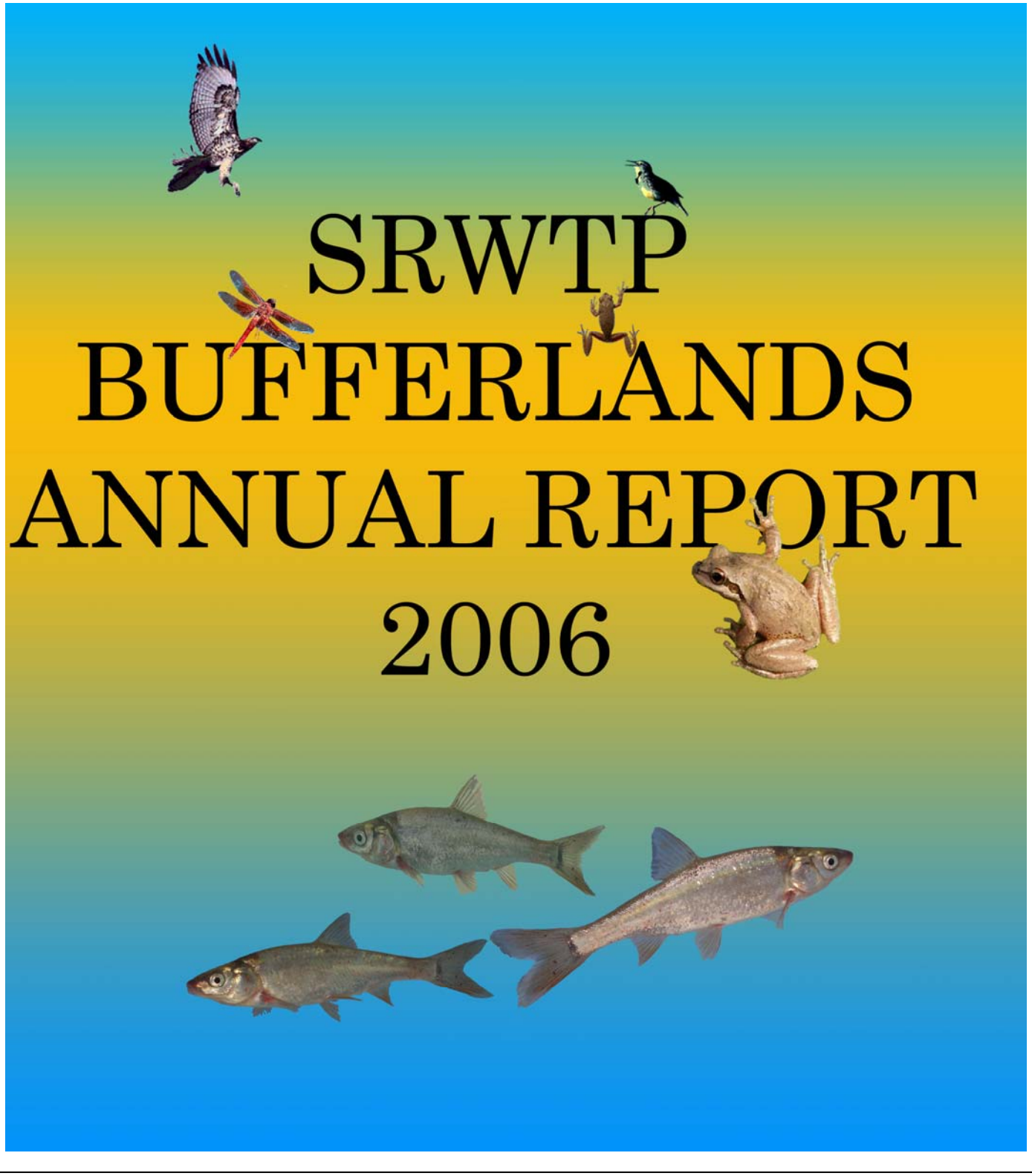


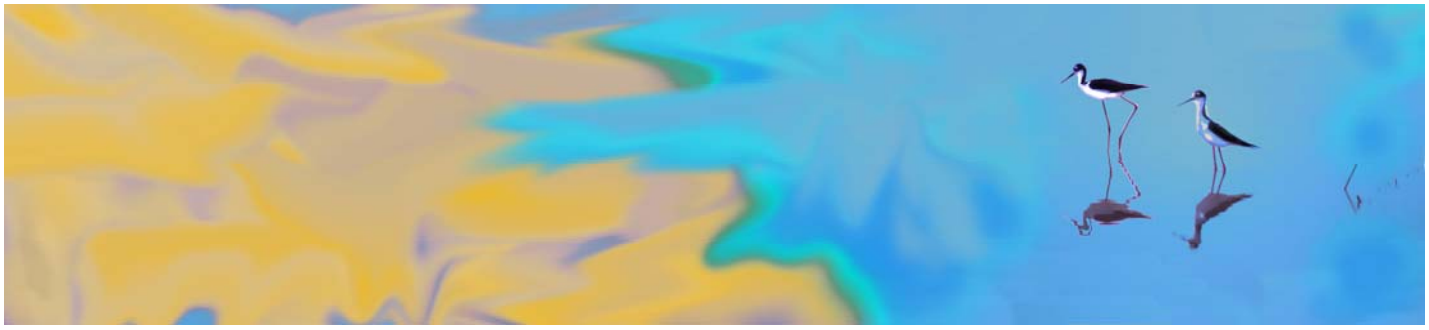
Sacramento Regional Wastewater Treatment Plant
Bufferlands Section
8521 Laguna Station Road
Elk Grove, CA 95758

BUFFERLANDS ANNUAL REPORT 2006

Each year, the Bufferlands management team faces a number of challenges in managing the 2,650 acres of multiple use open space that surrounds the Sacramento Regional Wastewater Treatment Plant. The area includes agriculture and grazing leases, pipeline and other infrastructure right-of-ways, fences and roads, and many other anthropogenic uses. These uses form a dynamic relationship within the diversity of wildlife habitats of the Bufferlands. To be successful, Bufferlands management activities must be equally diverse and easily adaptive to the continual changes and demands. This requires maintaining detailed data concerning wildlife populations and the conditions of their habitats. In addition, our staff must keep pace with the current knowledge available within the field of natural resources and stay abreast of new laws and regulations that affect our work.

The following report chronicles some of the major activities of the Bufferlands Management Staff and a few of the most interesting changes to our wildlife habitat during the past year, including:

- Staffing and staff background
- Wildlife habitat management
- Habitat restoration activities, achievements, and information about cooperative projects
- Wildlife population monitoring
- Water quality monitoring
- Applied research
- Environmental support of SRCSD projects
- Public outreach



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Executive Summary

The Sacramento Regional County Sanitation District was formed in 1973 to provide a regional wastewater conveyance and treatment system for the entire urbanized area of Sacramento County. Part of this system included the construction of the Sacramento Regional Wastewater Treatment Plant in Elk Grove. In addition to the 900 acres occupied by the plant, an additional 2,650 acres were purchased to serve as a buffer between the Plant and the surrounding communities. This area is known as the Bufferlands.

In addition to the buffering function, the Bufferlands also provides areas for environmental mitigation, farming and grazing, produces high quality wildlife habitat, and provides opportunities for public enjoyment through various educational outreach activities. The Bufferlands staff manage the property and associated activities.

The Bufferlands staff is comprised of natural resource professionals with a range of expertise, including wetland management, ornithology and mammalogy, integrated pest management, environmental education and outreach, certified wildlife biologists and certified arborists.

During the past 150 years, much of the area's native habitats have been degraded or lost. Bufferlands staff have devoted extensive efforts to restoring many of these critical habitats, including native perennial grasslands, wetlands, and riparian forests. In 2006, Bufferlands staff continued work on an additional 90 acres of perennial grasslands and 71 acres of riparian forests and 10,000 trees and shrubs. This work was possible through a funding partnership with the United States Army Corps of Engineers.

Much of the Bufferlands provides high quality wildlife habitat and managers rely on timely and accurate environmental data to manage the habitats and the associated wildlife populations. During 2006, Bufferlands staff continued a program to monitor all riparian and grassland restoration projects both during creation and for 10 years after establishment. This data will help develop the most cost effective means of restoring future habitat. Seasonal wetlands are also closely monitored and evaluated. In 2006, all Bufferlands seasonal wetlands met or exceeded our strict set of performance criteria designed to ensure maximum productivity from the wetlands. Marsh and open-water wetlands are also closely monitored and managed to their highest potential. In 2006, Bufferlands staff contributed significant staff time as a partner in the Stone Lakes Water Hyacinth Control Group with continued efforts towards eradicating this invasive and destructive aquatic weed.

In addition to the wildlife habitat, wildlife populations are also monitored. During 2006, our staff surveyed a number of wildlife populations, including burrowing owl, Swainson's hawk and other raptors, nesting landbirds, waterfowl, colonial nesting birds, wood ducks, and other general wildlife surveys. These surveys have yielded some interesting results for 2006:

- There were nine burrowing owls using the Bufferlands in winter, with 2 owls present during the nesting season. Three chicks were produced.
- There were 124 heron, egret, and cormorant nests in the Beach Lake rookery.
- Four Swainson's hawk pairs nested on the Bufferlands resulting in five chicks fledging to the wild.
- A total of 32 raptor nests were documented, including white-tailed kite, northern harrier, red-tailed hawk, Swainson's hawk, American kestrel, Cooper's hawk, barn owl, burrowing owl, and great-horned owl.

