Angler Rest Area Proposed Trees

South Platte Fishing Lakes

& Open Space

CDOW Boat Launch

Action Plan

Prepared For Adams County Parks and Community Resources Department By:

The Greenway Team

March 2004

Shelter

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- Elaine Granata, Tenant Farmer
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C	Page	
1.	 Introduction Mission Statement and Purpose of this Document Study Area, Regional Context and Site Features 	1
2.	Guiding Principles - Guiding Principles - Program of Uses and Activities	5
3.	Recommended Improvements-Site Planning Zones-Zones 1-6 Recommendations	8
4.	 Implementation And Management Roster of Projects Key Management Considerations 	14

Plan Attached

Appendix:

- Ecologist's Report Species List -
- _



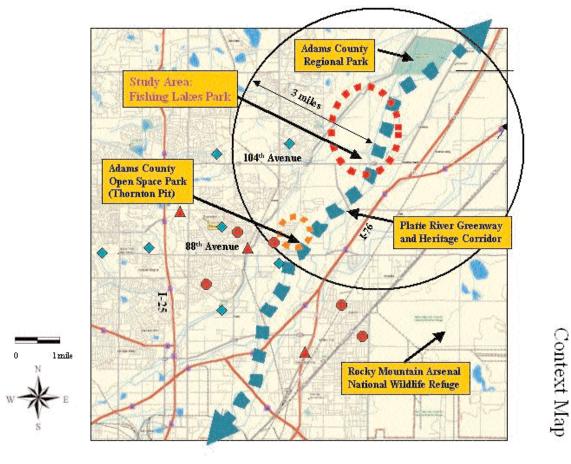
Mission Statement and Purpose of This Document

This document is intended to guide the transformation and reclamation of the former Bromley Sand and Gravel Mine. It provides land use planning and facility design guidelines and recommends land uses, habitat and recreational improvements. It also discusses implementation and management strategies. This Action Plan is intended to facilitate cooperative action among Adams County Parks, The Urban Drainage and Flood Control District, Great Outdoors Colorado, The Colorado Division of Wildlife, The CDOW Fishing is Fun Program, land holders, and other partners and stakeholders.

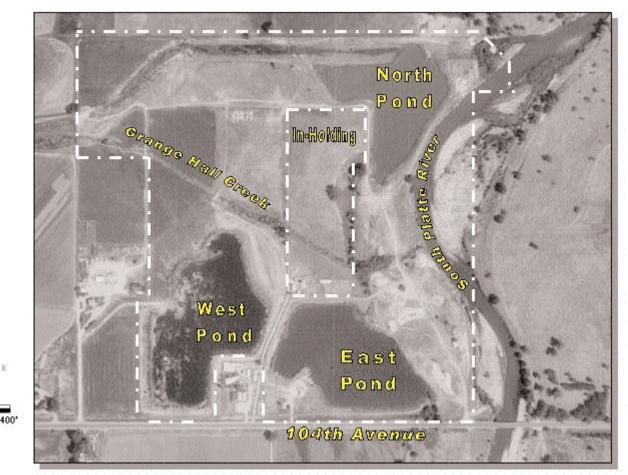


Study Area, Regional Context and Site Features

The study area, now owned by Adams County, is approximately 125.2 acres located on the west bank of the South Platte River immediately north of 104th Avenue in unincorporated Adams County. The property was acquired with Great Outdoors Colorado open space funds and Adams County Open Space Sales Tax funds in combination with floodplain acquisition funds from the Urban Drainage and Flood Control District. In accordance with the terms of the grant from Great Outdoors Colorado, the County granted a conservation easement to Colorado Open Lands, a land stewardship non-profit, to assure perpetual use as open space.



