BERGER FOUNTAIN REHABILITATION PROJECT
LORING PARK, MINNEAPOLIS, MN

ASSESSMENT & PROPOSED SOLUTIONS REPORT
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PREPARED FOR:
CITIZENS FOR A LORING PARK COMMUNITY (CLPC)
FRIENDS OF LORING PARK (Friends)

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ASSESSMENT | CHAPTER 1 - EXECUTIVE SUMMARY

1.01 Project Description

The Berger Fountain is an important, recognizable icon for the City of Minneapolis. This water feature serves as a gateway connection between Loring Greenway and Loring Park. The Berger Fountain is an admired landmark and park amenity, popular on warm summer days for its cooling spray while serving as a gathering place for the surrounding neighborhood. After years of the fountain in a state of disrepair, two organizations, The Citizens for a Loring Park Community (CLPC) and the Friends of Loring Park (Friends), formed a committee to address the current state of the water feature. The goal of the committee is to develop a plan for rehabilitation of the water feature and identify solutions for a winter cover. The committee entered into a memorandum of agreement with the Minneapolis Park and Recreation Board to explore potential solutions for rehabilitation of the fountain, develop plans for moving the project forward, and exploring costs associated with the work. This Pre-Design Assessment Report includes an investigation of the existing fountain structure, mechanical systems, structural elements, and waterproofing, in addition to options for a winter cover. The committee seeks to develop a comprehensive plan for the rehabilitation of this amenity for future generations to enjoy.

1.02 Investigation Process

“The Berger Fountain Rehabilitation Assessment and Proposed Solutions Report” project includes five major tasks:

A. DATA GATHERING

B. INVESTIGATION + ANALYSIS

C. PRELIMINARY CONCEPT ALTERNATIVES

D. COST ESTIMATING

E. DEVELOPMENT OF PRE-DESIGN DOCUMENT

The design team prepared a variety of alternatives based upon Committee Feedback, Analysis and Precedent Examples. Alternatives tested a variety of ideas and approaches to address restoration of the Berger Fountain, modernization of the mechanical systems, restoration of cascade/pool walls and further evolution of the Winter cover ideas.

MPRB, Friends and CLPC Meetings: Two meetings were conducted during this phase to work collaboratively with the committee to refine potential solutions and arrive at a scope of work that aligns with the committees’ goals for the project.

1.03 Summary of Findings

The consultant team recognizes that the Berger Fountain dandelion is an icon of Loring Park and the surrounding neighborhood. The team also understands that the current MPRB approved Downtown Service Area Masterplan (2017) calls for an interactive water feature in place of the Berger Fountain.

The fountain, pools, finishes, waterproofing structure, mechanical, electrical, and plumbing systems have significantly deteriorated and are in poor condition. In many cases, it is impossible to repair the equipment used in the feature due to discontinued sourcing and end-of-life conditions.

The consultant noted there is excessive use of power, water, and labor for maintenance. Current water usage does not align with the Loring Park Neighborhood Master Plan goal of working towards water use reduction and conservation. For instance, unnecessary water loss from pool overflow is partially due to the original design of mechanical systems, which do not allow for proper circulation. Also, the level of daily to annual required maintenance is cost prohibitive and labor intensive; these resources could be redistributed to better serve other tasks in Loring Park.

1.04 Summary of Rehabilitation Options Explored

Option 1: Stabilize and Repair in Place

Option 1 repairs vault structure and replaces failing mechanical systems, electrical systems, exterior finishes, and fountain with minimal modification to the original design.

Option 2: Rebuild and Enhance*

Option 2 demolishes the fountain, pools, vault, and associated electrical and mechanical systems; shifts the water feature location away from trees, replaces the dandelion, and adds a master-plan-approved interactive water-feature.

Option 3: Redesign, Demolish and Rebuild

Option 3 completely redesigns the water feature, demolishes the fountain, pools, vault, and associated electrical and mechanical systems, and rebuilds in a location removed from the trees.

1.05 Conclusions and Recommendation

The Rebuild and Enhance option retains the iconic dandelion fountain and combines it with an interactive water feature which aligns with approved long-term vision of the 2017 Masterplan. While this rehabilitation strategy requires greater up-front costs, the option will require less annual maintenance and labor and result in a fountain which will perform for decades.

*Indicates recommended Option.
CHAPTER 2 - PROJECT UNDERSTANDING AND SCOPE
2.01 Project
The Berger Fountain is an iconic fountain installed at the northeast perimeter of Loring Park in 1975. The main feature of the fountain is the dandelion display in the center of an upper pool with cascading effect over glazed splash block pavers to lower tiered catchment pools. The pools are surrounded by a partially accessible 8’ wide concrete sidewalk.

2.02 Scope and Purpose
This report is to aid the stakeholder committee to evaluate options for the future of the water feature by providing:

1. A high-level technical assessment of the current conditions of the fountain and related site, finishes, and infrastructure.
2. Exploration of three design options and related rough order of magnitude costs.

2.03 Process
The Consultant Team conducted site investigation visits, attended stakeholder committee meetings, MPRB operations staff informational meetings, and studied historic and former planning documents.

2.04 Investigation Background
Site investigation was performed by observation and was limited to those structural elements exposed to view. Photographs of various elements were taken during the observation to aid in the research and investigation.

An initial consultant team site visit was conducted on December 10, 2021. MPRB maintenance staff and representatives from the stakeholder committee were present to offer information, answer questions, and share observations about the fountain. A structural and architectural follow-up site visit occurred on February 8, 2022, to evaluate the structure’s condition and review areas of damage, deterioration, or deficiency.

See chapter 3 of this document for a detailed description of the design team observations from these site visits.

2.05 Report Terminology
Definitions of specific terminology found in the report:

Consultant Team: Group of assessment and design professionals contracted for the purposes of this report, which includes Damon Farber Landscape Architects (Project Lead, Landscape Architecture), CMS Collaborative (Fountain, Plumbing, and Electrical), Miller Dunwiddie (Architecture and Water Proofing) and Mattson Macdonald Young, Inc. (Structural).

Stakeholders: Those with vested interest in the fountain (ownership, funding, preservation, rehabilitation, maintaining, enjoyment of); may be further divided into sub-groups:

Community Stakeholders: The public at large.

MPRB: Minneapolis Park and Recreation Board; providers of an annual budget and full and part-time staff labor for maintenance and repairs on the Berger Fountain.

Stakeholder Committee: Group responsible for funding this report, formed of representatives from Citizens for a Loring Park Community (CLPC) and Friends of Loring Park (Friends).
CHAPTER 3 - EXISTING CONDITIONS AND ANALYSIS
3.01 Field Observations

Observations that were performed are considered a cursory “walk-through” of the structure. The performance of the structural system and framing elements was judged by visual observation. No analysis of the load capacity of existing members was performed as a part of this investigation.

Because the field visits took place in December 2021 and February 2022, the fountain was off and drained for the season. The fountain enclosure was not present at the time of the site visits. It is understood that this will not be reused.