- 49 species of landbirds were documented in our riparian forests during breeding season. 45 of these species are likely to breed here.
- Waterfowl surveys indicated that 23 species of waterfowl, six species of herons and 14 species of shorebirds use the area during winter. *The 120-day season showed over ¼ million waterfowl use days.*
- 72% of the 40 wood duck nest boxes placed on the Bufferlands were used by wood ducks. 15% of the boxes were used by other native bird species.
- The annual Christmas Bird Count yielded 108 species of birds and over 411,000 individuals using the Bufferlands on count day.

The Bufferlands contains several waterbodies and receives water from Morrison and Laguna creeks. As with other aspects of natural resource management, a timely and accurate water quality database is essential to good management. The Bufferlands staff monitors the local waterways through monthly and quarterly water sampling. In 2006, our staff performed four large-scale quarterly sampling events and 12 monthly water chemistry sampling events. In addition, our staff manages a program to investigate any water quality related events that negatively affect our local waters. In 2006, this program was implemented following the discovery of a water quality event on Morrison Creek that lead to the death of many fish. While no single point source could be identified as the cause of the fishkill, the program's immediate involvement of several resource agencies facilitated implementation of measures to alleviate the situation.

To supplement the information available through the scientific literature, Bufferlands staff often performs applied research to help guide our habitat management or to help develop corrective measures for environmental problems. In 2006, our staff continued research to correct problems that have impacted emergent vegetation growth within one of our small lakes. Monthly and weekly water tests indicated problems due to turbidity. Several management changes were implemented, and turbidity was greatly reduced. In addition, we partnered with graduate students from both Sacramento State University and University of California, Davis collect information that will lead to better management of our natural resources.

Given our extensive knowledge of the local natural resources and associated laws and regulations, Bufferlands staff also assist with many SRWTP and SRCSD projects. We provide project engineers with critical environmental information and help develop and implement workable environmental mitigation measures. In 2006, Bufferlands staff assisted with numerous large and small projects, including the Bradshaw Sewer Construction Program, Laguna Interceptor Extension, Lower Northwest Interceptor Program and the Upper Northwest Interceptor Program. We also work closely with outside agencies to monitor projects that may impact the Bufferlands and SRWTP. Last year, our staff was involved with seven outside projects, including the Cosumnes River Blvd. Extension, Regional Transit Light Rail South Line, Freeport Regional Water Project, and the Stone Lakes National Wildlife Refuge Comprehensive Conservation Plan.

The Bufferlands is typically closed to unescorted public access. However, during the past several years, we have developed a strong public outreach and education program, including a docent and volunteer component. In 2006, trained docents performed over 100 service hours and other volunteers logged several hundred more. Our staff hosted seven public events, including the popular Walk On The Wildside event, which received over 2,500 visitors. Also during 2006, high school classes, elementary school children, local environmental organizations, and foreign travelers visited the Bufferlands.

A critical part of our outreach also includes the Internet, print, and television media. In 2006, the popular Bufferlands Internet sites received over 17,000 page visits. A Bufferlands wall calendar was created and over 2000 copies were distributed to MSA employees and to visitors at public events. The Bufferlands and staff were also featured in various news publications, including a KCRA-3 noontime live feed about our annual Christmas Bird Count.

BUFFERLANDS BACKGROUND

General

The Sacramento Regional County Sanitation District (District) was formed in 1973 to provide a regional wastewater conveyance, treatment, and disposal system for the entire urbanized area of Sacramento County. Under mandate to eliminate all wastewater flows to the American River, 17 small wastewater plants were closed and diverted to the new Sacramento Regional Wastewater Treatment Plant (SRWTP) constructed in the southern part of the county. In addition to the 900 acres of land required to build the SRWTP, the District also purchased 2,650 acres surrounding the treatment plant site to serve as a "buffer" between the SRWTP operations and the surrounding existing and planned residential communities. This land is known as the Bufferlands. In 1994, County Sanitation District No.1 acquired approximately 160 acres of adjoining land west of I-5. This area is also managed by Bufferlands staff.

Location Map

The Bufferlands area includes over 2,650 acres of open space and wildlife habitat surrounding the Sacramento Regional Wastewater Treatment Plant

In this rapidly developing area of the county of Sacramento, the Bufferlands provide a large area of open space and phenomenal wildlife habitat. Hundreds of acres of wetlands can be found on the Bufferlands. Some of these seasonal wetlands are managed to maximize the food supply for the tens of thousands of waterbirds that visit the area each winter. Other seasonally inundated areas are classified as vernal pools and harbor federally endangered crustaceans. Perennially wet areas of the Bufferlands include several creeks, channels, lakes, ponds and marshes. In addition to providing brood rearing habitat for nesting waterfowl, these types of wetlands support many special status wildlife species, including the giant garter snake, western pond turtle and tri-colored blackbird.

The District also strives to restore native plant communities and habitats that had been degraded or lost. These efforts have resulted in the establishment of several hundred acres of native riparian forest and perennial grassland, augmenting existing mature forests and open annual grassland habitats. Additionally, nearly 900 acres of the Bufferlands are managed under agricultural leases. Careful language is incorporated into these leases to ensure that grazing and other agricultural practices are consistent with the District's commitment to wildlife conservation. Today, the Bufferlands supports 220 species of birds, 25 species of mammals, 20 species of fish, and 21 special status species.

With much of the Bufferlands' habitats now restored or under sound management programs, District staff developed a Bufferlands Master Plan to replace the existing plan adopted in 1989. The plan is a component of the SRWTP 2020 Master Plan. The purpose of the Bufferlands Master Plan is to establish a long-term, cost-effective management direction for the Bufferlands that will maintain the existing buffer function, provide for future expansion and changes in operation of the SRWTP, and further protect and enhance the area's natural resources. The Bufferlands Master Plan provides a consistent management framework through 2020 that will remain applicable as the surrounding area continues to change. The Bufferlands Master Plan builds on the management objectives from previous Bufferlands management documents, including the following:

- To maintain the function of the Bufferlands, allowing continued Plant operation and expansion while maintaining Plant security, and ensuring the safety of SRCSD personnel and the surrounding public;
- To provide and maintain extensive areas of open space, high-quality wildlife habitat, and other valuable natural resources on the Bufferlands;
- To provide areas to mitigate environmental impacts associated with SRCSD projects;
- To minimize conflicts and develop beneficial relationships with the local community;
- To promote public enjoyment and appreciation of the Bufferlands through educational outreach; and
- To generate lease revenues for the SRCSD in accordance with other Bufferlands objectives.

Staff

The District employs a hardworking group of natural resource management professionals to help meet the management objectives for the Bufferlands. This group is comprised of permanent and seasonal Sacramento County employees that work out of the SRWTP Administration Section (see figure 1). The permanent staff includes one natural resource supervisor, three senior natural resource specialists, four natural resource specialists, and one maintenance worker. The staff includes a mix of backgrounds, specializations, and certifications including wetland management, ornithology, integrated pest management, environmental education and outreach, certified wildlife biologist and certified arborist.

In addition to the Bufferlands management responsibilities, this group is also assigned duties within the SRWTP process area including the coordination and oversight of weed abatement and formal landscape activities. Furthermore, this group is also frequently directed to provide environmental support to District capital improvement and maintenance projects. This support typically involves preliminary project planning, assistance with regulatory compliance and biological monitoring.

