend tremendous financial resources to "fix" the creek; i.e., technical restoration efforts, would likely not be enough to ensure the long-term health of the watershed. The BCWC considered the impact of landowners and creek users on natural processes, and how to achieve the long-term health of the entire watershed. In late 1997, the Battle Creek Watershed Conservancy formed as a 501©3 nonprofit organization, and the Board of Directors and Officers were elected. The Conservancy Board is comprised of representatives of the major stakeholders representing the diverse interests and economic activities of the Battle Creek watershed.

Building trust in the restoration process, providing areas for involvement, and considering the concerns of the watershed communities were vital components in developing the Battle Creek Watershed Conservancy. A steering committee composed of a variety of landowners and residents of the watershed met for more than 9 months to gather information on options for group formation and to determine the interests of the group as well as those of other community members. It was clear from the onset that many landowners were concerned about their water rights and desired assurances of those rights into the future. There was also concern about preserving the environmental and economic resources of the area.

A BCWC Newsletter was created and is produced and mailed to community members biannually. Its purpose is to inform watershed residents of the restoration process, activities connected to the watershed, and meetings of the BCWC. In the first, August 1997 issue of "The Battle Creek Watershed News" the BCWC printed its draft goal or mission statement. No suggestions or modifications were made by the public; therefore, it was officially adopted on January 11, 1999: **"To preserve the environmental and economic resources of the Battle Creek watershed through responsible stewardship, liaison, cooperation, and education."**

On April 22, 1998 the first annual meeting of the BCWC was held in Manton with over 120 individuals attending. The Conservancy Board holds an annual meeting each year to report on accomplishments, review the plan, make any necessary revisions, and set priorities for implementation of planned items. From its inception in 1997 to current time, the Conservancy has obtained a number of grants and has implemented various watershed projects that benefit the entire watershed. For more information on these projects & current Conservancy activities go to the BCWC website at **www.battle-creek.net**

COMMUNITY CONCERNS, INTERESTS AND SUGGESTIONS

The following statements summarize concerns voiced during Conservancy meetings, activities with wide support, and suggestions for addressing the concerns.

CONCERNS

MAINTAINING WATER RIGHTS

The involvement of the Metropolitan Water District of Southern California, the Central Valley Project Water Association, and federal and state agencies in the watershed lead many to ask if their water rights are at risk.

THREATS TO HISTORIC ECONOMIC ACTIVITIES

The regulatory actions for endangered species (anadromous fish) and water quality (non-point-source pollution regulations) could be a threat to the agricultural, ranching and timber operations in the watershed.

RESTRICTIONS ON LAND USE

The presence of endangered species in the watershed may lead to restrictions on land uses, especially in riparian areas.

INCREASING PUBLIC OWNERSHIP

Land purchases by the Bureau of Land Management (BLM) in the watershed threaten the preservation of ranching as an economic activity, which is desirable for preserving the character, the natural attributes and aesthetic values of the area.

INCREASING GOVERNMENT INTRUSION

Rural communities feel that agency activity often occurs without rhyme, reason, or proper notification of the local populace. The frustration is expressed as, "Why don't they just leave us alone?" Government intrusion is a real concern, and one of the primary reasons for forming the Conservancy.

ECONOMIC VIABILITY

Landowners and residents are concerned about maintaining the economic viability of the Battle Creek region. Through the overall restoration process, there is the chance of enhancing and ensuring the inherent values of open space, the rural way of life, and thus, the economic viability of the watershed well into the future. The economic sustainability of the entire watershed and of each separate community are issues beyond the focus of this broad strategy, but are clearly a significant part of a community strategy for each area. The general plans of each county, the current political tone, and the desires of current residents will all drive what happens in the future.

One of the reasons Battle Creek is 'restorable' at this time is the very reason considerable attention needs be given to the types of future development that occur in the watershed, since Battle Creek area has been generally undeveloped. One strategy for re-building rural communities or for maintaining

their unique characteristics focuses on a land ethic. However, success for rural areas does not necessarily mean jobs in the form of industry or business coming to the area. Most landowners do not want “success” as measured by many politicians or statisticians. Development is precisely what is not wanted by many residents of the area.

Residents, particularly in the Manton area, express deep concern about the direction of their communities by the introduction of government lands and the additional people public ownership will bring. There is immediate concern about who will really make decisions about how communities grow. It will become a hotly contested issue in the future. Allowing rampant growth and urbanization would have significant implications to the quality of life of residents, the options to continue ranching, and the restoration of the anadromous fish.

