

Regional Alternative Transportation Evaluation

Region 6



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Section I: RATE Background

The U.S. Fish and Wildlife Service (FWS) and the U.S. Department of Transportation (DOT) Volpe Center (Volpe Center) conducted a regional alternative transportation evaluation (RATE) in Region 6, which is comprised of Colorado, Kansas, Montana, Nebraska, North Dakota, South Dakota, Utah, and Wyoming. The RATE helps to ensure effective consideration and integration of alternative transportation systems (ATS, Box 1) into the goals and recommendations of the Region 6 long-range transportation plan (LRTP).

FWS Headquarters and Regional staff approached the RATE with the understanding that increased ATS would be beneficial to Region 6 stations and complement Service-wide goals, particularly those contained in the Region 6 LRTP. Where viable, ATS can play an important role with regard to each of these goals:

- **Safety:** Provide a safe and secure transportation system to and within Service lands.
- **Access, Mobility, and Connectivity:** Ensure that service lands have appropriate levels of access, mobility, and connectivity for all users and staff.
- **Sustainability:** Provide a sustainable transportation program to address current and future needs.
- **Partnerships:** Develop partnerships to leverage resources and implement integrated transportation solutions.
- **Visitor Experience:** Develop and maintain a transportation network that welcomes and orients visitors.
- **Natural and Cultural Resource Protection:** Conserve and protect natural and cultural resources through comprehensive transportation planning and management.

Box 1: What are Alternative Transportation Systems?

Alternative transportation systems generally include any travel means other than personal automobile, such as:

- Motorized transportation systems operating internally within stations
- Shuttles and van transit connecting stations with other destinations
- Regional transit connections (bus, light rail, trolley, commuter rail, passenger rail)
- Bicycle and pedestrian infrastructure (sidewalks, paths, bicycle lanes, regional trails)
- Water-based transportation
- Publicly and privately operated systems

By reducing the use of personal automobiles, FWS can also reduce the impacts that these vehicles have upon natural resources. Vehicular resource impacts include wildlife collisions, invasive species, noise pollution, particulate emissions, erosion, and pollutants that can enter the soil or water. Over the long term, increasing ATS for stations with increasing visitation can minimize the need for new roads or parking, thus preserving more area for wildlife habitat. Furthermore, ATS is a critical visitor management tool for station staff facing increasing visitor demands and limited resources, especially through partnerships through the local transit agency or friends group. The use of transit enhances visitors' understanding of the station's natural resources by facilitating interpretive tours or directing visitors for special events. ATS can provide access and mobility to portions of the populations who do or choose not

to own a vehicle or are disabled. Finally, ATS reduces the Service's carbon footprint, reduces the use of carbon-based fuels, enhances accessibility, and reduces air pollutants emitted from vehicles.

Staff from FWS Region 6 and Central Federal Lands Highway Division (CFLHD) met in Lakewood, Colorado, in May 2012, to kick-off Region 6's LRTP, and staff from the Volpe Center participated by phone. As part of the RATE, Volpe Center, CFLHD, and FWS Region 6 and headquarters staff conducted site visits during the summer of 2012 at Upper Souris National Wildlife Refuge (NWR), Garrison Dam National Fish Hatchery, and Audubon NWR in North Dakota; Lee Metcalf NWR and National Bison Range in Montana; and Rocky Mountain Arsenal NWR in Colorado to learn about challenges and to identify specific opportunities for ATS in these stations. In early 2013, Volpe Center staff administered a survey focused on alternative transportation to Region 6 stations. Ultimately, the RATE provided lessons on how ATS may be instituted more broadly across Region 6.

Region 6 Background

According to its website, Region 6, the Mountain-Prairie Region, consists of the states in the heart of the American west. The region is defined by three distinct landscapes. The central and northern Great Plains lie to the east of the region, primarily the vast mixed- and short-grass prairies. To the west rise the Rocky Mountains and the intermountain areas beyond the Continental Divide, including parts of the sprawling Colorado Plateau and the Great Basin. The northeastern part of the Region contains millions of shallow wetlands known as the "prairie potholes," which produce a large portion of the continent's waterfowl. Some of the nation's greatest rivers rise in the Region including the Missouri, Colorado, and Platte rivers. The fish and wildlife that make their home on the Region's prairies and in its mountains are among the nation's most iconic species: grizzly bear, gray wolf, the American bison, and cutthroat trout. In sum, there are 125 NWRs and 24 wetland management districts (WMDs) throughout Region 6.

Section 2: Region 6 Trends

Wildlife observation, hunting, and photography

Wildlife observation is the most popular visitor activity at stations in Region 6, followed closely by hunting, and then photography. While hunting and fishing require specialized and sometimes bulky or heavy equipment, which may encourage hunters and fishermen to use their own private vehicles rather than an alternative mode, wildlife observation and photography do not always necessitate the use of private vehicles. ATS can be helpful for visitors participating in wildlife observation. While non-motorized travel on foot or by bicycle allow visitors observing wildlife to stop when they choose, transit vehicles do not, though they usually slow down or pull to the side of the road if the driver or passengers request a stop to take a picture or otherwise observe wildlife.

Limited and declining staff resources

Visitation growth at many stations is straining station resources, particularly as funding levels remain stagnant and hiring freezes continue while staff retire or move on to new jobs. The Service is trying to maintain a balance between resource protection and providing educational and recreational access for visitors, and visitation growth is straining the Service's ability to maintain that balance. Further, urban growth is occurring closer to refuges that were once far from urban centers. At the same time, the Service is also developing refuges in urban areas, which may see visitation patterns similar to other urban parks. Currently, the Service submits waivers for approval to fill job vacancies in the most strained stations.

Distance from urban areas

Many refuges in Region 6 are located dozens of miles away from urban areas. Due to these distances, most stations are not within the service areas of public transit systems (only two percent of stations are within one-half mile of a transit station, five percent are within three miles). Instead, stations may be accessible by organized private transit from cities, including partnerships with schools and community groups for scheduled trips to refuges. Gateway communities that are close enough to offer bicycle and pedestrian access to refuges are likely to be relatively low in population, and may therefore have fewer resources to support infrastructure to improve bicycle and pedestrian access to nearby stations. For refuges that are in remote areas, ATS use may be limited to very seasonal use or special events. Approximately 15 percent of stations said that they foresee alternative transportation modes as important to the future of their stations.

Regional population growth

All of the states in the region are experiencing population growth; as a whole, Region 6 has seen population growth of approximately 13 percent over the past ten years (Table 1:). Three states in Region 6 substantially exceeded the national growth rate of 9.7 percent, and growth trends are likely to continue, particularly as the economy recovers. As population grows, so too will visitation to refuge facilities. This growth will likely continue to tax the transportation systems of stations and will require infrastructure improvements that accommodate visitor growth while also allowing the stations to meet Service resource protection goals. By implementing transit service in high-growth areas, particularly during special events and busy weekends, and thereby replacing multiple private vehicle trips with fewer transit trips, it may be possible to not have to build new transportation infrastructure to accommodate more visitors.

Table 1: Population change 2000 – 2010 in Region 6 states

Source: U.S. Census Bureau

State	2000	2010	% Change
Colorado	4,301,261	5,029,196	16.90%
Kansas	2,688,418	2,853,118	6.10%
Montana	902,195	989,415	9.70%
Nebraska	1,711,263	1,826,341	6.70%
North Dakota	642,200	672,591	4.70%
South Dakota	754,844	814,180	7.90%
Utah	2,233,169	2,763,885	23.80%
Wyoming	493,782	563,626	14.10%
Region 6	31,252,152	37,348,108	13%

Section 3: Region 6 Strategies for ATS

Though the stations are diverse within Region 6, based on the trends described in the previous section and the responses to the Transportation Questionnaire, there are several types of ATS that may be especially effective within Region 6.

Promotion

Most refuges described limited, if any, ATS use. Notably, refuge staff responding to the online questionnaire do not prioritize adding new ATS infrastructure as part of their refuge's transportation systems. This response may indicate that certain ATS modes may not be appropriate or feasible on some refuges. However, the limited interest in ATS may also suggest a need for additional outreach and education among refuge staff as to how ATS can help address common management concerns. Table 2 lists management needs, which are either common across the Service or noted in the Region 6 questionnaire, and matches those needs with ATS solutions.

Table 2: Management Needs and ATS Solutions

Management Need	ATS Solution
Funding shortages	ATS may have low-cost options to solve management problems, for example, use shuttles to offsite parking for peak weekends and special events to avoid the need to build and maintain new parking lots.
Condition of existing roads and trails	Limiting refuge roads to transit, pedestrian, and bicycle uses (year-round or seasonally) reduces wear-and-tear on roadways.
Staff capacity shortages	Limiting vehicular use on refuge roads may reduce workload for staff in terms of road maintenance and law enforcement. Friends groups and volunteers may be able to help coordinate transit for special events and/or lead walking tours of the refuge.
Signage and visitor orientation	Signage, maps, and other wayfinding tools can be developed for pedestrians to orient visitors from surrounding communities, and within refuges, on sidewalks and trails towards key refuge amenities. Smartphones can guide both pedestrians and transit users to and within the refuge.

ATS often works as one of many elements to address some of the larger management challenges. However, ATS solutions may be easier or less expensive to implement (such as through simple pedestrian improvements or a two-day lease of school buses) than major road and parking construction.

Use of transit

The use of transit for special events may be the most appropriate way to incorporate transit into many of the Region 6 refuges. Five refuges that responded to the questionnaire already use transit for special events. They may rent private shuttles or buses, borrow vehicles from other refuges or local partners, or use vehicles owned by the refuge or friends groups. Transit during special events helps introduce the concept of transit to refuges without committing to vehicle ownership and maintenance. It also brings several benefits of transit, including parking management and access to restricted parts of the refuge, to a discreet event where these benefits are most needed.

A few refuges are within a reasonable driving distance for day trip from a major metropolitan area but not within the service area of a public transit system. Refuge staff may be able to partner with community groups, friends groups, and nature-based education non-governmental organizations to arrange buses for access to the refuge on weekends and/or for special events. The transportation could be coupled with refuge tours, hikes, and other educational or interpretive programs.

Use of non-motorized transportation

Seventeen of the stations that responded to the questionnaire are within three miles of a regional, multi-use trail or have a direct connection to that trail. Non-motorized transportation infrastructure also include sidewalks, bicycle lanes, and hiking trail networks; local governments, conservation groups, state parks, and others may own and maintain these networks. Refuge staff can work with these partners to ensure connectivity between the refuge and other non-motorized networks. This may include adding safe pedestrian crossings, bicycle racks, and signage to the trail networks, as well as listing the refuge location on local or regional trail maps. In instances where the refuge is near a regional trail, the refuge may add interpretative panels to the trail to extend the refuge experience in the surrounding community.

The majority of refuges responding to the questionnaire allow bicycling on all or parts of the refuge. Bicycling allows visitors to access a larger area of the refuge while reducing vehicular impacts such as noise, air pollution, and need for parking. Walking similarly avoids these vehicular impacts, and both non-motorized modes give visitors a closer view of wildlife. When planning for non-motorized travel within refuges, staff must consider how to restrict visitor access to closed areas of the refuge, using gates, signage, and closure of parking areas near restricted areas.

Section 4: ATS Questionnaire Analysis

In February 2013, the Volpe Center and FWS Region 6 staff sent the RATE Questionnaire to 149 stations in Region 6 to comprehensively collect information about the challenges and opportunities for transportation among those stations. Station managers or deputy managers typically responded to the survey. This report summarizes responses to the questionnaire and provides brief analysis as to the implications of the findings. The data will help to inform the Long Range Transportation Plan (LRTP) in Region 6, particularly alternative transportation system (ATS) project planning and prioritization among stations.

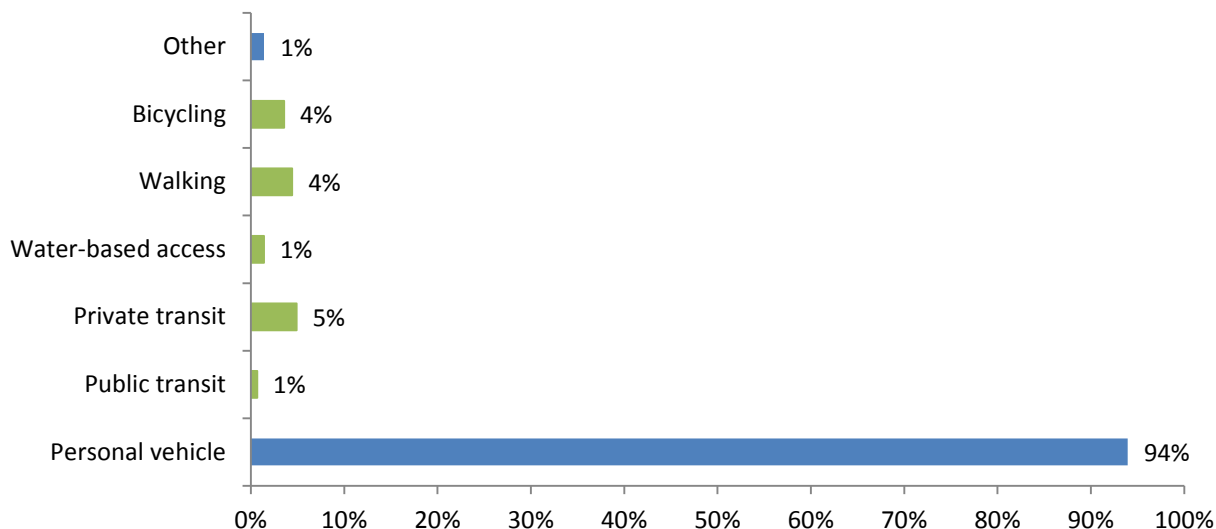
A total of 88 stations responded to the survey, representing an 82 percent (88 out of 110) response rate of stations in Region 6. Another 39 stations in the Region are limited-interest (easement) refuges, meaning the FWS does not own the land and private landowners are responsible for managing the property. Therefore, those 39 stations did not submit responses. Of the survey respondents, 83 percent (75 stations) are open to public use. Below are summaries of the data collected to provide insight into trends and opportunities in alternative transportation across the Region.

