Lower St. Louis River Landscape Conservation Design

Scoping Report

Prepared by:

Minnesota Land Trust

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Acronyms

Acronym	Description
AOC	Area of Concern
CISMA	Cooperative Invasive Species Management Area
FDL	Fond du Lac Band of Lake Superior Chippewa
GLRI	Great Lakes Restoration Initiative
LAMP	Lakewide Action and Management Plan
LCD	Landscape Conservation Design
LSNERR	Lake Superior National Estuarine Research Reserve
MLT	Minnesota Land Trust
MNDNR	Minnesota Department of Natural Resources
MPCA	Minnesota Pollution Control Agency
NOAA	National Oceanic and Atmospheric Agency
RAP	Remedial Action Plan
SLR	St. Louis River
SLRAOC	St. Louis River Area of Concern
SLRE	St. Louis River Estuary
SLRLCD	St. Louis River Landscape Conservation Design
UMD-NRRI	University of Minnesota-Natural Resources Research Institute
USEPA	U.S. Environmental Protection Agency
USEPA GLTED	US Environmental Protection Agency Great Lakes Toxicology and Ecology Division
USFWS	U.S. Fish and Wildlife Service
WDNR	Wisconsin Department of Natural Resources

Executive Summary

Numerous agencies involved in the cleanup and recovery of the Lower St. Louis River have indicated the need for continued coordination and collaboration after the St. Louis River Area of Concern is delisted. These agencies have proposed to develop a Landscape Conservation Design (LCD) approach for the Western Lake Superior region of the Great Lakes, expanding from an initial focus on the Lower St. Louis River landscape. The LCD will create a collaborative coordination framework in which local communities and tribal, State, and federal agencies responsible for managing natural resources can develop a shared vision for utilization and conservation of those resources; coordinate land use and restoration implementation strategies; and apply common metrics to plan, measure, and track success.

The LCD effort does not have a mandate to prepare an estuary-wide plan for a future state. The effort is designed to develop tools to support informed decision-making, such that natural resource management needs are balanced with community health and economic development interests. The primary outcome of this project is the establishment of a structured forum that brings together stakeholders representing these three sectors. The purpose of the forum is to provide a networking structure to help link specific projects and initiatives to the estuary landscape and to facilitate discovery of new opportunities, connections, and interests that may inform specific projects, identify new needs, and keep everyone informed.

The objectives and desired outcomes for the LCD were established based on input provided by stakeholders. This Scoping Report presents those objectives and outcomes, as well as the vision and guiding principles developed by the LCD Advisory Group formed for the project; the proposed planning framework for the LCD focus area; and the action plan for the completion of work under the initial GLRI grant.

Support for this project is provided by the Great Lakes Restoration Initiative (GLRI; CFDA Number 15.662) through the U.S. Fish and Wildlife Service (USFWS) Minnesota - Wisconsin Ecological Services Field Office. The Minnesota Land Trust (MLT) is managing the LCD project and providing local coordination and facilitation with local agencies, organizations, and stakeholders influencing land use decisions.

1.0 Background and Introduction

Numerous agencies involved in the cleanup and recovery of the Lower St. Louis River have indicated the need for continued coordination and collaboration after the St. Louis River Area of Concern is delisted. These agencies have proposed to develop a Landscape Conservation Design (LCD) approach for the Western Lake Superior region of the Great Lakes, expanding from an initial focus on the Lower St. Louis River landscape. The LCD will create a collaborative coordination framework in which local communities and tribal, State, and federal agencies responsible for managing natural resources can develop a shared vision for utilization and conservation of those resources; coordinate land use and restoration implementation strategies; and apply common metrics to plan, measure, and track success.

The overall goal of the St. Louis River Landscape Conservation Design (SLRLCD) is to support sustainable conservation of fish and wildlife resources of the Lower St. Louis River and Western Lake Superior landscape. To accomplish this, we seek to align natural resources management efforts focused on ecological integrity with the complementary themes of community health and economic development in the project area. This initial three-year project will establish a communication framework, identify necessary working groups, evaluate existing spatial-based land use and conservation plans, develop decision-support tools and associated metrics, and recommend additional data and information collection needed to assess targeted outcomes of ecological integrity, enhanced community health, and economic development.

Support for this project is provided by the Great Lakes Restoration Initiative (GLRI; CFDA Number 15.662) through the U.S. Fish and Wildlife Service (USFWS) Minnesota - Wisconsin Ecological Services Field Office. The Minnesota Land Trust (MLT) is managing the LCD project and providing local coordination and facilitation with local agencies, organizations, and stakeholders influencing land use decisions.

1.1 Statement of Need

The Lower St. Louis River was included as part of the St. Louis River Area of Concern (SLRAOC) in 1987. The Lower St. Louis River Habitat Plan (Habitat Plan) was developed by the St. Louis River Citizen Action Committee to “facilitate protection of the ecological diversity of the Lower St. Louis River” (SLRCAC, 2002). This well-accepted plan has guided habitat restoration efforts in the St. Louis River Estuary (SLRE) since its completion by defining conservation strategies and goals intended to achieve a mix of ecological and social benefits.

Recent efforts to delist the SLRAOC began in earnest with the passage of Minnesota’s Land & Water Legacy Amendment in 2008 and the GLRI in 2010. The SLRAOC Remedial Action Plan (RAP) Update was completed in 2013 and is updated annually. This plan describes the actions needed to remove beneficial use impairments and delist the SLRAOC and incorporated selected Habitat Plan projects.

Area of Concern coordinators from the Fond du Lac Band of Lake Superior Chippewa (FDL), Minnesota Department of Natural Resources (MNDNR), Minnesota Pollution Control Agency (MPCA), and Wisconsin Department of Natural Resources (WDNR) work together to secure funding for, coordinate, and implement RAP actions. Over the past ten years, these agencies, along with local and federal partners, have made a concerted effort to implement the RAP through remediation and restoration at priority sites, implementing monitoring protocols, and completing data assessments. The structure and focus provided by the SLRAOC process is supporting completion of a tremendous body of work. The most successful projects benefitted from diverse collaborations, often resulting in coordinated projects that will yield both natural resource and community benefits. With completion of the habitat and remediation construction projects by Fall 2024, now is the time to establish mechanisms to continue this beneficial work.

In addition to the AOC process, a myriad of other local, state, and federal efforts have made significant contributions to the restoration of the SLRE, including: the Natural Resources Damage Assessment process; U.S. Environmental Protection Agency's (USEPA's) Superfund program; natural resources management by FDL,1854 Treaty Authority, MNDNR, and WDNR; MNDNR's St. Louis River Restoration Initiative; USFWS Coastal Program; the National Oceanic and Atmospheric Agency (NOAA) Coastal Program; and work of the NOAA Lake Superior National Estuarine Research Reserve (LSNERR).

Another effort important to the estuary landscape is the Lake Superior Lakewide Action and Management Plan (LAMP; Lake Superior Partnership, 2016). The LAMP is developed by the Lake Superior Partnership, led by the USEPA and Environment and Climate Change Canada, and is implemented binationally in cooperation with all Lake Superior stakeholders. The LAMP is updated every five years and is used as a guide to identify, prioritize, and implement actions to restore and protect the Lake Superior ecosystem. LAMP companion documents, including A Biodiversity Conservation Strategy for Lake Superior (Lake Superior Binational Program, 2015a), provide broad-scope actions that can be used to help identify, support, or coordinate ongoing or new projects for Lake Superior. A Biodiversity Conservation Strategy for Lake Superior includes the St. Louis and Cloquet regional plan that encompasses the St. Louis River Watershed (Lake Superior Binational Program, 2015b). In the past, many of the LAMP actions have specifically targeted Lake Superior health via projects in the SLRE. Continued coordination with the Lake Superior Partnership through local LAMP representatives can ensure ongoing and future alignment of SLRLCD and Lake Superior LAMP goals and objectives.

While delisting the SLRAOC will be a major milestone in the recovery of the SLRE, partners recognize continued attention is required to achieve long range natural resource goals, including those identified in the LAMP. In addition, opportunities exist to move from a focus on the aquatic footprint of the SLRE to better integration with watershed restoration and management efforts being led by FDL, MPCA, MNDNR, WDNR, soil and water conservation districts, and others.

Much of the work done to date in the SLRE has been guided by the original Lower St. Louis River Habitat Plan, which provides wider guidance on restoration strategies and objectives than those projects that were included in the RAP. However, it is 20 years old and could benefit from new scientific understandings, as well as a more inclusive framework. Therefore, the time is now to update our collective vision for long term restoration, protection, and conservation of ecological integrity in the Lower St. Louis River. Additionally, as the SLRAOC work concludes, there is a need to transition leadership and habitat restoration goals to a new phase of work.

This LCD effort is intended to proactively address these needs by building upon the incredible collaboration and momentum that exists in the estuary. It ensures that the gains made through the AOC process are not lost and that we continue to work collectively towards a restored future state of the incredible local, regional, and global resource that is the Lower St. Louis River. It is important to note that the LCD is a process and not a plan in and of itself. The LCD approach is discussed in more detail in the next section.

1.2 Landscape Conservation Design

Landscape Conservation Design is a tool to support natural resources decision-making. The LCD process seeks to provide relevant information from a variety of sources to stakeholders making decisions that affect natural resources in the course of their work. It was developed by the Landscape Conservation Cooperative (LCC) Network, which was established by the Department of Interior through the USFWS as a means to further their interests in cooperative conservation. The LCCs were established “to provide science capacity and technical expertise for meeting shared natural and cultural resource priorities.” Members of the LCC Network developed the LCD process based on their years of experience with landscape-level conservation projects across the country.

The definition of LCD is (LCC Network, 2016a):

> *“a partner-driven approach to achieve a sustainable, resilient socio-ecological landscape. It is an iterative, collaborative, and holistic process resulting in strategic and spatial products that provide information, analytical tools, maps, and strategies to achieve landscape goals collectively held among partners.”*

There are eight key characteristics that define the approach (Table 1; LCC Network, 2016b). Of these, the first three: 1) collaborative/multi-sector/partner-driven, 2) shared goals, and 3) holistic/system level are essential to the SLRLCD from the standpoint of their importance in defining the ultimate characteristics and outcomes of the design. We selected the LCD framework because it is stakeholder-driven versus institution-driven, and the LCD structure, purpose, and outcomes are not pre-determined, but instead are defined by the collaboration process (Figure 1). Our work on the SLRLCD strives to achieve a collective future vision that incorporates the successful attributes of previous programs but exists outside of any particular government program that might be of limited duration.

Table 1: Key Characteristics of Landscape Conservation Design (LCC Network, 2016b)

Characteristic	Description
Collaborative / Multi-sector / Partner-Driven	The partnership is cross-jurisdictional and multi-sector and operates using collaborative, partner-driven processes.
Shared Goals	Partners collectively develop a shared vision, shared goals, and fundamental objectives for long-term, landscape-scale conservation in the subject geography.
Holistic / System Level	The Design reflects a holistic or systems-level look at the landscape over a specified time frame.
Conservation Features	The partnership identifies conservation features (such as elements of biodiversity, ecosystem processes, human well-being targets, etc.) as the most valued and/or urgent elements around which the Design is constructed. Identifying conservation features allows partners to link goals to specific factors driving change and to propose strategies to monitor these features as measures of progress towards goals.
Desired Future Conditions	The Design includes a spatial and/or narrative expression of the desired future trajectories or conditions of the landscape.
Assessment / Situation Analysis	The Design includes an assessment of current and projected future conditions of the landscape, of the factors driving change (e.g., climate change, land use, etc.), and of the economic, social, and/or ecological trends and opportunities affecting shared goals and desired future conditions within the landscape.
Strategies	The partnership collaboratively provides recommendations on strategies to achieve the vision, goals, and objectives of the Design.
Iterative / Adaptive	The Design products and processes are developed and managed iteratively, incorporate uncertainty, are adaptive to events and responsive to change, and are periodically evaluated and refined.

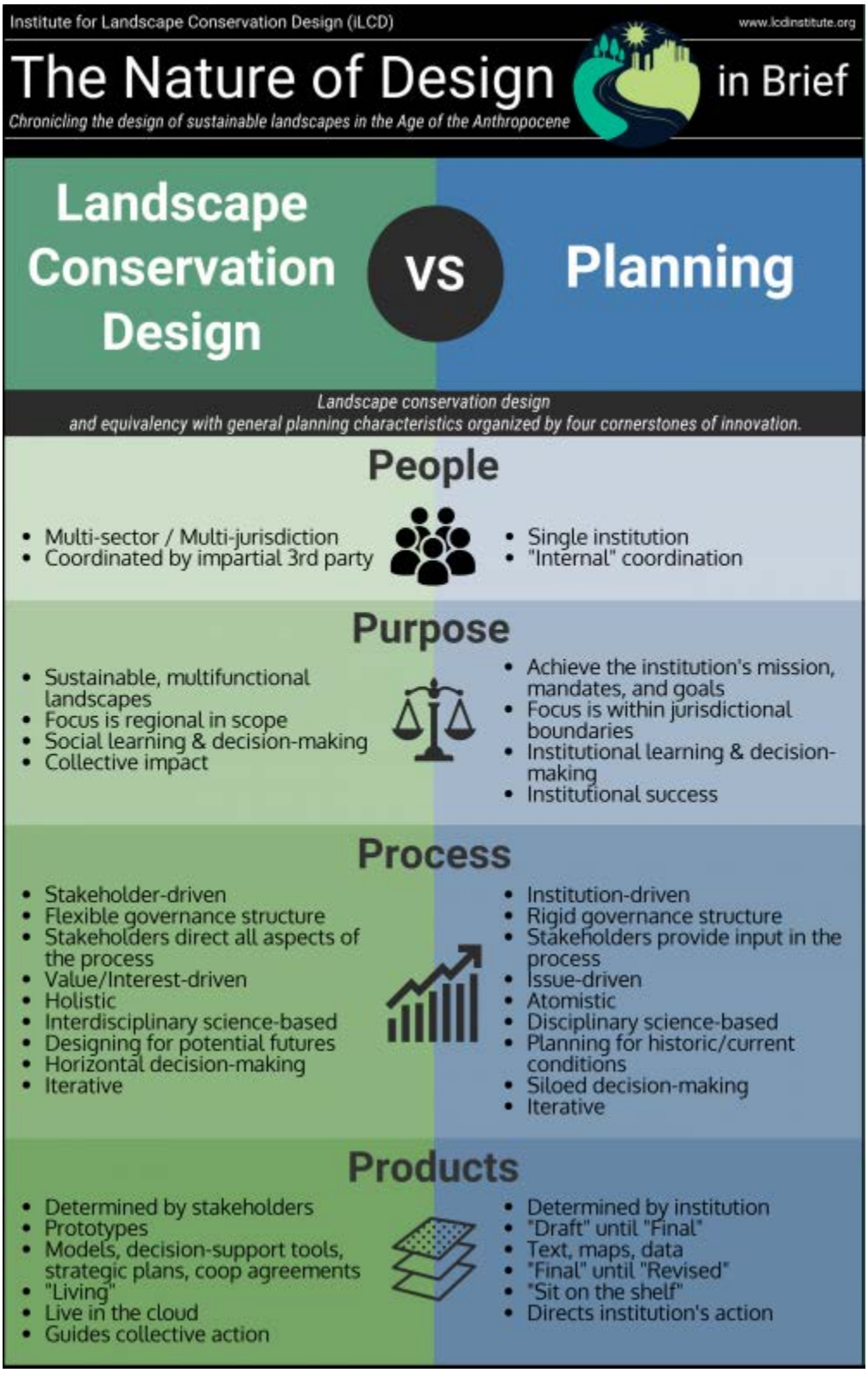


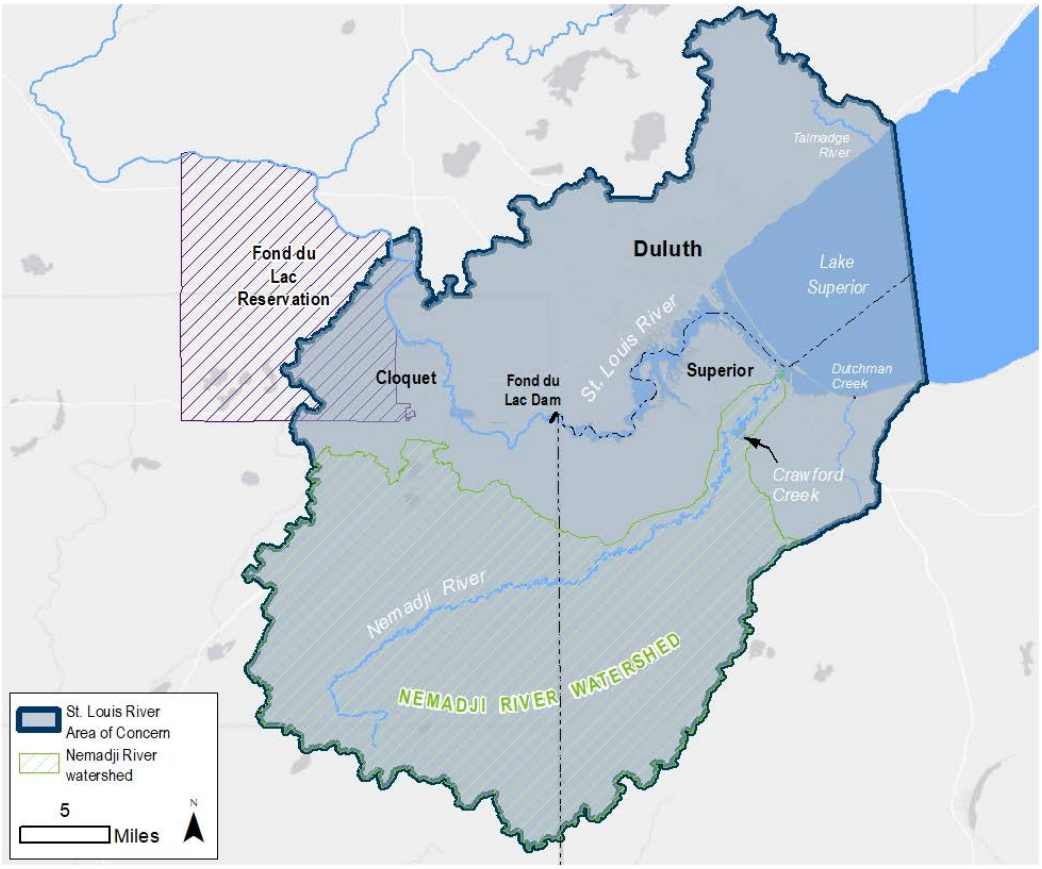
Figure 1: Comparison of LCD and Planning Processes (Campellone, et al. 2018)

1.3 Framing Assumptions for the Lower St. Louis River Landscape Conservation Design

Two initial assumptions frame our approach to LCD in the Lower St. Louis River: the geographic focus and a multi-sector approach.