Formerly known as the Bromley Sand and Gravel Mine, the site was used for gravel extraction and processing. Most of the mining activities, with the exception of reclamation, were completed in the 1970's. In August 2002, the site was acquired by Adams County and the County completed reclamation in 2003. Site features include: outstanding river frontage along the South Platte River; a reach of Grange Hall Creek which joins the South Platte on the property; three large lakes that resulted from the gravel mining process; wetland areas and significant upland areas with available irrigation ditches as well as Lower Clear Creek Ditch water rights. In January 2003, the County completed a detailed baseline report that inventories the site's resources. (See Figgs, Figgs, Lederer, and LREP, Inc., Bromley Property Conservation Easement Baseline Report, 2003, Adams County Parks Department.)



Site Map



In addition to the current site development plans, there are long-term plans. These include the South Platte River Heritage Corridor Plan, that recommends major conservation and recreational improvements along the river and the Adams County Transportation Plan that recommends (long term) upgrading 104th Avenue as a major traffic arterial along the south boundary of the site. Construction of a new connector road between Holly Street and McKay Road to the west of the site is also recommended. There are plans by Aggregate Industries to extract gravel from properties to the east and south and plans for future water storage and wildlife conservation areas on these sites. Major utilities in the area include a buried gas line that passes beneath the east side of the site, a high tension overhead electrical line that runs along the southern border and three irrigation ditch exceptions. Structures on the site include a maintenance building and irrigation diversion gates.



View to West from the Site

Currently, there are established residential neighborhoods to the west of the site (west of Riverdale Road). There are several schools in the area including Glacier Peak, Cherry Drive and Riverdale elementary. Recreational amenities in the area include: the Platte River Greenway multi-use hike/bike path and paddleway running along the west bank of the South Platte River currently terminating on the south side of 104th Avenue: the Fukaye Field ball park complex to the southwest of the site and several neighborhood park and community parks to the west of Riverdale Road. The existing South Platte River Trail runs southward to Littleton and in the future will connect northward to Brighton. Currently a multi-use trail and greenbelt system follows Grange Hall Creek upstream of Riverdale Road with plans to connect the trail to the South Platte River Trail and link to the east. A trail is also planned along 104th Avenue crossing both Thornton and Commerce City

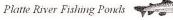


Present Terminus of Platte River Trail at 104th Avenue

Environmental features include three lakes created by gravel mining, riparian habitat along the South Platte River and numerous wetland and cottonwood stand communities. The landscape is known to support a variety of bird species, raptors including wintering eagles, prairie dog colonies, deer and other mammals (Please see Appendix for the ecologist's summary of site conditions and opportunities). The bulk of the site lies in the floodplain of the South Platte River. A major environmental concern is the presence of noxious weed growth and the spread of salt cedar (Tamarisk), an invasive and environmentally disruptive species.



Traffic on 104th Avenue





Guiding Principles

The following principles set the benchmark for site planning and future redevelopment.

1. Promote accessible, sustainable, high quality, diverse fishing opportunities consistent with the carrying capacity of the ponds.

2. Promote opportunities for year-round passive recreation and observing nature consistent with the carrying capacity of the site and participation in the restoration and long-term stewardship of the site.

3. Create an integrated system of multi-use trails serving recreation, non-motorized transportation, park management, fishing access and fish stocking. Trails should integrate with local and regional networks, meet design standards and run through pleasant and interesting settings.

4. Preserve and enhance the naturalistic character of the site with wetlands, diverse native vegetation, wildlife forage and natural contours.

5. Avoid fragmenting and adequately buffer sensitive areas from adverse impacts (acoustical, visual, water quality and wildlife) from recreational uses, pets and feral animals, roadways, utility corridors, and surrounding development.

6. To the maximum extent practical, eradicate invasive weeds, undesirable plant species and nuisance animal species using integrated pest management (IPM).

7. Protect the functionality of the floodplain with minimal use of built structures.

8. Provide outdoor education and interpretive opportunities that address the history and ecological context of the site.

9. The site should integrate with an inter-connect-

ed system of open spaces and natural areas along the South Platte River Corridor consistent with the goals and guidelines of the South Platte River Heritage Corridor Plan. This should include integration with, and preservation of, compatible uses on adjoining properties.