The restoration of Battle Creek is an opportunity for watershed communities to envision how the restoration process can benefit them well into the future.

INVASIVE WEEDS

YELLOW STAR THISTLE

An example of a subtle change is the significant increase of nonnative (invasive) plants, such as yellow star thistle. It didn't just happen overnight, but the spread is very evident following wetter than average springs (1997 and 1998). Many individuals noticed a significant change during the summer of 1998, as the increase of yellow star thistle was more abrupt. Both the amount of spread and the size of the plants seem to be unusual.

KLAMATH WEED

Another plant of concern to ranchers, but one they know can be controlled, is Klamath Weed. In many cases ranchers dealt with the invasive plant in the 40's and 50's. They continue to be very receptive to the Battle Creek Watershed Conservancy's offer to encourage Tehama County Agriculture Department to obtain Klamath Weed Beetles for distribution and once again bring this noxious weed under control. This includes moving part of the population of beetles from one patch of weed to another. BCWC will be helping ranchers do what they have decided is best for their operation.

BROOMS - SPANISH, SCOTCH AND FRENCH

Removal of Spanish Broom would probably best be accomplished by removal of plants and burning (Sacramento Bee, December 16, 1998).

FUELS MANAGEMENT

This is a critical local issue that effects all residents as well as the environment and the fish habitat of the area. Residents want to feel confident, however, that fuels/fire management is done competently and effectively. Since the two major conflagrations in Manton in 2004 & 2005, fuels reduction and fire safe planning and education have become the main concerns of the watershed communities. To this end, the BCWC has formed the Battle Creek Watershed Fire Safe Council, which works in

conjunction with Cal Fire (CDF) & Tehama and Shasta County Fire Safe Councils.

INTERESTS

RESTORATION OF SALMON FOR PRESENT AND FUTURE GENERATIONS

Most people seem to take a certain pride in the fact that the Battle Creek watershed has been much better cared for than other watersheds, and that it can be an excellent home for salmon for generations to come without compromising other aspects of the environment/economy.

PRIVATE STEWARDSHIP

Many local landowners are proud of their efforts to protect and improve their holdings, and believe they have the best interests of the local area in mind.

PRESERVATION OF THE RURAL LANDSCAPE

Most people came to this area because of the nature of the countryside, and they want to keep it that way. They tend to react positively to things which will accomplish this, provided that there are no negative side effects for them personally.

RECREATIONAL OPPORTUNITIES

Public space for recreation is available mainly in the upper watershed, higher altitude areas of Lassen National Forest and Lassen National Park. Watershed residents in general express the desire for recreational opportunities in the entire watershed, but want activities to be controlled and monitored by landowners.

SUGGESTIONS

STEWARDSHIP RESPONSIBILITIES

The ranchers, farmers, and other landowners have done a good job preserving the riparian corridor of Battle Creek. They are attentive and knowledgeable land managers. Provide incentives to help them fulfill their roles as both landowners and stewards of their land.

CONSERVATION EASEMENTS

It is recommended that landowners be compensated for any restrictions on activities in riparian areas through conservation easements. Such compensation will help ranching/farming remain economically viable into the future and will help to preserve the local landscape as well.

FIRES/FUELS MANAGEMENT

Local people generally support fuels management. Funds for management programs along the riparian corridor in particular would provide an opportunity to link fuels management with the anadromous fish restoration program.

EDUCATIONAL ACTIVITIES

One of the main reasons the Conservancy formed was to be involved in decisions and activities regarding the Battle Creek watershed, and to pass the information on to watershed residents. This interchange needs to continue via a regularly published newsletter, and through development and implementation of education programs for both the local schools and communities. Students and adults will learn more about their role in the restoration of the fishery and landscape, and what is needed to maintain a healthy watershed.

RECREATIONAL OPPORTUNITIES

Real public space is scarce in our watershed, with the exception of the higher altitudes (Lassen National Forest, Lassen Volcanic National Park). It would be economically beneficial to many watershed residents if space were created on Battle Creek tributaries for public parks, fishing, and other recreation. This would also alleviate the pressure of public use on more critical and sensitive parts of Battle Creek. As stated above, landowners express the desire to participate in the monitoring and control of such activities.

EXOTIC PLANTS MANAGEMENT

Exotic plants of several types are threats to ranching and to the riparian corridor in the watershed. Many watershed residents requested that the BCWC become involved in researching and implementing weed eradication programs, with the help of appropriate government agencies.

