

# Cheney Lake Park

## MASTER PLAN DEVELOPMENT

### Master Plan Report June 2003



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## Executive Summary

The Municipality of Anchorage created a Master Plan for Cheney Lake Park in 1982. In the twenty years since the plan's acceptance, the park has evolved, and in order to provide for the future development and management of the park, the Municipality of Anchorage secured the services of Land Design North to produce this updated Cheney Lake Park Master Plan. Within a framework of community consensus, this document presents an overall vision that will provide for the logical growth and aesthetic integrity of Cheney Lake Park for the next twenty years and potentially beyond.

Much of this Master Plan effort was driven by public process. In general, the people that were heard within this process spoke of a park that was close to their hearts. Whether comments were from residents that live beside the lake, or from users that come from further afield, all felt the park was a natural gem. The ability to come to an urban park, and recreate in a natural area with low development was what appealed to most everyone. While people had interest in protecting natural features and wildlife, conserving views, developing areas for quiet

contemplation and providing for park activities, there was little interest in any development that meant larger changes to the park, or to the user base to which it appeals.

The overall recommendations of this Master Plan are that management strategies be implemented for the park, specifically the usage of Limits of Acceptable Change, and that a development plan be adopted. The management strategies are related to such issues as shoreline protection and erosion control, water quality, habitat quality and maintenance of the trail system. Development recommendations include such things as the identification of the southern end of the park as the main usage area and location for future park amenities, identification of smaller amenity areas around the park, and the development of design guidelines for site furnishings.

This Master Plan is intended to help to provide a future for Cheney Lake Park where it remains close to the hearts of those involved within this Master Plan process, and a future where it becomes close to the hearts of many others.

Cheney Lake Park is located in east Anchorage, approximately 5 miles from the central business district. It is a forty-five acre park, of which approximately thirty-four acres are water surface. The park is located east of Baxter/Beaver Road, south of East 16<sup>th</sup> Avenue, north of Colgate Drive and west of the end of Foothill Drive (**Figure 1**). Single and multi-family residential units surround the park.

Cheney Lake is a former gravel extraction site that (since closure in the 1960's) has been inundated with water from ground fed springs, precipitation and storm drainage and run-off from approximately 100 acres of residential land. Historic lake elevations have been generally around 207 feet above mean sea level (MSL) (Montgomery Watson, 1998), but had risen to between 209 and 210 ft. MSL as of 1998. Road and drainage improvements returned this level to where it now stands at 207 ft. MSL. The maximum depth is believed to occur at an elevation of approximately 192 ft. MSL.

Within the 1985 Anchorage Parks, Greenbelt and Recreation Facility Plan document, Cheney Lake Park is referred to as a both a Community Park and a Large Urban Park (Large Urban Park within the Parkland Inventory and a Community Park within the context of the Muldoon Park Planning Area). According to the 1985 Parks, Recreation and Open Space plan, residents of Anchorage should have a Community Park within one to two miles of their residence. Cheney Lake Park serves between 17,000 and 50,000 residents within this one to two mile coverage (**Figure 1**). Five main community councils exist within this outer two-mile radius: Northeast,

Muldoon, Scenic Park, University and Russian Jack, with fractional coverage of Airport Heights and Mountain View.

Cheney Lake Park is well connected to adjacent neighborhoods, and into the larger matrix of Anchorage parks and trails. Local park connections include formal paths and entrances, as well as more informal access from people's yards. The main off-street trail connection is to the west through Nunaka Valley Park, and there are numerous on-street connections to the north, south, and west. The other close connection to off-street trails is via Chester Creek to the south of Cheney Lake Park.

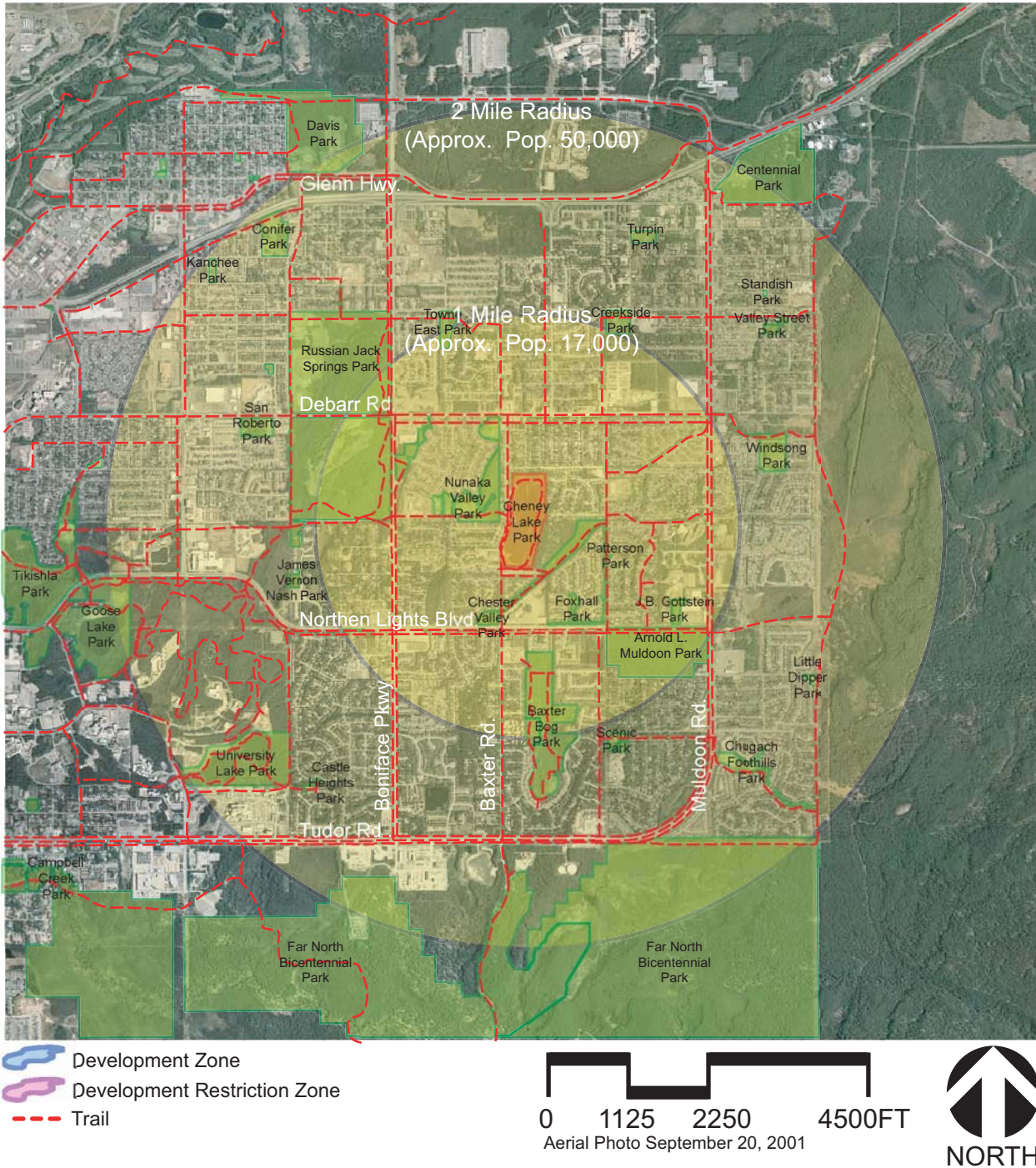
A summary of conditions on the site is presented in **Figure 2**. Existing facilities are minimal, and consist of a parking lot adjacent to Beaver/Baxter Road, a children's play area in the southwest corner of the site, two information boards, benches, and numerous types of paths (varying from multi-use gravel paths to small compacted dirt trails).

This document serves as a summary of the public process, and a synthesis of this process into a Master Plan that serves as a guide both for future development and management. This initially takes the form of a synopsis of the needs and desires of the community in regards to how the park needs to grow. Weighing all of these opinions and ideas within the sphere of the needs of the larger community of Anchorage produces a set of actions. Some of these actions are required for the basic ecological health of the park, others provide options for how the park develops, and others try to deal with controversy in an equitable manner.



## Introduction

**Figure 1 - Regional Context**



**LARGE URBAN PARKS**  
 Large Urban parks are designed to serve residents from several communities. These parks, which are generally over 100 acres in size, should have a mixture of natural beauty and developed facilities. Extensive wooded areas are often part of large urban parks, lending a sense of the natural landscape to the urban setting. The parks are located within a thirty minute drive of

