

Growing Regional Connectivity: Improving Access to the Detroit River IWR through Regional Partnerships

April 2019



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AUTHOR

This document was authored by Vince Ziols, Public Lands Transportation Fellow for the Federal Lands Transportation Institute at the Western Transportation Institute stationed at the Detroit River International Wildlife Refuge.

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This opportunity in which I found my first experience as a planner, transportation professional and working for public lands has satisfied my criteria as a job of interest (to say the least). This position has propelled me to continue work with the Federal government in such a fashion and, in this small tightknit profession network, to improve access to our nation's public lands.

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ABBREVIATIONS

ATS	Alternative Transportation Systems
AWP	Annual Work Plan
BLM	Bureau of Land Management
DCC	Downriver Community Conference
DLG	Downriver Linked Greenways
DLGI	Downriver Linked Greenways Initiative
DOI	Department of the Interior
DRFC	Detroit Riverfront Conservancy
DRIWR	Detroit River International Wildlife Refuge
FLAP	Federal Lands Access Program
USFS	United States Forestry Service
FWS	U.S. Fish & Wildlife Service
GHGs	Greenhouse Gases
IBT	Iron Belle Trail
IWRA	International Wildlife Refuge Alliance
LIAA	Land Information Access Association
MDNR	Michigan Department of Natural Resources
MPO	Metropolitan Planning Organization
MOU	Memorandum of Understanding
NPO	503 (c)(3)- nonprofit organization
NPS	National Park Service
NWR	National Wildlife Refuge
NWRS	National Wildlife Refuge System

SEMCOG	Southeastern Michigan Council of Governments
SMART	Suburban Mobility Authority for Regional Transportation
TSR	Transportation Status Report
USDOT	U.S. Department of Transportation
WCCC	Wayne County Community College
WNWR	Wyandotte National Wildlife Refuge

ABSTRACT

From June 2018 to May 2019, Public Lands Transportation Fellow Vince Ziols worked to improve alternative transportation systems (ATS) as they related to the Detroit River International Wildlife Refuge (Refuge), the surrounding local communities and regional partners. The Refuge sits on 48 miles of shoreline that extends from the southern city limits of Detroit to the Ohio/Michigan border. Under U.S. Public Law 107-91 (2001) that initially founded the Refuge, staff are allowed to work and conduct activities outside of the boundary of the Refuge and forge partnerships that foster environmental stewardship, conservation based education and promotion of open public lands in proximity to the Detroit River and the Lake Erie Basin. Through these partnerships, the Fellow on regional transportation issues and ATS projects that ultimately can benefit and increase multi-modal access to the region's recreational areas.

For a region that has historically propagated private automobile usage, multimodal planning across multiple communities can begin to address the challenges facing non-automobile transportation planning. This report shows how the Fellow collaborated with multiple partners across public, private and non-profit organizations on projects that enhanced bike and pedestrian pathways, recreational water trails, public transit and other systems of travel that ultimately improved usage and visitation of recreational areas around the Refuge and its gateway communities. A transportation status report was completed for the contract period of the Fellowship; it is a living document that will assist and guide transportation related projects and programs for the Refuge over the next five years.

INTRODUCTION

The Detroit River International Wildlife Refuge (Refuge or DRIWR) is a part of the National Wildlife Refuge System under the U.S. Fish and Wildlife Service (FWS), a branch of the Department of the Interior (DOI). The Refuge (shown in Map 1) consists of 48 miles of conservation management boundary from the southern limits of Detroit along the shoreline of the Detroit River and Lake Erie Basin ending at the Ohio/Michigan border. Within these boundaries, the Refuge manages over 6000 acres of shoals, coastal wetlands and prairies of the Detroit River and Lake Erie Basin that are either federal owned property or managed through a Cooperative Management Agreement. U.S. Public Law 107-91 (2001) created America's first international wildlife Refuge with Canada and allows for the Refuge to forge partnerships across the Southeast Michigan region to promote conservation, stewardship, environmental education, and support the function of these natural open spaces.



Map 1 : Detroit River International Wildlife Refuge Units and Partner Areas

The Refuge serves over 7 million people living within a 45-minute drive of its boundary area, and it is close to the two metropolitan areas of Detroit and Toledo, which makes it one of the nation's 14 Priority Urban Wildlife Refuges. The populations that are served by the Refuge range from inner city neighborhoods and dense suburbia to spread out townships, coastal towns and rural farmland. This population is diverse in terms of race, religion, income, lifestyle and numerous other factors, which creates a wide variety of recreation users for open public areas in the region. In terms of transportation, this presents opportunities to develop and expand a wide range of transportation options to improve, not only access to these public areas, but also regional connectivity for all aspects of life.

The Fellow worked to improve all transportation means to these public

areas, but there was a focus on alternative transportation systems (ATS) or modes of travel that are non-private automobile. Focusing on ATS can support and advance multiple refuge goals:

- Develop low-cost and equitable transportation systems to expand access for all populations,
- Reduce carbon emissions, greenhouse gases (GHGs) and automobile congestion that contribute to climate change,
- Promote active healthy lifestyles through outdoor recreation and non-motorized transportation, and
- Provide the best perspective for residents to see the beauty and importance that these natural areas offer to our society.

The Refuge brought in the Fellow to study the Southeast Michigan regional transportation systems and how different transportation systems, communities and organizations interact with the Refuge, the Detroit River and the open natural spaces of the region. Coincidentally, the start of the Fellowship turned out to be strategically well-timed. The Refuge is currently in its fifth year of constructing the John D. Dingell Jr. Visitor Center and expects to wrap up soon. Staff expect Refuge visitation to soar past 100,000 visitors when it opens. In addition, a recently completed paved trail now connects the Refuge to over 300 miles of regional trails. Even the philanthropic community is currently showing strong support for transportation enhancements, with local partners receiving tremendous funding assistance to focus on trails and non-motorized recreation connections.

The Fellow created a Transportation Status Report, a living document that states goals and objectives for the Refuge related transportation projects, summarizes current and future transportation systems, and provides a detailed description of all transportation projects of importance to the Refuge. The report also offers next steps and recommendations for the Refuge to continue the Fellow's work.

In addition to the report, the Fellow began implementation of some of these transportation projects; offered technical assistance to partners; improved visibility of regional natural areas with marketing and promotion; and served as a representative in regional transportation committees, community coalition groups, and public events. The independent nature of the position allowed the Fellow freedom to discover projects, grants, and partnership opportunities. This flexibility allowed the Fellow to deepen relationships between the Refuge and regional stakeholders while directing transportation conversations and resources towards Refuge and regional accessibility goals.

The Fellow's project responsibilities spanned the spectrum of the planning process. Specifically, he:

- Contributed to work groups to improve visibility to open Refuge units and trails;
- Enhanced wayfinding and promotional materials;
- Developed and installed safety signage for the trail system outside the Refuge Gateway;
- Offered technical assistance, such as grant writing and economic analysis to partners during the planning process;
- Began conversations and initiated coalitions on longer term projects such as Detroit River water taxis;
- Began a collaborative approach with partners to develop a bike and pedestrian pathway connecting two communities in order to pursue future federal funding, such as the Federal Lands Access Program (FLAP) grant; and
- Improved safety signage and markings in and around the Refuge Gateway.

These were a few of the many projects the Fellow was able to contribute his time and skills. More projects have presented and will present themselves during and after the creation of this document.

METHODOLOGY

The Fellow began his initial project work by doing a series of background research:

- Studied Refuge documents (Compressive Conservation Plan, Urban Connections Report, past reports, etc.);
- Read past Public Land Transportation Fellow (previously Scholar) reports;
- Interviewed various partners, community leaders and transportation stakeholders;
- Studied regional historical documents, transportation history and trends;
- Attended regional planning meetings and local group committees; and
- Conducted fieldwork and site visits to Refuge units, local communities, partner recreational areas and different modes of the region's current transportation systems.

This expanded the Fellow's knowledge of regional transportation development, planning and projects. With this perspective into the current transportation landscape of the region, the Fellow had the opportunity to see where his skills and knowledge could best support the Refuge and its partners.

Field Work

Twenty-four units of land are managed by the DRIWR. Nineteen units are owned by the federal government and the other five are managed through a cooperative management agreement, a non-binding document that lets the Refuge expand its coverage of ecological sensitive areas to better promote conservation and preserve the Detroit River/Lake Erie Basin ecosystem. Ten of the fee title units are open in some capacity to public use. The Fellow visited many of these units to get a better grasp of the work the Refuge is doing for the region. Specifically, he visited the units that are currently, or might be, open over the next five years and conducted observations and research of the transportation systems and communities that surround these areas. These units are the target for development of multimodal transportation systems to improve access and recreational opportunities for Refuge visitors.

