



# PLAN 2035

## the National Long Range Transportation Plan

*Moving People, Conserving Wildlife*

**DRAFT**





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*Cover: Muscatatuck NWR*

Indiana

# From the Transportation Program Manager...

After nearly three years of collaboration and planning, the U.S. Fish and Wildlife Service is pleased to present our Agency's Long Range Transportation Plan. The first national level, long range transportation planning document for a federal land management agency, the publication of this plan marks a significant achievement for transportation planning in the public lands arena.

On the most basic level, transportation is about movement of people or things across time and space. In the domain of transportation within Fish and Wildlife Service, we are tasked with managing a system that provides mobility and access to sensitive habitats and natural resources in rural landscapes, urban areas, wetlands, coastal plains, mountain highlands and everything in between.

With more than 150 million acres, 560 national wildlife refuges, 70 national fish hatcheries, and 38 wetland management districts, the task is daunting in scope alone. PLAN 2035 is our Agency's answer to solving resource management challenges through transportation solutions. Safety toolkits, roadway design standards, multi-modal access opportunities and a myriad of other policies and practices not only let us connect to and move freely about our lands, but also help us improve these legacy resources for generations of visitors to come.

We need a robust network of not just roads and parking lots, but foot and bicycle paths, transit systems, bridges and water trails that lay lightly on the landscape, yet are resilient to the consequences of natural disasters. While our refuges and fish hatcheries were created to protect and conserve biodiversity, we should also recognize the role they play in the mitigation of climate change and its impacts. Our lands should be accessible to all populations including underrepresented and transit dependent communities. Our urban units should function as training grounds for the next generation of land managers while our rural and remote units should drive regional tourism and bolster economic development.

The guidance and policies contained in this plan will set the stage for achieving this lofty vision while establishing the transportation program as a progressive, innovative and integral part of the Fish and Wildlife Service.

In closing, the transportation program is appreciative of the partnership and support the Federal Highway Administration has and will continue to provide in the Federal Lands Transportation Programs. We will continue to demonstrate our strength as a core partner as well as the value of investing in America's Wildest Lands and Great Outdoors.

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# Executive Summary



*Siletz Bay NWR*

Oregon

# Why Transportation?

The primary function of any transportation system is the simple movement of people, goods or equipment across time and space. However, in the realm of federal land management, the transportation system of the U.S. Fish and Wildlife Service (FWS or the Service) must be so much more. Transportation touches every aspect of the Service from the public that relies on safe access networks to the land managers that need to be able to move freely about the landscape, transportation is indispensable.

The purpose of this document is to illuminate the best known practices to manage a transportation system for a resource conservation agency.

In the face of changing climates, shrinking budgets and increased visitation, defining priorities for a national transportation program is a challenge. This Long Range Transportation Plan (LRTP or PLAN 2035) will help guide programmatic decisions while ensuring the transportation program supports the Service mission:

*‘Working with others to conserve, protect and enhance fish, wildlife, plants and their habitats for the continuing benefit of the American people.’*

- FWS Mission

To help balance this dual-purpose (resource conservation and public benefit) mission, this plan proposes a vision and six strategic goals that the transportation program will uphold through the actions and policies in this plan. The centerpiece of the plan is a performance based project selection process that will directly link the goals of the program with the way transportation projects are planned, designed and delivered.

While it is difficult to put a price on the ecological services the FWS provides (like habitat conservation, outdoor education, critical species protection and improvements in environmental quality), the financial dividends that the Refuge and Hatchery systems pay to local economies are well documented in national reports like Banking on Nature (October, 2013).

These outcomes, both monetary and nonmonetary, are predicated on safe, sustainable and resilient mobility and access networks that are the direct purview of the transportation program.

Thanks to nearly two decades of dedicated funding, the transportation program has been able to determine inventories, collect condition data, address the most pressing safety issues and fix the highest priority assets. Looking forward, the program must take a more strategic approach to demonstrate program stewardship while maintaining the Service’s commitment to leadership in the federal lands transportation arena. This document is a first step in meeting that commitment while helping to build a world class and context-sensitive transportation network that services our lands.

PLAN 2035 is written for Service project leaders at individual units, Regional Service leadership, national level decision-makers, non-Service partners, and stakeholders.

It should be noted that PLAN 2035 focuses on public use transportation facilities that connect to or are within Service lands. There are other Service programs relating to non-public use (or admin. only) transportation facilities as well as efforts within the federal-aid transportation system that are not eligible for Federal Lands Transportation Program (FLTP) funding. Being beyond the scope of this effort, those systems and programs generally are not covered in this plan.

# Transportation Vision

*‘To work collaboratively for future planning and stewardship of a context sensitive, multi-modal transportation system that helps conserve natural resources, provides a superior level of safety, delivers cost effective and environmentally sustainable transportation options, generates local economic opportunities and enhances the visitation experience for all visitors including underrepresented and mobility limited-populations.’*

# Program Principles

Consistent with Department of Transportation (USDOT) and national transportation policy (Moving Ahead for Progress in the 21st century or MAP-21, see page 62) guidance, the transportation program has adapted these three principles that guide this plan:

**[T] - Transportation** - The most basic function of any transportation network, the safe and efficient movement of people and equipment is essential to the program. The Refuge System is also mandated to operate and maintain a safe and functioning transportation network to service wildlife dependent recreational uses as provisioned in the National Wildlife Refuge Improvement Act of 1997.

**[RM] - Resource Management** - Transportation infrastructure, if not designed in the proper way, can fragment habitat, disrupt wildlife and even cause irreparable damage to an ecosystem. Parking lots, roads and trails must be thoughtfully planned, designed and constructed to preserve, conserve and enhance Service lands.

**[EG] - Economic Generation** - Parks, refuges and other public lands are economic drivers for local communities. Not only do they provide increased quality of life for nearby residents, but they draw visitors and tourists domestically and internationally that support local/regional economies and add to the tax base. Safe and efficient access to and within Refuges and Hatcheries, bolsters visitation and supports economic generation for the United States.

# Investment Strategy

The national investment strategy is a high level framework for complying with the policy directives in Executive Order 13327 (Federal Real Property Asset Management), guidance from the Office of Management and Budget, asset management principles at the Department of Interior, policy priorities of the Fish and Wildlife Service and current transportation legislation (MAP-21).

Transportation improvement plans and regional LRTPs should be consistent with this national investment strategy framework:

- Develop connections to people and urban refuges.
- Maintain state of good repair on high priority (mission dependent) transportation assets.
- Decommission or phase out low-priority (non-mission dependent) transportation assets.
- Improve safety.
- Support high-use recreation areas.
- Support financial sustainability.
- Seek partnerships for project implementation.



# The Six Strategic Goals

The six strategic goals are the framework for the policy guidance in this plan. Individually, they represent the ideal state of one aspect of the transportation program. Collectively they represent the 20 year transportation vision.

Goals are defined on pages 16–17. Each goal has specific objectives and performance measures to help the transportation program track and demonstrate progress over time. The six strategic goals are:



Coordinated Opportunities Goal



Asset Management Goal



Safety Goal



Environmental Goal



Access, Mobility and Connectivity Goal



Visitor Experience Goal

# Selection Process

The project selection process, built around the six strategic goals, is the outline for a data driven and performance based planning process to develop capital improvement plans at the regional level.

The framework is intended to be flexible and can be tailored to individual regions based on differing needs and priorities.

Each strategic goal is associated with an evaluation criteria element in the project scorecard (Step 3). The scoring process is meant to help determine a project's consistency with the strategic goals in this plan and a project's priority relative to other proposals through a consistent, quantitative ranking formula.

## Project Selection Framework Steps:

1. Region Solicits Projects From Units
2. Region Prepares Applications for Scoring
3. Scoring and Project Scorecard
4. Ranking and Prioritization
5. Determine Projects for Regional Program
6. Eligibility Check and Program
7. Adapt for Next Cycle

# Funding

Funding for the FWS public-use transportation network can either come from Federal Lands Transportation Program (FLTP) base allocations (authorized in national transportation policy, currently MAP-21) or supplemental sources like grants and non-governmental partnerships.

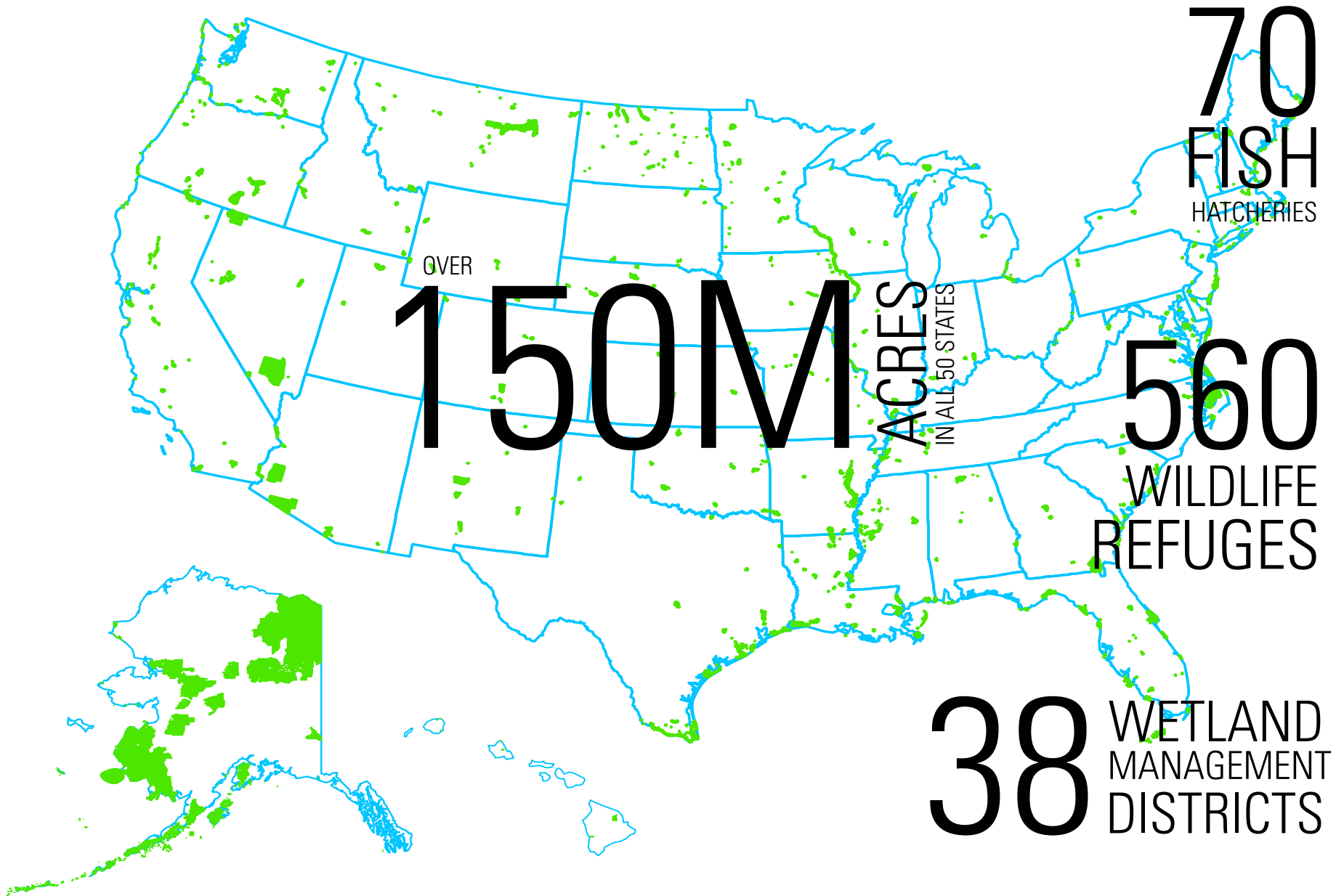
FLTP base funds are sub-allocated to the individual regions based on a formula that was established in the early days of the FLTP. This plan does not propose any change to the current formula.

The project selection process is intended to be used (or adapted) for projects programmed with FLTP base funds. To give the program consistency, demonstrate performance management, and advance strategic goals, PLAN 2035 proposes the selection process for scoring, prioritizing, and programming FLTP base allocations.

Because the needs of the program far outweigh the funds available through FLTP base allocations, the program must actively seek supplemental funds. Programs like the Federal Lands Access Program (FLAP) are key in leveraging the limited dollars available to address transportation needs in Service lands.

Low priority and administrative transportation assets are not eligible for FLTP funding. Instead, these assets should be maintained with deferred maintenance (DM) funds and/or general station funds on a case by case basis.

# Introduction



# The Road Ahead...



FLTP Network

The FWS transportation program has evolved significantly since its inception with the Refuge Roads Program in 1998. The program has built databases, catalogued and inventoried assets, set priorities and generally maintained a quality transportation network for land managers and the visiting public.

Transportation policy in the United States changed substantively in 2012 with the signing into law of Moving Ahead for Progress in the 21st Century, or MAP-21. Seeking economies of scale and institutional efficiencies, most federal lands transportation programs were consolidated under the Federal Highway Administration's new Federal Lands Transportation Program, or FLTP. This program emphasizes multi-modal transportation, off-site access networks, streamlined data collection/storage processes and an overall cooperative management approach to transportation in the federal lands domain. It also stresses the importance of access improvements at high-use recreation areas and federal economic generators like Refuges and Hatcheries.

MAP-21 also established performance requirements for all transportation related activities, including transportation in federal lands. These requirements have long been in place for state Departments of Transportation and Municipal Planning Organizations, however federal land management agencies are new to this approach. Development of LRTPs, goals, objectives, and performance targets will be essential in demonstrating program stewardship and securing funding in future transportation legislation.

As federal land management agencies begin to stand up their transportation programs with these new requirements, those agencies that best demonstrate success will be favorably positioned to secure program funds today and into the future.