ADDRESS POSSIBLE SIDE EFFECTS

The hydropower/passage portions of the restoration program in Battle Creek will have some potential side effects on the local economy, such as: reduced numbers of trout in the PG&E canals (affecting a very important local recreational activity): possible disease transmission to local trout farms (a potential disaster for a very important part of the local economy): and the removal of dams or other structures of historic importance (built by relatives of current residents). It is critical that the Conservancy and other agencies work together to identify and resolve these problems and any others that become apparent in the future.

BATTLE CREEK WATERSHED COMMUNITY STRATEGY

SUMMARY OF THE BATTLE CREEK WATERSHED COMMUNITY STRATEGY

Goal: To preserve the environmental and economic resources of the Battle Creek watershed through responsible stewardship, liaison, cooperation, and education.

The environmental resources of our watershed - the wildlife habitat, the grazing land, agricultural land, timber, lakes and streams, open space, scenery - are also the economic resources of our watershed.

These resources, whether looked at as environmental resources or economic resources, are what the people in the watershed value most:

- People value wildlife habitat in its own right and also because it provides economic value for hunting and fishing.
- People value grazing land, agricultural land, and timber because of its economic value to ranchers, farmers, and the timber industry, but also because these uses protect open space and provide much of our scenery.
- People value our lakes and streams because of their beauty and recreational value, but also because of their importance in agriculture and power production.

Since we value these resources for their multiple benefits, and since quality of life in the watershed would be diminished without them, we must take our share of responsibility for protecting them.

In order to protect our environmental and economic resources, we must be vigilant. We must become aware of outside activities which may affect us, and become a vocal part of the planning process concerning our watershed. In this way we will ensure that decisions made are consistent with our environmental and economic goals.

In order to participate effectively in environmental and economic planning, we need to educate ourselves, so that we can understand the environmental and economic implications of proposed actions, including our own actions. If we are to take upon ourselves the responsibility for looking after the environmental and economic health of our watershed, we have to recognize that we ourselves have a strong impact on it. We can take several steps to minimize this impact:

- Through educating ourselves we can promote good land and water stewardship for householders, ranchers, farmers and timber owners.
- Through good land-use planning and conservation easements we can support sustainable land uses which will preserve the economic and scenic values which brought us here.
- Through cooperative pre-fire management programs we can reduce the threat of wild fires both to our communities and to the environment.

- Through liaisons with outside agencies we can support those environmental programs which we believe are in the best interests of the watershed.

We should be prepared to seek out and promote programs which can improve our environmental and economic resources where possible. When working with outside agencies on such programs we should be ready and willing to cooperate to the extent that the program is compatible with our goals, and we should be ready to suggest alternatives when program elements seem to deviate from our goals.

We should seek to identify actual or potential damage to our environmental and economic resources. Where damaged areas can be restored, we should seek outside technical and financial support to assist willing landowners in restoration programs. Where potential damage could be prevented by restricting land development or related activities, we should encourage willing landowners to enter into a conservation easement, and we should seek outside financial support so that these landowners are properly compensated.

We recognize that there will always be potential conflicts between environmental values and economic values; one person's economic development is frequently another person's eyesore. Rather than wield legal or literal bludgeons against each other to resolve environmental or economic issues, we should try to explore the issues through education and discussion, always with the future of the watershed in mind: *if we destroy the open space, scenery, and jobs now, then the things we value most in this watershed will be missing for the future residents.*

SUMMARY OF STRATEGIES

- I. Encourage prefire management prescriptions to reduce wildfire impacts to natural resources and assets.
- II. Promote land and water stewardship through outreach and education.
- III. Seek to protect in-basin water rights and support appropriate beneficial water use policies.
- IV. Strive to maintain and restore natural processes and functions throughout the watershed.
- V. Support Best Management Practices in the continuation of existing upland land uses, such as livestock grazing, farming, wildlife habitats, open space, and other uses in support of local sustainable economies.
- VI. Support forestland management practices which sustain healthy forest lands in the upper watershed and which, in turn, support local sustainable communities.
- VII. Improve and maintain water quality throughout the Battle Creek watershed.
- VIII. Seek to delineate, improve and maintain riparian corridors along Battle Creek and its tributaries.
- IX. Support land use planning that supports sustainable communities and land uses throughout the Battle Creek watershed.
- X. Work to restore and maintain suitable habitat conditions for Chinook salmon, steelhead and other aquatic resources of the Battle Creek watershed.
- XI. Seek to identify and protect critical holding, spawning and rearing habitats and anadromous fish resources.
- XII. Encourage commercial outdoor-recreational opportunities which support local sustainable economies and which operate within the constraints of adequate resource management protections.
- XIII. Monitor plans and activities of organizations outside the watershed and evaluate policies with regards to their local effects and implications.