Other fieldwork comprised of traveling, riding, biking or walking the surrounding transportation systems to get firsthand observations on how well these systems provide access to various natural area recreational opportunities. The current mode share in the region is over 80% dominated by the private automobile. However, there is a growing interest, want and need for diversifying travel in the region by bike, public transit and water travel, among other modes. By observing and using these current transportation systems, the Fellow was able to experience the barriers that exist within these systems

and understand what improvements would be needed to make these systems more accessible to a wide array of users.

Research

Concurrently to this preliminary work, the Fellow conducted research on a wide array of transportation topics, issues and case studies. These consisted of reports created for other DOI and federal lands agencies, but also regional transportation reports and documents, large metropolitan area studies, and academic research. This research also investigated local community development plans, regional transportation and other topic plans for southeast Michigan, transportation plans for various communities, and future projects that would be significant for the region. The Fellow was conscious of the limited timeframe of the position. In order to support continuing work after the fellowship ends, the Fellow saved all research materials to the Refuge's shared drive. These materials will serve as vital training tools for new staff, interns and volunteers. They were added to the 'Transportation Projects' section of the *Transportation Status Report* and formatted as a one-page overview of a project, including details to inform the reader and next steps toward further project development .

Transportation Status Report

The initial plan for developing the 5-year Transportation Status Report (TSR) proposed a standard update of the transportation systems that involved the Refuge, the surrounding communities and the region. The report developed into a strategic guide for Refuge transportation planning over the next five years, including the following elements:

- Historical background of the region and the Refuge;
- Information on the Refuge, its units, partnerships;
- Socioeconomic and demographic overview of the region;
- Existing transportation conditions;
- Transportation goals & objectives for the Refuge;
- Performance measures to monitor successful implementation of the goals & objectives;
- Current transportation Projects; and
- Transportation Annual Work Plan for 2019.

The most important part of the report is the section on current transportation projects. It categorizes projects that involve the Refuge: projects in which the Refuge is directly or indirectly involved, or regional projects that are relevant to Refuge transportation planning. This section contains the scope of each transportation project; specific contacts and stakeholders; work completed by Refuge staff; the status of the project and

next steps for Refuge staff; and any comments or recommendations as the project moves forward. With this outline, a Refuge staff member, volunteer or intern will have enough information to take the lead on a project in the future when there is no longer a Fellow stationed at the Refuge.

To better institutionalize transportation projects into Refuge-wide work plans, the Fellow, along with input from supervisors and staff, created goals and objectives to improve transportation systems within the Refuge area of influence. Within each objective, several action items, such as projects, programs, and tasks, were proposed that would move the Refuge towards success of these goals. These action items formed the preliminary content for a *Transportation Annual Work Plan (AWP)* that mirrors other Refuge work plans and helps to break down tasks into specific areas of work, with listed priority and importance of each action item. The AWP allows staff to prioritize and plan transportation tasks while being mindful of staffing work and capacity limits. It also ensures transportation projects are integrated into the culture of Refuge planning strategies.

Other Work Completed

The Fellow also worked on projects for the Refuge and partner agencies that involved geospatial data mapping, data and economic analysis, literature review and strategy development. Such projects included:

- Developed cost estimates for bicycle infrastructure (such as path construction, amenities, etc.);
- Created a new Refuge regional map for reports, John D. Dingell Jr. Visitor Center tear sheet and brochures;
- Began collection of land, water, and wayfinding transportation amenities with a data mapping collection app;
- Conducted a case study review on successful federal lands transportation systems;
- Created Refuge transportation training materials and handbook;
- Developed a directional road signage strategy;
- Collaborated with partners on grant narratives;
- Developed and implemented a non-motorized count program for the Refuge;
- Drafted a multi-governmental path maintenance agreement for greenway trails near Refuge Gateway;
- Conducted a SWOT analysis for opening more units for public use;
- Designed kiosk panels;
- Conducted research into trail development and maintenance; and

- Developed with partners different recreational bicycle and water-based transportation events.

These projects allowed the Fellow to develop planning skills in real world application, while also aiding the Refuge, partners and other stakeholders.

CONSTITUENCIES

The Fellow worked with a wide array of partners on various projects throughout his tenure. As shown in Figure 1, these partners represented different levels of local, regional, state and federal government, Non-Profit organizations (NPOs), Metropolitan Planning Organizations (MPOs), small and large businesses, corporations and other organizations. Given the history of the Refuge, working with multiple partners has resulted in very fruitful projects and programs that expand the conservation mission that drives the FWS.



Figure 1: Collaborations and Partnerships of the Refuge

The following list describes partners with whom the Refuge has directly worked and will continue to do so. Some of these partners were addressing transportation related goals to connect more people to natural open space before the Refuge existed. The work with these partners greatly enhances the mission of the Refuge for the region and creates more livable, walkable communities for the residents of southeast Michigan.

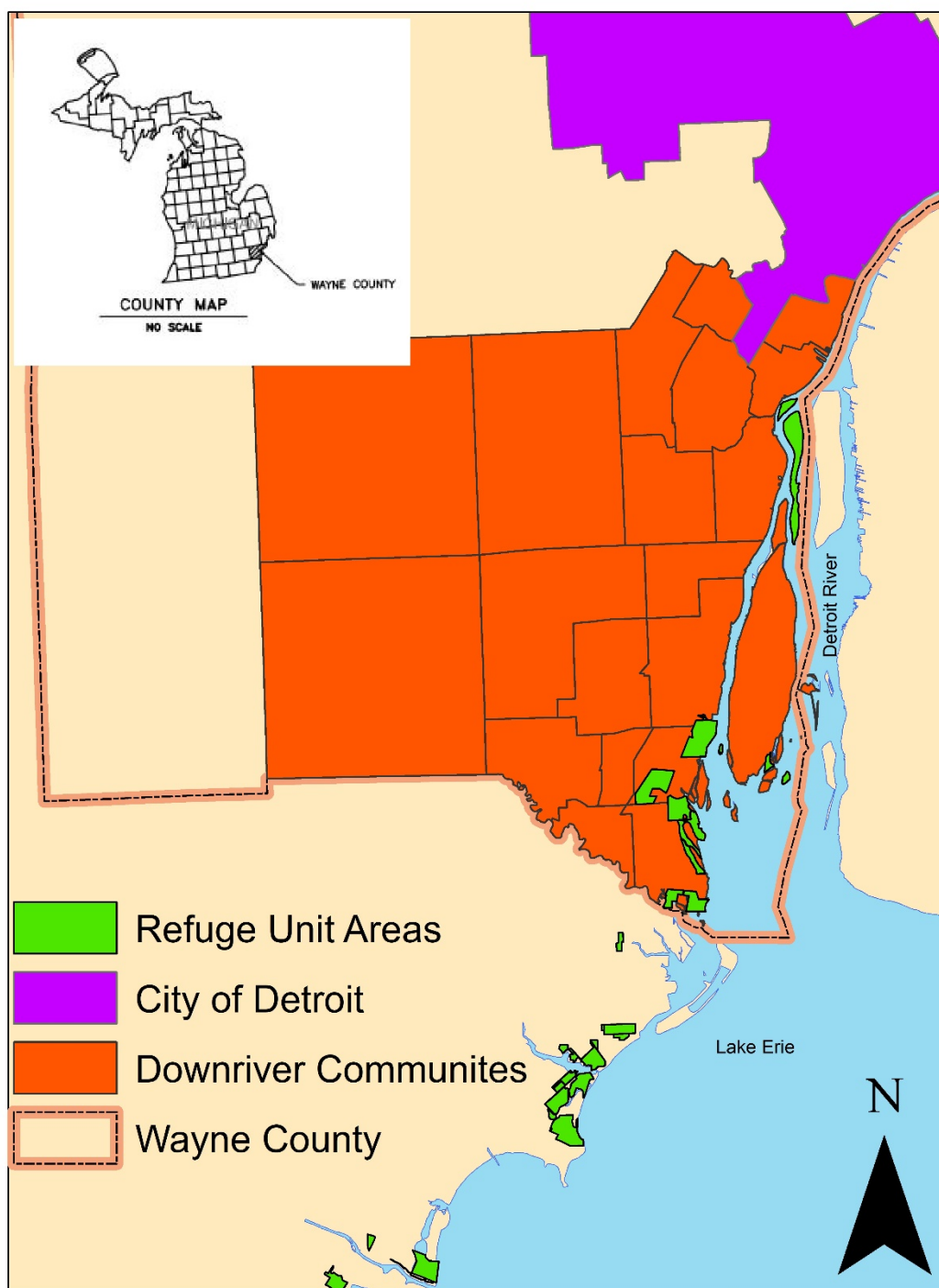
International Wildlife Refuge Alliance (IWRA)

The International Wildlife Refuge Alliance is a non-profit organization that supports the mission of the Refuge by fundraising and securing grants for a wide range of Refuge projects and programs, such as capital improvement projects, land acquisition efforts, support staff for the Refuge, leveraging funds and building an endowment for maintaining Refuge infrastructure and continuing conservation programs. Unlike a majority of National Wildlife Refuge ‘Friends groups’ which are sustained through membership fees and donations, IWRA is run like a traditional NPO, with an executive director, a board of directors and an investment portfolio to maintain operations and activities of IWRA and the Refuge.