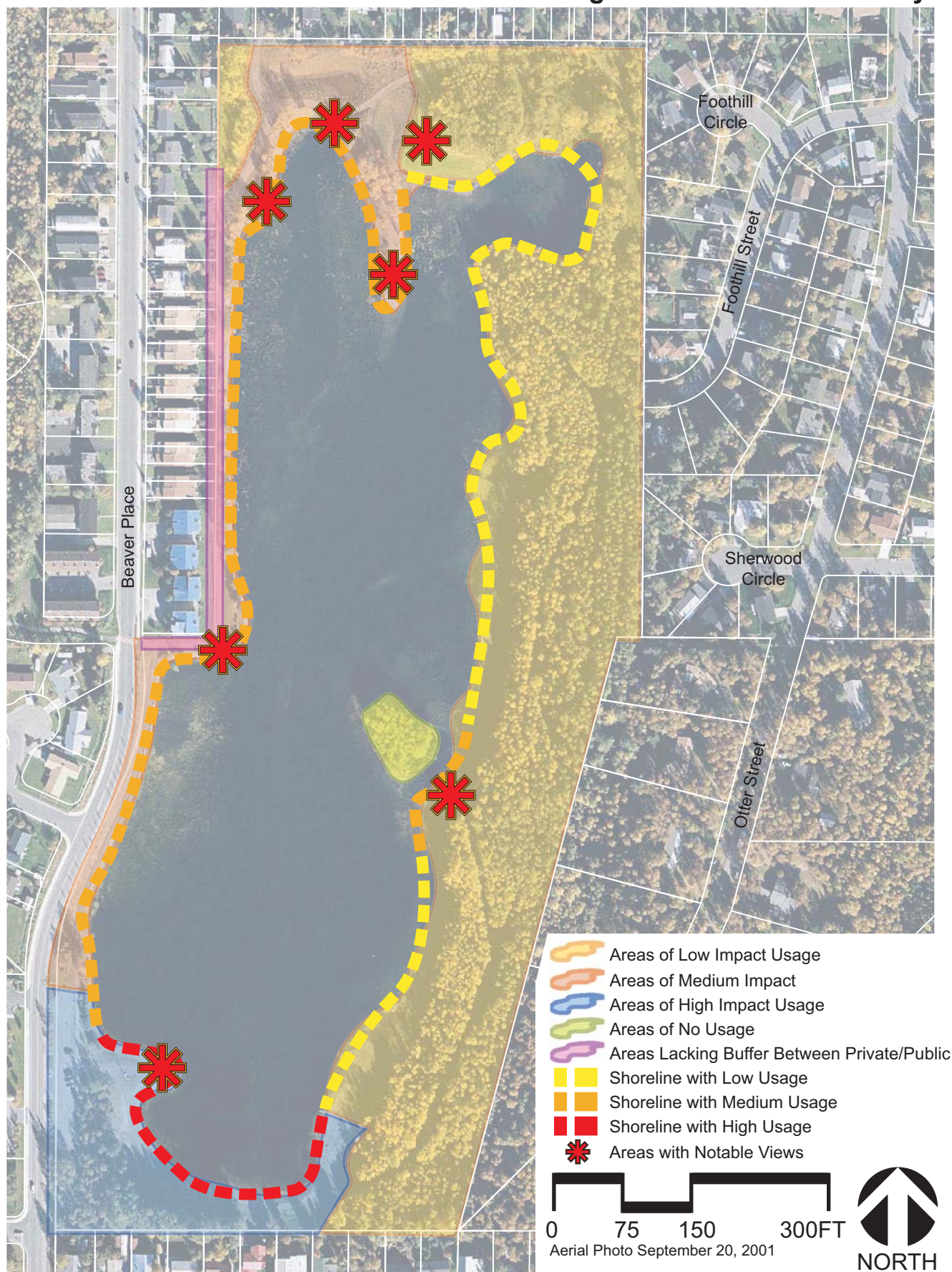
most city residents. Developed facilities are usually those which take advantage of the beauty, terrain and water bodies of the park. The types of facilities often found in large urban parks include golf courses, a picnic area, trails, a nature center, a day camp, boating/swimming areas, and sports. (Municipality of Anchorage, 1985, pp.10)

**COMMUNITY PARKS**

Community parks provide space for those recreational activities which typically cannot be accommodated within a neighborhood park. These parks, which are usually 20 to 100 acres in size,



Figure 2 - General Site Analysis



## Summary of Public Process

The update to the Cheney Lake Community Park Master Plan has provided an open public forum that included the following public consultation opportunities:

- Citizens Advisory Group (CAG) organized from all are broken down into four main subject areas: environmental issues, access issues, facilities and improvements, and activities. These aspects are treated to cover both development and management issues where necessary.

### a) Environmental Issues

Environmental issues pertain to the characteristics of the park that make it a valuable natural area, providing ecological value within an urban setting.

#### i) Fish Species

The reduction in stocked species (rainbow trout and chinook salmon) has been linked to the presence of Northern Pike within the lake. This also has effects upon the presence of some bird species. Consensus was that the Northern Pike be removed, and the lake be restocked. If it becomes apparent that shoreline vegetation is being adversely impacted by access, then consideration should be given to limiting fishing access to certain. (Refer to Section 6 – Limits of Acceptable Change)

#### ii) Habitat

Similar to the concern regarding potential habitat damage through fishing access, general habitat quality needs to be monitored to ensure that it is not adversely impacted by park usage. At the minimum, this relates to wildlife and the protection of such areas as nesting habitat. All essential wildlife habitat should be protected from impacts, and the degree of protection should relate to the importance of that

habitat to the species in question. Existing areas of erosion on the site should be revegetated. This may include the need for regrading areas, installation of structures to retain soil, limitation of access, and planting from a palette of various species.

#### iii) Monitoring

Due to Cheney Lake being one of the few larger bodies of water within Anchorage, and being subject to the pressures of the urban environment, a monitoring regime should be implemented to develop baseline information for future park decisions that will affect, or be affected by, the quality of the water. This information should include water chemistry (including nutrients, potential toxins, dissolved oxygen and other 'normally' measured information), and lake level.

#### iv) Lake Level

With the alteration of the lake level in 1999, there is concern regarding how the reduced lake level has affected the quality of the park. The public's main concerns with the lake were the observed increased presence of algae and aquatic vegetation species during the summer months. A study should determine whether it is feasible to raise the level of the lake within the current abilities of the drainage system. It was also the desire of the community to investigate the feasibility of dredging the lake to increase water depth. Prior to any action that would change the lake level, it should be established as to whether the water depth is the major contributing factor to the increased presence of algae and aquatic vegetation species.

#### b) Access Issues

Access issues pertain to the ease of access to and within the park, and the use of the park as a portal to the greater trails and open space system of Anchorage.



## Summary of Public Process

### i) Trails

The current trail system provides excellent connection and circulation within the park, with a hierarchy of trails that provides for a multitude of needs and recreation types. The trail system should be upgraded to reduce seasonal problems by ensuring that drainage and grading provide a stable surface not susceptible wet conditions. Any trail upgrades or future work should provide for the requirements of ADA accessibility where at all possible. Trails should be monitored for needed maintenance and upkeep to deal with trail widening and the development of social trails that could create undesirable impacts. (Refer to Section 6 – Limits of Acceptable Change)

### ii) Overlooks and Boardwalks

In natural areas (mainly the northern and eastern areas of the park), decking and other non-trail pedestrian surfacing should be limited to areas where the impact of park users has the potential to create habitat damage. In such areas, boardwalks, decking and/or overlooks should only be implemented where there is a need to protect natural systems from user impacts.

In areas where park user impacts are the highest, and there is a reduced need for maintaining habitat integrity (mainly western and southern areas of the park), boardwalks, overlooks and other surfacing should be employed for aesthetic purposes) ease of access, and erosion control.

### iii) Pedestrian Connections

There are concerns regarding the eastern right of way connections into the park. All access points to Cheney Lake Park should have clear ownership and dedication, and be designed to allow safe access into the park (ADA accessible where appropriate). One main regional connection that needs to be developed is between the southeast of the park and the Chester Creek

Greenway and its paved trail to the east.

### iv) Water Access

The main point for water access to Cheney Lake should remain at the southern end of the park. It is also advisable that an access point be provided along the western edge for local users of the park, so that erosion pressure along the bank can be reduced. Residential steps, docks, or other non-park implemented facilities along the lake edge should not be allowed.

### v) Parking Area

The majority of people felt that parking for the site is adequate.

## c) Facilities and Improvements

Facilities and improvements pertain to the quality of existing site amenities, and what future development may be required to ensure that the park meets the needs of its users.

### i) Site Furniture

Benches and picnic tables should be provided at user areas and rest stops. Style and manufacturer of benches should be consistent throughout the park (refer to section 6 - Design Guidelines).

### ii) Playground

The current playground needs to be repaired and upgraded to meet playground and safety standards. Costs should be examined to determine whether complete replacement of a structure is more economical in the long-term in comparison to the repair and upgrade of an existing structure.

### iii) Shelter

There is currently no desire for the provision of a permanent or temporary shelter within the park. Within the planning for the park, space should

## Summary of Public Process

be dedicated to the provision of a structure should this ever become a desire, whether temporary, seasonal or permanent. The idea for a winter warming hut potentially combined with a concession boat house should only be considered if use continues to grow, and such development is merited.

### iv) Restroom

A screened surround should be installed for the seasonal portable toilet within the park. This should be developed adjacent to the parking area, in the vicinity of where the portable toilet is currently placed. As with all park development, care should be taken to ensure user safety and allow for easy surveillance without blind spots where people might conceal themselves.

### d) Activities

Activities pertain to the opportunities for recreation within the park, and the accompanying management or development issues.

### i) Paddleboating

Paddleboating on the lake provides revenue for Parks & Recreation (currently 15% of concession revenues), and a recreational service is provided to the public. The concession has been operated according to past agreements, claims have been dealt with properly, and there has been an identified safety advantage to having a lifeguard and surveillance of the lake.

It is the recommendation that paddleboating should be allowed at Cheney Lake Park, with a new paddleboat agreement developed based upon previous agreements (See **Appendix B**). Recommendations for change of this agreement would include enlarging the existing no paddleboat zone to include a buffer along the eastern shoreline, and an enlarged area to the northeast (see **Figure 11** in **Appendix B**). As well, a limit for

the maximum number of paddleboats operating on the lake should be developed based upon the number that can operate upon the lake without adverse effects upon habitat, wildlife or the activities of other park users. This number may change over time if conditions in the park change. (Refer to Section 6 – Limits of Acceptable Change).

### ii) Skiing

Existing park trails provide for the needs of users for skiing. There is some interest that ski trails be set on a non-regular basis within the park.

### iii) Skating

Existing skating facilities provide for the current needs of skating. There is some interest in a larger area of cleared ice and for lighting of the expansion.

### iv) Interpretation

Some desire for interpretive facilities was expressed. The forms that this might take would need to be examined within the context of future opportunities. Initial opportunities for interpretation could enhance efforts for wildlife and habitat protection and erosion control by educating the public about such activities.

### v) Wayfinding signage

There is currently little interest in signage beyond the installation of a park map at the park entrance that shows trails and usage areas. Should it be desired in the future, it is recommended that all entrances to the park be marked to show their presence, and wayfinding signage be employed within the park where it might be useful for finding destinations (i.e. the trail entrance that connects to Chester Creek). See **Figure 9A** for a character sketch of signage.



Summary of Public Process

**e) Basic Assumptions**

**i) Community park**

The park is a community park. Community parks are designated as serving a larger cross-section of the Anchorage population than smaller neighborhood parks. This designation can have a large effect upon what is deemed appropriate for the development of a park.