For the purposes of this LCD, Lower St. Louis River is defined by the SLRAOC boundary. This area encompasses 1,081 square miles in Minnesota and Wisconsin, with a portion of the Fond du Lac Reservation located within the boundary (Figure 2). This will be known as the "estuary landscape."

Ultimately, the intent of this collaborative effort, is to explore developing an LCD for the Western Lake Superior region of the Great Lakes, building from an initial focus on the Lower St. Louis River geographic area. Over time, the landscape may be expanded to encompass the Western Lake Superior region from the western shore of Lake Superior in Duluth, Minnesota to Keweenaw Bay in Michigan.



Source: FDL, MNDNR, MPCA, and WDNR, 2020

Figure 2: Initial Geographic Focus of the SLRLCD: the St. Louis River Area of Concern Boundary

Recent efforts by FDL, City of Duluth, and USEPA have highlighted the connections among natural resources, economic, and community conditions on human health. Since a large portion of the estuary landscape is urbanized by the cities of Duluth, MN and Superior, WI, considering natural resources conservation within the context of community health and economic development is imperative.

The SLRLCD uses a multi-sector approach that explicitly includes these multiple perspectives. The approach encompasses the themes of ecological integrity (natural resources condition), community health, and economic development, with the intersection of these themes representing a sustainable landscape (Figure 3).

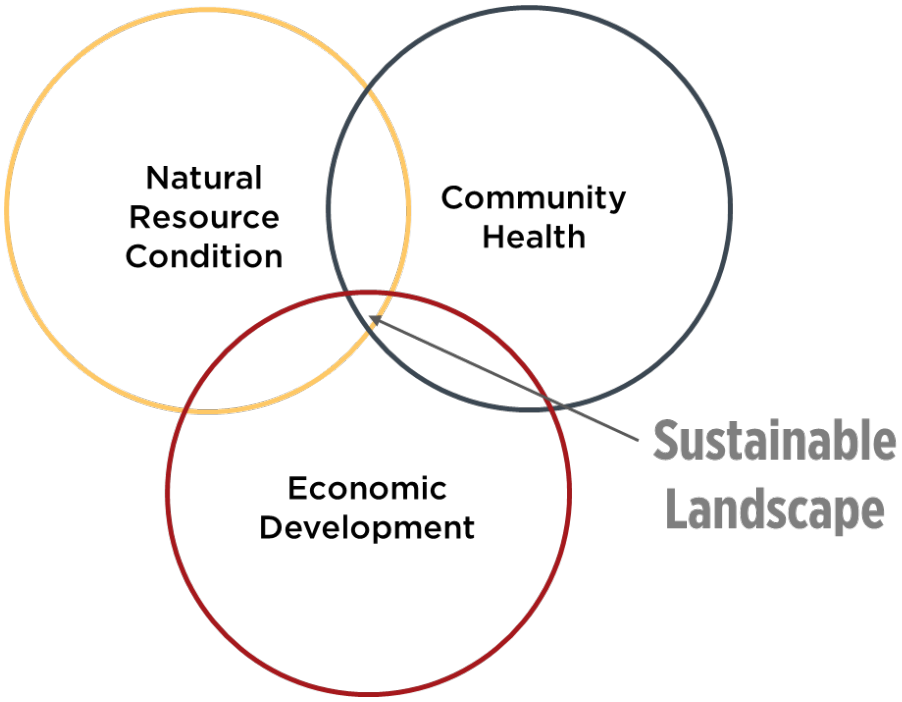


Figure 3: Multi-Sector Approach of the SLRLCD

Conservation of natural resources drives the development of the SLRLCD. While an eventual goal of the SLRLCD may include engagement of decision-makers in each of the three sectors, we recognize at this early stage that development of understanding of the interactions between the themes is an undertaking that must occur over time. Therefore, in the beginning stages, we will approach the design from the perspective of natural resources management, then evaluate and consider the intersections with the themes of community health and economic development from this basis (Figure 4).

LCD is undertaken as a voluntary effort amongst partners and stakeholders working towards conservation on a landscape scale. There is not a regulatory or institutional mandate for this effort. Therefore, effectiveness of such a collaborative, multi-sector approach necessarily relies on the recognition and realization of shared goals amongst the collaborators. In order for this to

happen, the LCD must be developed to address the issues, needs, and challenges faced by collaborators. As will be discussed in Section 2.0, the approach to the SLRLCD is driven by input from a wide array of stakeholders working in the estuary and its watershed.

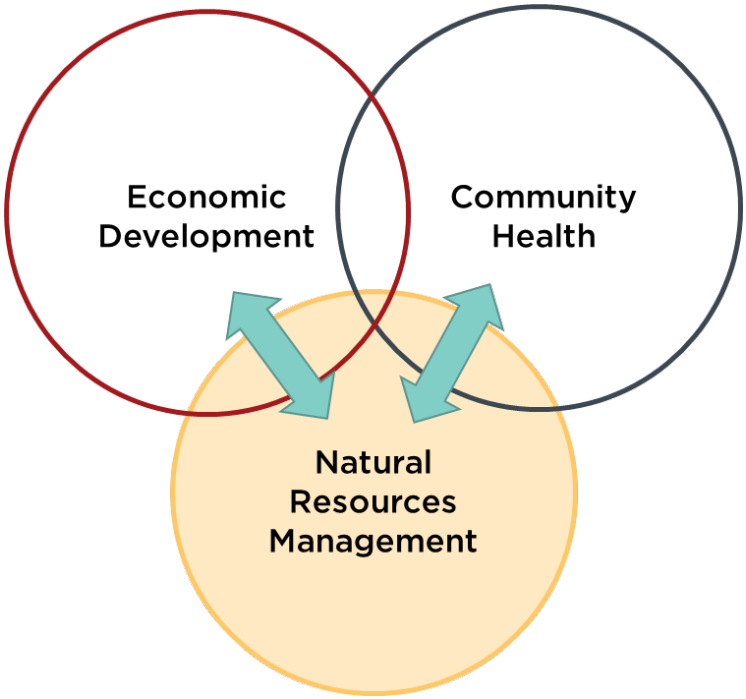


Figure 4: Evaluating Intersections from the Natural Resources Management Perspective

2.0 Scoping Methodology

A significant emphasis was placed on stakeholder engagement early in the SLRLCD process. While MLT and USFWS have stated that the primary outcome of the LCD is a collaborative coordination framework for the SLRE, the project workplan was developed with the understanding that this outcome was not a given. Rather, it was understood that a significant amount of stakeholder engagement was necessary to evaluate and develop support for the SLRLCD. Because the SLRLCD is a voluntary effort, stakeholder buy-in in terms of understanding shared goals and mutual benefit is vital for its success. In addition, the effort must listen to and address partner needs to be seen as valuable.

For these reasons, a significant emphasis was placed on stakeholder interactions in the early phases of the project. Stakeholder engagement takes time, and we saw it as imperative that the project work did not proceed faster than the level of understanding and buy-in from stakeholders. The approach used to develop the scope of the project included four primary elements:

1. Getting the word out on the SLRLCD project via presentations and project updates at existing stakeholder group meetings,
2. Individual meetings with selected stakeholders working on conservation related issues in the Lower St. Louis River,
3. Large group stakeholder meetings, and
4. Formation of the LCD Advisory Group for finalizing the project approach.

2.1 Presentations and Individual Meetings

The first element provided information on the project to potential partners and stakeholders in order to develop an understanding of the project and interest in the upcoming scoping efforts. Efforts included presentations by MLT staff at meetings of the multi-sector St. Louis River Technical Advisory Group and the St. Louis River Habitat Work Group, as well as sharing project information at other regional stakeholder meetings such as the St. Louis River Summit.

Individual meetings were held with stakeholders to test project messaging and develop ideas for project focus, as well as to build a basis of support among potential collaborators. MLT conducted meetings with individuals from:

- City of Duluth
- Duluth Cooperative Invasive Species Management Area (CISMA)
- Fond du Lac Band of Lake Superior Chippewa Resource Management Program
- University of Minnesota-Natural Resources Research Institute (UMD-NRRI)
- MNDNR

- US Environmental Protection Agency Great Lakes Toxicology and Ecology Division (USEPA GLTED)
- WDNR

2.2 Large Group Stakeholder Meetings

Once we felt that a sufficient basis of understanding and support for the project had been developed with elements 1 and 2, we initiated work on element 3: to cast a wider net of involvement from people working on conservation-related issues in the Lower St. Louis River, economic development, and community health. By design, these sectors were not fully represented in the large group efforts, but included individuals selected for knowledge and understanding of the intersections between their roles and the natural resources sector.

Scoping with the large stakeholder groups was completed in two three-hour meetings held in December 2019 and February 2020. Each meeting was designed to solicit information from participants in a manner in which their individual thoughts and ideas were heard and were used to develop the recommendations presented in Section 4.0. In order to be a successful collaborative framework, the SLRLCD must build on what is working well in the Lower St. Louis River and address key concerns and needs amongst partners.

The first large group meeting focused on introducing the project to those who had not seen previous presentations and gathering responses to the following questions from participants:

- Considering your involvement with efforts in the estuary involving other stakeholders (agencies, interest groups, municipalities, private interests, etc.):
    - What has worked well and could be built upon?
    - What could be improved?
    - What are you missing?
- From the viewpoint of your professional role, what are your priorities for economic development, community health, and natural resources?

In the second large group meeting, a review and summary of the first meeting results was presented, and groups were asked to answer the question:

- What have been the top 3-4 sticky-wicket issues in the estuary that have been hard to resolve and are still unresolved? Describe:
    - The issue
    - Identify the underlying barriers/drivers that have made this hard to address
    - Identify opportunities for how the SLRLCD process could provide tools to be better equipped to address the issue

In the second meeting, MLT also presented a preliminary proposed list of project outcomes based on the meeting results for the group to react to.

In total, the 61 participants of the two meetings represented 20 agencies and organizations. In a number of instances, multiple departments within agencies were represented. Attendees are listed in Appendix A. Meeting agendas are provided in Appendix B. The results of the stakeholder meetings are discussed in more detail in Section 3.0.

2.3 LCD Advisory Group Formation

The LCD Advisory Group was formed with tribal, state, municipal, and federal agency representation from those working on natural resources efforts in the SLRE in both Minnesota and Wisconsin. Members of the LCD Advisory Group will play an integral role in developing the SLRLCD's framework for collaboration towards a future vision for the Lower St. Louis River. This group will disband once the initial SLRLCD grant project is complete.

Members will work closely with MLT to lay the groundwork for the SLRLCD's future through the following tasks:

- Finalize the vision statement for the Lower St. Louis River landscape
- Prioritize the efforts within the initial GLRI-funded project
- Finalize the geographic scope of the LCD
- Create the framework of the forum for collaboration, in terms of who, what, how, where, and when
- Select an initial set of metrics and tools to prototype information and coordination needs identified in stakeholder meetings and through insights gained from other ongoing estuary projects

As described in Section 1.3, the intersections between natural resources, community health, and economic development sectors are not currently well-understood or developed within the SLRE. For this reason, representation on the LCD Advisory Group was focused in the natural resources sector with the intent of working towards inclusion of the other two sectors as the SLRLCD progresses.

3.0 Scoping Results

The scoping work conducted in the two large group stakeholder meetings was focused on the following:

- Evaluating the current partnership landscape to identify what is working and what could be improved and built upon
- Identifying priorities for natural resources, community health, and economic development that contribute to a thriving estuary landscape
- Describing sticky-wicket issues that have been difficult to solve and how the SLRLCD might assist in addressing them

A synopsis of each of these is provided in this section, with detailed compilations of the breakout session results from each meeting are presented in Appendix C.

The scoping results were compiled and synthesized to develop the structural and process recommendations and outcomes presented in Section 4.0.

3.1 Evaluating the Current Partnership Landscape

As part of the first stakeholder meeting, participants were asked to take stock of the current SLRE partnership landscape. In the breakout session, small groups were asked to discuss what has worked well within the current, primarily-AOC focused partnership landscape that can be built upon by the SLRLCD and to identify what could be improved upon. The intent of this exercise was to gather information for developing recommendations for organizing the SLRLCD and for completing projects in the future.

The following themes emerged from these discussions:

Things that have worked well and could be built upon:

- Projects/examples that effectively bring partners and stakeholders together
    - Health Impact Analysis
    - Kingsbury Bay and Grassy Point Habitat Restoration: Inclusive, effective public involvement, good metrics
- Remediation to restoration to revitalization
    - Effective in bringing the right people together
    - Explicit connection between natural resources and communities
- Habitat Plan
    - Stakeholder driven, created common vision, basis for funding acquisition
- Restoration site teams
    - Brings together broad group of stakeholders, effective inter-agency collaboration, frequency/continuity
- Beneficial Use Impairment Technical Teams

Items/issues that need improvement:

- Habitat Plan Update
    - Find a way to include socio-economic aspects
    - Tie impact of habitat projects to the larger landscape
- Identifying stakeholder communities
    - Need to identify who the stakeholders around particular issues are
    - Stakeholder communities are ephemeral and emerge around issues
    - Understanding the interests and positions
    - Strategies for timely and effective stakeholder engagement
- Effective facilitation and inclusivity of perspectives
    - Balance strong and quiet voices
    - Assume good intentions - we are all part of this community
    - Follow up and follow through (project champions and accountability)
- Project champions, on-boarding, and continuity
    - Leadership, coordination & facilitation key for project success
    - Need more effective way to bring new people up to speed/on-board
    - Continuity, a lot of work is built around relationships. People come and go, need to be pro-active
- Shared fact-finding
    - Data/Information used is commonly agreed upon
    - Equitable data collection - create balance between sectors to demonstrate inclusivity
    - Data sharing & data standards
    - Defined shared goals and metrics (multi-sector)
- Data sharing
    - Common platform for data sharing
    - Easily shareable data

3.2 Priorities for a Thriving St. Louis River Estuary

Following the initial discussion that looked mostly back in time, participants at the first stakeholder meeting were asked in a second round of break-out discussions to look ahead and identify priorities for a thriving SLRE in all three sectoral interests (natural resources, community health, and economic development). The intent of this breakout session was to develop an understanding of priorities of those working in the SLRE in order to help define the vision statement and guiding principles for the SLRLCD given in Section 4.1, understand overlaps between the natural resource, community health, and economic development sectors, and for future use in evaluating or ranking possible SLRLCD projects and outcomes.