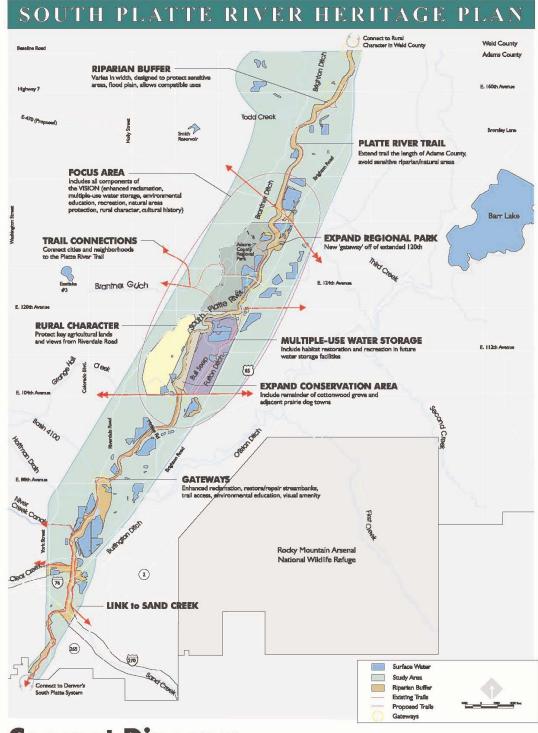
10. Protect the privacy and security of adjoining properties and in-holdings. The site should not create nuisances, adversely impact or be adversely impacted by surrounding homes, places of business, roads, parks and other land uses.

11. Wherever possible and feasible eliminate hidden hazards or attractive nuisances.

12. Improvement and management of the site should be affordable. Wherever feasible, sustainable, low-water-consumption techniques should be used, while maximizing the Lower Clear Creek Ditch water to achieve management object







Concept Diagram

Advants County Powics and Community Resources Advants County Commissioners: Martin J. Flowm Ted Strickland Emine T. Velente Conservation Partners/ERO Resources Corporation Jon 16, 1997

Program of Uses and Activities

Fishing Ponds Recreation

- Warm water fishing and fishing access
- Fishing lakes preservation and enhancement including shore revegetation and sub mersible structures
- Fishing interpretation and angler education
- ADA accessible fishing access including fishing docks and shelters

Heritage Corridor Preservation

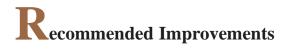
- Flood damage reduction including floodplain preservation and erosion control
- River corridor restoration and enhancement
- Open space
- Wetlands & lakes
- Riparian edge restoration with revegetation along Grange Hall Creek
- Prairie restoration and prairie wildlife habitat
- Wildlife corridors and forage areas
- Nesting sites
- Interpretive sites/education
- Outdoor classroom and stewardship projects
- Native plant restoration sites
- Wildlife viewing/bird-watching
- Tree nursery and riparian/wetland arboretum

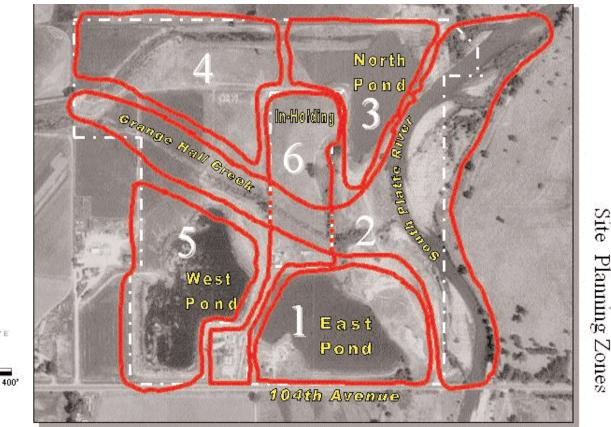
Passive Recreation (All Facilities Accessible per ADA)