Visitation Background

The questionnaire asked each station to estimate its visitors' access modes (Figure 1). Ninety-four percent of visitors to stations in Region 6 used personal vehicles. Five percent of visitors used private transit (inclusive of school buses or organized tours), representing the most popular alternative transportation mode. Walking and bicycling averaged slightly less than private transit with an estimated average of four percent each.¹ Water-based access (such as kayaking, sailing, or motor boating), public transit, and other modes each had averages of one percent.

¹ Forty-three percent of stations are closed to bicyclists.

Figure 1: Visitor Access Mode (Average Percent; green represents alternative modes) (N = 74)



The overwhelming popularity of personal vehicles as a mode of transportation might be attributed to the demographics of visitors at stations in Region 6 (Figure 2). Respondents marked that families comprised a significant portion of visitation, followed closely by school/youth groups and senior citizens. While school/youth and senior citizen groups often provide their own transit, providing transit to or within some stations will appeal to families as a means of access, especially when combined with interpretation via the driver, a guide, or an audio program. Since many families enjoy bicycling, allowing and providing safe facilities for bicyclists may cause families to drive less and bicycle more when visiting refuges in Region 6. Additionally, respondents indicated that many visitors are travelling much further than 10 miles to access the station and alternative transportation options are often limited for trips of that distance (Figure 3).

Figure 2: Visitor Demographics (N = 71)

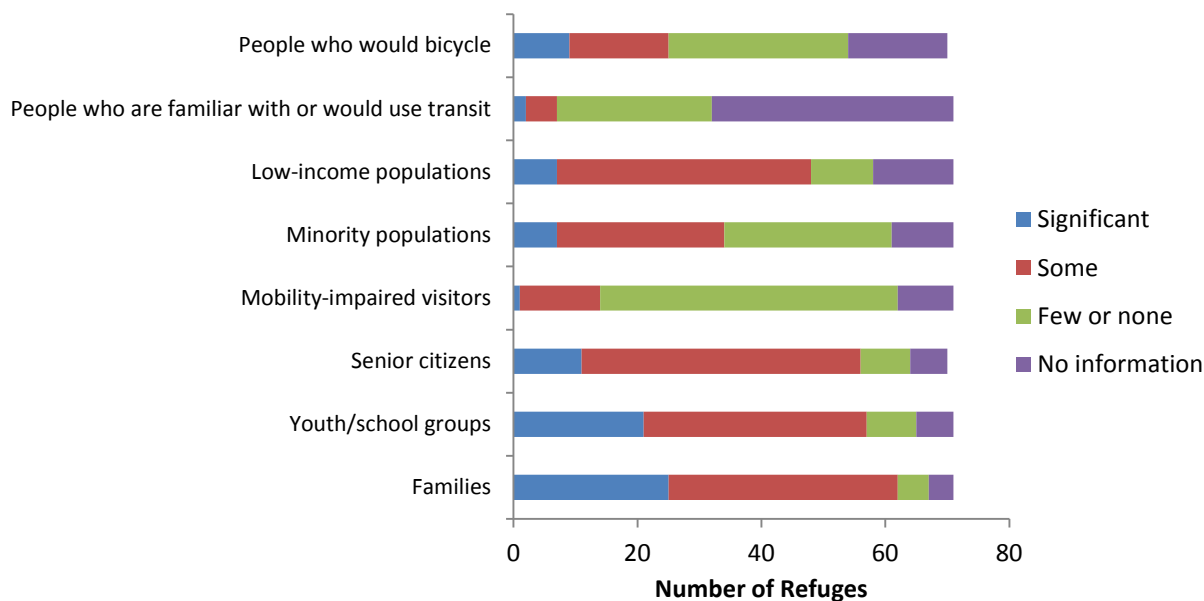
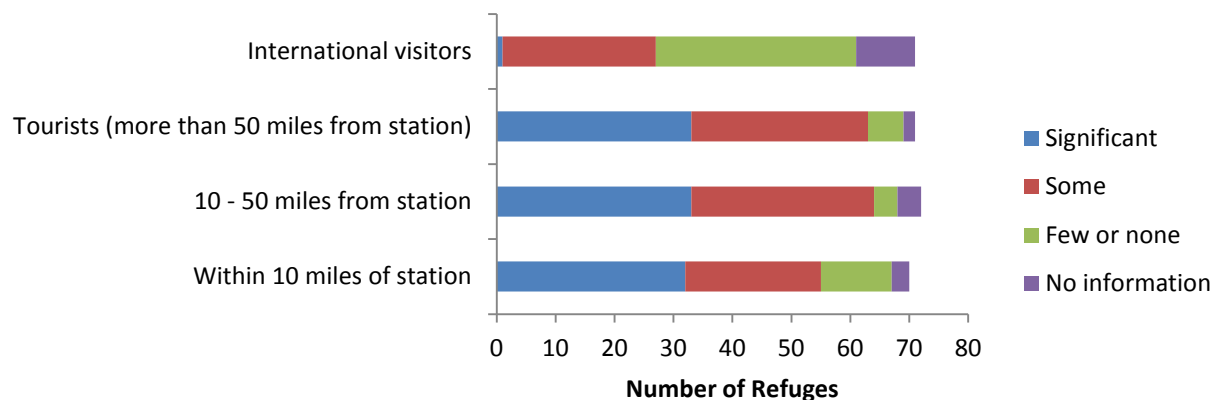


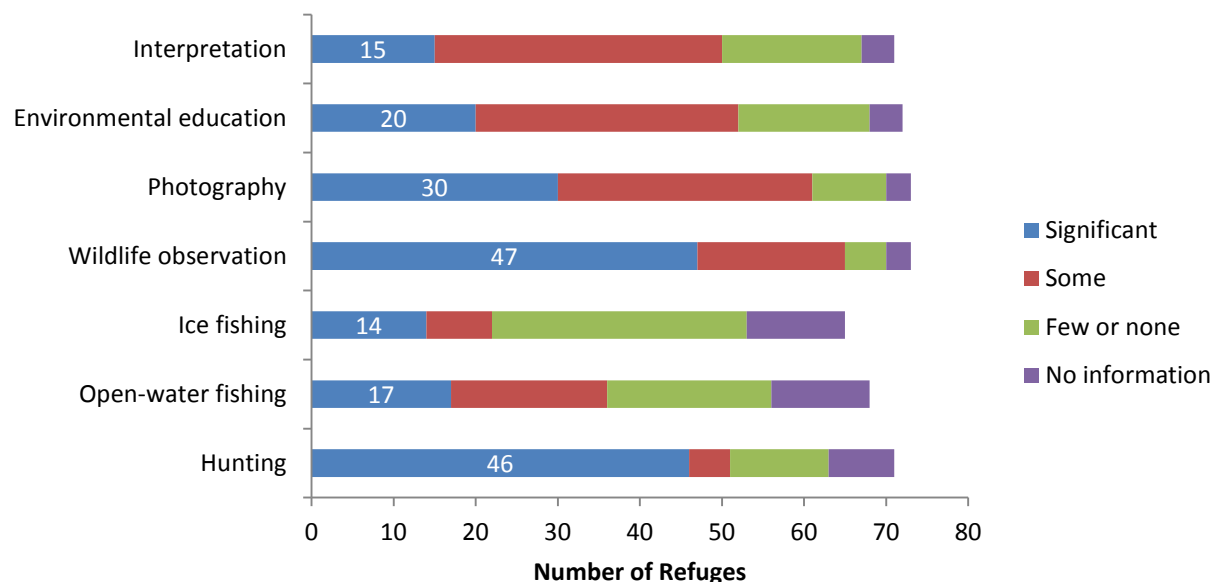
Figure 3: Distance Traveled to Reach Station (N = 73)



Visitor Activities

According to station managers, wildlife observation and hunting are the most popular activities in Region 6 (Figure 4). Photography is the third most popular activity, followed by environmental education and interpretation. Open-water fishing and ice fishing are less popular activities. While hunting, fishing, and ice fishing require personal vehicles for transporting equipment, many of the other popular activities at stations do not. By providing interpretation and/or access to otherwise restricted areas, ATS can actually enhance wildlife observation, photography, and environmental education. Although sometimes it may be more convenient, personal vehicles are not necessary to transport equipment or to participate in any of these three activities.

Figure 4: Activities Enjoyed by Visitors (N = 73)



Of the stations offering water-based activities, canoeing/kayaking is offered at the most stations (39 out of 75), followed by motor boat usage and vehicular and snowmobile access on the ice in the winter. Parking lots, boat ramps, and turn-a-rounds must be provided to facilitate vehicles pulling trailers for these activities. While personal vehicles are necessary to transport equipment or otherwise participate

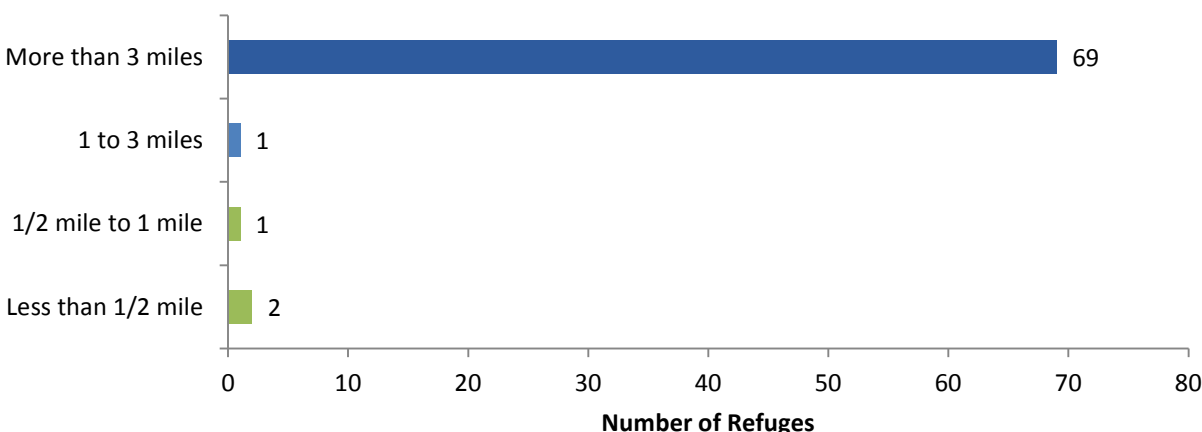
in these activities, stations can help accommodate visitors and enhance the use of these water-based transportation systems through ATS. For example, a ferry system could provide water-based access to the station and minimize the number of motor boats on the water.

Transit and Trail Connections

Distance from Transit

A significant portion of the questionnaire focused on external transit and trail connections to stations. As Figure 6 shows, 80 percent of respondents (69 stations) noted their station is more than three miles away from the nearest transit service (such as a local bus stop or Amtrak station). One station is located one to three miles away from transit, which may be too far for many visitors to walk but offers potential for bicycle connections or transit route extension. Three refuges are located less than a mile away from a transit service. These stations could benefit from further coordination with local transit services (particularly during special events at the station) since transit riders could have a relatively easy alternative transportation connection to the station, reducing the need for and use of private vehicles.

Figure 5: Station Distance from Transit Service (N = 86)



Private transit services organized by school groups or senior centers offer a viable ATS option by transporting a large number of people to and within stations. Sixty-four percent of stations indicated that some visiting groups provide their own transportation. Increasing organized group visits is a relatively resource-sensitive and inexpensive way for stations to increase visitation and promote ATS.

Another means to reduce personal vehicle use is for stations to provide transit service within their boundaries. Transit services may include year-round, seasonal, and special event services. Of the respondents, only two refuges stated that they already provide transit services at their station.

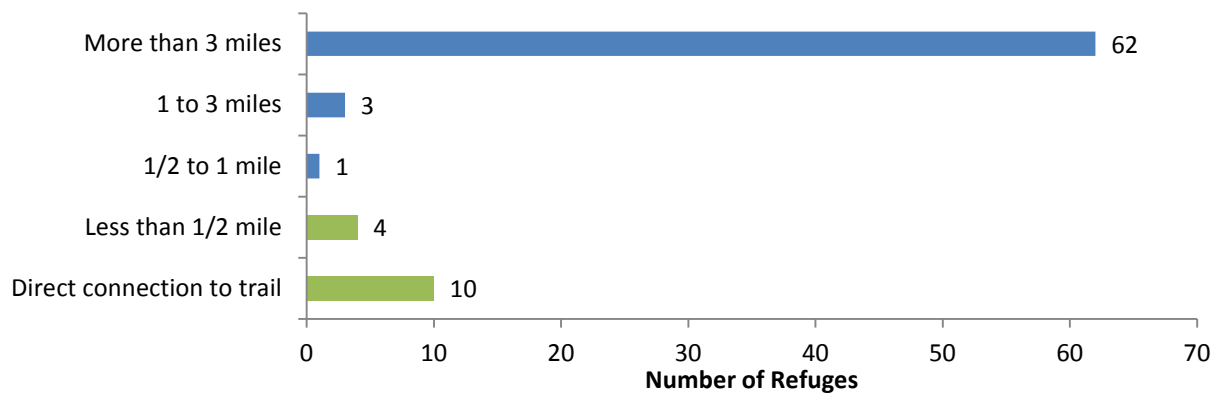
- Rocky Mountain Arsenal National Wildlife Refuge (NWR) in Colorado provides shuttle tours for visitors to access parts of the refuge that are typically closed to the public.
- Bear River NWR in Utah uses vans during special events to transport visitors around the refuge.