The following interests were identified as part of these discussions:

Natural Resources

- Habitat protection – identify and prioritize high quality habitats
- Conservation planning that considers multiple values
- Methods for valuation of resources
- Ensure a healthy/clean resource for recreation and consumptive uses
- Climate resilient system
- Protection of ecosystem function on landscape level
- Sediment, pollution, upstream impacts

Community Health

- Health equity: inclusive engagement of underserved communities and meeting their needs to achieve equitable access to resources and health outcomes
- Recognize cultural needs and benefits to health
- Community access to natural resources (non-consumptive)
- SLRE source of natural foods – local subsistence gathering opportunities
- Community resiliency

Economic Development

- Data and knowledge to inform decision making on balancing economic development, health, and natural resources
- Leverage natural environment for economic growth (tourism and recreation)
- Create room for economic development while balancing natural resources
- Local systems focused on sustainable economic development
- Community needs-driven economic development

3.3 Sticky-Wicket Issues

At the second stakeholder meeting, a small group breakout session focused on sticky-wicket issues for the SLRE. Sticky-wicket issues are defined as issues that are difficult to solve because they often require a multi-stakeholder solution in addition to addressing the potential technical and financial challenges. Participants were asked to identify issues and barriers to resolve these issues. They were also asked to identify opportunities for how the SLRLCD could provide tools to help resolve these issues. (These tools are discussed in more detail in Section 4.0.)

The following themes emerged from this discussion:

Long-term, large-scale data collection and management, data sharing and data use.

Informed decision making for estuary management requires data. In order to understand the estuary on a systems level, long-term, large-scale, and inter-operable datasets are important. In addition, management/curation of data, agreements on data use, and data sharing are ongoing challenges.

A number of barriers need to be overcome. These include but are not limited to: funding; lack of standards & protocols; inconsistent continuity and responsibility in data collection; better coordination on types of data to collect; metrics to use; and data priorities.

The SLRLCD can play a role in establishing a data needs and management agenda. This can serve as a basis to identify possible roles and responsibilities that SLRLCD partners can take on. It can also provide a basis for future funding proposals.

Moving from an ad-hoc project focus to a more strategic and holistic estuary/watershed focus

Currently there are a number of restoration efforts underway as part of the SLRAOC. A challenge has been that these restoration efforts have been approached on a project by project basis and are opportunity driven. However, a holistic, estuary-wide approach in which restoration needs are identified and prioritized at the landscape scale is currently lacking. This results in an ad-hoc approach and, in some cases, can create conflicting interests regarding which habitat types should be prioritized and in which locations.

A key barrier that is identified is the lack of a holistic plan that prioritizes, coordinates, and helps sequence restoration projects. In addition, there is currently a limited process in place to make trade-offs in terms of which species may be prioritized for certain habitats in the estuary.

Preparing an updated Habitat Plan can address these needs and serve as a tool to identify needs, opportunities, and potential conflicting interests. This SLRLCD development process can help in setting up a coordinating framework that can guide future restoration efforts.

Resiliency, climate change, and invasive species – data needs for better system understanding to support restoration planning.

Restoration efforts currently lack adequate data and analysis that can assist in understanding the impacts of climate change and invasive species. This includes a better prediction of changing water levels and understanding of its effects, as well as having an understanding of upstream impacts as it relates to stormwater and sediment pollution. A better understanding of these drivers is critical for designing and implementing restoration and protection efforts that contribute to the overall resilience of the SLRE.

Barriers to this issue that need to be overcome include research that will provide a better understanding of how climate change, invasive species, and upstream impacts may impact the estuary and relate this to what this means for restoration and protection strategies.

The SLRLCD effort can identify a research agenda that can inform data needs and partners who should be involved in addressing this issue. It can further facilitate the appropriate linkages with a Habitat Plan update and highlight intersections with economic development (e.g. land use and stormwater management) and health (e.g. water quality).

Legacy pollution including sediment and brownfield remediation and redevelopment

Legacy pollution, including sediment and brownfield remediation and redevelopment beyond the SLRAOC program, will continue to be a challenge. Remediation and redevelopment and/or restoration of legacy pollution sites pose complex questions often requiring multi-stakeholder solutions. The US Steel Superfund site was listed as an example of a site that has been going through the Superfund process since it was listed in 1984. Challenges include cost and decisions on methods for remediation.

Barriers to resolving these long running projects include legal obstacles, lack of sufficient staff power to resolve these issues, financial resources, and a lack of a clear vision for future use of the sites.

The SLRLCD effort can help provide context for resolving these legacy projects by identifying opportunities and priorities for legacy pollution sites. In addition, supporting data and a stakeholder management tool can be beneficial to identifying partnerships and potential solutions for competing interests.

Equitable access to the estuary, translating restoration success to community wellbeing

An important objective of work in the SLRE is that it ultimately benefits the citizens of the estuary. Equitable access to the benefits of the estuary continues to be a hard-to-resolve concern. Issues identified include public access to the waterfront, connections between neighborhoods and the waterfront, and safety and design of access that is inclusive of different user groups, including ability. The competing interest between private and public use of waterfront was also mentioned.

Opportunities identified for the SLRLCD include highlighting community needs and issues as they relate to equitable access to the estuary. This includes outreach and developing a good understanding of community needs, including cultural needs. A stakeholder management tool can map community needs and interests where they intersect with the estuary. In addition, geospatial analysis can identify opportunities to improve access.

4.0 SLRLCD Vision and Recommendations

The scoping results described above were used to develop a vision and guiding principles for the SLRLCD that provide focus for current and future SLRLCD efforts. Based on this vision and distillation of the themes heard from scoping session participants, we developed a set of objectives and associated outcomes for the SLRLCD. Both the vision and recommendations are presented in this section.

4.1 SLRLCD Vision and Guiding Principles

The following vision and guiding principles were developed for the SLRLCD based on the scoping results.

Vision:

The Lower St. Louis River Landscape Conservation Design is an inclusive and intentional framework for how and where we work to achieve a thriving estuary landscape and community. The principles of sustainability, resiliency, and equity guide our approach to managing our natural resources by including economic development and community health and well-being considerations.

Guiding principles:

In order to achieve this vision, we need to:

- Take a holistic approach to protecting and restoring the natural resources of the St. Louis River Estuary and surrounding watersheds that can be scaled up geographically over time,
- Build and improve the existing capacity and processes that enable us to work collaboratively,
- Work to improve ecological integrity and resiliency while furthering a sustainable relationship between humans and the environment,
- Incorporate human community needs and provide access to ecosystem services in an equitable manner,
- Develop trust and legitimacy in our efforts through knowledge sharing and effective facilitation, and
- Proactively identify emerging issues that may negatively impact achieving a healthy and thriving landscape.

This vision and guiding principles will provide a framework for how we work together as partners across different sectors. As such, the vision is centered around how we work together as a community in understanding and balancing the different interests, while making improvements in support of a healthy and thriving estuary. In this sense, the success of the SLRLCD will largely

be measured in terms of organizational outcomes (e.g., the ability to coordinate actions among the different agencies and sectors).

4.2 Recommended Objectives and Outcomes

The primary purpose of the SLRLCD effort is to support a healthy and thriving estuary landscape by establishing a framework that develops meaningful interaction and facilitates shared decision making amongst stakeholders. The SLRLCD will provide tools that support a shared understanding of competing priorities and desired outcomes, so that opportunities can be leveraged and potential conflicting interests can be identified and resolved. The recommended objectives and associated outcomes outlined below were identified with this in mind.

Objective 1: Establish an intentional structure for information sharing, networking & onboarding, coordination, and partnership development

There is strong interest from SLRLCD stakeholders to establish a post-SLRAOC supporting structure that will facilitate information sharing and networking, and provide a space for onboarding of new stakeholders, coordination among partners, and partnership development.

This new structure will have a broader scope in terms of stakeholder participation than is been part of SLRAOC-related gatherings and will also specifically target participation from economic development and community health stakeholders.

It is envisioned that this coordination structure will include smaller subject matter-specific or project-specific working groups. It would provide a place to bring the various SLRLCD related efforts together, share updates, problem solve, mobilize resources, and track progress towards shared goals.

Key requirements that have been identified include good meeting facilitation, accountability, and follow-up. This requires a dedicated LCD champion with support teams to ensure successful delivery of these services.

Outcome: Collaborative coordination framework

Establish a structured, larger forum which regularly brings together SLRLCD stakeholders representing natural resources, economic development, and community health interests.

The larger forum provides a “big tent” where all the interests can come together to share, discover, and coordinate. The purpose of the forum is to provide a networking structure to help link specific projects and initiatives to the bigger whole and to facilitate discovery of new opportunities, connections, and interests that may inform specific projects, identify new needs, or just plainly keep everyone informed and on the same page. The forum will help build and maintain relationships within the estuary community between sectors that may not otherwise

interact in their regular silos (e.g. health and natural resources or economic development may be operating predominantly in different silos). This forum could also play a role in on-boarding new people.

It is recognized that some of the existing sub-workgroups around key topics (e.g. Habitat Work Group, Restoration Site Teams) will continue to serve a useful purpose. It is desirable that post-AOC these will continue, whether or not in some modified form.

These workgroups may be used to gather input for the stakeholder analysis and would likely be the end-users of the stakeholder management tool (See Objective 3 below). This would have two benefits: tapping the knowledge available within these groups and having an opportunity for a shared learning experience and design process. By having members participate in the design process, a tool will result that meets their needs, has buy-in, and will likely be utilized.

Objective 2: Compile foundational information for SLRLCD community goals

The SLRLCD effort does not have a mandate to prepare an estuary-wide plan for a future state. The effort is designed to balance natural resource restoration and protection needs with community health and economic development interests to aid informed decision-making. In order to facilitate this, a framework that inventories key reference points from adopted community plans should be prepared. In this instance, reference point refers to spatial or written information in a plan that describes a desired condition, e.g. future zoning and land use maps or desired future locations for neighborhood riverfront access. This framework will likely have both a quantitative spatial component (e.g., for economic development, restoration, protection, public health concerns) and qualitative written measures (e.g., for resource access, consumption health advisories, and indicator metrics, such as acreage protected and restored areas, sediment loads, water quality, etc.).

This compilation will help inform costs, benefits, and opportunity trade-offs from different actions. As such, these reference points are not necessarily value statements about a static, ideal future-state. Rather, they are tools to evaluate trade-offs within the context of community needs and values, thereby allowing for informed decision-making.

Outcome: Summary of SLRLCD foundational information

This summary document with complementary spatial data will provide a factual overview of current community plans and distill key reference points in terms of desired sectoral community goals.

This will include both quantitative spatial and written qualitative components. The spatial component could include current zoning information, land cover and protection status, inventory areas targeted for economic development, important habitat needs for protection and restoration, and resiliency concerns (e.g., flooding, erosion, invasive species). As projects are

proposed, a robust spatial tool will provide quick insight into potential conflicting or complementary interests that need to be addressed.

The qualitative reference points will highlight non-spatial key indicators as they relate to community health, economic development, and natural resource condition. We recommend that partners work to identify practical, meaningful, and measurable "keystone" indicators, which can be used as proxies for a broader subset of community goals being met.

These reference points provide an indication of desired direction within a focus area and help inform a discussion regarding the community vision and goals as stated in public policy. This can help distill key elements of the community vision, both competing and complementary. It can help define the intractable (i.e., sticky wicket) problems that need to be resolved for the estuary where there are competing needs or complicating factors that have been proven hard to resolve. Examples of sources for reference points include:

- Lower St. Louis River Habitat Plan
- SLRAOC RAP Update
- Duluth-Superior Port Land Use Plan
- City of Duluth and City of Superior comprehensive plans and applicable mini-master plans/waterfront and community economic development plans
- Community health plan(s)
- Transportation plans (examples include the Blatnik Bridge replacement in the second half of 2020, rail service, multi-modal port development, shipping channels, possible changes resulting from Soo-lock upgrades, etc.)

A point needing further discussion is how key reference points inform the development of metrics that help measure whether we are moving in the right direction as an estuary community, as described below in Objective 5.

Objective 3: Develop a support tool for effective stakeholder management

We recognize that balancing competing interests and leveraging opportunities requires effective stakeholder management. SLRLCD stakeholder meeting participants observed that stakeholder communities are ephemeral and emerge around issues. Participants identified the need for a support tool that maps stakeholder interests and links them to general (sectoral) issues, providing a starting point for effective stakeholder engagement.

Outcome: Stakeholder management support tool

A stakeholder management support tool would be designed around key community goals and associated intractable problems that have been proven hard to resolve. The tool would provide a structured starting point to identify communities associated with issues and identify their positions and key interest(s). The tool would provide a basis for designing and implementing an effective engagement process. A stakeholder decision support tool could be co-created as a

means to create buy-in through shared fact finding/co-creation/learning of stakeholder process management skills. The tool could define a structured approach and provide supporting resources that can function as starting points. The tool and underlying supporting resources could be updated periodically to stay current with relevant estuary issues and allow for incorporation of changing community needs and stakeholder interests. Elements of a stakeholder tool could include:

- Issue identification informed by vision, community priorities, and/or intractable (i.e., sticky wicket) problems. This may focus on a select five to eight priority issues.
- For each issue, identify desired outcome(s) that support a shared estuary vision.
- Per issue, describe the topics of interest that intersect with the issue.
- Per issue, identify associated stakeholder communities and, importantly, describe role/stake/resources they have toward bringing this to a resolution (e.g., decision maker, influencer, beneficiary of outcome, funder, etc.).
- Per community group, map their current position on the issue (i.e., in support, neutral/indifferent, in opposition).
- Per community group, describe their interest as it relates to the issue outcome
- Development of a strategy (or strategic direction) to engage and work with the community interest group to identify a pathway toward consensus.

This may include identification of package negotiations or, in other words, exchanges between groups that resolve project-based problems using a broader estuary context. So rather than on a project-basis negotiation, a package negotiation would create a means to link seemingly unrelated issues to packaged negotiated agreements.

Objective 4: Develop a program management tool

This objective is closely linked to and in support of Objectives 1, 2 and 3. The program management tool would describe how various estuary landscape-related actions contribute to or detract from desired SLRLCD outcomes and can be also used to monitor progress. The tool provides important insights at the workgroup level and the larger forum level across the three sectoral interests. It can also highlight potential opportunities or conflicts, which may feed back into the stakeholder management tool.

The program management tool requires a dedicated program champion who facilitates a regular update closely coordinated with the timing of the larger forum gathering.

Outcome: Program management tool

The program management tool provides a structure to describe SLRLCD-related discreet initiatives that are linked to broad sectoral “-er” outcomes (e.g. better, cleaner, healthier, more resilient, etc.). What is characteristic of program management is that not one entity has the power to achieve a desired outcome, but a group or network effort is required. Programmatic

management maps the relationships between the various projects led by SLRLCD partners and creates insight in how these cumulatively move the community in the desired direction. The tool can be used on a (sectoral) workgroup level or at the larger forum level as a tool to create shared understanding of the current progress status in working towards a thriving estuary and how the different efforts fit within the bigger picture.

Objective 5: Develop a knowledge management support structure

The first four objectives all require data and information that is made easily accessible to the SLRLCD stakeholders and is kept up to date. A challenge with knowledge management within a network of partners is having a program champion or champions and resources needed for collecting, organizing, and maintaining data. This will require discussion among partners in order to determine what is needed and feasible.

Outcomes: Resource library, data-standards, and progress monitoring dashboard metrics

Under the broader umbrella of a knowledge management support structure there are three distinct outcomes or needs that have been identified:

1) Identify a select number of commonly accepted metrics around each sector to create a dashboard to monitor progress:
   a) Ecosystem function metrics that measure water quality, invertebrates, fish, wildlife, plant communities, and climate resilience.
   b) Community wellbeing metrics that measure access to a clean environment and nature-based experiences, and to the associated benefits of known determinants of health.
   c) Economic metrics that measure the health of local industries (such as shipping, tourism, and outdoor recreation) and that evaluate the estuary landscape's attractiveness as a place to visit, live and work.
2) Create a resource library to identify which data and information is available and where to locate the most up to date sources.
3) Establish data standards so that data can be integrated to answer a variety of questions and models can be comparable.

Resources developed in this outcome will require a dedicated program champion or champions that host the resources and facilitate regular updates.

Objective 6: Establish a SLRE emerging issues research agenda and work towards mobilizing resources to study and address them

The SLRAOC effort has been focused on addressing legacy-related impairments that were caused by actions before environmental regulations were in place. After impairments are removed and the SLRAOC delisted, threats to the long-term health of the estuary as a functioning ecosystem will continue. This objective will inventory emerging issues, such as: climate change, invasive species, and emerging chemical contaminant-related impacts.

Outcome: SLRE-LCD emerging issues research agenda

An emerging issues agenda would serve several purposes:

- Document the shared concerns and priorities for research within the SLRLCD community
- Serve as a catalyst for synergies in research efforts in the SLRE
- Provide a basis of support from the SLRLCD for funding requests
- Identify research leads and collaborators

5.0 Proposed Planning Framework for SLRLCD

The concept for the SLRLCD presented here was developed based on feedback from the LCD Advisory Group on the six objectives and outcomes described in Section 4. The concept represents a path forward for addressing elements of Objectives 2 through 6. This effort, in addition to addressing Objective 1 through development of the collaborative coordination framework, will serve as a strong platform for operationalizing the vision of the SLRLCD in the Lower St. Louis River.