- Continuation of Platte River Greenway multi-use trail with a pedestrian span over the Platte.
- Paddlecraft landing and access facilities along South Platte River
- Hiking, jogging, walking paths and loops
- Warm water fishing sculptural element and interpretive displays
- Fishing theme tot lot
- Gateway shelter with grill and picnic facilities
- Informal picnicking
- Overlooks and rest areas
- Horseback riding
- Cross county skiing
- Restroom facilities









Site Planning Zones:

- 1. East Pond/Gateway
- 2. Riparian Area (Grange Hall Creek and South Platte River
- 3. North Pond
- 4. North Sector Habitat Reclamation
- 5. West Pond
- 6. In-Holdings See also fishing enhancement plan that follows

Zones 1-6 Recommendations

Zone 1: East Pond/Gateway

Existing Conditions

Deep lake and re-graded uplands and formerly disturbed terrain with little vegetation

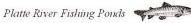
Recommended Actions

1. Re-vegetate uplands east of the lake with prairie vegetation-both native and appropriate non-native reclamation species. (County has already initiated tree planting and shortgrass seeding in this area.) 2. Create demonstration prairie interpretive area east of the east pond that addresses healthy prairie habitat, the role of catastrophic events in nature and ways humans can better live in harmony with wild lands and natural areas.

3. Provide entry drive off 104th Avenue with appropriate traffic designs to safely accommodate left turning and right turning traffic on and off 104th Avenue. Consult County traffic engineers and CDOT regarding this entry design. Work with adjacent property owners to coordinate the entry drive including a possible shared access configuration.

4. Remove existing house and provide a gravel parking lot to accommodate up to 40 cars that can later be expanded (to 100 cars) onto the adjacent nursery property to the west if acquired.

5. In appropriate location, provide an access point on the bank of the pond for Colorado Division of



Wildlife fish stocking/management vehicles and a small service boat.



6. Create a gateway shelter/pavilion with 5-6 picnic tables, a grill, and interpretive displays with warm water fishing theme. Include a "bass" thematic sculpture in the entry.

7. Install a bi-lingual user responsibility sign at the key entry point from the parking area.

8. Create fishing theme tot-lot with warm water fish climbing toys and other thematic features.

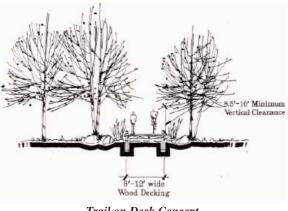
9. Provide a wheelchair accessible fishing dock directly adjacent to the accessible parking spaces. Install a submerged fish habitat structure on the lake bottom in this area to draw fish to the accessible fishing dock.

10. Provide a crusher fine fishing access path around circumference of the lake with an accessi-

ble sheltered fishing dock on the north side of the lake. Trail includes a boardwalk through wetland area at southeast corner of the lake.



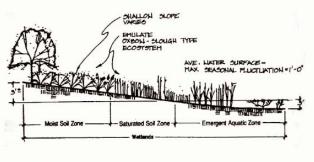
11. Provide public restroom facility near entry.



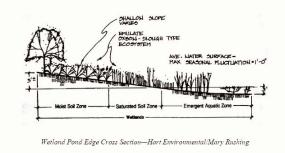
Trail on Deck Concept

12. Re-grade steep areas of the lake bank where easily accessible by public to a 6:1 +/- slope per safety standards. Install water and thin ice hazard safety signage.





Wetland Pond Edge Cross Section—Hart Environmental/Mary Rushing



13. Preserve/enhance wetland/riparian areas on west and southeast banks of the lake. Plant shade tree groupings at strategic spots along perimeter of the lake.

14. In conjunction with widening of 104th Avenue, construct a paved multi-use trail along the south edge of park linking to a cross-town regional trail along 104th Avenue. Trail will also link to the South Platte River Trail.