IWRA has been a great asset for the Fellow in many ways. First, the board of directors and Executive Director have shared their collective knowledge and history of on all matters relevant to the Refuge and surrounding areas. Throughout the fellowship, they also connected the Fellow to their extensive network of contacts from local government, NPOs, not-for-profits, corporations, land owners, and other stakeholders. Finally, in the terms of grants and funds management, IWRA is a perfect example of how a Friends organization can benefit a Refuge, not only by providing funding for four staff members in much needed roles, but also by receiving grants that funded capital projects such as the Refuge Gateway Boating and Fishing Dock and Refuge Gateway nature playscape.

Downriver Communities

The Downriver Communities (shown in Map 2) are the 18 communities that comprise most of the southern half of Wayne County. The term refers to the southward flow of the Detroit River, so that any community south of Detroit that is on the Detroit River, is a Downriver community. The term was first used during Prohibition times when bootleggers would smuggle alcohol into the US from Canada, often landing in one of the communities south of Detroit to evade the authorities. The term has evolved over the years as more industry and factories discharged in the Detroit River and its tributary rivers; these actions caused the pollution to collect and flow south, which brought about a negative connotation of “downriver” for the residents of those communities. Recently the term has been used to create a brand identity for Destination Downriver, a coalition of Downriver communities and organizations, which is working to showcase and further develop the historical, recreational, natural and cultural institutions and spaces that exist within the Detroit metro region. Destination Downriver hopes to begin changing the narrative of Downriver from industry and lingering pollution to a current network of natural areas on both land and water.



Map 2: Location of Downriver Communities

City of Trenton

The City of Trenton is the closest city to the Refuge Gateway, John D. Dingell Jr. Visitor Center, and part of the Humbug Marsh unit. As the closest “gateway community,” Trenton is leading efforts to make itself more bike friendly and accessible to outdoor recreational opportunities, such as building the W. Jefferson Greenways trail that runs from Elizabeth Park to the Gibraltar Greenways trail, next to the Humbug Marsh nature area. Trenton officials have also worked with the Land Information Access Association (LIAA), a Michigan-based non-profit planning firm, to receive the ‘Trail Town’ designation and create a plan to enhance non-motorized movement and local economy near and within the downtown area.

City of Gibraltar

The City of Gibraltar, just south of Trenton, is also one of the Refuge’s gateway communities. It holds two units of the Refuge, including the Gibraltar Wetland Unit and part of the Humbug Marsh, which is the last old growth forest on the Detroit River shoreline. Gibraltar has been a partner of the Refuge since its beginning and was one of the main forces that saved the Humbug Marsh from being turned into a large development, which would have included condos, a marina and a golf course. Within the city is the Lake Erie MetroPark, another recreational and natural area partner of the Refuge.

Gibraltar also holds part of the Downriver Linked Greenways Trail, which starts from the end of the W. Jefferson trail, alongside Humbug Marsh, passes through the city center, and then travels west past the Gibraltar Wetland Unit and continues to Brownstown.

Grosse Ile Township

Grosse Ile Township is an island community directly east of Trenton, Gibraltar and the Refuge Gateway. Also, a “gateway community,” Grosse Ile Township has two Refuge units within its boundary, the Gibraltar Bay Nature Area and Sugar Island. Both are open to the public, but only the Gibraltar Bay unit has observation spots, hiking trails, a kayak launch spot and is accessible by land. The Refuge has supported Grosse Ile in past FLAP grants to connect the Gibraltar Bay to the rest of the community’s trail system. Currently, the Refuge is working directly with the township to add a multi-use path on Grosse Ile Parkway to accommodate non-motorized access to the W. Jefferson trail and the Downriver Linked Greenways Trail.

City of Monroe

The City of Monroe is the biggest city in Monroe county and a “gateway community” of the Refuge. Monroe holds three Refuge units: the Ford Marsh, the Plum Creek Bay Unit,

and the Port of Monroe Unit. Currently, only the last two are open to the public, but only via water access, for hunting or by special use permit. Monroe is unique as it not only has FWS units but also a National Park Service (NPS) unit with River Raisin National Battlefield and a Michigan Department of Natural Resources (MDNR) unit with Sterling State Park.

The Refuge manages more land in Monroe County than in Wayne County, but besides ecological restoration, the Refuge has done little to bring education, stewardship or a natural experience to its residents compared to Wayne County. With limited capacity and a focus towards the opening of the Refuge Gateway and John D. Dingell Jr. Visitor Center, Monroe has taken a back seat in Refuge work plans. This will need to change as Monroe has embarked on a multi-million-dollar development to reconfigure its riverfront and areas of interest. The River Raisin Heritage Corridor East Master plan will bring greater connectivity and access to the recreational and environmental opportunities situated in Monroe and has the potential to open the Plum Creek Bay and Port of Monroe Unit to land access for the first time. It is important for the Refuge to be involved at the beginning of this development to ensure the protection of sensitive habitat and for FWS to have a seat at the table throughout these planning efforts.

Wayne County

Wayne County (shown in Map 3), which includes the City of Detroit, is the most populous county in the state. Wayne County technically owns 40 acres of the 44-acre Refuge Gateway property, although an intergovernmental agreement is in place to jointly manage the property. Wayne County has been a major partner of the Refuge, offering support in terms of technical assistance. The Refuge also works with Wayne County Parks to program and develop numerous natural areas. The Fellow worked with the Wayne County Community & Economic Development Department and Wayne County Roads on various projects to create more connectivity to the Refuge and Downriver communities.



Map 3: Wayne County's Location in Michigan

Lake Erie MetroParks

Located in the southern portion of Gibraltar and east portion of Brownstown Township, the Lake Erie MetroPark offers recreational opportunities including trails, fishing, boating access, a nature museum, pool facilities and large open spaces. It also has access via the Downriver Linked Greenways trail and kayak launch, further connecting it to the Refuge Gateway. The Refuge holds a Cooperative Land Management Agreement with the MetroPark to control invasive species, hold educational events, and allow for wildlife observation recording. As a partner and neighboring recreational area, the Refuge works with the MetroPark to provide conservation educational opportunities to the residents of southeast Michigan, especially school children.

There might be more opportunities for the Refuge to collaborate on wayfinding, area maps, access points and promotional campaigns in the future.

South East Michigan Council of Governments (SEMCOG)

SEMCOG is the Municipal Planning Organization (MPO) of the seven counties of Southeast Michigan and offers a wide array of planning support and technical assistance. The Fellow worked closely with SEMCOG in terms of data exchange, work groups, committees and capital development grants. As the regional MPO, SEMCOG is a great resource for technical assistance, data, grant opportunities, long term planning and having a finger on the pulse of the metro Detroit Region.

Detroit Riverfront Conservancy (DRFC)

The DRFC is a non-profit organization whose sole purpose is to redevelop and revitalize the Detroit's riverfront to offer residents more access to the water and increase Detroit's tourism. The Refuge has worked with DRFC on educational based programs and promoting children based outdoor recreational activities. The DRFC has also done

research into water taxis on the Detroit River to offer main service between mainland Detroit and Belle Isle. The Fellow has discussed future opportunities in developing a water taxi pilot with them.

Downriver Linked Greenways Initiative (DLGI)

DLGI have been working in the Downriver communities for several years to promote, develop and create networks of non-motorized land and water trails. The organization has had a major role in creating the Downriver Linked Greenways trail that connects communities to the Refuge and other recreational areas. Currently, DLGI is embarking on a large promotional campaign called *Destination Downriver* to help draw in more visitors and new residents to the 18 Downriver communities of Wayne County.

