

INTRODUCTION

the water supply from Pattee Creek is not abundant. roughly two and a half feet, while the other two are much shallower and often dry up when containing three shallow ponds. The main pond varies in depth from several inches to Bancroft Street, and Stephens Avenue. The land consists primarily of an open field The Children's Fish Pond Park is managed by the Missoula Parks and Recreation It covers approximately five acres and is bordered by Thirty-fourth Street,

visited by deer, muskrat, and racoon. western Montana. The ponds house numerous species of aquatic life, and the area is also many species of songbirds and waterfowl, including the Sora, a marsh bird seldom seen in willows, cottonwoods, and aspen. The park also serves as breeding and wintering grounds This park comprises a unique wetland habitat, supporting riparian vegetation such as

the park, consisting mostly of mowing the grasses several times per year. viewing, dog walking, and as a play area for children. There is little active management of to the marsh-like habitat found at the present time. The park is now mainly used for wildlife with silt, decreasing the depth and destroying the fish habitat. This decrease in depth has led main pond and stocking it with fish. Over the years, however, the ponds have gradually filled The Children's Fish Pond Park was created in the 1960's by dredging the area of the

decreasing rate of the ponds' depth. If this rate is allowed to continue, it is believed the marsh-like habitat will disappear in the near future. Concerns about the park's future have recently arisen, the most obvious being the

wildlife. Also, dogs have been frequently seen chasing and frightening birds. to the park. It is believed that children playing in the pond cause significant impacts on the printed in The Missoulian (summer, 1991) showing a child throwing a turtle brought attention Another problem concerns the disturbance of wildlife by children and dogs. A picture

plan for the park. Because of these concerns, it is believed necessary to develop a detailed management

ISSUES

extensive human developments. Most specific issues stem from this larger question. not have any management of the park, while the other side of the spectrum would see The primary issue concerns the level of development of the park. One argument is to

- developed with more traditional city park facilities, such as playgrounds and picnic tables? 1. Use of the park: Should the primary use be nature oriented, or should the park be
- eventually silt over of the ponds, or should they be left as they are? If no management is used, the ponds will Water Levels: Should management objectives include regulation of the water level
- area twice a year continue? This current method does not allow much species diversity. species, and eliminate foreign species, or should the present system of simply mowing the Flora: Should vegetation be managed to introduce and maintain indigenous
- perceived problem of wildlife disturbance encourage other species to visit it? Currently little is done to accomplish this, and there is a Fauna: Should facilities be developed to protect species that utilize the area and to
- Should accessibility be increased by improving bridges and trails:
- developed to enhance educational opportunities provided by the park? Education and Recreation: What types of facilities and/or organizations should be
- other interest groups, such schools, nature organization, or private citizens of who should conduct the enforcement, the Missoula Department of Parks and Recreation, or natural areas be enforced primarily by regulation, or by education? This leads to the question Enforcement of Objectives: Should the protection and maintenance of the park and
- development of the park will make it more of an attractive nuisance education, or physical barriers (around the ponds, for example)? It is possible that any Should the safety of children and other users be managed by regulations,
- firewood and vehicle storage, and use park land for access to their properties residents continued to be permitted. Currently several residents use park property for Encroachment: Should encroachment onto the park property by neighboring