As shown in Figure 4, interpretation is the sixth most popular activity in Region 6 stations, yet it is a significant goal of the FWS. Adding a transit service could simultaneously present interpretive opportunities as well as improve access to and within the refuge.

Distance from Regional Trails

As seen in Figure 1, eight percent of visitors access stations in Region 6 by bicycling or walking. Regional trails are a popular and safe way to bring visitors to stations since they provide an off-street and usually paved surface for pedestrian and bicycling recreation and travel. As displayed in Figure 7, 62 stations (78 percent) are located more than three miles away from a regional trail, a distance that is often considered too far for some bicyclists and most pedestrians to travel. On the other hand, the four stations positioned between one-half mile and three miles from a trail are at a reasonable distance for bicycling, but may require more sufficient infrastructure such as bike lanes, safe crosswalks, and directional signage. The bars colored green in Figure 7 represent stations that are located less than a half mile away from a trail or have a direct connection to a trail. With adequate infrastructure, trails near these 14 stations could potentially provide bicyclists and pedestrians convenient and easy access. With increased exposure and an examination of existing infrastructure along these regional trails, stations can take advantage of interpretative opportunities, such as signage, for trail-users who do not directly visit the refuge.

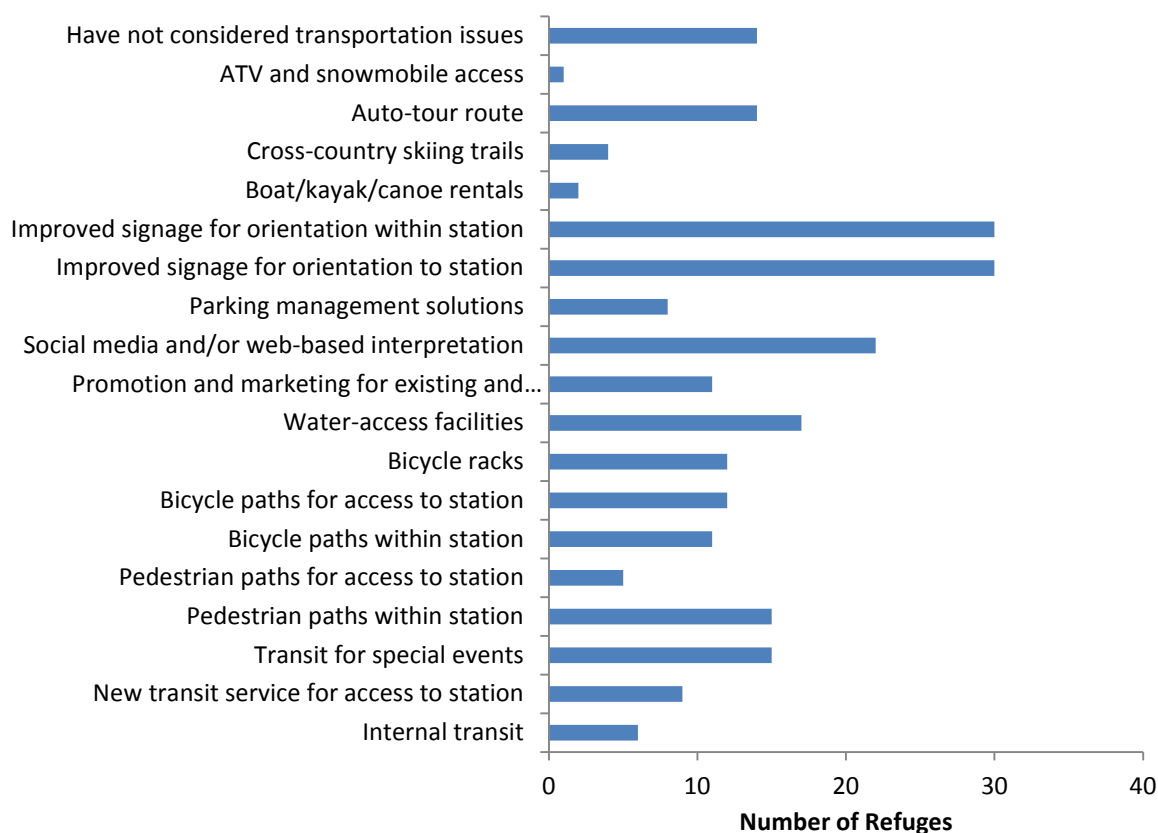
Figure 6: Station Distance from Regional Trail (N = 80)



Transportation Improvements

The questionnaire asked respondents to select from a list of transportation improvements that would enhance their visitor program. The results are illustrated in Figure 7. With 30 out of the 67 respondents (45 percent) selecting improved signage leading to and within the station, station managers made clear that greater orientation to their refuge would improve visitation and visitor experience. The third most stated transportation improvement was greater social media or web-based interpretation, with 22 stations marking this response. Other popular responses to the question about desired transportation improvements were improved water-access facilities, pedestrian paths within stations, and transit services for special events. In sum, the wide array of responses reveals that respondents are aware of the need to make their stations more easily-navigable and accessible through various alternative transportation methods.

Figure 7: Potential Transportation Improvements to Improve Visitor Programs (N = 67)



Open responses to the greatest opportunity for new or improved alternative transportation included:

- Need for upgraded or additional roads that would increase accessibility to visitor centers and auto tour routes.
- Improved bicyclist and pedestrian access with new or expanded trails and paths within the station.

Appendix A summarizes the responses of 30 stations that noted that various alternative transportation solutions could enhance their visitor program. While just under half of the stations marked one solution, five marked two, seven marked three, and five marked four or five (Bear River Migratory Bird Refuge, Marais des Cygnes NWR, Alamosa NWR, Flint Hills NWR, and National Bison Range).

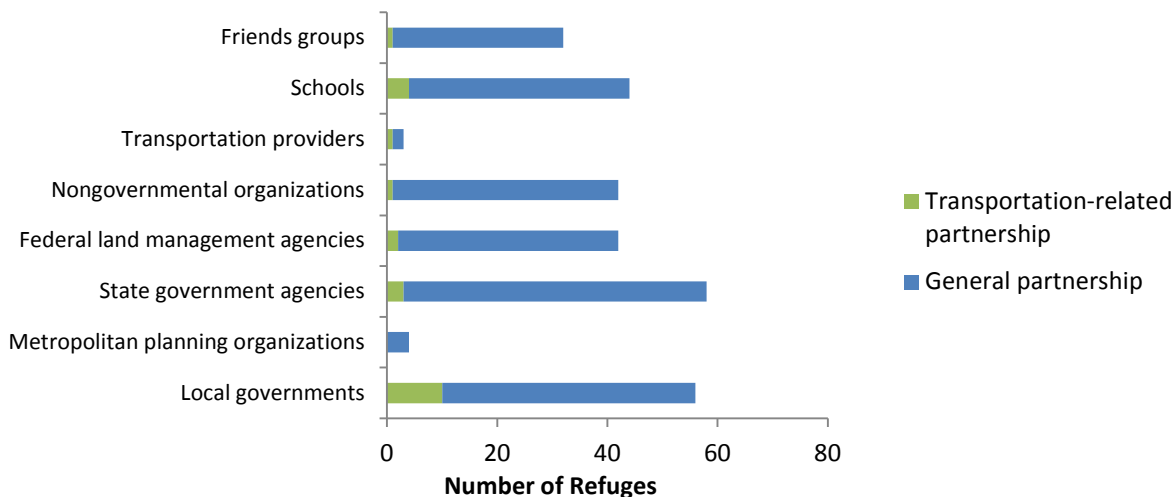
While several stations recognized the benefits of ATS solutions, many respondents mentioned that their refuge was too remotely located for alternative transportation options. However, creative ATS solutions can be realized as more stations may choose to adopt ATS. As more refuges adopt ATS solutions in Region 6, a wider array of best practices and case studies will allow managers to further understand and realize the value of ATS. Subsequently, stations that do not recognize the immediate benefits of ATS may soon find the appropriate ATS practice for them.

Partnerships

Many respondents indicated that they had established general partnerships, but few had established transportation-related partnerships. The results to the applicable question are displayed in Figure 8. A majority of respondents (58 stations, or 92 percent) have a relationship with one or more state

agencies, but the most transportation-related partnerships (10 stations) in Region 6 are with local governments. Numerous respondents stated that of their general partnerships, the relationships most likely to expand to transportation-related partnerships would be with state or local agencies.

Figure 8: General and Transportation Partnerships (N = 63)



Transportation partnerships can include work and support on projects ranging from new pedestrian and bicycling trails to new turn lanes and school bus programs. Some stations recognize the importance of expanding transportation partnerships; a few stations even noted their Comprehensive Conservation Plan mentioned building partnerships to develop transportation strategies. As the section on transit and trail connections observed, partnerships with public transit providers can be a valuable resource to establish a direct transit connection to stations, at least for special events or peak weekends. Through any transportation partnership, stations can receive valuable assistance in funding, planning, and accomplishing their long-term transportation goals.

Conclusion

Region 6 responses to the RATE questionnaire can be used to identify transportation trends in the Region as well as highlight specific stations that have pressing transportation issues. The data collected as part of the RATE will better advise alternative transportation recommendations and strategies for the Region 6 L RTP that is being developed. Moreover, these data allow for comparisons across regions and can further develop general alternative transportation needs nationally for FWS stations.

In examining the Region 6 results, it appears that visitors to many stations enjoy activities that could be enriched through ATS, at least for special events or on busy weekends and/or days during the peak season. With families having the highest percentage of visitation in the region, there is an opportunity to facilitate greater outdoor recreation and fewer vehicle trips by providing more bicycle and pedestrian facilities and transit service as well. Additionally, it was noted that many visitors in the region enjoy wildlife observation and photography, two activities that may be enhanced by transit service if paired with interpretation. Although the remote locations of some stations in this Region appear to be a barrier to implementing ATS, it may become an opportunity to explore and solidify transportation partnerships to increase connectivity.

From planning projects to matching funding sources to particular ATS projects, the RATE results can inform alternative transportation needs now and in the future. Overall, it is evident that there are

opportunities for ATS in Region 6, particularly by improving way finding and by advancing bicycle and pedestrian paths on refuges.

Section 5: Underserved Populations Analysis

Outreach to populations that are not currently visiting refuges is a formalized priority for the Department of the Interior, the FWS, and FWS Region 6. Alternative transportation is a way for the FWS to offer access to low-income, low-car ownership, and minority populations and help them learn about and visit refuges. While transportation is not the only barrier to visits by these groups, resolving it opens refuges to many who could not otherwise reach them.

The RATE team selected two metropolitan areas in Region 6 to examine how ATS could be used to connect refuges to areas with high densities of underserved populations. The RATE team selected the metro areas of Ogden, Utah, and Denver, Colorado. The team selected these areas based on large underserved populations, the refuges nearby, and proximity to ATS. The RATE team tried to identify a third metro area, but no other region met these criteria.

The Volpe Center overlaid demographic data with transportation networks and refuge locations to create a “focus index” map for each region that shows the location of refuges in relation to underserved populations and to show how alternative transportation can be used to reach out to these groups. The focus index scores in these maps are derived from an equally weighted average of the data listed below.² The scores range from 1 to 4, with 4 denoting highest focus.

- Median household income:³
 - Less than \$22,350 = 4
 - \$22,350 to \$42,437 = 3
 - \$42,437 to \$53,046 = 2
 - Greater than \$53,036 = 1
- Percentage of nonwhite households:
 - Greater than 75% = 4
 - 50% to 75% = 3
 - 25% to 50% = 2
 - Less than 25% = 1
- Number of vehicles per household:
 - Fewer than 1 = 4
 - 1 to 1.5 = 3
 - 1.5 to 2 = 2
 - More than 2 = 1

² Data sources: American Community Survey 2012, U.S. Fish and Wildlife Service, U.S. Geological Survey, ESRI

³ Median Household Income population segments are based on the following thresholds: \$22,350, the 2011 National Poverty Level for a family of four; \$42,437, 80% of the 2008-2012 U.S. Median Household Income; and \$53,046, the 2008-2012 U.S. Median Household Income.

The Volpe Center selected these measurable proxies for underserved populations consistent with similar analyses for other FWS regions. The Volpe Center selected the 2012 American Community Survey at the block group level to best balance timeliness of data with high geographic resolution. The demographic data is displayed on maps beneath layers showing refuge locations, interstates and major highways, bicycle and multi-use trails, transit, and major bodies of water. These layers are available online or by request from a variety of academic and non-profit organizations and local governments.

Ogden, Utah

The population of northeastern Utah has been growing significantly since 1990 and is likely to continue to grow in coming decades (Table 3). Ogden is located approximately 38 miles north of Salt Lake City and is connected to Salt Lake City by commuter rail and bus service. While bus service is in operation seven days a week, commuter rail is in operation every day except Sunday. Brigham City and Logan currently have no commuter rail, but Brigham City does have bus service.