The Fellow has worked closely with DLGI by supporting its efforts with technical assistance and stakeholder outreach. In 2019 DLGI, along with partner agency Friends of the Detroit River, received a \$1.9 million grant from Ralph C. Wilson Foundation to expand connectivity in the Downriver communities and enhance the experience of the numerous recreational opportunities by improving trail infrastructure, promoting local economies and leveraging funding to improve the quality of life for the residents of these communities. The Refuge can benefit from these funds by creating additional access to Refuge Units by non-motorized uses; connecting natural areas through recreational opportunities, such as bicycling; increasing the ability to offer circular excursions by land and water; and marketing the regional land and water trails to a wider audience (as shown in Figure 2).



Figure 2: Signage Meeting for Downriver Linked Greenways Trail

Downriver Community Conference (DCC)

The DCC has worked in the Downriver communities for many years to improve the life of its residents and the livability of the Downriver communities. The DCC offers programs in workforce development, economic development, community development, small business assistance, transportation for low income or vulnerable residents, and has worked to promote sustainability, green spaces and environmental regimentation. DCC has worked with the Refuge on securing funding for pollution remediation at the Refuge Gateway. DCC has express interest in continuing to offer financial and in-kind services to the Refuge and IWRA.

The Fellow worked with DCC and Wayne County Community College to begin a shuttle service between the community college campuses and select Downriver communities to the Refuge Gateway. This direct shuttle service will allow for shorter transit times and provide a case study on investing in public transit improvements for the Downriver communities, especially in terms of access to recreational areas on the Detroit River. The Fellow also worked to secure grants on other projects to help improve connectivity to open natural areas in the Downriver communities.

Wyandotte of Anderdon Tribe

A branch of the Wyandotte nation, the Wyandotte of Anderdon Nation are the Native American people who decided to stay in the Michigan region during the Indian Removal Act of 1830. These Native Americans assimilated themselves into European—American culture so that they could remain close to their native and scared areas. The history of the Wyandotte during the early years of America and the state of Michigan is deeply ingrained and many places and community names are derived from their culture.

The Nation has purchased 15 acres in the City of Gibraltar to develop a heritage trail and cultural center to showcase the history of the area and the importance of the Detroit River ecosystem. The U.S. National Park Service (NPS) and the FWS work closely with the Tribe to help with its mission, and, given the location between the Gibraltar Wetlands and Humbug Marsh units, this project would contribute to both the conservation mission of the Refuge and create more public access to the natural beauty of the area.

John A. Volpe National Transportation System Center (Volpe Center)

The Volpe Center is a branch of the U.S. Department of Transportation (USDOT) that offers technical assistance to federal land agencies in transportation planning and development. The Fellow was able to work with the Michigan region Community Planner who offered his experience and knowledge towards solving transportation issues across many of the Fellow's projects.

Fish and Wildlife Service Region 3 Office

The regional office that oversees the Refuge, FWS Regional 3 Office, has been working towards opening the visitor center and Refuge Gateway, while also helping on projects such as installation of directional signage, contractor bids, and technical assistance. The Fellow received support from the Regional Transportation Chief on a few projects and was able to offer the Regional Office on the ground assistance and fieldwork.

RECOMMENDATIONS

The Fellow developed two methods to assist Refuge staff with their work toward achieving transportation goals. These methods inform users about certain ongoing and future transportation projects related to the Refuge, organizing the information into an easy to interpret format. The Fellow developed these recommendations through research, community stakeholder interviews, Refuge staff participation, and an understanding of local, regional, and national transportation trends. These methods were created so that when the Fellow finished his contract, other Refuge staff or volunteers can continue some of the transportation-based projects and have a reference guide for future projects that the Refuge might decide to pursue.

These two methods can be used independently, or they can supplement the other when used in conjunction by Refuge staff. The first method is comprised of a set of one-page fact sheets summarizing transportation projects that involve the Refuge in some way. The second method is a Transportation Annual Work (AWP) Plan that lists and ranks priority projects to be completed or developed over the course of a fiscal year. The following sections provide a summary of each method, an example of how the method offers recommendations to the user, and an illustration of how the information is presented to the user.

- 1) **Transportation Project Fact Sheets.** Within the TSR, there is an individual fact sheet on each Refuge-involved project. It provides recommendations on how to move forward on a project that correlates to a Refuge specific transportation goal. Mostly, these fact sheets give direction in the form of short to medium term action items for the project. Additionally, the Fellow provides information that is important to the success of the project, and the next steps, recommendations and comments for each project.

The example shown in Figure 3 illustrates a maintenance project for an aging multi-used trail owned by the Refuge. The blue section of the fact sheet gives a name to the project, a background summary, and location. In this case the project is ‘Downriver Linked Greenways—Gibraltar Trail segment maintenance’; the summary tells the user that there are cracks forming along the entire path that need to be addressed to prevent larger, more expensive repairs in the future; and it states the project area, which is the Humbug Marsh Unit.

The green section shows which organization is the project lead, which organizations and/or communities are involved, and any reference documents/websites that can help the user better understand the project. For this example, the lead organization is the Refuge, because it owns the path; the

two cities that the trail runs through, Gibraltar and Trenton, are listed as related to the project, because there is a path maintenance agreement with both cities to aid the Refuge. Under reference documents, the path maintenance agreement between the Refuge and the two cities is listed.

The red section gives the past, current and next steps for the project, along with considerations and/or comments to keep in mind during the development of the project. For example, in the past the path was treated in small sections. The Fellow recommends the path be surveyed in larger sections in order to estimate the costs, such as the amount of sealant needed. Next steps after the survey would include contacting contractors to blow debris out of the cracks and then seal the cracks. Comments for this example tell the user to remember that for the sealant to work correctly the outside temperature has to be above a certain threshold and that one of the path maintenance agreements needs to be renewed.

Illustrations, maps, figures and/or pictures provide the user with additional reference material. This photo for this project (Figure 4) shows three different areas in which cracks are present on the trail.

Transportation Projects: Directly Involve Refuge

Project: Destination Downriver Project Scope: A promotional campaign to improve tourism and visitation to the <u>Downriver</u> communities with an objective of boosting the local economy and enticing new people to move to the area. This campaign will develop, improve and market recreational, cultural and quality-of-life opportunities throughout the <u>Downriver</u> area. Project Area: Downriver communities
Leading/Owner Organization(s): Downriver Linked Greenways Initiative Related Organizations: Southern Wayne County Regional Chamber; Friends of the Detroit River; Innovative Ideas for Sustainable Communities (IIA) Referenced Documents: - Downriver Tourism Analysis
Past Work Completed: - Tourism Analysis report that outlines the amenities of each community by local stakeholders Status: - Branding strategy and campaign are being developed Next Steps: - Social media campaign and marketing strategy - Local economic development and community enhancement strategies Considerations or Comments: - The Visitor Center & Gateway will be a large economic driver for the Downriver communities and the more Refuge can be involved in more communities, it's better for the ongoing improvement of both the Refuge and the communities - With Halls Trace Campaign route and Six Points project development, NPS will have a greater presence in Downriver communities, but also can be tied to many grants and assistance programs - A staff person should continually be involved in group, even if it's just attending once a month meeting




Figure 3: Fact Sheet Example

Transportation Projects: Refuge Only

Project: Downriver Linked Greenways—Gibraltar Trail segment maintenance Project Scope: The trail of the Gibraltar segment of the Downriver Linked Greenways, that runs parallel to the Humbug Marsh Unit, has cracks forming on outer edge of trail and in clusters groups on the trail. To extend the life of the trail and prevent much more expensive repairs in the future, the cracks need to be treated with sealant. Project Area: Humbug Marsh Unit
Leading/Owner Organization(s): FWS –DRIWR Related Organizations: City of Gibraltar; City of Trenton - Shared path maintenance agreement Referenced Documents: - Path Maintenance Agreement_renewal_2018
Past Work Completed: - A small segment received past sealant treatment from possible tree root damage Current Status of Project: - Surveying of entire trail to estimate amount of sealant needed Next Steps: - Reach out to contractors for price estimates for project - Before treatment, cracks need to have debris blown out of them Considerations or Comments: - Temperature needs to be above 40 °F for treatment - Path maintenance agreement with the City of Trenton segment of trail needs to be renewed before March 2019








Figure 4: Transportation Project One-Sheet Example

Annual Work Plans. Refuge staff utilize AWP as a way to measure employee performance, set program work goals, rank the importance of projects, and ensure that all programs leads are aware of assistance required by other programs. The Refuge has developed its own AWP template that promotes task efficiency for employees, but also creates synergy across the entire Refuge. The AWP developed by the Refuges may be a good candidate to be institutionalized at a national level and it already has been shared with a dozen other Refuges nationwide, with apparent positive results for those agencies that have adopted the template.

