EXHIBIT 1

MEMORANDUM OF AGREEMENT

BETWEEN THE STATE OF MINNESOTA, DEPARTMENT OF NATURAL RESOURCES AND THE CITY OF DULUTH RELATED TO ASSESSMENT AND DESIGN OF A FLOW RESTRICTIVE CULVERT AND FLOOD STORAGE AT HARTLEY DAM

THIS AGREEMENT, effective as of the date of attestation by the City Clerk, is made by and between the Minnesota Department of Natural Resources (DNR) and the City of Duluth (City) (both DNR and City hereafter collectively the Parties).

WHEREAS, the City and the DNR have mutual responsibilities for management of natural resources and infrastructure on the landscape that includes Hartley Pond and Tischer Creek.

WHEREAS, Tischer Creek is a designated trout stream requiring certain cold-water temperatures to function as a productive trout stream.

WHEREAS, monitoring has shown that the pond is causing higher stream temperatures in Tischer Creek downstream and the dam is a barrier to migration of fish and natural transport of sediment.

WHEREAS, the City has identified modification of the pond to mitigate thermal pollution and connectivity barrier to Tischer Creek in their Hartley Park Mini Master Plan and Duluth Natural Areas Program Hartley Park Management Plan.

WHEREAS, the City, by and through its City Council, passed a resolution of support for continued assessment and full design of a flow restrictive culvert through Hartley Dam (Resolution No. 24-0760R) on October 15, 2024.

WHEREAS, DNR is responsible for managing the public natural resources in Tischer Creek and Hartley Pond and has identified in its Tischer Creek Management Plan the need to address the impairments to priority cold-water stream resources by the dam and the pond, and desires to continue the advancement of the partner-driven Project through the full design phase.

WHEREAS, the Parties desire to work in partnership to assess and design a flow restrictive culvert at the Hartley Park dam and preservation or reconstruction of a small pond (the Project).

WHEREAS, the Parties understand that this agreement is intended solely to advance efforts to the design phase of the Project, and any further phases will be evaluated and discussed following completion of the assessment and design of the Project.

WHEREAS, a small pond must remain or be reconstructed, as the pond is a DNR designated public water and the City wishes to retain a small pond for habitat and recreational purposes.

WHEREAS, funding for the continued assessment and design of the Project is being held and managed by the DNR.

WHEREAS, DNR has secured funding from the United States Environmental Protection Agency (EPA) for the Project in the amount of $350,000, and anticipates the total cost of the Project, should it proceed past the current design phase and through construction, will be approximately $3,500,000.

WHEREAS, DNR anticipates federal and State financial support will be sufficient for completion. City will contribute no funds towards any work related to the design and assessment Project.

NOW, THEREFORE, the undersigned agree to join together in this Memorandum of Agreement (MOA) and work as collaborators and in good faith to further their shared interest in the assessment and design of a flow restrictive culvert at Hartley Dam, as follows:

I. SCOPE OF AGREEMENT

This agreement outlines the Parties' commitment to work in partnership to assess and design a flow restrictive culvert at the Hartley Park dam and preservation or reconstruction of a small pond (the Project). No construction activities are contemplated in the scope of this Agreement.

II. PARTIES' KEY UNDERSTANDINGS

a. DNR is responsible for administering secured EPA funding and applying staff time for completion of the Project design.
b. The City will not permit any changes to the dam that would potentially result in downstream flooding. Modeling completed as part of the full design process will accurately define impacts to downstream flood levels after installation of a flow-restricting culvert and also calculate flood-water storage capacity resulting from draining of the pond, excavation of the floodplain with retention of existing dam function.
c. DNR understands that the design, scope, and non-City funding for the Project must provide for the preservation or enhancement of existing opportunities for recreational enjoyment in the park and must also serve to repair and restore ecological processes, consistent with the Hartley Park Mini Master Plan and the Duluth Natural Area Program - Hartley Park Management Plan.

d. The design must provide specifications for efficient culvert maintenance by minimizing the susceptibility of culvert obstruction and the removal of obstructions.
e. Participation and funding of the project by non-city entities must not obligate the City to continue on to construction following partial completion or total completion of design. The DNR will make project funders aware of the limits and conditions of the City's commitment to the project.
f. Any future projects will be contingent upon ongoing assurances and demonstrations that the Project, if implemented, will not exacerbate downstream flood hazards.

III. TIME

a. The Parties agree to work cooperatively and expeditiously to meet the goals of the Schedule below.
b. The Parties understand that funding from the EPA may be contingent upon certain timelines being met and will endeavor to prioritize staff resources as necessary to ensure continued funding of the Project.
c. The DNR acknowledges that the City has limited staff resources available to meet the time requirements of the Project, and that City priorities may shift in the future due to other City priorities as determined by City administration and elected officials. The DNR will allow a reasonable period of time for the City to respond.

SCHEDULE

Activity	**Date**
Secure all funding for the project.	Complete.
Develop and receive approval of Project Agreement between City and DNR. City Council Approval, all signatures.	April, 2026
Develop the RFP for design services and review with the City.	April, 2026
Finalize RFP and distribute using DNR processes.	May, 2026
Proposals submitted; Hold design engineer selection meeting with City.	May, 2026
Secure funds to pay for a maximum $30,000 to engage a third-party engineer to conduct an additional QA/QC review of the flood hazard modeling.	August, 2026

Present 30% design to City including presentations to Commissions.	October, 2026
Hold Public Meeting.	October, 2026
Present 60% design to City Representative including presentations to Commissions.	March, 2027
Hold Public Meeting.	March, 2027
Present 90% design to City Representative including presentations to Commissions.	June, 2027
Hold Public Meeting.	June, 2027
3-year O &M plan completed.	July, 2027
Commission review of Final Design and O & M plan.	August, 2027
Deliver final design documents.	August, 2027
Council approval of final design and O&M Plan.	November, 2027