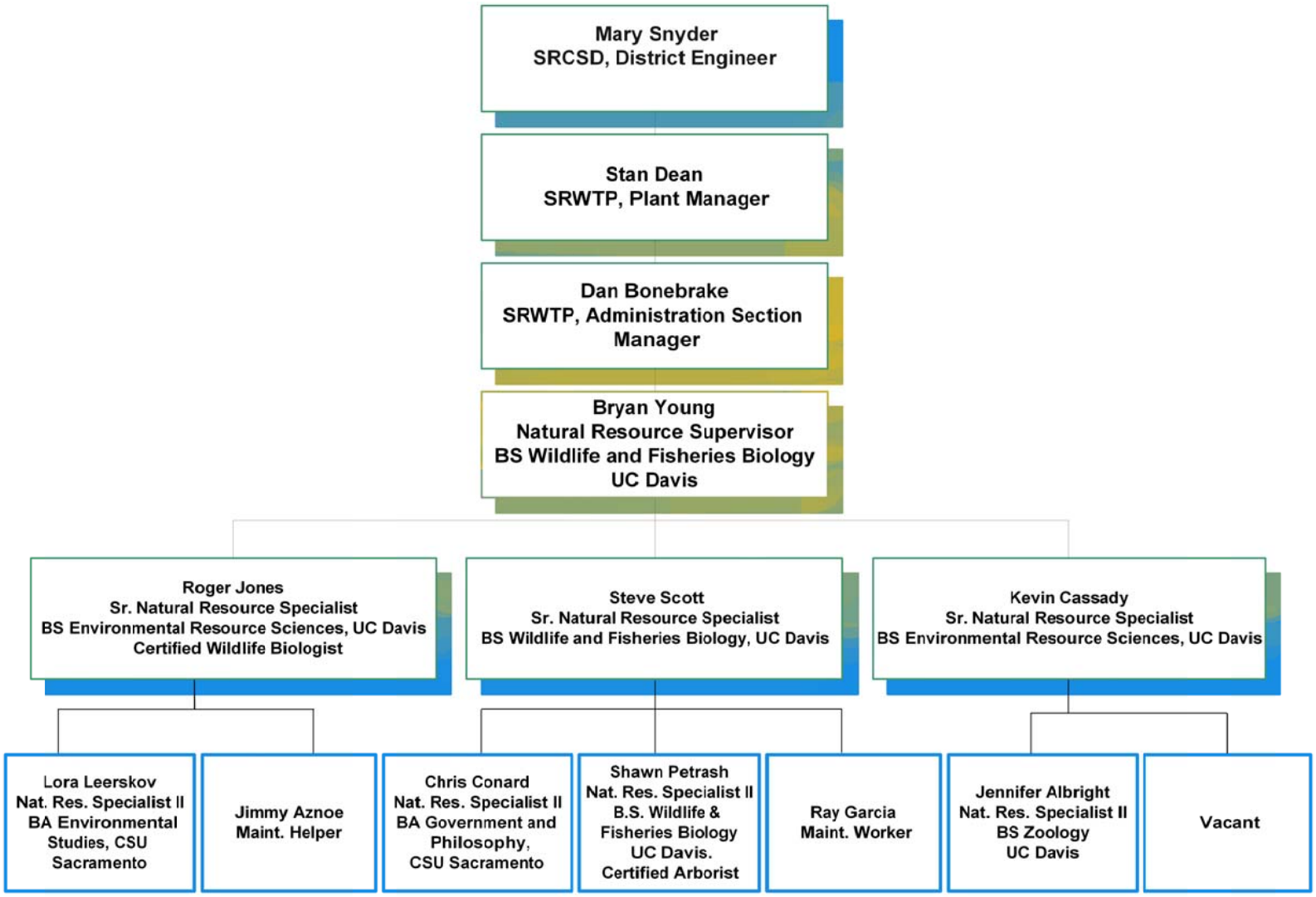







Bufferlands Staff

Figure 1



Bufferlands Staff 2006

WILDLIFE HABITAT MANAGEMENT

General

Wildlife populations are intrinsically linked to the habitats on which they depend. Wildlife managers must be aware of wildlife needs and work to promote habitats that provide all their requirements. Wetland, forest and grassland habitats on the Bufferlands are closely monitored and managed in a manner that encourages establishment of native vegetation, fosters biodiversity, and provides abundant food and cover for wildlife. Our staff also works closely with Bufferlands lease-holders to ensure that farming and grazing operations are compatible with our wildlife conservation goals and provide benefits to our local fauna. In addition, wildlife habitat near urban centers must be sensitive to and compatible with the urban neighbors and contribute to the aesthetic appeal of the surrounding landscape.

Wildlife Habitat Management

Wildlife managers must be aware of the habitat conditions present throughout the year. Wetland, forest and grassland habitats on the Bufferlands are closely monitored and managed to provide optimum habitat. Over 300 acres of seasonal wetlands are managed to provide maximum food production for wintering waterfowl and other waterbirds. Over 25 acres of perennial grassland, over 100 acres of riparian forest, and several hundred acres of annual grasslands are also managed to provide roosting, nesting and foraging areas for the many species of wildlife that use the Bufferlands.

Native Grassland Management

Native grassland habitats have nearly disappeared in our area in recent years. Historically, native grassland systems evolved with grazing by native mammals and periodic burning during natural grass fires. In the absence of these natural processes, periodic management to mimic their effects is often required. This management may include biomass removal to maintain optimal vigor and spot weed control of noxious and/or invasive species. Native grasses have been established on approximately 25 acres of the Bufferlands.

Monitoring the success of a planting is an important step in continually improving the process. With accurate records, managers can better define which methods work best within an area, which methods are most cost-effective, and develop the type of quantitative information that can predict the costs and success of future projects.

During 2006, Bufferlands staff continued a program to monitor all grassland restoration on the Bufferlands. This program acquires qualitative and quantitative data, both before planting and for a 10-year period after planting. This data includes:

- Site background information
- Management regime
- Planting techniques
- Project appearance
- Natural recruitment over time
- Vegetation composition over time
- Vegetative cover over time
- Mortality

Seasonal Wetland Management

Approximately 300 acres of seasonal wetlands on the Bufferlands are actively managed with the goal of producing abundant food for wintering waterfowl. The performance of our seasonal wetlands is closely monitored and the wetlands are expected to meet established performance criteria.

During 2006, all Bufferlands managed seasonal wetlands exceeded performance standards as measured during annual vegetation transect surveys.

Surveys measure abundance of various beneficial wetland plants as well as undesirable weed species. Mosquito larvae are also monitored as the wetlands are filled and drained. The results of these surveys provide us with the critical information needed to develop annual management strategies.

During 2006, management activities at Upper Beach Lake used minimal summer water due to heightened mosquito concerns. Mechanical operations targeted controlling perennial smartweed, an invasive wetland weed. Management activities at Fishhead Lake wetlands included controlling jointgrass and promoting a greater diversity of desirable species.

Riparian Forest Management

Riparian forests, the tree and understory habitats that border water, are critical for many migratory and resident birds, as well as mammals, fish, and insects. The tree canopy and dense understory provide roosting, nesting, and foraging areas. The trees also shade the water's edges, providing cooler water for various fish and other aquatic species.

Seasonal Wetland Management

Water management, from the basics of conveying water to the more detailed process of ensuring the precise timing, amount, duration, and quality, is the key to producing a productive wetland environment. In addition to supplying the needs of both plants and animals, mosquito control must also be included in the decision-making process. During the warmer months, mosquitoes can breed in standing water in as little as a few days. Wetland managers must constantly monitor the wetland conditions and drain or fill the wetlands as necessary to disrupt the mosquito life-cycle. Often the management needed to control mosquito production is counter to the management that is needed to promote the growth of wetland plants. Given the proximity of the Bufferlands area to urban residents, mosquito control is always a priority. In 2006, data collected from permanent vegetation transects within our wetlands indicated that all wetland areas exceeded their prescribed performance criteria.

The Central Valley once contained 2 to 3 million acres of riparian habitat. Today, less than 10% of these forests remain. Many riparian areas extended miles from the water but are now confined to narrow bands along river and stream banks.

The Upper Beach Lake riparian restoration work continued with efforts to convert the understory from primarily non-native cover to a native herbaceous community. Much of the management emphasis involved eliminating perennial pepperweed, a noxious and invasive weed, as well as preparing areas for future understory grass and sedge planting efforts. Staff also worked to protect mature trees from beaver and vole damage. Protection efforts involved installation and repair of wire caging and/or fencing and other protection around vulnerable trees.

Monitoring the success of riparian habitat improvements is an important step in continually improving the process. With accurate records, managers can better define which methods work best within an area, which methods are most cost-effective, and develop the type of quantitative information that can predict the costs and success of future projects. Bufferlands staff routinely monitor many critical habitat factors, including:

- Site background information
- Mortality/survivorship
- Planting techniques
- Canopy cover over time
- Management regime
- Vegetation composition over time
- Project appearance
- Natural recruitment over time

During 2006, Bufferlands staff monitored nine riparian restoration sites.

Wildlife Friendly Farming

Over 850 acres of Bufferlands are leased for farming/grazing. Bufferlands staff work closely with leaseholders to develop and implement productive agricultural programs that are compatible with our local wildlife. In many cases, simply shifting the timing of certain operations can reduce or eliminate the threats posed by traditional farming. As an example, delaying hay harvesting reduces conflicts with nesting waterfowl and other birds. Our grazing programs are used to reduce the height and thickness of annual vegetation, promoting biodiversity and creating foraging conditions that are ideal for species such as burrowing owl and Northern harrier.

Marsh and Open-water management

Water hyacinth is an invasive floating aquatic weed that will rapidly infest marsh and open water habitats, greatly impacting the species that depend on these habitats, as well as clogging boating areas and impacting agricultural operations. Bufferlands staff have been an integral part of the Stone Lakes Water Hyacinth Control Group since its inception in 1994.

Water Hyacinth

Water hyacinth is a beautiful aquatic plant and is often used in ponds and landscape water features. However, when allowed to escape into our waterways, it becomes a prolific weed, destroying the natural aquatic habitats and clogging canals, pumps, and impeding boat traffic. In a single growing season, 25 plants can expand to cover over 10,000 square meters of water surface. Hundreds of millions of dollars have been spent worldwide to try to control this destructive and invasive plant. Since its inception, Bufferlands staff have been an integral part of the Stone Lakes Water Hyacinth Control Group, working to eradicate this weed from the Bufferlands and surrounding waterways.