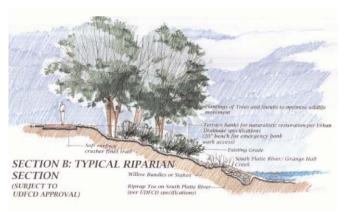
Zone 2: Riparian Area (Grange Hall Creek and South Platte River)

Existing Conditions

Channelized Grange Hall Creek with debris and some vegetation. Meandering River with some bank revetment (including tire wall) and gravel bars.

Recommended Actions

1. Layback and restore South Platte River bank with terraced slopes, stabilization and willow cot-



tonwood forest consistent with Urban Drainage and Flood Control District standards and crosssections.

2. Restore Grange Hall Creek with more natural meanders, wetlands, terraced, revegetated banks, rock drop structures and 100-to-50 foot-wide buffer zones along both banks (See Urban Drainage District design concepts and cross-sections per Bible Park in Denver).



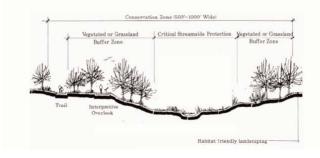
Grange Hall Creek

3. Run paved multi-use trail along the outside edge of the Grange Hall Creek buffer zone to connect with South Platte River Trail and the existing Grange Hall Creek Trail. Provide informal maintenance-access-only within the buffer zone. Create informal rest area/viewing spots at appropriate locations along the banks of the Creek.



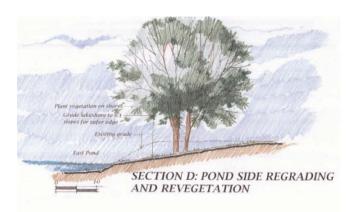
4. Renovate confluence area with cottonwood/willow habitat.

5. Replace tire wall and strengthen the riverbank between the North Lake and the South Platte River using naturalistic solutions of maximum strength, to minimize risk of breaching into the North Lake.



Riparian Edge Cross Section Concept

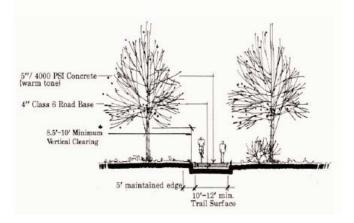
6. Continue the existing paved multi-use South Platte River Trail from its terminus at 104th with an underpass beneath 104th, then running along the west bank for several hundred feet, then crossing the river on a 220'-250' single-span pedestrian bridge, then running along the east bank above the gravel bars and skirting Bald Eagle areas.



7. Provide paddle craft boat landings just north of 104th and opposite the North Lake. Provide an overlook with shelter next to the north boat landing.

8. Pursue conservation easements to protect/enhance river bottom and expand cotton-wood/willow forests.

9. Create/maintain visual buffer using vegetation along the east bank of the river to help preserve views.



Paved Multi-Use Trail Cross Section

Zone 3: North Pond Existing Conditions

Deep pond with excellent "gold medal" quality warm water fishing. Re-graded, disturbed uplands.

Recommended Actions

1. Protect/enhance wetlands and riparian areas on west and north banks of the lake.

2. Enhance lake with underwater fishing habitat structures.

3. Plant shade tree groupings at strategic points along bank of the lake.

4. Manage lake for walk-in fishing only.



View of North Pond



5. In appropriate location, provide an access point on the bank of the pond for Colorado Division of Wildlife fish stocking/management vehicles and small service boat.

6. Provide an informal fishing dock on northeast corner of the lake.

7. Provide a sheltered viewing platform at north-west corner of the lake.

8. Provide 6'-wide crusher fine fishing access trail. Include a stub trail to the north bank of the lake.

9. Re-grade steep areas of the lake bank where easily accessible by public to a 6:1 +/- slope per safety standards.

10. Re-grade and lower riverbank. Restore and stabilize erosion using natural and natural-appearing techniques.



Zone 4: North Sector Habitat Reclamation Existing Conditions

Existing slough with wetlands, disturbed upland areas undergoing reclamation

Recommended Actions

1. Preserve/enhance wetland and riparian areas along slough. Where appropriate promote and enhance willow/cottonwood growth.