IV. REPRESENTATIVES

a. The DNR's representative shall be
John Lindgren
Principal Planner - Fisheries
5351 North Shore Drive
Duluth, MN 55804
Phone: 218-302-3274
Cell: 218-428-6204
Email: john.lindgren@state.mn.us

b. The City's representative shall be the Natural Resources Coordinator or their designees, assigned in writing:
Kate Kubiak
Natural Resources Coordinator
1532 W. Michigan St.
Duluth, MN 55806
www.duluthmn.gov
(218) 580-9150
kkubiak@duluthmn.gov

V. DNR ROLE AND RESPONSIBILITIES

a. Secure all funding for the Project unless otherwise specified. The DNR will explore potential means to support the City's desire to engage a third-party QA/QC review of downstream flood hazard modeling data.
b. Provide data to a third-party professional engineer selected by the City for QA/QC downstream flood hazard modeling data review.
c. Develop and distribute the Request For Proposal (RFP) for the design engineer using DNR processes. The RFP shall be approved by the City and shall include City criteria for design including, but not limited to:
    i. The design shall not increase flood risk. All storm events equal to or greater than the 5-year storm event shall be designed to match or decrease the existing flow rate of the now-existing dam outlet structure. Post-Project flow will be compared to pre-Project flows using modeling software that shows the accurate flow characteristics of the dam and the flow restrictive culvert. Additional modeling based on Federal Emergency Management Agencies (FEMA) Conditional Letter of Map Revision (CLOMR) process will be performed to determine changes to the recently completed detailed area FEMA Flood Map.
    ii. The design shall not compromise the integrity of the dam. The design and preparation of construction documents for the installation of a flow restrictive culvert through the existing dam embankment must be signed by an engineer experienced in the field of dam engineering.
    iii. The design process shall include the inspection of the existing spillway. The design shall identify impacts on the existing spillway and shall provide for rehabilitation, if any, needed to ensure proper function of the spillway under the operating conditions of the designed flow restrictive culvert.
    iv. To the extent possible, the design shall be undertaken so as to decrease flood risk. Modeling completed as part of the full design process will accurately define impacts to downstream flood levels after installation of a flow-restricting culvert and also calculate flood-water storage capacity resulting from draining of the pond, excavation of the floodplain with retention of existing dam function.
    v. The design shall produce a structure that can withstand anticipated water volumes, flood events and velocities over time.

vi. The design shall propose efficient culvert maintenance to inform a plan for operations and maintenance. This shall include design for maintenance equipment access.

vii. The design and scope of the project shall include the preservation or enhancement of existing opportunities for recreation in the park consistent with the Hartley Park Mini-Master Plan. This shall include the preservation or reconstruction of a smaller pond, preservation or relocation of the existing dock and the preservation of the existing trails in proximity to the pond.

viii. The design shall serve to restore and enhance ecological functions that are identified and prioritized in the DNR Tischer Creek Management Plan, the City Hartley Park Mini Master Plan and the Duluth Natural Area Program – Hartley Park Management Plan. Specifically, restoration of the landscape around the new stream channel and extending into the area of the pond to be newly exposed is a critical priority of the City. Furthermore, enhancement of the urban Brook Trout fishery is considered a high priority by the DNR and constituent groups that commented during the feasibility study phase of the Project.

ix. Design shall include a minimum of 5 years post-project vegetation management operations and management plan. That plan will minimize, to the highest degree possible, future growth of invasive plant species within the post-project footprint. Funding for future phases of the Project will be discussed following design phase. The current MOA is solely to advance the partnership through the assessment and design phase. There is no obligation by the DNR or the City to advance any portion of the Project past the assessment and design phase contemplated in this agreement.

d. Manage the selected design engineer, including payments and contractual agreements. The City shall be allowed to participate in the selection of the design engineer.

e. Advance to the greatest degree possible all permitting, environmental review and access agreement for the Project including EAW, SHPO, THPO, DNR Public Waters, MPCA, USACE 404/401 and other permitting as needed.

f. Support project-related public education and engagement in a variety of ways including, but not limited to, attending public meetings, developing and presenting project information, and responding to public inquiries. Present information to public bodies including the City's Natural Resource

Commission, Parks and Recreation Commission and Planning Commission at the 30%, 60%, and 90% stages of the design.

g. Furnish all prepared designs and data to the City.

VI. CITY ROLE AND RESPONSIBILITIES

a. City reserves the right to select and approve an independent third-party professional engineer to conduct associated QA/QC of the design of the flow restrictive culvert, with input from DNR.
b. Unless otherwise specified, City will not be responsible to provide any resources or costs necessary to accomplish the basic goals in the design of the Project. City is willing to contribute a maximum not to exceed of $30,000 to engage an additional third-party engineer to conduct a QA/QC review of the required downstream flood hazard modeling data. DNR and the City will work together to minimize the necessity for the City to incur this cost. DNR will provide any requested data to the City in furtherance of this goal.
c. City will provide staff to support the DNR in the completion of the Project as needed, including personnel representing the following departments: Property, Parks, and Libraries, the City's Attorney's Office, Planning and Economic Development, and Public Works. The Parties understand that, despite potential staffing limitations, the EPA has provided certain timelines and checkpoints for the Parties in order to provide additional support and funding and expects that the Parties will work to accomplish goals in a timely fashion. However, the DNR remains solely responsible for meeting EPA timelines and checkpoints and will provide the City a reasonable time to respond for all requests of support.
d. City will manage public engagement tasks during the design process.
e. City will review available data as it becomes available to clarify and define the City's requirements for the Project as the project progresses.