DETAILED BATTLE CREEK WATERSHED COMMUNITY STRATEGY

- I. **Strategy: Encourage prefire management prescriptions to reduce wildfire impacts to natural resources and assets.**

Action items:

- A. Encourage the use of VMP (Vegetation Management Plans) for both wildlife habitat improvements and a prefire management prescription to reduce the threat of wild fire.
- B. Encourage the use of shaded fuel breaks for wildfire protections. Implement, plan, and encourage strategic fuel breaks throughout the watershed (refer to VI action C).
- C. Continue to use controlled fire as a management tool to improve wildlife habitat and forage for domestic animals, for vegetation controls, including noxious weeds, and as a tool for wildfire protections. Vegetation Management Projects using fire have been successfully used in foothill chaparral vegetation. Controlled fire as a management tool in timberland is increasingly more difficult due to air quality smoke management constraints and the risk associated escaped fires.
- D. Seek cooperation among regulatory agencies to ensure the continued use of fire as a management tool until appropriate and economically viable alternatives for fuel management become available.
- E. Seek sources of funding for VMPs and shaded fuel breaks with interested landowners.
- F. Continue to support and facilitate the Battle Creek Watershed Fire Safe Council.

II. **Strategy: Promote land and water stewardship through outreach and education.**

Action items:

- A. Encourage landowners to seek ways to maintain the integrity of their ranch lands for future generations.
- B. Promote land and water stewardship through school education programs.
- C. Work with local schools to develop curriculum regarding the watershed.
- D. Promote land and water stewardship through community education programs.
- E. Create a liaison between schools and the communities to encourage an open exchange of information and educational programs regarding the watershed.
- F. Seek to include more natural spawning, habitat and life cycle needs of salmon and steelhead in the Battle Creek watershed at the Return of the Salmon Festival.
- G. Continue producing a newsletter to inform local residents about watershed activities.
- H. Continue to maintain and update the BCWC website.

III. **Strategy: Seek to protect in-basin water rights and support appropriate beneficial water use policies.**

Action items

- A. Monitor planning activities of organizations, agencies and legislation that might impact any water rights in the watershed.

IV. **Strategy: Strive to maintain and restore natural processes and functions throughout the watershed.**

Action items:

- A. Protect meadow functions, riparian habitats, wildlife habitats and all interrelated natural processes, as well as stream flows.
- B. Protect the hydrology and geological functions of the area – specifically the aquifers - from disturbances, such as drilling and mining, to the ancient stream channels buried by lava flows (lava tubes).

- C. Develop opportunities for interested landowners to coordinate restoration projects, utilizing the assistance of experts familiar with the Battle Creek watershed.

V. **Strategy: Support Best Management Practices (BMPs) in the continuation of existing upland land uses, such as livestock grazing, farming, wildlife habitats, open space, and other uses in support of local sustainable economies.**

Action items:

- A. Encourage private and public landowners/operators to develop ranch/farm plans, including grazing strategies and monitoring plans to support and accomplish their own stewardship actions.
- B. Encourage landowners/operators to include plans for management of multiple species of plants and animals in their ranch/farm plans.
- C. Develop an invasive weed management strategy for the watershed for the control of noxious weed species.
- D. Work with cooperators to reduce the spread and quantity of noxious weeds immediately.
- E. Develop protocols to identify and determine species, location, control methods, monitoring, citizen involvement, education, coordination with agencies and governmental entities, and impact of invasive weeds.
- F. Seek funding for a weed management strategy, partnering with all appropriate agencies, groups, TRCD and landowners.
- G. Implement a weed management strategy for the Battle Creek watershed.
- H. Encourage landowners/operators to support sustainable oak woodlands with the assistance of the Hardwood Advisory Committee in Tehama County, and by understanding and following the Shasta County Oak Woodland Management Guidelines, (Board of Supervisors, Resolution No. 95-157).
- I. Facilitate dispersal of information about potential funding for landowner assistance for resolution of impacts identified on private lands.
- J. Support regulations and economic activities which will increase the viability of ranching as a long-term contributor to the economic base and lifestyle of the area.

VI. Strategy: Support forestland management practices which sustain healthy forestlands in the upper watershed and which, in turn, support local sustainable communities.

