SECTION 5

Natural Resources Assessment and Management
Among the goals identified in the MPRB Comprehensive Plan is the aim to “provide urban forests, natural areas, and waters that endure and captivate.” The MPRB is committed to managing natural resources responsibly, connecting people to their natural environment and fostering stewardship. The MPRB Comprehensive Plan seeks to develop partnerships that will further this goal. It also identifies a need to balance the distribution of natural areas throughout the City, giving particular attention to north and northeast Minneapolis where Above the Falls Regional Park is located. Above the Falls Regional Park provides an opportunity to reclaim the region’s connection to this part of the river and to provide recreational opportunities within a framework of restored ecological function.

NATURAL RESOURCES INVENTORY

GEOLGY

Above the Falls Regional Park is characterized by geology created when the ancient river Warren swelled with glacial melt. The area has deep sand terraces, as well as remnants of former channels and floodplains. On the west shore, the bank is located only a few feet above the water. Between N Plymouth Avenue and Lowry Avenue the banks on the west side of the river are 20 to 30 feet in height. The land extending west from the bank is fairly flat from Plymouth to 26th Avenue. North of 26th Avenue the grades are progressively steeper to 36th Avenue where the grades start to diminish towards North Mississippi Regional Park. On the east shore, the bank is higher and the slope steeper. The east side of the river has banks of 30 feet or more for most of the upper riverfront, except from Plymouth to the BNSF railroad bridge. From the edge of the bank to Marshall Street, the ground is fairly flat. These bank conditions may make access to and viewsheds of the river challenging.

As shown in images to the left, existing riverbank conditions vary considerably from re-naturalized edges to stone riprap to metal sheeting. An important aspect of the vision for the Above the Falls Regional Park is enhancement of the riverfront’s ecological integrity by reshaping previously altered shoreline to be less severe and establishing dynamic plant communities (predominantly native). Examples of this approach already implemented include West River Parkway from Broadway Avenue to Ole Olson Park, the Mississippi Watershed Management Organization headquarters, and Halls Island.

LAND COVER

Given that Above the Falls Regional Park is in an urbanized area, the site has been extensively altered over time. These activities have included river dredging as well as importation of fill to level and stabilize the ground. As shown in Figure 5.1 Minnesota Land Cover Classification System, the only existing natural features within the park include the water/wetlands associated with the river. Otherwise, the land cover within the Regional Park is comprised of exposed earth/transitional land, short grasses, or altered/nonnative vegetation. Although altered, the areas characterized as altered/non-native vegetation should be considered opportunities as they are the open space areas associated with the railroad corridor, Xcel Riverside Plant property, North Mississippi Regional Park, and the land surrounding St. Anthony and Columbia Parkways.
Figure 5.1 MLCCS Land Cover with Rare, Endangered or Threatened Species information

Legend
- Regional Park Boundary
- Rare Species Area
- Prairie/Grassland
- Hardwood Forest
- Altered/Non-Native Vegetation
- Tree Canopy with <76% Impervious
- Open Water
- Exposed Earth 0-50% Impervious
- Buildings/Pavement >76% Impervious

(Source: MN-DNR NHIS and MLCCS)

For more detailed information on the NHIS classification system, contact the MNDNR or visit www.dnr.state.mn.us.

Rare-species locations as recorded by the DNR are shown only to the nearest square mile.
Existing Conditions in ATF Regional Park include restored shoreline and many habitat patches.
Beyond the riverbank, most of the nearby neighborhoods are covered with buildings and pavement with more than 75% impervious cover or exposed earth/transitional land. The urban tree canopy shown further away represents the residential neighborhoods of north and northeast Minneapolis. An examination of the MCBS Native Plant Communities database shows that there are no native plant communities within the regional park boundary.

The developed nature of the Above the Falls area can also be seen in Figure 5.2 Built Structures. While there are a number of areas without structures on the industrialized west bank, it is important to note that much of this is the Upper Harbor Terminal where outdoor storage of bulk commodities is the predominant land use. On the east bank, many of the large areas of open space along the river are existing park land. Also of note is the Xcel Energy Riverside Plant which shows as open area between 33rd and 39th Avenues North.