3.02 Site

3.02.01 Location: The Berger Fountain is found at the north-east perimeter of Loring Park (see Image 3.021). It is positioned across the street from the Loring Greenway entrance and is situated on a slope within a grove of trees (see Image 3.022).
3.02.02 Groundcover and Trees: Grass and concrete make up the surrounding groundcovers; a grove of mature oaks and other trees surround the fountain and associated pools (Images 3.023 and 3.024).

3.02.03 Identified Issues:

1. Tree proximity to the fountain results in leaves, sticks and other debris falling into the fountain pools which creates maintenance issues.
2. The current location on a slope and the adjacency of trees limits the amount of accessible open space around the fountain that would be needed for additional/alternative activity infrastructure.
3. Areas of erosion are present, due to shade, foot traffic, and fountain wash-out downhill from the water feature.

Consultant Insight: The Consultant Team and Neighborhood Stakeholders agree that if the fountain is to be reconstructed, a shift in its location closer to the street would position it on flatter grades with more visibility, provide more flexibility with surrounding amenity development, and avoid tree debris issues.
**3.03 Vault and Foundation**
The Berger Fountain structure includes a below-grade vault that serves as a foundation for the fountain and primary pool. There are also a series of connected weir pools as part of the feature. (Image 3.030).

**3.03.01 Vault Structure:** The main structure of the vault is constructed from cast-in-place concrete slab, beams, and columns. The vault walls are cast in place concrete retaining walls and the floor of the vault is a slab on grade (Image 3.031).

**3.03.02 Pool Integration:** The pools and vault roof are constructed as a structural concrete slab which includes a waterproof membrane and concrete topping slab. The connected weir pools are comprised of concrete slab on grade with frost depth foundation walls bearing on spread footings.

**3.03.03 Vault Contents:** The vault contains plumbing, electrical systems, and an open water reservoir. The vault space is divided in two by a low wall that separates the equipment area from a reservoir (Image 3.032). The reservoir acts as the lowest body of water. In normal operation (a fully recirculating system), the water not held in the catchment pools returns to the reservoir and is recirculated through the dandelion and as supplemental water into the pools to overflow the weirs. The vault is spacious and easily accommodates mechanical and electrical equipment.
3.03.04 Vault Condition: The structural condition of the vault was inspected from inside the vault. The structure is in good condition given its age; however, deterioration was revealed in the following areas:

1. Access Hatch: The concrete around the access hatch has deteriorated. Around the opening for the ships ladder, there are exposed and rusted reinforcing bars. Partial rusting has caused spalling at the concrete surface (Images 3.041 and 3.042).

2. Slab (Vault Ceiling): The bottom of the structural slab has locations of rusted bars. A majority appears to be from support rebar that has corroded (Image 3.043). There are also locations where the concrete has started to spall due to the corrosion, exposing reinforcing bars (Images 3.044 and 3.045).
At the northern end of the vault, there is a series of exposed and rusted bars. These are dowels connecting the wall to the slab (Images 3.046 and 3.047).

It was noted by MPRB staff that the ceiling of the reservoir leaks profusely when the fountain is in operation and that chemicals in the confined space have accelerated the effects of corrosion.

3. Walls: The walls have a membrane that has partially peeled away. There is partial staining of the concrete in the exposed areas. There was no spalling of the concrete or exposed reinforcing bars observed in the walls. There are repair patches evident around piping (Image 3.048).

4. Columns and Beams: There was no observed damage to the beams, but the columns are stained where the waterproof membrane has failed and peeled loose.

3.04 Superstructure

The structure overall is in general good condition for its age, however, corrosion of the rebar throughout the slab has caused damage to the concrete, as noted in the previous section.

Consultant Insight: The areas of deterioration could be repaired. Removal of deteriorated concrete and patching would be required; however, the water would need to be stopped from coming through to the structural slab prior to this work to prevent further deterioration. The walls and slab on grade should be protected by a proper membrane.
3.05 Waterproofing

Age and constant freeze thaw patterns typical of Minnesota seasons has compromised the integrity of the waterproofing system. The waterproofing system has failed, in that water is breaching the exterior pool basin and leaking into the vault below and into other above grade areas next to the fountain. The existing tank liner/waterproofing system will require removal and replacement with a new fully adhered waterproofing system with proper terminations.

Consultant Insight: The exterior fountain basin is independent of the structural support system. Constructed using a membrane separating the structure from the concrete pool basin, the repair strategy would be to remove the existing concrete pool basin, place a new waterproof membrane with sufficient vertical rise and overlap any horizontal wall cap material (stone or brick). A new concrete basin would then be constructed above the new waterproof membrane system.

Another option to address the leakage distress of the foundation basin includes a surface application of a fluid-applied fabric-reinforced polyurethane system. This system is UV resistance and will require a separate application of an additional layer of the waterproofing to accommodate heavy broadcast of fine silica sand or other aggregate finish to supply added protection and slip resistance. This system will require removal of all granite coping, tiles, terra cotta weirs to allow for continuous monolithic application of the waterproofing system (see Image 3.050 for illustration). This waterproofing system has color options along with choice of finish aggregate surfacing. Upon completion of the waterproofing application, the granite coping, new tiles, and weirs will be reinstalled.
3.06 Exterior Enclosure and Finishes
The fountain has significantly degraded both aesthetically and functionally after 50 years of exposure to freeze-thaw cycles. Evidence of deterioration is seen in loosened stonework cladding and deteriorated joints. Existing finishes at the catchment pools are in poor condition.

3.06.01 Top slab: The concrete topping slab and membrane are not structural elements; they are separated from the structural slab. The observed areas did show signs of deterioration from age, wear, and freeze-thaw damage in the form of cracking and joint failure.

3.06.02 Pool Weirs: The fountain pool weirs walls are comprised of a variety of masonry units: larger glazed clay tiles (“glazed apron tile”) on the vertical surfaces, and a mix of original glazed clay pavers (“glazed spillway tile”) and non-matching, replacement concrete pavers at the horizontal ledges. Apron tiles and spillway tiles are continually deteriorating due to poor suitability of the freeze/thaw cycle in this climate. They appear in poor condition with cracked, chipped, or missing units. Maintenance staff have indicated that there is no replacement source for either type of tile; the long-term desire by MPRB maintenance is to eliminate these materials. Original plans indicate a different spillway tile detail (Images 3.061 and 3.062)

3.06.03 Pool Exterior: Granite stone caps at the perimeter of pools have shifted due to freeze-thaw and age. Vertical granite surfaces are in fair condition, but joints are missing mortar and sealant, there is staining, and there are locations with earlier crack/chip patches that were not well matched to the material. (Images 3.063 and 3.064)

3.06.04 Exterior Basin: The sealant and caulking where the concrete basin meets adjacent finish materials show repeated failures. According to MPRB maintenance staff, this is a constant area of concern, and requires yearly repair. The weirs between multi-level pools have been compromised and it is likely they have a challenging time holding water. (Images 3.065 and 3.066)

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3.06.04 Exterior Basin (continued): Staff noted that there is a steady flow of water out of one of the lower pools and down the hill (away from Willow Street) whenever the fountain is operational, flooding other park amenities. Waterproofing elements have failed in areas, as noted in section 3.05. This has resulted in water entering the vault below, causing further damage to the basin, structural foundations, electrical and other infrastructure systems.