*A systematically applied, ongoing process that provides key information to help decision makers understand the outcomes of investment decisions, improves communication between decision makers and the public and ensures that performance targets are developed based on objective information and data.*

The FWS transportation program must transform itself from an organization with a variety of disparate transportation assets spread across 50 states and territories to a better connected, data informed, and priority driven transportation system that serves the public and supports the FWS conservation mission.

This transformation will demonstrate program stewardship while at the same time helping the program build a better connected and dynamic organization.

The first of its kind, this plan and the policies contained herein represent a big step forward for the Service and transportation practice in federal lands.

- Transportation Performance Management  
MAP-21

## Context

### Program Partners

In 2013, the FWS transportation program marked a 15-year milestone in its partnership with the Federal Highway Administration.

Part of the U.S. Department of Transportation (USDOT), the FHWA provides stewardship and oversight of the FLTP, and is an indispensable partner of the FWS transportation program. Through the regionally based Federal Lands Highway offices, FHWA provides planning, programmatic guidance, data gathering, engineering, asset management, design and project delivery services that support the program. Together, the Service and FHWA have worked successfully to support, maintain and improve the FWS transportation network, deliver mission critical projects and develop improved access to Refuges and Hatcheries.

Although MAP-21 expired September 30, 2014 and transportation funding for the nation is currently dependent on a temporary extension, the Service is confident that its partnership with FHWA will continue through future transportation authorizations.

The Service would also like to recognize the role of the John A. Volpe National Transportation Systems Center (Volpe). Also part of USDOT, Volpe provides technical support, administrative assistance, research, analysis and planning to the FWS transportation program.

### Planning Efforts

The publication of this document comes amidst an agency wide effort to develop high level planning documents and policy to guide the resource conservation mission of the Service into the future.

In 2011, the Service unveiled a bold, new vision for the National Wildlife Refuge System entitled 'Conserving the Future'. The transportation program is in a unique position to play an important role in implementing the vision because many of the key elements of the vision fall within the purview of the program.

In late 2013, the FWS published an update to its regular 'Banking on Nature' report which catalogues the economic benefits of the National Wildlife Refuge System. In these reports, access networks are consistently cited as indispensable prerequisites to unlocking the economic dividends that these lands provide.

PLAN 2035 is a companion document to a number of already published transportation plans including the FWS Roadway Design Guidelines (2012), and the Transportation Needs and Planning For the Future (2013) white paper that details the overall needs of the program.

Concurrently with the publication of PLAN 2035, each Service region is in various stages of drafting its own LRTP.

### How to Read this Plan

PLAN 2035 is written for Service project leaders at individual units, regional transportation and facilities staff, national-level transportation planners, and even non-Service partners.

This is not a top-down policy document. This plan is intended to provide high level guidance and programmatic consistency for decision making processes at the regional levels. The broad scope of this plan should give the transportation program a common framework to work from and will also help inform the ongoing development of regional LRTPs, which will be more prescriptive in nature.

The following support documents, included in the Appendix, are intended to be used in conjunction with PLAN 2035:

- The FWS Roadway Design Guidelines and Project Acknowledgements - The Design Guidelines highlight best practices in planning, design and construction of transportation facilities in ecologically sensitive areas. The Project Acknowledgements provide a way to track integration of the Guidelines in transportation projects.
- The Safety Analysis Toolkit - A suite of tools that support the Agency's Safety Management System (SMS), the toolkit takes collision and facility data and makes recommendations for further study to determine if countermeasures are needed.
- The Project Description Form - A standardized template to be used in the solicitation phase of project selection to determine a project's consistency with the strategic goals in this plan. This form is merely a guide and regions are free to adapt their own version.

# Policy Framework of Transportation Program



**FWS Mission:**

*‘Working with others to conserve, protect and enhance fish, wildlife, plants and their habitats for the continuing benefit of the American people.’*



**Vision - Conserving the Future:**

Completed in 2011, Conserving the Future is a comprehensive path forward for the current and future stewardship of the Refuge system. The Vision produced 24 ‘Recommendations’ with discreet goals and performance targets.

The FWS transportation program can directly help advance the following Recommendations:

- 2 - Climate Change
- 11 - Community Partnerships
- 13 - Urban Initiative
- 17 - Hunting and Fishing
- 18 - Outdoor Recreation

**National Transportation Policy - MAP-21:**

Signed into law in 2012, MAP-21 is the source of funding for the FWS transportation program. Part of the multi-partner Federal Lands Transportation Program (FLTP) the FWS transportation program delivers projects that uphold these core principles:



**[T]**  
Transportation

**[RM]**  
Resource Management

**[EG]**  
Economic Generation

**Transportation Program 20 Year Vision:**

Dovetailing with the FWS mission, the 20 year transportation vision is a single statement that describes where the program aims be in 2035.

**The Six Strategic Goals and Objectives:**

The six strategic goals are broad statements about the desired state of six elements of the transportation program and network. The objectives under each are measureable milestones that relate to the goals.



**Data Collection:**

These key data collection efforts help the program make project decisions and measure progress toward completing the objectives and performance targets in this plan.

- RIP - Road Inventory Program (Condition Assessments)
- RATE - Regional Alternative Transportation Evaluations
- USGS Visitor Survey - Visitation Patterns and Satisfaction Levels
- RAPP - Refuge Annual Performance Planning (Visitation and Usage Data)

**Project Selection Process:**

The project selection process, based around the six strategic goals and driven by data, is designed to prioritize FLTP transportation projects. Projects that most clearly accomplish goals and objectives will rise to the top of regional scoring processes and will be selected for programming. See section on Implementation.

**Funding:**

Tailor funding streams (FLTP and competitive sources) to best leverage available transportation dollars and advance goals and objectives.

**Measure, Evaluate, Adjust:**

On a 5 year cycle, measure performance, evaluate outcomes and and adjust policy by updating this national long range transportation plan.

# Vision and Goals

## *20 Year Transportation Program Vision:*

*'To work collaboratively for future planning and stewardship of a context sensitive, multi-modal transportation system that helps conserve natural resources, provides a superior level of safety, delivers cost effective and environmentally sustainable transportation options, generates local economic opportunities and enhances the visitation experience for all visitors including underrepresented and mobility limited populations.'*

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*Humboldt Bay NWR*

California

# A Clear Path Forward

As the premier wildlife management agency in the world, the U.S. Fish and Wildlife Service is expected to steward the assets and natural resources entrusted to it so that present and future generations of visitors can benefit and appreciate the biodiversity of the United States.

In planning the future of the transportation program, the vision is a single statement that describes the desired state of the program in 20 years... It is a conceptual ideal that projects, policies and actions should support to keep the promise that was made to the American people when the first National Wildlife Refuge was established at Pelican Island in 1903.

Based on the 20 year vision, this plan presents six strategic goals that describe in broad terms the desired condition of various unique elements of the transportation program. The objectives that follow are actionable management techniques and policies that can be implemented to advance the strategic goals.

# The Six Strategic Goals



## Coordinated Opportunities Goal:

The program will seek joint transportation opportunities that support the Service mission, maximize the utility of Service resources, and provide mutual benefits to the Service and external partners.

- Objective 1: Identify and increase key internal and external partnerships at the national, regional, and unit levels.
- Objective 2: Maximize leveraged opportunities by identifying and pursuing funding for projects of mutual interest and benefit.
- Objective 3: Develop best practices for external engagement that illustrate success in forming and nurturing coalitions and partnerships that support the Service’s mission.
- Objective 4: Coordinate within Service programs, including Refuges, Ecological Services, Fish and Aquatic Conservation, Hatcheries, and Migratory Birds, during the development of regional long-range and project level plans.

Supports Principles: **[T]** **[RM]** **[EG]**



## Asset Management Goal:

The program will operate and maintain a functional, financially sustainable and resilient transportation network to satisfy current and future land management needs in the face of a changing climate.

- Objective 1: Use asset management principles to maintain important infrastructure at an appropriate condition level.
- Objective 2: Prioritize work programs through the project selection process detailed in this plan or an adaptation, thereof.
- Objective 3: Evaluate life cycle costs when considering new assets to determine long term financial sustainability.
- Objective 4: Consider the impacts of increased climate variability in the planning and management of transportation assets.

Supports Principles: **[T]** **[RM]**



## Safety Goal:

The program’s network will provide a superior level of safety for all users and all modes of transportation to and within FWS lands.

- Objective 1: Identify safety issue ‘hot-spots’ within the Service’s transportation system with the Safety Analysis Toolkit.
- Objective 2: Implement appropriate safety countermeasures to resolve safety issues and reduce the frequency and severity of crashes (also with the Safety Analysis Toolkit).
- Objective 3: Address wildlife-vehicle collisions with design solutions (Environmental Enhancements).
- Objective 4: Use cooperation and communication among the ‘4Es’ of safety including: engineering, education, enforcement and emergency medical services.

Supports Principle: **[T]**





### Environmental Goal:

Transportation infrastructure will be landscape appropriate and play a key role in the improvement of environmental conditions in and around Service lands.

- Objective 1: Follow the Roadway Design Guidelines for best practices in design, planning, management, maintenance and construction of transportation assets.
- Objective 2: Reduce greenhouse gas (GHG) emissions and air pollutants by increasing transportation options and alternative fuels.
- Objective 3: Protect wildlife corridors, reduce habitat fragmentation, and enhance terrestrial and aquatic organism passage on and adjacent to Service lands to conserve fish, wildlife and plant populations.

Supports Principles: **[T]** **[RM]**



### Access, Mobility and Connectivity Goal:

The program will ensure that units open to the public have adequate transportation options for all users including underserved, underrepresented, and mobility limited populations.

- Objective 1: Offer a wide range of transportation modes and linkages for on and off site access.
- Objective 2: Provide clear wayfinding information both on and off Service lands.
- Objective 3: Through the Urban Refuges initiative, integrate Service transportation facilities with local community transportation systems in a way that encourages local visitation and provides economic benefits to partner and gateway communities.
- Objective 4: Through coordinated planning, provide context-appropriate transportation facilities that address the specific needs of local visitor groups and respect the natural setting of the refuge or hatchery.
- Objective 5: Address congestion issues to and within Service units.

Supports Principles: **[T]** **[RM]** **[EG]**



### Visitor Experience Goal:

The program will enhance the visitation experience through improvement and investment in the transportation network.

- Objective 1: Improve traveler information through use of intelligent transportation systems (ITS).
- Objective 2: Integrate interpretation, education, and resource stewardship principles into the transportation experience.
- Objective 3: Evaluate the feasibility of alternative transportation systems at all stations and implement where appropriate.
- Objective 4: Encourage connections with existing and planned public and private transportation services.
- Objective 5: Design infrastructure in such a way that highlights the landscape, and not the transportation facility.

Supports Principles: **[T]** **[RM]** **[EG]**

# Strategy to Address Needs



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*Choctaw NWR*

Alabama

# Tie Projects to Policy

The Service's transportation system is more than its physical assets. It is a network of events, expectations and relationships all happening in the domain of sensitive landscapes and diverse wildlife.

The strategy to accomplish the transportation vision involves advancing the strategic goals through policy, projects and other actions.

A performance based planning approach requires an explicit link between program goals and projects. This section makes this connection through analysis of our needs as a program followed by exploration of a series of case study projects that exemplify program principles and strategic goals.

# Program Needs

In a broad sense, the gap between current conditions and desired conditions represent the needs of the transportation program. While the program has worked diligently to improve overall conditions since the inception of the Refuge Roads Program in 1998, there is still much room for improvement.

## Total Program Needs (Priority Assets and Projects)

Need	Current Condition	Desired Condition
<b>Pavement Cond. Rating</b> Roads and Parking System Avg.	<b>62</b> PCR Rating	<b>≥ 80</b> PCR Rating
<b>Bridge Rating</b> System Avg.	<b>65%</b> Good or Excellent	<b>≥ 95%</b> Good or Excellent
<b>Trails</b> All Surface Types	<b>84%</b> Good or Excellent	<b>≥ 95%</b> Good or Excellent
<b>Large Projects (&gt;\$3M)</b> Delivery Schedule	<b>1</b> Every 2 Years	<b>2-3</b> Every Year
<b>Environmental Enhancements (&gt;\$1M)</b>	<b>Minimal</b>	<b>2-3</b> Every Year
<b>Transit</b>	<b>Maintenance of Current Portfolio</b>	<b>Modest Expansion of Portfolio at Key Locations</b>
<b>Deferred Maintenance</b> Roads, Bridges and Trails	<b>\$433M</b> 3.4% of Total Replacement Value	<b>&lt; \$250M</b> < 2% of Total Replacement Value

### Paved or Engineered Surfaces: Roads and Parking Areas (Asphalt and Gravel)

While emphasizing multi-modal and alternative transportation is a priority for the program, roads and parking lots remain the most important facilities in the transportation network. The program manages over 5,400 miles of public use roads and over 5,000 parking areas across the nation. Based on data collected by FHWA through the Road Inventory Program or RIP, current funding levels are only sufficient to maintain existing pavement condition ratings (38% fair/poor/failed) for all public use roads and parking areas, see page 40.

### Bridges

There are over 300 public bridges that are managed by the transportation program. These facilities are an integral part of the public road system because they provide access to refuge facilities, natural resources and auto tour routes. Since 1994 the Service has ensured that all bridges are routinely inspected to comply with National Bridge Inspection Standards (NBIS). While the program has been able to improve average bridge conditions over the lifetime of the transportation program, many larger needs remain unmet and bridge closures due to failures or safety issues can impact visitors and resource managers alike.

### Trails and Boardwalks

Trails and boardwalks provide access to geographically constrained areas while providing visitors with unique ways to experience Refuges and Hatcheries. In addition, these facilities are relatively inexpensive to build and maintain. For these reasons, trails are a key component of the FWS transportation portfolio and should always be considered as an option for augmenting access and mobility in and around Service lands. While current funding levels are sufficient to maintain present trail conditions, significant boardwalk repairs can impact regional improvement budgets.