GOALS AND OBJECTIVES

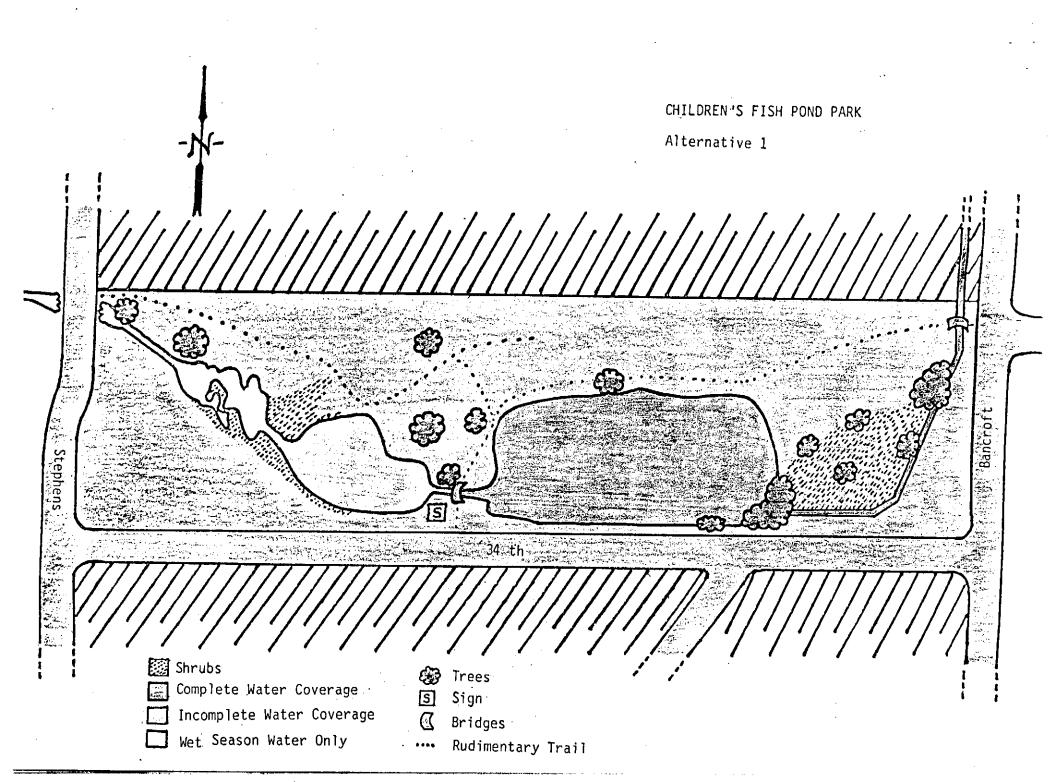
provide the public with educational and recreational opportunities focused on the marsh area. the restoration and improvement of the marsh habitat. In concordance with this goal is Specific objectives are as follows: The primary goal of this plan is to preserve the natural qualities of the park, including

- but is also visually aesthetic. The flora and fauna capable of existing in the urban setting will be determined in an environmental assessment. Within five years the park will support a riparian habitat that is primarily natural
- the riparian habitat. This objective will be attained within five years. 12 Visitors to the park will increase their knowledge, awareness, and appreciation of
- fauna and do not detract from the natural aesthetic setting of the park will be emphasized. Within five years recreational activities that do not negatively impact the flora and
- prominently visible from a distance greater than one block. Any man-made facilities installed to meet the management objectives will not be

ALTERNATIVES

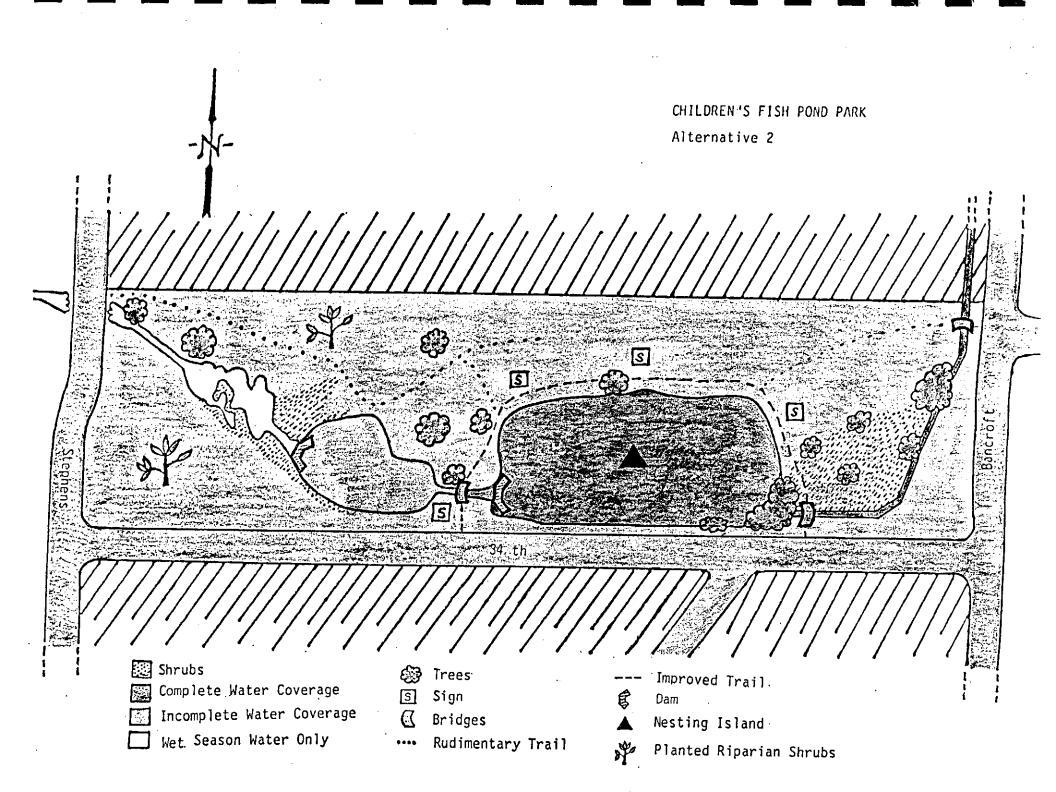
ALTERNATIVE #1.