3.07 Mechanical
The services currently provided are domestic water supply, connections to sanitary and/or storm, and HVAC. An outdated ventilation system to remove CO2 is ineffective and a safety hazard.

3.08 Plumbing
The dandelion fountain was a common water feature in the 1970s. Water is pumped into a central globe-like vessel and is routed out through 253 pipes with jets at the end of each which fan the water into a flattish disc ("emitter"); Images 3.081A and 3.081B. When taken as a whole, this produces a beautiful water effect resembling a dandelion (Image 3.082).

3.08.01 Dandelion Fountain: Parts are no longer available for the dandelion, meaning that any replacement part must be custom fabricated. All components are brass. Over the course of one summer, algae build-up clogs the fountain rods and emitters which require occasional shutdowns and cleaning. In the Autumn, the threaded pipes and jets are removed from the central globe, cleaned, and stored for the season (Image 3.084); in the Spring they are reinstalled. These processes are laborious and with annual assembly and disassembly, the likelihood of damage to the components increases, despite the best efforts of the MPRB. See section 3.10 for maintenance labor detail.

3.08.02 System Design and Operation: The fountain and pools were originally constructed as a closed loop recirculating system. Each pool weir level has a series of gravity fed cylindrical drains with screen covers (Image 3.083). The drains are unable to work properly as the screens easily clog with tree debris, requiring frequent, sometimes daily monitoring and clearing by MPRB staff.
3.08.03 Water Consumption: MPRB estimates that 65,000 gallons of water are used by fountain/pools in a season, which translates to 15 gallons per hour during a season of operation; it is suspected this amount is underestimated due to pool leaks and the wind blow-off of water from the dandelion itself.

3.08.04 Water Filtration: While the two fiberglass filter tanks and associated PVC piping located in the vault appear to have been installed in recent years, the equipment is old and showing its age. MPRB Staff indicated the sand filters are operational but not working as designed. Virtually anything that is made of metal is corroded/rusted. (Images 3.085 and 3.086)

3.08.05 Piping: The condition of the piping in grade is unknown. Inspection of the in-grade piping would be performed by a specialized pipe inspecting service with video capture. Given the condition of the exposed piping and the age of the fountain, it is likely that the piping in-grade has been compromised and is leaking water.

3.08.06 Pump: The display pump is incredibly old (Image 3.087), and while it may be possible to rewind the motor, replace the bearings, inspect, and refurbish the pump volute and impeller, a new more energy efficient pump could be purchased to replace it.

Consultant Insight: Most equipment is end-of-life and not worth salvaging.
3.09 Electrical
Components (conduit, switches, junction boxes, and other elements) have severe surface corrosion/rust. (Image 3.091)

The electrical system is a collection of separate components (Image 3.092). This contrasts with the bulk of the components being centralized and housed in a suitably rated enclosure. Contemporary fountains typically use the centralized approach with a programmable logic controller (PLC) designed to monitor and control all system functions (fill, make-up, low-water, pump starts and stops, filter backwash, etc.).

At the fountain there are 12 underwater light fixtures (Image 3.093), vertically oriented, on a +/- 4-foot radius surrounding the dandelion. The fixtures are mounted in custom enclosures. The original drawings show them as 500W PAR56 quartz lamps. Quartz lamps have a +/- 2,000-hour life. By contrast, contemporary LED lights have a life of about 10,000 hours and use a fraction of the energy of quartz lamps. LED fixtures can be supplied in RGBW diode clusters and, with a programmable controller integrated with the fountain control system, can create a near limitless palette of color-changing options. Most contemporary LED fixtures can run wet/dry.

3.10 Maintenance
Maintenance and upkeep are increasingly difficult and costly efforts expended by MPRB annually. Figure 3.094 outlines components and commitment frequency.

FIGURE 3.094 - EXISTING FOUNTAIN MAINTENANCE ACTIVITIES: LABOR & BUDGETARY COMMITMENTS, FREQUENCY:

Fountain Head:
“Rough estimate for plumbing shop: about a week to reinstall arms on the fountain in the spring, another week to dismantle in the fall, about 4 hours to move from the fountain to the basement and another 4 hours to move from the basement to the fountain in the spring. Figure a couple hours when we come to winterize/blowout the fountain and service line, another couple hours in the spring turning it back on and filling it. Figure 2 guys X 100 hours each at $50.00 an hour = $10,000.”

Pool and Mechanical Repairs:
1. Reset loose granite and/or patch pool slab (annual)
2. Caulking (annual)
3. Repair spill tiles (annual)
4. Machine missing or damaged parts from fountain assembly/disassembly

Maintenance during operational season:
1. Clear drains (daily to weekly)
2. Clean out rods and emitters (monthly)
3. Add water (daily)

Water Bill: 65,000 gallons of water used annually in operation

Power Bill: In-efficient lighting and circulation system

Liability: Safety issues inside vault, water purification issues, leaking water/erosion/flooding

*Note: items listed above could be partially reduced with Option 1 or dramatically reduced or eliminated with Options 2 or 3.
CHAPTER 4 - REPAIR OPTIONS
4.01 Rehabilitation Options Introduction
Three options ranging from stabilize and repair to complete redesign and replacement were explored. The options evaluate opportunities to provide more sustainable operations and enhanced user experiences.

4.02 Considerations for All Options
1. The dandelion fountain is a local icon and there is great community interest in the original feature.
2. Any proposed solution should consider all facets of safety.
3. The fountain and pool are not contributing features to the Minneapolis Grand Rounds Scenic Byway and as such are not protected historic resources.
4. The fountain feature was located intentionally as a focal point for the intersection between Loring Park and Loring Greenway. Attention should be given to these historic alignments.
5. The stakeholder committee has determined that the pools surrounding the fountain are not perceived as part of the iconic feature.
6. A solution that resolves current operational and maintenance issues, reduces operating costs, and enhances current aesthetics is preferred by the stakeholder committee and MPRB.
7. In 2017, the Minneapolis Park and Recreation Board developed a master plan for Loring Park, part of the Downtown Service Area Masterplan. This master plan includes an interactive water play feature and expanded plaza.
8. Topography and universal access need to be considered for every option in order to maximize access for all users and create expandability for future related garden and plaza amenities.

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9. Nearby tree locations should be considered to alleviate impacts to the functionality of the selected option, construction impacts to the vegetation, shade conditions that promote algae growth resulting slippery conditions, and tree debris.

10. Relationships between the fountain and other park amenities should be explored in order to provide effective pedestrian connections.

11. Visual connections to the fountain from within the park and surrounding neighborhood should be further studied and defined.

12. Consider the solar orientation of the feature, and any beneficial or negative impacts to users and equipment.

13. The selected option should provide a range of experiences to serve a larger user group.

14. Minneapolis winters are harsh on outdoor features. Uncomplicated mechanical systems and durable materials are advantageous.