Sources: FHWA RIP, FWS Resource Paper, Facilities Branch Quarterly Report Q3 2014 and Year End Report 2013

## Deferred Maintenance Backlog and Tiering Efforts

Deferred maintenance (DM) affects the entire transportation network. In 2010, transportation assets accounted for roughly 60% of DM Servicewide (*Life-Cycle Investment Needs for Constructed Facility Assets and Mobile Equipment in the National Wildlife Refuge System, 2010*). Through data cleanup and effective asset management, the transportation program has been able to reduce this number to less than 4% of replacement value (well within the asset management industry standard tolerance of <10%). The same report also documents that, on average, Service-owned roads, bridges, and trails exceed normal useful life despite the fact that the average age of transportation infrastructure in the FWS system is increasing over time.

The program is currently undergoing a network-wide ‘tiering’ effort to determine relative priority of the Service’s roads and parking lots with the aim of right sizing the DM backlog by eliminating low priority assets from the backlog. This has been a successful process resulting in reduction of nearly \$700M in DM numbers since 2010.

Tier 1 facilities generally include main ingress/egress routes, auto-tour routes and visitor center parking lots. Tier 2 facilities generally include secondary connector roads, primary administrative facilities and parking pull-outs. Tier 3 facilities are generally non-mission critical and low-volume with non-engineered/native surfaces. While tier 3 facilities will still be available for FLTP funding in limited instances, they will not be inventoried by FHWA in the upcoming RIP cycle 5.

Summaries of tiering efforts should be included in regional LRTPs.

## Large Projects

Individual project needs can frequently exceed financial resources available within regional funding allocations. For the transportation program, projects over \$3M are considered ‘large’, yet many transportation needs far exceed this amount (see *Transportation Needs and Planning for the Future, 2013*)

In order to overcome these kinds of shortfalls the program has had to rely on outside funding (grants and earmarks) or banking of FLTP funds over several years. Funding from outside sources can be erratic and storing funds over several years limits the movement of capital and delays needed improvements in the transportation system that fit within the program’s limited budget. The program needs to be able to deliver 2-3 large projects per year from base FLTP funds.

## Environmental Enhancements

Transportation facilities like roads, bridges and parking areas can cause negative impacts to surrounding ecosystems and sensitive habitats. Habitat fragmentation, water quality issues, stormwater runoff and construction activities can all be detrimental to the very resources the Service is entrusted to protect. Environmental enhancements are design solutions intended to soften these impacts and indeed improve adjacent natural resources while providing important access and mobility.

Aquatic and terrestrial passages, bioswales, and pervious pavements are just some of the enhancement possibilities available in the Roadway Design Guidelines. These enhancements can increase project costs because they introduce environmentally sensitive features to a project. Ideally the program would deliver 2-3 projects per year that integrate these enhancements into otherwise standard transportation projects.

## Transit and Electric Vehicles

Transit systems and trail networks are very important components of the transportation program’s multi-modal portfolio.

On-site transit systems, while few in number, provide important access opportunities for mobility limited populations while also allowing refuge managers to control visitation and recreational patterns on sensitive landscapes. FLTP funds may be used to acquire rolling stock and to pay for operations and maintenance of transit if such service is deemed a priority. Operations and maintenance costs may also be covered by recreational fee programs under the right circumstances.

As of the publication of this plan, there is a service-wide effort underway to pilot electric vehicle technology and infrastructure on select refuges. Because this form of transportation can provide noise and emissions free transportation on Service lands, the program is keenly interested in further developing this concept for the visiting public and FWS fleet vehicles. A number of stations are currently testing electric vehicles for both administrative and public uses. In addition, the transportation program is currently exploring the possibility of deploying EV charging infrastructure (EVSE) on select refuges.

These transportation options help round out the program’s transportation portfolio while at the same time helping the Fish and Wildlife Service meet important greenhouse gas emissions goals and reduction of car-centric travel within Service lands.

# Program Needs

## Planning

Transportation planning is essential to making data informed decisions about how, where and why to take action. The following planning activities help managers make informed decisions: program cohesion (outcomes clearly tied to mission), performance management (measurable performance targets), project selection (outlined in this LRTP), high-level guidance, data collection/analysis and demonstration of compliance with federal requirements.

## Staffing

The transportation program currently supports two staff at the headquarters office and ten regional coordinator staff throughout the eight regions. Through a staffing assessment conducted by the John A. Volpe National Transportation Systems Center on behalf of the program, transportation and facilities staff expressed need for additional capacity to leverage funds, manage databases, and provide technical planning assistance to units.

Staff relies on internal and external partners for help with project review and management, technical assistance to units, leveraging new funding sources, and general program oversight. These partnerships, however, cannot meet all of the transportation program's capacity needs. The staffing assessment concluded that adding staff capacity in the following functions and roles at the national level could help address program needs.

### ■ Transportation Scholar (Varies)

One creative solution to address the program's staffing shortfall is to continue to bring on public lands transportation scholars. This program connects emerging transportation professionals with different federal public land units across the country. In the past, The FWS has been awarded a number of scholars to work at various levels of the organization to assist with project planning, grant writing and policy initiatives.

### ■ Facilities Liaison (Regional)

This position would work with the Facilities Branch and focus exclusively on transportation asset management. The liaison would have access to the Financial and Business Management System (FBMS) and other database management systems and coordinate training or provide technical assistance to transportation staff for database requests. The position would also oversee budgeting for FHWA transportation funds, including FLTP funds, Emergency Relief for Federally Owned Roads (ERFO), and deferred maintenance.

### ■ Grant-Writing (Headquarters and Regional)

With possible future funding limitations, regional staff are increasingly pressured to identify and leverage new funding sources to meet their transportation needs. A half-time position at the national level would identify supplemental and discretionary funding sources, match sources with appropriate unit needs, and assist with grant writing to best leverage limited FLTP funds.

### ■ Planner (Headquarters)

The staffing report also noted the need for short and long-range planning activities at the headquarters level. An HQ level transportation planner would be responsible for overseeing national and regional planning efforts such as: including transportation in the Service's landscape planning efforts, ensuring that Comprehensive Conservation Plans (CCPs) address relevant transportation issues and providing technical assistance to units for transportation planning. The position would also make connections with State DOTs, State and regional governments, and metropolitan planning organizations (MPOs) to help stations better participate in State and regional transportation planning and to ensure that Service's plans connect to wider transportation networks and organizations.

### ■ Fulfilling Staffing Needs

After reviewing these findings, HQ is attempting to fill two new positions with multi-regional and national level responsibilities in 2015.

# The National Investment Strategy

The national investment strategy is high level guidance for complying with the policy directives of the Service and the Federal Highway Administration (FHWA). The following focus areas provide direction for decision making at all levels of the transportation program. Transportation improvement plans and regional LRTPs should, in general, be consistent with these focus areas:

## Develop Connections to People and Urban Refuges

The Refuge System vision, *Conserving the Future*, calls for an increased Service presence in urban areas (Recommendation 13). The transportation program is an excellent means to achieve the Recommendation because it can help provide and build the access opportunities needed to reach out to new and diverse audiences.

The Urban Refuge Initiative has identified 101 Refuges in the system as ‘urban’ classifying them in different tier categories based on visitation. In addition, the Initiative has defined seven ‘Standards of Excellence’ to guide the program, including Standard 6: Provide Equitable Access.

At the time of publication of this plan, work is underway to identify a list of priority urban transportation projects.

## Maintain State of Good Repair on Priority Assets

Preventative maintenance on roads, bridges and parking areas can cost 20-30 times less than more significant rehabilitation or complete reconstruction. For this reason, program funds should be directed towards preservation of high priority (mission critical) assets in good or better condition. The use of Roadway Inventory Program (RIP) data is key for prioritization of regional capital improvement plans.

## Decommission or Phase out Low Priority Assets

Assets in poor or failed conditions should be slated for reconstruction or decommissioning based on Asset Priority Index (API) scores and tier-levels. This reduces the deferred maintenance backlog, simplifies RIP data collection and helps the program ‘right size’ the transportation network. API scores can be found in the FWS asset management database (SAMMS). The tiering effort, currently underway at the regional levels, will help define non-priority assets. Until the program has addressed all of its most pressing needs, adding new assets to the transportation network is not a priority except in the cases of trails and multi-modal connections which can augment access opportunities to Refuges and Hatcheries.

## Improve Safety

With a low-volume and low-speed roadway network, the standard of safety is much higher for the FWS transportation system when compared to a state DOT, for example. The transportation program is working towards zero fatalities and minimal wildlife/vehicle collisions (WVC’s) through various design solutions, data collection efforts and safety countermeasures identified in this plan. See Appendices: Safety Analysis Toolkit and Roadway Design Guidelines

## Support High-Use Recreation Areas

Current transportation legislation calls for the identification and strategic support of high-use recreation sites and/or economic generators. According to the working definition developed by the Service’s transportation program, high use recreation sites and economic generators are those Refuges and Hatcheries that are open to the public and whose annual visitation numbers exceed the average annual visitation rates for that region.

## Support Financial Sustainability

Financial sustainability, from an asset management perspective, means more than merely preserving pavement conditions at appropriate levels. The transportation program must take into account life-cycle costs of transportation improvements while at the same time investing in projects that are resilient to the impacts of climate change. The FWS land base includes coastal lowlands, barrier islands, wetlands, fire-adapted grasslands and other landscapes that are, by their very nature, vulnerable to hazards. Inland flooding, coastal flooding, fire and other stressors threaten the natural resources the FWS is entrusted to protect. Transportation systems are key in responding and to and adapting from emergencies and natural disasters and therefore should be managed in a way that ensure their long term sustainability and resilience.

## Seek Partnerships for Project Implementation

The needs of the FWS transportation network far outweigh the current funding for the program. Whenever possible, base allocations should be leveraged with outside resources to maximize the utility of FLTP base dollars.

# Coordinated Opportunities Strategic Goal:

The program will seek joint transportation opportunities that support the Service mission, maximize the utility of Service resources and provide mutual benefits to the Service and external partners.

## Coordinated Opportunities Snapshot

Coordinated opportunities may be considered an implementation principle or critical success factor that supports the other strategic goals, as well as a goal unto itself. The transportation program relies upon, and benefits from, connections with other transportation systems and organizations who share facilities, interests, boundaries, or goals. Equally important are connections to other branches and departments within the FWS.

Coordinated opportunities with other agencies and organizations allow for transportation solutions that support the Service's mission, maximize the utility of Service resources, and provide mutual benefits to the Service and external partners. The condition of the Service's transportation system in regard to coordinated opportunities is therefore determined by the agency's ability to, and record of, partnering with others to implement mutually beneficial transportation projects.

The FWS partners with fifteen different types of organizations at the national level and an additional 10 categories of partners at the local and State levels. Examples of successful partnerships are detailed in this section and throughout this plan.

The following four steps outline an approach for pursuing coordinated opportunities:

### ■ Identification of Transportation Needs

With guidance from the regional offices, field stations should identify their transportation needs and see where their projects may fit in the larger (regional) capital improvement program. Step one of the project selection process is a 'solicitation' phase where stations submit their proposals for review by the region. It is important to note that needs, especially safety needs, can exist on connecting transportation facilities outside FWS boundaries. Needs should be consistent with local and/or regional transportation plans (STIPs, TIPs, LRTPs, etc.).

### ■ Isolate Opportunities

Since base FLTP funding cannot address all transportation needs, leveraging of supplemental funding (or technical capacity) is key to the program. Transportation program managers should help disseminate information about state, local and federal programs that can provide funding or technical expertise (like design/engineering).

Friends  
Organizations (2014)

---

approx **230** Groups

&

approx **50k** Members

### ■ Engagement

Once opportunities are identified, transportation or field staff should reach out to partner organizations to determine areas of mutual interest. Partners can include: universities or other educational facilities, 'friends of' groups, volunteer organizations, research organizations, other FLMAs, state DOTs, MPOs/RPOs, homeowners groups, transit authorities, local government authorities and environmental or conservation organizations. Field staff should prioritize organizations whose purview is in close physical proximity to FWS lands as they are most likely to have overlapping interests with the Service.

### ■ Partnership Activities

The final step is to commence partnership activities. These can be informal (once yearly trail maintenance by the friends group) or more formal activities (like construction project management by the state DOT). The more formal activities generally warrant a memorandum of understanding (MOU) or other legal instrument that clearly outlines the cooperative arrangement between the Service and the partner organization. Partnership activities can also be specific to an individual project.

Source: FWS Friends Fact Sheet



# Case Study:

Visitors Center and Parking Lot  
Tualatin River NWR, Sherwood, OR

## Coordinated Opportunities (Primary Goal)

- Objectives 2, 3

## Asset Management

- Objectives 1, 3

## Environmental

- Objective 1

## Access, Mobility and Connectivity

- Objectives 1, 3, 4, 5

## Visitor Experience

- Objectives 2, 5

The relationship the FWS has with its various friends groups is one that pays significant dividends. Dating back to the cooperating associations formed in the 1930s, these partnerships have provided much needed assistance in the forms of: volunteer hours, specialized knowledge/information, links to local communities, assistance to leverage funds and advocacy at local and national levels for policy and funding.

While building new transportation assets is not a priority for the program, sometimes large scale improvements can include transportation facilities like this example at Tualatin River NWR. The local friends group worked with elected representatives to secure discretionary funds to build a new visitor's center and parking lot. Meeting key elements of the FWS Roadway Design Guidelines, the parking lot features: pervious surfaces, amended soils, native vegetation and a bioswale that controls stormwater and filters runoff.



Coordinated Opportunities



Asset Management



Safety



Environmental



Access, Mobility and Connectivity



Visitor Experience

# Asset Management Strategic Goal:

The program will operate and maintain a functional, financially sustainable and resilient transportation network to satisfy current and future land management needs in the face of a changing climate.