- Water Level: Make no efforts to alter the current water flow.
- Ņ Flora: Continue to mow the area twice a year to provide weed control and reduce fire
- Fauna: Make no efforts to increase protection of the existing species or to introduce new
- park, spanning the gap between the main and secondary ponds. bridges at the east end of the park over Pattee Creek, and near the south boundary of the Access: Make no efforts to change the present state of the trails. Build rudimentary foot
- 5. Education and Recreation: Install one sign briefly describing the riparian habitat.
- 6. Rules: Make no efforts to change present rules or enforcement of them.
- 7. Safety: Make no efforts to change safety levels.
- Encroachment: Make no efforts to eliminate encroachment onto park lands.



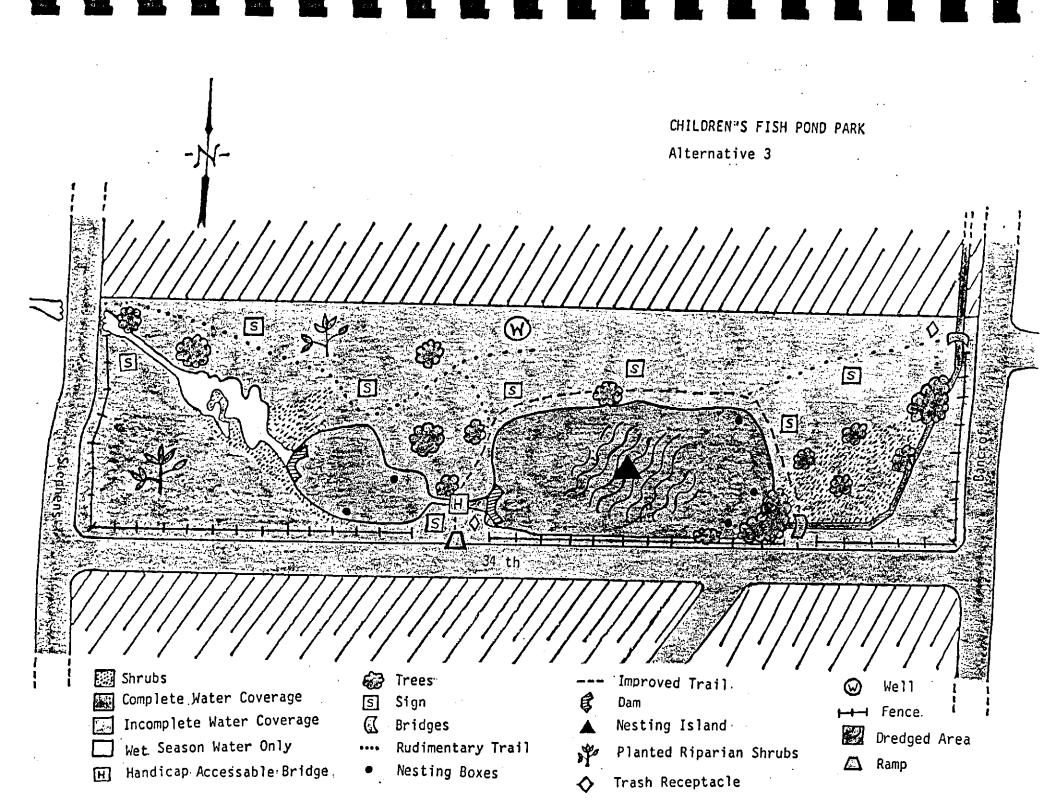
ALTERNATIVE #2.