In 2006, Bufferlands staff again contributed as a significant partner in the Stone Lakes Water Hyacinth Control Group, to help control this invasive weed. Our staff performed direct weed abatement activities and also conducted all of the requisite water quality monitoring associated with this aquatic weed control program. In addition, we refined our public event display that highlights the problems associated with this invasive plant and distributed a color tri-fold pamphlet we created through a grant from Cal-Fed.

HABITAT RESTORATION

General

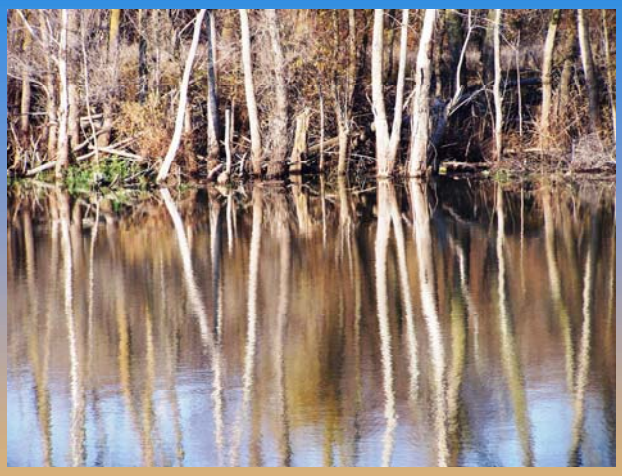
During the past 150 years, many of the native habitats on the Bufferlands have either been converted to low-value farmland or degraded due to various disturbances. As resources and funding are available, our team restores and enhances a variety of habitat types on the Bufferlands. Typical habitat types created or enhanced include riparian forest, native perennial grassland, and freshwater wetlands.

Native Grassland Restoration

During the past 10 years, much effort and research has been devoted to developing successful and cost-effective means of restoring native perennial grasslands to the Sacramento Valley. Successful projects have demonstrated that this requires a long-term commitment. These sites typically contain a large reservoir of invasive weed seeds that must be depleted before planting can occur. This process of allowing the weed seeds to germinate and then tilling the site before the new plants can produce seeds may take several years to complete. Once the perennial grasses are planted, it typically takes three or more years of intensive weed control to establish a self-sustaining perennial system.

During the past five years, over 20 acres of native grassland have been seeded. In 2006, approximately five acres were being prepared for future planting. In addition, over 90 acres planted in 2005 are being maintained as part of the South Sacramento County Streams cooperative project.

Habitat Restoration



During the past 150 years, many of the Bufferlands habitats have been converted to low-value farmland or degraded due to various disturbances. Bufferlands staff have rigorously worked to restore and enhance these precious habitats, with over 31,000 trees planted to date. In 2006, our staff worked to plant over 400 new trees and shrubs.

Riparian Forest Restoration

In September, 2004, the SRCSD Board of Directors authorized the District Engineer to sign a Letter of Intent with the Sacramento Tree Foundation. This Letter of Intent expresses the District's desire to continue partnering with Sacramento Tree Foundation on volunteer tree planting projects through 2008. In October 2006, Bufferland staff worked with the Sacramento Tree Foundation to plant over 300 riparian trees and shrubs on approximately 1.15 acres. Trees and shrubs were provided by the Sacramento Tree Foundation through their native tree mitigation fund. The irrigation supplies and volunteer planting labor were also donated through this program. An additional 138 trees were planted on the Bufferlands as mitigation for portions of the Upper Northwest Interceptor Project.

New forest plantings, although designed to be fairly self-sufficient in the long run, require intensive management throughout the first three or four years of establishment. During this time, plants are irrigated and weeds are removed to reduce competition and facilitate maximum growth. Disease and damage from pests are also monitored and corrective actions taken when necessary.

During the previous six years, over 13,600 trees and shrubs have been planted and still require varying degrees of maintenance, including monitoring, irrigation and weed control.

Year	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	TOTAL
# Trees/shrubs	1,000	1,200	2,200	2,600	7,200	1,520	455	170	120	250	420	1,850	350	750	6,300	4,357	438	31,180
Additional Acres	3.9	11.7	19.7	12.9	94.2	8.9	2.3	1.1	0.88	0.9	2.4	10	1.1	7	71	1.28	1.62	250.41

1994 – Includes Trail of Trees
2004-2005 Includes Cooperative Project with USACE

Numbers of Riparian Trees Planted and Associated Acreages

Cooperative Project with U.S. Army Corps of Engineers

Over a six-year period, Bufferlands staff worked with the United States Army Corps of Engineers to obtain a cost-share funding agreement for habitat enhancement work on various areas of the Bufferlands. In 2003, a project cooperation agreement was signed by the District to enhance approximately 265 acres of habitat, including 95 acres of valley oak savanna, 92 acres of perennial grassland, 40 acres of aquatic habitat, 20 acres of riparian woodland, 10 acres of seasonal wetland, and 8 acres of emergent marsh.

During 2006, contractors continued planting the forest and grassland habitats as well as maintaining the existing planting and wetland enhancements. The project will be monitored and maintained by the contractor for several years before being turned over to the Bufferlands staff. By the end of 2006, over 200 acres were seeded with native grasses and approximately 10,000 trees and shrubs were planted.

WILDLIFE MONITORING

General

Adaptive natural resource management requires that managers have access to accurate and timely data relating to wildlife populations, locations, and other critical information. This same information is used to assist District projects during pre-project design and during project construction. Throughout the year, Bufferlands staff perform routine surveys and other monitoring work to gather and document this valuable information.

Wildlife Monitoring

Burrowing owl numbers have declined during the past few decades. Bufferlands staff routinely monitors the population and habitat conditions for this small owl as well as many other species. Our staff work closely with project engineers to develop mitigation measures to minimize construction impacts to this and other sensitive species. Over 20 artificial nesting burrows are monitored and maintained each year.

Western Burrowing Owl Monitoring

The burrowing owl is a year round resident of the Sacramento Valley. This small owl uses burrows created by ground squirrels, culverts, piles of rock, and other natural and man-made structures for protection, shelter, and nests. Once a very common resident of this area, burrowing owl numbers have been on the decline for the past 50 years. The burrowing owl is currently listed as a California Species of Special Concern. The SRCSD Bufferlands provides quality habitat for our resident burrowing owls. The Bufferlands management staff has been monitoring and managing this habitat for burrowing owls since 1991 and have created many artificial nesting burrows to help promote breeding by this declining species.

Breeding season surveys are conducted weekly during the months of February through August. These data provide a picture of the growth and decline of our resident population. Breeding pairs and clutch success are pivotal factors recorded during the breeding season monitoring.

During the 2006 breeding season, the population of breeding burrowing owls on the Bufferlands has paralleled the downward trend observed in the other areas of the County and contained only one breeding pair. This pair produced three chicks during the season.

Non-breeding season surveys are conducted bi-weekly between September and January. These results provide an insight into the quality of our wintering habitat and the status of the regional owl population.

During the 2006 non-breeding season, nine owls were observed throughout the Bufferlands.

Season	'96	'97	'98	'99	'00	'01	'02	'03	'04	'05	'06
Winter (Non-breeding)	28	18	25	15	17	13	10	10	7	9	9
# of Breeding Pairs	10	10	6	6	2	1	2	1	3	1	1
# chicks observed	24	24	25	34	4	3	3	0	0	5	3

Numbers of Breeding Season, Non-breeding Season, and Burrowing Owl Chicks Observed on the Bufferlands, 1996-2006

Swainson's Hawk Monitoring

The Swainson's hawk is a seasonal resident in the Central Valley, spending the winters as far away as Argentina. These hawks forage over the Central Valley's vast open grasslands and agricultural lands for large insects and small mammals. The Swainson's hawk breeds in riparian forests adjacent to their foraging areas, building stick nests in the large, mature oaks, cottonwoods, and willows associated with the riparian area. Although this species' breeding range includes the Central Valley and a portion of northeastern California, the greatest nesting concentration occurs in our area. The Swainson's hawk is currently listed as a California Threatened Species.

One reason for the decline of the Swainson's hawk is a recurring scenario for many threatened and endangered species - loss of habitat. Over 95% of the original riparian habitat that once existed in the Sacramento River Valley has been lost to development, agricultural, and other uses. The region's vast native grasslands have also been lost for similar reasons. The remaining riparian habitat and associated grasslands are now scattered, narrow parcels that can support only a limited population of hawks.

Raptor Monitoring

All raptors are protected by the Migratory Bird Treaty Act. Some species, such as the Swainson's hawk receive further protection by the Federal and/or State governments. Nine raptor species use the Bufferlands for both nesting and foraging. Bufferlands staff closely monitors all raptor nests, with detailed information gathered on endangered and threatened species. In 2006, staff located and monitored 32 raptor nests, including four Swainson's hawk nests. From those four nests, five young Swainson's hawks were fledged into

The SRCSD Bufferlands provides both nesting and foraging habitat for the Swainson's hawk. The Bufferlands management staff has monitored and protected the nesting sites since 1993.