**ii) Natural amenity**

The desire of the community is that Cheney Lake Park retain, protect and complement its natural features. This is supported first of all as being the over-riding desire of the community. Secondly, the historical usage of the park has been for its trails, undeveloped spaces and playground. Lastly, the configuration of the land around the lake, existing topography, and some existing uses, preclude the development needs of more active recreation options (i.e. sports fields), and these options are provided for at other parks in the area. Possessing a lake, quality habitat, and an established trail system, Cheney Lake Park provides a unique experience that is not replicated in the near vicinity. This summary acts as a good synopsis of the Desired Future Conditions (DFC) which are discussed in reference to Limits of Acceptable Change later in this report.

**iii) Public vs. private**

The privacy and desires of residents adjacent to the park need to be balanced with the needs of the park users. Siting of public facilities should consider adjacent residential patterns and respect private property. Concentrating development efforts at the south and north of the park should reduce unnecessary conflicts between residents and park users. Determination of the appropriateness of facilities within the park will need to carefully balance the desires of the individual with the needs of the community. If development within an area of concern is deemed appropriate, steps should be taken to mitigate effects on residents. Conversely, residents should not treat the park as an extension of their property. No personal development within the park should be allowed. Any desired alterations need to be achieved through the proper park planning and development process.

**f) Issues Outside of Master Plan Scope**

**i) Baxter Rd./Beaver Place**

Citizens voiced concerns with the roadway adjacent to the park. Specific issues include: speeding, a desire for lights at the pedestrian crossing, and the safety of the intersection north of the parking lot.

## Master Plan

The public process identified the need for a Master Plan that provided both for the growth of the park through a development plan, but also for the upkeep and maintenance of the park through a management plan.

This section provides the refinement of these two plans, and detailed discussion of the elements that each contains. Each of these sections (management and development) identifies fundamental issues or items, develops associated action items to address these issues, and places these within a time frame for initiation.

### a) Development Plan

As is shown in **Figure 3**, the park is divided into three different types of use: development zones, development restriction zones, and natural zones. Development zones illustrate the areas where the community felt development was appropriate. The extent and types of development are further described within this section. Development restriction zones are areas where there are potential conflicts between residential and park uses. It is recommended that development be avoided in these areas unless potential conflicts can be mitigated. Natural zones are the areas in the park that have higher habitat quality and upon which the park's identity and character are reliant.

A summary of the development plan is presented in **Table 1**, concisely listing topics, items, actions and time frames.

### i) South Development Area

The southern area of the site (**Figure 4**) has been identified as the most logical location for the most intensive development. This selection is due to its past uses, access and the amount of area open to development without the need to impact high quality habitat.

Development of this area would

logically be phased, progressing at a rate that meets the needs of the community into the future. As Anchorage continues to grow, it is possible that increased usership in the future will create pressures on the park that need to be addressed in order to lessen negative impacts. This is the location at which this impact can be best provided for and absorbed.

Initial improvements to this area include addressing erosion issues, and providing for aesthetics. It is recommended that site furniture be upgraded to meet design guidelines, that portions of the area be revegetated to reduce the amount of open ground, and that plantings be added for aesthetic appeal. It is also important to ensure that the site be designed to ADA standards in order to create a space usable by all in an easy and pleasurable fashion. One aspect of this is creating an easier access into and out of the playground from within the park, where there is currently a steep hill. See **Figure 5A** for an illustration of how this area might look.

The next logical stage would be incorporation of harder surfaces such as concrete, pavers or boardwalk. In addition to improving aesthetics and the user areas, this would also act to reduce the erosion pressures on the shoreline and adjacent vegetated banks. Depending upon the design and available funding, these improvements could begin to shape the area into a more defined park center. Opportunities could include the creation of planting beds, separated areas for different user functions and gathering sizes, and improved water access. There is also the opportunity for incorporating the playground into the shoreline area through better connection, and the utilization of similar materials and construction techniques. See **Figure 5B** for an illustration of how this area might look.

**Table 1:** Development issues, actions and time frames.

Issue	Action	Time Frame
Water Access	a) Provide more developed access point at southern end	a) Medium term
	b) Provide access point at western edge	b) Medium term
Pedestrian Connections	a) Develop connection to Chester Creek from southeast of park	a) Long term
Trails	a) Upgrade paths for proper drainage	a) Short term
	b) Realign western path to allow better buffering of residential units and alleviate steep slopes to lake	b) Medium to long term
Restroom	a) Build surround for portable toilet	a) Medium term
Signage	a) Provide park entry kiosk	a) Short term
	b) Develop wayfinding signage	b) Medium term
Skating	a) Improve lighting for enlarges skating area	a) Long term
Playground	a) Repair, upgrade and replace as necessary to meet playground safety requirements	a) Short term
South Development Area	a) Repair/prevent erosion	a) Short term
	b) Provide additional planting	b) Short term (continuing)
	c) Replace site furniture as per guidelines	c) Medium term
	d) Develop user area as per description/illustrations	d) Medium to long term
	e) Enhance connection to playground	e) Medium term
Northwest Amenity Area (west of peninsula)	a) Repair/prevent erosion	a) Short term
	b) Provide site furniture	b) Medium term
	c) Develop user area as per description/illustrations	c) Medium to long term
North Amenity Area (tip of peninsula)	a) Repair/prevent erosion	a) Short term
	b) Provide site furniture	b) Medium term
	c) Develop user area as per description/illustrations	c) Medium to long term
East Amenity Area (east of island)	a) Repair/prevent erosion	a) Short term
	b) Provide site furniture	b) Medium term
	c) Develop user area as per description/illustrations	c) Medium to long term
Site Amenities	a) Provide benches and litter bins at key points along trail	a) Medium term
Planting	a) Planting as required for erosion control	a) Short term
	b) Provide buffer planting to delineate residences from the park	b) Short to medium term
	c) Provide ornamental plantings for aesthetics in the southern development area	c) Medium to long term



## Master Plan

A final stage would be further refinement of the area. This could include upgrading the materials used, incorporating site elements such as seat walls to provide seating and to help define planting beds, development of a small dock for increasing water accessibility, and the incorporating an area for a seasonal structure to be erected.

Overall, the materials used and the development of this area should be done in a fashion that meets the needs of a high usage area, especially in regards to eliminating erosion of surfaces, damage to any vegetation, and damage to the materials that are used in construction. Plantings should be used for both screening where necessary, and more importantly, for aesthetics. Interaction with the water is an important feature of this park, so some development along the shoreline is essential to allow for a number of ways of utilizing the water (i.e. boating access, interpretation, contemplation). This should also be done in a manner where activity conflicts are reduced (i.e. fishing should be separated from other recreational activities).

The paddleboat concession on the lake needs to be incorporated into the development of the Southern Development Area. There are certain needs inherent to this activity (i.e. water access, paddleboat observation, etc) that need to be considered to ensure that conflicts are minimized. Within provision of facilities for paddleboating, there also lies the opportunity to develop a park amenity for other users, during and after hours of operation. See **Appendix B** for materials relevant to the paddle boating concession.

### ii) Northwest, Peninsula and East Amenity Areas

Amenity areas are locations where benches, picnic tables, litter bins and

harder surfacing may be grouped in some combination. These areas should provide a variety of options for usage, individual contemplation, viewing opportunities and family picnics. Construction methods and material types should be chosen to reflect anticipated levels of usage, and the ensuing pressures on the natural habitat. For example, pavers or concrete may be chosen for an area where a picnic table is placed, whereas an area of ADA accessible gravel surfacing may be all that is required around a bench. Delineation of these spaces with surfacing, planting and other methods will hopefully contain activities and reduce the impacts to surrounding vegetation. Efforts should be made to buffer the amenities when close to residential properties.

The amenity areas are chosen so as to provide locations where existing conditions allow for development without adverse impacts on the park, and also to provide areas with a variety of character.

#### 1) East Amenity Area

The East Amenity Area has a character reflective of the eastern half of the park (see **Figure 6A**). Surrounded by a more mature landscape, the area provides a shaded space surrounded by forest, with views of the lake to the northwest and southwest. The existing bank in this area is prone to erosion, so the area should be regraded to reduce erosion potential, or a boardwalk/deck should be erected. Seating should be placed here, with surfacing to delineate the area and limit adverse impact to adjacent habitat.

Access to the island should also be examined. If it is possible to further discourage people from crossing over to the island (especially with reduced water levels), thought should be given to deepening the channel that divides the island from the land, and/or

removing more shoreline to extend the distance. Being the only area of the park where habitat is truly isolated, any efforts to maintain or increase this isolation are merited.

### 2) Peninsula Amenity Area

The Peninsula Amenity Area would be similar to the Northwest Amenity Area, except that it provides more of a water experience, being surrounded by the lake. The built area should provide an area of boardwalk/deck to reduce erosion on the peninsula, and overall treatment of the area should allow for revegetation.

### 3) Northwest Amenity Area

The intent of the Northwest Amenity Area is to provide a place with the character of more open, regenerating forest that makes use of the excellent views to the southeast (see **Figure 6B**). Development should be limited to a few benches, an area of paving, and plantings complimentary to the view and to act as screening from the path and residential units.

### ii) Development Restriction Zone

Development should be restricted along the northwestern edge of the site, where the trail is adjacent to residential property lines. Improvements should only be made relative to the trail, shoreline protection and planting. Restricting the placement of other park amenities from this area should have negligible impact on park use, as other park areas with fewer potential conflicts are better suited for amenities.

The main item of improvement for this area is a realignment of the trail. Doing so would increase buffering between the trail and the property lines, and increase the aesthetics of this area. By lowering the path where possible, a small bank could be created that helps to define property lines. Altering the alignment of the path to a more

sinuous line would also add interest, and provide additional areas where there is potential to plant next to the properties. In tandem with these changes, the slope of the lake bank should be examined and altered to reduce erosion and access to the water should be improved. Stairs and a ramp for canoes/kayaks could be provided to ensure safe access to the water without eroding the shoreline.

Revegetation, and planting in general, should be provided to supplement buffering between public and private lands, to frame and develop views, and to ensure shoreline prevention from erosion.