VII. PROJECT DESIGN REQUIREMENTS

a. Flow restrictive culvert inlet access: The design shall provide access for a City-owned standard length boom hydraulic excavator to reach debris that would obstruct the culvert inlet. Design must include a specification for a safe working area/pad above the water surface (water elevation equal to the current dam weir elevation post rain event and/or inlet obstruction event) and

provide an approach to this area/pad. Coordination with the City regarding inlet access shall occur throughout the design process.

b. The design shall provide that the culvert and natural bottom facets shall be constructed to be durable and withstand flow (quantity and velocity) while providing flow restrictions previously stated. The feasibility study conducted by GEI consultants indicates that the stream bottom in the proposed culvert shall include the facets of a natural stream channel including pools, glides, and riffles constructed from aggregate, rocks, and boulders. The Parties understand that this is a key element of the Project; City Engineering shall review and approve the design at 30%, 60% and final design to ensure the efficacy and longevity of these elements.
c. The design shall take into account that the area upstream of the current dam embankment (currently the pond) will be used for periodic floodplain inundation resulting from the installation of the flow restrictive culvert. DNR will coordinate with the City in this area during the design phase, especially for grading and restoration. The Parties understand that the final design of this area will have an impact on available flood storage and the potential to generate substantial debris that could increase the frequency of obstructions to the proposed culvert inlet.
d. The design process will take into consideration phasing construction activities so as not to increase flood risks during implementation. Constructability and proposed phasing will require review and approval by the City.

VIII. TECHNICAL ANALYSIS

a. DNR shall oversee site evaluations, topographic survey, permitting processes and comparative studies as necessary to prepare the design.
b. DNR shall furnish a CADD file of the survey base map to the City. Files shall be in the software specified by the City's Engineering Department.
c. DNR shall prepare a report containing schematic layouts and conceptual design criteria with appropriate exhibits to indicate clearly the considerations involved in setting forth the DNR's findings and recommendations with probable total costs for the Project, including construction cost, contingencies, estimation of charges of all professionals and consultants, and post-Project vegetation management. Furnish four copies of the report and present the report to the City's Natural Resources Commission, Parks and Recreation Commission, Planning Commission, and PW&U Engineering Division.

IX. PRELIMINARY DESIGN DOCUMENTS

a. DNR shall prepare preliminary design documents consisting of final design criteria, preliminary drawings, vegetation plan, and outline specifications.
b. Based on the information contained in the preliminary design documents, DNR shall submit a revised opinion of probable project costs.
c. Preparation of applications and supporting documents for any governmental grants in connection with the project shall be provided by the DNR.
d. DNR shall prepare all environmental assessments and impact statements as needed; review and evaluate the effect on the design requirements due to any such statements and documentation prepared by others; and assist in obtaining approvals of authorities having jurisdiction over the anticipated environmental impact of the Project.
e. The DNR will assist the City in scheduling periodic design checks as requested, but no less often than at 30%, 60% and 90% levels of design. City Engineering will evaluate outputs to ensure that the best possible data is informing the design, and that the Project will not increase downstream flood risk. The City may use its selected independent third-party reviewer for this evaluation.

X. FINAL DESIGN DOCUMENTS

a. Drawings and Specifications: On the basis of the independent third-party design level review outcomes, DNR shall prepare for incorporation in the contract documents final Construction Plans to show the character and extent of the Project and specifications.
b. Adjusted Project Costs: DNR shall advise the City of any adjustments to the latest opinion of probable Project costs, identify cause of adjustments, and furnish a revised opinion of probable Project cost based on the final drawings and specifications outlined in the Construction Plans.
c. Operation and Maintenance Plan - Vegetation: The DNR is responsible for providing a Vegetation Operations and Maintenance (O&M) Plan for five years post-project. This plan should include management, supervision, labor, materials, supplies, and a schedule for the stewardship and long-term vegetation maintenance requirements of the Project, specifically, the area that will be newly exposed once the pond has been drawn down. The pond will occasionally fill up by design, so a special vegetation plan that can withstand occasional inundation must be planned for this area.

d. Operation and Maintenance Plan and Full Warranty – Culvert: The design contractor shall develop a three-year Operation & Maintenance (O&M) Plan of the flow restrictive culvert including management, supervision, labor, materials, supplies, and a schedule for the long-term maintenance requirements of the culvert. The Parties understand that a three-year warranty, applying to all elements of the O&M Plan, will be discussed prior to Project construction.
e. DNR shall furnish three copies of the above documents and present and review them in person with the City.

XI. OWNERSHIP OF DOCUMENTS

Each respective Party shall own all of the drawings, specifications, reports, records, and other work products that are developed in the course of this Agreement unless otherwise specified. Regardless of document ownership, the Parties agree to work collaboratively and share documents as needed to accomplish the shared goals set forth herein.

XII. PERIOD OF PERFORMANCE

This Agreement becomes effective as of the last date shown below on the signature page and will be reviewed at least every two years by the DNR and City for amendments, or more often, as needed. The Agreement shall expire on February 28th, 2031 (the "Expiration Date") unless terminated sooner or extended in whole or in part as provided herein.

XIII. AMENDMENTS AND TERMINATION OF AGREEMENT

Either Party may recommend amendments to this Agreement. Any proposed amendment will be effective only if agreed to in writing by authorized representatives of the DNR and the City. Either the DNR or the City may terminate this Agreement upon 30-day written notice to the other Party.

XIV. DISCLAIMER

This Agreement is not a contract and is neither a fiscal nor a funds obligation document. Any endeavor involving reimbursement or contribution of funds between the Parties will be handled in accordance with applicable laws, regulations, and procedures including those for government procurement and printing. Such endeavors will be outlined in separate agreements that shall be made in writing by representatives of the Parties and shall be independently authorized by appropriate statutory authority. This Agreement does not provide

such authority. Specifically, this Agreement does not establish authority for noncompetitive award to the City of any contract or other agreement.

Pursuant to Section 22, Title 41, United States Code, no member of, or Delegate to, Congress shall be admitted to share any or part of this instrument, or any benefits that may arise therefrom.

This Agreement does not restrict Parties from participating in similar activities with other public or private agencies, organizations, and individuals.