Year	No. Nests	No. Fledglings
1996	3	3
1997	2	2
1998	2	2
1999	3	7
2000	2	2
2001	3	5
2002	2	2
2003	3	7
2004	4	6
2005	4	5
2006	4	5

Number of SWHA Nests and Fledglings on the Bufferlands, 1996-2006

A total of four Swainson's hawk nests were identified and monitored during the 2006 breeding season, resulting in five chicks fledging from their nests.

Colonial Nesting Birds

Some bird species, including egrets, herons, and cormorants, nest in large congregations called rookeries. The SRCSD Bufferlands contains one of only five large rookeries in Sacramento County. These birds create very large nests at the top of mature riparian tree species. The mixed colony of species that use rookeries are protected under the Migratory Bird Treaty Act. The Bufferlands management staff has been monitoring and protecting this special resource since 1990. Approximately 27 nests were counted in the rookery during 1995. With our ongoing management, that number has increased substantially.

In 2006, 124 great-blue heron, great egret, and double-crested cormorant nests were counted during the breeding season.

Colonial Nesting Birds

The Upper Beach Lake riparian area contains one of the largest colonial nesting bird rookeries in Sacramento County. Herons, egrets, and cormorants have nested here for many years, but records indicate that nesting has increased dramatically since the creation of the Upper Beach Lake wetlands. In 2006, 124 nests were documented by Bufferlands staff.

Species	1995	1997	1999	2000	2001	2002	2003	2004	2005	2006
GBHE	17	23	28	26	40	59	50	40	46	52
GREG	10	27	27	34	27	44	39	55	44	39
DCCO	0	0	0	0	0	11	14	21	28	33
Total	27	50	55	60	67	114	103	116	118	124

Nest Counts at Upper Beach Lake Rookery 1995-2006

Raptor Nest Search

All raptor species are protected under the Migratory Bird Treaty Act. The Bufferlands management staff performs raptor nest searches prior to and during the breeding season. Identifying potential and occupied nests is essential in managing these areas for wildlife. This critical information also helps Bufferlands staff to work with District project designers to help minimize impacts to known nesting areas.

Nesting raptors located and recorded in 2006 include; Cooper's hawk, white-tailed kite, northern harrier, red-tailed hawk, Swainson's hawk, American kestrel, barn owl, great horned owl, and burrowing owl. A total of 32 nests were documented. For the second consecutive year, Cooper's hawks have nested on the Bufferlands. This species rarely nests in the Valley and had not been documented as nesting here until 2005.

Point Count Land Bird Monitoring

During breeding season, birds sing or otherwise display to find mates and claim territories. Their songs and heightened activity also alert habitat managers of their presence. Since birds fill countless niches and have a wide range of habitat requirements, the presence or absence of a particular species is an important window into habitat health and raises questions that may have management implications.

Monthly	# Surveys	Weekly Avg	# Recorded
Jan-06	5	1743	8716
Feb-06	4	2008	8033
Mar-06	4	1901	7603
Apr-06	3	1202	3607
Nov-06	4	1536	6145
Dec-06	4	3358	13430
Total	24	1981	47534

2006 Season Waterbird Survey Data

Species	2003	2004	2005	2006
Song Sparrow	87%	93%	89%	97%
Tree Swallow	77%	85%	81%	89%
Spotted Towhee	64%	72%	75%	78%
Brown-headed Cowbird	77%	72%	61%	75%
Western Scrub-Jay	39%	48%	30%	22%
Red-winged Blackbird	59%	61%	57%	58%
House Wren	37%	50%	50%	58%
Ring-necked Pheasant	50%	41%	35%	25%
Ash-throated Flycatcher	46%	41%	35%	17%
Common Yellowthroat	48%	35%	19%	47%

Percentage of Total Points on which Various Bird Species were Detected

Point counts, when observers count birds seen and heard from fixed points, are the most widely used standardized method for monitoring breeding land birds in North America. The numbers and locations of species are tracked from year to year, and matched with the corresponding vegetation data. This information will help determine how bird populations respond to maturing forests and continued restoration efforts. These data were also submitted to the Point Reyes Bird Observatory, which maintains a database on bird populations throughout the western United States.

In spring of 2006, Bufferlands staff surveyed a permanent route of 18 points through a portion of the property's restored and remnant riparian forest. The route was surveyed three times during the breeding season. Forty-nine species of land birds were recorded, 45 of which are likely to breed in the area. With four years of data, variation in the percentage of total points on which each species was encountered is already showing interesting information. We will watch for trends as we collect additional information.

Waterbird Monitoring

The Bufferlands staff manages the seasonal wetlands on the property for waterfowl and other water-dependent species. To monitor waterbird usage, the staff performs weekly surveys from November to April, depending on water conditions. They record the number of individuals and species on each wetland unit. In addition to waterfowl, other waterbirds such as herons, shorebirds (sandpipers, plovers, etc.) and gulls are also counted.

During the 2005 – 2006 season, birds recorded include 23 species of waterfowl, six species of herons, and 14 species of shorebirds. A total of 24 weekly surveys were conducted to obtain information indicating the type and numbers of waterfowl using the Bufferlands wetlands. The 120-day season in 2006 showed over ¼ million waterfowl use days.

Wood Duck Nest Box Program

Although Bufferlands staff and its volunteers build and maintain nest structures for many species, the greatest effort in recent years has been toward creating nest boxes for the wood duck. California's Central Valley is the most important wood duck wintering and nesting area in the Pacific Flyway. Throughout the past few decades, wood duck populations have declined, as greater than 90% of the historic forested wetland habitats they depend on have been lost. In order to augment existing nest sites, staff and volunteers have built, installed, maintained and monitored 49 wood duck nest boxes on the Bufferlands. Through this and the many other nest-box programs around the Central valley, wood duck populations have increased dramatically. Last year, it was estimated that 30,000-40,000 chicks were produced in these nest-box programs.

The boxes also provide nest sites for other native cavity-nesters such as American kestrels, barn owls, ash-throated flycatchers, house wrens, and tree swallows as well as provide shelter for mammals like the Virginia opossum.

Each year prior to nesting season, Bufferlands staff and volunteers clean each box, add wood shavings, remove pests (European starling, rats, bees, etc), and repair or replace the box if necessary. During the nesting season, each box is checked for breeding activity, necessary maintenance is performed, and any new pests are evicted. A post-season check is also performed to monitor breeding evidence.

In the 2006 nesting season, there were 49 artificial wood duck nest boxes maintained by Bufferlands staff. At nesting season, 72% of the boxes were used by wood ducks with several boxes being used by other native species. Barn owls and American kestrels occupied 15% of the boxes. The remaining boxes were either unused or used by non-target species.

Nest Structures

Bufferlands staff and volunteers monitor and maintain many artificial nest structures, including boxes, burrows, and nest cones. These important features provide nesting opportunities in areas where the natural nesting sites, such as tree cavities, are rare. In very young forests, such as in newly restored areas, these cavities may not occur naturally for many years. Providing these artificial structures can also increase the potential nesting densities in areas that have adequate food resources, but where nesting sites are limited. These structures benefit many species, such as barn owls (pictured here), burrowing owls, wood ducks, and several species of songbirds.

Christmas Bird Count

The Christmas Bird Count, which began in 1900, is the largest and longest running wildlife survey ever undertaken. Individual count circles are 15 miles in diameter, and participants count the number of birds of each species found within the area. Each count is conducted on one day within a three week count period centered on December 25th. The information collected during the Christmas Bird Count provides valuable statistics on population trends, geographical shifts in winter ranges, and other indicators of bird populations and habitat health.

The Bufferlands staff has participated in this annual event sponsored by the National Audubon Society since 1995, as part of the Bufferlands' baseline biological sampling program. The Bufferlands is within the larger Rio Cosumnes/Stone Lakes count area.

During the 2006 survey, Bufferlands staff and volunteers counted over 411,000 birds and 108 different species.

Christmas Bird Count

Since 1995, Bufferlands staff have taken part in the National Audubon's annual Christmas Bird Count. This bird survey, the largest of its kind, was started in 1900. Today, over 50,000 wildlife managers and volunteers count birds in every US state, as well as many foreign countries. This year, we counted 108 species of birds, accounting for over 411,000 individuals. This data set is used to determine population trends and can help identify species that are in decline. These data will be extremely helpful in documenting the effects of emerging diseases, such as West Nile Virus.

Year	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
Total Birds Counted	7,723	522,420*	13,347	16,440	32,301	11,385	14,057	13, 957	27,594	19,799	56,563	411,278
Total Species	90	97	93	96	104	100	103	109	109	108	110	108

***** This total included an unusually large (~500,000) flock of mixed blackbirds that were roosting in the Constructed Wetlands facility

Christmas Bird Count Data for Bufferlands Property, 1995-2006

WATER QUALITY MONITORING

General

As with other aspects of natural resource management, an accurate and timely database of baseline information is an absolute requirement. Our staff work with SRWTP engineers and perform the quarterly sampling requirements of the SRWTP Onsite Monitoring Program (OSMP). Throughout the year, Bufferlands staff perform routine water quality sampling in all waters found on the Bufferlands. Our staff also responds to investigate any signs of unhealthy water quality (odors, surface observations, dead fish, etc.)