Several important issues are addressed with the planning framework presented in this section:

- Developing a landscape level design starting at the landscape level is a big undertaking and can feel overwhelming and abstract. The proposed approach provides an entry point for development of the design on a "meso-scale", which is somewhere between landscape level and site level (Figure 5). This approach allows for development of a design within a more manageable spatial scale, while recognizing that certain issues necessarily require landscape level planning. By defining certain characteristics at the meso-scale, we can better inform the landscape level issues.
- The smaller geographic scale allows partners to tie their involvement in the process to concrete projects in the meso-scale areas. It makes it easier to justify spending time on the LCD effort from an organizational perspective. This is in contrast to justifying working on a higher Lower St. Louis River Watershed-wide, more abstract effort that is more difficult to tie back to a concrete, organization-benefitting project outcome.
- Recognition of both strategic planning and opportunistic projects are both explicitly incorporated in the approach, as is modeled in Figure 6, along with differences that occur at each scale. Timelines of willing landowners, funding opportunities, agency priorities, and strategic plans never line up perfectly. The proposed approach provides for informing efforts along a continuum from landscape level down to site level and back. Over time, implementation of the LCD planning framework will allow for strategic implementation along the entire continuum.
- The approach builds on the bi-state sediment assessment effort completed for the SLRAOC program that established "geographic zones" identified here (Figures 7 and 8) within which the smaller "sediment assessment areas" lie. These geographic zones have different geomorphologic characteristics, as well as different land uses. They have been widely vetted and form the basis of mapping and project planning for SLRAOC remediation and restoration efforts.
- The approach will be implemented over time by implementing three levels of analysis (described in Section 5.2, below), where each subsequent level provides more detailed information and visioning than the previous level. Within the current project timeframe, a Level 1 analysis would be conducted for each geographic zone, and a Level 2 analysis would be completed for Allouez Bay as a prototype.

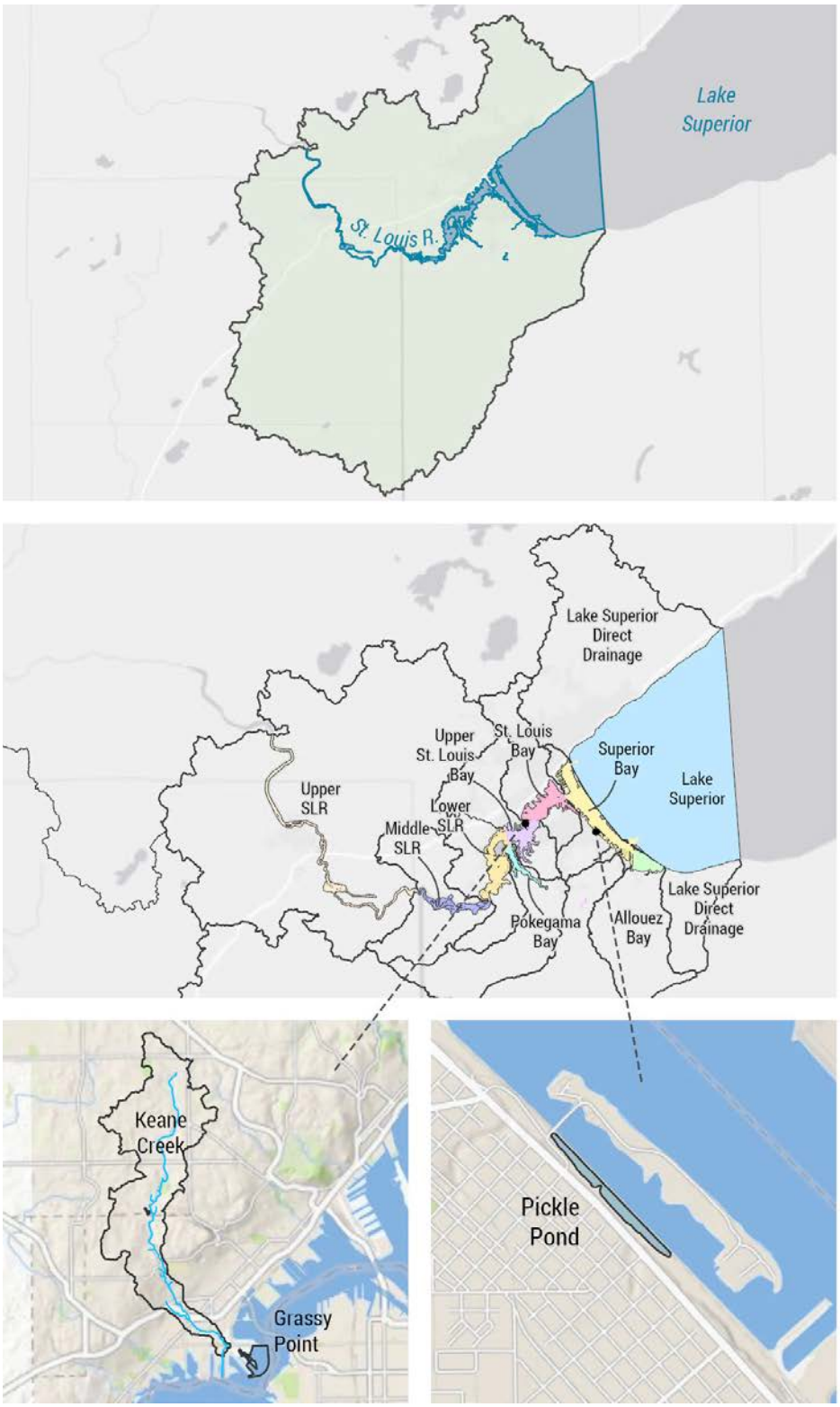


Figure 5: Landscape, Meso-scale, and Site Level

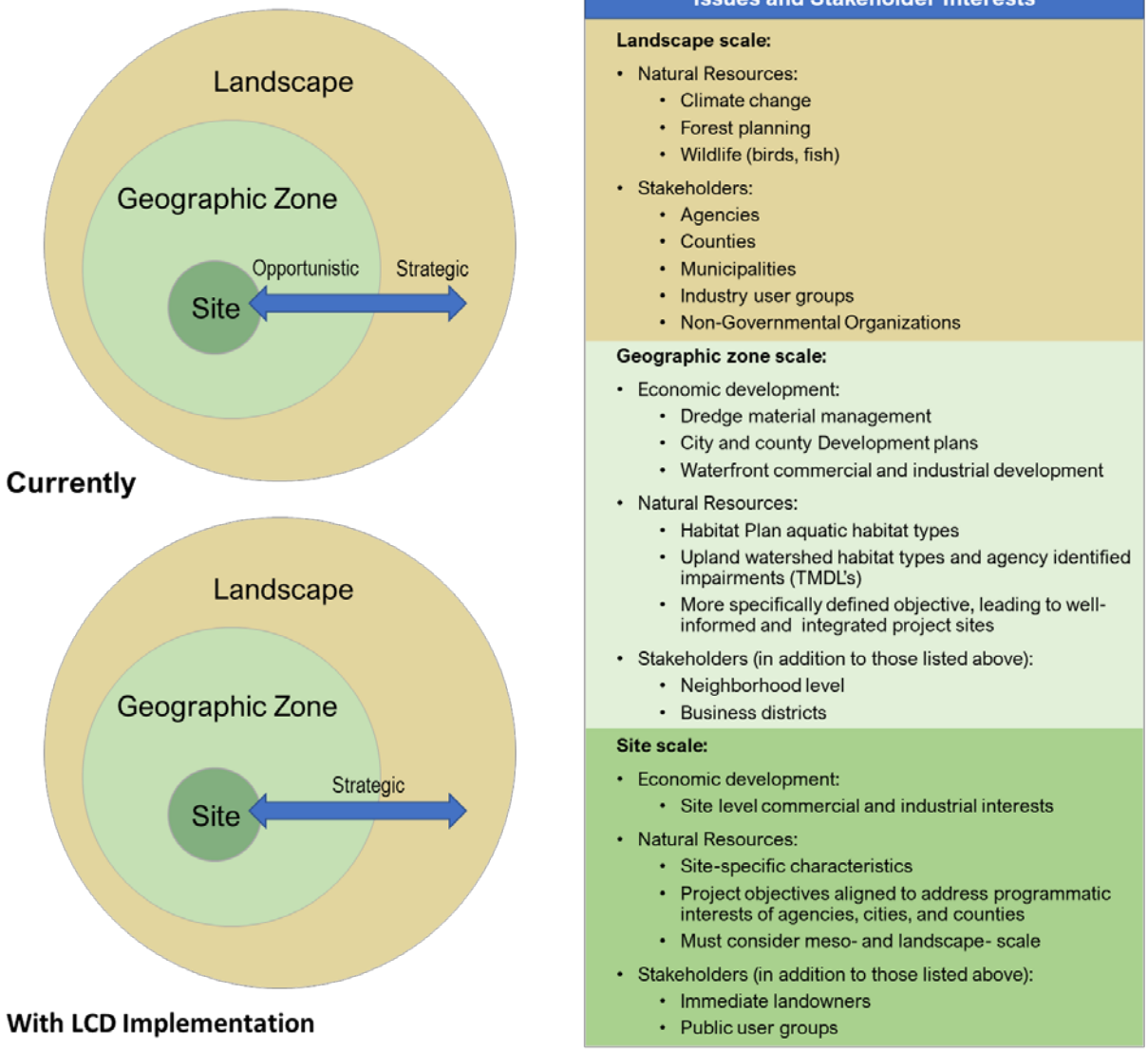


Figure 6: Incorporation of both Opportunistic Projects and Strategic Planning

5.1 Meso-Scale Selection

The first step in implementing this planning approach is to identify a set of meso-scale planning areas for the SLR. We are suggesting that these be defined by the geographic zones shown in Figures 7 and 8, which are based on the watershed areas draining to the sediment assessment areas established for the AOC. They would function as sub-systems within the LCD, meaning projects within these zones will most likely need to be coordinated, sequenced, and balanced with respect to competing interests within this geographic area.

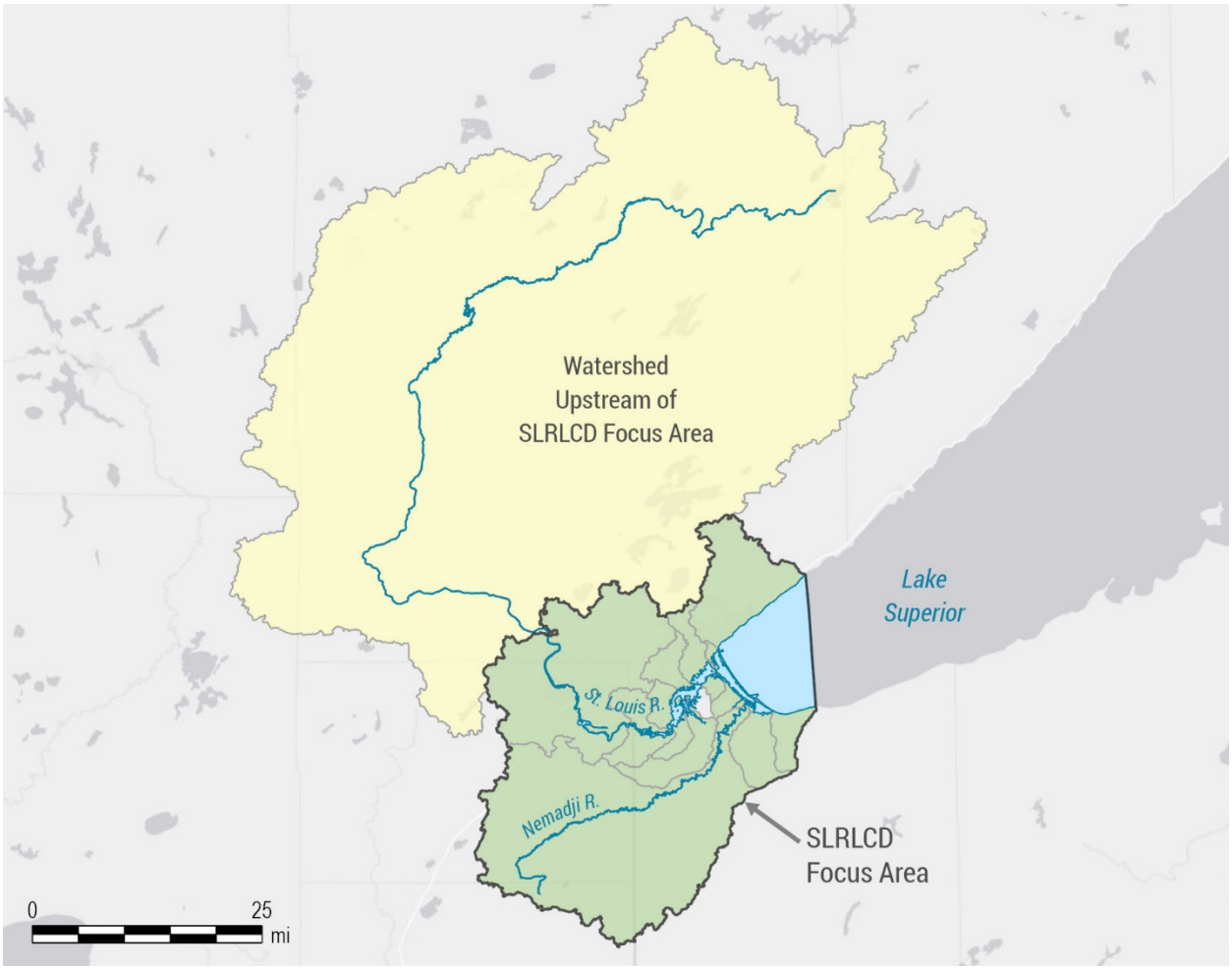


Figure 7: Geographic Zones and Their Contributing Watersheds with SLRAOC Boundary

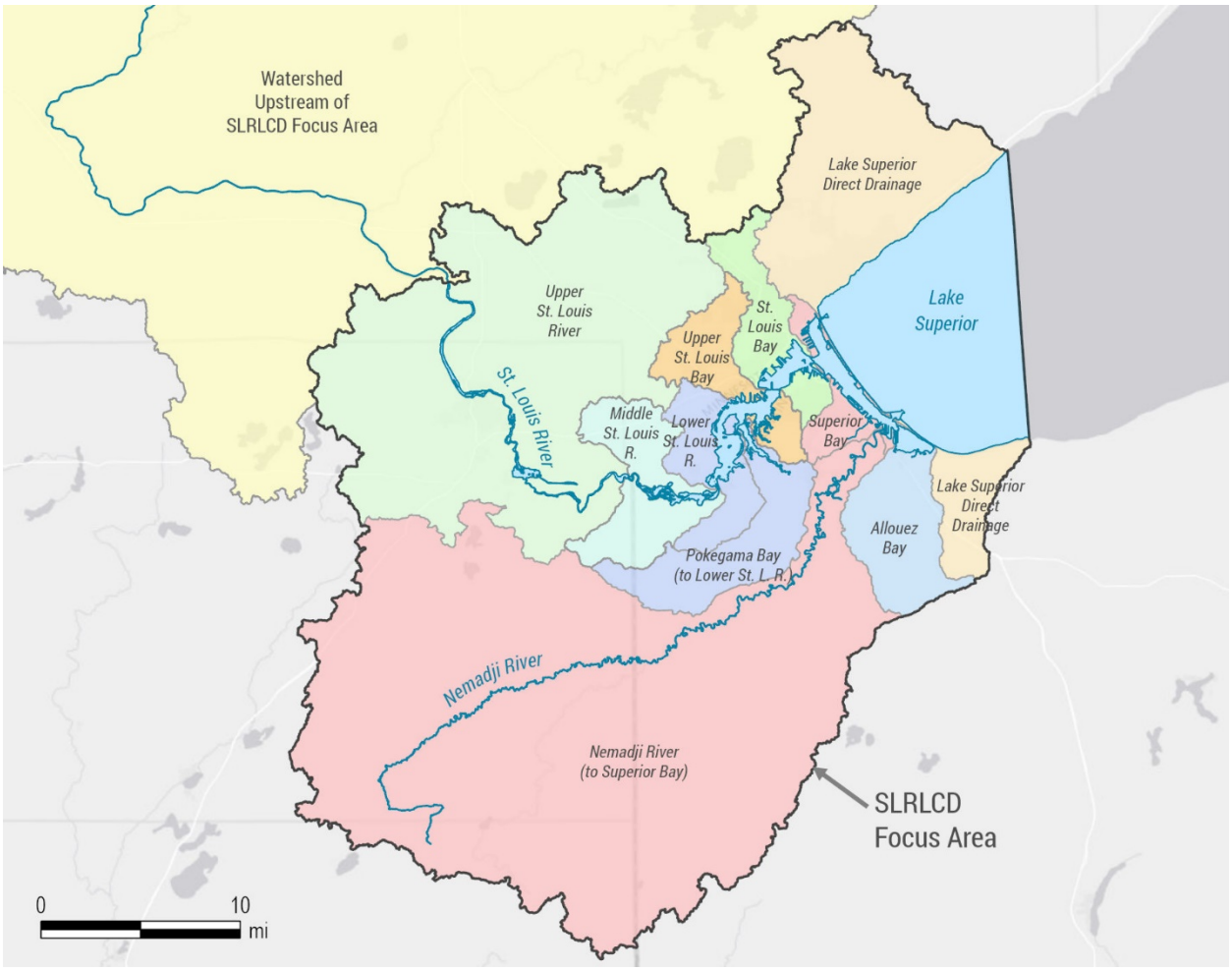


Figure 8: Geographic Zones and Their Contributing Watersheds with Direct Drainage Areas to Lake Superior

5.2 Description of Planning Levels

The planning approach will be implemented in three levels:

- Level 1 – The Level 1 analysis would provide an overview of each geographic zone describing jurisdictions, natural resources management concerns, issue analyses, stakeholder analyses, programs and projects, research needs, and metrics for monitoring progress in the area. It would also describe cross-cutting themes that the particular geographic zone shares with neighboring zones. Information from the Level 1 analysis can be “wrapped up” to the landscape level to provide insight into priority issues and metrics. For example, if lack of riparian buffers on trout streams was identified as an important issue across several geographic zones, the landscape level wrap-up might identify forested buffer as an important metric for the landscape. An annotated outline for the Level 1 analysis is provided in this next section.