### iii) General Trail Issues

While the existing trail system provides the desired amount of routes and access, some changes need to be made. The most important one is to upgrade trails to ensure that they drain properly. This is essential to ensure seasonal trail surface consistency. Developing the trail that connects Cheney Lake Park to the Chester Creek Greenway into a formal trail from its existing social path is also important as a regional connection.

Development of new trails is not currently anticipated, but should usage of the park result in the expansion of the trail network or deterioration of trails, trail closure or improvement should be considered. (Refer to Section 6 – Limits of Acceptable Change)

For various example of trail sections and their relation to adjacent land, see **Figures 7A, 7B and 9B**.

### iv) General Habitat Issues

It is the overall desire of the community to maintain the existing flora and fauna of the park, and to protect and improve it where necessary. Interpretation of the Master Plan can provide two management areas in regard to habitat.

## Master Plan

The western and southern sides of the park have a higher level of usage, and correspondingly, the habitat values for these areas will be lower. In order to protect a basic level of habitat integrity, the design of these areas will need to anticipate and provide for the pressures of usage. The northern and eastern sides of the park have habitat that is generally of high quality, or in the case of the recently disturbed areas around the detention pond, recovering. Human usage of these areas is lower, and of a transitional nature so impacts are generally of a linear nature along the paths. Any areas that have, or develop, higher usage confined to a particular area, will need to be examined for determine the appropriate design to reduce any impacts.

Evidence of erosion is a good indicator of habitat quality. All areas that currently show erosion should be treated to remove the signs of erosion, and prevent further erosion. This can be done through limiting access and allowing natural regeneration and/or immediate replanting, changing the grade of such areas to reduce the tendency to erode, or developing options such as boardwalk, areas of paving, and/or terracing. Each area should be examined to determine the cause of erosion, and the solution weighed on the merits of how well it deals with the problem and how it is affected by usage needs. (Refer to Section 6 – Limits of Acceptable Change)

### v) Plantings

In addition to the planting required for erosion control and habitat function, there is a desire for buffer planting, ornamental plantings for aesthetics, and general revegetation. It is recommended that only native species be utilized within the majority of the

park. Non-native species may be desired for aesthetic reasons within the southern development area of the park. This is a logical area for them, and has the added benefit of being an area easily accessed for the increased maintenance that non-native species may sometimes need (i.e. beds of annual and/or perennial species, and the required pruning and maintenance of flowering species).

No non-native species should be utilized that have the potential to escape from their original planting area (i.e. invasive). It is crucial that no introduced species have the opportunity to compete with the native species present in the park. It is especially important that no non-native aquatic species be introduced. Any riparian or aquatic plantings, or material introduced within 50 feet of the ordinary high water mark of the lake, must be guaranteed to be free from weed or non-native species.

Should any non-native aquatic species be found within the lake, or other non-native species be found within the natural areas of the site, immediate action should be taken to remove them in a manner that prohibits their future presence.

### b) Management Plan

Much of the management plan has been discussed in previous sections. **Table 2** provides a summary of these issues, actions and time frames for implementation.



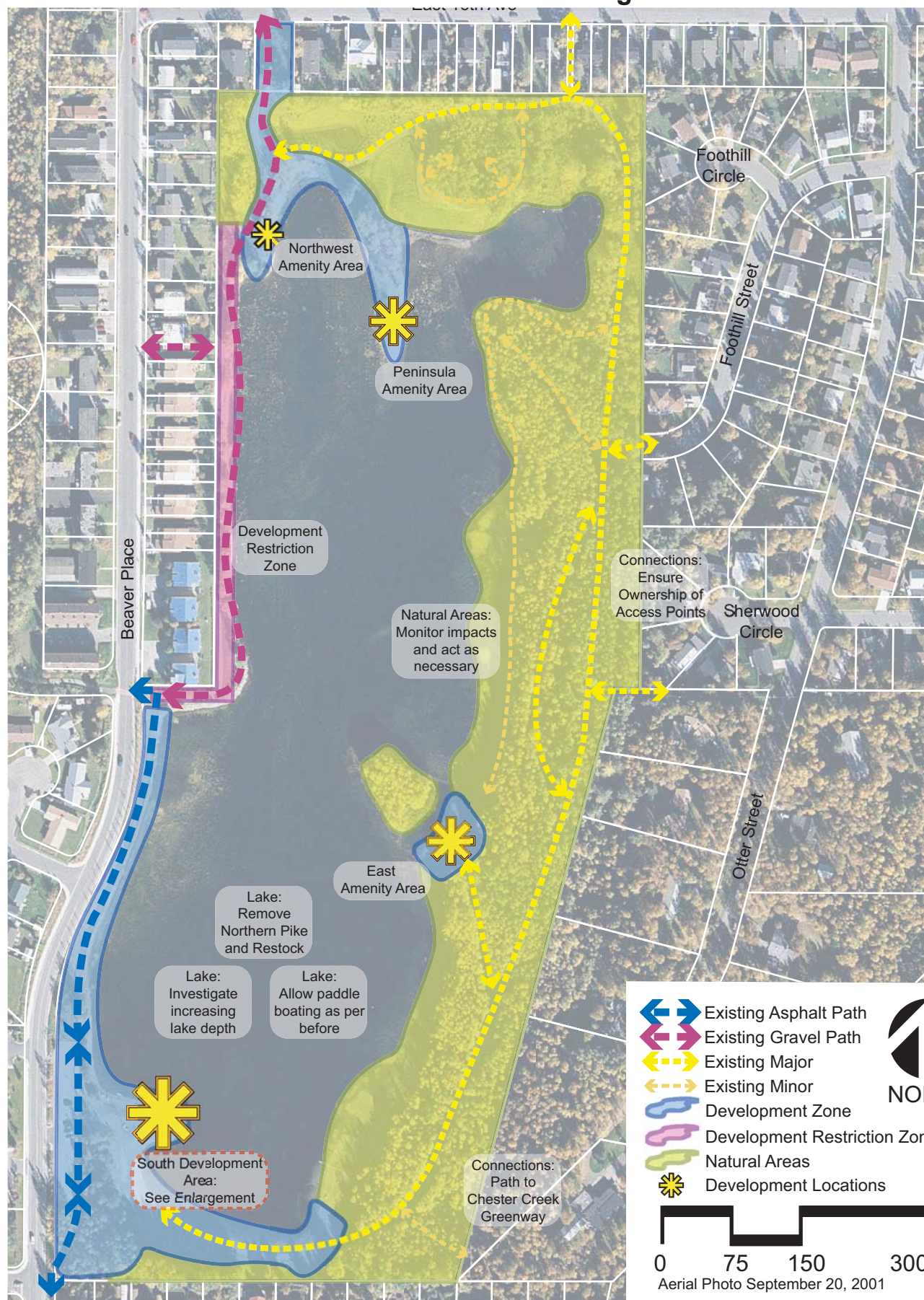
**Table 2:** Management issues, actions and time frames.

<b>Issue</b>	<b>Action</b>	<b>Time Frame</b>
Habitat	a) Provide erosion repair/prevention b) Limit access to critical wildlife habitat	a) Short term (continuing) b) Short term (continuing)
Fish	a) Remove Northern Pike b) Re-stock c) Monitor shoreline degeneration and limit access if required	a) Short term b) Short term (continuing) c) Short term (continuing)
Monitoring	a) Develop monitoring program	a) Short term (continuing)
Lake Level	a) Examine options to increase lake depth	a) Short term
Litter	a) Provide litter bins and regular trash removal	a) Short term (continuing)
Paddleboating	a) Allow usage as per previous agreements and levels b) Monitor to ensure adherence to agreement	a) Short term (continuing) b) Short term (continuing)
Limits of Acceptable Change	a) Develop limits of acceptable change for any management/development issue where actions may need to react to future conditions (see Section 6 – Limits of Acceptable Change)	a) Same time frame as item investigated