Table 3: Population of cities in northeastern Utah

City	Population 2000	Population 2010	Percent Change	Population Projections 2040 ⁴
Ogden	77,226	82,825	7.3%	102,059
Brigham City	17,411	17,899	2.8%	22,970
Logan	42,670	48,174	12.9%	76,658
Salt Lake City	181,743	186,440	2.6%	229,985

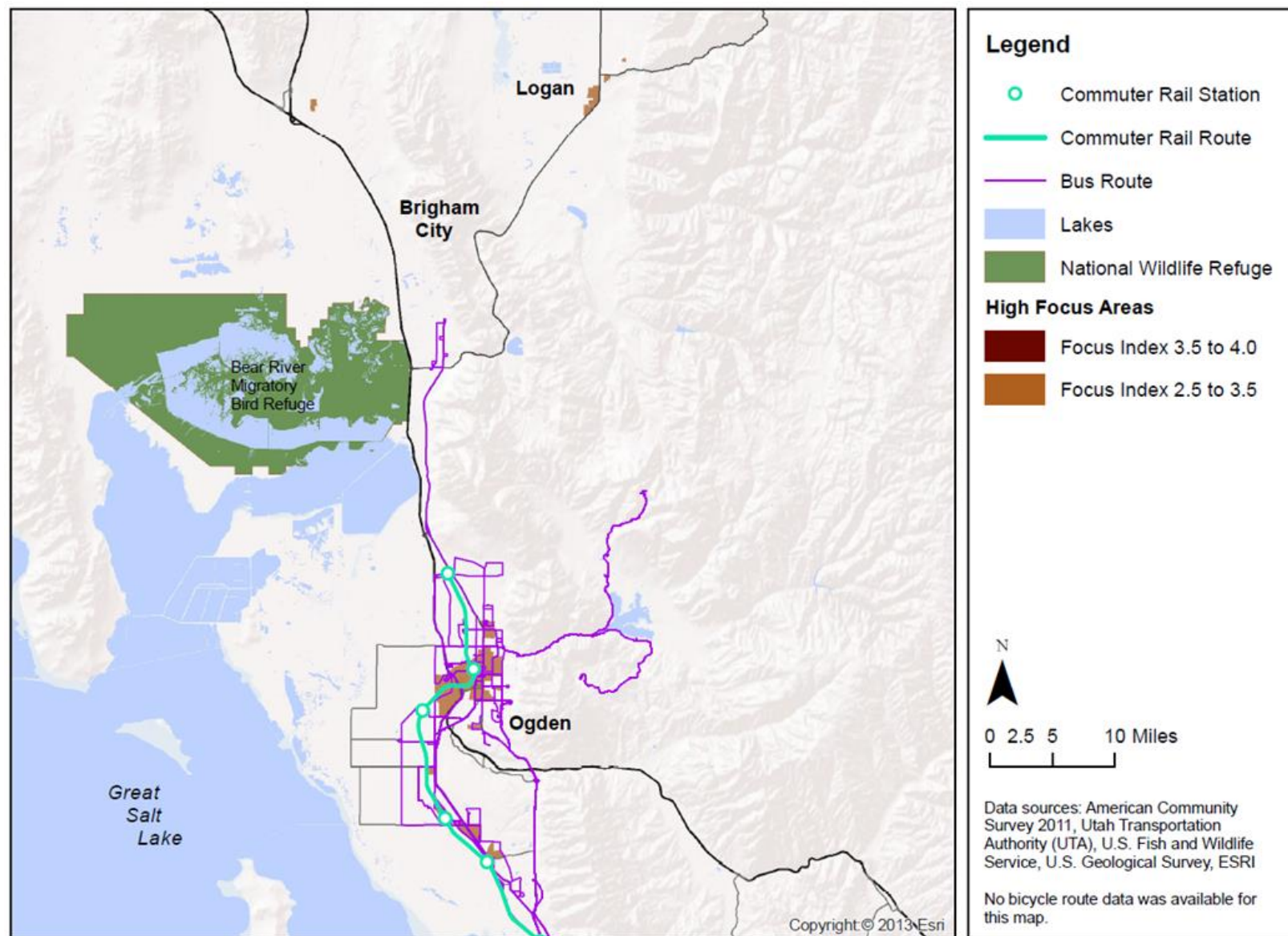
The visitor center for Bear River Migratory Bird Refuge lies 23 miles north of Ogden and 2.5 miles west of Brigham City. One bus line extends north from Ogden towards the refuge but stops 3.4 miles from the visitor center. This bus service is in operation six days a week from 5:20 AM to 9:00 PM on weekdays and 8:00 AM to 7:30 PM on Saturdays and runs about every hour. The bus ride from downtown Ogden to the bus stop closest to the refuge takes 40 minutes. Every bus has a bus rack that can carry up to two bicycles.

While Ogden, Brigham City, and Logan do not have any areas that are in the highest focus index range, Ogden and Logan do have areas that are in the next highest index range (Figure 9). Though people living in these areas in Ogden cannot take the bus (the 630) all the way to the refuge, they can put bicycles on the buses' bike racks and bike 3.4 miles to the visitor center or, after arriving in Brigham City, they can transfer to a local bus (the F638) that runs hourly, take it for 40 minutes, and then bike 2.2 miles along West Forest Road to the visitor center. Though this road does not have an official bike lane or trail parallel to it, it does have a new sidewalk adjacent.

To improve the alternative transportation connection between Ogden and the refuge, the 630 could be extended 3.8 miles or the F638 could be extended 2.2 miles to the refuge's visitor center. This service could be tested by piloting it only on busy days or for special events at the refuge; however, the F638 currently does not run on Saturdays.

⁴ <http://governor.utah.gov/DEA/projections.html>

Figure 9: High focus index for northeastern Utah



Denver, Colorado

In 1990, the population of the Denver region was 1.9 million. In 2010, the population grew 53 percent to 2.9 million, and the region's metropolitan planning organization estimates the population will be 4.3 million in 2035.⁵ As the region's population grows, so will the opportunity to connect more people to the region's refuges (Rocky Flats NWR, Two Ponds NWR, and Rocky Mountain Arsenal NWR) with alternative transportation.

Region 6 has already anticipated this opportunity and is working with CFLHD and the National Parks Service to create the Rocky Mountain Greenway. Once completed, the Rocky Mountain Greenway will create an uninterrupted trail and open space network that connects Rocky Mountain Arsenal NWR, Two Ponds NWR, Rocky Flats NWR, and Rocky Mountain National Park (see conceptual maps [here](#) and [here](#)). Currently, the Greenway's eastern terminus ends at Rocky Mountain Arsenal NWR's Visitor Center. The Greenway, and the connecting trails to the Greenway, will and currently provide nonmotorized connections to the region's three urban refuges from many of the high focus areas shown in Figure 10.

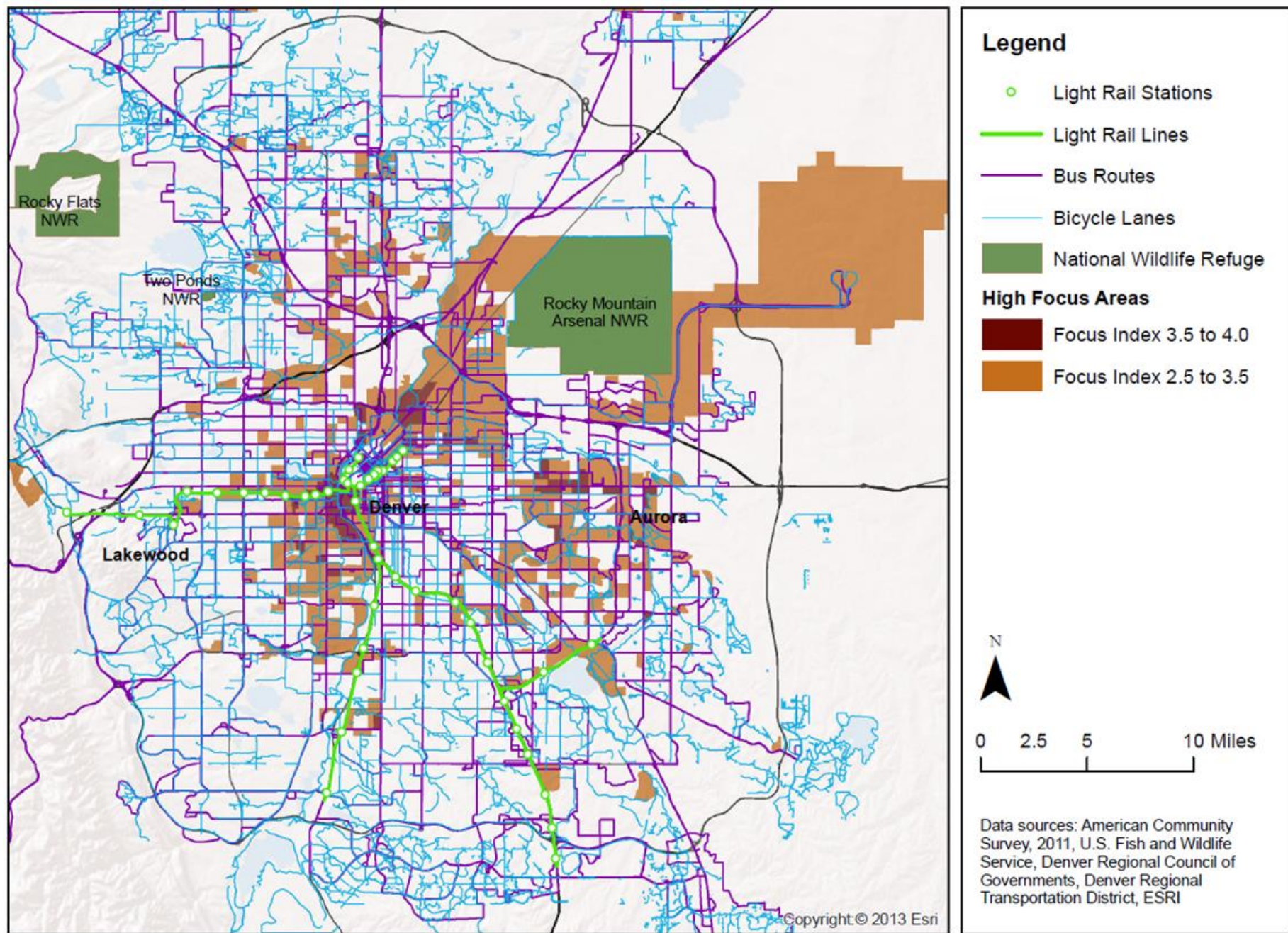
As the map shows, there are numerous high focus areas in Denver and Aurora. While many of these areas are located along bus and light rail lines, transit connections from these areas to these refuges can be improved. Though the region has been investing in extending its light rail system, no lines are close to any of the refuges. However, this will likely change within the next ten years when a couple of light rails stations are likely to be built near Rocky Mountain Arsenal NWR when the new light rail line out to the airport is completed. One of the case studies at the end of this report focuses on alternative transportation to and within Rocky Mountain Arsenal NWR.

Though many bus routes connect high focus areas to each of the refuges, only Two Ponds NWR has a stop directly adjacent, though still a 0.4 mile walk, to the refuge. The nearest bus stop to Rocky Mountain Arsenal NWR is 2.9 miles away. However, all buses have bike racks, so visitors could take their bike on the bus and ride this distance to the refuge. While it is permissible to bike on the road leading to the visitor center, bikes are not allowed elsewhere on the refuge. Rocky Flats NWR is not yet open to the public. When it does open, there are several nearby bus routes, however many of them are commuter buses that do not stop nearby. Additionally, if FWS prefers that visitor access is on the west side of the refuge, visitors traveling by bus will have to transfer buses in Boulder or Golden to reach the refuge.

With so many people, including high focus populations, in and projected to increase in the Denver region, FWS has a unique opportunity to work with the Regional Transportation District (RTD) to provide and improve transit access to the region's three refuges so that people can visit these refuges without using a car. Existing transit is nearby, but future transit can provide more direct and closer connections.

⁵ As defined by the Denver Regional Council of Governments in the 2035 Metro Vision Regional Transportation Plan.

Figure 10: High focus index for Denver, Colorado



Section 6: Funding Sources for ATS

The primary funding source for transportation projects in Region 6 stations is the Federal Lands Transportation Program (FLTP). Established in 2012 through Moving Ahead for Progress in the Twenty-First Century (MAP-21) surface transportation bill, the FLTP includes ATS as eligible projects. Specifically, FLTP funds can be used for transit capital costs, transit operations and maintenance expenses, trail construction, and bicycle and pedestrian enhancements. However, ATS projects will have to draw from a limited regional allocation of FLTP funds, the vast majority of which are allocated towards priority road project needs based on the FWS transportation asset portfolio and past spending from similar programs. FLTP funds will most likely advance ATS through enhancements to larger road construction projects, such as the inclusion of bicycle and pedestrian features. FLTP funds may also fund transit and bicycle/pedestrian projects that stand out as regional priorities or that perform well under a multimodal project selection process (see the next section on Project Selection).

A second funding source established through MAP-21 is the Federal Lands Access Program (FLAP), which funds projects on routes owned or maintained by state or local governments that provide access to Federal lands. Like FLTP, FLAP also includes ATS projects as eligible expenses. The program is administered jointly by the FLH, state DOTs, and local governments; exact application requirements and selection criteria vary by state. Some states require ATS projects to fill out separate applications from highway-based capital projects. FLAP may be well-suited for ATS projects in that a number of the ATS needs and opportunities identified for Region 6 stations involve access improvements on local or state roads leading to the station. These needs and opportunities include new or expanded nonmotorized trails, roadway improvements, and new transit connections between stations and nearby communities. While all of the Region 6 states already had their initial call for FLAP projects, additional calls for projects are anticipated within the next few years. For more information about the FLAP application process, visit the CFLHD website ([CFLHD FLAP Program Website](#)) for all the states in Region 6 except for Montana; Western FLHD administers the Montana program ([WFLHD FLAP Program Website](#)).