- enlarge second pond. Water Level: Build a dam at foot of main pond to hold more water. Build a dam to
- to mow the rest of park twice a year. Plant a small number of indigenous species on the borders of the ponds. Continue
- ယ Fauna: Create a small island in the center of the main pond as a nesting habitat
- at both the head and foot of the main pond. accessible to cyclists at the east end of the park over Pattee Creek, and at the south boundary 4 Access: Widen and level the trail around the main pond. Build bridges that are more
- vegetation, and wildlife. describing marsh habitat and different aspects of it, including aquatic vegetation, land Education and Recreation: Install four signs along the trail around the main pond
- Recreation rules. Organize a volunteer litter clean-up group. Rules: Install a sign stating the park's name and the standard Missoula Parks and
- 7. Safety: Make no efforts to change safety levels.
- Encroachment: Make no efforts to eliminate encroachment onto park lands.



ALTERNATIVE #3.

- regulated flow of water. Dig a well and install a pump in order to provide the ponds with an easily Dredge ponds of silt to deepen.
- to a riparian habitat. Flora: Eliminate all exotic species, and make extensive efforts to introduce species typical
- install nesting boxes along the ponds. Create a small island in the center of the main island as a nesting habitat, and
- secondary pond. Install a handicapped accessible ramp on the street curb in front of this Build a handicapped accessible bridge over the span between the main pond and the east end of the park over Pattee Creek and at the south side at the head of the main pond. to make it handicapped accessible. Access: Widen and level the main trail around the pond, covering it with crushed gravel Build bridges more easily accessible to cyclists on the
- wooden benches along the trail around the main pond. general habitat, and four giving more detailed information about selected species. Education and Recreation: Install eight signs around the park, with four describing the Install two
- delineate the area as a special resource, encouraging the public to treat it with respect. on the south side of the park, and one each on the east and west ends. This will help Recreation rules. Install two trash receptacles and have hired personnel periodically patrol for Rules: Install a sign stating the name of the park and the standard Missoula Parks and Build a four-foot high double beam wooden fence around the area, with two entrances
- 1. Safety: Make no efforts to change safety levels.
- park land. Build the entranceways to the fence too small for vehicle entry. Encroachment: Require all neighboring residents to remove any and all possessions from



ALTERNATIVE #4.

Any combination of the above alternatives.

PREFERRED ALTERNATIVE

The preferred alternative involves a combination of alternatives one through three.

providing the optimal habitat for the flora and fauna, and will also allow for flood control. dam will be adjustable, allowing varying rates of water flow. This adjustability will help in main pond will be constructed. This will allow more water to be contained in the pond. In managing the water level, the main aspect of the park, a dam at the foot of the

increasing the depth and delaying the silting-over of the pond. The center of the main pond will be dredged to remove one to two feet of silt, thereby

vegetation to resume growth. Mowing will only continue on the permanently dry areas, thereby allowing the native Flora will be introduced by planting riparian shrubs and trees in the marshy areas

protection of birds from disturbance by dogs and visitors. habitation. The presence of additional riparian fauna will be encouraged by the introduction A small island will be created in the center of the main pond to provide Nesting boxes will be installed in the main pond to encourage Wood Duck

and end on the east side of the main pond. The trail will be widened and leveled in order to "main loop" trail bordering the west, north, and east sides of the main pond. This main loop juncture between the main pond and the secondary pond. This bridge will be part of the side at the head of the main pond. A handicapped accessible bridge will be built over the bicyclists will be constructed on the east side of the park over Pattee Creek and on the south believed that foot traffic will continue to sufficiently delineate those paths. make it handicapped accessible. No alterations will be made to the other trails, as it is will start on the curbside directly in front of the bridge with a handicapped accessible ramp, Access to the park will be improved in several ways. A bridges easily accessible to

habitat. Two wooden benches will be installed along the main loop, allowing relaxed viewing interpretive signs along the main loop, briefly describing different components of the riparian Educational and recreational opportunities will be increased by installing four