15. An associated catchment pool or scrim should be appropriate for the scale of the feature.
4.03 Option 1: Stabilize and Repair in Place ($2.0M)

The first option removes and replaces damaged materials and inoperable equipment. This option includes minimal modification to the original design.

Consultant Team Assessment & Recommendations: The existing installation is nearly beyond repair. It is safe to say that there are enough holes, both literally and figuratively, in the fountain structure, waterproofing, and piping systems that any attempt at rehabilitation to emulate existing conditions is ill-advised.

If the dandelion fountain is repaired, an enclosure will be necessary to cover it partially or completely during the winter months. A study of enclosures was completed by Dunwoody College design students, and the committee has selected a preferred choice to serve as a starting point for further exploration. The intent of the enclosure is to create winter interest while serving to protect the dandelion. It is also to be used as an independent sculptural element on public display during the summer months. An option to the cover strategy is to fabricate or purchase a similar removable fountain head which can be removed and stored in the winter months. This option is a more reliable winter storage strategy and alleviates the need for seasonable relocation of the removable cover.

Scope of Work:

1. Replace all mechanical, electrical, and plumbing systems, including pumps and concealed piping.
2. Modify drain system to properly handle water volumes and self-clean.
3. Replace waterproofing and pool finish slabs.
4. Clean and replace or stabilize rebar and patch concrete in structural slab, vault walls, and floor.
5. Reset granite veneer.
6. Replace glazed apron tile and spill blocks with readily available material suited to Minnesota freeze/thaw cycles but similar in appearance and water effect.
7. Replace dandelion fountain head with similar commercially available feature to match existing size and effect.
8. Modify installation to accommodate complete fountain head removal for off-season or provide a winter cover.
9. Install fiberglass water reservoirs (surge tanks) in mechanical vault to prevent damaging moisture exposure to mechanical equipment.
10. Add an automatic chemical treatment system to maintain water quality.

Advantages:

1. Maintains original design with modern equipment and suitable materials.
2. Likely the lowest cost of the three options.

Disadvantages

1. Rehabilitating the feature in place does not address the impact of the tree litter on the feature. The existing trees are mature and valuable and should be protected.
2. This option does not address ADA access (universal access) to and around the water feature.
3. Significant costs are as associated with rehabilitating the existing system, and maintenance costs will continue to be high.
4. Rehabilitation of the existing water feature does not align with approved MPRB masterplan to provide an interactive water feature and plaza space, necessary amenities for park development funding.
Option 2: Rebuild and Enhance ($2.92M)

The second option includes demolishing the fountain, pools, electrical/mechanical systems, and vault; and constructs a new system which reimagines the dandelion fountain head as an interactive water feature. The feature is shifted east from the current location to avoid conflicts with existing mature trees.

Consultant Team Assessment & Recommendations: Demolishing and repurposing the dandelion fountain head into an interactive water feature is a feasible alternative, but there are design issues that should be addressed if this option is selected:

1. Dandelions by their very nature put a lot of atomized water in the air and with just a little bit of wind, that water "escapes" the system (the top of the dandelion at Berger is about twenty-two feet above the pool floor). Wind control (by sensors that turn the fountain action off in times of greater wind) helps to mitigate water loss, but exterior dandelion displays tend to use excessive water because of containment challenges. Catalogs of current manufacturer of dandelions state that dandelions "are ideal for malls, foyers, and areas that are free of wind."

2. In addition to a wind sensor system, enlarging the base area around the dandelion will help catch overspray from the jets.

3. If a dandelion fountain head is re-introduced to the site, a removable fountain head is recommended for winter storage.

4. The new vault configuration should be designed to include water containment tanks separated from electrical and mechanical systems.

5. For optimized use, the system should be designed to allow an interactive water feature component that can function independently from the dandelion feature.

Scope of Work

1. Remove existing structural, mechanical, electrical, and plumbing systems, vault, pools and pavements.
2. Shift water feature location slightly east away from trees and to an area with less topographical change. Retain connection with Loring Greenway.
3. Redesign infrastructure to a more efficient system which will perform with minimal maintenance.
4. Construct a new vault for mechanical, electrical, and plumbing systems.
5. Install new redesigned pools.
6. Replace dandelion fountain head to match existing size and effect.
7. Provide an easily removable fountain head for off-season storage or provide a winter cover.

Advantages

1. Maintains the iconic fountain element.
2. Improvement to fountain efficiency with new infrastructure and systems that will last 50+ years.
3. Aligns with the approved MPRB master plan.
4. Shifted location has less topographical challenge and creates flexibility for future user amenities such as plaza space, seating area, gardens, etc. New location also provides better ADA access (or universal access) and maintains alignment with Loring Greenway.
5. New location reduces conflict between tree debris and fountain.
6. Formalizes a secondary pedestrian crossing at Willow Street and improves safety with a physical barrier to guide pedestrians away from the existing blind corner (See Image 4.041).
7. Creates more opportunities for community use by introducing an interactive water feature to Loring Park.

Disadvantages

1. Interactive water features require intensive labor and maintenance.
2. Dandelion fountain head uses unsustainable amounts of water.
3. Dandelion fountain head seasonal maintenance remains intensive. The annual assembly and disassembly of the 253 pipes and jets is laborious and expensive. This creates long-term wear and tear on the internal globe, pipes, and jets. Despite everyone's best efforts, parts get dropped, threads get stripped, pieces get misplaced.
ASSESSMENT | CHAPTER 4 - REPAIR OPTIONS

OPTION 1: STABILIZE AND REPAIR IN PLACE

DEMOLITION        $30K
CONCRETE WORK      $50K
GRADE PIPE       $80K
PUMP SUCTION PIPE      $5K
POOL FITTINGS       $20K
WATER TREATMENT SYSTEM    $30K
FOUNTAIN PUMP       $40K
EXTERIOR LIGHT FIXTURES    $20K
CONDUIT & WIRING      $40K
CONTROL / POWER PANEL    $50K
OPTIONAL DANDELION ENCLOSURE  $125K
BERGER FOUNTAIN REHABILITATION PROJECT / OPTIONS EXPLORATION
NEW ELECTRICAL / RETROFIT/    $140K
SEPARATE RESERVOIR/MECH    $100K
REPAIR VAULT STRUCTURE     $50K
NEW MECHANICAL   / RETROFIT/    $225K
SOFT COSTS  / 20%  $270K
CONTINGENCY / 25%  $337.5K
NEW DANDELION FOUNTAIN HEAD   $80K
REPAIR GRANITE PERIMETER    $72K
REPLACE WEIRS        $108K
REPLACE WATERPROOFING     $183K
OPTION 1 R.O.M. COSTS TOTAL   $2,200,500