Water Quality Monitoring

Twenty species of fish occur on the Bufferlands, including three native species. The health of fish populations is an important indicator of water quality. The Bufferlands staff monitors fish populations and through the On-Site Monitoring Program, works closely with SRWTP engineers to monitor the water quality within the local creeks. In addition, our staff has developed a "Toxic Response Action Plan" to quickly respond to any events or conditions that might impact the aquatic life of our local waters.

Onsite Monitoring Program

The SRWTP has performed water quality testing at various Bufferlands waters for many years. This proactive plan was initially developed to characterize the quality of water within the three creeks that pass through SRWTP property. In 1994, Bufferlands staff joined SRWTP engineers to develop standard sampling protocols and to document all sampling locations. Since the program's inception, our staff have been responsible for conducting all quarterly sampling events, including the ultra-clean technology sampling required during low-level mercury testing.

During 2006, Bufferlands staff performed four quarterly water quality sampling events as part of the SRWTP On-site Monitoring Program.

Monthly Water Quality Sampling

To further compliment the information being collected through the OSMP, Bufferlands staff developed a plan to test certain parameters of the Bufferlands' waters on a more frequent basis.

Between 1996-2006, we have recorded pH, salinity, dissolved oxygen, temperature, electro-conductivity, turbidity, and various other parameters at 15 or more locations on a monthly basis.

Toxic Response Action Plan

The three creeks that pass through the Bufferlands receive residential and commercial stormwater drainage discharges, making their waters vulnerable to contamination. During 1997, Bufferlands staff and SRWTP engineering created a protocol for investigating water quality disturbances within the Bufferlands waters. This plan, known as the Toxic Response Action Plan (TRAP), presented detailed instructions for gathering the information needed to investigate and evaluate water quality events that result in negative impacts to the local ecology. Since the plan was created, Bufferlands staff have investigated and reported four fishkill events.

During 2006, Bufferlands staff observed a fishkill event on Morrison Creek. Per the TRAP, notifications were made to the U.S. Fish and Wildlife Service, California Department of Fish and Game, Central Valley Regional Water Quality Control Board, County Water Resources, and the City of Sacramento. Also, per the TRAP protocol water samples and water quality readings were collected from strategic locations to help determine the root cause. While the investigation did not identify a responsible point source discharge, analysis of the water chemistry and coordination with the various agencies helped Bufferlands staff to implement water management measures to alleviate the poor water quality event.

APPLIED RESEARCH

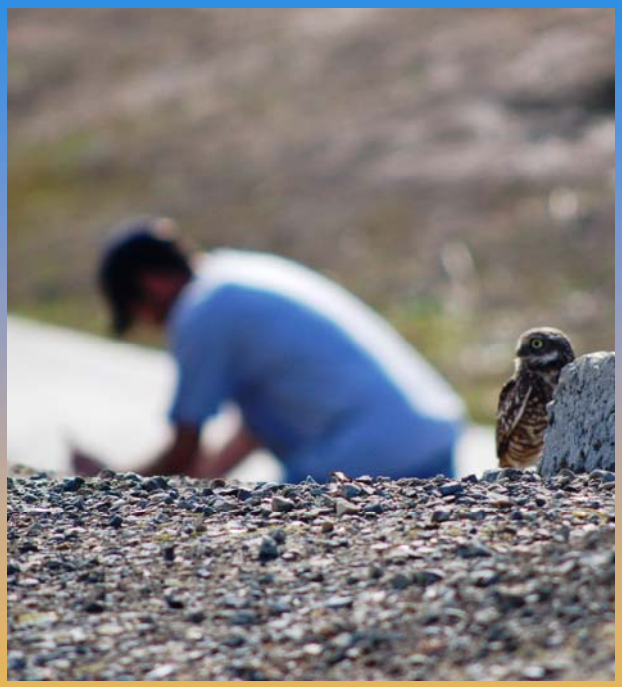
General

Throughout the years, Bufferlands staff have conducted a number of research projects. The results of this research have been used to guide our habitat management, to develop corrective measures for environmental problems, or to overcome habitat restoration obstacles. This applied research has helped guide our management strategies in areas ranging from beaver problems within our riparian forests to perennial grassland establishment within the Upper Beach Lake floodplain.

Meadowlark Lake

The 2005 Bufferlands Annual report provided details of research taking place to identify and correct problems of low water clarity at Meadowlark Lake. Emergent vegetation at this important wetland habitat was not growing adequately. Previous research indicated that the problem was likely due to low light penetration within the cloudy water. Research further indicated that

Applied Research



The Bufferlands staff often collaborates with other agencies on research to better understand our ecosystems. During 2006, we worked with a student from Sacramento State University and University of California, Davis on projects ranging from riparian trees and insects to local wildlife species.

the water clarity problems were associated with suspended solid particles, rather than algae and other organic sources. Bufferlands staff began a program to change the process and timing of water delivery. During 2006, we continued this process and continued to monitor water quality conditions

Western Pond Turtle

During 2004 and 2005, Bufferlands staff worked with a Master's degree student at California State University, Sacramento, to quantify the population of the introduced red-eared slider turtle and the native western pond turtle. This research, reported in the 2005 Bufferlands Annual Report, indicated that our native turtle represented only a small fraction of the turtle total population.

During 2006, our staff provided documents and other material to assist the student with completion of her Master's Thesis and a presentation of the work at a national wildlife conference. Our staff will continue to monitor these populations and through networking with other researchers, work towards creating better habitat conditions for the western pond turtle.

Riparian Forest Research

The historic loss of riparian forest in central California is dramatic, and manipulation of river flows has left few areas open to natural regeneration. However, the last twenty years have seen widespread attempts to replace riparian corridors. Motivation for such restoration varies, from hopes for greater wildlife habitat to impetus for naturally-occurring flood control and water filtration. Riparian areas have been shown to contribute to such "ecosystem services".

In 2006, Bufferlands worked with a Graduate student from University of California, Davis to include areas of the Bufferlands in a comparative study of several riparian sites in the Sacramento region.

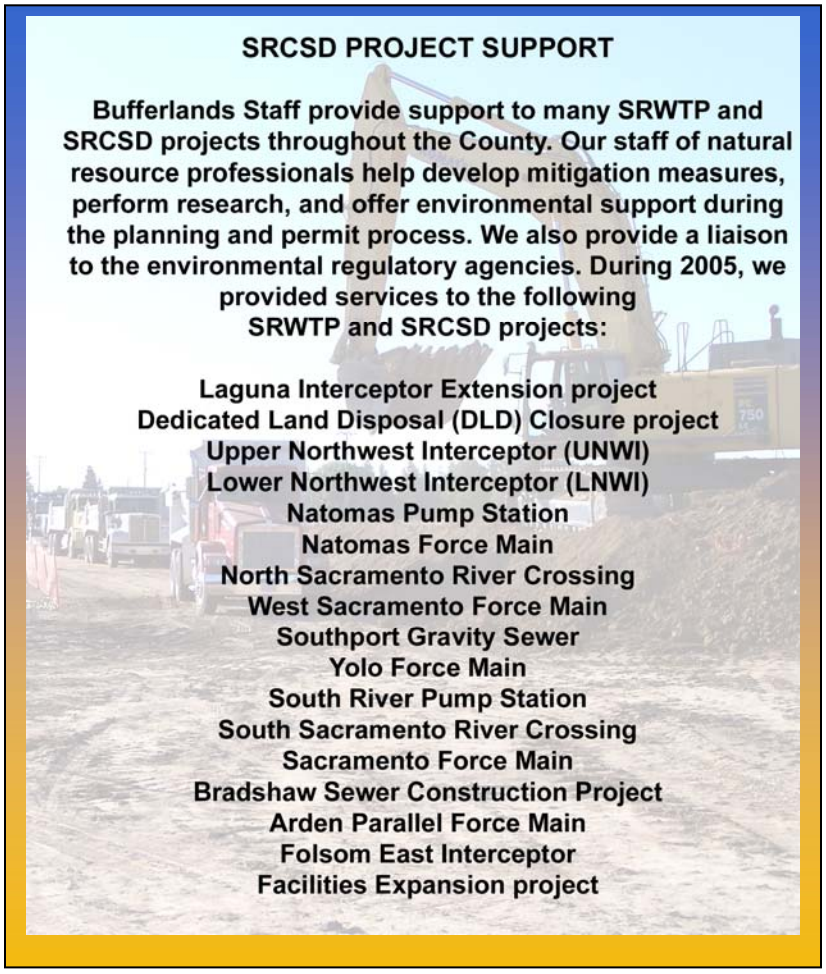
The study looked to determine the effectiveness of recent restoration efforts, contrasted with areas where natural regeneration occurred. Using indicators of ecological functioning, 20 riparian stands of different ages (including three from the Bufferlands) are being assessed in terms of diversity and nutrient cycling rates. Specifically, bird species richness data were collected, and feeding guild representation established. Simultaneously, insect diversity in two categories (pollinators and detritivores) was determined. Ultimately, correlations may be drawn between trophic levels with the information available on bird feeding habits. Similarly, the richness and abundance of the detritivore group of insects may be related to nutrient cycling through the analysis of leaf decomposition rates.