**RARE, ENDANGERED AND THREATENED SPECIES INVENTORY**

Also shown in Figure 5.1 on the previous page, the Minnesota Department of Natural Resources (MNDNR) has identified two areas where there are known rare, endangered, or threatened species. Both species have been observed in these areas in the last 10 years. The habitat is located in the river itself or on private land that is expected to remain private in the foreseeable future. The environmental restoration proposed as part of the development of Above the Falls Regional Park will enhance the species' habitat.

**FLOOD ZONES**

Where the bluff is absent, the soft edge of the riverfront can accommodate changes in water levels and serve as flood plains of the river. Figure 5.3 Floodplain shows the FEMA-designated 100 year and 500 year flood zones for the area. Most of the 100-year Floodplain is located within the regional park boundaries while the 500-year floodplain extends out into some surrounding properties. Areas of active floodplain have been considered in the vision described in the Park Development section of this plan.

The urban context for ATF Regional Park includes not only residential neighborhoods and industrial uses, but also parks and other “patches” of habitat along this international migratory flyway.
Figure 5.2 Built Structures
Figure 5.3 Flood Zones  (Source: City of Minneapolis and FEMA)
WATER QUALITY

While the Mississippi River is a prominent feature in the Above the Falls Regional Park, it is important to remember that this stretch of river is part of a much larger system. The Mississippi River drains a watershed of 1.2 million square miles that includes a majority of the land mass of North America. Thus, the development of Above the Falls Regional Park will have a positive but incremental impact on the system. Significant change in the Mississippi River itself is limited by what occurs in the watershed north of the regional park.

Water enters the Mississippi River in this area from a number of sources. There are no streams that enter the river within the Regional Park itself. Just north of ATF Regional Park, Shingle Creek enters the river, while Bassett Creek enters just to the south. Also notable is the BNSF railroad bridge, which marks the northern end of the channel dredged by U.S. the Army Corps of Engineers.

Water also flows into the river from 33 stormwater outfalls, shown in Figure 5.4. These drain stormwater runoff from streets, parking lots, yards and buildings, bringing pollutants, organic debris, and trash along the way. Some of these stormwater drains sit below the Ordinary High Water Level and are usually not visible.

According to the MPCA, the Above the Falls stretch of the Mississippi River is impaired with both fecal coliform and polychlorinated biphenyls (PCBs), as evidenced by fish tissue. Fecal coliform is present largely due to animal waste and septic systems, and is likely associated with agricultural operations and rural development upstream. This pollutant is found at high levels at various locations and water bodies statewide. PCBs are industrial chemicals that were discontinued in the late 1970's, but still exist in residual amounts in the environment. This pollutant is found at high levels in the Mississippi as far north as St Cloud. Together, these pollutants have negative implications for recreational use of the river and fish consumption. For example, proposed water access and swimming beaches will need to be closed during periods of acute river pollution, with adequate public notice being a key operations challenge.

At present, the MPCA is conducting a TMDL (total maximum daily load) project in the Above the Falls area related to bacteria. Interventions include compliance for failing septic systems, measures to reduce runoff from feedlot/pasture areas, and overall better stormwater management (e.g. filtration and reducing sediment). This project is expected to conclude in 2012.

SOILS AND CONTAMINATION

Structurally, soils on the west side of the river are relatively stable and suitable for development. The east bank, particularly in the middle section, has more problematic soils with the potential for water saturation that could add to any structural costs.

Soils contamination within the ATF Regional Park reflects the area’s urban, industrial history. Elements like hydrocarbons, ash and sawdust result from its industrial past. Contamination occurred both from a lack of historic standards on how to handle and dispose of toxic substances and from the use of unsafe fill for development.
Figure 5.4 Existing Sewer Outfall Locations (Source: MWMO)
In response to such ubiquitous contamination, park development projects must account for extensive remediation needs through Phase I and II testing. This has been the MPRB’s practice on such sites as Orvin “Ole” Olson Park, Gluek Park and the Scherer Bros. property. Since the adoption of the 2000 ATF plan, the MPRB has remediated 18.6 acres of new parkland within the Regional Park. Funding has been acquired through partnerships with local agencies, such as Hennepin County and the MWMO, as well as through Federal programs.