## Asset Management Snapshot

Asset management is the process of strategically maintaining, upgrading, and operating physical assets. The practice includes preservation, upgrading, and timely replacement of assets through cost-effective management, programming, and resource allocation decisions.

To quantitatively determine the condition of Service transportation assets, data are analyzed from the Service Asset Maintenance Management System (SAMMS), FLH's Road Inventory Program (RIP), and FHWA's National Bridge Inventory (NBI). The Service also uses an Asset Priority Index (API) to determine the relative importance of an asset based on mission dependency and substitutability. Finally, the transportation program is currently undergoing a nationwide 'tiering' process to right-size the DM backlog.

To achieve a financially sustainable portfolio, vulnerability to natural disasters and changing climate patterns should always be taken into account when considering the maintenance or replacement of an asset. A resilient transportation system will be minimally impacted by weather events and natural disasters.

Another key element in advancing the asset management strategic goal will be the implementation of standardized project selection processes at the regional level. The selection process framework outlined in this plan will provide guidance for regions to be able to quantitatively rank and prioritize projects for their work programs. This will give consistency to the transportation program and will ensure that regional allocations are advancing strategic goals and balancing program principles.

These ongoing processes and data-collection/analysis efforts follow established guidance found in this plan or elsewhere in Service policy. This ensures programmatic consistency and gives the Service and transportation program an excellent snapshot of overall conditions across the entire transportation network. All this information is essential to the program's data-driven decision making processes, which inform how, when, and where the transportation program should act to improve, replace or decommission its various assets.

These processes are also helpful in fulfilling the Service's commitment to measure and monitor performance of the transportation network over time and to deploy funds strategically to maintain a resilient, efficient and cost-effective system.

## ROADS

In GOOD or better condition



5,400 Miles of Public use Roads

## BRIDGES

In GOOD or better condition



300 Public Use Bridges

## TRAILS

In GOOD or better condition



2,100 Miles of Surface Trails

Sources: FHWA Roads Inventory Program 2013, FWS Bridge Inventory Program 2013

# Case Study:

Pavement Preservation  
Crab Orchard NWR, Marion, IL

## Asset Management (Primary Goal)

- Objectives 1, 3

## Safety

- Objectives 1, 2, 3

## Environmental

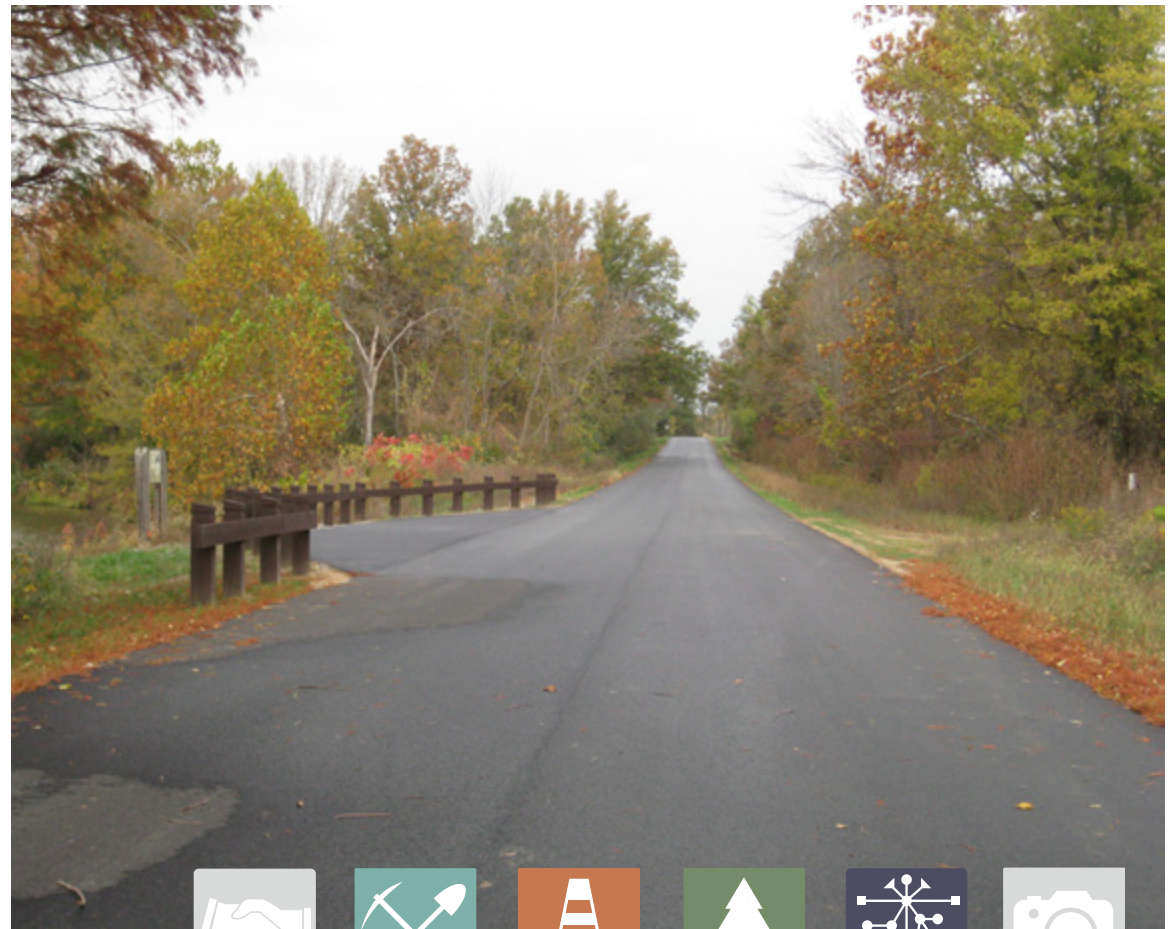
- Objective 1

## Access, Mobility and Connectivity

- Objectives 3, 4, 5

Starting in 2010 the FWS Midwest region began a paved road and parking area surface preservation program at Crab Orchard National Wildlife Refuge in southern Illinois. Converted from private property in the 1950's, this refuge has the highest paved road total in the NWR system. Maintenance and upkeep of the paved surfaces was taking up an inordinate amount of program funding, so the region decided that repaving the roads at Crab Orchard was a priority for long-term cost reduction.

To date the transportation program has rehabilitated nearly 17 lane miles of roads and over 22,000 square yards of parking area. The region intends to accomplish another 15 lane miles and 16,000 square yards of parking improvements, documented as a priority in the five year capital improvement program. Once completed, the majority of the paved public use routes inside the refuge will have a good or better condition rating with better roadside drainage and reduced long term maintenance costs.



Coordinated Opportunities



Asset Management



Safety



Environmental



Access, Mobility and Connectivity



Visitor Experience

# Safety Strategic Goal:

The program’s network will provide a superior level of safety for all users and all modes of transportation to and within FWS lands.

## Safety Snapshot

FWS is committed to providing the utmost in safe and reliable access to and within refuges and hatcheries. Unlike many state level departments of transportation (DOTs), the Fish and Wildlife Service’s mobility network is designed to provide service at much slower speeds and much lower volumes. As such, the Service has established a target of zero fatalities and zero wildlife/vehicle collisions (WVC). To accomplish this target, the Service has set into motion efforts to improve existing data collection efforts (specifically in the RIP/RATE surveys) to assist with analysis and recommendations.

The Fatality Analysis Reporting System (or FARS, a nationwide census program run by the National Highway Traffic Safety Administration, NHTSA) and the Safety Management System (or SMS, a program run by the Federal Highway Administration) are programs that track the number, location, frequency and severity of crashes and incidents on refuges and hatcheries.

FARS is a nationwide dataset that provides NHTSA, Congress, and the American public with annual motor vehicle fatalities data. Reported data includes information such as the nature of accidents, accident location, and number of fatalities.

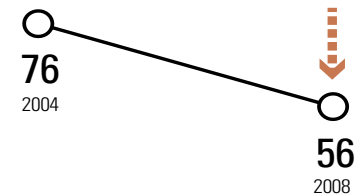
SMS uses FARS data to populate crash information and produce safety solutions and interventions for Service-owned and non-Service-owned roads in Service lands. This protocol combines engineering (safety improvements), education (public availability of information), enforcement (by FWS Law Enforcement staff), and emergency medical services (with local first responders) to comprehensively address the safety strategic goal.

The 2014 update to the SMS protocol minimizes the reliance on data collection efforts required of unit-level staff, and instead uses existing sources of crash and other safety data to identify issues and develop potential projects and programs for implementation. The program has also developed a safety analysis toolkit, included in this publication, that will help refuge and hatchery staff identify safety issues and implement appropriate countermeasures.

Data sources include: national and state crash reporting systems, qualitative information, Service regional studies, and unit-level inventories. Once data are assembled, they are analyzed to determine locations where safety issues appear to exist, and what kinds of interventions may be appropriate to improve safety at those locations. More information about the Service’s SMS update can be found in the Service’s Transportation Program Safety Management Report.

Sources: FARS, NHSTA

Total Accidents on FWS Lands



Reduction of 26%

Total Human Fatalities on FWS Roads System

2

Past 5 Years

FWS 20 Year Target



Zero Human Fatalities  
Minimal Wildlife/Vehicle Collisions

# Case Study:

Access Improvement  
San Luis NWR, Los Banos, CA

## Safety (Primary Goal)

- Objectives 1, 2, 4

## Coordinated Opportunities

- Objective 1

## Asset Management

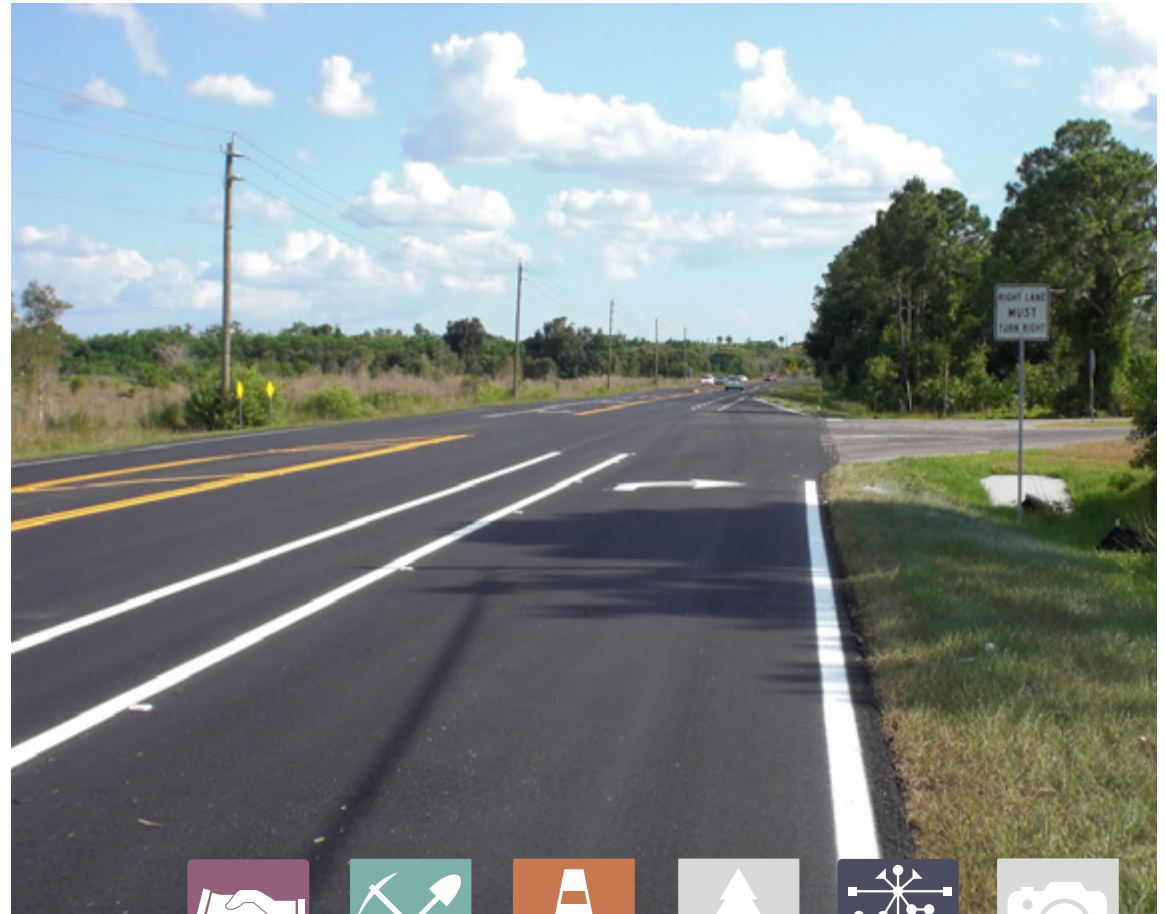
- Objective 1

## Access, Mobility and Connectivity

- Objectives 3, 4

Transportation facilities that visitors and staff use to access Refuges and Hatcheries (off-site facilities) are as important to the program as the facilities that are on Service lands. These can include rural roads, trails and state or local highways that connect to the FWS network. Frequently there can be safety related concerns at the interface between FWS lands and off-site facilities. Given the high standard of safety goals for the program (zero fatalities in 20 years) addressing any and all safety hazards, especially at this jurisdictional interface, is of utmost importance.

The principal ingress of San Luis NWR is located directly off a state owned highway. Because of the lack of acceleration/deceleration lanes and turn pockets, visitors and staff would have to make dangerous maneuvers at high speeds to access the refuge. After 10 years of collaboration with CalTrans, the program was able to build access improvements from both northbound and southbound approaches, increasing safety for the over 100,000 yearly visitors and administrative personnel.



Coordinated Opportunities



Asset Management



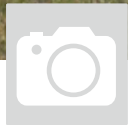
Safety



Environmental



Access, Mobility and Connectivity



Visitor Experience

# Environmental Strategic Goal:

Transportation infrastructure will be landscape appropriate and play a key role in the improvement of environmental conditions in and around Service lands.