Action items:

- A. Encourage landowners to utilize sustained yield forest management to provide for the long-term economic health of the watershed community. The Forest Practice Act of 1973 and forest practice regulations require landowners filing timber harvest plans to demonstrate that the proposed timber harvest meets sustained yield requirements.
- B. Encourage landowners to use forest management activities that provide healthy vigorous forests, which create habitat for a diversity of species, reduce forest fuel loads that create conditions for catastrophic wildfires, and increase groundwater availability by reducing the transpiration rate.
- C. Encourage landowners to use resource management tools such as logging, prescribed fire, and biomass chipping to create and maintain shaded fuel breaks and defensible fuel profile zones, which also maintains a diversity of healthy wildlife habitat. Fuel break projects that have occurred in the watershed since 1999 include the Hazen Road shaded fuel break done in conjunction with a fuel break on Sierra Pacific Industries ownership. The total length of these fuel breaks is approximately 25 miles. The Shasta Forest Village fuel break in the Shingletown area is on small and large landowners in the area is roughly 35 miles long. The Lassen National Forest has also established several miles of fuel break along the 17 Road.
- D. Encourage USFS and private landowners to survey road systems within the watershed for erosion and other problems that impact water quality and other aspects of the watershed.
- E. Encourage the correction of problem areas and the maintenance of the road infrastructure to facilitate fire suppression, forest management and recreational activities. Close roads in sensitive areas, and discontinue roads that because of poor road design, cannot be corrected and have a negative impact on water quality.

VII. Strategy: Improve and maintain water quality throughout the Battle Creek watershed.

Action items:

- A. Encourage private and public landowners/operators to develop ranch and farm plans to ensure Best Management Practices on all watershed lands. Best Management Practices (BMPs) are a combination of management, cultural, and structural practices that agricultural scientists, the government, or some other planning agency decide to be the most effective and economical way of controlling problems without disturbing the quality of the environment.
- B. Encourage private and public landowners/operators to support forest management practices to maintain optimum water quality.
- C. Facilitate educational opportunities for landowners /operators in support of their stewardship actions.
- D. Support development of appropriate monitoring protocols to assess water quality of the watershed.
- E. Facilitate educational opportunities for landowners to receive information on available financial support programs which address their own responsible stewardship needs.
- F. Work with County Road Maintenance Departments to maintain and improve County roads in the watershed, especially in sensitive areas.

VIII. Strategy: Seek to delineate, improve and maintain riparian corridors along Battle Creek and its tributaries.

Action items:

- A. Work to ensure continued connectivity of riparian corridors throughout the watershed.
- B. Coordinate the assessment of and the eradication of non-native (noxious) plant species. Provide educational materials regarding noxious plant species and assist landowners interested in eradication projects.
- C. Seek funding for actions to ensure healthy riparian corridors into the future.
- D. Encourage documentation of current resource management protections already provided throughout the systems' riparian corridors, demonstrating no need for either National Wild and Scenic designation, or for designation under the State of California Wild and Scenic program.

IX. Strategy: Support land use planning that supports sustainable communities and land uses throughout the Battle Creek Watershed.

Action items:

- A. Assess land use and zoning plans for the Battle Creek watershed as described in the Tehama County General Plan and the Shasta County General Plan.
- B. Encourage any expansion of new development within community spheres of influence.
- C. Encourage adoption of reasonable community growth boundaries to meet projected demands.
- D. Promote land use planning that supports the agriculturally based economy and open space throughout the watershed.
- E. Support mitigation of land use conflicts between watershed neighbors.
- F. Ask the Board of Supervisors and Planning Departments of each county to accept the BCWC Strategy as community input into future planning activities.

X. Strategy: Work to restore and maintain suitable habitat conditions for Chinook salmon, steelhead and other aquatic resources of the Battle Creek watershed.

Summary of Restoration Project Accomplishments and other projects in the watershed since 1999:

- 1. Battle Creek Watershed Assessment 2001-2002.
- 2. Remeasurement of Watershed Assessment stations 2006.
- 3. CNFH Science Panel Report 2004.
- 4. Adaptive Management Plan for Coleman National Fish Hatchery in progress.
- 5. Funding granted for Restoration Project 2007.
- 6. CalFed Watershed Protection Grant for LNF erosion control and water quality monitoring projects in Battle Creek watershed and watershed outreach and education (2005-2008) \$636,000.

Action items:

- A. Continue to help resolve stream flow and fish passage issues in Battle Creek through active participation in the Battle Creek Working Group (BCWG).
- B. Encourage and support restoration programs determined by the BCWG and supported by the BCWC as best for the fish and in cooperation with property owners.
- C. Encourage on-going monitoring of restoration areas (reaches) to evaluate in-stream flow conditions.