Within the Refuge's AWP template, each category has several action items with an A, B, or C and 1, 2, or 3 priority indicators. These indicators provide guidance to staff on which projects are most influential in achieving a certain objective or on those items that are considered 'lowest hanging fruit' and can be easily accomplished. The Fellow and his supervisors drafted, decided and agreed on which action items would be priorities for the Transportation AWP. These priorities were then presented to the entire Refuge staff during a meeting in which they created the transportation goals and objectives for the Refuge. During the meeting, Refuge staff members were able to give their preference on which of the objectives they thought were most important. These preferences were then considered during the final draft of the Transportation AWP.

Projects were grouped into different areas of focus, which facilitates the development of the priority rankings. First, the Fellow placed these projects into these categories, for example, those projects in which the Refuge or Fellow would work with a partner or create partnerships. Then, based on the Refuge's goals and objectives, the projects and tasks were ranked according y to importance, time expense and overall impact of the project. Selected portions of an AWP are displayed in Figure 5.

TRANSPORTATION ANNUAL WORK PLAN 2019						
PRIORITY RANK (ABC)	RANK (123)	MISSION CRITICAL (Y-N)	PROJECT/ACTIVITY	ASSIGNMENT	DUE DATE	COMPLETE (Y)
General Tasks						
A	1		Develop Transportation Binder and Database for Refuge Transportation Topics	Vince	2019	
A	2		Orange trail construction oversite	Jody/Vince	Spring 2019	
A	3		Cracks treated and sealed on Humbug Marsh/Gibraltar trail	Vince/Steve/Nicely	Summer 2019	
B	1		Create list of stewardship and work group projects	Vince/Jody	ongoing	
B	2		Upload trails to hiking and other outdoor apps	Vince	Summer 2019	
B	2		Non-hardscape trail improvements for waterlogged trails	Vince/Jody/S C	Summer 2019	
C	1		Complete sign inventory	Vince/Jessie/Techs		
PRIORITY RANK (ABC)	RANK (123)	MISSION CRITICAL (Y-N)	PROJECT/ACTIVITY	ASSIGNMENT	DUE DATE	COMPLETE (Y)
Partners						
A	1		Develop safety strategy for W. Jefferson Greenway	Vince	Spring 2019	
A	1		Develop shuttle service with DCC and WCCC	Vince/VS	Summer 2019	
A	2		Develop/Support Grosse Ile Pwk pathway FLAP Grant	Vince	Winter/ Spring 2019	
A	3		Help DLGI for Destination Downriver with community input and MOUs	Vince	Spring/Summer 2019	
B	1		Install wayfinding maps created by DLGI	VS	Spring 2019	
B	2		Stakeholder meeting for Detroit Water Taxis	Vince		
B	2		Develop cross-promotional partners campaign for recreational areas	Vince/VS		
B	2		Begin development of paddle share	Vince		
B	3		Attend stakeholder meetings and workgroups	Vince	Ongoing	
B	3		Participate in SE MI Trail/Traffic Counters program	Vince	Ongoing	
B	3		Develop Michigan Sea Grant Educational Vessel program	VS/Vince	Spring 2019	

Figure 5: Refuge Transportation Annual Work plan for 2019

In addition to developing the recommendations that are outlined in the TSR and AWP, the Fellow conducted additional research on a wide array of transportation topics that have relevance to the Refuge. Using this research and collection of reports, articles, guides and studies, he created a database to allow for more direct access to literature that can inform present and future Refuge staff on these transportation topics. After the Fellow leaves, this database should provide a foundational resource that Refuge staff can add to as more information is found and different transportation projects require new research.

An important goal of the Fellowship was to help promote and market the Refuge, its open public lands and different Refuge programs. The Fellow supported several efforts to raise public awareness of both the Refuge itself and the different transportation modes that allow access to local natural areas, with the goal of increasing usage of ATS and visitation of public lands. These activities included:

- Creating a new Refuge map to be used specifically for the Refuge's Visitor Center tear sheet, but also for presentations, reports and visual aids. This map also highlights different ATS networks, partner areas, and outdoor recreational opportunities at the Refuge's units. Furthermore, this map was created so that it can be added to when updates are needed;

- Updating Refuge brochures with travel directions for various transportation modes;
- Increasing and updating the Refuge's online presence (e.g. Refuge website, Google maps, social media, and outdoor recreational search apps);
- Providing assistance and support for the *Destination Downriver* initiative; and
- Working with IWRA to improve cohesion between local communities/businesses and the Refuge.

Lastly, the Fellow attended various meetings, committees, work groups and other events. These occasions played an important role of educating the Fellow about different projects at the start of the Fellowship. Over time, these forums also offered opportunities for greater Refuge involvement in certain groups and for sharing information among agencies and stakeholders, which led to some of the current transportation projects for the Refuge. Additionally, the continued involvement of the Fellow in these groups has strengthened the Refuge's partner networks.

NEXT STEPS / IMPLEMENTATION

With the completion of the TSR and the Transportation AWP, the Refuge can move into the beginning stages of implementation and monitoring of these projects. For a simple division, future transportation related projects for the Refuge could be split into two groups, small projects and large projects. Small projects are those in which the time investment is low to medium; there is a definite end product or ongoing tasks; and there is little to no urgency for completion. Though they might not have a large impact on the transportation goals, these small projects can build a foundation to support the Refuge's larger transportation goals, and furthermore, can contribute to other projects of both scales. Small projects can also be tasks for future temporary staff, such as interns or new Fellows, to complete during their position period.

By contrast, large projects require a medium to high time investment and have a much longer timeline beyond the contracted period allocated for the Fellow. If completed, these projects will accomplish a major transportation objective or goal for the Refuge. However, given the nature of large projects, there is more risk involved, and success is not guaranteed, if for example funding is not secured or staff lack adequate time to continue work on the project after the Fellow has left his position. On the other hand, as most large projects involve Refuge partners, even without direct Refuge involvement, it is possible that large projects may progress without involvement of Refuge staff.

Examples of Small Projects:

- Promotion and marketing;
- Information database, funding research, grant writing;
- Transportation training materials;
- Greater Refuge participation in transportation working groups;
- Safety signage and markings, future directional signage needs; and
- Survey of possible units to open.

Examples of Large Projects:

- Grosse Ile Parkway FLAP grant application;
- Opening weekend preparation;
- ATS monitoring and analysis; and
- DLGI technical assistance.

The Fellow hopes that these recommendations will prove useful to the Visitor Services Manager and the other Refuge staff after he has completed his contract and leaves the Refuge. They provide guidance on how to continue the priority projects laid out by the Fellow, and they identify numerous projects of various sizes and priority levels that can

be implemented in the near future as funds or additional staff capacity becomes available.

CONNECTION TO WIDER TRANSPORTATION COMMUNITY

Transportation planning for federal public land areas is evolving; instead of focusing only on the immediate vicinity of these areas, planners and stakeholders are considering regional connectivity to all publicly open natural areas. As resources become ever scarcer and the costs of large transportation projects balloon, it is important to plan in a holistic and sustainable mindset. When considering transportation systems, they should do more than just connect people to one part of their lives, such as from home to work and back again. In addition, they should encompass all the needs of everyday life and be equitable and accessible for all.

The Fellow approached his position with this idea in mind. As an Urban Wildlife Refuge serving more than seven million people residing within 45 minutes' drive, the Refuge was an ideal location to practice this type of planning. The Fellow had the opportunity to integrate the Refuge into regional transportation projects that will not only improve access to the Refuge but also improve the regional transportation network. Approaching the Fellowship with equitable access in mind allowed the Fellow to think outside the typical "Motor City" linear approach and focus on implementing additional ATS, thereby promoting a new concept of the "Mobility City."

With this approach in mind, it would be timely to place less priority on allocating resources and investments to expansion of the private automobile transportation network, and consider "sharing the wealth" by allocating more funding towards improving ATS systems and making them more attractive to the public. Metro Detroit has struggled with prioritizing public transit in the last two election cycles when proposals to fund regional transit were narrowly defeated.

Additionally, over the last few years there has been a push towards improving health through outdoor recreation and green spaces, as obesity and related health disease have become leading causes of death. Providing more equitable transportation systems to connect residents to health and community services advances this mission as well. Expanding ATS will allow for greater accessibility to health services, jobs, recreational opportunities and natural open spaces.

Finally, improving ATS around the 'gateway communities' of federal land units can bolster economic and community development in these areas. The communities around the Refuge and the Southeast Michigan region have seen a gradual loss of industry-based jobs over the last half century, with no other sector taking its place to generate new jobs for these residents. With the rise in popularity of outdoor recreation and nature experience in the US, the Southeast Michigan region can develop a localized economic driver by promoting these public open spaces and offering visitors a unique experience with food, accommodations and outdoor sport-based amenities. Given the

immense population that exists within the region and the importance that Michiganders place on the great outdoors, these areas can help to improve the quality of life and increase prosperity within these gateway communities.