In addition to the FLTP and FLAP funding, there are a few additional funding sources that may help fulfill unmet ATS needs (Table 3). State transportation, recreation, natural resource, and environmental agencies often administer discretionary or grant funds. One significant source of these funds are part of the Transportation Alternatives Program, authorized under MAP-21; because these funds are distributed via State DOTs, the application information varies by state. States also have funding programs for transportation and recreational trails and enhancements to make transportation systems more conducive to using bicycle, pedestrian, and transit modes. In the case of state-administered funding sources, partnerships with local governments and neighboring landowners is critical for leveraging funds and developing competitive applications. The [Rivers, Trails & Conservation Assistance](#) Program (RTCA), led by the National Park Service, offers technical assistance for establishing partnerships and project ideas.

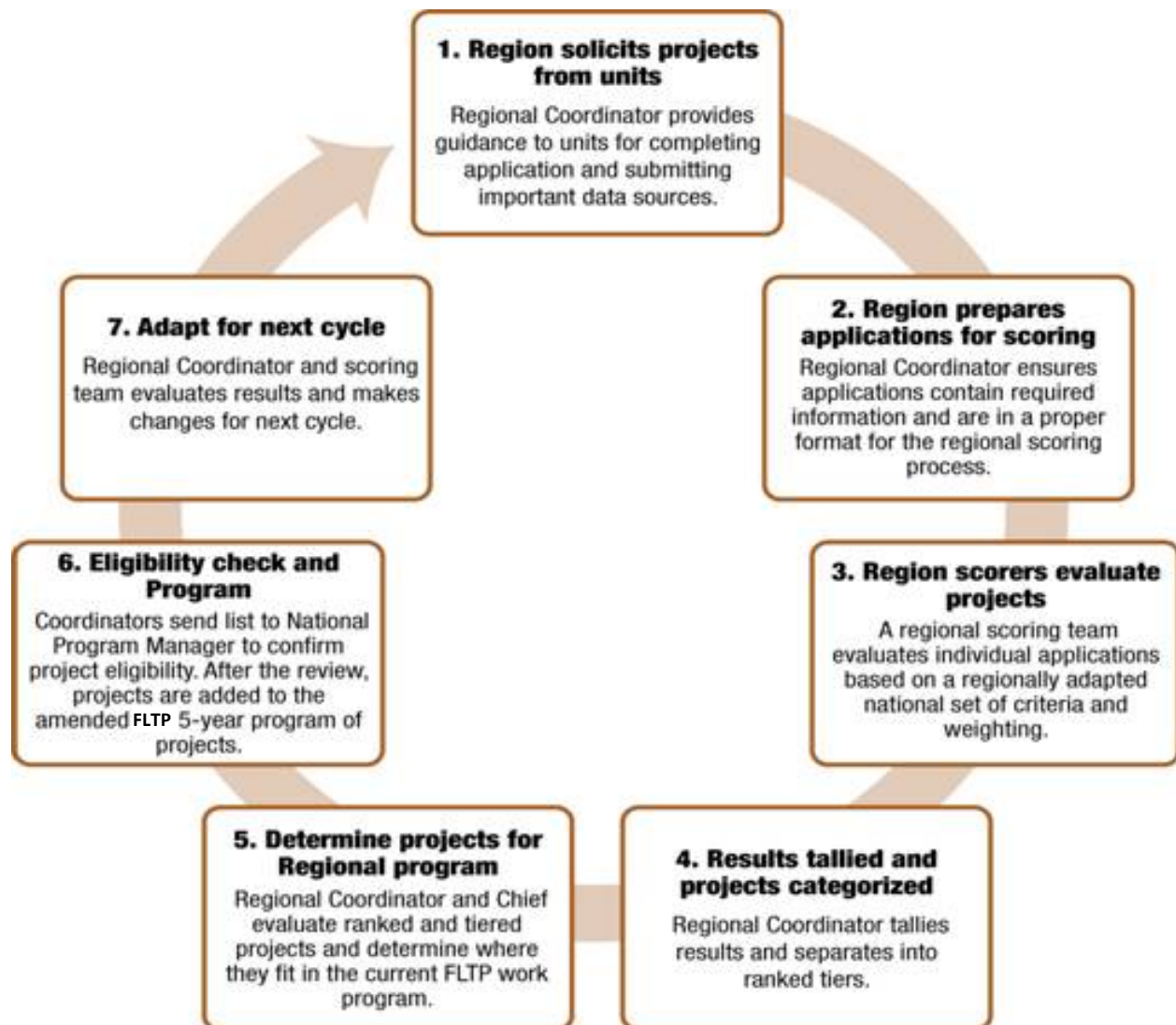
Table 4: State-based funding sources for ATS projects

State	ATS Funding Sources	Transportation Alternatives Program Link
Colorado	<u>Transit Grants Program</u>	
Kansas	<u>Public Transportation Program</u>	
Montana	<u>Community Transportation Enhancement Program</u>	<u>Transportation Alternatives Application</u>
Nebraska		<u>Transportation Enhancement Program</u>
North Dakota		<u>Transportation Alternatives information</u>
South Dakota		<u>Transportation Alternatives information</u>
Utah		<u>Transportation Alternatives information</u>
Wyoming	<u>Public Transit Programs</u> <u>Transportation Enhancement Activities- State</u>	<u>Transportation Alternatives information</u>

Section 7: Project Selection

As part of its National Long-Range Transportation Plan, the FWS is adopting a standard set of project selection criteria for FLTP funds to be adapted for use in each region. The standardized criteria and process are meant to link project selection to program goals, use data to drive decision-making, and contribute to a stable and predictable program of projects across the Service. The National plan outlines a seven-step project selection process that can be used at the regional level, as shown in Figure 11. Within these steps, there is room for the region to exercise flexibility, such as the format for submitting project ideas, the types of data submitted, the composition and methods of the team to score projects, and the management of the project selection process.

Figure 11: Regional Project Selection Process



There are six project criteria which relate to the goals of the FWS Transportation Program and will be used to select projects. Within these criteria there are multiple linkages to ATS projects, as noted below:

1. **Improves transportation safety:** The Service will address safety to ensure all road users arrive safely at destinations, regardless of their modes of transportation and trip purposes.
 - a. **ATS link:** The criterion calls out multimodal transportation safety, ensuring that projects offer safety for all users, including vulnerable users of pedestrian or bicycle modes.
2. **Improves the “state of good repair” of transportation assets:** The Service will maintain and improve upon the condition of transportation assets (i.e., roads, bridges, trails, runways, etc.), including such activities as preventative maintenance.
 - a. **ATS link:** The criterion focuses on repairing existing trails, transit, and other ATS infrastructure before building new capacity.
3. **Enhances transportation choices to, from, and within FWS stations:** The Service is committed to increasing the efficacy, quality, and availability of other modes of travel to provide more transportation choices for visitors and to support Service goals.
 - a. **ATS link:** This criterion has the most direct connection to ATS by calling for more mode choice in station access, noting that alternative modes should be available to many users, effective, and high in quality.
4. **Enhances environmental conditions in the field and/or helps to meet programmatic goals:** The FWS Transportation Program supports the Service’s mission through its transportation investments and decisions, as well as other program priorities and needs.
 - a. **ATS link:** ATS can enhance environmental conditions by removing vehicles and their potentially negative environmental impacts from roadways. This criterion also focuses on programmatic goals, such as visitor experience and environmental education, which can be easily incorporated into transit and non-motorized projects via interpretive features.
5. **Meets a priority: (a) documented in a Comprehensive Conservation Plan, (b) other transportation plan/analysis by FWS or partners; or (c) is within a Region’s high-use or urban station:** The Service will work to support the spirit of the CCP process, as well as partner planning processes, that reflect transportation needs and priorities at Stations.
 - a. **ATS link:** This criterion helps stations plan for its highest priority transportation needs; stations are encouraged to include ATS projects in their plans due to the long-term benefits they can provide in multiple goal areas. Also, high-use stations and those in urban areas may be especially well-suited to ATS due to connections with existing transportation networks and volumes of visitors.
6. **Supports transportation partnerships and leveraging of transportation funds / programs to benefit FWS:** The Service will maximize coordination opportunities and partner both internally and externally to address Service transportation priorities and leverage funds to meet transportation needs for FWS lands.
 - a. **ATS link:** Partnerships and multiple funding sources are especially critical for ATS projects, which often involve multiple types of stakeholders.

Each of these criteria either directly supports ATS or offers credit for the benefits that ATS provides, thus helping to boost the competitiveness of ATS projects for use of FLTP funds.

Section 8: RATE Case Studies

The results of the RATE survey provided a broad look at alternative transportation in the region, as well as qualitative insights that refuge managers provided in their text responses. The RATE team conducted site visits and spoke with staff at five stations to get an in-depth understanding of alternative transportation at a small sample of refuges geographically dispersed throughout the region.

Upper Souris National Wildlife Refuge

Station Background

Upper Souris National Wildlife Refuge is located approximately 25 miles northwest of Minot, North Dakota, in the Souris River Valley of north-western North Dakota. This 32,000-acre refuge is an important unit in the great waterfowl migration corridor known as the Central Flyway. FWS purchased the refuge's land in 1935 using proceeds from the sale of duck stamps. The center point of the refuge is Lake Darling, which is a 10,000-acre reservoir. Waterfowl, including tundra swans, pintails, canvasbacks, redheads, and buffleheads, nest on the refuge or use the refuge during migration. In addition to wildlife observation, fishing is a popular visitor activity; northern pike, walleye, yellow perch, and smallmouth bass may be caught in Lake Darling and the Souris River. An estimated 85,000 people visit the refuge annually to fish or to view the wildlife.

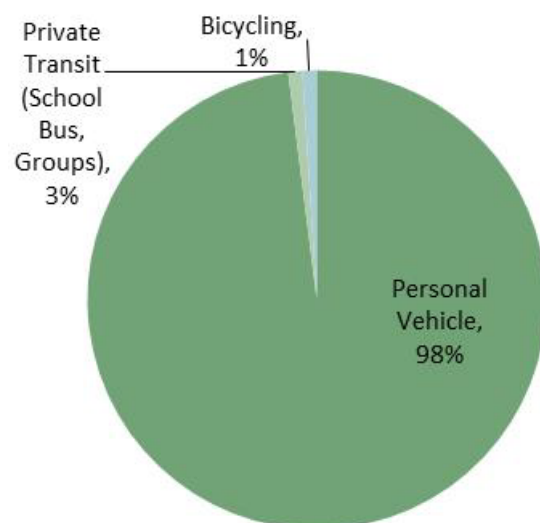
The refuge has designated 3.5 miles of Prairie-Marsh Scenic Drive as an auto tour route, which is a one-way loop road. The refuge upgraded the roadway surface from gravel to asphalt within the last five years. It plans to install interpretive signage along the auto tour route to enhance the visitor experience. Since most visitors travel to the refuge for fishing, the refuge estimates that only five percent of visitors currently use the auto tour route.

The refuge completed its [Comprehensive Conservation Plan](#) in 2007.

Highlighted RATE Questionnaire Responses

- Special events: The refuge hosts an annual ice fishing tournament in January and a fishing tournament in May as well as an annual fishing day for people with special needs during North Dakota's annual free fishing weekend in June. Additionally, during National Refuge Week, the refuge offers outdoor workshops and interpretive programs for the visitors. The refuge also hosts Envirothon, an event where teams of area high school students participate in a natural history knowledge competition. Finally, the refuge hosts a "Becoming an Outdoorswoman" workshop annually.
- Major transportation challenges:
 - Snow removal and winter driving conditions (the auto tour route is open year-round)
 - Staff capacity
 - Parking capacity at bank fishing areas
 - Speeding

Figure 12: Visitor Access by Mode at Upper Souris NWR



Existing Alternative Transportation

Transit

There is currently no transit service that serves Upper Souris NWR. The refuge believes that, since most visitors to the refuge bring equipment to fish, a transit service would not be the best fit for the refuge. However, the refuge does host approximately five school groups in the spring, which provide their own bus transportation. The refuge would like to host more school groups but is limited by staff capacity.

Non-motorized Trails

There are four hiking trails in the refuge. The refuge estimates that the use of these trails is low. There are no bicycle trails in the refuge, but bicyclists are allowed on the refuge roads and on the auto tour route.

Water Access

There are two boat-fishing areas at Lake Darling and 13 bank-fishing areas scattered along Lake Darling and the Souris River. There are four boat-launching facilities that provide visitors with access to the water. Some of the parking lots near the bank-fishing areas fill to capacity on busy days, forcing visitors to move to other locations.

Partnerships

The refuge does not have a “friends” group, but they would like to establish one. The refuge does partner with local sportsmen’s groups for tournaments and other fishing events. The refuge also has a partnership with the Teddy Roosevelt Nature and History Association, which provides some financial support to the refuge.

Opportunities and Needs

Short-term Opportunities

Add Interpretive Signage to Auto Tour Route	
Project Description	Install interpretive signage along Prairie-Marsh Scenic Drive (the auto tour route) to enhance the visitor experience and to encourage more visitors to use the auto tour route.
Refuge Priority	High
Time Frame	Short term
Dependencies	Adequate funding would be required
Potential Funding Sources	Refuge operating budget
Partners	None

Long-term Opportunities

Expand Parking Capacity at Key Parking Lots	
Project Description	Add more parking spaces at the parking lots at boat launches and bank-fishing areas that tend to fill to capacity on busy days.
Refuge Priority	Medium
Time Frame	Long term
Dependencies	Funding availability
Potential Funding Sources	Federal Lands Transportation Program
Partners	None

Garrison Dam National Fish Hatchery

Station Background

The mission of the Garrison Dam National Fish Hatchery (NFH) is to provide fish to mitigate adverse impacts from federal water projects, to maintain healthy recreational fisheries for the benefit of the angling public and for general economic productivity, and to recover threatened and endangered species.