## Environmental Snapshot

Conservation and protection of wildlife and habitat are at the core of the Service’s mission. Rather than disrupting an ecosystem, transportation infrastructure should facilitate the improvement of the landscape and the conservation of natural resources.

General understanding about the impacts of transportation systems on habitat are widely known within the Service, and are addressed in planning by comprehensive conservation plans (CCPs) Landscape Conservation Cooperatives (LCCs) and environmental impact statements (EIS). The Service and transportation program also follow the principles of Compensatory Mitigation (Avoidance, Minimization, Rehabilitation and Restoration) to achieve no net loss of environmental and cultural resources.

Additionally, the FWS Roadway Design Guidelines and Project Acknowledgements (included in this publication) will give best practice guidance and methodology for planning, designing, maintaining and building transportation infrastructure in a way that stitches together sensitive habitats, manages stormwater runoff, restores native vegetation and helps manage invasive species.

The transportation program also plays a key role in the Service’s goals of reducing GHG emissions, as a large part of the carbon footprint of the Service comes from the use of the transportation facilities. The Climate Leadership In Refuges (CLIR) tool is a web-based application currently in testing that will provide unit-level analysis of all on and off-site carbon and GHG impacts of a refuge. The application also tailors specific recommendations for mitigation of these impacts over time. These recommendations can include: upgrading of service equipment, changes in visitor and/or staff behaviors, development of multi-modal or transit connections and other facilities-related (buildings, etc.) activities.

The Service is also working to better understand how climate change will impact transportation facilities and what might be done to create a resilient transportation network that is environmentally and financially sustainable in the long term.

## FWS Fleet Carbon Mitigations Actual Performance

- 2 % yr Petroleum use reductions (2005 base)
- + 10 % yr Use of alternative fuels
- 75 % New fleet vehicle acquisitions that use alternative fuels
- 12 % Percentage of entire FWS fleet that is alternative fuel capable

## Roadway Effects on Landscapes

- Habitat Fragmentation
- Roadkill
- Materials and Chemicals
- Aquatic Passage Issues
- Non-Native Plants
- Traffic Disturbance
- Construction Disturbance



Roads can impact landscapes from:

0 to over 1Km away

## Roadway Design Guideline Elements

- LE - Landscape Ecology
- PC - Planning Context
- DE - Design and Engineering
- OP - Organism Passage
- SM - Stormwater Management
- VE - Visitor Experience

Sources: 5 Year Vehicle Management Plan FWS 2009, Visitor’s Survey 2012 (USGS)

# Case Study:

Aquatic Organism Passage  
Kenai NWR, Soldotna, AK

## Environmental (Primary Goal)

- Objectives 1, 3

## Asset Management

- Objectives 1, 2

## Coordinated Opportunities

- Objectives 1, 2, 4

## Visitor Experience

- Objectives 2, 5

Ecological stream and river functions, such as the movement of woody debris, sediment transport and aquatic organism passage, can be impeded by roadway infrastructure. Box culverts, bridges, dams, dikes and roads all disrupt the free flow of natural processes of aquatic resources on refuges. Recognizing the importance of habitat connectivity, the program is keenly focused on environmental enhancements (that can be found in the Roadway Design Guidelines) to transportation facilities that improve aquatic and terrestrial organism passage.

An excellent example of how environmental enhancements can repair fragmented habitat can be found at Kenai National Wildlife Refuge near Soldotna, Alaska. Together with its partners from the Kenai Watershed Forum, the Alaska Department of Fish and Game, the Kenai Peninsula Economic Development District, Chevron and Peak Oilfield Service Company, the transportation program retrofitted a number of existing box culverts with bottomless culverts and thus improved flow, circulation and access for more than 10 miles of aquatic habitat.



Coordinated Opportunities



Asset Management



Safety



Environmental



Access, Mobility and Connectivity



Visitor Experience

# Access, Mobility and Connectivity Strategic Goal:

The program will ensure that units open to the public have adequate transportation options for all users including underserved, underrepresented, and mobility limited populations.

## Access, Mobility and Connectivity Snapshot

This plan expands upon the internal asset inventory (on-site) definition to include non-FWS owned (or off-site) facilities that connect and provide access to Service owned lands and transportation systems. Programs like the Federal Lands Access Program (FLAP) exist solely to support projects that improve access to federal lands such as refuges and hatcheries. Judging the condition of, and finding opportunities to improve, access to and within Service lands can be achieved through examination of visitation data, measuring the accessibility of urban refuges and hatcheries, alternative transportation evaluations, and visitor surveys. The Service surveyed visitors throughout the country and found that 58 percent of station visits originate more than 50 miles from the refuge (National Visitor Use Survey, 2012). This indicates that improving access and mobility, especially for off-site access improvements, supports the economic generation program principle.

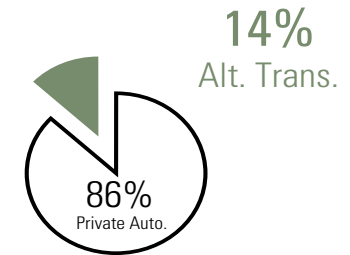
Surveys also indicate the possibility of latent demand for off-site alternative transportation options. While 35 percent of refuges have multimodal access, only 14 percent of visitors actually used some form of ATS. This, despite the fact that 23 percent of respondents of the same survey indicated that off-site alternative transportation options could enhance the visitation experience.

The ongoing RIP/RATE surveys and Multimodal Catalog (FLH and Volpe Center) will give the program an excellent picture of the different transportation options and preferences of the visiting public. These efforts will help the program develop better access for underserved, underrepresented and mobility limited populations.

On-site transportation patterns are also measured through various ongoing data collection methods including the Refuge Annual Performance Planning survey (or RAPP). The latest numbers indicate that 35 percent of all visitors use auto tour routes, 33 percent use hiking trails, 5 percent use bicycle facilities and 7 percent use water facilities (like water trails and boat docks/launches). When asked about preferences in using various modes of transportation to tour a refuge, watercraft, pedestrian trails and open-air trams were popular options, each receiving over 50 percent likelihood of usage.

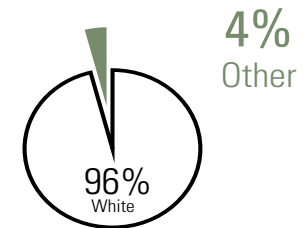
RAPP numbers show that over 47 million people visited refuges in 2013. This marks an increase of 20 percent from just 5 years prior. U.S. Census projections suggest that the upward trend in visitation to Refuges will continue underlining the need for the transportation program to plan for and improve access, mobility, and connectivity throughout the network.

## Visitation By Mode



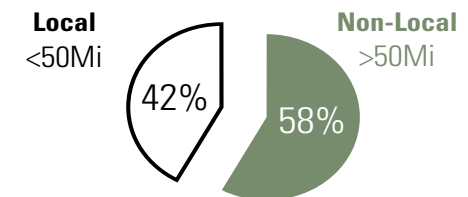
Lacking Transportation Options

## Race



Lacking Diversity

## Distance Traveled



FWS Units Drive Tourism

Source: Visitors Survey 2012 (USGS)



# Case Study:

Bicycle Boardwalk  
Chincoteague NWR, Chincoteague, VA

## Access, Mobility and Connectivity (Primary Goal)

- Objectives 1, 2, 3, 4, 5

## Asset Management Goal

- Objectives 3, 4

## Safety Goal

- Objective 2

## Environmental Goal

- Objectives 1, 2

## Visitor Experience

- Objectives 2, 5

Because of the importance of water resources to migratory birds and fish, Refuges often are located in places with abundant hydrological resources like coastlines and lakes. Frequently, the Refuges in these areas are essential elements to a region's tourism infrastructure. Visitors and residents alike benefit from the recreational opportunities and quality of life dividends that Refuges can provide. Quality access, mobility and connectivity options are essential to managing natural resources as well as providing the public with opportunities to recreate and learn about habitat and ecology.

This bicycle boulevard inaugurated in 2012 at Chincoteague NWR parallels the main access road that connects the popular coastline with the nearby village, providing visitors with a safe, non-motorized and enjoyable way to travel between the two. The facility also reduces traffic congestion, helps refuge staff manage visitation and helps meet GHG emissions reduction goals.



Coordinated Opportunities



Asset Management



Safety



Environmental



Access, Mobility and Connectivity



Visitor Experience

# Visitor Experience Strategic Goal:

The program will enhance the visitation experience through improvement and investment in the transportation network.

## Visitor Experience Snapshot

It is important to keep in mind that transportation merely provides access opportunities. It is the means, not the end, and transportation infrastructure should highlight the landscapes and resources the Service is endowed with protecting. The visitor experience goal, therefore, builds upon the desire to provide adequate access and focuses on how the quality of the visitation experience can be improved through investments in the transportation network.

The most recent visitor use survey (2011) compared importance and satisfaction ratings across a number of station services, including 12 discreet transportation elements (below).

- Conditions of roads
- Number of parking places
- Directional signs on highways
- Condition of parking areas
- Number of pullovers
- Directional signs on station
- Safety of driving conditions
- Directional signs on trails
- Condition of trails/boardwalks
- Safety of station entrances
- Disabled access
- Condition of bridges

75 percent of respondents ranked the transportation elements as ‘highly important’ as well as indicating a high degree of satisfaction with the element.

Strategies for addressing visitor experience through the Service’s transportation system are also tied to the visitation levels. Visitation levels are relevant to transportation improvement strategies because, generally, units with higher visitation will benefit more from transportation related improvements.

Gateway communities are also potential locations for visitor enhancements, particularly as they relate to wayfinding, which informs visitors about neighboring refuges and hatcheries. These enhancements can improve ease of travel to and within units, thus improving visitor experience.

This philosophy of focusing investments on areas of greatest use and importance also applies to activities enjoyed most frequently by Refuge and Hatchery visitors. The 2004 and 2011 visitor surveys and 2010 RAPP data suggest that transportation investments that accommodate wildlife observation (like auto tour routes) are the most effective in enhancing visitor experience.

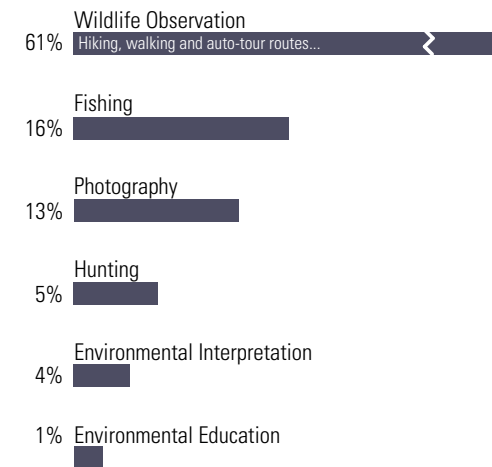
Furthermore, survey results identify private vehicles, walking/hiking, and private vehicles with trailers as the top three modes of visitor travel within refuge units. Transportation assets supporting these modes will therefore have a greater ability to improve visitor experience through regular maintenance and investment.

Satisfaction with 12 Transportation Elements

# 75%

Highly Important and Very Satisfied  
‘Keep Up the Good Work’

## ‘Big Six’ Activities



Focus Investment Where it has the Most Impact

Source: National Wildlife Refuge Visitor Survey 2010/2011: National-level Results

# Case Study:

Auto Tour Route Paving  
J.N. Ding Darling NWR, Sanibel, FL

## Visitor Experience (Primary Goal)

- Objectives 2, 4, 5

## Asset Management

- Objectives 1, 3, 4

## Environmental

- Objectives 1, 2, 3

## Access, Mobility and Connectivity

- Objectives 2, 3, 4, 5

The J.N. ‘Ding’ Darling National Wildlife Refuge is located along Florida’s southwest coast on Sanibel Island, covering over 6,400 acres and supporting hundreds of species of wildlife and plants. The refuge receives hundreds of thousands of visitors annually, many of whom walk, bicycle or drive along the auto tour route. It is one of the top birding areas in the nation as it plays host to many migratory birds.

In 2013, the FHWA assisted the FWS in the repaving of Wildlife Drive, the main auto tour route on the Refuge. Because of concerns related to the deteriorated condition of the semi-pervious pavement, the construction and engineering team used a limestone aggregate asphalt to provide a heat reflective, smooth surface accessible to bicycles, wheelchairs, and strollers. Pervious shell parking shoulders were added to slow stormwater movement and filter contaminants from the water bodies on-site. Two new water control structures were installed to improve water circulation and traffic calming humps were added or relocated to improve safety. The newly paved route provides improved access to the numerous trails and viewing platforms on the refuge while facilitating multimodal circulation along with wildlife observation and fishing.



Coordinated Opportunities



Asset Management



Safety



Environmental



Access, Mobility and Connectivity



Visitor Experience

# Funding



*Don Edwards San Francisco  
Bay NWR*

California

# Bridge the Gap

The transportation assets spread across National Wildlife Refuges, National Fish Hatcheries and other Service lands require constant investment to manage and operate. As outlined in the vision, the program is striving to build transportation network that is safe, multi-modal, resilient to changing climatic conditions, and integrated with surrounding communities and regions. However, the needs of the current or any future system far exceed the available FLTP base program funds.

For this reason it is imperative for the program to bridge the gap and pursue creative and alternative funding sources. Any funding strategy should include grants and other opportunities at local, state or national levels, congressional earmarks, friends group activities and any other available sources.

This section begins with a brief history of transportation program funding, analyzes some national level funding-related data, details a number of federal funding programs that can be used to leverage FLTP program dollars and finally lists a number of federal funding sources that can be leveraged to address critical needs and funding gaps.

# History of Program Funding

While the Service did build and maintain transportation assets prior to 1998, the creation and authorization of the Refuge Roads Program (RRP) through the Transportation Equity Act for the 21st Century (TEA-21) effectively established the modern-day Service transportation program. Through the Federal Lands Highway Program (FLHP) the RRP authorized and funded a yearly base program of \$20M from 1998 through August 2005 for maintenance and improvements of public roads within the National Wildlife Refuge System.