**Master Plan**

**Figure 3 - Overall Illustrated Master Plan**

Figure ? - Overall Master Plan





Master Plan

Figure 4 - South Development Area

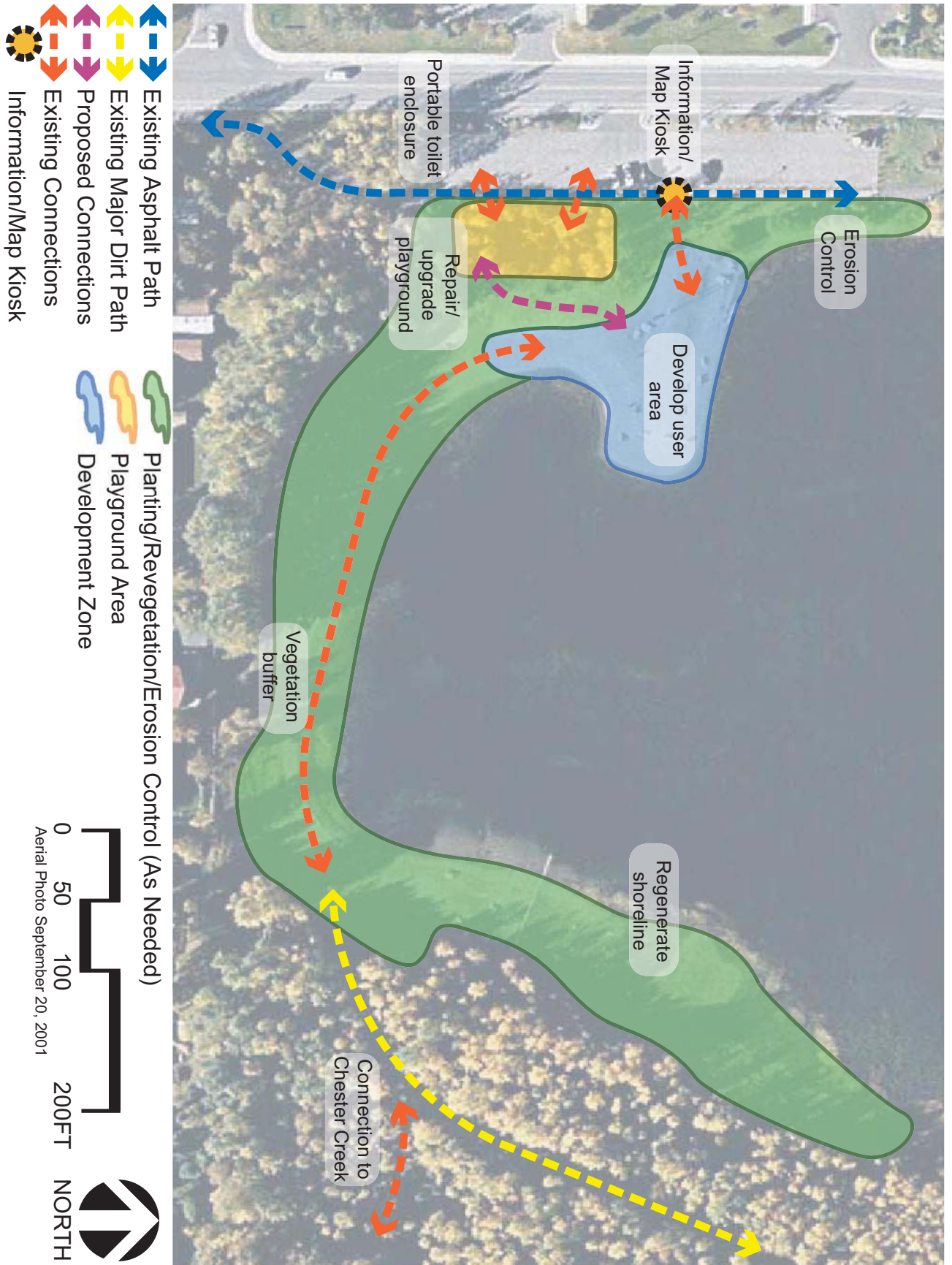
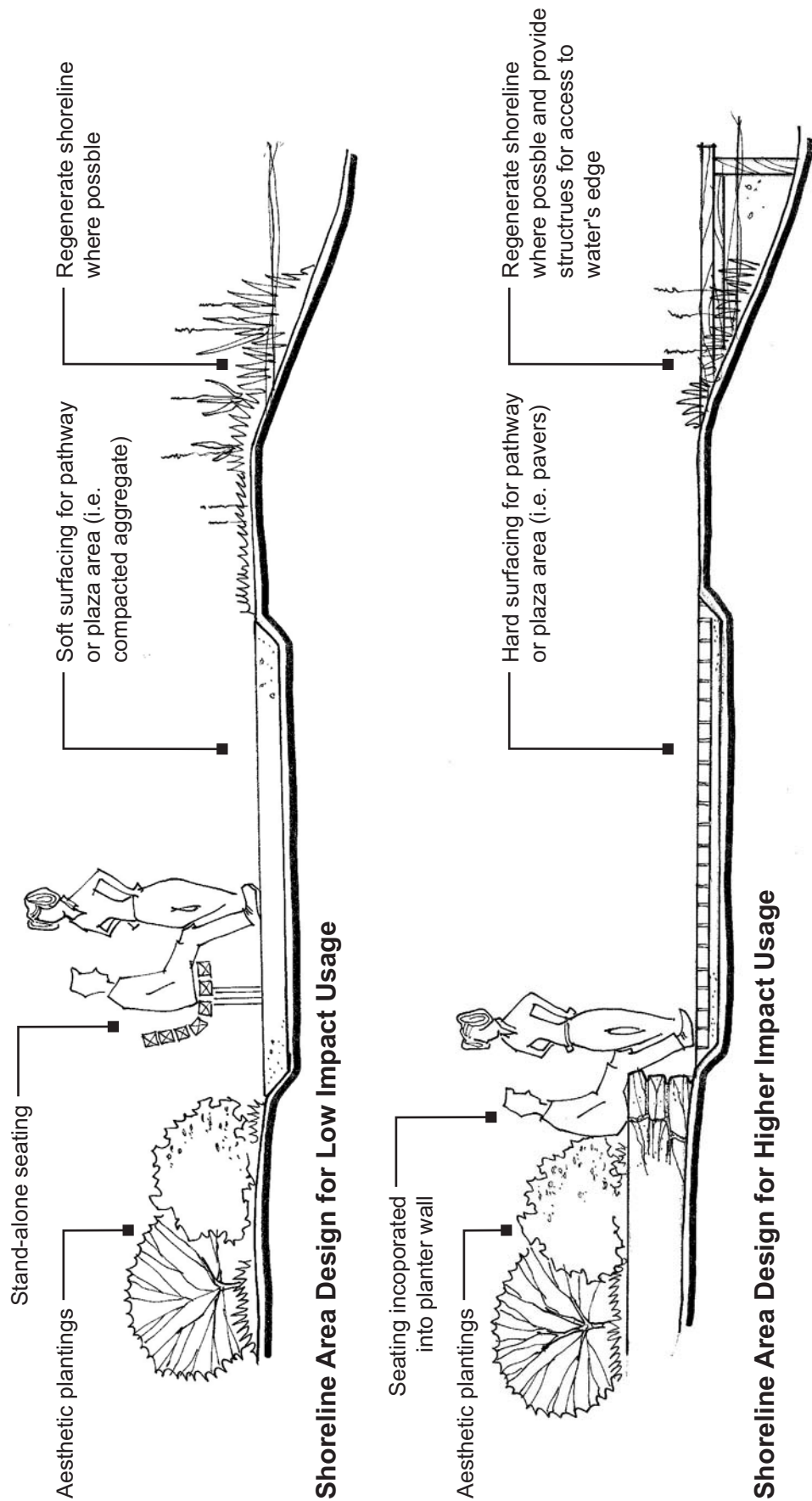


Figure 5 - South Development Area Character Sketches



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Figure 6 - Amenity Area Character Sketches

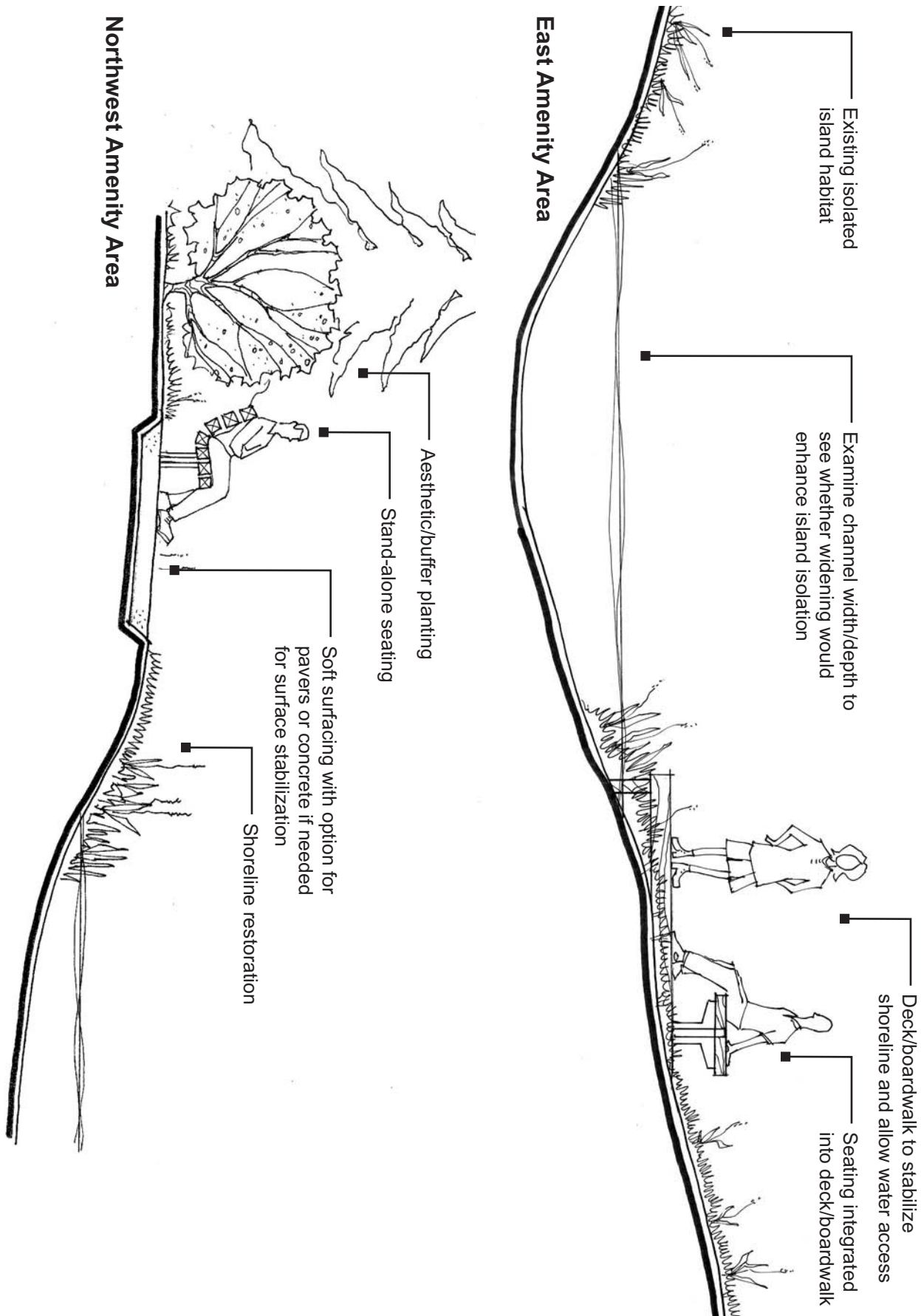
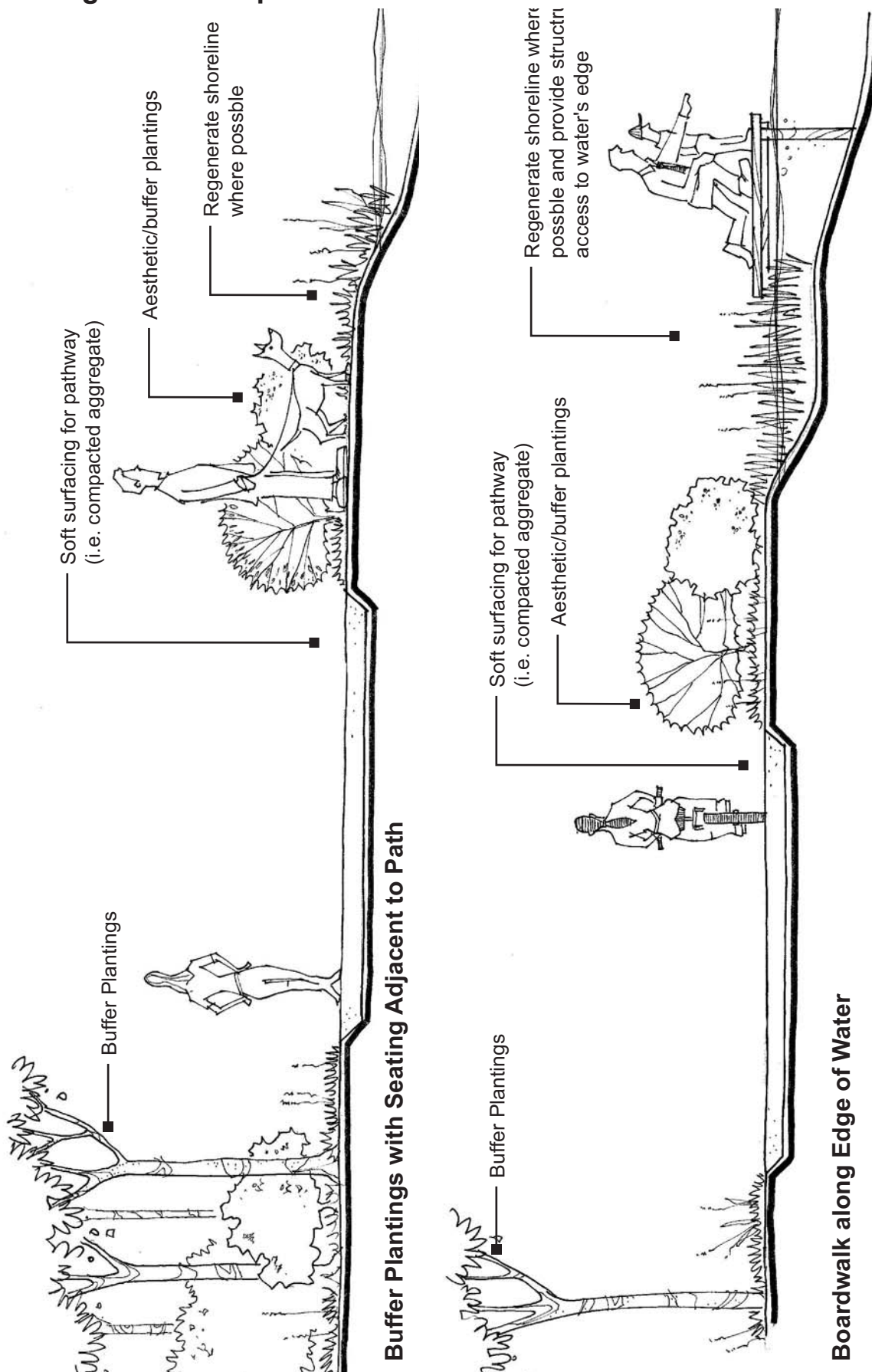