CONTRACTOR G.C. / 18%  $243K

OPTIONS EXPLORATION | R.O.M. COSTS SUMMARY / DRAFT/  

OPTION 2: REBUILD AND ENHANCE

PIPING          $120K
POOL FITTINGS       $20K
SPLASH PAD FEATURE E IQP   $750K
WATER TREATMENT SYSTEM    $30K
FOUNTAIN PUMP       $40K
CONDUIT & WIRING      $50K
CONTROL / POWER PANEL    $50K
MECHANICAL         $1.04M
NEW VAULT         $100K
LANDSCAPE / PLANTINGS, ETC/  $100K
HARDSCAPE / CONCRETE, ETC/  $200K
SEPARATE RESERVOIR      $100K
GRANITE PERIMETER      $290K
WATERPROOFING       $190K
NEW DANDELION FOUNTAIN   $125K
DEMOLITION OF OLD VAULT     $25K
SOFT COSTS / 20%  $555K
GRANITE PERIMETER      $290K
CONCRETE POOL BASIN      $215K
WATERPROOFING       $190K
OPTION 2 R.O.M. COSTS TOTAL   $4,523,250
CONTRACTOR G.C. / 18%  $499.5K
SOFT COSTS / 20%  $555K
GRANITE PERIMETER      $290K
WATERPROOFING       $190K

DAMON FARBER LANDSCAPE ARCHITECTS / CMS COLLABORATIVE / MILLER DUNWIDDIE / MATTSON MACDONALD YOUNG

Image 4.041 - Option 2 Aerial Plan
Image 4.042 - Option 2 Fountain and Water Feature Plan
Image 4.042 - Option 2 Section (Provided by MPRB)
Scope of Work:
1. Design a new water feature with community input. New design should perform with minimal maintenance and high efficiency.
2. Demolish entire existing system of equipment, pools, vault, etc.
3. Shift new water feature location away from trees and steep slope.
4. Construct new vault with mechanical, electrical, and plumbing systems below grade; provide new catchment pools or scrims with waterproofing, finishes and water feature.

Advantages
1. Allows community to select new water feature design.
2. Maximum sustainability potential for operations and maintenance.
3. New infrastructure and systems built with better efficiency to last 50+ years.
4. Creates flexibility for integrated user amenities such as plaza space, seating area, gardens, etc., with improved location.
5. Opportunity for better alignment with Loring Greenway entrance, better ADA accessibility (universal access) and fewer issues with conflict with tree debris.

Disadvantages
1. Dandelion community icon is eliminated.
2. Greater initial construction costs.
4.06 Costs

Exact costs are difficult to estimate at this point in design, but general rough order of magnitude pricing was assembled to study the economic differences between Options 1 and 2. Option 3 was not priced due to the unknown nature of the future design.

4.07 Conclusions and Recommendations

Option 1, which includes repair of the existing fountain in its current location, is not a sustainable investment due to the condition of the fountain, mechanical system and associated continued maintenance requirements. Because Option 3 involves a new fountain design, the associated cost of this solution is not known and thus this option is not recommended at this time. The design team recommends Option 2, which reimagines the iconic dandelion fountain as a new interactive water feature. This option best aligns with the long-term vision of the ‘MPRB Downtown Service Area Masterplan and provides the best economic value for stakeholders.
APPENDICES

CONTENTS
1974 Site Survey and Design Documents
2001 Site Survey
2003 Berger Fountain Report
Loring Park Master Plan Document (Excerpt)
Downtown Service Master Plan Document (Excerpt)
June 16, 2003

REPORT FOR

BERGER FOUNTAIN
Minneapolis, Minnesota

OWNER:
Minneapolis Park and Recreation Board
3800 Bryant Avenue South
Minneapolis, MN 55409 – 1029
(612) 313-7700

AQUATIC/FOUNTAIN DESIGN:
Gremmer & Associates, Inc.
9202 202ND Street West, Suite 202
Lakeville, MN 55044
(952) 985-0570
INTRODUCTION

The Minneapolis Park and Recreation Board built the Berger fountain in 1974. The fountain consists of one large fountain spray sculpture located in the upper basin with waterfalls into three lower basins. There is a lower level mechanical room that has a water holding tank, recirculation pump, filter, related piping, and related electrical.

The operation of the fountain has been difficult since it was built and has three major problems associated with it. The first problem is that the fountain puts out a higher flow rate than what the basins and related waste piping can handle. This in turn causes the lower basin to overflow into the park. The next problem is that the fountain spray sculpture can be easily plugged will small particles that get past the inline strainer. When these particles get to the fountain, the small branches of the fountain get plugged and require maintenance. The last problem is that the waterfall bricks and related tiles are failing. These require a lot of maintenance and need replacement. Solving these three problems will make the operation and maintenance much easier.

The following report covers each of the problems discussed above in greater detail, recommendations for repairs, and repair estimates. We are also including some other recommendations for the fountain that should be considered. This report will give the Minneapolis Park and Recreation Board some options for repair and upgrades to the Berger Fountain.

FOUNTAIN PROBLEMS AND REPAIRS

This section covers each of the three major problems of the Berger Fountain along with the recommendations for repair. In some cases, multiple options are given for the repair, which have different costs so that the Minneapolis Park and Recreation Board can make decisions based on the funding available. It is our opinion that these three issues should be taken care of together to get the fountain operating properly and safely.

Fountain Flow Rate/Overflow Problem:

In order for the fountain spray sculpture to operate properly, the original designer established a designed flow rate. This flow rate is 1,280 gallons per minute (GPM) at a total dynamic head of 83 feet. This information was obtained from the original pump still in operation. This designed flow rate can no longer be maintained due to problems with the lower fountain basin overflowing into Loring Park.
There are two reasons that the overflowing occurs on this fountain. The first reason is that the "Glory Holes" (please refer to appendix for photos of Glory Holes), which are the waste overflows located in three of the fountain basins, cannot handle the required flow rates at all times of operation. The Glory Holes are pipes capped with screens at the desired water level in the basin. The overflowing occurs because the screens over the Glory Holes plug up quickly with surface waste, such as leaves and grasses. As the screens get plugged, less flow is able to get back into the water holding tank and causes the lower basin to overflow.

The second reason for the overflow is related to the existing steel piping. Typically in old steel piping, there will be growth in the piping from rust and other deposits, sometimes referred to as barnacles. These barnacles will continue to close up the pipe until completely plugged. This situation is most likely occurring, which also reduced the flow allowed back to the water holding tank. There have also been failures in the existing waste piping which have been repaired the best that they can without major reconstruction.

The Berger Fountain operators have tried to alleviate the problem by utilizing the basin drains. New overflow pipes were made by the operators and connected to the basin drains. The waste line in the mechanical room that goes to the sanitary sewer then gets opened into the water holding tank. This provides more piping to remove excess water when the Glory Hole screens are getting plugged. However, this still has not been enough to prevent the fountain from overflowing.

The following are recommendations to prevent the overflowing from occurring. The first step is find new screens for the Glory Holes. The new screens can have openings as large as ½", which is safe for someone standing on or for fingers. This will help reduce the amount of plugging up of the screens and help keep the flow moving. The next step is to provide new overflow chambers for each basin. The two upper basins have longer waterfalls, which means more flow is going into the next basin than is designed to flow over the next waterfall. That is the reason for the Glory Holes, they provided a means to get rid of the extra water flow. The lowest basin would have an overflow chamber to handle the complete flow needed to prevent any possibility of overflowing the basin into the park. With the new overflow chambers, the original Glory Holes would provide another means for water removal or could be abandoned.