- D. Encourage on-going monitoring of restoration areas (reaches) to evaluate and ensure proper operating efficiency of fish ladders and screens at water diversions and appropriate/necessary controls at diversion outflows.
 - E. Seek funding for watershed-wide assessment of existing conditions to identify impacts on anadromous fish restoration efforts. Battle Creek Watershed Assessment of 2001-2002 and remeasurement in 2006 through BCWC grant. Also ongoing water quality monitoring project in Battle Creek watershed through CalFed Grant on LNF (2005-2008).
 - F. Plan strategies to address assessment findings which impact the health of the watershed and restoration activities.
 - G. Seek funding for implementation of actions based on assessment recommendations.
 - H. Facilitate educational opportunities for landowners to address their own stewardship needs.
 - I. Encourage public agencies to resolve impacts identified on public lands.
 - J. Request funding to continue BCWC participation in the Greater Battle Creek Watershed Working Group, to foster agency/stakeholder coordination and additional restoration work in the Battle Creek watershed.
- XI. **Strategy: Seek to identify and protect critical holding, spawning and rearing habitats and anadromous fish resources.**

Action items:

- A. Encourage California Department of Fish and Game maintain sufficient staff for the protection of the anadromous fishery resources, and encourage staff activities and on-the-ground monitoring. Battle Creek Watershed Assessment of 2001-2002 has begun to evaluate anadromous fish habitat.
- B. Work to ensure that all monitoring activities respect landowner's rights.
- C. Consider forming a Stream Watch program on Battle Creek, similar to a Neighborhood Watch, to monitor activities on the creek in coordination with CDF&G, the regulatory authority.
- D. Provide educational forums to help individuals understand the significance of critical habitats and life cycle needs of anadromous fish.

- E. Work to ensure that human disturbances do not create negative impacts on the fishery restoration efforts.
- F. Encourage support of federal monitoring efforts. Examples of such efforts are: In 1999 and 2000 the Fish and Wildlife Service (FWS) operated two rotary screw traps to estimate production of juvenile salmon and steelhead in Battle Creek. For about the past five years, California department of Fish and Game has conducted the carcass/redd surveys in the lower six miles of Battle Creek.

XII. Strategy: Encourage commercial outdoor recreational opportunities which support local sustainable economies and which operate within the constraints of adequate resource management protections.

Action items:

- A. Encourage interested private landowners to provide a variety of viable recreational opportunities throughout the watershed.
- B. Seek appropriate lands for public access in the mid-range of the watershed to provide a broader range of available recreational opportunities, utilizing, whenever possible, existing public-owned lands.

XIII. Strategy: Monitor plans and activities of organizations outside the watershed and evaluate proposed policies with regards to their local effects and implications

Action items:

- A. Partner with local organizations with similar interests and concerns.

BATTLE CREEK RESTORATION PROGRAM:
AGREEMENT IN PRINCIPLE WITH PG&E (3/2/99)

Provide a fully functioning stream system over 42 miles long for producing salmon and steelhead by constructing new facilities to allow safe upstream and downstream passage of fish on three diversions and removing five diversions that would only marginally contribute to hydro production under new instream flow provisions.

Substantially increase the release of water from remaining dams to the stream to provide habitat for salmon and steelhead during each of their life stages in the creek.

Through a partnership with PG&E, share in the costs associated with reduced power production and construction of new facilities, removal of decommissioned structures, and ongoing monitoring and management activities.

The Battle Creek Restoration Project does not require or include any of the following:

- land purchases from PG&E;

- land purchases from private parties;
- reduction in the number of powerhouses;
- use of any agricultural water supplies;
- changes in the timing or amount of waters flows on the valley floor or flood control capacity.

Existing Conditions/Future Conditions schematic of Battle Creek (following).

BATTLE CREEK WATERSHED PROJECT

The Battle Creek Watershed Project started in early 1997 as a result of grant funding to the Western Shasta Resource Conservation District (WSRCD) to assist Battle Creek landowners in forming a community group to develop a watershed management strategy for the watershed and assist in its implementation.

Since Battle Creek flows through both Shasta and Tehama counties, WSRCD signed a Memorandum of Understanding (MOU) with the Tehama County Resource Conservation District (TCRCD). The WSRCD, through grant agreements with both CALFED's Category III and U.S. Fish and Wildlife Service's Anadromous Fish Restoration Program, provided contract and program management and fiscal services. The TCRCD provided office space for a watershed coordinator, related office support equipment, and supplies for the use of the Battle Creek Watershed Project.