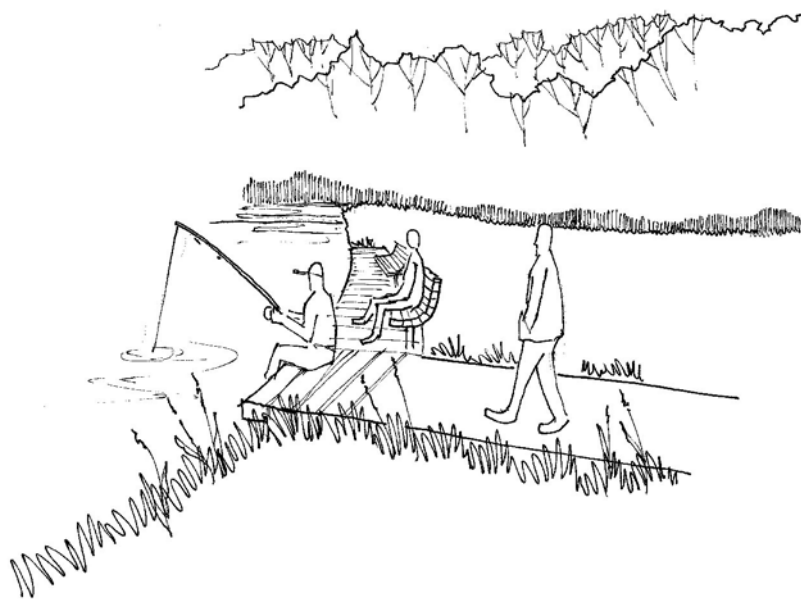


Figure 7 - Composite Character Sketches - Western Trail and Shoreline

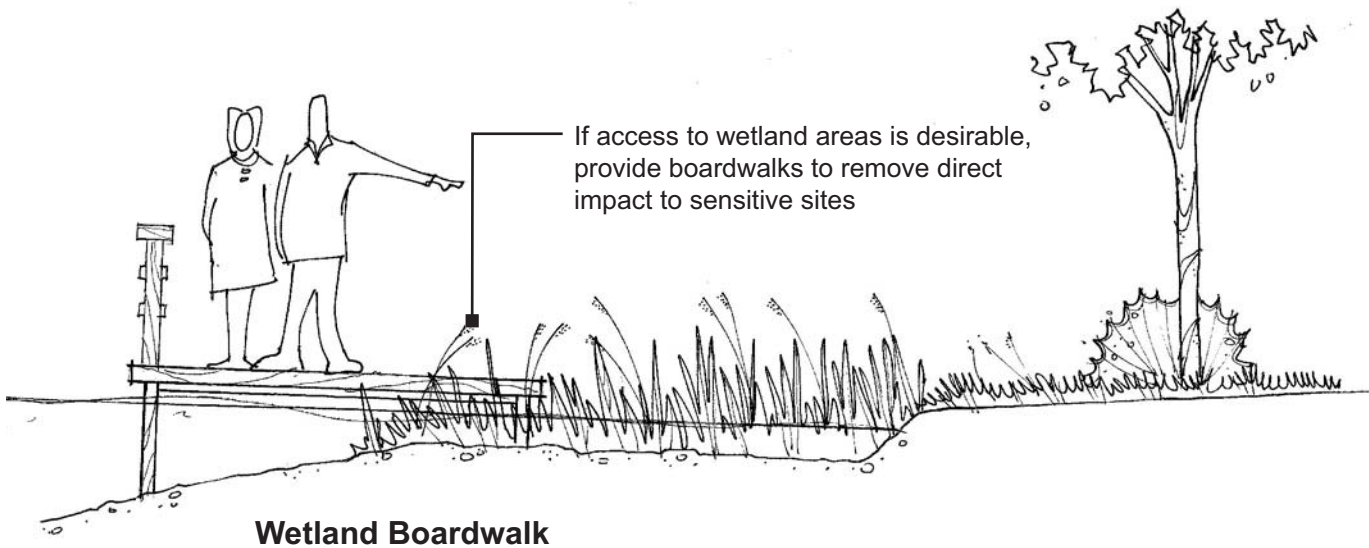


Master Plan

Figure 8 - Wetland/Shoreline Character Sketches

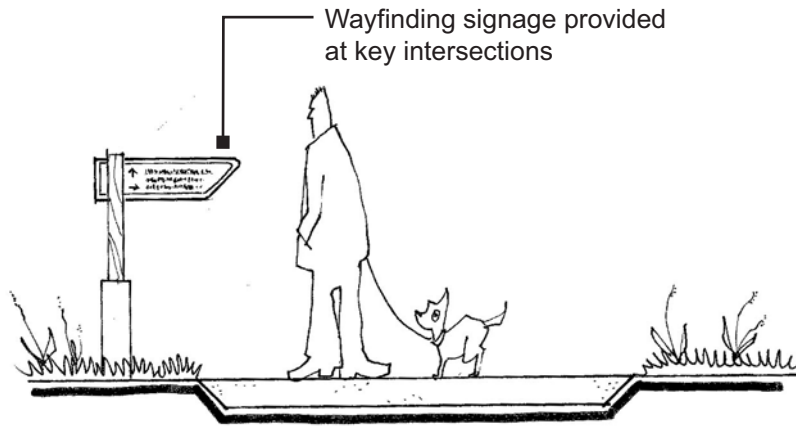


Boardwalk to Reduce Shoreline Impacts



Wetland Boardwalk

Figure 9 - Trail and Signage Character Sketches



Wayfinding Signage



Typical Trail Section for Eastern Side of Site



## Design Guidelines

Creation of design guidelines for the park is important to ensure that the park maintains a consistent image into the future. Numerous options for site furnishings are provided in **Figures 10A, 10B and 10C**. It is recommended that a palette of items be chosen for the park, and once any particular item is used, that it should become the standard for the park.

### a) Benches

Benches should be provided at development/amenity areas as well as at key points along the trail. Key points should include points of notable views, and where rest areas are needed between seating areas. A style of bench that includes a backless version should be chosen to allow for flexibility of placement of benches, and integration into their locations. Backless benches provide a more transparent profile, and would be ideal for locations where seating should be secondary to the view and not compete with it. Half of the benches are required to meet ADA Accessibility Guidelines (ADAAG) accessible bench requirements.

### b) Picnic tables

Picnic tables should be provided at development/amenity areas where there is a desire for table surfaces in addition to seating. A proportion of the picnic tables should be accessible.

### c) Litter receptacles

Litter receptacles should be provided at all areas where benches, picnic tables or other facilities are provided. If it is determined that this does not provide enough litter receptacles, then additional litter receptacles should be provided at areas where there is a shown requirement.

### d) Bicycle racks

A bicycle rack should be provided at the southern end of the site. Additional bicycle racks may be needed if there is an increase in park usage.

### e) Signage

Any signage developed for the site should be of a nature that it complements existing site elements, should be appropriate to the natural character of the site, and should provide information in a concise and useful manner.