- Level 2 – For this level of analysis, a restoration site team will be convened (as has been done for SLRAOC projects) for the purposes of developing a concept plan for the desired natural resource condition in the geographic zone. Stakeholders local to the geographic zone will help identify community needs and desires that will then be considered in the concept plan. The intent of the Level 2 analysis is to provide a larger geographical design context to influence site level project implementation.
- Level 3 – A Level 3 analysis would be a detailed project-level plan for a particular site within a geographic zone. As is the case for the Level 2 analysis, a restoration site team would be convened to develop a concept design for the project, and input from applicable local stakeholders would be sought and considered in the design.

5.3 Level 1 Analysis Format for a Geographic Zone

Following is an annotated outline for the proposed Level 1 analysis format.

Geographic Zone: <Zone Name>

Geographic zone overview

This may include multiple maps, including sectoral (i.e., natural resources, economic development, community health) spatial analysis, as well as applicable Habitat Plan content, including an overview of projects in progress or scheduled.

Jurisdictions (federal, tribal, state, county, city, township)

The administrative boundaries governing the geographic zone will be identified, mapped, and described in this section. This should include city, county, township boundaries; other pertinent special designations such as Scientific Natural Areas, parks, economic development zones, treaty areas, etc.

Natural resource management concerns

This section will include a summary of the current state of the geographic zone, including threats and stressors. It will also describe key natural resources management features (e.g., sensitive habitats, threatened and endangered species, etc.). Maps would be provided, as appropriate.

Desired future conditions

This section provides an overlay and contextual description of the geographic zone highlighting the key themes included in existing planning documents (e.g., City of Superior and City of Duluth municipal comprehensive plans, watershed plans, Duluth-Superior Port Land Use Plan, Lower St. Louis River Habitat Plan, etc.). This would include a brief description of the interaction of the spatial functions as proposed in the plan documents in conjunction with the map(s). This could be separated out in a paragraph discussing each sectoral area, with a focus on the intersections of community health and economic development with natural resources. A listing of relevant plans would be included.

Issue analysis

An initial analysis to identify both opposing and complementary points of intersection between sectoral interests (i.e., natural resources, economic development, and community health) would be provided. Additionally, inter-sectoral issues, especially as they relate to protection and restoration (e.g., prioritization of habitat types and project sequencing), will be described in this section. An overview table presenting the analysis would be included.

Projects/programming relevant to the sub-planning area

This section would provide an overview of known existing and planned/desired projects that impact the sub-planning area. This should be a dynamic component that could be updated bi-annually. It will tie directly to the Habitat Plan update work that was just completed, but would also include community health and economic development efforts.

Project description	HUC 10/12 Watershed(s)	Status (in progress, planned & funded, under development)	Agency lead/partners	Sectoral/Issue intersections	Notes

Stakeholder analysis

In this section, we will identify the key topics/issues around which stakeholder interests (communities) will likely be organized. This may be concrete proposed projects or opportunities/issues/competing interests we will identify through our planning document analysis and projects/programming discussions. The table below gives an idea of a rough framework to organize initial stakeholder analysis as a starting point. This can be a dynamic table that can be updated by SLRLCD lead agency/partners.

Topic/Issue area description	HUC 10/12 Watershed(s)	SLRLCD Lead agency/partners involved	Stakeholder	Stakeholder interest & position	Stakeholder engagement Strategy

Cross-cutting themes

This section identifies and describes those issues that are relevant in the geographic zone that also occurs landscape-wide (e.g., public access, climate change, sediment transport, etc.) or within several geographic zones (e.g., maritime commercial uses, stormwater infrastructure, etc.). This section would

serve to identify the information that is known about cross-cutting themes to inform work on the meso- and site-scales, as well as identifying what is not known that needs additional study/research to make the best decisions.

Research needs

This section will list and describe the research questions that need to be answered in order to address resource management and related sectoral needs within the geographic zone.

Metrics for progress monitoring

This section will suggest metrics that would measure progress in terms of resource management and related sectoral outcome for the geographic zone. Metrics should address both program implementation (i.e., coordination/collaboration needs), as well as resource status. Consideration of both landside (watershed) and water-side metrics will be given.

Program coordination

This section summarizes which agencies are active or have jurisdiction within the geographic zone. It further identifies the key SLRLCD partners that would serve as the core working group to keep the dynamic information for this geographic zone current and would relay this back to the SLRLCD coordinator.

6.0 Action Plan

The LCD Advisory Group was asked to evaluate, discuss, and recommend priorities for the SLRLCD effort based on the recommendations presented in Section 4.0. Three priorities were identified from these discussions:

1. Establish the SLRLCD forum
2. Begin implementation of the SLRLCD planning framework by:
   - Completing a Level 1 analysis for each geographic zone in the LCD focus area
   - Developing a prototype of a Level 2 analysis in Allouez Bay
3. Develop a prototype dashboard of metrics for evaluating the state of the estuary landscape

The plan for addressing each of these priorities within this effort are described in the following sections.

6.1 Establish the SLRLCD Forum

The primary intended outcome of this effort is the establishment of a regular structured forum that brings together SLRLCD stakeholders representing natural resources, economic development, and community health interests. This new structure will have a broader scope in terms of stakeholder participation than is part of SLRAOC-related gatherings and will also specifically target participation from economic development and community health stakeholders.

It is envisioned that this coordination structure will be complementary to smaller subject matter-specific or project-specific working groups. It would provide a place to bring the various SLRLCD related efforts together, share updates, problem solve, mobilize resources, and track progress towards shared goals. It should also be noted that this forum intends to build on existing AOC coordinating structures already in place.

Key requirements that have been identified include good meeting facilitation, accountability, and follow-up. This requires a dedicated program champion and support team to ensure successful delivery of these services.

Key elements to establish this structure include, but are not limited to:

1. An organizational structure that includes a forum charter, meeting principles, participants, standing agenda items, meeting frequency and location, and resources needed.
2. An operational structure that includes roles and responsibilities to organize, facilitate and document meeting results and monitor completion of action items.
3. A partner Memorandum of Understanding that documents interest and support.

A subcommittee of the LCD Advisory Group and other partners will be established to oversee the development of these elements and the recommendations will be presented to the complete LCD Advisory Group for review and approval. This work will be managed by MLT staff.

6.2 Implement the SLRLCD Planning Framework

Within the current SLRLCD project, a Level 1 analysis would be developed for each of the geographic zones and their watersheds (Figure 8), thereby covering the entire estuary. This provides a structured way of organizing the reference points (i.e., existing planning documents), ongoing projects, stakeholder management, and coordination needs on a level that is practical and relevant for the partners.

The intended outcome is an LCD document that provides a shared reference for the partners. It also has a dynamic component with project, partnership, and stakeholder maps and tables that can be updated over time. The approach lends itself well to being served online through a Geographic Information Systems-based platform, allowing access, and updating by partners.

Once the Level 1 analysis is complete on each of the meso-scale areas, a roll-up to the landscape level will be completed. The roll-up will be a summary of plans, projects and issues that can be used for the development of metrics to monitor progress from the bottom up and for identifying cross-cutting themes and research needs.

The Level 1 analysis can serve as a framework for the update of the Habitat Management Plan as it will serve as an issue inventory providing insight in the various sectoral interests and potential competing interests in terms of habitat use, as well as identifying those issues that are not currently well understood on a landscape scale.

In addition to the Level 1 analysis that will be completed for each of the geographic zones, a Level 2 analysis will be conducted for Allouez Bay with the result being a comprehensive vision for the planning area. The planning effort would take the Level 1 assessment as the starting point and the partners would then develop a coordinated approach towards restoration and protection improvements, as well as coordinating with the other sectoral interests. This Level 2 analysis for Allouez Bay will serve as a prototype, which could be replicated with lessons learned for the other geographic zones as funding and interest allows.

The Level 1 and Level 2 analyses described above will be managed by MLT staff and completed with the assistance of a consultant team under contract to MLT. All work products will be presented to the LCD Advisory Group for review, discussion, and final acceptance. Input from other stakeholders and partners will be sought extensively in developing these work products.

6.3 Develop a Prototype Dashboard of Metrics

There is significant desire amongst partners to develop a system of metrics for evaluating conditions within the SLRLCD landscape. The interest of the LCD Advisory Group is to develop

a simplified dashboard of metrics that can be used as indicators of landscape condition and implementation, such as a simplified version of the Puget Sound Vital Signs developed by the Puget Sound Partnership. Beginning with a simplified system of the “top” three or four metrics is desired.

It is intended that over time, partners will incorporate data collection necessary to support reporting on the metrics within their projects and programs across the planning area, such that the capabilities of the metrics to indicate landscape status become more robust over time.

A prototype system of metrics and corresponding dashboard will be developed for the SLRLCD planning area based on existing monitoring data. Development of the metrics dashboard will be managed by MLT staff and completed with the assistance of a consultant team under contract to MLT. All work products will be presented to the LCD Advisory Group for review, discussion, and final acceptance.

7.0 References

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8.0 Appendices

Appendix A

Stakeholder Meeting Participant Lists

Lower St. Louis River Landscape Conservation Design Project – December 16, 2019 Stakeholder Meeting Attendees

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Lower St. Louis River Landscape Conservation Design Project – December 16, 2019 Stakeholder Meeting Attendees

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Gini	MLT	Bill Majewski
Ruurd	MLT	Jules with USEPA (?)
Daryl	MLT	

Lower St. Louis River Landscape Conservation Design Project - February 3, 2020 Stakeholder Meeting Attendees

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Carol Reschke	UMD NRRI	
Diane Desotelle	City of Duluth	
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On Phone		
Rosita Clark-Moreno	US EPA Region 5	
Mike Kautnik	Friends of NBRR	
Cynthia Hagley	MNSEA Grant	
Daryl Peterson	} MLT	
Gina Breidenbach		
Richard Schoolderman		

Event/Conference Sign-in Form

Meeting Name: Workshop – Lake Superior Landscape Conservation Design
Organizer/Organization: EPA/MN Land Trust **Staff Contact: J Hollenhorst**
Event Date/Time: Thu, 2/4/20, 1-2 pm

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Appendix B

Stakeholder Meeting Agendas

Lower St. Louis River Landscape Conservation Design Project

Monday, December 16, 2019 1:00 pm to 4:00 pm

USEPA, 6201 Congdon Blvd, Duluth, MN 55804

Agenda

1:00 pm Participant Check-in/Meet and Greet

1:15 pm Welcome and Introductions

1:45 pm Setting the Stage

- What is this project about?
- What is Landscape Conservation Design?

2:15 pm Group Breakout Session: Gathering Experience with Collaborative Efforts in the Lower St. Louis River

- What has worked well and could be built upon?
- What could be improved?
- What are you missing?

2:40 pm Coffee Break

2:50 pm Breakout Session Debrief

3:05 pm Individual Breakout Session: Identifying Characteristics of a Thriving Landscape

From your professional point of view, what are priorities for the following in the Lower St. Louis River?

- Community health
- Economic development
- Natural resources

3:30 pm Moving Forward

- Meeting summary
- Next steps

Lower St. Louis River Landscape Conservation Design Project

Monday, February 3, 2020 1:00 pm to 4:00 pm

USEPA, 6201 Congdon Blvd, Duluth, MN 55804

Agenda

1:00 pm Participant Check-in/Meet and Greet

1:05 pm Welcome and Introductions

1:20 pm Review and Discussion of What We Learned from December Meeting

2:00 pm Group Breakout Session: Issue Identification

- What have been the top 3-4 sticky issues in the estuary that have been hard to resolve and are still unresolved? Describe:
  - The issue
  - Identify the underlying barriers/drivers that have made this hard to address
  - Identify opportunities for how the SLR LCD process could provide tools to be better equipped to address the issue

3:00 pm Coffee Break

3:15 pm Breakout Session Debrief

3:45 pm Moving Forward

- Next steps
  - 3rd large group stakeholder meeting in March
- Final comments

Appendix C

Stakeholder Meeting Results Summaries

Lower St. Louis River Landscape Conservation Design
12-16-19 Stakeholder Meeting
Breakout Session #1 Results

Responses to the question: Considering your involvement with efforts in the estuary involving other stakeholders (agencies, interest groups, municipalities, private interests, etc)

- What has worked well and could be built upon?
- What could be improved?
- What are you missing?

The list is organized by common topics that arose from the breakout team responses.

What has worked well or can be built upon?

Health Impact Analysis:

Grassy Point Health Impact Analysis (HIA). Inclusive process with neighborhood added voices to outcomes, positive feedback loop between HIA and restoration design.

HIA because research led directly to design outcomes through restoration site team design process. Findings also serve as long term resource for other actions in community.

HIA -involves public. Right type of process, right type of input. Good model.

HIA process: Holistic project development targeted/rigorous public involvement. (BUI's wellbeing metrics)

CISMA uses subject team:

CISMA uses subject teams to focus effort (phragmites team). many organizations collecting common data and using single platform to prioritize work and report success. CISMA spends a lot of time engaging and meeting community. building grassroots support for invasive species control.

R2R2R process has worked well:

Remediation to Restoration to Revitalization concept works well. Process has everyone in the room and important to give it the time it takes.

R2R2R: Develop a project considering/weighing each equally. Bring the right people together and give it time.

Habitat Plan:

Habitat Plan. Was cutting edge stakeholder driven, common vision at the time.

Habitat Plan, Habitat Workgroup, Twin Ports Freshwater Folks. Opportunities for networking

Habitat Plan: stakeholder driven, helps get funding

Time to update habitat plan. Apply habitat plan framework and include socio-economic visions. Shared plan.

Tie impact of habitat projects to larger landscape

Habitat plan – update, find a way to apply framework to socioeconomic (or consolidate existing plans)

Include urban ecosystems

<u>Effective meeting facilitation and follow-through:</u>

Coordination meetings generally work well when there is facilitation, results capture and follow through. (also an issue that can use improvement)

Effective meeting facilitation. Ensure both strong voices and weaker voices are heard, All perspectives equally valued. Use the plan, demonstrates value.

Intentionality. We're all part of this community building this together.

Meeting & collaborative follow-up/follow-through is important

Good facilitation is important

We all come from the same community (assume good intentions for the Estuary)

<u>General positive feelings about supportive attitudes and resources for collaboration within estuary:</u>

People are generally reflective and transparent. Are open to sharing and learning. Good collaborations.

Positive media coverage. Press releases are met with positive response.

There is a lot of research and data available.

Media coverage (print & TV)

Research and data to inform management

<u>Explore building on existing groups that have proven to be highly functional and good models:</u>

Some existing groups are highly functional and are good models: HTAC, HWG, etc. Rather than build new organization look to other for adoption.

Groups like HTAC or the Habitat workgroup are good models of effective work relationships. Elements of those models would be useful for LCD

Restoration site teams:

Restoration Site Teams: broad spectrum of input.

Restoration site teams: Broad group of stakeholders meeting frequently during project.

Willing collaborations (interagency) & natural resources

RAP Subcommittees/subject teams.

Good model.

Common information:

Using information commonly agreed on.