XV. FURTHER ASSURANCES

The Parties acknowledge that the City has not committed to proceed with the Project, except as contemplated by this Agreement, which is solely focused on assessment and design. Certain assurances will be required of the DNR in the event the City elects to proceed with the Project beyond the final design contemplated by this Agreement. DNR acknowledges it will be required to certify the following assurances and certain representations and warranties as follows:

a. The DNR has the legal authority and the institutional, managerial, and financial capability to ensure proper planning, management, and completion of the Project.
b. The DNR will give the City access to and the right to examine all records, books, papers, and documents related to this Agreement.
c. The DNR provided and maintained competent and adequate supervision over the design contemplated in this Agreement.
d. The final design complies with the design requirements of this Agreement.
e. The operation and maintenance plans comply with the design requirements of this Agreement.

XVI. SPECIAL PROVISIONS

The following exhibits are attached to and made part of this Agreement:

1) Exhibit A – Concept Drawing – Open Bottom Culvert
2) Exhibit B – Technical Memo
3) Exhibit C – City Council Resolution No. 24-0760R

ACCEPTED AND AGREED

State of Minnesota, Department of Natural Resources

Signature: _____

Printed Name: _____

Title: _____

Date: _____

ACCEPTED AND AGREED

City of Duluth

By: _____
Mayor

Attest: _____
City Clerk

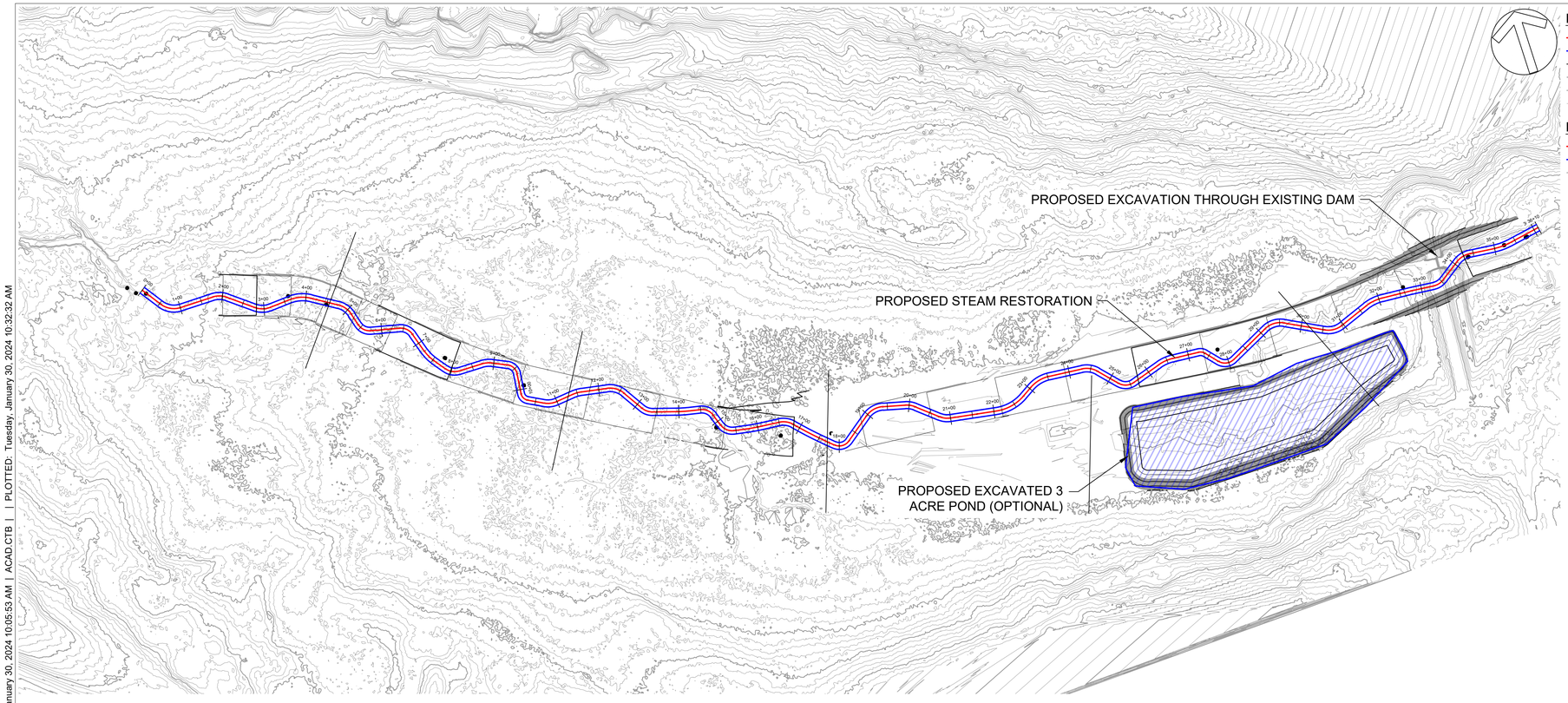
Date: _____

Countersigned:

By: _____
City Auditor

Approved as to form:

By: _____
City Attorney

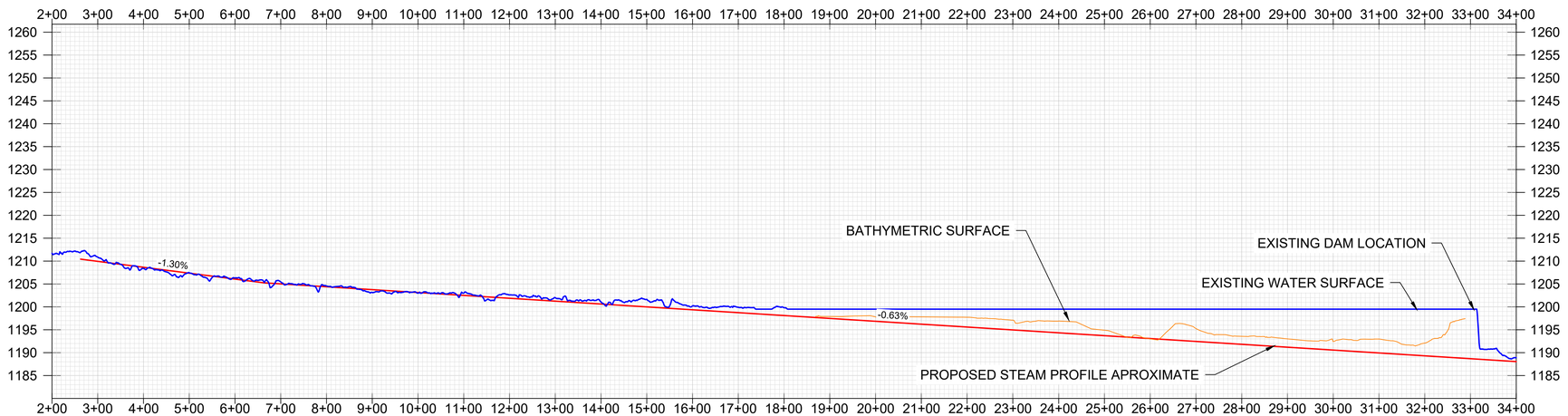


PLAN LEGEND

- PROPOSED STREAM CENTER LINE
- PROPOSED BANKFULL
- (483) PROPOSED MAJOR CONTOUR
- PROPOSED MINOR CONTOUR
- 479 EXISTING MAJOR CONTOUR
- EXISTING MINOR CONTOUR

PROFILE LEGEND

- PROPOSED STREAM CENTER LINE
- EXISTING WATER LEVEL
- EXISTING GROUND



Stream valley through pond - SCALE: HOR 1" =30'; VERT 1"= 3'

NOT TO SCALE

APPROVED BY: XX | CHECKED BY: XX | DRAWN BY: XXX

REV	DESCRIPTION	APPRV
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FEASIBILITY STUDY
HARTLEY DAM
HARTLEY PARK
DULUTH, MINNESOTA

NOT FOR CONSTRUCTION

DAM REMOVAL ALTERNATIVE

BEAVER RIVER CONSULTING

30% DESIGN
NOT FOR CONSTRUCTION

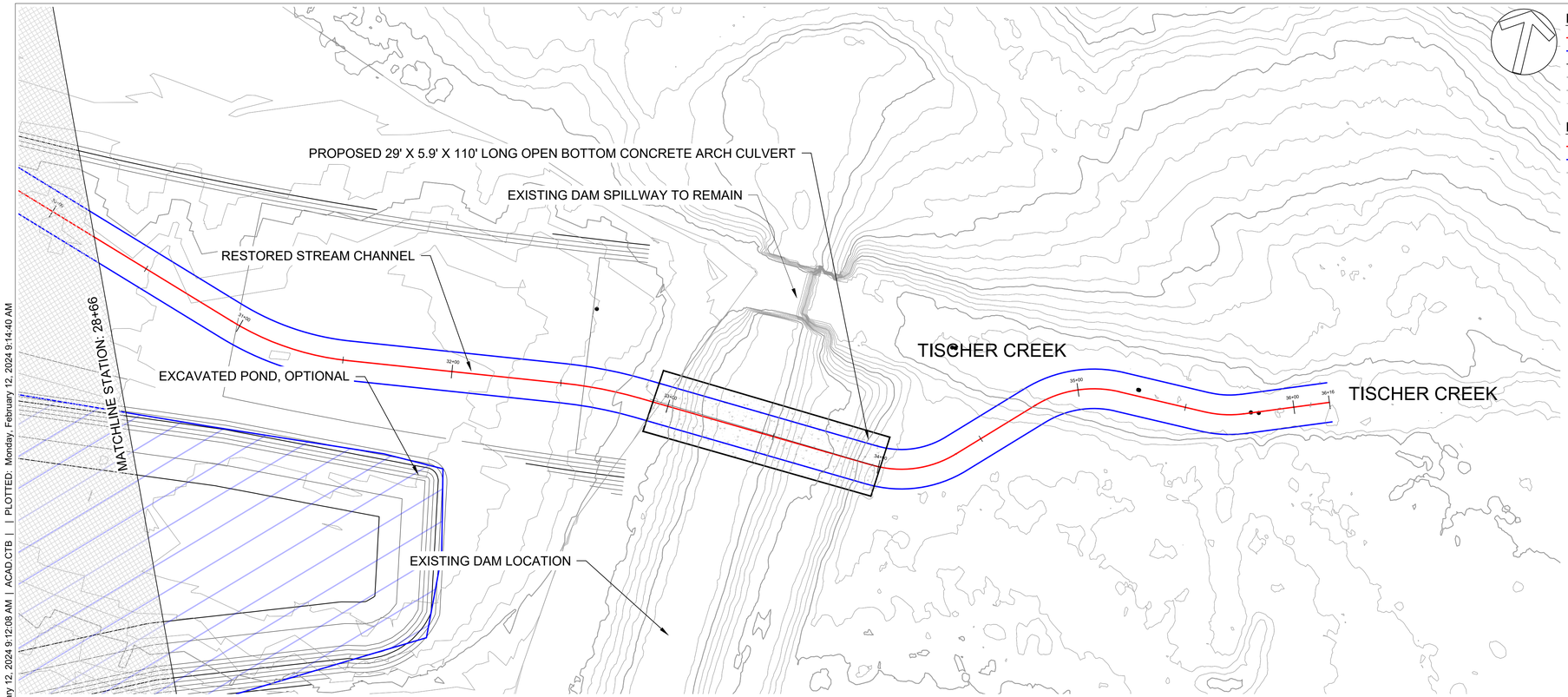
DATE: 03/31/2023
SCALE (34"X22"): 1" = 150'
SCALE (17"X11"): 1" = 300'