The Safe, Accountable, Flexible, Efficient, Transportation Equity Act (SAFETEA-LU) continued the FLHP and Refuge Roads Program with with base funding for the FWS transportation program at \$29M per year through 2012. In addition, SAFETEA-LU created an eligibility for National Fish Hatcheries to compete for discretionary funds like congressional earmarks and grant programs like the Scenic Byway Program and the Paul S. Sarbanes Transit in the Parks Program (TRIP). Over the years, the FWS transportation program has leveraged an average of \$7M/Yr. from these supplemental funding sources.

Moving Ahead for Progress in the 21st Century (MAP-21) was signed into law in July 2012 and has been in effect since October 1, 2012 (expiring on September 30, 2014). A transformative transportation authorization, MAP-21 streamlined and consolidated many existing transportation programs and funding sources.

Under MAP-21, the Federal Lands Highway Program, was replaced by the Federal Lands Transportation Program (FLTP). Overseen by the Federal Highway Administration, the FLTP is a multi-agency program that includes many other federal lands partners like the National Parks Service, the Bureau of Land Management and other federal land management agencies. In addition to being multi-agency, the FLTP program is also multi-modal allowing eligibility for alternative and off-site access networks such as trails, bicycle infrastructure, access improvements and transit linkages.

Under this authorization, FLTP base funds for the Service equal \$30M/Yr. and can be used for refuges and hatcheries as long as those units are open to the public and are included in the Service's transportation facility inventory. MAP-21 also discontinued some discretionary grant programs (Sarbanes and Scenic Byways) while at the same time creating a number of new programs (like the Federal Lands Access Program, or FLAP) that allow agencies to compete for supplemental funding.

These fundamental changes to transportation funding mechanisms indicate a larger shift toward an outcome-driven and performance based funding environment, for which the FWS transportation program must be ready.

The GROW AMERICA Act is the Administration's transportation reauthorization proposal, which builds on the foundation laid out by MAP-21. The proposal addresses many of the concerns of MAP-21, yet many details of the Act are yet to be determined and approved by Congress. Reauthorization may take several years, yet despite this uncertainty the FWS transportation will be ready to comply with any requirements set forth.

Beginning with this plan and the policies contained herein, the program is ready to demonstrate quantifiable system improvements to deliver a better connected, dynamic and priority based network of transportation facilities that provide sustainable, safe and resilient access opportunities to and within FWS lands.

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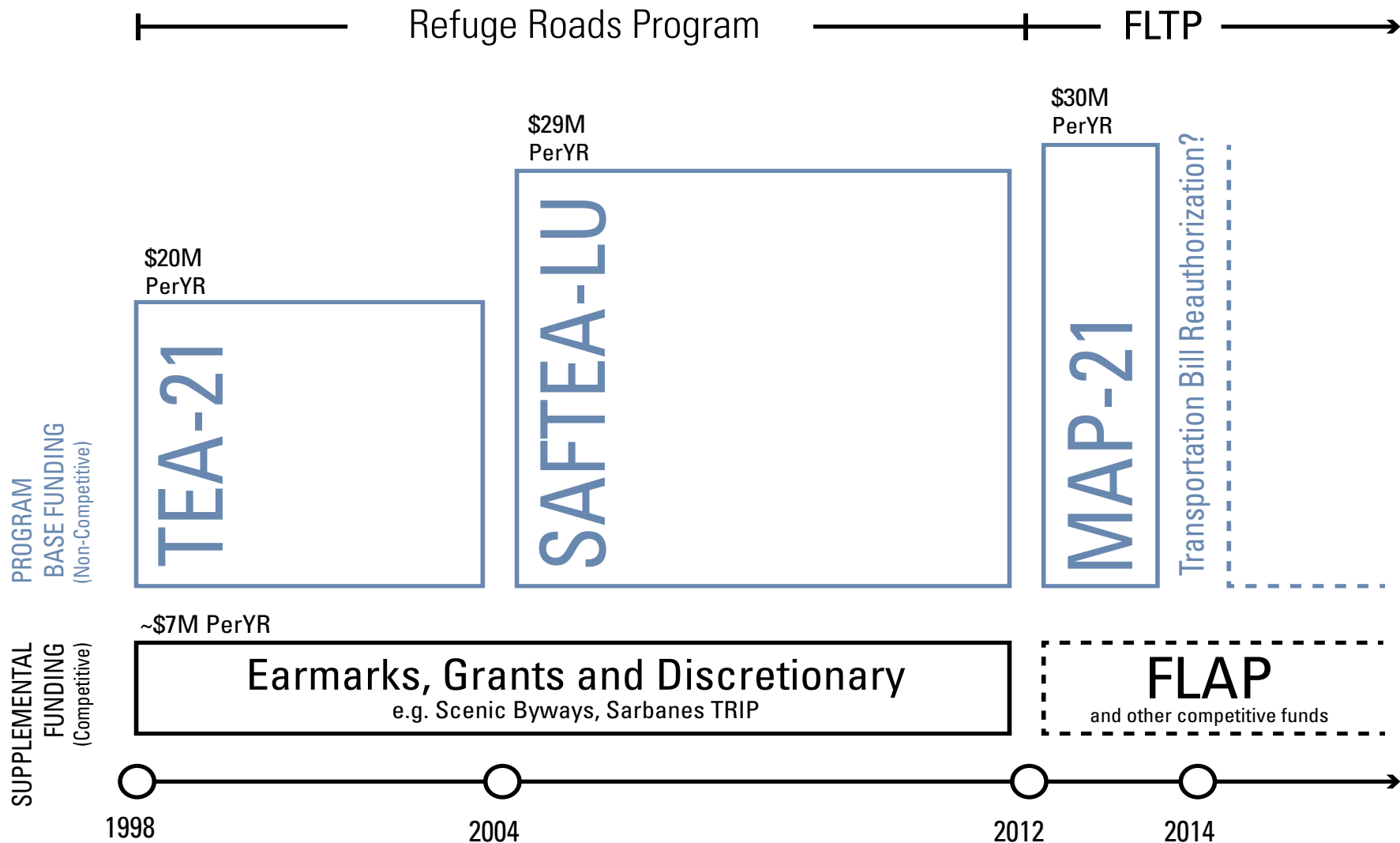
*“Our ability to provide support for access to federal lands is contingent on our ability to invest in our nation’s infrastructure.”*

- US Secretary of Transportation Anthony Foxx

Upon presenting Bernalillo County, NM and Valle de Oro NWR With an \$8M FLAP Award  
October, 2014

Source: *Transportation Needs and Planning for the Future 2013*

# FWS Transportation Funding Timeline



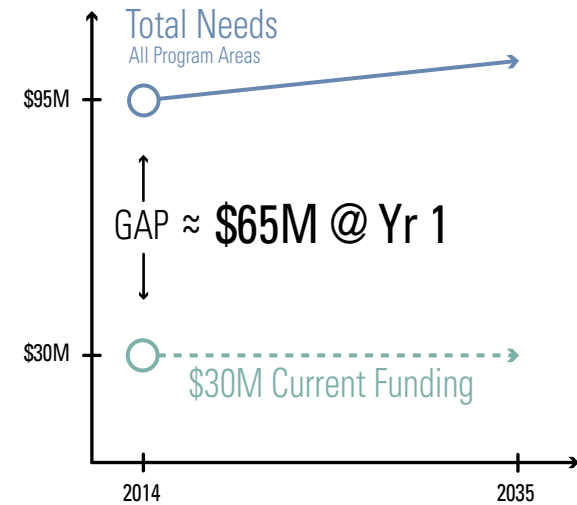
# National Level Analysis

## Needs vs. Funding

Soon after MAP-21 was enacted, FLTP partners were asked by FHWA to prepare an analysis of total system needs based on the size and nature of their transportation networks. The outcome of this extensive effort is summarized here. To address all the needs in the public use transportation system, the program would require \$95M/yr. or roughly three times the current funding level.

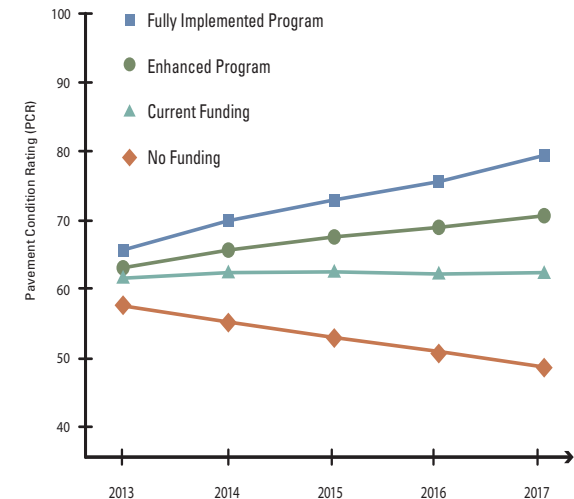
Thus, the gap between current funding levels and the total needs of the program equal approximately \$65M at year 1 (2014, plus 3 percent inflation per year). This exercise illustrates the importance of strategic program planning as well as the need to leverage supplemental funding to be able to achieve goals and targets.

Funding vs. Needs



Program Area	\$30M Current Funding	\$60M Enhanced Program	\$95M Fully Implemented Address all Needs
Pavement Roads and Parking Lots	\$17.5M	\$37M	\$57M
Bridges	\$2M	\$4M	\$6M
Large Projects	\$2.5M	\$5M	\$15M
Environmental Enhancements	\$2M	\$4M	\$6M
Trails + Transit	\$2M	\$4M	\$5M
Transportation Planning	\$1M	\$3M	\$3M
FHWA Admin.	\$3M	\$3M	\$3M
20 yr Deferred Maintenance	~ 2-3% per yr Reduction ~ 40-60% Reduction in 20 yrs		~ 5% per yr Reduction ~ 95% Reduction in 20 yrs

Nationwide Pavement Roads and Parking Lots



Sources: Transportation Needs and Planning for the Future 2013, FWS Facilities Branch Annual Report 2013, FHWA Pavement Management Analysis 2013



### Allocations vs. Visitation and High-Use Recreation

To determine the extent to which the program is fulfilling the economic generation principle, HQ conducted a national level analysis to determine the extent to which funding allocations were being programmed at high-use recreation sites. These sites are economic generators because they drive tourism and bolster local economic activity.

The top graph shows the percentage of each region's allocation that is programmed at stations with higher than average visitation for that region (6 year totals, Alaska Region 7 omitted). Regional variability is captured in the distribution of the results (Great Lakes Region 3 at over 60 percent, South East Region 4 at just over 20 percent).

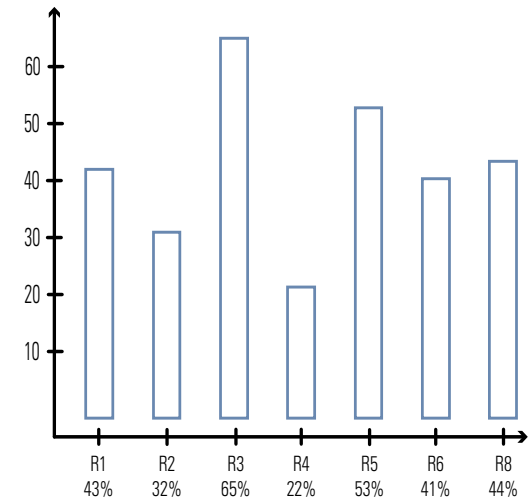
This analysis gives each region a baseline to inform future programmatic decisions regarding high-use recreation sites and economic generation. A strong work program will balance the economic generation principle with the other two, equally important principles of transportation and resource protection.

The bottom graph shows entire FLTP program spending (all regions totaled, Alaska R7 omitted) at highly visited units over the same six year period. The sawtooth pattern demonstrates the variability of conditions in the field and the response the program makes to manage this reality.

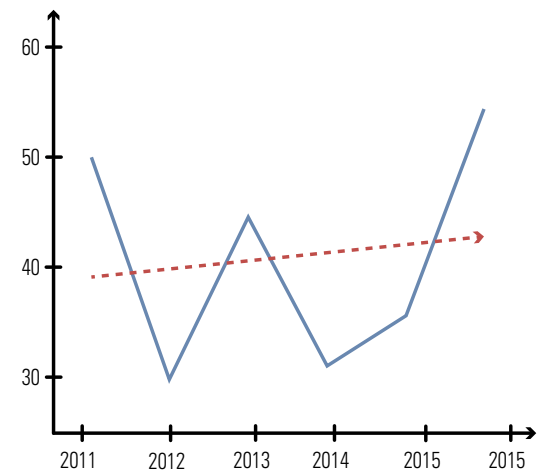
As a small program, the organization must broadly distribute funds year to year to strike a balance between urgent needs brought about by climatic events or safety concerns, priority needs on bridges and auto tour routes and smaller scale, but mission critical, improvements at less frequently visited refuges and hatcheries. This analysis is helpful in establishing a baseline for the program nationally (approx. 40 percent average, all regions, all program funds, over 6 years) and will help guide programmatic recommendations in the future.

In addition, the red trendline demonstrates the program's success at directing funding towards high-use recreation sites over time.

% of Regional Allocations Programmed at High-Use Recreation Sites (2011 - 2015)



% FLTP Program Funds Programmed at High-Use Recreation Sites



## Net Visitation

50M

2013

Actual

75M

2035

Projected Given  
Historic +2% / Yr  
Increase

Sources: Refuge Annual Performance Planning, FWSTP Budget and A Preliminary Analysis of Transportation Program Funds and Highly Visited Field Stations 2014

# National Level Analysis

## Facilities and Asset Management

SAMMS is the asset management database that the Fish and Wildlife Service uses to provide information on facility and equipment deficiencies, justify budget requests for maintenance needs, track 5-year budget plans, and provide bases for management decision making. Transportation assets are included in SAMMS to aid in completing inspection and maintenance activities and to quantify the complete picture of facilities and equipment owned by the Service.