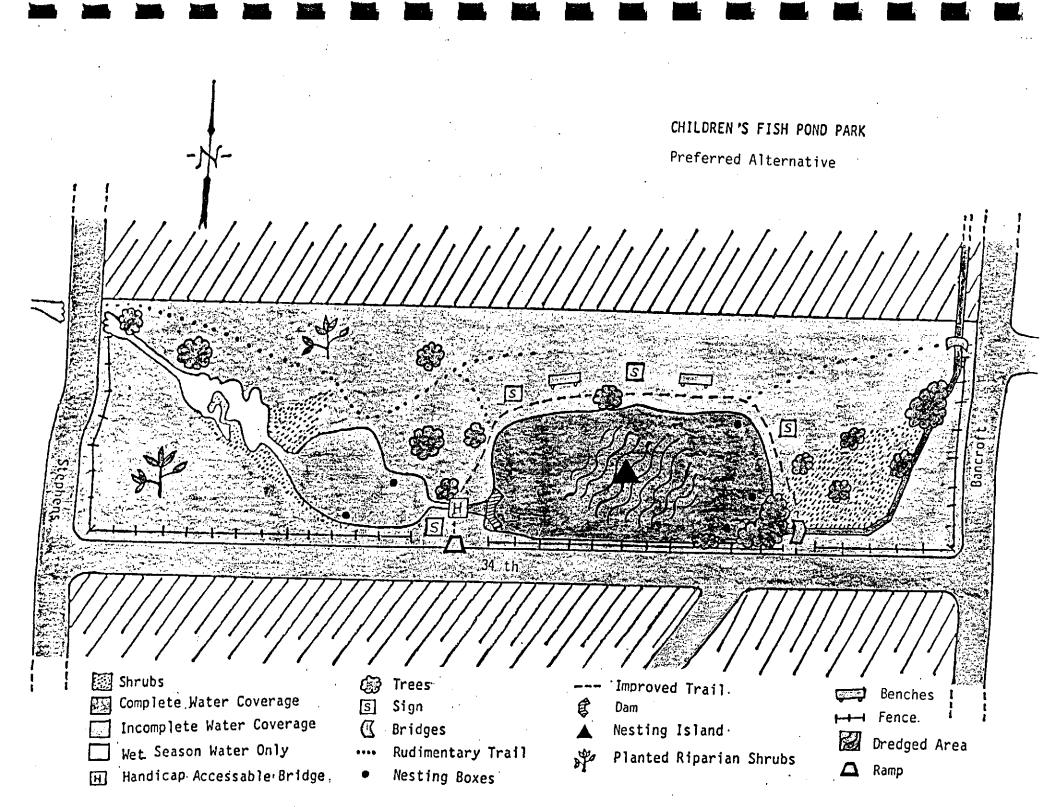
of the pond areas.

Parks and Recreation Department regulations. the rules and regulations of the park. These rules will encompass the standard Missoula A wooden sign will be placed at the beginning of the main loop, stating the name and

Posted at each entranceway will be small signs asking visitors to leash their dogs. as a special area, thereby increasing the parks aesthetic pleasure and the respect given it. will help eliminate the unwanted trails in the park. It will also noticeably delineate the park bridge, the south end at the start and end of the main loop trail, and the west end. This fence east, south, and west borders of the park. Entranceways will be at the east end in front of the A three- to four-foot high double beam wooden fence will be constructed around the

will also be required to remove any and all possessions from park property within the first neighboring residents from using the park as an access point to their yards. Those residents when necessary for park maintenance. This restriction of public vehicles will eliminate the These barriers will be easily removable by authorized personnel, permitting vehicle entry The entranceways of the fence will have barriers making them inaccessible to vehicles.

installed at the beginning of the main trail, and paid personnel will periodically remove litter. after that period the amount of litter is deemed to be a problem, a trash receptacle will be Control of litter will be continued by unorganized volunteers for the first two years.



DECISION CRITERIA

primarily nature based. Pond park was found to unique in these aspects, as no other parks within several miles are inventoried to determine how many other areas possessed these qualities. The Children's Fish and educational opportunities. The parks near the Children's Fish Pond park were then examining the current and potential presence of wildlife, unusual vegetation, and recreational the perceived need for such an area. An inventory of the resource was first conducted The decision criteria used to develop the preferred alternative stemmed mainly from

natural qualities of the park. fifteen residents who live adjacent to the park. Most expressed interest in preserving the such a park in the area. The planners then conducted an informal telephone survey, polling Parks Dept. expressed strong interest in keeping the park nature-based, citing the value of Using these criteria of naturalness, the planners determined the public's felt need Both the Missoula Parks and Recreation Dept. and the state Fish Wildlife and

to send representatives. Montana Fish Wildlife and Parks Dept., and the Audubon Society were contacted and invited In addition, about fifteen other special interest groups, such as the Parks and Recreation Dept, Approximately 150 invitations were issued on October 23 to residences bordering the park. Following the telephone interviews, a public meeting was held on October 30, 1991. Sixteen people attended the meeting.