Garrison Dam NFH is located halfway between Bismarck and Minot, ND, and is approximately an hour's drive from both cities. The hatchery was authorized in 1957 to stock fish in U.S. Army Corps of Engineers Reservoirs and is now the largest walleye producing hatchery and pallid sturgeon producing hatchery in the nation.

The hatchery has a small visitor center that can accommodate up to 30 people. It is open from Memorial Day through Labor Day and features five 400-gallon aquariums that display many of North Dakota's fish species. The hatchery is near two campgrounds and a State Park; two million people use the recreation area annually. The hatchery estimates that it has between 10,000 and 12,000 visitors annually. Visitation peaks on Sunday afternoons during the summer as people leave the campgrounds. Visitation is also high on poor weather days when the campers are looking for indoor activities.

Highlighted Issues and Special Events⁶

- The road leading to the hatchery winds down the dam and traffic move fast; it is therefore not safe for pedestrians.
- Pedestrians must stay on walking paths and away from the adjacent lined ponds.
- The parking area at the hatchery is half the size of what it was 15 years ago (it was not paved back then but is now).
- The hatchery hosts a kids' fishing derby in the fall (50 kids, 50 adults) as well as nursing home fishing events (20 adults).

Existing Alternative Transportation

Transit

There is no transit in the vicinity, and due to the hatchery's small footprint, there is no need for transit on-site. However, the hatchery hosts many school groups from April to June and again in October. The hatchery typically has 80 school groups annually from across the state. The hatchery would like to have classroom space to better accommodate school groups.

Non-motorized Trails

There are two walking and bicycling trails for public use: the Wetlands Trail Loop and the Lewis and Clark Trail Loop. These trails total 1.7 miles. People, especially kids, often use these trails to access the hatchery from the nearby campground. The trails are groomed by the refuge for cross-country skiing in the winter.

Water Access

No water access is allowed.

Partnerships

The hatchery operates with cooperative funding and in-kind support from the North Dakota Game and Fish Department and the U.S. Army Corps of Engineers. In addition to agency partnerships, the hatchery

⁶ The hatchery did not complete a RATE questionnaire.

receives support from fishing clubs across the state represented through the North Dakota Sport Fishing Congress. The annual fishing derby, termed the Physically Challenged Children's Fishing Derby, is hosted in conjunction with the Great Planers Trout and Salmon Club.

There is no friends group, but volunteers from across the country usually arrive each spring to assist hatchery staff with fish production and providing guided tours. Last year, however, the hatchery had no volunteers, so all the work on-site was done by staff. There are RV pads on-site for up to three volunteers.

Opportunities and Needs

Medium-term Opportunities

Add Classroom Space	
Project Description	Add classroom space to be able to accommodate more school groups.
Refuge Priority	Medium
Time Frame	Medium term
Dependencies	Adequate funding would be required
Potential Funding Sources	TBD
Partners	None

Audubon National Wildlife Refuge

Station Background

Audubon National Wildlife Refuge (NWR) is located 47 miles south of Minot, North Dakota. The refuge was established in 1956 as Snake Dam NWR and was given its current name in 1967 to honor John James Audubon, one of the great naturalists and wildlife painters of the 19th century. The refuge encompasses 14,735 acres of native prairie, planted grasslands, and wetlands and is home to a wide variety of birds, fish, and mammals. It also encompasses a large portion of Lake Audubon, which was formed by the damming of the Missouri River. The Lake contains many islands that serve as critical bird habitat. The lake is closed to public boating and shore fishing, primarily due to the presence of vulnerable bird populations. However, ice fishing is permitted on portions of the lake.

The refuge has a 7.5-mile auto tour route that has a gravel surface. It provides access to the areas of the refuge that are open to visitors, including four boat launches. Pedestrians are allowed on the auto tour route, but refuge staff does not observe many. The refuge recently opened a new Visitor Center that includes interpretive displays, a classroom, a gift shop, and offices for administrative staff.

The refuge completed its [Comprehensive Conservation Plan](#) in 2008.

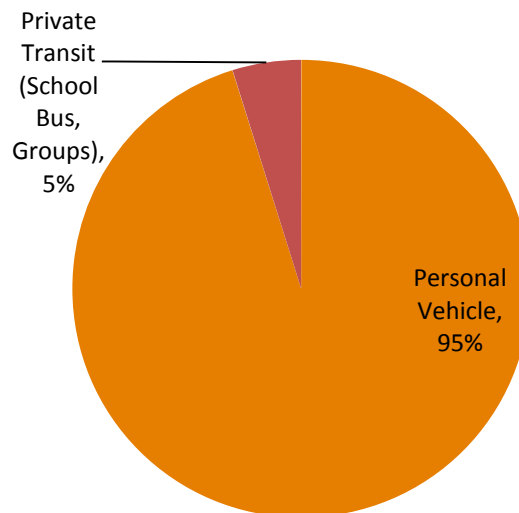
Highlighted RATE Questionnaire Responses

- Special events: The refuge occasionally hosts

nest box and bird feeding workshops for visitors, which can draw 100 children and their parents. The refuge also hosts hunting and fishing skills days annually.

- The refuge also organizes pontoon boat tours of the islands in Lake Audubon to view nesting birds in June. These tours accommodate around 20 people each and are very popular. Pontoon boat tours last 1.5-2 hours and reservations must be made in advance.
- Major transportation challenges:
 - Condition of roads
 - Staff capacity
 - Snow removal and winter driving conditions
 - Distance from population centers
 - Funding shortages

Figure 13 Visitor Access by Mode for Audubon NWR



Existing Alternative Transportation

Transit

There is currently no transit service that serves Audubon NWR. However, the refuge does host 20-30 school groups in the spring, which provide their own bus transportation. The refuge would like to host more school groups, but the current staffing capacity limits the number of groups it can handle. Also, senior centers often organize shuttle tours of the auto tour route.

Non-motorized Trails

The refuge includes the Prairie Nature Trail, a one-mile, self-guided trail that begins near the entrance of the auto tour route. The trail winds through grasslands and along wetlands, allowing visitors to observe many species of plants, birds, and other animals.

There are no bicycle trails within the refuge. Bicyclists are allowed on the auto tour route, but since the surface is gravel, staff do not observe many bicyclists on the route. Coleharbor, ND, four miles south of the refuge's Visitor Center, is within bicycling distance of the auto tour route.

Water Access

There are four boat launches within the refuge, all of which are located along the auto tour route. Public boating is not allowed in the portion of Lake Audubon that is included in Audubon NWR, but the refuge sometimes offers pontoon boat tours. In the winter, visitors use the boat launches for ice fishing access. The auto tour route is not plowed in the winter, but visitation is still open. However, snowmobiles and ATVs are only allowed on the frozen lake, not on refuge roads.

Partnerships

The refuge has a friends group (501c3) called Audubon Refuge Partners, Inc. The group has 25 active members and they conduct environmental education, help organize events, and provide leadership in working with visitors. The friends group does some fundraising and grant writing to support the refuge. The group also manages the gift shop in the visitor center.

Opportunities and Needs

Short-term Opportunities

Add Interpretive Signage to Auto Tour Route	
Project Description	Install interpretive signage along the 7.5-mile auto tour route to enhance the visitor experience and to encourage more visitors to use the auto tour route.
Refuge Priority	Medium
Time Frame	Short term
Dependencies	Funding availability
Potential Funding Sources	Refuge operating budget
Partners	None

Long-term Opportunities

Pave Roads that Provide Access to the Refuge	
Project Description	The roads from Route 83 to the refuge (11 th Street and 33 rd Avenue) are owned and managed by the county. They have gravel surfaces, but the refuge is considering paving them. The refuge could also make enhancements for pedestrians and bicyclists as part of the improvements to the roads.
Refuge Priority	Low
Time Frame	Long term
Dependencies	Coordination and cooperation with the county; funding availability
Potential Funding Sources	Federal Lands Access Program, county funding
Partners	McLean County

Lee Metcalf National Wildlife Refuge

Station Background

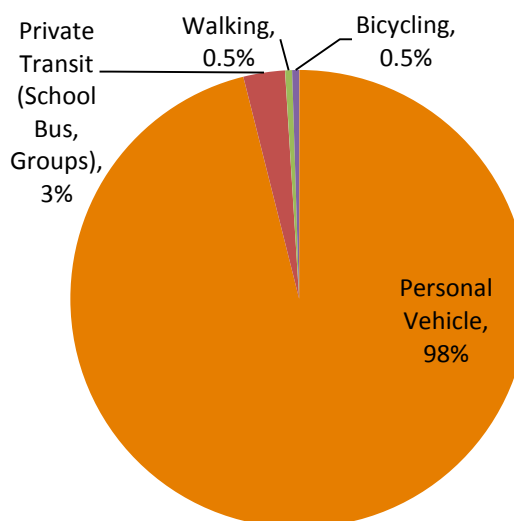
Lee Metcalf National Wildlife Refuge (NWR) is located approximately 30 miles south of Missoula, Montana. The 2,871-acre refuge was established in 1963 primarily as protected habitat for migratory birds. FWS purchased the refuge's land using proceeds from the sale of duck stamps. In addition to migratory birds, the refuge is host to eagles, osprey, wolves, black bear, moose, whitetail deer, elk, and other species. The refuge is also a designated critical habitat for bull trout. An estimated 165,000 people visit the refuge annually to view the wildlife as well as for hunting and fishing. Many of the refuge's visitors are local to the area, but there are a significant number of long-distance visitors.

The refuge has a long-term plan to designate Wildfowl Lane, which loops through the refuge and connects at both ends to Eastside Highway, as an auto tour route. The refuge has outlined this plan in its [Comprehensive Conservation Plan](#) (CCP). The road is owned by the county, so the refuge will work closely with the county to designate it as an auto tour route and to add new pull-offs and interpretation opportunities. After the improvements, Wildfowl Lane will continue to be open to bicyclists and pedestrians; the width of the roadway allows for safe passage of vehicles, bicyclists, and pedestrians.

Highlighted Issues⁷

- Schools and the refuge: In May, the refuge hosts one to six school visits a day. During school visits, the Outdoor Recreation Planner leads a discussion at the visitor center and sometimes takes the students on a hike. The groups often go on self-guided tours of the refuge. Also, the refuge has a volunteer that visits area schools to talk to primarily 4th graders about the refuge and its wildlife.
- Special events: the refuge hosts several fishing events annually, including a kids' fishing day organized by a local fisherman's club.
- A regional trail is within three miles of the refuge.
- Major transportation challenges:
 - Resource conflicts
 - Funding shortages
 - Staff capacity
 - Condition of roads
 - Parking capacity

Figure 14: Visitor Access by Mode at Lee Metcalf NWR



⁷ The refuge did not respond to the RATE survey; accordingly, the Volpe Center added special events and challenges and estimated access by mode based on notes from their discussions with refuge staff during the site visit.

Existing Alternative Transportation

Transit

There is currently no transit service that serves Lee Metcalf NWR. Additionally, the refuge does not see a need for shuttle service for non-event days. However, the refuge would consider a shuttle specifically for its fishing events, which attract a large number of visitors to specific locations within the refuge. The shuttle would reduce the number of vehicles traveling within the refuge, but visitors would still need to travel to the refuge on their own. If the refuge pursued a shuttle, it would need to partner with another entity to operate and maintain it since the refuge would only use the shuttle a few times a year.

Non-motorized Trails

The refuge has two non-motorized trails. The Kenai Nature Trail is a 1.25-mile trail accessed just north of the refuge headquarters. The first segment of the trail is a 0.25-mile paved loop that is five feet wide and accessible to persons with disabilities. The rest of the trail is a soil and gravel footpath that tracks northward, above and parallel to the eastern shorelines of Ponds 8 and 10. The second trail is 2.5 miles long and consists of two paved loops in the refuge's Wildlife Viewing Area (WVA) on the southern end of the refuge. The trail passes through riverfront and gallery forest and persistent emergent wetland and is designated as a National Recreation Trail. The first half mile of the trail is a 10-foot-wide paved path that is considered accessible for visitors with disabilities. This paved section of trail begins at the trailhead, located at a large parking area, and ends at a turn-around point at the refuge's shelter at the edge of the Bitterroot River. Other sections of the trail are soil or gravel. The WVA is open year-round from dawn to dusk and is very popular with refuge visitors. Dogs on leashes are allowed on the trail, but bicycles or horses are prohibited.

In its CCP, the refuge proposed a new 1.25-mile walking trail loop around Pond 8 to provide visitors with more opportunities to independently explore the refuge and view wildlife. This trail will extend the Kenai Nature Trail westward using the Pond 8 dike road; it will then loop south and connect to Wildfowl Lane. This trail will be located close to an existing heron rookery and waterfowl habitat. To protect these species, the trail will be closed seasonally.

The Bitterroot Bike trail runs adjacent to US Route 93 between the communities of Lolo and Hamilton. Bicyclists can access the refuge from the trail via local roads to Wildfowl Lane. The distance between the trail and the refuge's Visitor Center is over five miles. Bicyclists can follow existing signage to access the refuge.

Water Access

There are no boat launches within the refuge. Visitors can float and fish the part of the Bitterroot River that passes through the refuge. However, they must remain below the high watermark and must not access the refuge from the river.