THE PUBLIC LANDS TRANSPORTATION LANDSCAPE

Transportation planning within a federal land agency offers many interesting opportunities and challenges. It provides an opportunity to view transportation systems from a unique perspective related to recreation versus commuting to work or routing public services. However, budget challenges hinder federal agencies when attempting to develop transportation access projects outside the boundary of the unit. Nevertheless, a federal land agency can offer in kind support as a partner for communities and organizations, which can be used as match for transportation projects grants. It is also important to note that partnerships across a wide array of organizations and communities can bolster grant applications, help mitigate challenges and jurisdictional issues, and improve work efficiency in larger scale projects. Additionally, programs that offer transportation technical assistance at a unit level to communities, such as this program and the *Rivers, Trail, Conservation Assistance Program* by the NPS, can support positive action and development for gateway communities and highlight the federal government in a positive light in those communities.

When you consider all federal public lands and their locations, many are located far from major American population centers, so visitors require more time to access and experience the area, and must spend more money to cover travel costs, accommodations, food and other necessities to enjoy that trip. Additionally, many of these areas require a motor vehicle to reach the destination, as the remoteness of these units comes with lack of connections to regional and national transportation systems. Noting this, many Americans in urban settings or low-income communities do not have both the time and money to travel to these places and see the natural beauty that should be available to them as citizens of this country.

Alternative transportation systems expand access to a larger proportion of the American population and help eliminate barriers to certain segments of society. For DOI areas that are in close proximity to larger urban areas, there is an opportunity to support enhanced ATS that will improve access in their metro regions. The FWS is leading the charge in the arena through its *Urban Wildlife Conservation Program*, and other FLMAAs are also developing their own programs. From a transportation perspective, showcasing public areas via ATS lets the public experience these natural amenities and gain additional including personal health and enjoyment benefits, while also reducing congestion and minimizing negative impacts from high visitation of popular sites. Lastly, but most important, using recreational experience is another way to educate the public on why more sustainable transportation is needed throughout our country, not only to visit open public areas, but to be integrated into nation-wide transportation planning for rural, suburban and urban areas.

The rural settings of DOI areas also present difficult challenges for implementing alternative transportation systems. Low-usage rates can often make these systems economically unfeasible. The communities and organizations that are located in surrounding areas can also face challenges implementing these systems due to lack of funding, lack of capacity (development, ridership, users) and lack of interest. On the upside, there is a growing interest in some neighboring gateway communities to support development of ATS and recreational-based transportation amenities to spur local economic growth.

During the contract period, the Fellow's work was disrupted by the 2019 government shutdown that put a majority of FMLA employees and their projects on furlough. The Fellow was not furloughed, due to an existing funding allocation, and he was still able to continue some of his work for the contract and with the Refuge partners. The disruption came from the furlough of the rest of the Refuge staff and the after effects in the follow-up months post-shutdown. The Fellow found it difficult to schedule meetings with staff members afterward, and a few projects continue to be delayed at the time of this report. In a larger scope, transportation staff across the nation were eventually able to continue their work on certain projects and continue with their duties, but delayed projects for months afterward.

The lingering construction of the John D. Dingell Jr. Visitor Center is an ongoing public relations issue for the Refuge. The project is entering its fifth year under construction. Various grand opening dates were publicized throughout this period, yet no firm date is currently set. Regional Office staff have asked the Refuge to limit its outreach about the specifics of the project delay, creating additional tension around the subject. This delay has had both positive and negative impacts on the work of the Fellow and the Refuge.

Pros

- More time for development of projects and programs;
- Opportunity to improve plans to evaluate visitation and transportation systems;
- Expanded preparations for opening day and first season of public visitation at the Refuge Gateway; and
- More time to prepare standard operating procedures, handbooks and trainings for staff and volunteers.

Cons

- Delay in implementation of transportation programs (college/community shuttle service);
- Loss of staff credibility;
- Economic loss for gateway communities;
- Infrastructure issues through non-usage;
- Missed opportunities for additional project grants.

To mitigate the negative impacts, the Fellow did as much as possible to prepare for the opening of the Refuge Gateway and associated visitor center. He also searched for projects that were not contingent of the Refuge Gateway opening. This included helping

with grant writing and grant support with various organizations applying for access and transportation grants, attending work groups and task forces to ensure Refuge representation in the gateway communities, creation of a safety plan for the Refuge, and development of training materials for Refuge staff and volunteers. The Refuge Gateway was delayed through the entire first contact period of the Fellow and (as of this report) for the foreseeable future.

CASE STUDY FOR FUTURE PUBLIC LANDS TRANSPORTATION FELLOWS

Given the unique nature of this position as a Fellow, I didn't grasp my specific role at the Refuge or how it fit into the Refuge workload at large until I had been on location in Detroit for a few weeks. Moreover, as projects began to develop, my role evolved. Staying flexible and embracing this evolution allowed me to accept the slower times when I worked alone for days on my computer; I began to look forward to the more engaging opportunities when I was in the community or with the Refuge staff moving projects from planning to realization.

As a Fellow, you are the transportation professional of the Refuge team and they can learn a lot from you about transportation issues. Some of your work may be foreign to Refuge staff members, and their roles may feel the same to you. Yet, you have an amazing opportunity to not only learn from Refuge staff and partners, but also to tie transportation planning into as many current Refuge projects as possible. As you shadow staff and learn more details about their current projects, you may begin to see overlap with transportation issues, which can help you identify opportunities and develop your work priorities.

Working and brainstorming with the Refuge staff helped me become a better communicator of my ideas, because I had to talk about planning and transportation systems to people who do not have extensive knowledge of these topics. This dialogue with Refuge staff is incredibly important. This staff was receptive to "institutionalizing transportation into Refuge-wide planning as the Refuge Manager said. However, I was still very conscious of making recommendations that reflected staff workload capacity and the short timeframe of the Fellowship.

Because most stations do not have a dedicated staff member to focus exclusively on transportation issues, these tasks will most likely fall on someone working outside his or her job description to take on the transportation planner role, as time allows. However, using the annual work plan system and institutionalizing transportation theories and knowledge into Refuge management decisions and priorities will help to ensure that the unit's transportation goals will be achieved even when there is not a dedicated point person.

To put it another way, providing equitable access and improving regional transportation systems are long-term projects that will last well beyond the timeframe of a dedicated Fellow. In order to ensure that projects will continue after you leave, you should clearly document your research, contacts, and next steps to provide seamless coverage by other staff. Again, be conscious of work capacity and attempt to break out next steps in small manageable tasks.

If you can successfully become an asset to the Refuge staff members and assist them in completing their projects, the final product will benefit not just the program but also provide barrier free access and public enjoyment.

Due to the unique types of transportation systems used in outdoor recreational areas, I made sure to do research on topics I was not familiar with, especially those that can help other staff members with their work. If I did not know enough about a transportation topic or question asked of me, I made sure that I became familiar with the topic. Like most career fields, it is impossible to know everything about one's field, especially a topic so expansive as transportation. I utilized my experience in research, interviewing and stakeholder engagement to find answers and useful resources. This also helped to cement my own knowledge of transportation topics and regional transportation trends. Lastly, expanding your knowledge of transportation related abbreviations, acronyms and terminology will give you confidence when speaking with or requesting information from veteran transportation experts.

What worked:

- Systematic check-ins with supervisors and mentors;
- Working with Friends Organization;
- Attending any meeting that involves regional transportation or connecting to natural open lands;
- Using staff and Friends Organizations for a list of initial contacts;
- Talking to every partner you can, even just to let them know you are at the Refuge;
- Setting agendas, objectives and goals for each meeting that you have;
- Taking notes and pictures, and saving key documents; and
- Making lists for everything (to-do, reports read, project visioning etc.).

What did not work:

- Working independently on transportation projects;
- Taking staff workload capacity and priorities for granted;
- Waiting for people to get back to you (sometimes a follow-up is needed); and
- Not having clear goals when you host a meeting.

For future Fellows of this program, I will suggest two recommendations that will not only increase your productivity, but also leave your unit in a good place to keep transportation projects on course. First, remember that you are only at your unit for 10 months, and that when you leave, everything that you have collected, researched, worked on and saved to your computer will be placed onto a shared drive for future usage by Refuge staff. With this in mind, develop a database of information that can be

easily found and used by anyone who needs it. See if your unit has a standardized way to organize its files, if not, implementing a user-friendly organization system will help the Refuge overall.