0 150 300
SCALE IN FEET

SHEET NUMBER
2 OF XX

City Contract #_____

Exhibit A

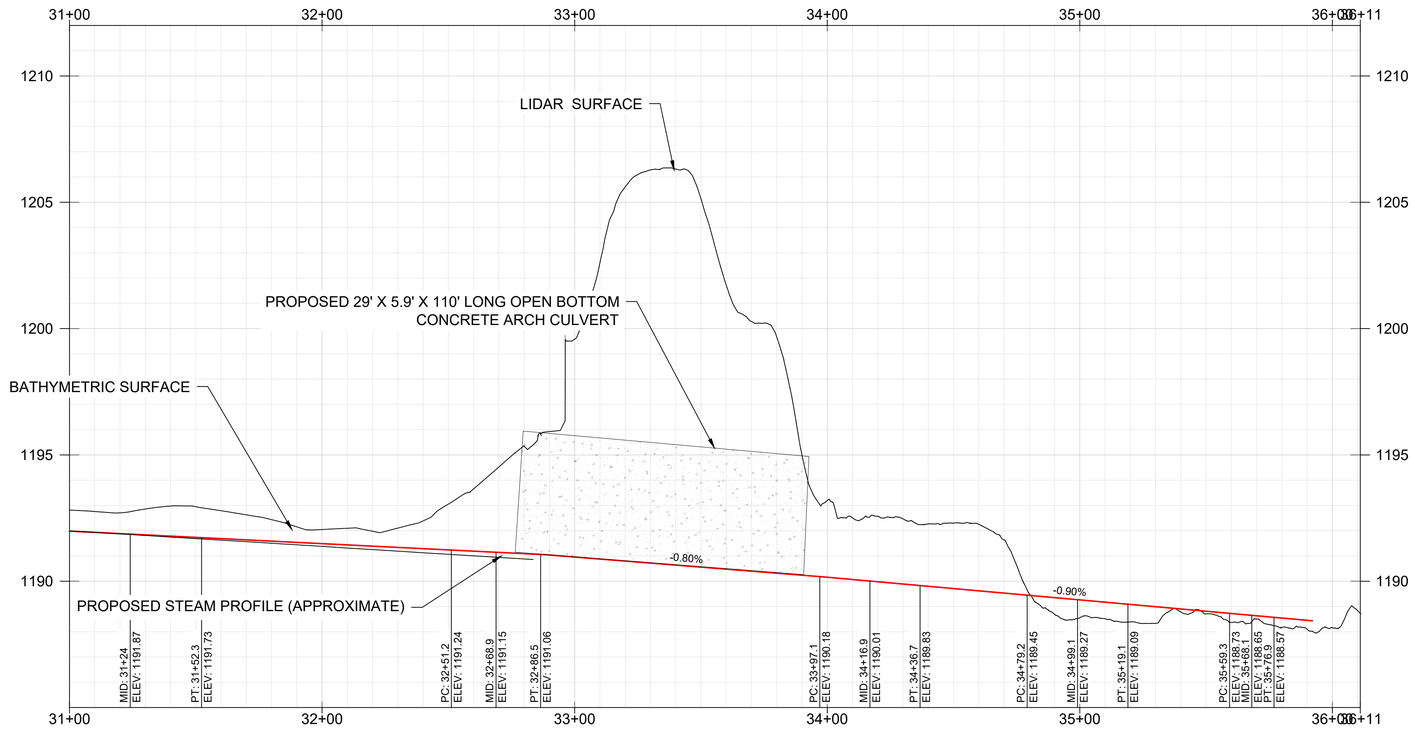


PLAN LEGEND

- PROPOSED STREAM CENTER LINE
- PROPOSED BANKFULL
- (483) PROPOSED MAJOR CONTOUR
- PROPOSED MINOR CONTOUR
- 479 EXISTING MAJOR CONTOUR
- EXISTING MINOR CONTOUR

PROFILE LEGEND

- PROPOSED STREAM CENTER LINE
- PROPOSED BANKFULL
- EXISTING GROUND



stream_channel_culvert Option - SCALE: HOR 1" =30'; VERT 1"= 3'

APPROVED BY: XX	CHECKED BY: XX	DRAWN BY: XXX

REV	DESCRIPTION	APPRV
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FEASIBILITY STUDY
HARTLEY DAM
HARTLEY PARK
DULUTH, MINNESOTA

NOT FOR CONSTRUCTION

CULVERT ALTERNATIVE

BEAVER RIVER CONSULTING

30% DESIGN
NOT FOR CONSTRUCTION

DATE: 03/31/2023
SCALE (34"X22"): 1" = 30'
SCALE (17"X11"): 1" = 60'

0 30 60
SCALE IN FEET

NOT TO SCALE

SHEET NUMBER
3 OF XX

City Contract #_____

Exhibit A

C:\USERS\OWNER\DROPBOX\2022_TISCHER_CREEK\C3D\SHEETS\HARTLEYDAM_PLAN_PROFILE_CULVERTALT.DWG | OWNER | SAVED: Monday, February 12, 2024 9:12:08 AM | ACAD.CTB | PLOTTED: Monday, February 12, 2024 9:14:40 AM

Exhibit B

TECHNICAL MEMORANDUM

To: Jim Filby-Williams

From: Kate Kubiak, Natural Resources Coordinator; Tom Johnson, Sr. Engineer-Stormwater; Amanda Mangan, Asst. City Attorney; Jim Filby Williams, Property, Parks, and Libraries Director

Re: *Statement of intent and conditions regarding DNR/City partnership for design and further assessment of a flow restrictive culvert for potential installation at the Hartley Park dam and pond*

City of Duluth staff support a conditional City commitment to work in partnership with the Minnesota DNR to design and further assess a flow restrictive culvert for potential installation at the Hartley Park dam and pond.

Background:

Hartley Pond is becoming shallower, hotter, and more anoxic as it fills with silt and organic material. This process has reduced the recreational, educational, and aesthetic value of the pond and caused significant environmental harm to the cold-water trout stream below the dam. The shallowing of the pond, and its negative consequences, are expected to accelerate and mount. The City cannot afford the estimated $1.92 million cost to restore the historic depth of the pond via dredging. As an alternative, the City asked Minnesota DNR to engage an independent engineering firm to study options for grant-funded reinvestment in Hartley dam and pond that would, at no cost to the City, partially restore the recreational, educational, and aesthetic value of the pond, cease the environmental harm from the pond to the trout stream below, and do so without increasing downstream flood hazards.