Link to RAP, LAMP to help set stage for future funding opportunities

Explicit links to RAP and LAMP. Drives future funding opportunities. Build process and plan how to fund

It's important to link this project with the LAMP (funding)

What is missing or needs improvement?

Effective facilitation and inclusivity of perspectives

We need effective facilitation to balance strong and quiet voices to enable good listening to each other

Need to make sure that input from all partners is equally valued

Equitable data collection (Data is power and intent is reflected in amount of data collected). Create balance between sectors to demonstrate inclusivity.

Shared fact finding, agreed upon data and what it means (information) in relation to what…

Equitable data collection (Data is power and intent is reflected in amount of data collected). Create balance between sectors to demonstrate inclusivity.

Information used is commonly agreed upon: e.g. if people come from different points of view they should be able to come to a common conclusion when the facts are presented (shared fact finding- rso)

Clearing house/plan to share/disseminate information that's gathered. Data compatibility

Need to define shared goals and metrics needed to measure progress e.g. Resilience to what? (Climate, economy, what timeframe?)

Concept designs – what does the proposed project plan look like?

Use common metrics -good examples include BUI and HIA.

Be specific on resiliency objectives: are you talking climate, biodiversity, economic, timeframe?

Knowledge gap of the socioeconomic impact on underserved communities.

A single platform to share data and collaborate.

Accepted data standards so data is sharable and useable.

Easily sharable data – imagery

Robust multisector data to inform decisions.

<u>Facilitate stakeholder identification/issue management – linkage of the appropriate stakeholder communities and their interests to the project</u>

Connect with agencies and stakeholders prior to research

(Insight in? rso) Socio-economic impact directly received from AOC/Estuary work

Missing upstream stakeholders

Who to contact for collaboration especially at the community level. Questions about how to tie into community interest groups

Cast a wide net. Who participates from community health sector?

We need better contacts for socio economic issues.

Missing upstream stakeholders

Need for including increasing participation of economic development planning. Econ participation may be manpower limited.

Find motivating factors -common ground

All viewpoints present at start to move through from beginning.

Make sure full variety of perspectives are included early in process.

Connections and contacts for collaboration (community, economic development, planning)

Coordinated messaging framework for getting buy-in and identifying/defining target audiences.

Communication on Estuary related issues / LCD

Coordinated messaging framework for getting buy-in and identifying/defining target audiences.

Trial runs on messaging to stakeholders.

Communication: improve & find new platforms & methods

Can we get a 1 page factsheet on the SLRLCD?

Change the name of LCD to attract other sectors.

Incorporation of geo-spatial data/communication coordination engage with the process.

Would like case studies, share early in process.

Suggest an education and outreach plan for improving involvement.

Project champions / leadership to follow-through/on-boarding/continuity

At some point, someone has to step-up and do the work. Partner agreements can help formalize these commitments.

Leadership: Coordination and facilitation of collaborative groups is important to the project success.

Agency engagement and commitment will be key to success. Who does the work? Formalize agreements and ensure accountability.

Continuity of people. What happens when they leave or are added. How can we manage that process better.

Lack of upfront information for new participants (on-boarding)

General/cross-cutting reactions

Planning:

Timeframes, don't rush process.

Minimize negative impacts of state line and other jurisdictional separations

Incorporate climate resiliency

Adaptability. Plans are too flat and can't accommodate trends and changes in public demand.

Health:

Largest number of objectives are in community health sector. how do we get that sector involvement?

Health is well being and fulfilment

Recognize communities are organized around issues and topics:

Communities are usually around issues and topics and may be ephemeral

Shared metrics:

Metrics lead to your vision and demonstrate you are moving the needle.

Work across jurisdictional boundaries:

St. Louis River connects – don't allow the state lines to divide

Lower St. Louis River Landscape Conservation Design
12-16-19 Stakeholder Meeting
Breakout Session #2 Results

Responses to the Question: "From the viewpoint of your professional role, what are your priorities for economic development, community health, and natural resources?"

The list in each theme is organized by common topics that arose from the individual responses.

Theme: Economic Development

Leverage natural environment for economic growth (tourism & recreation)

- Quantifying $ sharing economic impact of the various restoration projects
- Balance between multiple user groups
- Providing opportunities for improved quality of life while sustainably using natural resources
- Opportunities for tourism and outdoor recreation
- Promote recreational activities that support the local economy
- Expand local use and tourism of the river to build appreciation and protection in perpetuity and expand economic impact
- Utilize the natural environment as a catalyst for economic growth, developing complementary services that balance conservation with access. Examples: outfitters, housing development, restaurants that meet needs of neighbors & visitors
- Improve and maintain high quality habitats for recreation/tourism
- Develop/implement projects with using local workforces in mind
- Develop and use metrics to show how R2R2R impacts economy. Get the word out – share results!
- Grow economic opportunities that take advantage of restored, remediated habitats and that do not degrade them
- Passive recreation opportunities/tourism
- Natural resource-based tourism

Create room for economic development (industrial/port) while balancing with natural resources

- Appropriate land reserved on waterfront for industrial development
- Infrastructure to support economic development
- Coordinate competing uses for win-win
- Continue to support industrial activities in the harbor while protecting the natural resources
- Beneficial use of maintenance dredge material
- Upper watershed revitalization through mine land reclamation
- Identify and promote maritime/harbor improvements to infrastructure
- Appropriate uses of land and water
- Sustainable projects with focus on longevity
- Innovative approaches to use "unusable" land or water
- Usable land that supports industrial/commercial/business growth
- Brownfield restoration

Local systems focused sustainable economic development

- Encourage economically and environmentally sound agricultural techniques to promote agricultural success
- Coordinate timber harvest to prevent large scale deforestation of a watershed
- Find ways to provide economic growth that does not contribute to climate change
- Do not put economic growth ahead of resource health and community
- Sustainable economic development that allows for restoration of fish and wildlife habitats, and clean air and water for community health
- Support diverse scale and types of business and industry that are in harmony with sustaining the natural resources
- Considering community health with economic development taking into account cultural ties to the history of the economy when planning for future economic development
- Development for renewable energy
- Development with low climate impacts or climate positive
- Build an economy for the future on renewable energy, food, health and education
- Continued innovation and best practices
- Place based systems
- Investment in education
- Implementing a sustainable and economic resilient plan

Data & knowledge to inform/balance economic development and sustainability/health and community needs

- Actual data of economic benefits/impacts of revitalized environment and community
- Coordination of natural resource improvement with private sector to maximize business ability to leverage resources
- Help econ people better connect their knowledge to ecological science
- Bring development interests in up front, make sure they have the resources/knowledge to understand value ($$ and ecological/human health) of approaches such as conservation design to preserving open space
- Better data on economic advantages of sustainable approaches
- Community based economic development- start with conversations about what the community should look like. Then decide the balance of economic activity. Incentivize those activities (Not just attract developers)
- Priority to make it thrive – create space for real community and public input in decision making that is respected and used by economic development professionals and agencies

Community needs driven economic development

- West End development
- Food security in underserved communities
- Address community needs before recreation or tourism needs or even wants of other Duluth residents that don't necessarily live in the smaller community – example FDL Neighborhood
- Sustainable: wealth to provide services to community
- Support redevelopment of existing buildings; Businesses that provide gathering places for strong communities (e.g. climbing gyms to support local climbers, bikeshops where bikers can repair bikes etc.)
- Access to real estate in which to start business

- Promote ways to incentivize economic development that benefits all communities by utilizing as many former storefronts as possible
- Encourage ecofriendly and sustainable businesses; accessible by public transit; available to all types of people.
- Support for homeless and other at risk populations
- Determine how to provide opportunities for underserved members of the community
- Achieve community agreement on the balance between conservation and economic development when the two are in direct conflict
- Professional job opportunities for my children after college
- Need to diversify local economic profile (Heavy on tourism)
- Small Biz. Entrepreneur support
- Workforce housing
- Health care
- Workforce
- Education
- Housing resources in all income ranges
- Jobs with benefits and wages that support families

Theme: Community Health

Health Equity: inclusive engagement of underserved communities and meeting their needs to achieve equitable access to resources and health outcomes

- Reach out personally to the community on a neighborhood level to engage, educate and listen too
- Improve conditions for underserve parts/members of our community
- Including community members/neighborhoods that may be outside of the known user groups and gathering their opinions and needs prior to setting goals and plans
- Assessment of who (what demographics) will be most impacted by predicted climate change impacts including locations, income levels needs etc. Target programs, help etc. To those groups.
- Ensure access for all (whether they own a car or not) to wild natural areas
- Avoid Green Gentrification – assure that the restoration of the river, creates greater public access opportunities for neighbors along the corridor, and policies/programs are put into place to assure R2R2R creates space for everyone to thrive – not get pushed out.
- Communities may need to be engage in a different method than a large meeting asking for "input"
- Intentional identification & consideration of who is included as a stakeholder and transparency and inclusion of stakeholders throughout decision processes.
- Environmental conditions and policies are aligned with healthy standards of living → environmental justice access, monitoring, holistic approach
- Expand the definition of health to include wellbeing as defined by the community and recognize the connection between environment and health
- Rebuild trust between government – local, state and federal and the surrounding neighborhoods
- Health outcomes indicators (HIA) are not different between East and West Duluth
- Conservation Plan that account for community needs and preferences in an equitable way

- Ensure public input is gathered to construct projects with public support
- Priority to make it thrive – create space for real community and public input in decision making that is respected and used by health professionals and agencies
- Community needs/wants for habitat/wildlife
- Understanding how to leverage natural resource work to benefit homeless people affected by opioid crisis

Recognize cultural needs and benefits for health

- Ability for expression; cultural practices or health practices → meditation.
- Cultural resource awareness, acknowledgement, visibility (past and present), Tribal, other
- Tribal interests/consultation
- Increased access to the estuary for both outdoor recreation and social cultural experiences
- Understand history – interpreted history
- Gathering places - Art
- Generational sharing "wisdom of elders"

Community access to natural resources

- Provide better connections to the river resources
- Connect underserved groups to the natural resources in the St. Louis river
- Access to river in as many places as possible – keep or add public lands along shoreline. If public interact with the river, they will be willing to protect the river
- Access for recreation groups
- Places to support sustainable use of nature areas
- Some area with no recreation for habitat
- Access to natural areas for all communities
- Resilient natural areas and infrastructure to reduce solastalgia(?)/stress and anxiety from climate change
- Diverse and inclusive community
- A destination to interact with nature/the Estuary
- Improve ADA access to the St. Louis river (fishing, boating, canoe, kayak)
- Increase access to green spaces
- Brownfield restoration
- Increase access to socio-economic data that is current i.e. income, education, health care
- Vibrant community groups that care for individual places in the landscape that are particularly important to them
- Litter and ATV free public land
- Community understands, appreciates and protects the St. Louis River; Build a sense of place for all community members
- Safe welcoming public spaces for people to recreate in health habitats
- Preservation of green spaces
- Qualifying the positive mental health impacts of outdoor recreational activities
- Retaining public land and green space, providing access to lands and water
- Neighborhood access to parks, trails and open space
- Safe recreational areas
- More educational use of the St. Louis River
- Protect infrastructures w. climate change in mind

- Fair opportunities i.e. recreational uses or clean drinking water
- Access to the river especially by underserved community
- Encourage balanced habitat/public use areas

Source of natural foods – local subsistence gathering opportunities

- Designed to support ecosystems for the future – preventative health
- Mercury issue; fish consumption advisories
- Wild rice restoration and sustainability
- Minimize effluent discharge into St. Louis river – WLSSD (ecoli)
- Availability to support local subsistence way of life (food resilience e.g. fish consumption)
- Fish consumption
- Wild rice production
- Pollinator plants
- Air pollution reduction
- Reduce contaminant load in SLR to allow higher levels of fish consumption safely
- Healthy food
- Legacy contaminants

Community resiliency

- Protecting communities from trauma of repeating disasters
- Flood resilience to protect infrastructure
- Sustain a connected, intact and resilient open space that provides important ecological functions and services that benefit society (clean water, flood protection, well-being)

Theme: Natural Resources

Habitat protection – identification and prioritization of high quality habitats

- Abundant, productive, protected habitats for the full suite of fish, wildlife, plants native to the SL river
- Long term commitments for natural resource protection, management and ongoing restoration
- Erosion reduction and water quality improvement – encourage slow the flow activities (prevent deforestation and encourage coniferous forest)
- Improve sustainable agricultural practices, prevent cattle access to streams, encourage nutrient management
- Clean sediment substrate
- Healthy native population fish, wildlife and vegetation
- Less or unaltered hydrology and flows
- Diverse and protected habitats
- Dark Skies
- I.D. high quality habitats and develop strategies to protect them
- I.D. good quality habitats and ID strategies to improve them
- Develop/implement strategies and best practices to address climate resiliency through restoration/enhancement/protection
- Set aside lands not suitable for development and will protect the water quality in the estuary.

- Consider implementation of watershed planning
- Set aside adequate corridors among streams to protect water quality
- Health, self-sustaining marsh bird habitat and populations
- Landscapes that support a diversity of pollinator species
- Healthy, self-sustaining shorebird and waterfowl habitat and populations
- Healthy fisheries
- Protection of green space
- Rare species protection monitoring and maintenance
- Monitoring after all restoration projects. Were they successful or do they need tweaking?
- Public involvement in planning protection and restoration efforts
- Agency support both staff and $$
- Increase fish and wildlife habitat and populations in the St. Louis River
- Adaptable populations – resilient to climate change
- Areas with no access for habitat

People – Habitat interaction and valuation/value system

- Sustainable interaction – people and their environment. Non-degrading use, monitoring, systematic thinking
- It would be great to find out a way or process to add monetary value to trees or open space preservation. Income has value, job creation has value, property has value; but our system doesn't place "value" on trees or open space
- Conservation planning that considers multiple values – impacts of effects of conservation choices on wildlife including mammals, birds, fish, invertebrates, plants/vegetation, invasive species water and sediment quality. Agreement on metrics and how they are calculated and used
- Building for, preparation of and minimizing user impact on natural resources
- Landscape level ecosystem function protections
- Building a community of land stewards that value the river (because of the access) and are compelled to perpetuate the work of the people in this room. Supporting elected officials and public policy that sustains the AOC efforts

Healthy/clean resource for utilization for consumptive uses and recreation

- Provide more public access to the St. Louis River
- Available and healthy (sustainable, safe for consumption/utilization) resource for subsistence/treaty rights and recreational use
- Diverse natural environment recreation opportunities accessible to those of limited economic means
- Fair accessibility
- Preservation of for cultural and commercial uses
- Creating healthy environments and ecosystems
- Fish populations that support local recreation and commercial fishing
- Water that is swimmable and free of pollution or hazards to human health
- Wildlife populations to support healthy ecosystems
- Recreational hunting and trapping
- Healthy resource that can be utilized by community (hunt, fish, swim. Rice, etc.)

(Climate) resilient system

- Climate resilience to water level changes and storm events
- Climate change resilience – prevent loss of wetlands and encourage innovative wetland restoration to prevent flooding
- Properly size culvers for fish passage and large storms
- Get estuary habitat to the point where it can sustain itself then ensure we prevent future impacts such as those we are currently cleaning up – create a resilient estuary
- Incorporate traditional ecological knowledge into community education/outreach and agency science
- Realistic approach to managing invasives along with the rest of the system in face of climate change
- Prioritize and fund lands for permanent protections that provide for resiliency, and provide economic well-being (ecosystem services)
- Climate resiliency adaptations or plans to protect biodiversity and environment
- Implementing native species that are climate resilient
- Seven generations planning
- Write a plan to sustain a diverse suite of intact, connected and resilient ecosystems
- Gain a better understanding of climate change impacts on the estuary and how to prepare for these impacts
- Incorporating climate resiliency into natural resource management; resilient healthy eco-systems

Sediment and pollution, upstream impacts

- Remediate contaminated sediments
- Mitigate for impacts to habitat loss
- Protection from point and non-point source pollution. Water quality to support thriving aquatic ecosystem and human use
- Gain a better understanding of the watershed/upstream influence and impacts on the estuary, and how to remove or mitigate the harmful impacts
- Shoreline stabilization along the river to minimize erosion and sediment loading
- Protecting Lake Superior from upstream impacts
- Considering and addressing (ex. Permitting and decision making) upstream impacts and discharges
- Identify a long-term assessment strategy for the estuary
- Linking upstream and tributary health (including impairments, TMDL's and WRAPS-mn) to the estuary health and management decisions. Get away from addressing sediment in the estuary/stream mouths before we assess the stream

Lower St. Louis River Landscape Conservation Design
2-4-20 Stakeholder Meeting
Breakout Session Results

Responses to the Question: "What have been the top 3-4 sticky issues in the estuary that have been hard to resolve and are still unresolved?"