Partnerships

The refuge does not have a "friends" group; despite this, the refuge benefits from over 200 volunteers a year. A Bass Club in Missoula organizes a kids' fishing day annually (2012 was the 30th year). In addition to parents bringing their children in private vehicles, the Bass Club provides transportation for children for the event. The refuge grants the Bass Club a special use permit for the event.

The refuge does not currently share resources with other local public lands in the area, but would consider the opportunity, particularly for a potential shuttle vehicle.

Opportunities and Needs

Short-term Opportunities

Convert Wildfowl Lane to Auto Tour Route	
Project Description	Work with the county to resurface Wildfowl Lane and to add vehicle pull-offs and interpretive signs. The improved roadway will retain bicycle and pedestrian access.
Refuge Priority	High
Time Frame	Short term
Dependencies	Funding availability; coordination and consensus with the county
Potential Funding Sources	Federal Lands Access Program; Federal Lands Transportation Program, county transportation funds
Partners	Ravalli County

Long-term Opportunities

Construct Walking Trail Around Pond 8	
Project Description	Construct a 1.25-mile walking trail loop around Pond 8 as an extension of the Kenai Nature Trail using the Pond 8 dike road and looping south and then connect to Wildfowl Lane.
Refuge Priority	High
Time Frame	Long term
Dependencies	Funding availability
Potential Funding Sources	Refuge operating funds
Partners	None

Operate Shuttle Service on Event Days	
Project Description	Purchase a shuttle vehicle (in conjunction with partner agencies) and operate transit service to and/or within the refuge on event days with high visitation
Refuge Priority	Low
Time Frame	Long term
Dependencies	Partnership with other Federal lands or communities; would require a major funding investment
Potential Funding Sources	Federal Lands Access Program; Federal Lands Transportation Program; funds from other Federal lands
Partners	Other Federal lands or communities
Peer costs	\$25,000 to \$40,000 purchase price per new vehicle, \$50-100 per hour operating expenses

National Bison Range

Station Background

National Bison Range is located in northwest Montana, 45 miles north of Missoula. The 18,500-acre range was established in 1908 to support a population of American bison. Between 350 and 500 bison reside in the range, which is also home to elk, white-tail and mule deer, pronghorn antelope, bighorn sheep, and black bear. An estimated 122,000 people visit the range annually to view the wildlife, particularly during the spring and fall months when the bison herds are on the move. The range allows visitors to experience the wildlife on its 19-mile auto tour route, which is open from early May through early October. A shorter auto tour route is open year-round and is routinely cleared of snow. National Bison Range also manages Nine Pipe National Wildlife Refuge (NWR), Pablo NWR, and several Waterfowl Production Areas.

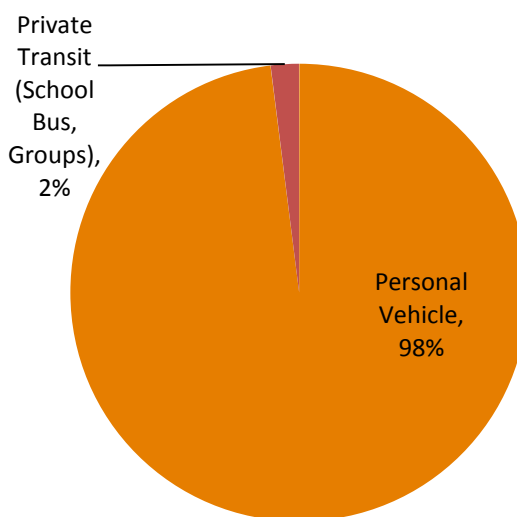
The range charges entrance fees of \$5 per private vehicle and \$25 per bus or tour group. Holders of active America the Beautiful - the National Parks and Federal Recreational Lands Passes can access the range for free.

The range is considering relocating its visitor center to the eastern edge of the range. This relocation would place the visitor center close to US Route 93, which is the most direct route between Missoula and Kalispell and other outdoor recreation sites in Montana, including Flathead Lake-Wild Horse Island State Park and Glacier National Park. It would also provide better access from the range to Nine Pipe NWR and Pablo NWR for both visitors and staff. Relocating the visitor center would require the construction of a 1.5-mile road to connect to the auto tour route.

Highlighted RATE Questionnaire Responses

- Special events: In the spring, rutting (mating season) and the movement of the herd to the areas of the range viewable from the auto tour route draw many visitors, including school groups. In the fall, the annual bison round-up (where the herds are moved to the south-facing slopes of the range) and elk bugling attract large groups of visitors. The weekends in the spring and fall when staff move the herd draw 2,000-3,000 visitors each.
- Major transportation challenges:
 - Resource conflicts
 - Funding shortages
 - Lack of transit service
 - Lack of safe pedestrian and bicycle access
 - Staff capacity
 - Condition of roads

Figure 15: Visitor Access by Mode at National Bison Range



Existing Alternative Transportation

Transit

There is currently no transit service that serves National Bison Range. However, the range expressed interest in purchasing several transit vehicles to transport visitors throughout the range during high-

visitation days to reduce congestion (but primarily along the auto tour route) and/or to transport range employees and visitors to the range from surrounding communities to improve access to the range for those without personal vehicles. Due to the steep grades and tight turns on the auto tour route, the vehicles would have to be vans or small buses.

Non-motorized Trails

There are no non-motorized trails in National Bison Range. Bicyclists are not allowed on the auto tour route because of safety concerns relating to the surface (it is a gravel road), steep inclines, and conflicts with wildlife. For this last reason, visitors are encouraged to stay in their cars except at designated locations, which include picnic areas, the visitor center, and viewpoints. The southern portion of the range is closed to visitors. Due to the presence of bison and other large wild animals, the range is not planning to establish any non-motorized trails.

Partnerships

The range does not have a “friends” group, but it does have a group of volunteers that help out at the range during events such as the annual bison round-up. The range also has other volunteers, many of whom are University of Montana students, who volunteer at the visitor center and gift shop. The range also coordinates with schools that visit often in the spring for field trips.

Opportunities and Needs

Short-term Opportunities

Chip-Seal Auto Tour Route	
Project Description	Replace the gravel surface of the auto tour route with chip-sealed pavement
Refuge Priority	High
Time Frame	Short term, as the maintenance of the road, which must be re-graded and have magnesium chloride (required to minimize dust) applied several times a year, is a significant cost.
Dependencies	Funding availability; it is likely that the cost to chip-seal the road would exceed the annual maintenance costs of the gravel surface.
Potential Funding Sources	Visitor fees
Partners	None

Long-term Opportunities

Relocate Visitor Center to Eastern Portion of Range	
Project Description	Build a new visitor center on the eastern portion of the range, close to US Route 93. This relocation would require the construction of a 1.5-mile road connecting the new visitor center to the auto tour route.
Refuge Priority	High
Time Frame	Long term
Dependencies	Major funding investment above and beyond the range’s operating budget,
Potential Funding Sources	TBD
Partners	None

Operate Shuttle Service to and within the Range	
Project Description	Institute a shuttle service to and within the range, using several vans or small buses
Refuge Priority	Medium
Time Frame	Long term
Dependencies	Partnership with local communities (Polson and/or Missoula), chip-sealed auto tour route (to minimize wear and tear on vehicles)
Potential Funding Sources	Federal Lands Access Program, Federal Lands Transportation Program, visitor or rider fees
Partners	City of Polson, City of Missoula
Peer costs	\$25,000 to \$40,000 purchase price per new vehicle, \$50-100 per hour operating expenses

Rocky Mountain Arsenal National Wildlife Refuge

Station Background

Rocky Mountain Arsenal National Wildlife Refuge (NWR), located 10 miles from downtown Denver, is nearly 17,000 acres, making it one of the largest urban wildlife refuges in the United States. It consists of open lakes, wetlands, prairie grasslands, and woodlands.

Each year, visitors come to the refuge to see its wildlife and scenic habitat as well as learn about native prairie species. According to its website, the refuge has been called “a significant habitat island for wildlife” and “a place to renew the relationship with nature.” The refuge is a sanctuary for more than 330 species of animals, including bison, deer, coyotes, bald eagles and burrowing owls.

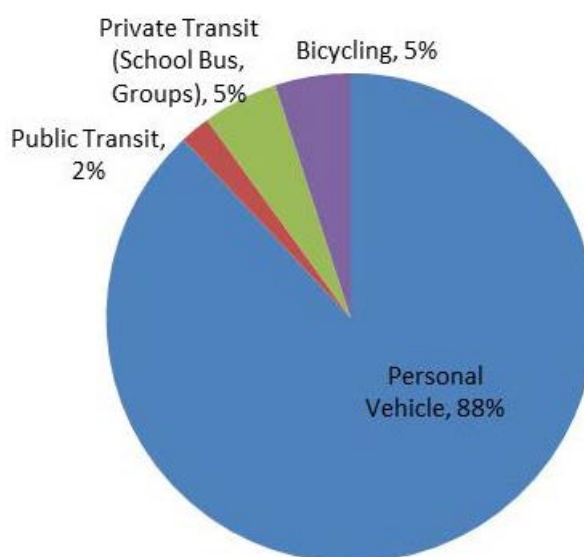
Due to its location within the Denver metropolitan area, one of the refuge’s primary goals is to provide environmental education programs for urban school children. Popular activities include interpretative programs, environmental education, fishing, wildlife observation, and photography. The refuge also provides hiking trails, site tours for the public, and a self-guided auto tour along Wildlife Drive, which is nine miles long.

The refuge is currently drafting its Comprehensive Conservation Plan. Visitation significantly increased from 23,000 in 2012 to an estimated 300,000 in 2013. The refuge attributes this dramatic increase to the “official” opening of the auto tour route and significant marketing and publicity of the auto tour route and the refuge in general.

Highlighted RATE Questionnaire Responses

- Distance to nearest regional trail: Direct connection to a regional multi-use trail network
- Distance to nearest transit service: half mile to one mile⁸
- Special events:
 - July 4th, Refuge Day, Fishing Frenzy
 - Each event draws 3,000 or more visitors
- Major transportation challenges:
 - Congestion on roads leading to the refuge
 - Staff capacity shortages
 - Appropriate and effective signage
- Highest three priorities:
 - Parking management solutions
 - Bicycle paths within the station
 - Improved signage

Figure 16: Visitor Access by Mode at RMA NWR



Existing Alternative Transportation

Transit

The refuge currently owns and operates three transit vehicles: one 34-passenger bus (Figure 17), one 16-passenger shuttle (Figure 18), and one 14-passenger van. These vehicles are driven by FWS staff and volunteers from the refuge’s friends group. Commercial drivers’ licenses (CDLs) are needed to operate the two larger vehicles, and it is difficult for the refuge to maintain volunteer and staff with CDLs. Refuge

⁸ From entrance, not from visitors center

staff has noted that the vehicles are difficult to maintain; they have found that driving the shuttles for longer distances at higher speeds is necessary to keep them in better working condition. Staff believes that the vehicles were not designed to be operated only periodically for short distances at low speeds.

These vehicles operate along a 13-mile loop, which is currently mostly closed to automobile traffic, through the refuge and the cost is free. The loop takes 1.5 hours, and a FWS staff or a volunteer provides interpretation along the way. The refuge is considering allowing automobile traffic, and possibly bicycle traffic, along this route in the near short- to medium-term.

In 2012, the vehicles operated two days a week in the summer months (Fridays and Saturdays), and 90 percent of bus tours were full with reserved seats. Due to sequestration-related staff cuts and hiring freezes, they now only operate a couple of days a month. For example, in December 2013 and January 2014, the refuge held bus tours each morning of one weekend each month. The refuge hopes to increase service this summer to two weekends a month.

Many school groups take school buses to the refuge; most of these groups are from nearby and have more than 50 percent of their students on free and reduced lunch programs. The friends group (Friends of the Front Range Wildlife Refuges) raises funding to help subsidize the cost of these trips. Whereas staff or a volunteer boarded the bus and provided interpretation in the past, due to sequestration, this is no longer possible. However, school buses are still allowed to travel to tour loop and materials are available for teachers to provide interpretation.