The goals of both districts are as follows:

Western Shasta Resource Conservation District (WSRCD)

The mission of the WSRCD is "to collaborate with willing landowners, government agencies, and other organizations to facilitate the conservation or restoration of Western Shasta County's natural resources."

The conservation district's governing board is comprised of local landowners appointed to represent land users in their district and implement natural resource conservation programs. The Western Shasta RCD board currently has 7 directors and 2 associate directors.

Tehama County Resource Conservation District (TCRCD)

The mission of the TCRCD is: "To conserve and improve the natural resources of Tehama County and to improve the quality of life, aesthetically and financially for all county residents and visitors through an enhanced environment."

Tehama County's RCD consists of 5 volunteer Directors appointed to represent the landowners of the county and their interests while ensuring appropriate uses of the natural resources of the area.

One of the end products of the Battle Creek Watershed Project, working closely with the Battle Creek Watershed Conservancy, is the Community Strategy. The strategy is the framework for future activities of the Battle Creek Watershed Conservancy for years to come.

FUTURE WORK AND FUNDING

One of the first steps of implementing the Battle Creek Community Strategy has been successful. CAL FED is funding the Battle Creek Watershed Conservancy to continue their work for fiscal years 2000, 2001, 2002. The following are the specific areas to be addressed by the funding which is being administered by the National Fish and Wildlife Foundation:

IMPLEMENT WATERSHED STRATEGY

Implementing the strategies in this document will help direct the scope of work for the next several years. This includes education, historic documentation, and future project planning which allows the communities an opportunity to define future activities within the context of available funding. The Conservancy's Annual Meeting will serve as the time for stakeholders to report on accomplishments, review the plan, make any necessary revisions, and set priorities for implementation of planned items.

EDUCATION PROGRAMS

The Battle Creek Watershed Conservancy has received funding from two sources to implement education programs. The first is part of a CalFed grant which funds the Conservancy Board to "develop and conduct nine workshops for public school teachers concerning watershed processes and the special protection and restoration challenges of the Battle Creek watershed...The staff will develop no fewer than nine classroom and in-the field-workshops for school teachers, rotating among the watershed's three public schools."

The other program entitled, "Your Watershed At Work" is part of a grant from the Anadromous Fish Restoration Project (US Fish and Wildlife Service), to be managed by the Western Shasta Resource Conservation District. This program will focus on the most important local economic activities of the watershed, activities which affect and are affected by the local environment. The purpose of this program is to explore and exhibit the correlation between the environment and the economic activities of a watershed. AFRP will also fund the costs of developing curriculum units, field trips, outreach materials, developing and distributing information on anadromous fish life history, population status, watershed processes, restoration activities and specific attributes of the Battle Creek watershed.

UPPER WATERSHED PROCESSES

A work group will be convened by the BCWC to determine a scope of work for these areas and action steps, recognizing the important functions of the upper watershed in the restoration planning for Battle Creek.

FIRE DEFENSE IMPROVEMENTS

Fuels management projects to address large areas with dangerously high fuel loads surrounding communities in rural, and sometimes inaccessible, areas. Shaded fuel breaks and other vegetation management could reduce the risk of wildfire and the likelihood of fine sedimentation in the creek. By providing such a clear benefit to

the residents, fuels management will likely help involve them in other Conservancy programs.

CONSERVATION EASEMENTS

The advantage conservation easements have for cooperating landowners is continued control of the economic use of those lands, subject to easement restrictions. Each easement is designed to meet the needs of the landowner, as well as those of the environment. This task supports a planning effort to identify willing landowners. There is great value in large blocks of private land that continues to buffer Battle Creek fish populations from land management practices and human disturbance.

NOXIOUS WEED CONTROLS

Exotic plants pose a threat to the entire ecosystem, wildlife, and are a danger to the continued use of rangeland for grazing. Noxious weed invasions are spreading, particularly Klamath weed, scotch or french broom and star thistle. The need for noxious weed controls was identified as an area of concern by the BCWC.

CONCLUSION

Community commitment to restoring the Battle Creek Watershed to a healthy, functioning state is high. The opportunity is here at the end of the 20th century, to make alterations to man's past actions and once again enable Battle Creek to be home to vast runs of chinook salmon and steelhead trout. It is an opportunity to use our best science to make the hydroelectric system more compatible with the habitat requirements of the fisheries and to ensure the naturally functioning processes of the watershed. This is an opportunity to accommodate both the needs and desires of mankind for development and economic growth with the essential requirements for a productive fishery and a healthy functioning watershed.