The overflow chambers would be constructed out of concrete or fiberglass and connected to each basin. Each basin would vary in size due to different flow characteristics at each basin. From each chamber, a new pipe is installed which continues to the water holding tank below. With these chambers, little reconstruction would be needed on the actual fountain basins. The sidewalk would need to be removed on the west side of the fountain to install the chambers and piping to the tank. However, that is less expensive than going through the fountain itself.
These overflow chambers would prevent the overflow problem into the park. It would also reduce the amount of maintenance needed to operate the fountain. This option would be of great help to properly controlling the fountain.

**Plugging of the Fountain Spray Sculpture:**

The following is a basic overview of the existing piping for the fountain to help better understand how this situation occurs. In the mechanical room, there is a large water holding tank, which serves as an underground pool for storage of the water required for the fountain. From the tank, a pump pulls the water out and pushes the water through the system. In the piping system, the piping splits. A small amount of water, approximately 150 GPM, goes to a sand filter for cleaning the water and returns to the tank. The remaining flow goes directly to the fountain through an inline y-strainer. Once the water goes out the fountain, it goes through the series of waterfalls and returns to the tank.

The problem with the plugging of the fountain is related to the y-strainer. The original strainer had large openings that allowed big particles to continue to the fountain and plug it. Since the problem first occurred, the operators have lined the strainer with finer screen to help reduce the problem. This has been somewhat successful in that there aren’t a lot of situations where the fountain plugs anymore. However, the problem could be eliminated.

The recommendation to solve this problem is to change the piping system. The best way is to have the water going to the fountain go through a filter. By doing this, there would not be any small particles going through that could plug the fountain. It also provides completely filtered water, which means that the water is much cleaner. This is important since people are known to wade and play in fountains at times so it becomes safer for those people. The only downside to this is that the filter assembly can be a bit large so it will take up a lot of space in mechanical room.

**Failure of Spillway Bricks and Related Tile:**

The spillway bricks and related tile are located at each of the waterfalls. The bricks are at the top of the waterfall and are voluted to pass the water in small gaps in the bricks. The tile is on the wall below the bricks and above the lower basins waterline. Please refer to the appendix for drawings and photos. The bricks and tile are failing and could be a hazard if someone entered the fountain. They are also difficult to replace. The fountain operators have not been able to find the same type of brick and have used regular concrete bricks, 8” long by 4” wide by 2” thick, for replacement. Functionally, they are working okay, however aesthetically they don’t fit the fountain, as they don’t look anything like the original brick. The tiles have cracked and are falling off and in need of replacement.

The recommendation to solve this problem is to remove all of the existing spillway bricks, tiles, and related grout beds from the fountain and replace with one of three options. The first option is to replace with granite stone that would be made to match the
existing spillway brick and tile. This would provide an excellent replacement that would last a long time. The granite can be purchased in many different colors to match many different color schemes that may be desired. The second option is to use precast concrete. Again, this material can be made to match exactly what is there now. This can also be made in several different colors. The last option would be to change the type of waterfall to a continuous waterfall, which means that the water would not go through individual spillways. Concrete could be formed at the top of the walls with a straight edge at the front for the waterfall. This would give the least expensive option, but would change the appearance of the waterfall from what is there now. This would also change the lengths of the waterfalls to shorter lengths to work with the same water flow.

Any of these three options would repair the waterfall with a long lasting product. Please refer to the estimates section for the different pricing on the three options on the waterfalls.

OTHER RECOMMENDATIONS

The following are recommendations to help improve the overall quality of Berger Fountain. There are several additional recommendations for the fountain, which include a new recirculation pump, new caulking, chemical system, new make-up water system, upgrade of electrical system, and new piping in mechanical room.

The existing recirculation pump is currently working fine. It does not appear to have been replaced since the original installation. The operators could not recall any work being done to this pump. However, replacement of this pump would help eliminate the possibility of a 28-year-old pump from failing during the operation of the fountain. A new higher efficiency pump could be installed which would provide confidence in the operation of the pump and reduce electrical cost to run. Along with the new pump, a strainer basket would be provided on the suction side of the pump to protect the pump impeller.

The fountain should have new caulking. Most of the existing caulking has failed, however much of it is associated with the existing spillway brick and tile that would be replaced. When the new brick and tile are done, new caulk will be provided around them. However, there is still some existing caulking that should be redone in other parts of the fountain that would help protect the joints in the basins.

The next recommendation is to install a chemical system. The growing concern with fountains is that they sometimes become water play features even though it is not the intent of the fountain. Many people look at them as a place to cool off and play in the water. By installing a chemical system, which would include a chemical controller, acid feed pump, and chlorine feed pump, the water quality would be safe for someone to enter the fountain. Chlorinated water also helps keep out some of the unwanted animals in the fountain, such as ducks and geese.
A new water make-up system would improve operation of the fountain. The water make-up system would automatically maintain the water level in the water holding tank in the mechanical room, which protects the pump from cavitation. The system would make up water that is lost to evaporation or splash out.

Upgrading the existing electrical system would improve safety and better operation. The existing electrical panels, wiring, conduits, and boxes are the originals that were installed and are in poor to fair condition. In order to update the system, a new electrical panel, new starter, and new conduit with wiring would be needed. This would provide safer operation and potentially better operation for the fountain.

The last recommendation is to replace all of the existing piping, valves, and pipe hangers in the mechanical room. Depending on which options are selected in the remodel, much of the piping may already be replaced. However, any remaining piping, valves, and hangers should also be replaced with the new systems.

**ESTIMATES**

The following are the estimates for all of the previously discussed options. All of these estimates are based on previously built projects to help insure accuracy in the estimates. Please refer to the appendix for breakdowns for each of the options to see what is included in each item.

**Fountain Problems and Repairs:**

- Includes repair of Glory Holes, new overflow chambers, new bricks and tiles. Please note that the following shows a base price then three options for the finish of the waterfalls. The total price shall be the basic total plus one of the three options.

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<th>Description</th>
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<td>Basic Total (Not including bricks and tile)</td>
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<td>Option 1: Granite Brick and Tile</td>
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<td>Option 2: Precast Concrete and Tile</td>
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<td>Option 3: Concrete Waterfall and Tile</td>
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<td>Total Range (dependent on Brick and Tile finish)</td>
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**Other Recommendations:**

- New Pump and Strainer                         | $30,000   |
- New Caulking                                  | $5,520    |
- Chemical System                               | $7,860    |
Water Make-Up System $ 4,680
Upgrade Electrical $26,760
Replace Piping, Valves, and Hangers $13,080

SUMMARY

The Berger Fountain is in need of remodeling. The existing fountain system, from the fountain spray sculpture to waterfalls to the mechanical system, does not work properly. The three major concerns are the overflowing of the lower basin into the park, the plugging of the fountain spray sculpture, and the failure of the spillway bricks and tile. By remodeling the fountain with our recommendations to handle these three items, the fountain will function properly and be aesthetically pleasing to observe.