Figure 17: 34-passenger bus



Figure 18: 16-passenger shuttle



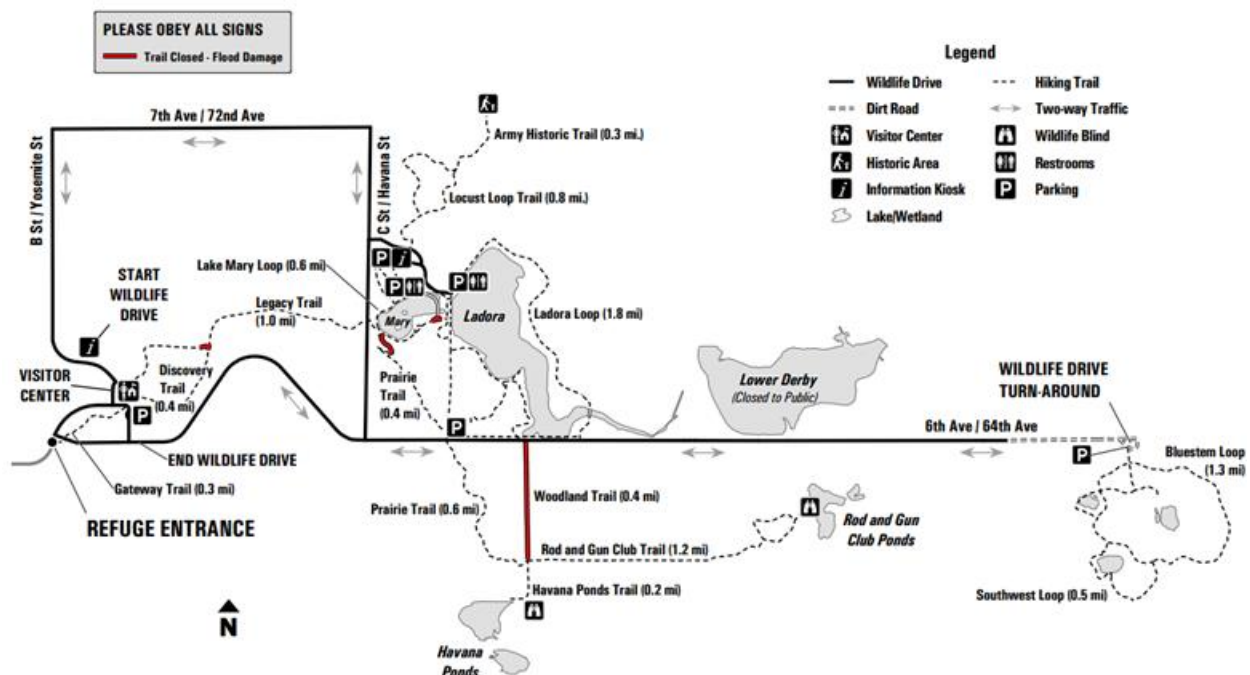
The Regional Transportation District (RTD), which is the metropolitan area's largest public transportation agency, offers one bus with service 2.9 miles from the refuge visitor center. The neighboring community of Commerce City completed a Paul S. Sarbanes Transit in the Parks-funded study with the Stapleton Development District and the Refuge. The study determined that transit would be a viable mode for accessing the refuge's visitor center in the future.

RTD's light rail extension to the airport, which is to open in 2016, will bring four stations to within three-miles of the refuge. One of the stations will be across the street from the east side of the refuge, but not near any current access points. The refuge is considering allowing pedestrian access through the perimeter fence at this location.

Non-motorized Trails

There are over 10 miles of trails throughout the refuge (Figure 19). These trails, which cross through grassland, wetlands, and woodland habitat, are open year-round for hiking or snowshoeing. As stated on the refuge's website, bicycling is prohibited on the refuge except from the refuge entrance road to the Visitor Center, where bicycle racks are located. Running, jogging, and pets are also prohibited in the refuge.

Figure 19: Hiking trails and Wildlife Drive auto tour



Constructed in partnership with Commerce City, the 13-mile Perimeter Trail covers the eastern, northern, and western refuge boundaries and allows bicycle and pedestrian access with potential connections to other regional trails. The Perimeter Trail will cover the 19-mile circumference of the refuge once it is fully constructed. As part of the CCP process, the refuge is considering creating pedestrian access points along the eastern and southern extents of the perimeter fence.

The Rocky Mountain Greenway's eastern terminus ends at the refuge's Visitor Center. Once completed, the Rocky Mountain Greenway will create an uninterrupted trail and open space network that connects the refuge to Two Ponds NWR, Rocky Flats NWR, and Rocky Mountain National Park (see conceptual maps [here](#) and [here](#)). The Greenway's eastern trail link, which stretches about three miles from the Sand Creek trail to the Visitor Center, was completed in 2013.

In February 2013, the last round of the Federal Transit Administration's Transit in Parks program provided \$1.7 million to develop the Rocky Mountain Greenway. The grant will provide for the initial design and construction of the western trail link, connecting Rocky Flats and Two Ponds NWRs to the Greater Denver trail system. The new trail link will be approximately seven miles long.

Water Access

Boating is not allowed in the refuge's lakes.

Partnerships

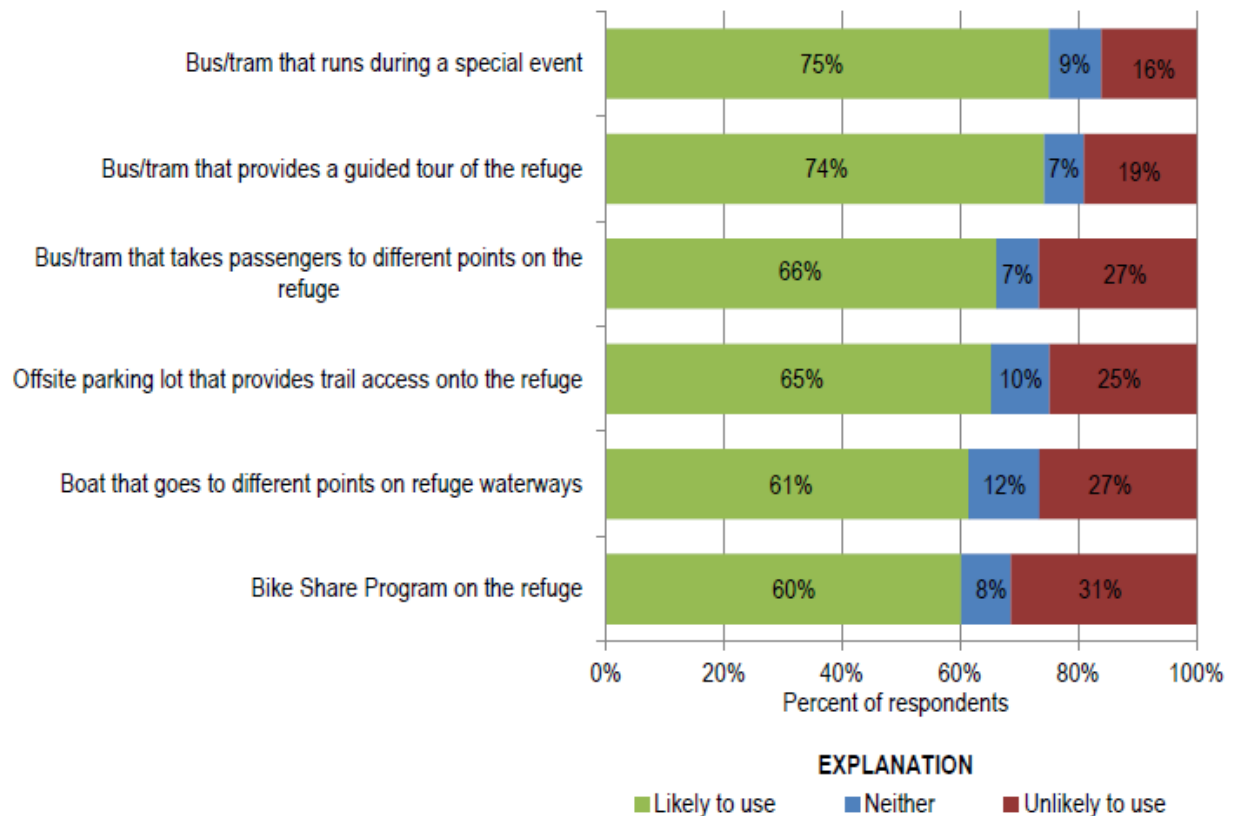
The Friends of the Front Range Wildlife Refuges is a non-profit membership community that supports the two largest national wildlife refuges in the Denver metro area: the Rocky Mountain Arsenal and Rocky Flats National Wildlife Refuge. Through volunteering and fundraising, the Friends Group supports refuge programs, volunteers, environmental education for kids, and habitat restoration among many other projects. Nature's Nest Books and Gifts is a gift shop managed by the Friends Group and is located inside the Visitor Center. Proceeds support refuge programs, volunteers, and environmental education for kids.

The refuge also works with both Mile High Youth Corp and Groundwork Denver youth between the ages of 18 and 24 to build and maintain refuge trails, remove invasive species, and assist with habitat restoration projects.

Opportunities and Needs

According to the United States Geological Survey's *National Wildlife Refuge Visitor Survey 2012: Individual Refuge Results for Rocky Mountain Arsenal National Wildlife Refuge*, a majority of visitors would be interested in taking transit for different purposes at the refuge (Figure 20). While these stated likelihoods would not translate directly into the number of visitors who would take transit once any of these services were in place, these results are an indication that these services would be (and are) popular on the refuge.

Figure 20: Visitor's likelihood of using alternative transportation options at the refuge in the future (n > 190)



Short-term Opportunities

Increase Shuttle Service	
Project Description	Increase shuttle service by hiring seasonal or permanent staff or by training/recruiting more volunteers to drive and provide interpretation on the shuttle.
Refuge Priority	High
Time Frame	Short term
Dependencies	Adequate funding (for staff and O&M) and staff time would be required
Potential Funding Sources	FLTP, refuge operating budget, rider fees, concessionaire
Partners	Volunteers, friends group (for recruiting more drivers and interpreters)

Bike Lanes along Entrance Road	
Project Description	Stripe bike lanes along the road from the entrance to the Visitor Center
Refuge Priority	Medium
Time Frame	Short term
Dependencies	Adequate funding would be required
Potential Funding Sources	FLTP, refuge operating budget
Partners	Commerce City, advocacy groups like BikeDenver

Increase Nonmotorized Access Points	
Project Description	Increase nonmotorized access points by installing gates along the perimeter fence.
Refuge Priority	High
Time Frame	Short term
Dependencies	Adequate funding
Potential Funding Sources	FLTP, refuge operating budget
Partners	Adjacent communities, advocacy groups like BikeDenver

Medium-term Opportunities

Shuttle Connection to External Locations	
Project Description	Run shuttles over to the soccer stadium, nearby bus/LRT stops, and/or the airport
Refuge Priority	Medium
Time Frame	Medium term
Dependencies	Adequate funding and staff (with CDLs) would be required; marketing with City and soccer stadium
Potential Funding Sources	FLTP, refuge operating budget, rider fees, concessionaire
Partners	Commerce City, RTD, Denver International Airport, soccer stadium representative

Appendix A: Selected Regional ATS Opportunities

In the questionnaire, 30 stations in the region responded that they see opportunities for ATS to or within their refuge. These refuges represent a spectrum of needs and opportunities in Region 6. While the list of opportunities and needs in Table 5 is not exhaustive, it represents some of the most promising ATS activities that have not yet been funded. It also represents several longer-term activities that may be relevant for many refuges throughout the region.

In addition to the information summarized in the table, stations were asked which of these improvements would be their highest three priorities. The following stations identified the following alternative transportation improvements within their top three priorities (rank is in parentheses).

All three priorities:

- Bear River Migratory Bird Refuge: more trails (1), public transit for events (2), public transit to station (3)
- Bowdoin NWR: new transit service for access to the station (1), transit for special events (2), bicycle paths for access to station (3)
- Gavins Point NFH: pedestrian paths (1), bike paths (2), transit to special events (3)
- Monte Vista NWR: bicycle paths within station (1), bicycle paths for access to station (2), pedestrian/bicycle paths within station (3)

Two priorities:

- Nine Pipe NWR: pedestrian paths within station (1), bicycle paths within station (2)
- Sully's Hill NGP: pedestrian or bicycle path to refuge (1), transit for special events (2)
- Flint Hills NWR: bicycle paths for access to station (2), transit for special events (3)

One priority:

- Alamosa NWR: bicycle and accessible pedestrian paths for access to station (1)
- D.C. Booth Historic NFH and Archives: pedestrian paths within station (1)
- Fort Niobrara NWR: bicycle paths to station (1)
- Lake Andes NWRC: pedestrian paths (1)
- Marais des Cygnes NWR: pedestrian paths within station (1)
- Red Rock Lakes NWR: internal transit (1)
- Seedskadee and Cokeville Meadows NWR Complex: pedestrian paths (1)
- Chase Lake WMD: internal transit (2)
- Madison WMD: pedestrian paths within station (2)
- National Bison Range: internal transit/transit for special events (2)
- Pablo: bicycle paths for access to station (2)
- Rocky Mountain Arsenal NWR: bicycle paths within the station (2)
- Sand Lake NWR/WMD Complex: pedestrian paths (2)
- Baca NWR: pedestrian paths for access (3)
- Jones Hole NWF: new transit (3)
- Lostwood WMD: pedestrian paths (3)
- Northwest Montana WMD: pedestrian paths (3)

Table 5: Self-reported alternative transportation opportunities

Refuge	Internal transit or transit between units	New transit service for access to the station	Transit for special events	Pedestrian paths within station	Pedestrian paths for access to station	Bicycle paths within station	Bicycle paths for access to station	Total topics of interest
Bear River Migratory Bird Refuge	x	x	x	x		x		5
Marais des Cygnes NWR			x	x	x	x	x	5
Alamosa NWR				x	x	x	x	4
Flint Hills NWR		x	x			x	x	4
National Bison Range	x	x	x	x				4
Bowdoin NWR		x	x				x	3
Gavins Point NFH			x	x		x		3
Lostwood NWR and WMD		x	x	x				3
Monte Vista NWR				x		x	x	3
Pablo NWR					x	x	x	3
Rocky Mountain Arsenal NWR		x				x	x	3
Sully's Hill NGP			x		x		x	3
Baca NWR					x		x	2
Chase Lake WMD	x		x					2
Jackson NFH		x	x					2
Madison WMD				x		x		2
Nine Pipe NWR				x		x		2
Arapaho NWR				x				1
Charles M. Russell NWR & UL Bend NWR			x					1
Creston NFH							x	1
D.C. Booth Historic NFH and Archives				x				1
Fort Niobrara NWR							x	1
Jones Hole NFH		x						1
Lake Andes NWRC				x				1
Northwest Montana WMD				x				1
Ouray NWR						x		1
Quivira NWR			x					1
Red Rock Lakes NWR	x							1
Sand Lake NWR/WMD Complex				x				1
Seedskaadee and Cokeville Meadows NWR Complex				x				1
Total	4	8	12	15	5	11	11	66