### f) Trail Surfacing

No changes to trail surfaces are currently desired, with the exception of potential improvement to the gravel path on the northwest of the site (to consolidate gravel and provide a more stable surface). Any maintenance, or further trail development, should provide surfaces that are designed to meet ADA requirements.

Trail widths:

Asphalt – 12' wide multi-use pathway  
Gravel – 10' wide multi-use pathway  
Earth – 6' maximum width compacted and graded to drain

### g) Lighting

Lighting should be provided where necessary for public safety. Since the park is closed at night, and the public had demonstrated little desire to light the park further, lighting should be limited to what currently exists around the main park usage area to the southwest. Additional lighting should only be added if it is an aesthetic upgrade to what is currently in use, or if a need for additional lighting is determined (i.e. to illuminate an expanded ice surface).

Design Guidelines

Figure 10a - Vactor Stanley Site Furniture



Petoskey Bench



Petoskey Bench and Litter Receptacle



Petoskey Litter Receptacle



Gretchen Bench



Petoskey Picnic Table



Arcata Bench - Backless



Arcata Bench

Design Guidelines

Figure 10b - Fairweather Site Furniture



Cascade Bench



Cascade Bench - Backless



Litter Receptacle



Transit Bench - Backless



Transit Bench



Ribbon Bicycle Rack



Bollard



Picnic Table



Design Guidelines

Figure 10c - Landscape Forms Site Furniture



Petoskey Bench



Petoskey Bench and Litter Receptacle



Petoskey Litter Receptacle



Gretchen Bench



Petoskey Picnic Table



Arcata Bench - Backless



Arcata Bench

## Limits of Acceptable Change

The following items have been identified as requiring the provision of a Limits of Acceptable Change (LAC). This provides a measurable stage at which action needs to be taken to remediate or re-examine issues. Refer to **Appendix A** for an overview of the LAC Process.

### a) Trails

Trails where an LAC should be implemented are of two types: desire lines (small paths generally no more than a foot or two in width) and the main earthen paths of the site (generally around six feet wide). Should desire lines develop a width of more than two feet, they should be examined as to whether they fulfill the role of a main path and can be allowed to widen, whether they should be restricted to a smaller width and revegetated, or whether access should be limited and the path should be revegetated as a whole. Should main paths develop a width of greater than eight feet, they should be examined to see whether they should be surfaced with another material (gravel or pavement), or whether access should be limited and the path margins revegetated.

### b) General Erosion

Active erosion control should be implemented at any place where the ground becomes denuded of groundcover in a size greater than four square feet (this does not pertain to trails, see LAC for trails). Erosion control could include: 1) re-grading and revegetation if the area will be open to subsequent user impact, 2) further development utilizing boardwalk/decks or other surfaces to provide a non-erosive surface, or 3) revegetation if the pressures that caused the erosion are removed.

### c) Water Quality

Limits of acceptable change for water quality are generally set by local health or environmental departments. Institution of a regular monitoring program would provide the information needed to determine if any further water treatment is required for the lake for ecological and/or human health concerns.

### d) Paddleboating

Several aspects of paddleboats on the lake should be covered by limits of acceptable change: the maximum number of boats allowed to be on the lake at any given time, the areas of the lake that paddleboats are allowed to use, and usage of the shore areas for launching paddleboats. A balance between the concerns of other park users, wildlife and habitat value and the maximum number of boats will need to be developed. A similar process will need to be examined to determine the exact (if any) no-paddleboat buffer along the eastern shore of the lake. Shoreline usage for launching paddleboats and operating the concession will need to be monitored to ensure that the quality of the areas used is maintained at the desirable level. For all of these issues, a threshold level of directly linked negative impact will need to be set for triggering changes to paddleboat usage.

## Appendix A - Limits of Acceptable Change

The Limits of Acceptable Change (LAC) process is based on the premise that change to the ecological and social conditions of a site will occur over time as a result of natural and human factors. The goal of management is to keep the character and rate of change due to human factors within acceptable levels that are consistent with plan objectives and protection of the site. The primary focus of the LAC system is on maintaining the desired resource conditions, rather than how much use or abuse an area can tolerate. The management challenge is not one of how to prevent human-induced change in the planning area, but rather one of deciding:

1. What changes should occur?
2. How much change will be allowed?
3. What management actions are needed to guide and control it? and
4. How will managers know when the established limits have been reached?

The LAC process can help to supply a vision of what Cheney Lake Park should look like in the future through identifying indicators related to park conditions, establishing monitoring which tracks these indicators over time, and determining what management actions would restore conditions should changes become incompatible with the park's vision. Once in place and functioning, an LAC system would alert managers to unacceptable changes in the park before solutions are too late or too costly.

For monitoring Cheney Lake Park, one or more key indicators should be selected which allow managers to stay attuned to changes in the ecosystem or social setting. For each indicator, a standard value, or threshold, will be set that determines the amount of change that is acceptable. Once these thresholds are approached, or

exceeded, appropriate predetermined management actions should be implemented. The purpose of the indicators and standards is to provide managers with a tool to determine, through monitoring, if the resource values and opportunities specified for Cheney Lake Park are actually being provided.

The LAC process includes the following key components:

1. **Desired Future Conditions:**  
Specification of acceptable, achievable resource and social conditions, defined by measurable parameters (Desired Future Conditions (DFC)).
2. **Indicators, Standards, and Management Actions:**  
Identification of management actions to achieve desired conditions.
3. **Monitoring and Evaluation:**  
Monitoring and evaluation of management effectiveness, field training, and product updates.

The process is dynamic, requires continuous feedback and refinement, and directs reasonable corrective actions to be taken from time to time to address specific problems that threaten the resource or social conditions.

The Cheney Lake Park LAC process will form the foundation for the long-term protection and enhancement of the park-related values of the park. The process will be designed with enough flexibility to allow unique site-specific situations to be addressed and to provide ample opportunity for public involvement and adjustment as the resource and social knowledge base increases. Public interaction with agencies and affected interests is interwoven throughout the technical process.



**Appendix A - Limits of Acceptable Change**

**i) Task I Desired Future Conditions**

The Cheney Lake Park LAC process will be used to identify management objectives and to develop trackable, traceable management actions tied to these objectives. To help identify management objectives, Desired Future Conditions (DFCs) are incorporated into the LAC process. DFCs are designed to lay the groundwork for the long-term protection of features and values by providing a concise statement of key elements that indicate the overall health of the park.

**ii) Task II Indicators / Standards / Management Actions**

Indicators and standards are the heart of the LAC system. Indicators are specific items that will be measured to ensure that the overall desired resource and social conditions are maintained or achieved. The indicators are selected to respond to management and public concerns and to ensure that the Desired Future Conditions are achieved. There is no requirement to develop an indicator for every possible concern (many don't lend themselves to being easily monitored and can be addressed in a different manner). Indicators are selected that are the most important for monitoring the overall health of the Cheney Lake Park system (as defined by the DFCs). Consideration are given to selecting indicators whose measurement (data collection) are simple, straightforward field techniques that can be conducted reliably, with training, by a variety of personnel and volunteers.

An indicator serves as a measuring stick to indicate changes in conditions that occur over time. To be effective an indicator should be judged against the following criteria:

- 1. **Relevant:** Helps describe the overall health of the Cheney Lake Park system.

- 2. **An Early Warning Signal:** Alerts managers about trends in conditions before it is too late to act.
- 3. **Measurable:** Can be stated in quantifiable units.
- 4. **Specific & Significant:** Detects a change in conditions that reduces the future desirability or ecological viability of the area.
- 5. **Sensitive & Discriminating:** Detects a change in condition that occurs within one year and as the result of human activities (vs. natural fluctuations).
- 6. **Reliable:** Can be measured accurately by different observers using the same procedures to collect information.
- 7. **Cost Effective & Feasible:** Can be measured by field personnel using uncomplicated equipment and straight forward sampling techniques.

Data describing the existing conditions of identified indicators are collected. The purpose of conducting such inventories is to establish existing conditions (baseline) and to establish the range of variability. This information aids in the development of preliminary standards for each indicator. Standards are the "acceptable limits of change" in conditions that can be tolerated in resource and social conditions. Once the standards are approached or exceeded they trigger predetermined management actions that are implemented.

Examples of Indicators:

- Bank erosion.
- Ground cover loss.
- Crowding.
- Amount of ground cover revegetated.
- Habitat quality.
- Trail damage and multiple-trailing. • Travel corridor and tread width.
- User-established social trailing.

## Appendix A - Limits of Acceptable Change

- Visitor satisfaction and visitor problems (levels, types and locations).
- Cleanliness (litter and waste).

### Selection of Standards

Indicators by themselves do not tell managers whether an observed change is acceptable or unacceptable. Each indicator has an associated standard, a quantifiable measure that dictates at what point change becomes unacceptable. Standards define thresholds or levels at which the amount of change occurring on the Cheney Lake Park Site is deemed acceptable or unacceptable. Standards are selected based on a comparison of an inventory of field conditions to those conditions sought (as defined in the Desired Future Condition Statements). Once data describing the present field conditions are available, meaningful, realistic standards can be determined. It is important to note that for most indicators there are no universally accepted standards and no perfect answer. Standards must be attainable, but must not justify degradation of the resource. Standards do not have to be achieved immediately, but should be attainable within a reasonable time frame. Standards also need to be re-evaluated periodically to determine if they need to be altered because conditions have improved or desired conditions have not resulted.

### Establishing Management Actions

When a standard is exceeded, a specific management action may be initiated to maintain desired conditions. However, no standard in and of itself necessarily triggers a restrictive management action. There are several steps to decide what actions are appropriate. First, indicators, standards, and the monitoring process must be evaluated to determine if they are still valid and the data are reliable. If they are not, they must be adjusted and monitoring continued. If they are valid,

the manager must identify the source of the problem and implement actions to resolve it. In general, the manager should select the least restrictive action necessary to reasonably resolve the problem. Finally, after the selected action is implemented, monitoring must continue to evaluate its effectiveness.

Potential problem areas will be identified by the comparison of existing conditions to standards. This helps to identify management actions that could be implemented to achieve desired conditions. Possible actions will be evaluated in terms of their desirable outcomes and undesirable side effects. For any given alternative, there may be a number of potential management actions that could be undertaken to achieve standards. Consideration will be given to the action's effectiveness (will it have the desired result), acceptability (how park users feel about the action), enforceability, and long-term commitment (the probability the action would be sustained).