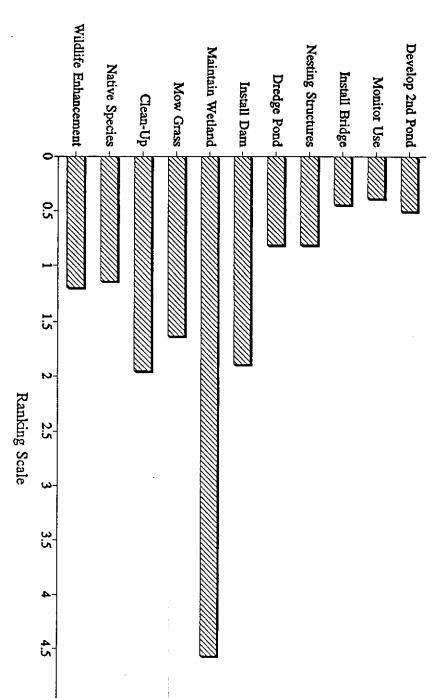
shown in Appendix B. Each individual was then asked to rank their top five ideas, with natural and to preserve the riparian habitat for wildlife were most important which were representative of the group as a whole. By far, the desires to keep the park ranked ideas is shown on page 16. The graph respresents ranked suggestions for the park "one" being of the lowest importance, and "five" the highest. A bar-graph of the highest was asked, and all ideas were listed on a sheet of poster board. A list of these suggestions is This meeting was structured by the nominal group process, which involves input from The question "What facilities or projects should be developed in the park?"

a whole. It is believed that those who felt strongly about keeping the park natural were more use, but also that some form of management is needed to do so. It was also recognized that consensus was reached that not only should the park be kept as a natural setting for wildlife the attendants at the meeting may not have been representative of the surrounding residents as likely to attend than those who did not have strong opinions Although there were many different suggestions for how to reach these goals, a

presently not easily accessible to walkers (because of lack of bridges) and those wanting to sit in the development of the preferred alternative. Secondarily, but also playing a strong role for such areas and also help eliminate the current disturbances of wildlife and vegetation. Increased education about the park and its habitat could enhance the respect and appreciation and relax in the park. Also, the educational focus of the park was thought to be lacking was the desire to enhance recreational and educational opportunities in the park. The park is This goal of preserving and enhancing the riparian habitat was the primary influence

funding available for managing the park. Also considered in developing the preferred alternative was the minimal amount of

Rank Order of Park Issues



FIVE-YEAR BUDGET

CAPITAL EXPENDITURES

TOTAL CAPITAL EXPENDITURES	Fence	Tree planting	Island in center of pond	Bird nesting boxes	Handicapped ramp	Bridges	Dam	Interpretive signs
\$20,000	\$3,500	\$360	\$350	\$150	\$2,000	\$4,250	\$2,890	\$6,500

OPERATING AND MAINTENANCE COSTS

TOTAL OPERATING COSTS	Rules and regulations sign	Tree evaluation	Dredging main pond	Benches	Trails	General maintenance/ repair	Litter clean-up	Mowing
\$8,290	\$1,175	\$200	\$800	\$604	\$500	\$3,471	\$540	\$6,500

TOTAL FIVE-YEAR EXPENDITURES \$28,290

PLAN IMPLEMENTATION

YEAR-ONE EXPENDITURES:

TOTAL CAPITAL	Small bridge	Tree planting	Build dam	Capital
\$4,000	\$750	\$360	\$2,890	
TOTAL OPERATING \$1,500	Trail improvement \$500	Dredging pond	Mowing	Operating
\$1,500	\$500	\$800	\$200	

TOTAL YEAR-ONE EXPENDITURES \$4,500

YEAR-TWO EXPENDITURES:

TOTAL CAPITAL \$	Island in pond	Nesting boxes	Handicapped bridge \$3,500	Capital
\$4,000	<u>\$350</u>	\$150		
TOTAL OPERATING \$1,575	Regulations sign \$1,175	Tree evaluation	Mowing	Operating
1,575	1,175	\$200	\$200	

TOTAL YEAR-TWO EXPENDITURES \$5,575

YEAR-THREE EXPENDITURES:

Capital Interpretive signs \$2,000 Handicapped ramp \$2,000 TOTAL CAPITAL \$4,000	\$2,000 \$2,000 \$4,000	Operating Mowing Litter clean-up Maint./ repair	\$20(\$18(\$67(
Interpretive signs	\$2,000	Mowing	\$200
Handicapped ramp	\$2,000	Litter clean-up	\$180
TOTAL CAPITAL	\$4,000	Maint./ repair	\$670
		Benches	\$604
		TOTAL OPERATING \$1,654	\$1,654