Second, look through the AWP of your Refuge's programs, and brainstorm how transportation could be incorporated into those AWP projects. Consider creating a Transportation AWP halfway through your contract period. Use this AWP to make a priority list of transportation projects that you will be able to finish before you leave, and additional projects that can be carried on by other staff and align with other Refuge programs and priorities.

PROFESSIONAL DEVELOPMENT

The Fellow was able to attend a few conferences to develop further knowledge and skills of a planner and transportation professional. These included:

- National Summit for Gateway Communities at the National Conservation Training Center in Shepherdstown, WV;
- Transportation Research Board Annual Meeting in Washington D.C.; and
- National Planning Conference in San Francisco, CA.

The Fellow also took the opportunity to prepare for the American Institute of Certified Planners Certification (AICP). The Fellow pursued this goal by studying for the AICP exam through webinars on current planning trends, obtaining study materials, and attending Certification Maintenance credit courses. The Fellow is currently an AICP-Candidate and will soon start the process towards full certification.

The Fellow enhanced his professional skills during the day-to-day work and interactions with stakeholders from the local, community, region and state level organizations and governments. These interactions helped the Fellow become more comfortable reaching out to new stakeholders and engaging in conversations to further the goals of the Refuge and partner agencies. Understanding the different dynamics of these stakeholders and how to talk with them will benefit the Fellow for the rest of his career.

One of the best on the job experiences was learning how to work on multiple projects at once, during different stages of development. While some projects continued over the entire Fellow contract period, others took a few hours to complete. This diversity provided a good balance of continuous work without overwhelming the Fellow. Beginning work on the final report early in the fellowship period helped with time management as the fellowship progressed. Drafting the final report gave the Fellow something to work on when there were no immediate deadlines or when waiting to hear back from stakeholders to continue a project. In addition, this ensured having enough time to thoroughly write out and edit this document. To do this, the Fellow started brainstorming the content and getting an outline finalized almost immediately after starting the fellowship. Then he kept working through sections, so not to be burdened with excessive writing at the end of his contract time.

Through his work on the Refuge, the Fellow also learned the importance of framing complex issues and incorporating multiple perspectives. Though Fellows are brought in to assist Federal Land Agencies with transportation planning and development at specific units, a majority of this Fellow's work happened outside the boundaries of these units, with a broader focus that incorporated the local transportation networks, communities and even regional systems. Under federal law, staff of the Detroit River

International Wildlife Refuge are authorized to work outside the boundary area of the Refuge to further the conversation, stewardship, environmental education and outreach goals of the FWS to the entire southeast Michigan region. Therefore, the mission of the Fellow to improve access to the natural areas on the Detroit River/Lake Erie ecosystem could be extended to the entire region. Improving accessibility and ATS for all residents of the region supports this mission, and allowed the Fellow to identify and initiate a wide range of transportation related development projects and programs for both the short-term and long-term benefit of the Refuge and its visitors.

APPENDIX A: TRANSPORTATION GOALS AND OBJECTIVES FOR THE DETROIT RIVER INTERNATIONAL WILDLIFE REFUGE

Refuge Transportation Goals and Objectives

GOAL #1: Prepare DRIWR staff, Refuge Gateway, and the public for opening weekend and the first few seasons at Refuge Gateway and visitor center.

- A. ***Objective:*** By the end of fellowship, fellow has educated and made training materials available to Refuge staff and volunteers to aid in a general understanding of transportation information and Alternative Transportation Systems (ATS) as they relate to the DRIWR.

Action: By opening weekend, host a training session for Refuge staff/volunteers/interns on Refuge related transportation topics such as:

- a) Introduction to ATS and why we should pay attention;
- b) DRIWR transportation goals;
- c) Current and potential ATS to access Refuge units;
- d) Safety issues;
- e) DOI Bicycle Subsidy Program;
- f) Updates on partners' ATS efforts;
- g) ATS access points to nearby recreational areas; and
- h) Special event transportation offerings.

Goal of this training is to create consistent, deliberate messages about the benefits of ATS.

- B. ***Objective:*** During the grand opening celebration and throughout the first few years of operation, gather baseline data on how visitors arrive at the Refuge Gateway and interact/move throughout the space. Determine errors and correct inefficiencies within both the Refuge Gateway system and surrounding Refuge units.

Action: Before the Refuge Gateway opens to the public, develop protocol and write Standard Operating Procedures on methods available to gather baseline data of visitors' arrival transportation modes and methods of recording observations/comments.

Action: Use SOP to train staff/volunteers/interns to act as observers for opening weekend and during the first year of public visitation.

Record the following types of transportation related topics:

- a) Issues, challenges and successes in how visitors reach the Refuge Gateway;
- b) Visitor satisfaction and comments of shuttle system and traffic flow;
- c) Parking capacity; and
- d) Traffic flow.

Action: Use information gathered to provide recommendations on how to improve transportation for future events and evaluate the effectiveness of ATS modes by the second year.

- C. *Objective:* Use baseline data collected to find ways to increase ATS usage rate annually.

Action: In preparation for opening weekend, prepare and circulate electronic promotional material related to transportation modes and access points to the Refuge Gateway (i.e. website, brochures, Google maps, etc.)

Action: Prepare plans, promote and implement shuttle service for remote parking and community pickup to deal with over capacity parking issues during opening weekend.

Action: Design and implement measures of effectiveness for different ATS to evaluate success for the second year.

- D. *Objective:* Work with partners and local communities to cross promote multimodal transportation to DRIWR and educate public on region-to-Refuge related transportation network and benefits.

Action: Develop a spreadsheet of potential partners and their contact information to engage with for promotional campaigns. Include potential ideas and/or projects.

GOAL #2: Promote access and utilization of public lands by improving ATS to the DRIWR boat dock and fishing pier.

- A. *Objective:* Develop partnerships to encourage visitors from Downtown Detroit, Downriver Communities and Monroe to visit the Refuge Gateway by 2021 via passenger water vessel utilizing the Gateway boat dock.

Action: Work with private tour companies, regional school districts and NPOs to host public events utilizing the boat dock for Refuge visitation.

Action: By 2020, develop a water taxi plan for the Detroit River. Work with Port Authorities, SEMCOG, water trail organizations and riverfront communities to ensure the Refuge Gateway is included in special events or weekend routes.

- B. *Objective:* Improve non-motorized recreational water vessel usage of the lower Detroit River, Western Basin of Lake Erie and tributary waterways.

Action: Before the grand opening of the Refuge Gateway, encourage Wayne County to permit a kayak/canoe concessionaire to provide patrons with water vessels to explore area waterways.

Action: By 2020, develop a wayfinding and marketing plan with partners for the Lower Detroit River and Western Basin of Lake Erie (e.g. water trail map, access points, amenities, promotional materials, etc.)

Action: Support communities to develop plans that encourage more recreational use of local waterways and greater connectivity of regional water trails.

- C. **Objective:** Prioritize strategies to ensure Refuge units are accessible via bicycle (i.e. from local communities, the Detroit Metro region, and through statewide connectors of Michigan and Ohio).

Action: Over the next 5 years, work with the Downriver Linked Greenways Initiative to:

- a) Provide technical assistance on projects;
- b) Assist with grant applications;
- c) Provide outreach to local community leaders regarding trail improvements and connections;
- d) Build community bicycle amenities (i.e. bicycle shares, Fix-It Stations, etc.);
- e) Improve safety on local trails;
- f) Improve condition of the Downriver Linked Greenways Trail and the Iron Belle Trail; and
- g) Identify and find ways to alleviate barriers associated with ATS.

Action: Identify top priority bicycle transportation projects that will maximize access to the DRIWR. Prepare FLAP application materials for next Michigan FLAP Grant submission window and other trail/bicycle related grants.

Action: By 2020, purchase a Refuge bicycle for safety patrols of Refuge units and Refuge hosted bicycle tours.

Action: Over the next 5 years, work with communities and organizations to develop a formal plan to improve bicycle connections to Refuge units, via the greenway trail system in Wayne County and the intra-bike connector trail in Ohio.

Action: Promote bicycling commuting to Refuge Gateway for staff and volunteers. Assist employees with Bicycle Subsidy Program provided by DOI.

Action: Over the next 5 years, promote bicycle trail networks and access to the DRIWR by:

- a) Hosting or participating in bicycle-oriented events;
- b) Supporting communities as they become designated trail towns;
- c) Working with partners to develop regional bicycle promotional campaigns;
- d) Identifying projects to partner with local and regional bicycle organizations; and
- e) Creating a presence in the national bicycle community.