A feasibility study was completed for the Hartley dam and pond in March 2024. The study was overseen by DNR, in consultation with the City, undertaken by GEI Consultants, and paid for by the US Environmental Protection Agency.

After a public process which included the Natural Resources Commission, the Parks and Recreation Commission, City Council, and four public meetings, the alternative selected was a flow restrictive culvert (see attached exhibit).

The proposed partnership outlined in this memo is for a design process only; once the design is complete, and it appears that permits can be attained, the City and MN DNR will consider the next step - construction of the selected alternative. The parties agree that the City has no obligation to proceed with construction following design.

This document recommends that the City impose a number of specific conditions and limitations on City support to proceed with complete design and assessment of the flow restrictive culvert and that the parties memorialize these conditions in a project agreement.

Key City Conditions

The City will not permit any change to Hartley pond and dam that might increase downstream flood risks.

- Study to date demonstrates that a flow restrictive culvert need not increase downstream flood risk and that it may be possible for the culvert to be designed so as to decrease downstream flood risk. As such, the City will require that the project be designed so as to decrease downstream flood risk to the maximum extent possible and strictly avoid any increase to downstream flood risk.
- Continued City support for design of the flow restrictive culvert is conditional upon continued City confidence that the flow restrictive culvert will not increase downstream flood risk.
- The design process shall include additional independent evaluation by City-approved experts of project plans, analyses, models, and designs all of which shall bear out that the project will not increase downstream flood risks. The selected third-party reviewer will evaluate outputs at the 30, 60 and 90 percent design levels to ensure that the best possible data is informing the design.

The design must support, the scope of the project must include, and non-City project funding must provide for preservation or enhancement of existing opportunities for recreational enjoyment in the park generally consistent with the Hartley Park Mini-Master Plan.

The design must provide for efficient culvert maintenance. by minimizing the susceptibility of the culvert to obstruction and providing for efficient removal of obstructions. See “Other Design Requirements” below.

Unless otherwise specified, City funds will not be used to accomplish the basic goals of the project, either in design or construction.

The potential exception is the maximum $30,000 cost to engage an additional third-party engineer to conduct a Quality Assurance/Quality Control review of the flood hazard modeling. DNR and the City will work together to avoid or minimize the necessity for the City to contribute to this cost. All City costs would be paid from PPL Department Budgets.

The design must serve to repair and restore ecological processes generally consistent with the Hartley Park Mini-Master Plan, the Hartley Natural Area Management Plan, and the primary purpose of Hartley Park as a nature center.

Participation in, and funding of, the project by non-city entities must not obligate the City to continue through to construction following partial completion or total completion of a design. DNR will make project funders aware of the limits of, and conditions on, the City’s commitment to the project.

Responsibilities:

DNR will:

- Secure all funding for the project unless otherwise specified.
- Seek to secure funds to pay for the maximum $30,000 cost to engage an additional third-party engineer to conduct an additional Quality Assurance/Quality Control review of the flood hazard modeling.

- Provide data to third party for the QA/QC modeling review.
- Assist in setting up design checks with the City at the 30% / 60% / 90% stages of the design.
- Manage funding including all required reporting.
- Provide regular updates to City staff, Commissions or Council on the project as needed or requested.
- Develop and distribute the RFP for the design engineer, using MN DNR processes. RFP shall include City criteria for design including but not limited to:
    - The design shall not increase flood risk.The design shall not compromise the integrity of the existing dam.
    - The design shall produce a structure that can withstand anticipated water volumes and velocities over time. See "Other Design Requirements" below.
    - The design shall provide for efficient culvert maintenance. See "Other Design Requirements" below.
    - To the extent possible, the design shall be undertaken so as to decrease flood risk.
    - The design shall support, and the scope of the project shall include, preservation or enhancement of existing opportunities for recreational enjoyment in the park generally consistent with the Hartley Park Mini-Master Plan.
    - The design shall serve to repair and restore ecological processes generally consistent with the Hartley Park Mini-Master Plan, the Hartley Natural Area Management Plan, and the primary purpose of Hartley Park as a nature center.
- Manage the selected design engineer including payments and contracts. City shall be allowed to participate in the selection of the design engineer.
- Pursue all permitting for the proposed alternative including SHPO, THPO, MNDNR Public Waters, MPCA, and USACE 404/401 certification and other permitting as needed. It is important to determine if permits can be acquired for construction of the selected alternative, and determination of this should occur during the design phase of the project.
- Support project-related public education and engagement in a variety of ways including, but not limited to, attending public meetings, developing and presenting project information, and responding to public inquiries.
- Furnish all prepared design documents and design data and present and review such documents and data to the City.

Enter into a project agreement with the City of Duluth memorializing the requirements and conditions outlined here. City will:

- Contribute to the selection and approval of the independent third parties engaged to undertake project design and conduct associated QA/QC.
- If necessary, contribute up to $30,000 to engage an additional third-party engineer to conduct an additional Quality Assurance/Quality Control review of the flood hazard modeling. All City costs would be paid from PPL Department budgets.
- Provide staff to support the MN DNR in the completion of the project including personnel representing the following departments: Property, Parks, and Libraries, the City Attorney's Office, Planning and Economic Development, and Public Works. Support from City staff may be limited due to other duties and project and staffing levels.
- Coordinate necessary updates through City Commissions and City departments as needed.

- Manage the public engagement tasks during the design process.
- Enter into a project agreement with DNR memorializing the requirements and conditions outlined here.