2. Protect privacy/security of farm to the north and promote open space and view preservation to

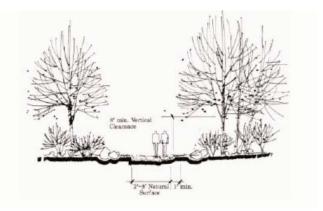
the north with a visual buffer zone.

3. Restore upland portions of this zone area with trees, shrubs, wildlife forage crops, and native grasses; and implement weed management.



North Wetland Area

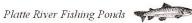
4. Design to discourage access to sensitive areas by using contours, thickets, fencing and signage. No trail access to this area.



Primitive Trail Concept

5. Create wooded/vegetated buffers between Zone 4 and Zone 5.

6. Use currently available irrigation water to promote growth of wildlife "food crops" and vegetated wildlife dispersion corridors with trees and shrubs to optimize wildlife movement. (Please see ecologists' report by Savage and Savage in the Appendix.)





SECTION F: STREAM STABILIZATION Per UDFCD (actual locations to be determined by Engineer)

Zone 5: West Pond Existing Conditions

Large shallow pond with islands, disturbed upland areas undergoing reclamation, rich fishing breeding resource in pond

Recommended Actions

1. Manage lake for walk-in and wheelchair access fishing only.

2. Provide informal fishing dock on east bank.

3. Enhance lake with underwater fishing habitat structures.

4. Plant shade tree groupings at strategic points along bank of the lake.

5. In an appropriate location, provide an access point on the bank of the pond for Colorado Division of Wildlife fish stocking/pond management vehicles and small service boat.

6. Grade steep areas of the lake bank commonly accessible to the public to a 6:1 +/- slope per safety standards.

7. Create wooded buffer area between lake and adjacent property to the west.

8. Use currently available irrigation water to promote growth of wildlife "food crops" and vegetated wildlife dispersion corridors with trees and shrubs to optimize wildlife movement.



Zone 6: In-Holdings Existing Conditions

Operating nursery, residence and agricultural lands with driveway easement across County property to the north parcel

Recommended Actions

1. When resources are available, work with nursery owner to acquire the property to use for expanded park gateway.

2. Work with north parcel owner to pursue a floodplain conservation area within 150' of either side of the centerline of Grange Hall Creek to preserve integrity of riparian zone from both a wildlife and visual standpoint.

3. Work with north parcel owner if willing to pursue a long-term acquisition of the north property.



Roster of Projects

Following are the recommended priority projects:

Key Items	Est. Cost	Priority	Lead Agency	Potential Funding Sources
Upland Grading/Restoration	\$ 100,000	First	Adams CO	Adams CO Crews
Fishing Access Improvements —basic parking, fishing docks, access paths, pond upgrades	280,000	First	Adams CO	CDOW, Adams CO
River Corridor Improvements/Acquisitions including tire wall replacement	1,897,000	First	Urban Drainage, Adams CO	Urban Drainage District*
Multi-Use Trail Construction Platte River incl. ped. bridge.	1,000,000	First	Adams CO	GOCO Trails, Urban Drainage, LWCF, Adams CO
Crusher Fine Trail (2,500 lf). Completes loop central area.	35,000	First	Adams County	Volunteers, Private Donors, County Crews
Grange Hall Creek Renovation—localized stabilization work	250,000	Second	Urban Drainage, Adams CO	Urban Drainage, Adams CO. part of larger long term Urban Drainage effort. *
Grange Hall Creek Multi-Use Trail	375,000	Second	Urban Drainage, Adams CO	GOCO Trails, Urban Drainage, LWCF, Adams CO
Rest Areas	20,000	Second	Adams CO	GOCO, Adams CO, LWCF, Private Donors
Upland Wildlife Improvements	100,000	Second	Adams County	Adams CO, Volunteers
Interpretive Displays	20,000	Second	Adams County	GOCO Parks, SCFD, Adams CO
Protect/Acquire In-Holdings	To be determined	Second	Adams County	GOCO Open Space, Adams CO Open Space
Amenities/Furnishings	250,000	Third	Adams County	GOCO Parks, Adams County
Main Shelter	300,000	Third	Adams CO	GOCO, Adams CO, LWCF, Private Donors
Large Fishing Dock	60,000	Third	Adams CO	GOCO, Adams CO, LWCF, Private Donors
Wetland Creation Enhancement	20,000	Third	Adams CO	Using site resources
West Pond Restoration (Dredge bank work)	500,000	Third	Adams CO	Adams CO, CDOW , Wetlands Reserve Program (NCRS)