TOTAL YEAR-THREE EXPENDITURES \$5,654

YEAR-FOUR EXPENDITURES:

	TOTAL CAPITAL	Replacement signs	Fence	Capital
	\$4,000	\$500	\$3,500	
TOTAL OPERATING \$1,737	Maint./repair \$1,357	Litter clean-up	Mowing	Operating
\$1,737	\$1,357	\$180	\$200	

TOTAL YEAR-FOUR EXPENDITURES

\$5,737

YEAR-FIVE EXPENDITURES:

\$1,824	TOTAL OPERATING \$1,824		
\$1,444	Maint./repair \$1,444		
\$180	Litter clean-up	\$4,000	TOTAL CAPITAL
\$200	Mowing	\$4,000	Replacement signs \$4,000
	Operating		Capital

TOTAL YEAR-FIVE EXPENDITURES \$5,824

MONITORING

flora and fauna introduction and preservation, trail erosion, facility deterioration, and litter monitored to ensure they are meeting the stated objectives. These aspects include water level, Throughout and following the plan implementation, certain aspects of the park must be

assessment and the determination of who owns the water rights of Pattee Creek best preserve the riparian habitat. These levels will be determined through an environmental By regulating the flow of water through the dam, water levels will be maintained to

weeds that would detract from the visual aesthetics of the park. The survival of the planted environmental assessment. The vegetation will also be monitored to reduce the overgrowth of existing. The appropriate species of flora and fauna will also be determined during the trees will also be monitored. The water levels will highly influence the species of flora and fauna capable of

the users. Also, the main trail will be monitored to ensure it remains passable to wheelchairs The trails will be monitored to determine if their layout matches the travel patterns of

purchasing of replacement signs. vandalism or weathering. The facilities (fence, signs, bridges, dam) will be monitored for deterioration from Funds are allocated for repair of these structures and the

installed and personnel will be paid to clean up litter, starting in the third year The litter levels will be monitored, and if deemed necessary, trash receptacles will be

APPENDICES

Appendix A.

Literature Cited

Appendix B.

Suggestions from Public Meeting

Appendix C.

List of Birds Sighted in Park

Appendix D.

Key Contacts

A. LITERATURE CITED

Farran, John Jr. 1988. Western Birds. McGraw-Hill Book Co., New York, NY.

Mitsch, William J. and James G. Gosselink. 1986. Wetlands. Van Nostrand and Reinhold Inc., New York, NY.

Rutledge, Albert J. 1971. Anatomy of a Park. McGraw-Hill Book Co., New York, NY.

В. SUGGESTIONS FROM PUBLIC MEETING, OCT. 30, 1991

Create an additional pond on the west end of the park Install a log or island in the main pond for ducks and turtles