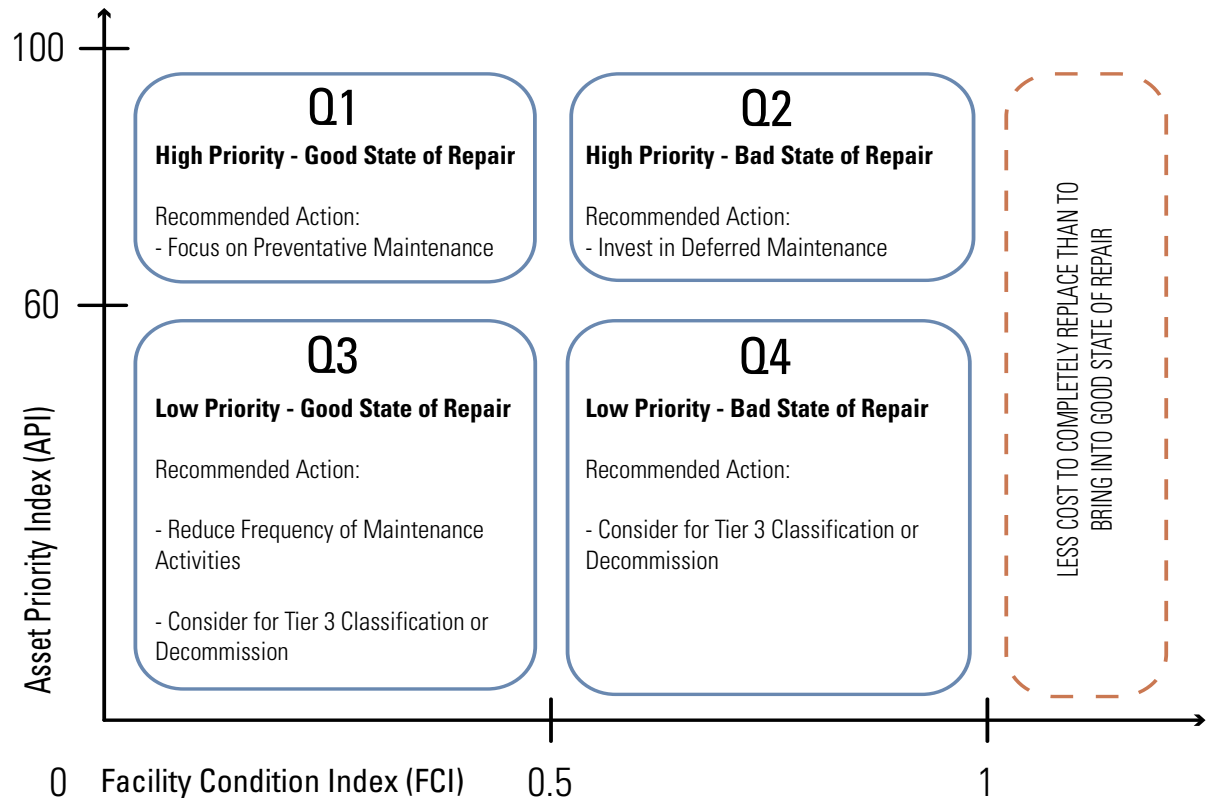
SAMMS uses an Asset Priority Index (API) to rank how important assets are to the Service. The Service's use of API is consistent with the U.S. Department of the Interior (DOI) definition of API as 'an asset evaluation process that quantifies the value of an asset in relation to the mission of the Bureau or Office.'

The API scale is from 1 to 100 (with 100 being the highest score) and is calculated from two variables: mission dependency and substitutability. The Service uses this metric to ensure that maintenance activities focus on the highest-priority assets. Similarly, API is used to identify the lowest-priority assets for less frequent maintenance, or possible decommissioning.

API can be revisited periodically, and should be as part of any CCP or transportation plan development.

Sources: SAMMS 2011, NBI

## Condition and Priority Matrix



SAMMS also contains a Facility Condition Index (FCI) which is a ratio of the deferred maintenance (DM) costs to replacement value (CRV). The closer to 0 that an asset's FCI score is, the better condition the asset is in. API and FCI numbers can be used to optimize transportation allocations at the regional level. Work programs and project selection processes can be tailored around where assets fall within the 'condition and priority' matrix, supporting the performance management components of MAP-21.

Approximately 57 percent of all FWS transportation assets have an FCI of < 0.10, indicating that no improvements are needed (as of 2011). An FCI greater than 1 indicates that it would cost more to bring the asset to full repair through deferred maintenance than it would be to completely replace the asset. In these situations, replacement is therefore the best course of action, if the asset is mission critical.

Asset Type <sup>*</sup>	Units	% Of Units in Q1	
ROADS †	Paved Roads	2,354 Lane Mi	91%
	Dirt Roads	7,721 Lane Mi	75%
	Gravel Roads	8,449 Lane Mi	83%
TRAILS	Paved Trails	86 Mi	96%
	Unpaved Trails	1,885 Mi	86%
	Boardwalks	47 Mi	76%
BRIDGES	Culvert Road Bridges	175	95%
	Road Bridges	485	89%
	Trail Bridges	139	90%
OTHER	Stationary Docks	207	84%
	Floating Docks	60	99%
	Airstrips	28	95%
	Parking Areas	5,100	65%

**A Note on Data:**

Since the inception of the multi-partner FLTP, data collection protocols (for assets and real property, deferred maintenance, condition assessments, usage statistics, etc.) have changed substantially. Methods and procedures have been streamlined to not only facilitate the collection of data from the FWS perspective, but many procedures have been standardized to assure quality control between and among FLTP partner agencies. This helps FHWA in planning, designing and delivering transportation projects across the country.

This shift from old to new takes time as many data collection efforts require multiple years to gather an entire national set. In addition, as old data is replaced with new data, discrepancies can emerge due to differing methodologies.

As a program, we recognize that for the data to be meaningful it must be accurate, precise, up to date and collected in a consistent manner. The FWS transportation program is working diligently in this transition period and as the FLTP matures, the overall quality of data collection and analysis will only improve.

According to SAMMS, There are thirteen different types of ‘core transportation asset types’ that support travel as their primary function.

An analysis of FCI/API scores on all thirteen different asset types revealed that, in all cases, the vast majority of units of measure in that asset class fell in the ‘High Priority - Good State of Repair’ quadrant (Q1).

This illustrates two important facts:

- The transportation network is the right size for the usage and need of the Fish and Wildlife Service and visiting public.
- The program is very effective in maintaining a state of good repair on the most important, mission critical transportation facilities.

<sup>\*</sup> Public and admin. assets

<sup>†</sup> FWS reports approx. 13,000 linear miles of roadway (5,400 mi. of public, 7,800 mi. of admin.)

# Federal Funding Opportunities

Having priority projects scoped and scored with some degree of design and/or engineering will demonstrate the program's commitment to the project and increases chances for securing additional funding.

Some of the funding sources listed are administered by USDOT or the Federal Highway Administration. Other programs channel monies to state agencies for them to administer through their respective departments of transportation or local government representatives (also known as Federal Aid). Programs vary by state and may be housed in more than one agency, including those with a primary focus on transportation, recreation, environment and natural resources, and planning. MPOs and local governments may be another source for funding multi-modal projects, often using funds allocated from the state or USDOT.

Regional transportation coordinators can help individual refuges identify appropriate state and regional funding sources and programs according to applicable investment strategies.

## The Federal Lands Access Program or FLAP

The following activities are eligible for consideration under the FLAP:

- Preventive maintenance, rehabilitation, restoration, construction and reconstruction of transportation facilities
- Adjacent vehicular parking areas
- Acquisition of necessary scenic easements and scenic or historic sites
- Provisions for pedestrian and bicycles
- Environmental mitigation in or adjacent to federal land to improve public safety and reduce vehicle-wildlife mortality while maintaining habitat connectivity
- Construction and reconstruction of roadside rest areas, including sanitary and water facilities
- Operation and maintenance of transit facilities
- Research and planning

Proposed projects must be located on a public highway, road, bridge, trail or transit system that is located on, adjacent to, or provides access for a federal land. Additionally, title or maintenance of the facility must be vested in a state, county, town, township, tribal, municipal, or local government.

The FLAP is funded at \$250 million annually and its monies are allocated on a state by state basis using the following formula:

- 80 percent of funds to States with at least 1.5 percent of the total acreage of United States' public land
- 20 percent of funds to States with less than 1.5 percent of the total acreage of United States' public land

Within these states, the FLAP further calls for funding allocation based on federal public road miles (55 percent), recreation visitation (30 percent), federal public bridges (10 percent), and federal land area (5 percent). The program also lends preference to projects that are within, adjacent to, or provide access to high-use federal recreation sites or economic generators, as identified by the appropriate FLMA. Programming decisions are made by a committee (Project Decision Committee or PDC) comprised of FHWA, state DOT and local government representatives. Despite the fact that FLAP applications require an FLMA partner, representatives of FLMAs are not yet formally represented in the PDCs.

Partnerships and coordination with state and local governments will be critical to leverage FLAP funds for transportation projects within and surrounding Service lands.

FWS has been successful in leveraging funding from this new program, securing projects in every region in its first year of implementation.

## Transportation Alternatives Program or TAP

Also administered through the FHWA, the TAP is the successor to the Transportation Enhancements (TE) Program that was initiated in 1991. TAP is intended to promote a balanced and multimodal approach to American transport infrastructure.

In order to qualify for a TAP award, a project must propose one of the 10 eligible activities which include:

- Pedestrian and bicycle facilities (planning, design and construction)
- Safe routes for non-drivers
- Abandoned railway corridors to trails
- Scenic turnouts and overlooks
- Outdoor advertising management
- Preservation and rehab of historic transportation facilities
- Vegetation management
- Archaeological activities
- Storm water mitigation
- Wildlife management

State DOT's and regional MPO's are given the authority to manage the grant application and project selection processes.

See [www.Enhancements.org](http://www.Enhancements.org) or [www.fhwa.dot.gov/map21/guidance/guidetap.cfm](http://www.fhwa.dot.gov/map21/guidance/guidetap.cfm) for more information on the TAP program.

## Coordinated Technology Implementation or CTIP

The Coordinated Federal Lands Highway Technology Implementation Program is a cooperative technology deployment and sharing program between the FHWA Federal Lands Highway office and the various federal land management agencies.

It provides a forum for identifying, studying, documenting, and transferring new technology to the transportation community. Its purpose is to deploy innovative, unique, or under-used transportation technologies that enhance highway safety, access and/or management.

Allocations for the CTIP come from FLTP and Tribal Transportation Programs (TTP) and equal about \$2M/Yr.

Eligibility includes:

- Testing, deployment, and impact evaluation of market-ready technologies and innovations.

For more information on the Coordinated Technology Implementation program contact Victoria Peters at [victoria.peters@dot.gov](mailto:victoria.peters@dot.gov)

## Accelerated Innovation Deployment or AID

Under the AID demonstration program, funds are available to implement an innovation in any aspect of highway transportation including planning, financing, operation, structures, materials, pavements, environment, and construction on any project eligible for assistance under title 23, United States Code. The full cost of the innovation in a project may be awarded up to the maximum amount of \$1M.

Awards are limited to up to two projects per State DOT applicant, with up to one project award to a State DOT and up to one project award to a sub-recipient applying through the State DOT, and limited to one project award per applicant for Federal Land Management Agencies and tribal governments, subject to the number of eligible applications and the availability of funds. These funding goals are reviewed annually and may be adjusted to reflect current priorities and needs. Projects eligible for funding include proven innovative practices or technologies, including infrastructure and non-infrastructure strategies or activities (like dust suppression or roadside invasive species management) which the applicant or sub-recipient intends to implement and adopt as a significant improvement from the applicant's or the sub-recipient's conventional practice.

See <https://federalregister.gov/a/2014-03452> for more information about application and eligibility.

# Implementation



*Kanuti NWR*

Alaska

# Key Actions and Targets

This section is about putting PLAN 2035 into practice. First, this section proposes a performance based project selection framework. The metrics of the framework are directly tied to the strategic goals of this plan. This process will help regions identify their most pressing needs, balance program principles, advance strategic goals and ultimately help achieve the 20 year transportation vision. Second, this section proposes a non-exhaustive starter list of recommended actions derived from the strategic goals in this plan. Under each strategic goal are actionable items that regional staff and program managers can implement at various levels of the organization to advance the ideas and policies in this plan. Third, the section sets performance objectives and targets under each strategic goal that will help the program track progress over time.

Finally, the section offers guidance for the development of the forthcoming regional LRTPs as well as updates to completed ones.

# Selection Process

The Service and its partners have developed a national project selection framework that will help Service staff determine improvement programs that align with the policies in this plan. This strategy envisions a usage of best available data to arrive at recommendations and decisions for regional work programs. This framework is intended to establish uniformity in project selection across the Service thereby contributing to stability of the program.

The project selection process is flexible and allows for regions to adapt the framework to fit their needs. Some examples of how regions can adapt the selection process to fit their needs include, but are not limited to:

- The composition and roles of regional project scoring teams
- Methods for submitting project information
- Sub-criteria within the national criteria
- Process for assigning scores to projects
- Weight given to goal categories
- Use of scores in determining final project selection
- Determination of regional priorities
- Schedule for updating the regional project selection processes

## Project Selection Cycle Steps:

### 1 - Solicitation of Projects

Regional transportation coordinators create a pool of candidate projects for consideration, by soliciting input from units and regional leadership. Potential projects must include key data points (such as RIP, SAMMS, RATEs, CCP, road safety audits, SMS, etc.) to verify and explain the need for a project. The project description form, included with this publication, will be used in the solicitation phase.

### 2 - Preparation for Scoring

Regional transportation coordinators ensure that all proposed projects have sufficient information and best available data to take part in a regional scoring process.