While data collection has not yet been finalized, analysis of preliminary results remains inconclusive. Thus far, data do not indicate clear differences in naturally-regenerated and human-restored stands.

ENVIRONMENTAL SUPPORT

General

A large part of Bufferlands staff resources are devoted to supporting SRCSD projects. A significant portion of resources are also dedicated to tracking other projects which may impact the sensitive resources of the Bufferlands and/or the operation of the SRWTP.



SRCSD Project Support

Given their extensive knowledge of the local natural resources and the associated laws and regulations, the Bufferlands staff becomes involved early in the project planning process and can provide project engineers with critical environmental information. Bufferlands staff also assist with the development and implementation of environmental mitigation measures and provide biologists to monitor project construction. Our staff serves as a liaison to the regulatory agencies and provide them with any required written reports and other documentation.

In 2006 Bufferlands staff assisted with seven large projects and a number of smaller projects.

Laguna Interceptor Extension project

The existing Laguna Interceptor extends through the Bufferlands to the existing Bradshaw Interceptor Equalization Structure. The project involved open cut, as well as extensive boring to avoid wetland habitats. This project completed a previously constructed interceptor serving Elk Grove residents. The project alignment crossed the Bufferlands in the vicinity of grassland, vernal pool, and other wetland habitat. Construction began in May 2005 and wrapped up all ground disturbing activities in late 2006. Our staff served as the biological monitor for this project and is will continue to maintain site restoration efforts for the next 5 years. Requisite annual monitoring reports will be submitted to the regulatory agencies to demonstrate District fulfillment of mitigation obligations.

Upper Northwest Interceptor (UNWI)

The UNWI sections 1-4 begin at the Natomas Pump Station and ends at Elkhorn Blvd and . The project alignment spans the Dry Creek parkway, the Walter S. Ueda Parkway and the Natomas Basin Habitat Conservation Area. In 2006, our staff was involved in the negotiations of mitigation measures appropriate to offset impacts to sensitive resources associated with project construction. Staff also initiated pre-construction surveys that enabled construction of these sections to begin in 2007.

During February 2006, 138 oak trees Bufferlands staff planted to mitigate for impacts resulting from construction of UNWI Section 7. At the end of the first growing season, 100% of these trees had survived. Staff will continue to maintain, monitor and report on these trees for two more years.

Lower Northwest Interceptor (LNWI)

The LNWI is one of the most ambitious projects to be implemented by the SRCSD since its formation. The 19 mile pipeline route begins in North Natomas and continues through the city of West Sacramento, rural Yolo County and ends at the SRWTP. The LNWI is being constructed in 9 segments; Natomas Pump Station, Natomas Force Main, North Sacramento River Crossing, West Sacramento Force Main, Southport Gravity Sewer, Yolo Force Main, South River Pump Station, South Sacramento River Crossing, and the Sacramento Force Main. Mitigation for wetland impacts associated with the construction of these segments includes onsite restoration of disturbed habitats. Ground disturbing activities in all segments were nearing completion at the end of 2006. During the 2006 construction season, all 9 segments of the LNWI reached substantial completion. After the wetland areas were re-graded and hydroseeded by the contractor, Bufferlands staff installed more than 1100 plants to restore the impacted riparian habitat. Bufferlands staff will be responsible for the requisite 5-10 year monitoring and maintenance of these restored wetlands Annual monitoring reports will be submitted to the regulatory agencies to demonstrate District fulfillment of mitigation obligations.

Protecting Natural Resources

Infrastructure and other construction projects within the Bufferlands area pose real challenges to ensure that all species and habitats are protected. Bufferlands staff work closely with project engineers, consultants, contractors and regulatory agencies to develop workable plans that protect these sensitive natural resources while providing for cost-effective and efficient construction. Our staff are involved through planning and construction stages, and then for several years after project completion to monitor post-project conditions and report to the various agencies.

Bradshaw Sewer Construction Project

The Bradshaw Sewer Project consists of a 17-mile large-diameter sewer interceptor, which will connect to the recently built Folsom Interceptor. By the end of 2006, the 31-mile Bradshaw/Folsom Interceptor will convey wastewater from the northeast area of Sacramento County to the SRWTP. The Bradshaw Sewer Project will be built over many years. In 2005, Bufferland staff conducted pre-project

investigations for sensitive biological resources for Bradshaw segments 6A, 6B, 7A, 7B and 8. While private environmental consultants have been retained to monitor construction activities, Bufferlands staff have served as advisors to project managers with regard to sensitive resource avoidance and post project restoration. Bufferlands staff will also be responsible for the requisite 5 year monitoring and maintenance of the project's onsite restoration. Annual monitoring reports will be submitted to the regulatory agencies to demonstrate District fulfillment of mitigation obligations

Arden Parallel Force Main

The Arden Parallel Force Main is a 60-inch diameter parallel force main that will run from the Arden Pumping Station, 10,400 feet along the American River Parkway to the south bank of the American River in the vicinity of California State University, Sacramento, and the Fairbairn Water Treatment Plant. To mitigate for impact to riparian vegetation and Valley Elderberry Longhorn Beetle habitat, the District has entered into an agreement with the Sacramento County Cooperative Extension. Per this agreement, Cooperative Extension has planted approximately 1,500 elderberry and associated riparian trees and shrubs. In 2005, Bufferland staff provided oversight for the planting and irrigation design, plant installation, maintenance, and requisite monitoring. Unfortunately, the wet spring of 2006 took a heavy toll on the planted elderberry shrubs. In 2006, Bufferlands staff has been in consultation with the USFWS and the project team to develop a new and more successful mitigation strategy to compensate for the project impacts.

Folsom East Interceptor

While this project was completed in 2001, it has yet to satisfy the requite mitigation associated with oak tree impact near Lake Natoma. The original 35 mitigation trees planted for this project died. The trees were replanted in 2004 by Bufferlands staff. In 2006, Bufferland staff continued to maintain these trees and monitor their health. In early 2006, 19 more trees were planted to replace trees lost to herbivory during 2005. At the end of the 2006 season, survival rates for this project exceeded 95%.

Facilities Expansion project

This project involved construction of new facilities buildings, existing office space remodeling, and construction of new landscape. Our staff assisted with landscape design and installation, including document review and contractor oversight. Our involvement with this project was completed in late 2006.

Outside Project Tracking

Many projects that have a direct effect on the Bufferlands are managed by outside agencies. These projects may include roads, rails, pipelines, or other facilities that will be constructed within the Bufferlands property. Bufferlands staff monitor these projects and remain involved to protect the District's interests.

During 2006, Bufferlands staff tracked and participated in the development of six outside projects.

Cosumnes River Blvd. Extension

Cosumnes River Blvd. currently terminates at Franklin Blvd. near the northeast corner of the Bufferlands. The Cosumnes River Blvd. Extension will continue this road to the west, connecting it to I-5 and terminating at Freeport Blvd. north of the town of Freeport. This project is proposed to traverse the northeast portion of the Bufferlands, severing approximately 50 acres of the District's property. A draft Environmental Impact Report (EIR) for this project is currently in development. Construction of this project is anticipated to commence between 2008 and 2010. Bufferlands staff will continue to track this project to ensure that impacts to the SRWTP and the Bufferlands are appropriately mitigated.

Regional Transit, Light Rail South Line Phase II

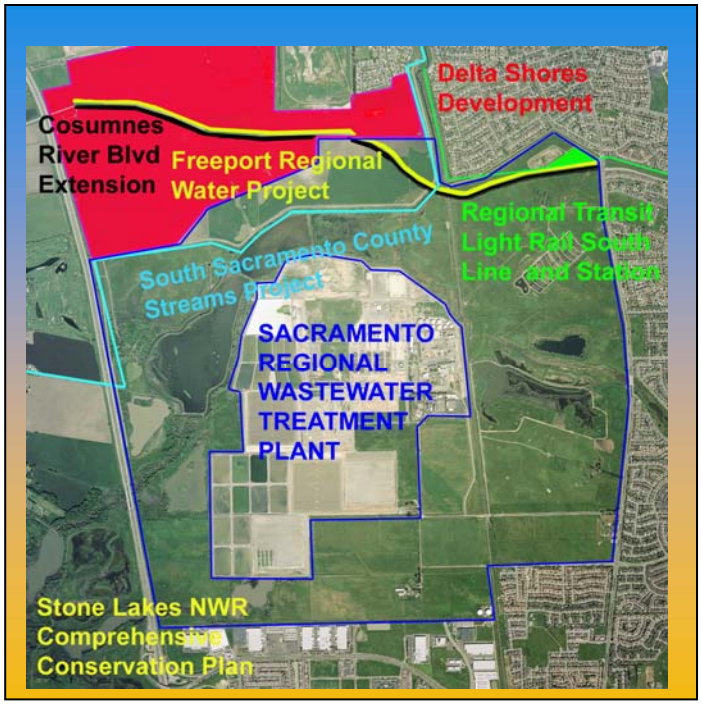
This Regional Transit project will extend the Light Rail South Line from Meadowview Road to Cosumnes River College. This extension is slated to traverse the northeastern portion of the Bufferlands and proposes to build a light rail station on the Bufferlands near Franklin Blvd. The entire footprint of this project will be located north of the proposed Cosumnes Blvd. Extension. A draft EIR for this project is due out in early 2007. Construction of this project is anticipated to commence in 2008. Bufferlands staff will continue to track this project to ensure that impacts to the SRWTP and the Bufferlands are appropriately mitigated.