As shown in Figure 5.5 the Minnesota Pollution Control Agency (MPCA) has identified nearly 300 sites in the City’s larger Above the Falls Study Area with some pollution-related issues. These include sites with active issues as well as those with past issues on record. The types of sites depicted include:

- **CERCLIS (1 site):** CERCLIS sites are places that are listed in the federal Comprehensive Environmental Response, Compensation and Liability Information System. This means that they are or were suspected of being contaminated.

- **Hazardous Waste, Small to Minimal Quantity Generator (113 sites):** A small to minimal quantity generator is a facility that generates less than 1,000 kilograms (2,200 pounds) of hazardous waste or 1 kilogram (2.2 pounds) of acutely hazardous waste per calendar month. Like large quantity generators, SQGs and VSQGs must have current hazardous waste licenses. For more information on hazardous waste licenses.

- **Landfill, Open (3 sites):** Open landfills are landfills that are still accepting waste. This includes facilities that accept household garbage, industrial waste, and debris from construction or demolition.

- **Leak Site (16 sites):** Leak sites are locations where a release of petroleum products has occurred from a tank system. Leak sites can occur from above ground or underground tank systems as well as from spills at tank facilities.

- **Multi (105 sites):** Multi sites are locations where there are multiple MPCA activities occurring. This could be a facility with a wastewater permit and an air quality permit, a cleanup site with multiple Superfund operating units, a site with a registered feedlot and a tank, etc.

- **Unpermitted Dump Site (5 sites):** Unpermitted dump sites are landfills that never held a valid permit from the MPCA. Generally, these dumps existed prior to the permitting program established with the creation of the MPCA in 1967.

- **Voluntary Investigation & Cleanup (VIC) Site (37 sites):** The Voluntary Investigation and Cleanup (VIC) Program is a non-petroleum brownfield program. VIC provides technical assistance to buyers, sellers, developers or local governments seeking to voluntarily investigate or clean up contaminated land.
HISTORIC RESOURCE INVENTORY

The City has conducted two historic resource inventories that included properties within the Above the Falls Regional Park. In 2004, the Northeast Minneapolis Historic Resources Inventory was a reconnaissance survey of historic resources in a 4,564 acre area which included over 12,000 buildings. The survey found 38 individual properties and one historic district which were good candidates for additional research and documentation for potential local designation or listing in the National Register of Historic Places (National Register). None of the potential properties are within the Above the Falls Regional Park boundary.

In 2009, a historic resource inventory was conducted for the Northside Industrial Area, an area bounded by Plymouth Avenue on the south, the Mississippi River on the east, Interstate 94 on the west, and the Minneapolis city limits on the north. The purpose of the survey was to identify properties within the study area that potentially meet criteria for historic designation under the City of Minneapolis Heritage Preservation ordinance and/or the National Register. The survey area covered approximately 500 acres comprising 337 parcels. Six properties were identified for further investigation as they possessed strong potential for local designation or the National Register. None of these properties are within the Above the Falls Regional Park boundary.

As noted in the historic resource surveys, it is likely that Above the Falls Regional Park has unidentified archaeological remains given the river’s importance in transportation and settlement in both pre-contact and post-contact history. Appropriate archaeological assessment and/or survey should be conducted prior to ground-disturbing activities that have the potential to disturb intact archaeological resources.

In general, MPRB will continue to incorporate consideration of historical and cultural resources and an area’s many histories when designing and developing sites within ATF Regional Park. Through careful research and design, informed site selection and preservation of existing elements, parks can tell the stories of the past with sensitivity while shaping visionary futures.

Two photos from 1955 show land uses including residential rail yards, industry, agriculture and several islands between Plymouth Avenue (left) and the Xcel Riverside Generating Station (right). Photos courtesy of City of Minneapolis.
Figure 5.5 2013 Minnesota Pollution Control Agency (MPCA) Sites - North
Figure 5.6 2013 Minnesota Pollution Control Agency (MPCA) Sites - South
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