* (per page E-7 Major Drainageway Planning Platte River In Adams CO. Phase B, UDFCD, Repot 2002)



Key Management Considerations

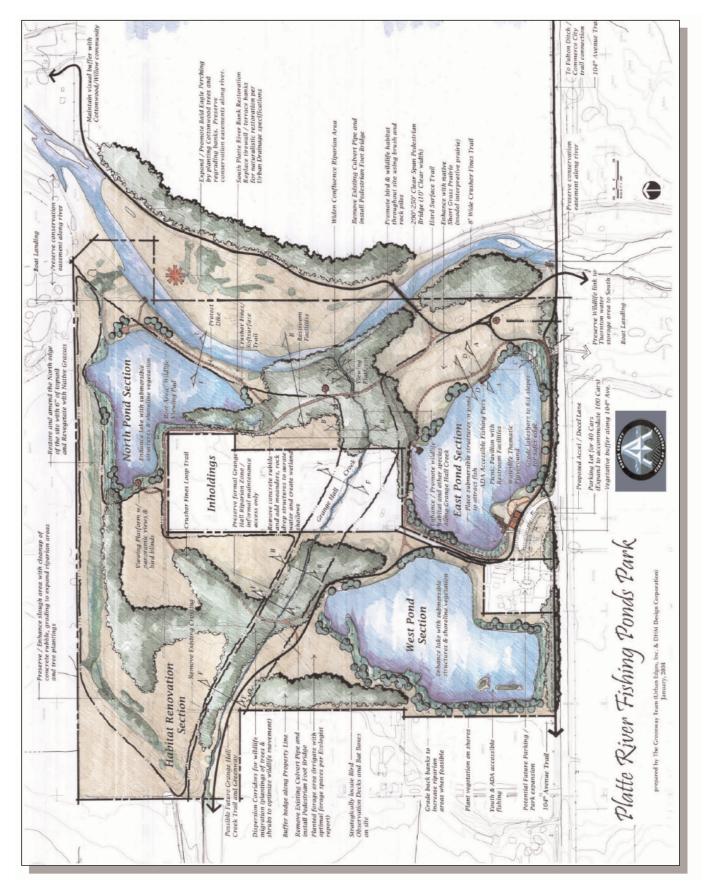
The table below lists the key management functions and anticipated annual costs. Note that existing crews and equipment will perform many of these functions. Accordingly, the actual incremental dollar cost should be significantly less.

Item	Unit Cost	Annual 125 Acres	Key Agency
Multi-Use (paved) Trail Maintenance (sweeping, litter pick-up, patrol, repair—Grange Hall, 104 th and Platte Trails through the Park—total 8,000 lf at full build out)	\$8,000/mile	\$ 12,100	Adams County∖ Urban Drainage
Crusher Fine Trail Maintenance (repair, litter pick-up, patrol— total 6,300 lf at full build out)	\$2,500/mile	\$ 2982	Adams County
Amenity Maintenance (Trailheads, parking, picnic facilities, shelters, docks)	L.S.	20,000	Adams County
Grounds Maintenance Including Patrol and Law Enforcement, Pond/Wetland Maintenance/Fish Stocking	\$150/acre	19,000	Adams County∖ DOW
Riverbank Maintenance Erosion Control	L.S.	48,000**	Urban Drainage District
Weed Management (spray, mechanical removal, bio/insect release control revegetation over a minimum of 3 years)*	\$60/acre	7,500	Adams Co/ CSU Cooperative Extension