- D. **Objective:** Develop public transit connections focused on Downriver communities, community colleges, universities, and schools.

Action: During the first year after the grand opening of the Refuge Gateway, work with the Downriver Community Conference (DCC) and Wayne County Community College District (WCCCD) on development of a pilot shuttle service. Ensure service is flexible enough to test different service routes, service stops, timetables, and other issues/challenges.

Action: If shuttle service pilot is deemed successful, based on ridership and more community buy-in, explore opportunities with DCC, WCCCD and SMART to create: a) fixed route systems, b) special use service for elderly, ADA and under- represented populations, and c) possible SMART service stop at Refuge Gateway on weekends and special events.

Action: After initial shuttle service pilot, develop an evaluation plan for continued service, which addresses issues and challenges from pilot, and measures different aspects for success (i.e. reliability, cost, times, etc.)

Action: If shuttle service continues past pilot stage, research funding opportunities to provide service to communities and groups who cannot afford to pay for service.

Action: Over the next 5 years, further develop connections throughout the Southeast Michigan region school network to help connect elementary to college level students to DRIWR and other outdoor conservation areas.

Goal #3: Use guiding stewardship principles to direct transportation planning for Detroit River IWR to increase access to Refuge lands in a sustainable manner.

A. *Objective:* Begin implementation steps to open specific units for public use.

Action: Determine primary data needed to make informed decisions about public use. Conduct Rapid Ecological Assessments in priority units.

- a) Specific habitat site conditions;
- b) Potential amenities for public usage;
- c) Access points;
- d) Trail system;
- e) Proximity to local transportation systems; and
- f) Wayfinding signage.

Action: In 2019, update the timeline and priority list for opening Refuge units.

Action: In 2019, create a list of projects to remediate landscapes and create wildlife habitat, while also enhancing the natural experience for visitors and local communities.

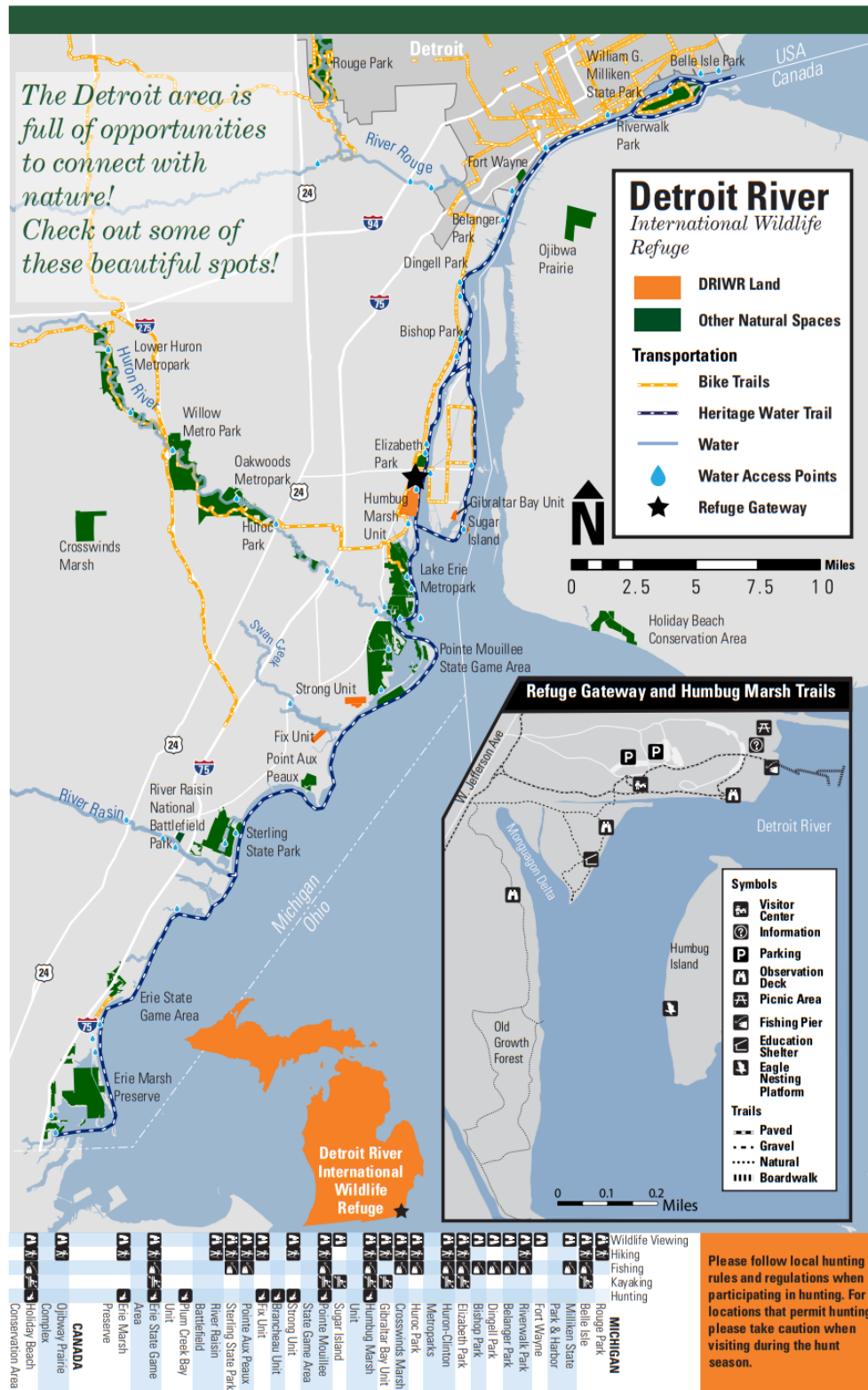
Action: Improve staff knowledge of transportation topics, to identify issues and challenges of transportation systems as they relate to the Refuge, and guide opportunity and action to improve these systems through their localized experience.

- B. *Objective:* Institutionalize transportation principles into Refuge planning culture.
Action: As planning documents are created for Refuge management, include sections focused on improved ATS, access and urban connections to the DRIWR.
- C. *Objective:* Ensure adjoining community development plans address their impact on the DRIWR management area's environment and work to involve the Refuge in their planning process.
Action: Over the next 5 years, ensure DRIWR is represented during development of the River Raisin Heritage Corridor East Master Plan to secure connections to Refuge units, while limiting disturbance of sensitive habitats and stop over sites.
Action: Monitor the development of local, regional and statewide transportation plans to ensure that they observe the best interests of the DRIWR.

APPENDIX B: PERFORMANCE MEASURES

Performance Measures to monitor successful implementation and achievement of DRIWR Transportation Goals & Objectives					
Performance Measure	Sub Performance Measure	How to conduct	Data needs & Sources	Outcomes	notes on outcomes
Increase of ATS usage rate annually					
	Increase ATS Usage annually by percentage of overall transportation mode share	pedestrian counts; car counts; shuttle user counts; non-motorized water counts; group bus and shuttle	Vehicle and trail counts; VS estimates of visitors arriving via car; NM water counts	See an annual, or at least keep baseline from previous year	High occupancy car visitation could be added in the future
Efficient and safe refuge wide transportation system					
	Gateway road system efficiencies and parking capacity	Observations on roadway usage; baseline collection of incidents and reports	What does efficient roadway look like?; What is considered efficient, but not overcrowded parking capacity?	Understand the problem areas for road system; days of not enough parking capacity	visitation threshold in which we see a full parking lot; can we estimate those days and plan accordingly; personnel assistance on heavy volume
	Incidents/accidents that happen on property or right outside	Observation; comments	Crash records and descriptions	related incidents or accidents on and in conjuncture to Refuge land	
Transportation related planning and programs into general Refuge Management					
	Transportation related projects completed or kept ongoing at end of FY	Refuge AWP	n/a	Remains apart of station priorities to help improve transportation systems around refuge and region	Intergration into to main Refuge AWP and department AWP's
	Staff and Volunteer knowledge of transportation systems	Figure out how to measure; milestone that it is included in training/handbooks	n/a	transportation systems in the region, how to identify Refuge based transportation issues, how to talk and describe transportation networks to the general public with importation on ATS modes	How will training look like? Possible integration into to quarterly safety lesson or something similar?

APPENDIX C: TEAR SHEET MAP



*Note: The Tear Sheet was created in collaboration with Jennifer Braatz, Detroit River International Wildlife Naturalist Park Ranger, who provided the original map design and information; Kumiko Highley, FWS Region 3 Visitor Services Specialist, who did the layout and design work; and the Fellow, who created the map and map elements and provided input for map design, information and layout.