Groups were asked to describe:
*The issue
*Identify the underlying barriers/drivers that have made this hard to address
*Identify opportunities for how the SLR LCD process could provide tools to be better equipped to address the issue

The table below is a summary of all the group results. Similar issues from multiple groups were combined.

Issue	Barriers	LCD Opportunities
Data relating to TMDL's (Sediment, temperature, etc.) Conventional pollution/(Non-Point-rso)	Effective implementation of load reductions: (Stressor Identification, project design, prioritizing, responsibility, funding)	More inclusive forum, educate and engage to be part of the solution
Long term, large scale data collection and management	• Funding • Different standards • IT limitations • Collection protocols • Different missions of agencies • Continuity and responsibility • Frequency and resolution • Agreed upon metrics • Type of data + missing pieces • Diverse data types	• MN Land Trust, as a non State/Federal agency has more flexibility • Federation of data sets that can flow together (talk to each-other) – Example: FGDC+GDA • Endowment for monitoring • Getting the right "external" people involved.
Data sharing & Data use	Funding	Communicate results Interoperability Central location to connect people
Mercury in fish – impacts treaty rights, fishery has come back in terms of population, but can't be used for consumption.	Lack of regulatory controls; political will.	Keep issue elevated in public eye and process. Highlight solutions
Brownfields restoration and re-use	Lack of sufficient staffing, $$, blight	Ecosystem services, more economic development, housing etc.
USX	Hurry up already	Ecosystem services, more economic development, housing etc.

Issue	Barriers	LCD Opportunities
Decision-making for Natural Resource projects	Process/Criteria for Regulatory approval Misapplication of analysis/Data Team selection/inclusion Indigenous engagement	
Appropriate information & Analysis for resiliency: restoration effectiveness	Water levels effect/prediction Design Invasive species	
Mercury effects & social justice	Contaminants – non legacy	
Equitable access to the benefits of the estuary	• Public access of waterfront (existence of + connections to) • Design of sites not always inclusive of accessibility considerations • Mobility differential, but also different time + access resources • Safety • Public access not value highly (as high) as a private entity using/developing the same land	• Doig good outreach with populations who don't have access (need to study/understand what do they want?) • Getting the right people involved • Intentional community programming • Access to watercraft • CZM's used to improved access + interest groups
Upstream impacts (stormwater, sediment pollution, everything)	• Challenges of multiple entities, processes. • Conflicting values • Political pressures on permitting • NIMBY • Watershed, land uses, mining etc. • Measuring the impacts • Climate change	• Consensus building with lots of players • Capture the energy of existing efforts • Ecosystem values (assigning them) • Improve existing programs (i.e. permitting) • Rallying change • Pilots, demo's uplifting examples.
Targeted habitat restoration "band aid" approach to habitat restoration	Holistic watershed assessments Funding – Decision making process	Scaling assessments to identify on the ground opportunities. Targeted habitat restoration
How to identify and prioritize habitat protection and restoration opportunities	Scaling Funding Decisions Making progress	Bigger picture overview of habitat projects to coordinate/sequence restoration projects.
Linking people higher in the watershed to the estuary – West Duluth	Access to the river Education Limited recreation opportunities Limited job opportunities Landownership pattern	Education Highlight community needs/issues to natural resources professionals

Issue	Barriers	LCD Opportunities
Capping contaminated sediments – long term natural resource/community impacts	Cost of removal	Data base of info related to locations and restrictions related to land use (institutional controls)

Other points brought up as part of the sticky issues discussion:

- There is a need to deal with legacy and non-legacy contaminants. Not just mercury
- There is potential for conflict between industrial waterfront uses and the estuary
- Invasive species – the inter-lake movement of aquatic invasives is the bigger concern currently. As well a better understanding of invasive species and their impact (e.g. narrow leaf cattail)
- Improve connections among sectors
- Connections among people are important
- Add virtual/listserv forum as a possibility; may be easier to engage folks this way vs. in-person meetings

Discussion of Meeting #1 Results - Break-out Session 1 Discussion Notes

- Benefit of structured ways to convene, update and share information
- Habitat workgroup offers on-boarding opportunity
- Better management needed of foundational documents and data layers: data curation responsibilities and data management
- Recognize need for a central location to access data
- Need agency support for continued meeting
- Natural resources trustees are another good example of a collaborative group that has been working well (FWS. NOAA, MPCA, FDL, MNDNR, WDNR, 1854)
- Recognize the importance of good science as a basis
- Social justice – what is the right forum to engage to bring this into the fold? May not exist?
- How do we engage social justice needs early on? Need list of intersections to help decide who needs to be involved.
- Define spatial area that is included in the SLR Estuary LCD
- Subject teams could be used not just for RAP; what is the next iteration?

Discussion of Meeting #1 Results - Break-out Session 2 Discussion Notes

- Wellbeing data set is a gap; this is a real need to help determine/measure revitalization of the AOC, is it benefitting the impacted communities? (Look at Ted Angradi's 2019 paper)
    - Would like to have wellbeing data on a neighborhood level.
    - Possible sources of data: MN Department of Health does assessments, there is a challenge in mismatch of scales. County community health improvement plan
    - HIA pathways were effective. Helped identify data sources to show the path
- Intersection is about shared values
- Commonality between measurable indicators – within the intersection
- Public sector can lead by example
- Estuary part of freshwater inland sea – look into blue economy principles (NOAA)

Appendix A

Stakeholder Meeting Participant Lists

Lower St. Louis River Landscape Conservation Design Project – December 16, 2019 Stakeholder Meeting Attendees

Name	Affiliation	Email Address
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Lower St. Louis River Landscape Conservation Design Project – December 16, 2019 Stakeholder Meeting Attendees

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Cherie Hagen	WDNR	
Patti Fowler	MNDNR	
Ted Koehler	USFWS	
Sarah Warner	USFWS	
Didn't sign in:		
Tom Hollenhorst	USEPA	Dan Breneman, MPCA
Gini	MLT	Bill Majewski
Ruurd	MLT	Jules with USEPA (?)
Daryl	MLT	

Lower St. Louis River Landscape Conservation Design Project - February 3, 2020 Stakeholder Meeting Attendees

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Darren Vogt	1854 Treaty Authority	
Carol Reschke	UMD NRRI	
Diane Desotelle	City of Duluth	
LISA LUOKKALA	City of Duluth - Parks	
On Phone		
Rosita Clark-Moreno	US EPA Region 5	
Mike Kautnik	Friends of NBRR	
Cynthia Hagley	MNSEA Grant	
Daryl Peterson	} MLT	
Gina Breidenbach		
Richard Schoolderman		

Event/Conference Sign-in Form

Meeting Name: Workshop – Lake Superior Landscape Conservation Design
Organizer/Organization: EPA/MN Land Trust **Staff Contact: J Hollenhorst**
Event Date/Time: Thu, 2/4/20, 1-2 pm

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Appendix B

Stakeholder Meeting Agendas

Lower St. Louis River Landscape Conservation Design Project

Monday, December 16, 2019 1:00 pm to 4:00 pm

USEPA, 6201 Congdon Blvd, Duluth, MN 55804

Agenda

1:00 pm Participant Check-in/Meet and Greet

1:15 pm Welcome and Introductions

1:45 pm Setting the Stage

- What is this project about?
- What is Landscape Conservation Design?

2:15 pm Group Breakout Session: Gathering Experience with Collaborative Efforts in the Lower St. Louis River

- What has worked well and could be built upon?
- What could be improved?
- What are you missing?

2:40 pm Coffee Break

2:50 pm Breakout Session Debrief

3:05 pm Individual Breakout Session: Identifying Characteristics of a Thriving Landscape

From your professional point of view, what are priorities for the following in the Lower St. Louis River?

- Community health
- Economic development
- Natural resources

3:30 pm Moving Forward

- Meeting summary
- Next steps

Lower St. Louis River Landscape Conservation Design Project

Monday, February 3, 2020 1:00 pm to 4:00 pm

USEPA, 6201 Congdon Blvd, Duluth, MN 55804

Agenda

1:00 pm Participant Check-in/Meet and Greet

1:05 pm Welcome and Introductions

1:20 pm Review and Discussion of What We Learned from December Meeting

2:00 pm Group Breakout Session: Issue Identification

- What have been the top 3-4 sticky issues in the estuary that have been hard to resolve and are still unresolved? Describe:
  - The issue
  - Identify the underlying barriers/drivers that have made this hard to address
  - Identify opportunities for how the SLR LCD process could provide tools to be better equipped to address the issue

3:00 pm Coffee Break

3:15 pm Breakout Session Debrief

3:45 pm Moving Forward

- Next steps
  - 3rd large group stakeholder meeting in March
- Final comments

Appendix C

Stakeholder Meeting Results Summaries

Lower St. Louis River Landscape Conservation Design
12-16-19 Stakeholder Meeting
Breakout Session #1 Results

Responses to the question: Considering your involvement with efforts in the estuary involving other stakeholders (agencies, interest groups, municipalities, private interests, etc)

- What has worked well and could be built upon?
- What could be improved?
- What are you missing?

The list is organized by common topics that arose from the breakout team responses.

What has worked well or can be built upon?

Health Impact Analysis:

Grassy Point Health Impact Analysis (HIA). Inclusive process with neighborhood added voices to outcomes, positive feedback loop between HIA and restoration design.

HIA because research led directly to design outcomes through restoration site team design process. Findings also serve as long term resource for other actions in community.

HIA -involves public. Right type of process, right type of input. Good model.

HIA process: Holistic project development targeted/rigorous public involvement. (BUI's wellbeing metrics)

CISMA uses subject team:

CISMA uses subject teams to focus effort (phragmites team). many organizations collecting common data and using single platform to prioritize work and report success. CISMA spends a lot of time engaging and meeting community. building grassroots support for invasive species control.

R2R2R process has worked well:

Remediation to Restoration to Revitalization concept works well. Process has everyone in the room and important to give it the time it takes.

R2R2R: Develop a project considering/weighing each equally. Bring the right people together and give it time.

Habitat Plan:

Habitat Plan. Was cutting edge stakeholder driven, common vision at the time.

Habitat Plan, Habitat Workgroup, Twin Ports Freshwater Folks. Opportunities for networking

Habitat Plan: stakeholder driven, helps get funding

Time to update habitat plan. Apply habitat plan framework and include socio-economic visions. Shared plan.

Tie impact of habitat projects to larger landscape

Habitat plan – update, find a way to apply framework to socioeconomic (or consolidate existing plans)

Include urban ecosystems

<u>Effective meeting facilitation and follow-through:</u>

Coordination meetings generally work well when there is facilitation, results capture and follow through. (also an issue that can use improvement)

Effective meeting facilitation. Ensure both strong voices and weaker voices are heard, All perspectives equally valued. Use the plan, demonstrates value.

Intentionality. We're all part of this community building this together.

Meeting & collaborative follow-up/follow-through is important

Good facilitation is important

We all come from the same community (assume good intentions for the Estuary)

<u>General positive feelings about supportive attitudes and resources for collaboration within estuary:</u>

People are generally reflective and transparent. Are open to sharing and learning. Good collaborations.

Positive media coverage. Press releases are met with positive response.

There is a lot of research and data available.

Media coverage (print & TV)

Research and data to inform management

<u>Explore building on existing groups that have proven to be highly functional and good models:</u>

Some existing groups are highly functional and are good models: HTAC, HWG, etc. Rather than build new organization look to other for adoption.

Groups like HTAC or the Habitat workgroup are good models of effective work relationships. Elements of those models would be useful for LCD

Restoration site teams:

Restoration Site Teams: broad spectrum of input.

Restoration site teams: Broad group of stakeholders meeting frequently during project.

Willing collaborations (interagency) & natural resources

RAP Subcommittees/subject teams.

Good model.

Common information:

Using information commonly agreed on.

Link to RAP, LAMP to help set stage for future funding opportunities

Explicit links to RAP and LAMP. Drives future funding opportunities. Build process and plan how to fund

It's important to link this project with the LAMP (funding)

What is missing or needs improvement?

Effective facilitation and inclusivity of perspectives

We need effective facilitation to balance strong and quiet voices to enable good listening to each other

Need to make sure that input from all partners is equally valued

Equitable data collection (Data is power and intent is reflected in amount of data collected). Create balance between sectors to demonstrate inclusivity.

Shared fact finding, agreed upon data and what it means (information) in relation to what…

Equitable data collection (Data is power and intent is reflected in amount of data collected). Create balance between sectors to demonstrate inclusivity.

Information used is commonly agreed upon: e.g. if people come from different points of view they should be able to come to a common conclusion when the facts are presented (shared fact finding- rso)

Clearing house/plan to share/disseminate information that's gathered. Data compatibility

Need to define shared goals and metrics needed to measure progress e.g. Resilience to what? (Climate, economy, what timeframe?)

Concept designs – what does the proposed project plan look like?

Use common metrics -good examples include BUI and HIA.

Be specific on resiliency objectives: are you talking climate, biodiversity, economic, timeframe?

Knowledge gap of the socioeconomic impact on underserved communities.

A single platform to share data and collaborate.

Accepted data standards so data is sharable and useable.

Easily sharable data – imagery

Robust multisector data to inform decisions.

<u>Facilitate stakeholder identification/issue management – linkage of the appropriate stakeholder communities and their interests to the project</u>

Connect with agencies and stakeholders prior to research

(Insight in? rso) Socio-economic impact directly received from AOC/Estuary work

Missing upstream stakeholders

Who to contact for collaboration especially at the community level. Questions about how to tie into community interest groups

Cast a wide net. Who participates from community health sector?

We need better contacts for socio economic issues.

Missing upstream stakeholders

Need for including increasing participation of economic development planning. Econ participation may be manpower limited.

Find motivating factors -common ground

All viewpoints present at start to move through from beginning.

Make sure full variety of perspectives are included early in process.

Connections and contacts for collaboration (community, economic development, planning)

Coordinated messaging framework for getting buy-in and identifying/defining target audiences.

Communication on Estuary related issues / LCD

Coordinated messaging framework for getting buy-in and identifying/defining target audiences.

Trial runs on messaging to stakeholders.

Communication: improve & find new platforms & methods

Can we get a 1 page factsheet on the SLRLCD?

Change the name of LCD to attract other sectors.

Incorporation of geo-spatial data/communication coordination engage with the process.

Would like case studies, share early in process.

Suggest an education and outreach plan for improving involvement.

Project champions / leadership to follow-through/on-boarding/continuity

At some point, someone has to step-up and do the work. Partner agreements can help formalize these commitments.

Leadership: Coordination and facilitation of collaborative groups is important to the project success.

Agency engagement and commitment will be key to success. Who does the work? Formalize agreements and ensure accountability.

Continuity of people. What happens when they leave or are added. How can we manage that process better.

Lack of upfront information for new participants (on-boarding)

General/cross-cutting reactions

Planning:

Timeframes, don't rush process.

Minimize negative impacts of state line and other jurisdictional separations

Incorporate climate resiliency

Adaptability. Plans are too flat and can't accommodate trends and changes in public demand.

Health:

Largest number of objectives are in community health sector. how do we get that sector involvement?

Health is well being and fulfilment

Recognize communities are organized around issues and topics:

Communities are usually around issues and topics and may be ephemeral

Shared metrics:

Metrics lead to your vision and demonstrate you are moving the needle.

Work across jurisdictional boundaries:

St. Louis River connects – don't allow the state lines to divide

Lower St. Louis River Landscape Conservation Design
12-16-19 Stakeholder Meeting
Breakout Session #2 Results

Responses to the Question: "From the viewpoint of your professional role, what are your priorities for economic development, community health, and natural resources?"

The list in each theme is organized by common topics that arose from the individual responses.