*Source Kelly Uhing, Adams County Ray Sperger (Ranger and Commercial Pesticide Applicator) South Platte Park, Littleton, CO) ** (per page E-7 Major Drainageway Planning Platte River In Adams CO. Phase B, UDFCD, Repot 2002)









Appendix: Ecologist's Report

Savage and Savage

practical solutions for environmental problems

464 West Sumac Court Louisville, Colorado 80027-2227 303 666-7372 telephone 303 665-6808 facsimile

Observations Based on a June 2003 Visit by Michael and Edith Savage to the Platte River Fishing Lakes Park Site:

The site has desirable existing wildlife elements. The lakes, slough, South Platte River, and Grange Hall Creek all contain existing favorable wildlife habitat elements. Listed below are thoughts we had as we were walking on the site.

UPLAND AREA EAST OF SOUTHEAST POND

- Plant to native short grass prairie, xeric seed mix.
- Wildlife habitat for species and buffer between trail and lake. _

GRANGE HALL CREEK

- Improve habitat for Preble's meadow jumping mouse and other wildlife species. _
- Create a shallower slope along the banks.
- Remove or cover concrete.
- Create shallows along the creek bed. _
- Plant native grasses, forbs, trees, and shrubs along the creek banks.

SOUTH PLATTE RIVER

- Reduce steep slope along west bank to improve wildlife habitat and create larger area _ for flooding.
- Plant copses of cottonwoods in order to expand the bald eagle habitat that already exists east of the river.
- Plant boxelders and willows. _

TIRE WALL

- Remove tires and rehabilitate slope along west edge of S. Platte. _
- Reduce slope and plant as discussed in South Platte River above.

ISOLATED LAKE (FARTHEST TO THE NORTH)

- Buffer the isolated lake from the site with trees and shrubs along the south edge of the _ lake.
- Isolating this lake will help to protect the existing South Platte River riparian corridor that exists to the north.
- If possible cut, and create a more natural shoreline along the east edge of the lake. -
- Create an undulating shoreline with benches.



LAKE ALONG 104TH STREET CLOSEST TO SOUTH PLATTE

- This lake looks good, our only suggestion would be to plant grasses, forbs, shrubs, and trees along the shoreline to create wildlife habitat.

SHALLOW LAKE

- The optimal treatment for this lake would be to decrease the steep slopes and dredge the lake to minimize eutrophication.
- Plant vegetation along the shore for foraging and wildlife cover.

DISPERSION CORRIDOR CONNECTING ALL LAKES WITH GRANGE HALL CREEK

- A dispersion corridor would optimize wildlife movement on the site. Connect all of the lakes with the creek with corridors of shrubs and trees.

DISPERSION CORRIDOR BETWEEN SLOUGH AND PLANTED FORAGE AREA

- A dispersion corridor between the slough and planted forage area would create a buffer and for age area for wildlife.

PLANTED FORAGE AREA

- A forage area for wildlife (that may be irrigated) is located east of the lakes.
- Optimal forage to be planted for wildlife on the site would include serviceberry, sagebrush, oak brush, fescue, brome, bluegrass, needlegrass, wheatgrass, ricegrass, chokecherry, poplar, and rabbitbrush.
 - A specific crop could be planted or a mix of some of the species just listed.

SLOUGH

_

Remove concrete and clean up slough. Dredge out potholes and make them deeper in order to move more water. Plant copses of trees along slough for wildlife cover.

ROCK PILES AND BRUSH PILES

- Rock piles and brush piles could be located throughout the site. These would act as cover for birds and rodents.

Lith Gavage

Edith Savage Principal