The other recommendations should also be considered. If the funding is available, each of these additional recommendations will help extend the life of the fountain without concern of additional work being required in the near future. With all of the recommendations being completed, the Minneapolis Park and Recreation Board can be confident that the Berger Fountain will operate properly, be aesthetically pleasing, and reduce the costs of maintenance.

Please contact Jody Dahms at 952-985-0570 to discuss any of this report. Gremmer & Associates would like to come present and explain this in greater detail when it is convenient for you.
EXISTING WATERFALL SPILLWAY BRICK

SCALE: 1" = 1'-0"
## COST ESTIMATE
### MINNEAPOLIS PARK & RECREATION BOARD
### BERGER FOUNTAIN REMODEL

**PREPARED BY GREMMER & ASSOCIATES - JUNE 11, 2003**
**FOR BID OPENING NO LATER THAN MARCH 2004**

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**CONTRACTOR MARK-UP, BOND, INSURANCE**  
LS | 1 | 20% | $16,500

**TOTAL (NOT INCLUDING BRICK AND TILE)**  
$99,000

### BRICK AND TILE OPTIONS
#### OPTION 1: GRANITE BRICK AND TILE
- **GRANITE BRICK AND TILE**  
  LS | 1 | $48,000.00 | $48,000
- **INSTALLATION**  
  LS | 1 | $52,500.00 | $52,500
- **CONTRACTOR MARK-UP, BOND, INSURANCE**  
  LS | 1 | 20% | $19,700

**OPTION 1 TOTAL**  
$118,200

#### OPTION 2: PRECAST CONCRETE AND TILE
- **PRECAST CONCRETE AND TILE**  
  LS | 1 | $31,000.00 | $31,000
- **INSTALLATION**  
  LS | 1 | $43,000.00 | $43,000
- **CONTRACTOR MARK-UP, BOND, INSURANCE**  
  LS | 1 | 20% | $14,800

**OPTION 2 TOTAL**  
$88,800

#### OPTION 3: CONCRETE WATERFALL AND TILE
- **FORMED CONCRETE AND TILE**  
  LS | 1 | $14,000.00 | $14,000
- **INSTALLATION**  
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Existing Spillway Bricks and Tile
Existing Spillway Bricks And Tile
Existing Spillway Bricks
And Tile
Glory Holes
Glory Holes
Spillway Brick Replacement
Existing Pump and Related Piping
- Work with property owners and developers to build mixed use commercial development with housing that serves individuals and families with diversity range of income.
- Promote development that helps achieve the goals of the Loring Indicators.
- Promote 'Loring Village” brand for the area around Nicollet Avenue.

10-20 years:

**Support for Park Public Art, Public Space, and Public Space Programming**
Loring Park is a central focal point and integral of part of the neighborhood. All of the below actions steps will happen in cooperation with the Minneapolis Park & Recreation Board (MPRB). Other entities will also be crucial. For establishing better, safer crossings to the park will

<table>
<thead>
<tr>
<th>0-5 years:</th>
<th>MPRB, City of Minneapolis/Public Art, friends of Loring Park, CLPC</th>
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</thead>
<tbody>
<tr>
<td>Design and conduct an inventory of Public Art in the Park, M &amp; R needs, and feasible locations for additional art.</td>
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<tr>
<td>Berger Fountain &amp; Plaza Capital Campaign and Fund raising</td>
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<tr>
<td>Develop plan with MPRB to create an enhanced promenade across Loring Park connecting Downtown Minneapolis to the Walker Art Center via the Loring Greenway and Berger Fountain. Plan should include a high quality way-finding system to assist visitors.</td>
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<tr>
<td>“Wrap” utility boxes surrounding park with community generated art.</td>
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<tr>
<td>Conduct survey of the condition of existing public art in park and develop long-range maintenance plan.</td>
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<tr>
<td>Develop plan to add walkways at the periphery of the park. The top priority should include sections along Willow Street.</td>
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<tr>
<td>Support Friends of Loring Park initiatives that encourage active participation and investment by the community.</td>
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<tr>
<td>Support efforts to establish safe street crossings at the park's periphery. See “Safe Crossings” section of this implementation plan.</td>
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<tr>
<td>Develop programming with the Minneapolis Community &amp; technical College and other educational institutions to allow students to utilize Loring for environmental science and other studies.</td>
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</tr>
<tr>
<td>Assess Community Assets – Survey individuals, businesses and institutions for potential assets that could lead to investment and partnerships that contribute to the programming and fabric of the park.</td>
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</tr>
<tr>
<td>Apply for the CPED's Art in Public Places arts funding program. 5-10 years:</td>
<td></td>
</tr>
<tr>
<td>Berger Fountain &amp; plaza construction</td>
<td></td>
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<tr>
<td>Explore potential opportunities to develop vegetable and fruit gardening.</td>
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</tr>
<tr>
<td>Apply for the CPED's Art in Public Places arts funding program.</td>
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</table>

5-10 years:

- Berger Fountain & plaza construction
- Explore potential opportunities to develop vegetable and fruit gardening. Pursue possible managing partners and develop
community based programming.

- Continue to maintain and make improvements to park entrances.
- Assess impacts of park events on the park and surrounding community. Continue to pursue ways to mitigate negative impacts and capitalize on positive one's.
- Continue to implement and complete projects set forth in the Loring Park Master Plan (1996)
- Continue to work with MPRB and the DNR to address problems related to invasive cattails. Develop long-term plan to establish and maintain a more diverse array of native shoreline plants.

10-20 years:
- Explore opportunities to create an expanded green connection between Loring Park and the Sculpture Garden.

<table>
<thead>
<tr>
<th>Increase Social Capitol for a Safer and more Connected Neighborhood</th>
<th>CLPC, Minneapolis Police Department, MPRB Police</th>
</tr>
</thead>
<tbody>
<tr>
<td>Through ongoing partnerships between community members, agencies and organizations, increase community awareness in order to address current issues and plan for the future.</td>
<td></td>
</tr>
</tbody>
</table>

0-5 years:
- Maintain and develop a communication network between property owners, businesses, residents, institutions, social service institutions, Hennepin County, City of Minneapolis resources, and the Minneapolis Police Department to communicate information.
- Implement the Livability, Safety & Community sections of Loring Park Neighborhood NRP Phase II Action Plan
- Provide public forums where property owners, business owners, residents, and members of institutions and government can get to know each other and share critical information.
- Continue to pursue initiatives with the Minneapolis Police Department to enhance Community Policing approaches.
- Ensure police presence across the neighborhood with a special emphasis in and around Nicollet Avenue.
- Ensure an immediate response and communication plan for all Part I crimes.
- Pursue and continue focus on Part II Livability Offenses to reduce crime and enhance safety.
- Coordinate safety training at multi-family buildings with the Minneapolis Police Department.
- Public Policy - Set standards for Community Engagement - no less than 30 day notification and preferably 45-day notification.