Theme: Economic Development

Leverage natural environment for economic growth (tourism & recreation)

- Quantifying $ sharing economic impact of the various restoration projects
- Balance between multiple user groups
- Providing opportunities for improved quality of life while sustainably using natural resources
- Opportunities for tourism and outdoor recreation
- Promote recreational activities that support the local economy
- Expand local use and tourism of the river to build appreciation and protection in perpetuity and expand economic impact
- Utilize the natural environment as a catalyst for economic growth, developing complementary services that balance conservation with access. Examples: outfitters, housing development, restaurants that meet needs of neighbors & visitors
- Improve and maintain high quality habitats for recreation/tourism
- Develop/implement projects with using local workforces in mind
- Develop and use metrics to show how R2R2R impacts economy. Get the word out – share results!
- Grow economic opportunities that take advantage of restored, remediated habitats and that do not degrade them
- Passive recreation opportunities/tourism
- Natural resource-based tourism

Create room for economic development (industrial/port) while balancing with natural resources

- Appropriate land reserved on waterfront for industrial development
- Infrastructure to support economic development
- Coordinate competing uses for win-win
- Continue to support industrial activities in the harbor while protecting the natural resources
- Beneficial use of maintenance dredge material
- Upper watershed revitalization through mine land reclamation
- Identify and promote maritime/harbor improvements to infrastructure
- Appropriate uses of land and water
- Sustainable projects with focus on longevity
- Innovative approaches to use "unusable" land or water
- Usable land that supports industrial/commercial/business growth
- Brownfield restoration

Local systems focused sustainable economic development

- Encourage economically and environmentally sound agricultural techniques to promote agricultural success
- Coordinate timber harvest to prevent large scale deforestation of a watershed
- Find ways to provide economic growth that does not contribute to climate change
- Do not put economic growth ahead of resource health and community
- Sustainable economic development that allows for restoration of fish and wildlife habitats, and clean air and water for community health
- Support diverse scale and types of business and industry that are in harmony with sustaining the natural resources
- Considering community health with economic development taking into account cultural ties to the history of the economy when planning for future economic development
- Development for renewable energy
- Development with low climate impacts or climate positive
- Build an economy for the future on renewable energy, food, health and education
- Continued innovation and best practices
- Place based systems
- Investment in education
- Implementing a sustainable and economic resilient plan

Data & knowledge to inform/balance economic development and sustainability/health and community needs

- Actual data of economic benefits/impacts of revitalized environment and community
- Coordination of natural resource improvement with private sector to maximize business ability to leverage resources
- Help econ people better connect their knowledge to ecological science
- Bring development interests in up front, make sure they have the resources/knowledge to understand value ($$ and ecological/human health) of approaches such as conservation design to preserving open space
- Better data on economic advantages of sustainable approaches
- Community based economic development- start with conversations about what the community should look like. Then decide the balance of economic activity. Incentivize those activities (Not just attract developers)
- Priority to make it thrive – create space for real community and public input in decision making that is respected and used by economic development professionals and agencies

Community needs driven economic development

- West End development
- Food security in underserved communities
- Address community needs before recreation or tourism needs or even wants of other Duluth residents that don't necessarily live in the smaller community – example FDL Neighborhood
- Sustainable: wealth to provide services to community
- Support redevelopment of existing buildings; Businesses that provide gathering places for strong communities (e.g. climbing gyms to support local climbers, bikeshops where bikers can repair bikes etc.)
- Access to real estate in which to start business

- Promote ways to incentivize economic development that benefits all communities by utilizing as many former storefronts as possible
- Encourage ecofriendly and sustainable businesses; accessible by public transit; available to all types of people.
- Support for homeless and other at risk populations
- Determine how to provide opportunities for underserved members of the community
- Achieve community agreement on the balance between conservation and economic development when the two are in direct conflict
- Professional job opportunities for my children after college
- Need to diversify local economic profile (Heavy on tourism)
- Small Biz. Entrepreneur support
- Workforce housing
- Health care
- Workforce
- Education
- Housing resources in all income ranges
- Jobs with benefits and wages that support families

Theme: Community Health

Health Equity: inclusive engagement of underserved communities and meeting their needs to achieve equitable access to resources and health outcomes

- Reach out personally to the community on a neighborhood level to engage, educate and listen too
- Improve conditions for underserve parts/members of our community
- Including community members/neighborhoods that may be outside of the known user groups and gathering their opinions and needs prior to setting goals and plans
- Assessment of who (what demographics) will be most impacted by predicted climate change impacts including locations, income levels needs etc. Target programs, help etc. To those groups.
- Ensure access for all (whether they own a car or not) to wild natural areas
- Avoid Green Gentrification – assure that the restoration of the river, creates greater public access opportunities for neighbors along the corridor, and policies/programs are put into place to assure R2R2R creates space for everyone to thrive – not get pushed out.
- Communities may need to be engage in a different method than a large meeting asking for "input"
- Intentional identification & consideration of who is included as a stakeholder and transparency and inclusion of stakeholders throughout decision processes.
- Environmental conditions and policies are aligned with healthy standards of living → environmental justice access, monitoring, holistic approach
- Expand the definition of health to include wellbeing as defined by the community and recognize the connection between environment and health
- Rebuild trust between government – local, state and federal and the surrounding neighborhoods
- Health outcomes indicators (HIA) are not different between East and West Duluth
- Conservation Plan that account for community needs and preferences in an equitable way

- Ensure public input is gathered to construct projects with public support
- Priority to make it thrive – create space for real community and public input in decision making that is respected and used by health professionals and agencies
- Community needs/wants for habitat/wildlife
- Understanding how to leverage natural resource work to benefit homeless people affected by opioid crisis

Recognize cultural needs and benefits for health

- Ability for expression; cultural practices or health practices → meditation.
- Cultural resource awareness, acknowledgement, visibility (past and present), Tribal, other
- Tribal interests/consultation
- Increased access to the estuary for both outdoor recreation and social cultural experiences
- Understand history – interpreted history
- Gathering places - Art
- Generational sharing "wisdom of elders"

Community access to natural resources

- Provide better connections to the river resources
- Connect underserved groups to the natural resources in the St. Louis river
- Access to river in as many places as possible – keep or add public lands along shoreline. If public interact with the river, they will be willing to protect the river
- Access for recreation groups
- Places to support sustainable use of nature areas
- Some area with no recreation for habitat
- Access to natural areas for all communities
- Resilient natural areas and infrastructure to reduce solastalgia(?)/stress and anxiety from climate change
- Diverse and inclusive community
- A destination to interact with nature/the Estuary
- Improve ADA access to the St. Louis river (fishing, boating, canoe, kayak)
- Increase access to green spaces
- Brownfield restoration
- Increase access to socio-economic data that is current i.e. income, education, health care
- Vibrant community groups that care for individual places in the landscape that are particularly important to them
- Litter and ATV free public land
- Community understands, appreciates and protects the St. Louis River; Build a sense of place for all community members
- Safe welcoming public spaces for people to recreate in health habitats
- Preservation of green spaces
- Qualifying the positive mental health impacts of outdoor recreational activities
- Retaining public land and green space, providing access to lands and water
- Neighborhood access to parks, trails and open space
- Safe recreational areas
- More educational use of the St. Louis River
- Protect infrastructures w. climate change in mind

- Fair opportunities i.e. recreational uses or clean drinking water
- Access to the river especially by underserved community
- Encourage balanced habitat/public use areas

Source of natural foods – local subsistence gathering opportunities

- Designed to support ecosystems for the future – preventative health
- Mercury issue; fish consumption advisories
- Wild rice restoration and sustainability
- Minimize effluent discharge into St. Louis river – WLSSD (ecoli)
- Availability to support local subsistence way of life (food resilience e.g. fish consumption)
- Fish consumption
- Wild rice production
- Pollinator plants
- Air pollution reduction
- Reduce contaminant load in SLR to allow higher levels of fish consumption safely
- Healthy food
- Legacy contaminants

Community resiliency

- Protecting communities from trauma of repeating disasters
- Flood resilience to protect infrastructure
- Sustain a connected, intact and resilient open space that provides important ecological functions and services that benefit society (clean water, flood protection, well-being)

Theme: Natural Resources

Habitat protection – identification and prioritization of high quality habitats

- Abundant, productive, protected habitats for the full suite of fish, wildlife, plants native to the SL river
- Long term commitments for natural resource protection, management and ongoing restoration
- Erosion reduction and water quality improvement – encourage slow the flow activities (prevent deforestation and encourage coniferous forest)
- Improve sustainable agricultural practices, prevent cattle access to streams, encourage nutrient management
- Clean sediment substrate
- Healthy native population fish, wildlife and vegetation
- Less or unaltered hydrology and flows
- Diverse and protected habitats
- Dark Skies
- I.D. high quality habitats and develop strategies to protect them
- I.D. good quality habitats and ID strategies to improve them
- Develop/implement strategies and best practices to address climate resiliency through restoration/enhancement/protection
- Set aside lands not suitable for development and will protect the water quality in the estuary.

- Consider implementation of watershed planning
- Set aside adequate corridors among streams to protect water quality
- Health, self-sustaining marsh bird habitat and populations
- Landscapes that support a diversity of pollinator species
- Healthy, self-sustaining shorebird and waterfowl habitat and populations
- Healthy fisheries
- Protection of green space
- Rare species protection monitoring and maintenance
- Monitoring after all restoration projects. Were they successful or do they need tweaking?
- Public involvement in planning protection and restoration efforts
- Agency support both staff and $$
- Increase fish and wildlife habitat and populations in the St. Louis River
- Adaptable populations – resilient to climate change
- Areas with no access for habitat

People – Habitat interaction and valuation/value system

- Sustainable interaction – people and their environment. Non-degrading use, monitoring, systematic thinking
- It would be great to find out a way or process to add monetary value to trees or open space preservation. Income has value, job creation has value, property has value; but our system doesn't place "value" on trees or open space
- Conservation planning that considers multiple values – impacts of effects of conservation choices on wildlife including mammals, birds, fish, invertebrates, plants/vegetation, invasive species water and sediment quality. Agreement on metrics and how they are calculated and used
- Building for, preparation of and minimizing user impact on natural resources
- Landscape level ecosystem function protections
- Building a community of land stewards that value the river (because of the access) and are compelled to perpetuate the work of the people in this room. Supporting elected officials and public policy that sustains the AOC efforts

Healthy/clean resource for utilization for consumptive uses and recreation

- Provide more public access to the St. Louis River
- Available and healthy (sustainable, safe for consumption/utilization) resource for subsistence/treaty rights and recreational use
- Diverse natural environment recreation opportunities accessible to those of limited economic means
- Fair accessibility
- Preservation of for cultural and commercial uses
- Creating healthy environments and ecosystems
- Fish populations that support local recreation and commercial fishing
- Water that is swimmable and free of pollution or hazards to human health
- Wildlife populations to support healthy ecosystems
- Recreational hunting and trapping
- Healthy resource that can be utilized by community (hunt, fish, swim. Rice, etc.)

(Climate) resilient system

- Climate resilience to water level changes and storm events
- Climate change resilience – prevent loss of wetlands and encourage innovative wetland restoration to prevent flooding
- Properly size culvers for fish passage and large storms
- Get estuary habitat to the point where it can sustain itself then ensure we prevent future impacts such as those we are currently cleaning up – create a resilient estuary
- Incorporate traditional ecological knowledge into community education/outreach and agency science
- Realistic approach to managing invasives along with the rest of the system in face of climate change
- Prioritize and fund lands for permanent protections that provide for resiliency, and provide economic well-being (ecosystem services)
- Climate resiliency adaptations or plans to protect biodiversity and environment
- Implementing native species that are climate resilient
- Seven generations planning
- Write a plan to sustain a diverse suite of intact, connected and resilient ecosystems
- Gain a better understanding of climate change impacts on the estuary and how to prepare for these impacts
- Incorporating climate resiliency into natural resource management; resilient healthy eco-systems

Sediment and pollution, upstream impacts

- Remediate contaminated sediments
- Mitigate for impacts to habitat loss
- Protection from point and non-point source pollution. Water quality to support thriving aquatic ecosystem and human use
- Gain a better understanding of the watershed/upstream influence and impacts on the estuary, and how to remove or mitigate the harmful impacts
- Shoreline stabilization along the river to minimize erosion and sediment loading
- Protecting Lake Superior from upstream impacts
- Considering and addressing (ex. Permitting and decision making) upstream impacts and discharges
- Identify a long-term assessment strategy for the estuary
- Linking upstream and tributary health (including impairments, TMDL's and WRAPS-mn) to the estuary health and management decisions. Get away from addressing sediment in the estuary/stream mouths before we assess the stream

Lower St. Louis River Landscape Conservation Design
2-4-20 Stakeholder Meeting
Breakout Session Results

Responses to the Question: "What have been the top 3-4 sticky issues in the estuary that have been hard to resolve and are still unresolved?"

Groups were asked to describe:
*The issue
*Identify the underlying barriers/drivers that have made this hard to address
*Identify opportunities for how the SLR LCD process could provide tools to be better equipped to address the issue

The table below is a summary of all the group results. Similar issues from multiple groups were combined.

Issue	Barriers	LCD Opportunities
Data relating to TMDL's (Sediment, temperature, etc.) Conventional pollution/(Non-Point-rso)	Effective implementation of load reductions: (Stressor Identification, project design, prioritizing, responsibility, funding)	More inclusive forum, educate and engage to be part of the solution
Long term, large scale data collection and management	• Funding • Different standards • IT limitations • Collection protocols • Different missions of agencies • Continuity and responsibility • Frequency and resolution • Agreed upon metrics • Type of data + missing pieces • Diverse data types	• MN Land Trust, as a non State/Federal agency has more flexibility • Federation of data sets that can flow together (talk to each-other) – Example: FGDC+GDA • Endowment for monitoring • Getting the right "external" people involved.
Data sharing & Data use	Funding	Communicate results Interoperability Central location to connect people
Mercury in fish – impacts treaty rights, fishery has come back in terms of population, but can't be used for consumption.	Lack of regulatory controls; political will.	Keep issue elevated in public eye and process. Highlight solutions
Brownfields restoration and re-use	Lack of sufficient staffing, $$, blight	Ecosystem services, more economic development, housing etc.
USX	Hurry up already	Ecosystem services, more economic development, housing etc.

Issue	Barriers	LCD Opportunities
Decision-making for Natural Resource projects	Process/Criteria for Regulatory approval Misapplication of analysis/Data Team selection/inclusion Indigenous engagement	
Appropriate information & Analysis for resiliency: restoration effectiveness	Water levels effect/prediction Design Invasive species	
Mercury effects & social justice	Contaminants – non legacy	
Equitable access to the benefits of the estuary	• Public access of waterfront (existence of + connections to) • Design of sites not always inclusive of accessibility considerations • Mobility differential, but also different time + access resources • Safety • Public access not value highly (as high) as a private entity using/developing the same land	• Doig good outreach with populations who don't have access (need to study/understand what do they want?) • Getting the right people involved • Intentional community programming • Access to watercraft • CZM's used to improved access + interest groups
Upstream impacts (stormwater, sediment pollution, everything)	• Challenges of multiple entities, processes. • Conflicting values • Political pressures on permitting • NIMBY • Watershed, land uses, mining etc. • Measuring the impacts • Climate change	• Consensus building with lots of players • Capture the energy of existing efforts • Ecosystem values (assigning them) • Improve existing programs (i.e. permitting) • Rallying change • Pilots, demo's uplifting examples.
Targeted habitat restoration "band aid" approach to habitat restoration	Holistic watershed assessments Funding – Decision making process	Scaling assessments to identify on the ground opportunities. Targeted habitat restoration
How to identify and prioritize habitat protection and restoration opportunities	Scaling Funding Decisions Making progress	Bigger picture overview of habitat projects to coordinate/sequence restoration projects.
Linking people higher in the watershed to the estuary – West Duluth	Access to the river Education Limited recreation opportunities Limited job opportunities Landownership pattern	Education Highlight community needs/issues to natural resources professionals

Issue	Barriers	LCD Opportunities
Capping contaminated sediments – long term natural resource/community impacts	Cost of removal	Data base of info related to locations and restrictions related to land use (institutional controls)

Other points brought up as part of the sticky issues discussion:

- There is a need to deal with legacy and non-legacy contaminants. Not just mercury
- There is potential for conflict between industrial waterfront uses and the estuary
- Invasive species – the inter-lake movement of aquatic invasives is the bigger concern currently. As well a better understanding of invasive species and their impact (e.g. narrow leaf cattail)
- Improve connections among sectors
- Connections among people are important
- Add virtual/listserv forum as a possibility; may be easier to engage folks this way vs. in-person meetings

Discussion of Meeting #1 Results - Break-out Session 1 Discussion Notes

- Benefit of structured ways to convene, update and share information
- Habitat workgroup offers on-boarding opportunity
- Better management needed of foundational documents and data layers: data curation responsibilities and data management
- Recognize need for a central location to access data
- Need agency support for continued meeting
- Natural resources trustees are another good example of a collaborative group that has been working well (FWS. NOAA, MPCA, FDL, MNDNR, WDNR, 1854)
- Recognize the importance of good science as a basis
- Social justice – what is the right forum to engage to bring this into the fold? May not exist?
- How do we engage social justice needs early on? Need list of intersections to help decide who needs to be involved.
- Define spatial area that is included in the SLR Estuary LCD
- Subject teams could be used not just for RAP; what is the next iteration?

Discussion of Meeting #1 Results - Break-out Session 2 Discussion Notes

- Wellbeing data set is a gap; this is a real need to help determine/measure revitalization of the AOC, is it benefitting the impacted communities? (Look at Ted Angradi's 2019 paper)
    - Would like to have wellbeing data on a neighborhood level.
    - Possible sources of data: MN Department of Health does assessments, there is a challenge in mismatch of scales. County community health improvement plan
    - HIA pathways were effective. Helped identify data sources to show the path
- Intersection is about shared values
- Commonality between measurable indicators – within the intersection
- Public sector can lead by example
- Estuary part of freshwater inland sea – look into blue economy principles (NOAA)