Other Design Requirements:

- Flow restrictive culvert inlet access: All culverts are susceptible to debris and obstruction caused by natural stream conditions, though typical road culverts have access for equipment and crews to remove debris from the road that is directly above the culvert. The project shall provide access for a City owned standard length boom hydraulic excavator to reach debris that has obstructed the culvert inlet. The access shall include a safe working area/pad above the water surface (water elevation may be at current weir elevation post rain event and inlet obstruction) and provide an access path to this area/pad. Coordination with the City regarding this shall occur throughout the design process.
- The characteristics of the culvert to provide the flow restriction to match the existing hydraulics of the dam weir, shall be constructed to be durable and withstand the flows (quantity and velocity) that will be conveyed through the proposed culvert. The feasibility study indicated the interior of the culvert would provide a "roughness" through the use of rock features to create a natural channel with pools and riffles to reduce the discharge rates/flows. This is a key element of the project and will require City engineering review and approval throughout the design process to ensure longevity of these elements.
- The area upgradient of the current dam embankment (currently the pond) will be used for periodic inundation resulting from the flow restrictive culvert. The design (grading, restoration, planting,..) of this area will require coordination with the City throughout the design process. The final design of this area will have an impact on the available flood storage / inundation and the potential to generate a substantial amount of debris that may increase the frequency of obstructions to the flow restrictive culvert inlet. As this area grows with vegetation over time, this may change both flood storage capacity and debris generation.
- The design process must also take into consideration the phasing of the project to not increase flood risks during construction. Constructability and proposed phasing will require review and approval by the City.

Current Timeline:

- **May 1** Presentation of study results and recommendations to Natural Resource Commission
- **May 8** Presentation of study results to Parks and Recreation Commission
- **May 23** Public meeting – study presentation and public input
- **August 7** Natural Resource Commissions voted on guidance to City Council and administration
- **August 14** Parks and Recreation Commission voted on guidance to City Council and administration
- **October 15** City Council approved resolution 24-0760R approval to move forward with City/DNR project agreement
- **Spring 2025** DNR secures project funding
- **2025-2026** DNR undertakes and completes further study and project design

Legislation Text

File #: 24-0760R, **Version:** 1

RESOLUTION OF SUPPORT FOR CONTINUED ASSESSMENT AND COMPLETE DESIGN OF A PROPOSED FLOW RESTRICTIVE CULVERT AT HARTLEY DAM

CITY PROPOSAL:

WHEREAS, on July 21, 2014, the city council approved a Hartley Park Master Plan, which recommended that the city commission a feasibility study to assess options for reconfiguring the relationships between Hartley Pond, Hartley dam, and Tischer Creek to better advance the public's interests in ecosystem integrity and outdoor recreation (14-0390R);

WHEREAS, on March 23, 2020, the city council approved the Management Plan for the Hartley Natural Area which recommended that the city commission a study of potential changes to the same pond, dam, and creek in Hartley Park (20-0274R);

WHEREAS, on October 10, 2022, the city council approved the Essential Spaces: Duluth Parks, Recreation, Open Space & Trails Plan which recommended that the city commission a study to retain, remove, or modify the pond in Hartley Park to best balance recreation, aesthetics, history and ecology (22-0828R);

WHEREAS, in 2023 and 2024, Minnesota Department of Natural Resources ("MN DNR"), in cooperation with the city, undertook the recommended study with independent engineer support and extensive community input;

WHEREAS, in July of 2024, MN DNR issued a final report recommending that the city address the interrelated issues at the pond, dam, and creek by installing a flow restrictive culvert in the dam;

WHEREAS, in August of 2024, the city's natural resources commission and its parks and recreation commission each unanimously recommended that the city authorize additional assessment and complete design of a flow restrictive culvert at Hartley Park subject to the terms and conditions set forth in Exhibit 1;

NOW, THEREFORE, BE IT RESOLVED, that the city council supports continued assessment and complete design of the proposed flow restrictive culvert at Hartley dam subject to the conditions outlined in the staff memo attached as Exhibit 1.

FURTHER RESOLVED, that the city council supports development of a project agreement with MN DNR that would authorize MN DNR to undertake continued assessment and complete design of the proposed flow restrictive culvert subject to the terms and conditions outlined in Exhibit 1.

STATEMENT OF PURPOSE: This resolution expresses the City Council's support for continued assessment and complete design of a proposed flow restrictive culvert at Hartley dam and calls for development of a project agreement with MN DNR that would authorize MN DNR to undertake continued assessment and design on behalf of the City subject to the terms and conditions outlined in Exhibit 1.

The force of this resolution of support is, by intention, very limited. The resolution expresses support for assessment and design only, not construction. Moreover, the resolution provides only preliminary support for

assessment and design-subsequent Council authorization of a formal DNR/City project agreement is necessary before the partners may proceed with any assessment and design activities. Further, continued advancement of assessment and design is, and will be, contingent upon ongoing assurances and demonstrations that the City will incur no cost in association with the project and that the project, if implemented, will not exacerbate downstream flood hazards.

As envisioned, the flow restrictive culvert, constructed through the existing earthen dam, would reconfigure the relationships between the pond, dam, and creek.

- Approximately 2,200 linear feet of Tischer Creek now submerged below Hartley Pond would be restored as a free-flowing, cold-water trout stream.
- Tischer Creek would be reconnected, above and below the dam, allowing free passage of native brook trout and other aquatic organisms.
- The current 12-acre pond-shallow, hot, and increasingly unsuitable for recreation-would be replaced with a deeper, cooler, 3-acre pond more suitable for fishing and paddling.

Exhibit 2 juxtaposes an aerial view of the pond, creek, and dam today with a simulation of how the site would normally appear following installation of a flow restrictive culvert.

The flow restrictive culvert would be designed so that water would temporarily back up behind the culvert during precipitation events, temporarily resubmerging the 12-acre area now occupied by Hartley Pond. In so doing, the culvert would moderate stream flows and downstream flood hazards much as the dam does today.

The City and MN DNR are recommending additional assessment and complete design of the flow restrictive culvert on the basis of an 18-month, community-engaged, engineer-supported feasibility study that examined five options for addressing the deteriorating condition of Hartley Pond and Tischer Creek downstream: no action (retain the dam as-is); route the stream around the dam; remove the dam; and install a flow restrictive culvert (with and without a retained pond). A flow restrictive culvert with retained, but reduced, pond was the highest scoring, currently feasible option.

The Natural Resource Commission, the Parks and Recreation Commission, and the Hartley Nature Center Board of Directors have each voted to recommend advancement of the flow restrictive culvert with reduced pond.