Freeport Regional Water Project

This project will create a 185 million-gallons-per-day water intake from the Sacramento River near the town of Freeport. This water will help meet the water supply needs of central Sacramento County and will provide a dry-year water supply to East Bay Municipal Utility District customers. The project will include a pipeline to convey water eastward to the existing Folsom South Canal. The pipeline will cross the Bufferlands along the alignment of the proposed Cosumnes River Blvd. Extension. Construction of the pipeline is targeted for 2007. A draft EIR for this project was released in 2003. Bufferlands staff reviewed and commented on this document. Bufferlands staff will continue to track this project to ensure that impacts to the SRWTP and the Bufferlands are appropriately mitigated.

Stone Lakes National Wildlife Refuge (SLNWR) Comprehensive Conservation Plan

The SLNWR is currently preparing a Comprehensive Conservation Plan to guide the management of the refuge for the next 15 years, ensuring conservation of fish, wildlife, plants and their habitats. A portion of the Bufferlands falls within the planning boundary of the SLNWR. As major stakeholders in the process, the Bufferlands staff participated in the creation of this plan and submitted comments on behalf of the District to the Draft CCP in 2006.



South Sacramento County Streams Project

The South Sacramento County Streams Project is a joint flood control project sponsored by the Army Corps of Engineers, the State Reclamation Board, and the Sacramento Area Flood Control Agency. This project is designed to achieve 100-year level flood

protection for areas in the Morrison Creek stream group. In 2006, a portion of segment 1B was

constructed and other portions were under design. Segment 1B is adjacent to the Bufferlands and thus staff will continue to be involved with this project to ensure that impacts to the SRWTP and the Bufferlands are appropriately mitigated.

Delta Shores Development / Sacramento City Regional Park

North of the Bufferlands, the private developers of the Delta Shores project area are solidifying commercial and residential development plans. In 2006, Bufferland staff and SRCSD management met with the developers to provide feedback and reaction to their conceptual development plans. Additionally in this area, the City of Sacramento has expressed interest in developing a regional park on District Bufferlands. The City of Sacramento brought this idea to the District Board in 2006, suggesting that they work with District staff to develop a mutually beneficial park type use on this land. Bufferlands staff will continue to participate with the City and the developer in the planning process to ensure that the function and natural resources of the Bufferlands are not unduly compromised.

PUBLIC OUTREACH

General

The Bufferlands is typically closed to unescorted public access. However, we have a strong public outreach and education program aimed at allowing the public to view the Bufferlands habitats and animals, and to learn about our local natural environment. In addition, these programs help educate visitors about the function of the Bufferlands and the SRWTP.

Much of our outreach effort centers on scheduled public events, but we also accommodate a number of school groups, college classes, environmental groups, visiting professionals, and others each year.

Public Outreach

The Bufferland staff host eight formal nature tour events each year as well as many other tours and outdoor opportunities designed for school kids. Last year, over 2,500 people attended these formal events with over 300 taking tours of the Bufferlands. These tours are led by our staff with assistance from trained volunteer docents.

Docent and Volunteer Program

The Sacramento Zoo, Stone Lakes National Wildlife Refuge, Cosumnes River Preserve and Sacramento Ballet, have all incorporated a docent program into their education and public outreach efforts. Docent programs train volunteers to assist in leading tours and participating in other functions.

The docent programs are a win-win situation. The docent sponsor offers the necessary training and in return, receives assistance from the volunteers. Volunteers

receive special training, recognition, and benefit from the opportunity to share their talents with the public.

Volunteers are proud of their public service and invariably have a zeal for public education. Since many of the volunteers are students or professionals in the natural resource fields, they are also encouraged to participate in other Bufferlands work areas. Volunteers are also included during tree plantings, wetland monitoring, and the annual Christmas Bird Count. This allows them to gain valuable experience in resource management and other topics pertinent to their education or interests.

In 2002, Bufferlands staff developed a docent program that would provide the framework for recruiting, training, retaining, and rewarding volunteers. The training program includes a docent handbook of general information, with various specific topics presented through PowerPoint presentations. Since the inception of the program, ten volunteers have received training.

During 2006, Bufferlands worked to develop a new docent recruiting and training program. Current docent volunteers logged over 100 service hours and other volunteers logged several hundred more.

Tours and Events

The following tours were included in our scheduled list of events for 2006.

Wetlands and Waterfowl, Tour I

On February 25, 2006, Bufferlands offered a guided tour of the Fishhead Lake Mitigation Wetlands. During the 2.5-mile walk, Bufferlands staff helped identify the various flora and fauna, and explain our current management and habitat restoration techniques.

Creek Week – Birds and Blooms

On April 22, 2006, participated in Creek Week with a guided tour to allow visitors to view the Fishhead Lake Mitigation Wetlands and the native wildflowers that bloom in early spring. Participants receive a packet of native flower seeds to start their own native garden.

Creek Week - Local Fishes

On April 26, 2006, Bufferlands staff presented a mini-workshop on the life history and identification of fish species found in our area. Many parents and home-schooled children have participated in this focused presentation.

Spring Migration on The Bufferlands

On April 29, 2006, Bufferlands offered a fast-paced day searching the entire Bufferlands to locate and identify as many bird species as possible, with over 100 species seen by the participants.

Walk On the Wildside

On May 20, 2006, Bufferlands sponsored a celebration of International Migratory Bird Day. Walk On the Wildside highlights local efforts to protect and restore Central Valley habitats. This free, family-oriented event is held annually on the Bufferlands and includes tours, presentations, live animals, music, hands-on activities and informational exhibits. Guided and self-guided tours are offered throughout the day with over 2500 people enjoying the day.

Habitat Restoration Workshop

On October 14, 2006, Bufferlands staff presented a restoration workshop to allow an opportunity for students, volunteers, and natural resource professionals to learn critical aspects of conservation and habitat restoration. Participants viewed restoration sites up-close and discussed project implementation and challenges that occur during planning.

Make a Difference Day

On October 22, 2006, Bufferlands participated in the national Make a Difference Day by providing an opportunity for the public to help make the Bufferlands a better place. Over 50 volunteers planted 300 native riparian trees on 1.5 acres.

Wetlands and Waterfowl, Tour II

On December 9, 2006, Bufferlands staff offered a guided tour of the Fishhead Lake Mitigation Wetlands. During the 2.5-mile walk, Bufferlands staff helped identify the various birds, mammals and plants, and explained our current management and habitat restoration techniques.

Other Tours

As time permits, the Bufferlands staff tries to accommodate as many school field trips and other group outings as possible. During 2006, many elementary school kids, high school classes, college classes, environmental organizations and clubs, and other natural resource professionals visited the Bufferlands.

Internet Outreach

The Bufferlands supports a large internet web site, ***www.bufferlands.com***, in conjunction with the SRCSD.com web domain. The web site offers visitors a wealth of information, including:

- General information about the Bufferlands (background, location, maps, etc.)
- Copies of various reports, such as our annual report, annual wetland monitoring reports, etc.
- Lists of plant and animal species found on the Bufferlands
- Information about burrowing owls and their habitat and reviews of our management practices
- A list of tours and public events
- Information about research taking place on the Bufferlands
- Wetland and waterfowl information
- Docent recruiting

During 2006, Bufferlands web sites received over 17,000 page visits. The greatest interest involved the burrowing owl related pages, last year's annual report, Constructed Wetlands 5-year Monitoring Report, list of Bufferlands plant species, and calendar of coming events.

Media Coverage

The interesting work taking place on the Bufferlands, as well as the unique relationship with the SRWTP, is often recognized in various publications, including print news media, local news publications, and numerous environmental bulletins and newsletters. In the past, the Bufferlands and staff have been featured on various television programs, ranging from local news broadcasts to ESPN2 outdoor programs and nature documentaries. The Bufferlands also produces several informational publications and promotional items.

Print Media

During 2006, the Bufferlands and the various events were featured or mentioned in several local news publications, ranging from the Sacramento Bee to local Elk Grove publications. During the Bufferlands Christmas Bird Count, KCRA channel 3's Deirdre Fitzpatrick broadcast a live segment during the 12:00 news. This featured several birds observed during the survey and interviews by Bufferlands and Plant staff. In addition, the Bufferlands work was also mentioned in several environmental bulletins and newsletters.

Bufferlands Calendar

For the fourth year, the Bufferlands worked with the District Communication and Media Office to create a wall calendar featuring photographs taken on the Bufferlands during the preceding year. This year's calendar followed the dimensions of the award winning 2002 calendar, but contained new pictures and general design. Besides a collection of photographs, the calendar contained information about Bufferlands activities and special events. These calendars were distributed to MSA employees and given away at Bufferlands public events.

During 2006, over 2,000 calendars were distributed and a new calendar was created for 2007.

Bufferlands Calendar

Over 2,500 of the popular Bufferlands calendars were distributed during 2006 and a new calendar was created for 2007.