### Example Guidelines for Selecting Management Actions

1. The action follows the guidelines described in the desired future conditions. Appendix A - Levels of Acceptable Change Overview
2. The action maximizes the opportunity for desired experiences while minimizing the burden on the visitor to adhere to many rules.
3. The action ensures the maintenance of the natural resources.
4. The action is fair and equitable to visitors.
5. The action is cost effective and personnel efficient.
6. The action helps reduce conflict among visitors (promoting multi-visitor cooperation).
7. The action utilizes the least restrictive means necessary to resolve the problem.

## Appendix A - Limits of Acceptable Change

### iii) Task III Monitoring and Evaluation

When implementing the LAC planning system, monitoring takes on a new role of importance and relevance. The LAC plan will essentially become a contract with the public that says this is our shared vision of the resource and social conditions that should be maintained in perpetuity. It is a statement that will manage the park to ensure a sustained flow of public benefits from a well-managed natural resource base. Monitoring is the public's guarantee that managers will continually be taking the pulse of the resource and social conditions. And in the LAC process, it is their guarantee that reasonable corrective actions will be taken from time to time to address specific problems that threaten the resource or social conditions that they desire to perpetuate. Rather than being perceived as an esoteric technical requirement, monitoring becomes perceived as an essential, practical element of the park management process. To this end, citizens and park user groups may volunteer to become involved in assisting with the monitoring program, partially defraying the labor costs while raising public awareness and cooperation in sound management. To the extent that the public has become informed and involved in the planning process, they will eventually become much more involved in seeing that it is adhered to and carried out. In essence, they will become partners in management. And perhaps more importantly, they will also become a knowledgeable constituency who can help when new situations require adjustments or new decisions to be made to perpetuate the desired future conditions of the Cheney Lake Park Master Plan.



## Appendix B - Paddleboat Concession

Rodney Clark of AK Pyrotechnics began operation of a paddleboat concession at Cheney Lake Park in 1996. The following items are the operational requirements for his concession.

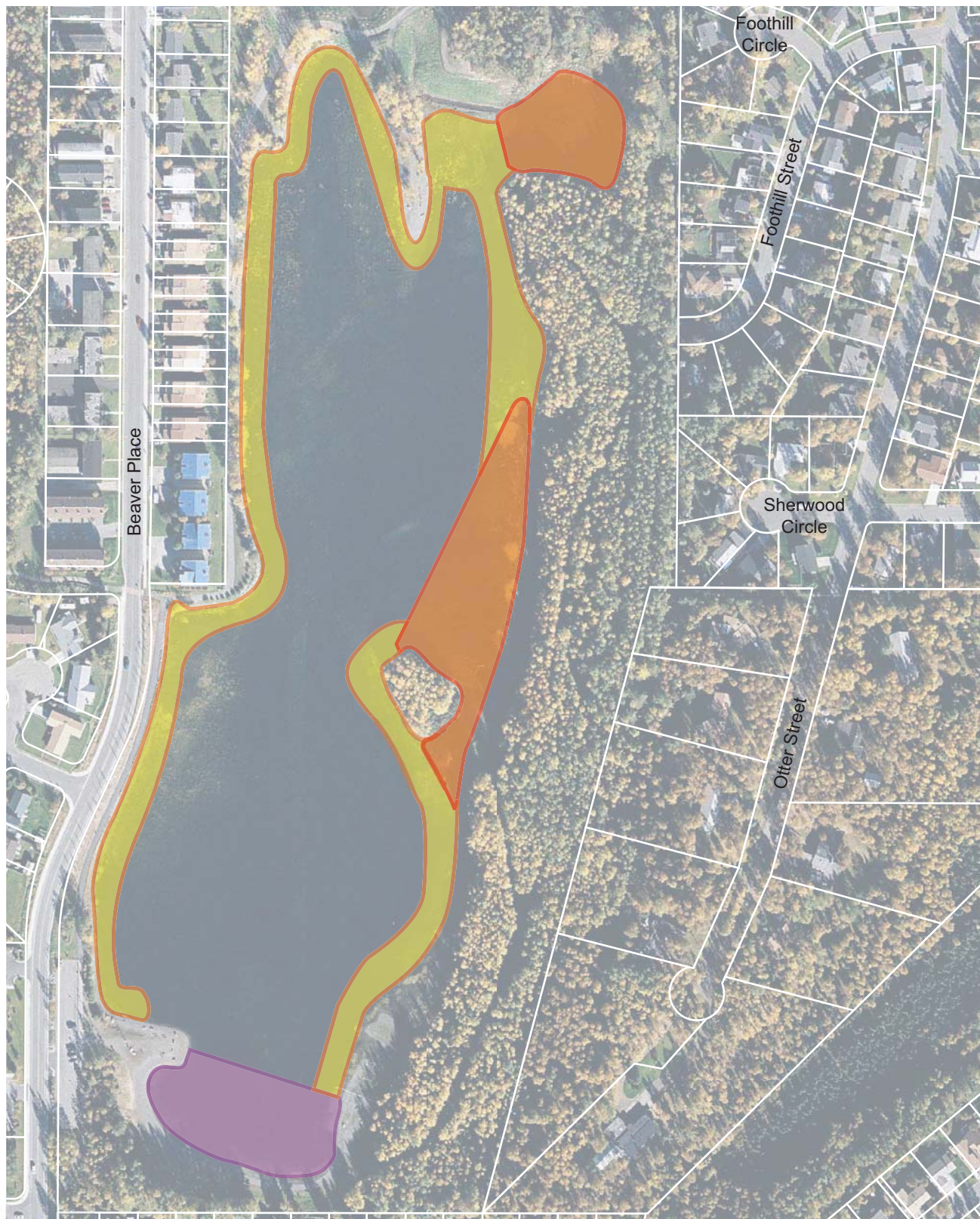
### i) Recommended Use Guidelines for Cheney Lake Paddle Boat Rental Concession




These are based upon previous Permit Guidelines, including “Use Guidelines for Cheney Lake Boat Rental Concession Permit #36433”.

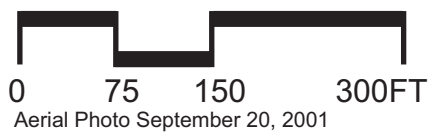
- Permit must be on-hand at site(s) to resolve possible use conflicts/questions,
- The conditions of this permit are subject to changes, revocations or cancellation,
- User group will be required to have insurance in the amount of \$500,000 – general liability, naming the Municipality of Anchorage as the additional insured,
- Concessionaire will be required to have a certified lifeguard on duty at all times during operational hours.
- The concessionaire will be required to post and/or inform all users of the rules,
- Users are to be informed to be sensitive to public concerns,
- No alcoholic beverages allowed,
- Park/facility will remain open to the public,
- Park access gate to be locked at all times when not in use for setting up/breaking down,
- The concessionaire reserves the right to refuse service to anyone,
- Users may be denied use if, in the opinion of the concessionaire, they are not able to reach and operate the foot paddles efficiently,
- Children under the age of 10 must be accompanied by a responsible person,
- The concessionaire will provide each paddle boat with a litter bag and inform all users to place litter in the bag,
- Class 3 flotation devices must be worn at all times,
- No harassing or feeding of water fowl,
- No disturbing nesting areas,
- No standing in the boat or transferring from one craft to another,
- Craft cannot be beached or landed in/on any area other than the concession landing/launching area (landing on the island may be allowed during official clean-up),
- The area of paddleboating is limited by: 1) users must remain within sight of the landing/launching area, 2) users must not boat within thirty feet of the shore \*\*to be expressed as a number of ‘boat lengths’\*\* (except at landing/launching area), and 3) users must not paddleboat in the far northeast of the lake (this and all no-paddleboat zones are clarified in Figure 11). It will be the responsibility of the concessionaire to provide, maintain and replace the signage as necessary,
- Paddle boaters may use the restricted area, located south/southeast of the paddle boat launching area, only if no one is fishing in this area, from land or any type of water craft,
- Paddleboats must be marked so as to be able to identify concession ownership from the shore, and numbered in such a manner as to identify the particular craft/user from one hundred feet,
- During the hours of operation, a cell phone will be available in the event that the Municipality of Anchorage or the public may need to contact the proprietor/operators,
- The concessionaire will be required to develop and implement an Enforcement Policy,
- No overnight camping (overnight security watches permitted),
- Concessionaire responsible for clean-up,

Appendix B - Paddleboat Concession

Figure 11 - Paddleboat Exclusion Zones



-  Existing No-Paddleboating Zone
-  Proposed Additional No-Paddleboating Zone
-  No-Paddleboating Zone When Users Fishing





**Appendix B - Paddleboat Concession**

- User group will be required to remove all boats, weights, and equipment from the site or the bottom of the lake,
- Signage must be taken down at end of day, and
- Concessionaire responsible for additional needs.

**ii) Enforcement Policy**

As signed by Rodney Clark, AK  
Pyrotechnics, May 22, 1998

- Everyone signs up on sheet and/or all parties will be required to sign in
- Everyone reads posted rules,
- If, in our opinion, there is a gross violation of the rules without expressing the need to follow the rules, there will be a permanent loss of privilege,
- If, in our opinion, there is a gross violation of the rules with an expression of the need to follow the rules, a warning not to repeat any violation will be made,
- Both of the above will be kept in a written file,
- The second gross violation will result in a loss of privilege,
- Minor violations will be handled with a verbal reprimand,
- Gross violations will include, but not limited to the following:

- Endangering one's self or other people
- Doing damage to animals at the lake

- Everything else will be considered minor,
- Attitude has a lot to do with whether a minor violation will be written down for future consideration, and
- We have a sign-up sheet in our sign-up book for listing violations

**iii) Posted Signage**

As posted the summer of 1998.

- Life vest must be worn at all times,
- No standing in boats,
- You must return to the dock to switch passengers,
- No harassing or feeding of water fowl,
- We reserve the right to refuse service to anyone,
- Children under 10 must be accompanied by a responsible person, and
- Boats can not be landed any place except the dock