Build wood duck nests

Prevent flooding of the park and neighboring residences

Make trails more accessible to bicycles

Build bridges across culverts and between ponds

Clean up litter

Control weeds

Build a covered picnic area

Deepen main pond by dredging

Start educational programs with schools

Make at least one trail handicapped accessible

Reduce algae in ponds

Increase water flow in summer

Install interpretive signs

Keep dogs on leashes

Continue mowing grasses

Manage to maintain natural wetlands

Leave as is

Keep maintenance costs low

Keep development to a minimum

Monitor condition of wetlands

Introduce native species of flora

Introduce plants to increase food supply of ducks

Create natural protective barrier around ponds

Manage brush and grass to be aesthetically pleasing

Leave trails in present condition

Create access road

Build playground equipment

Divert more water into pond

Build dams

Protect wildlife

Stock ponds with fish

Determine who owns water rights

C. LIST OF BIRDS SIGHTED IN PARK

Bird Name

Presence

Habits

Breeding only Breeding, wintering	Possible Confirmed	Orange-crowned Warbler (Vermivora celata) Pine Siskin (Carduelis pinus)
Wintering	Confirmed	Northern Shrike (Lanius excubitor)
Breeding only	Possible	(Stelgidopteryx serripennis)
		Northern Rough-winged Swallow
Breeding, wintering	Confirmed	Northern Pygmy Owl (Glaucidium gnoma)
Breeding, wintering	Confirmed	Northern Oriole (Icterus galbula)
Breeding, wintering	Confirmed	Northern Flicker (Colaptes auratus)
Breeding only	Possible	Nashville Warbler (Vermivora ruficapilla)
Breeding only	Possible	Mourning Dove (Zenaida macroura)
Breeding, wintering	Possible	Mountain Chickadee (Parus gambeli)
Breeding, wintering	Possible	Merlin (Falco columbarius)
Breeding, wintering	Confirmed	Mallard (Anas platyrhynchos)
Breeding only	Possible	MacGillivray's Warbler (Oporornis tolmiei)
Breeding only	Confirmed	Lazuli Bunting (Passerina amoena)
Breeding, wintering	Possible	Killdeer (Charadrius vociferus)
Breeding only	Confirmed	House Wren (Troglodytes aedon)
Breeding, wintering	Confirmed	House Finch (Carpodacus mexicanus)
Breeding, wintering	Possible	Hairy Woodpecker (Picoides villosus)
Breeding, wintering	Possible	Great Horned Owl (Bubo virginianus)
Breeding, wintering	Confirmed	Golden-crowned Kinglet (Regulus satrapa)
Breeding only	Possible	Field Sparrow (Spizella pusilla)
Breeding, wintering	Confirmed	Evening Grosbeak (Coccothraustes vespertinus)
Breeding, wintering	Confirmed	European Starling (Sturnus vulgaris)
Breeding only	Possible	Eastern Kingbird (Tyrannus tyrannus)
Breeding, wintering	Confirmed	Downy Woodpecker (Picoides pubescens)
Breeding only	Possible	Common Yellowthroat (Geothlypis trichas)
		ng, wintering
Breedi	Possible	Common Snipe (Gallinago gallinago)
Habits	Presence	Bird name

Bird Name	<u>Presence</u>	Habits
Red-eyed Vireo (Vireo olivaceus)	Possible	Breeding only
Red-tailed Hawk (Buteo jamaicensis)	Confirmed	Breeding, wintering
Red-winged Blackbird (Agelaius phoeniceus)	Confirmed	Breeding, wintering
Ring-necked Pheasant (Phasianus colchicus)	Possible	Breeding, wintering
Rufous Hummingbird (Selasphorous rufus)	Possible	Breeding only
Rufous-sided Towhee (Pipilo erythrophthalmus)	Possible	Breeding, wintering
Savanna Sparrow (Passerculus sandwichensis)	Possible	Breeding only
Sharp-shinned Hawk (Accepiter striatus)	Confirmed	Breeding, wintering
Solitary Vireo (Vireo solitarius)	Possible	Breeding only
Song Sparrow (Melospiza melodia)	Confirmed	Breeding, wintering
Sora (Porana carolina)	Confirmed	Breeding only
Tree Swallow (Tachycineta bicolor)	Possible	Breeding only
Varied Thrush (Ixoreus naevius)	Possible	Breeding, wintering
Vaux's Swift (Chaetura vauxi)	Confirmed	Breeding only
Violet-green Swallow (Tachycineta thalassina)	Possible	Breeding only
Warlbing Vireo (Vireo gilvus)	Possible	Breeding only
Western Kingbird (Tyrannus verticalis)	Possible	Breeding only
Western Meadowlark (Sturnella neglecta)	Confirmed	Breeding, wintering
Western Tanager (Piranga ludoviciana)	Possible	Breeding only
Western WoodPewee (Contopus sordidulus)	Confirmed	Breeding only
White-crowned Sparrow (Zonotrichia leucophrys)	Confirmed	Breeding only
Wilson's Warbler (Wilsonia pusilla)	Confirmed	Breeding only
Yellow Warbler (Dendroica petechia)	Confirmed	Breeding only
Yellow-rumped Warbler (Dendroica coronata)	Confirmed	Breeding, wintering

D. KEY CONTACTS

Audubon Society	Audubon Society	
Bruce Bender	Missoula Public Works Dept.	523-4623
Connie Carson	Humane Society	549-3934
Rich Clough	Montana Fish, Wildlife, and Parks Dept.	542-5500
Iank Fisher	Defenders of Wildlife	549-0761
3yron Lamphear		721-7704
3ob O'Connor	Missoula City Parks Board	549-1258
Deborah Ritchie	Watchable Wildlife	
ue Reel	Watchable Wildlife	
Richard Sheridan	University of Montana, Botany Dept.	243-3176
im VanFossen	Missoula Dept. of Parks and Recreation	721-7275
Joug Waters	Missoula Dept. of Parks and Recreation	721-7275
huck Wright	Missoula County Surveying	721-5700