It is clear from the many public meetings that have been held by the Conservancy that local residents are interested in the health and well-being of their environment—in the appearance of the land, the health of the streams and forests, the health of the natural and hatchery produced fish populations, the health of the local economy—and that they would like to participate in the decisions which will affect the future of the area. Over and over the comment was voiced, “We like our way of life and would like to retain it for our children and our children’s children.”

How to maintain the current “way of life” and ensure its survival in the future is the real issue for local people.

Battle Creek is about to undergo a major transformation to become one of the state's most important salmon and steelhead streams. As this transformation occurs, it is the goal of the Battle Creek Watershed Conservancy to listen to and represent the people of its watershed by being actively involved in the decision making process of the Battle Creek Restoration Project. It is only through active participation in the restoration process and the education of the citizenry of the

watershed concerning the process that the Conservancy can achieve its mission, which is “to preserve the environmental and economic resources of the watershed.” This community strategy, then, is one step towards the achievement of this goal, one that will benefit the entire watershed.

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APPENDIX A

ISSUES AND CONCERNS

This appendix is a compilation of the numerous issues and concerns that were brought up at watershed meetings in the past two years:

Animals/Birds:

Audubon bird counts, deer, waterfowl, ensure diverse species of animals in the watershed.

Cultural Attributes:

Prehistoric development, historic development, archeological attributes, air pollution, wood fired heat, county statistics of area, health of the watershed, defeat Wild and Scenic proposed designation, educational opportunities both for students in schools and the public.

Economics:

Maintain economic viability of the area. Ensure economic resources within the watershed: private aquaculture business – currently 8 private trout hatcheries in the Battle Creek watershed, Mt. Lassen Trout Farms, Inc. expressed significant concerns regarding vector transmission from wild anadromous fish populations to their hatchery operations;. Sustainable agriculture including ranching, farming; vineyards, orchards; service businesses – restaurants, guest accommodations; development/housing, garbage issues-littering, hay production, silva-culture, production/manufacturing, hydro electric production, logging companies, Natural Gas Pipeline, rock quarries/gravel operations, land uses, conversions of agriculture (mostly ranching and timberlands); future urbanization.

Fish:

Fisheries, potential listings ESA, aquaculture - private, aquaculture – public.

Flora & Fauna:

Timber, blue oaks, monoculture vs. biodiversity; noxious/invasive weeds; ensure diverse species of plants of the watershed.

Geological Resources:

Minerals, volcanic formations, quarries.

Land uses:

Ensuring that just as with farming or ranching ,adjacent land uses need to be compatible with the restoration effort. That leads to the concern of public access/ownership of the riparian area directly adjacent to the stream reaches within the watershed that will be so heavily depended upon for the wild salmon populations.

Life Styles:

Ranching, farming, wood fired heat, help young people recognize the value of their homes/areas, rural areas, government employment opportunities, retain rural life style, land protections.

Natural Resources:

Participate in the regulatory decision-making processes guiding the future of the watershed, such as conservation easements to ensure existing land uses while preserving the natural attributes of the lands, meadows, hydrology, wetlands, fuels reduction, fire/fuels management, property protections, and habitat improvements.

Open spaces:

Recognition of the role of open spaces, their value and the need to preserve open lands for the future, land use concerns future urbanization, conversion of agriculture (mostly ranching) and timberlands, conservation easements could be part of the answer to ensure future land uses.

Plant species of concern:

Klamath weed, Scotch Broom, French Broom, Himalayan Blackberries, yellowstar thistle, and likely numerous species that have yet to be identified. Exotic plants can be introduced and spread rapidly, particularly along watercourses.

Recreation:

Fly fishing, hunting/fly fishing clubs, private camp grounds, tourism, bird watching, access for recreational opportunities, planting lakes with fish, related stocking issues, ensuring access to lakes (currently PG&E owned facilities) and a variety of recreational opportunities throughout the watershed.

Stewardship responsibilities:

The role private ownership has for the stewardship of privately held lands and their water courses.

Support of the restoration efforts to ensure wild Chinook salmon:

Accept the role of the tributary for migration, holding, spawning and as a nursery for the various runs of Chinook salmon and steelhead trout. Consistent message from the communities of the BC watershed: they want to retain their rural lifestyles while endorsing the restoration of the salmon runs.

Water quality:

Non point source pollution, thermal pollution, point source pollution, water rights, water right assurances, water users, water diversions, consumptive vs. non-consumptive.

Watershed Processes:

Understanding those processes, impacts on the processes and appropriate on ground options to maintain or improve those natural processes.