5-10 years:
- Schedule with Xcel Energy an update of all pedestrian level ornamental lighting.
- Cultivate new leadership with an annual outreach plan to recruit and develop participation and leadership.
Berger Fountain (Loring Park)

**Location:** The fountain is located on the northeast edge of Loring Park along Willow Street, where the Loring Greenway meets the park.

As part of a constellation, features that suggest connections to parks and park-like spaces beyond Loring Park are important. A refurbished Berger Fountain marks the downtown side of the park, surrounded by a more generous plaza that is more readily populated, gardens that—while smaller than others in the park—reflect one of its character-defining features, and tall trees offering shade for people and scale for the fountain. The portion of Willow Street near the fountain is conceived as a more pedestrian-focused crossing between Loring Park and the Loring Greenway.

**History**

The fountain was donated by former Park Board Commissioner Benjamin Berger to the Park Board in 1975. It is similar to a fountain Mr. Berger saw in Australia. It was initially intended for the Minneapolis Sculpture Garden but the Walker Art Center declined the installation because it was not an original artwork, so it was subsequently installed in Loring Park.

**Existing Conditions and Character**

The fountain is a beloved neighborhood landmark and a favorite location for wedding photographers and children. The plaza and surrounding trees create a cozy enclosed area with good views of the park and skyline. Pipes and parts function but are often failing and hard to repair, with the basin leaking water onto the plaza in several locations. Strong winds often blow fountain spray onto the nearby plaza benches. The Willow Street crossing to the Loring Greenway is not clearly defined and makes pedestrian and bike crossings challenging in that area.

**Issues**

» Aging mechanicals and plaza infrastructure are in constant need of repair or replacement

» Poor visual and physical connections to Loring Greenway, including lack of a safe bicycle/pedestrian crossing at Willow Street, a lack of a welcoming entrance and wayfinding signage, and a plaza that is too small to accommodate both bicycles and pedestrians while also providing areas to avoid fountain spray

» Current winter cover is unattractive, inviting vandalism, and staff find the cover difficult to install

**Opportunities**

» Create a grand entrance into the park from Loring Greenway

» Provide an efficient and reliable water feature

» Offer room for group gatherings of various sizes while still accommodating bicycle and pedestrian circulation

» Reinforce views and visual connection between the fountain entrance, Loring Pond, and the rest of the park

**Motivators:**

- Assembly (Civic)
- Be Entertained
- Competition/Sport
- Explore/Learn
- Family + Friends
- Fitness+ Health
- Get Away/Retreat/Rest/Relax
- Study/Think/Work
Connections
Wayfinding and connections to and from Berger Fountain should focus on:

» The pedestrian and bicycle connections to the Loring Greenway leading to Nicollet Mall and downtown.

» Pedestrian and bicycle connections leading into the heart of Loring Park and across it to Lyndale/Hennepin Avenues and neighborhoods and parks farther west.
Berger Fountain Proposed Plan

Figure 1.43 Berger Fountain Proposed Plan
Proposed Design

The proposed design features an organically shaped plaza with flowing lines that encourages pedestrian sifting through the space and into the park. Small garden spaces and new trees provide wind breaks and sheltered seating from fountain spray. A raised pedestrian table and on-street markings increase safety and access to the Loring Greenway. A simplified basin prevents plaza flooding and standardized replacement fountain parts reduce time and cost of fountain repairs. Introduction of a splash pad allows children and adults to access the water without climbing on and potentially damaging the basin. New plantings introduce color and a new signage wall creates a welcoming gateway to the park.

Desired Key Features

» A more organic quality to the spaces surrounding the fountain, one that resonates with the natural character of the park and maintains the focus on the fountain as the primary feature of the space
» Routes through the plaza area reflecting the “wandering” character of the Loring Greenway and the strolling nature of the park, eventually linking to the Promenade, one of the key directives of the former master plan for the park;
» A low sign wall identifying the fountain from Willow Street and guiding pedestrians to proper crossing points at a raised roadway which facilitates pedestrian movements while slowing traffic on the street;
» Fixed and flexible seating, recognizing the need to move with breezes that result in fountain overspray falling on various parts of the plaza
» Garden features balancing “hard” surfaces of the surrounding plaza, with a plan for perpetuating the overstory trees that currently surround the fountain area
Processes

<table>
<thead>
<tr>
<th>Initial Design Guidance and Ideation by Design Team</th>
<th>Design Week Products</th>
<th>Design Week Feedback</th>
<th>Final Design Product</th>
</tr>
</thead>
<tbody>
<tr>
<td>Honor existing plans and original design intent for fountain</td>
<td>Keep dandelion head design, but upgrade to modern materials</td>
<td>OK, provide more detailed concepts of Berger Fountain and plaza</td>
<td>Keep dandelion head design, but upgrade to modern materials</td>
</tr>
<tr>
<td>Create strong connection to Loring Greenway, act as bridge between these two significant public spaces</td>
<td>Enhance crossing of Willow Street</td>
<td>OK, provide more detailed concepts of Berger Fountain and plaza</td>
<td>Enhance crossing of Willow Street</td>
</tr>
<tr>
<td>Create significant entry space that leads to but is separate from Great Lawn</td>
<td>Create plaza and seating at edge of fountain that connects street to Great Lawn</td>
<td>OK, provide more detailed concepts of Berger Fountain and plaza</td>
<td>Create plaza and seating at edge of fountain that connects street to Great Lawn</td>
</tr>
<tr>
<td>Design for wandering, create options for paths through</td>
<td>Multiple paths intersecting and passing through plaza space</td>
<td>OK, provide more detailed concepts of Berger Fountain and plaza</td>
<td>Multiple paths intersecting and passing through plaza space</td>
</tr>
<tr>
<td>Garden-like, shaded, protect old trees</td>
<td>Planters and shade trees over plaza</td>
<td>OK, provide more detailed concepts of Berger Fountain and plaza</td>
<td>Planters and shade trees over plaza</td>
</tr>
<tr>
<td>Variety of seating options</td>
<td>Planter seating, fountain edge seating, movable tables and seating</td>
<td>OK, provide more detailed concepts of Berger Fountain and plaza</td>
<td>Planter seating, fountain edge seating, movable tables and seating</td>
</tr>
<tr>
<td>Simple design highlights fountain and doesn’t detract from it</td>
<td>Fountain is centerpiece of plaza</td>
<td>OK, provide more detailed concepts of Berger Fountain and plaza</td>
<td>Fountain is centerpiece of plaza</td>
</tr>
<tr>
<td>Welcoming entrances</td>
<td>Open views of plaza and fountain from street and adjacent paths</td>
<td>OK, provide more detailed concepts of Berger Fountain and plaza</td>
<td>Open views of plaza and fountain from street and adjacent paths</td>
</tr>
</tbody>
</table>

» Play features integrated with the fountain so that it becomes more than a visual feature and allows access to the water, but also recognizing the need to replace fountain components to make it more resilient to damage and easier to maintain

» An attractive winter cover designed with consideration for maintenance, especially one that is designed to be an attractive feature for the plaza space when the fountain is not in use

Costs and Operations Estimates

See Loring Park (beginning on page 4-68) for information on project cost estimates and park operations estimate that includes Berger Fountain.