### 3 - Scoring and Project Scorecard

Regional staff evaluate and score each project using the criteria elements in the project scorecard (P 50-51) as a guide. This framework gives the transportation program a common baseline to work from to link projects with the strategic goals and principles in this plan. The project scorecard is intended to give guidance the regions, and may be adapted, amended or modified to suit policy, needs and priorities. The best projects will incorporate most, if not all, of the goal areas in the scorecard.

**Note on STAT Tool:** The forthcoming Station Transportation Analysis Tool or STAT is intended to streamline the scoring process by displaying multiple transportation datasets as they relate to the goal areas in the scorecard and this plan. This provides regional transportation staff a way to both validate improvement plans and a means to facilitate future project programming.

### 4 - Ranking and Prioritization

Regional staff rank projects according to a scale and process documented in their regional LRTPs.

High scoring projects are then prioritized based on factors to be determined by the region. Such factors can include projects that incorporate a number of LRTP goals, projects that are consistent with the FWS Roadway Design Guidelines, projects that are indicated in a Comprehensive Conservation Plan (CCP) or Landscape Conservation Cooperative (LCC), assets with a high API score, projects that improve a primary access route, indicated as a priority in a regional LRTP or other planning document and/or projects consistent with the national investment strategy.

### 5 - Determine Regional Work Program

While the ranked project list will guide project decisions, regional leadership will have the final decision on project selection. Scores are intended to advise the decision makers, but they have flexibility to prioritize projects due to timing, size of projects, funding availability, or shifting regional priorities.

### 6 - Eligibility Check

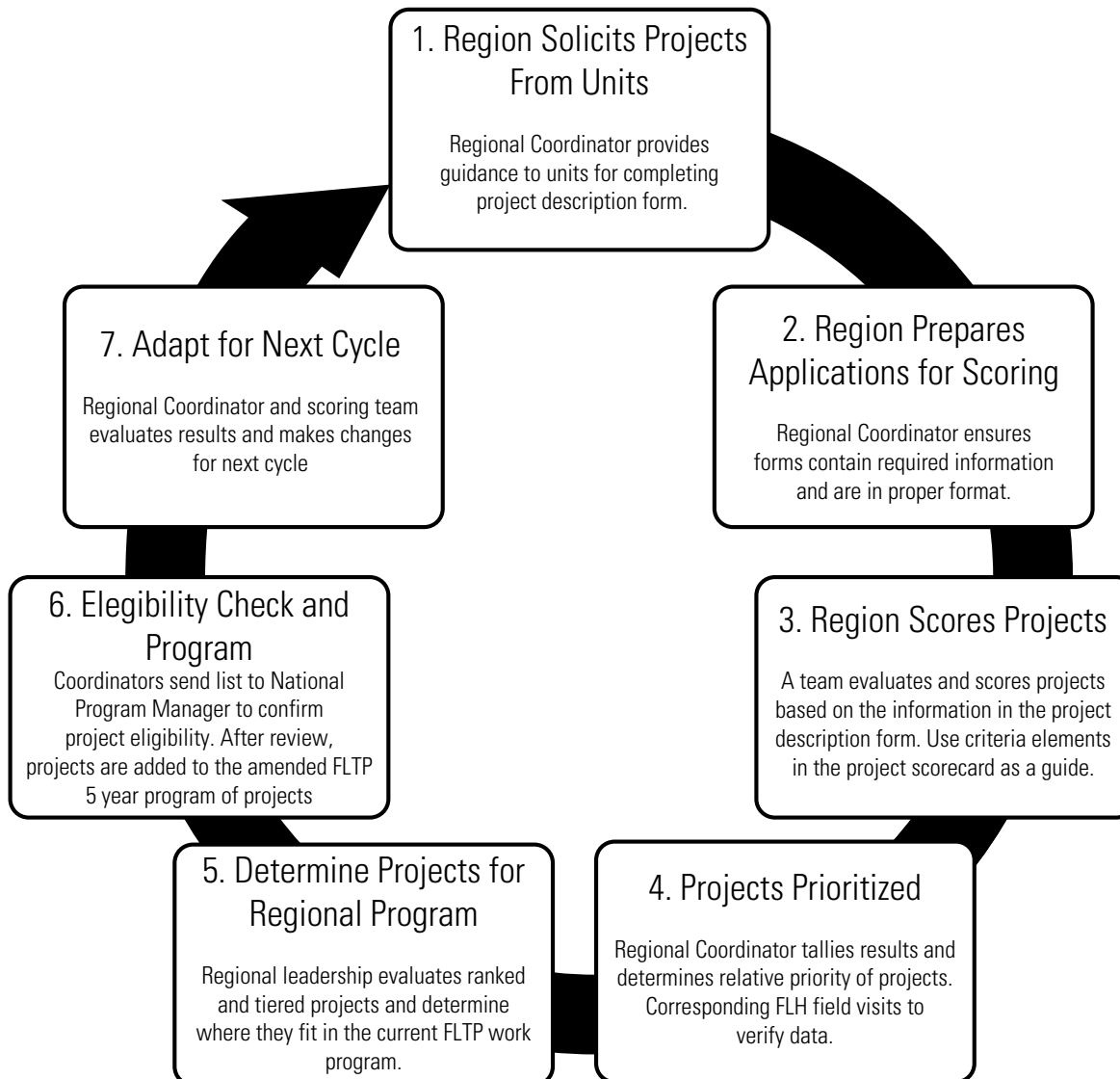
Coordinators send list to national transportation program coordinator to confirm project eligibility. After the review, projects are added to the amended 5-year program of projects.

### 7 - Adapt as Needed

Regional staff will evaluate the regional project selection process and revise it as necessary for following selection cycles.



## FWS Project Selection Cycle



## Data, Assistance and Guidance

**Key Data Inputs:**

- Roads and Trails Inventory Programs (RIP)
- FWS Asset Management Database (SAMMS)
- National Bridge Inventory (NBI)
- Refuge Annual Performance Planning (RAPP)
- Regional Alternative Transportation Evaluations
- Safety and Crash Data

**Ongoing: Coordination with FHWA**

Throughout the project selection process, transportation coordinators and maintenance staff should maintain open dialogue and collaboration with the appropriate Federal Lands Highway office.

FLH can: corroborate/validate 5 year improvement plans, identify efficiencies and economies of scale and can assist with the scoping and budgeting of projects in the initial phases of programming and development.

**Project Scorecard:**

# Project Scorecard

## Coordinated Opportunities



### Data Inputs

- List of partner organizations on regional or national level
- Letters of support from partner organizations
- State and/or regional transportation plans (STIPs, TIPs, etc.)

### Criteria Elements

- Consider the use of funding or partner expertise for planning, design, construction, and/or operations from a partner organization
- Partners can also help manage or operate the completed transportation facility.
- Scoring may be on percentage of partner funding: 10% or less of total project cost, 10-50% of total project cost, or greater than 50% of total project cost
- Project has a letter of support from a partner agency
- Project includes financial support or in-kind support from a partner agency

### Points

**10 points**

## Asset Management



- Project description
- SAMMS data
- RIP data
- NBI and other bridge data
- FCI/API matrix

- Project will bring an asset with a current condition rating of Fair, Poor, or Failed to a condition of Good or Excellent, or improves an identified deficiency
- Project takes into account vulnerability to changing weather patterns and natural disasters
- Project extends the remaining service life of an existing asset
- Project improves an identified deficiency
- Project incorporates cost-savings plan for operations and maintenance to reduce long term costs

**20 points**

## Safety



- Project description
- RIP questionnaire
- Road safety audit
- Crash data
- FARS
- NBI and other bridge data

- Improves transportation-related safety for visitors, staff, and/or wildlife
- Enhancements and countermeasures included in project description: Road safety audits, signs and markings, traffic calming measures and movement restrictions, wildlife crossings, barriers, vegetation control, surface improvements, visiting hours
- Project references: Highway Safety Manual, Interactive Highway Safety Design Model, NATCO Bikeway Design Guide, FWS Roadway Design Guidelines, etc.
- Project site has documented crash history or is identified as a safety issue 'hot spot'
- Project incorporates one or more of the "4Es" of safety (engineering, education, enforcement and emergency medical services)

**20 points**

## Environmental



### Data Inputs

- RIP/RATE survey
- CCP notation of sensitive resources
- Project description
- Roadway design guidelines
- CLIR Tool

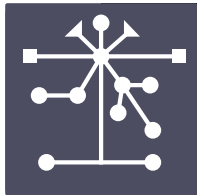
### Criteria Elements

- Project includes context sensitive enhancements for wildlife connectivity and reduction of habitat fragmentation
- Project will reduce or offset greenhouse gas emissions
- Project is designed to avoid negative impacts to fish, wildlife, habitat, cultural and aquatiuc resources through the Roadway Design Guidelines or Adaptive Mitigation principles

### Points

**20 points**

## Access Mobility and Connectivity



- Maps of local transportation systems
- Project description
- RATE maps and project list
- RIP road classification
- List of urban refuges

- Project expands modal options or reduces dependency on private automobiles
- Project expands on and/or off-site connectivity with increased connections to existing transportation systems, roads, trails and transit (if applicable)
- Project expands access to visitor groups that are underrepresented or limited by mobility
- Project includes elements that are addressed or identified in other organizations (state DOTs, MPOs, cities/municipalities) long or short term planning documents
- Addresses a congestion “hot spot”
- Project description includes a measure of the (quantity and/or quality) of existing transportation infrastructure

**15 points**

## Visitor Experience



- CCP or transportation plan
- LRTP or RATE report
- RAPP visitation
- List of urban refuges
- Visitor Service Plans and Assessments
- US Census Data

- Addresses a congestion “hot spot”
- Project includes access to recreational elements like trailheads, viewing blinds, and/or auto tour routes
- Includes internal and external wayfinding for visitor orientation, including multimodal orientation (if applicable)
- Project is listed or referenced in a transportation plan/analysis by FWS or partners
- Project features enhancements that incorporate environmental education, interpretation and stewardship into the travel experience
- Project improves access for underserved or underrepresented visitors

**15 points**

# Short and Long Term Actions



## Coordinated Opportunities:

Coordinated Opportunities:	Deliverables	Resources and Contacts
<p><b>Short Term - Next Four Years</b></p> <p>Identify and engage partners, leverage funds and collaborate with local and regional actors such as: NGOs, non-profits, MPOs, local/state government agencies, state DOTs, local landowners, Indian tribes, transit authorities and private transportation providers when interests align with Service and station level needs.</p> <p>Literature review of all relevant transportation planning documents (STIPs, LRTPs, etc.) from State DOTs, MPO/RPOs for all metropolitan statistical areas in US.</p>	<p>Update of regional transportation partners list due to FWS HQ every 2 years, develop and share accomplishments between regions and NGOs to spur continued collaboration and support.</p> <p>National database of transportation planning documents</p>	<p>Local contacts for MPOs, state DOTs and state/municipal governments, National Friends Group Coordinator at FWS HQ office</p> <p>State DOTs, RPOs and MPOs</p>
<p><b>Long Term - Four Years Plus</b></p> <p>Develop a streamlined method to engage gateway communities, federal land management agencies, tribes, military, state DOTs, and planning organizations to address issues of mutual interest. Focus on priority field stations.</p>	<p>Develop best practice handbook for engaging local governmental and non-governmental actors</p>	<p>Regional transportation program coordinators</p>



## Asset Management:

Asset Management:	Deliverables	Resources and Contacts
<b>Short Term - Next Four Years</b>		
Improve data interoperability between RIP and SAMMS, including use of Services Application for Material Assessments (SAMI)	Fulfill all transportation condition assessments using refined process and placement into SAMMS using SAMI	Facilities Branch at FWS HQ or Federal Lands Highway Roadway Inventory Program (RIP)
Develop a formal step in planning processes to estimate and consider life cycle costs and emissions when project planning and pursue mitigation strategies	Standardized project description form with climate change elements incorporated	The Roadway Design Guidelines, FHWA Climate Change Tools, Climate Leadership in Refuges tool (CLIR)
Complete and merge road and parking tiering effort, nationwide	Data cleanup in SAMMS	
Develop strategy to inventory and manage non-public use transportation network, ERFO program, and maintenance program	Updates/addenda to PLAN 2035	Transportation at FWS HQ and Volpe Center
Continue to implement non-safety (pavement, congestion and bridge) management systems	Full execution of management systems	The Volpe Center, FHWA
<b>Long Term - Four Years Plus</b>		
Begin a 'pavement preservation' approach to asset management to extend the life of roads	Best practice guides for pavement preservation	The Volpe Center, FHWA
Identify transportation assets at risk due to the impacts of climate change and pursue appropriate adaptation strategies	Nationwide vulnerability study (Expansion of pilot study conducted in Region 4)	Transportation at FWS HQ, FHWA and Consultants
Improve the collection, accessibility, and interpretation of asset management, resource, safety, planning, and other data. For example: the on-going Station Transportation Analysis Tool (STAT) project, planning questionnaire assisted RIP process and safety assessments	Central database for storage of transportation program data. ServCAT is potential repository	Transportation and Natural Resource Program Center at FWS HQ and FHWA

# Short and Long Term Actions



## Safety:

### Deliverables

### Resources and Contacts

#### Short Term - Next Four Years

Implement recommendations resulting from the Service’s Transportation Program Safety Management System report

Establish connection between FWS data and Safety Management System (SMS) to use data to assess needs

Regional transportation program coordinators and FHWA

Develop Servicewide standard to track and report wildlife/vehicle collisions (WVC)

Integrated into RIP/RATE surveys to the field

Transportation at FWS HQ and Volpe Center

Implement the safety analysis toolkit. Initiate safety studies and actions in areas believed to have safety problems as identified in unit-level plans, regional LRTPs, and the National LRTP

Determine safety priority improvement areas across the network. Begin to address through studies and needs assessments. Report every 2 years on safety related transportation improvements

Regional transportation program coordinators

Complete transportation safety assessments for all stations with identified needs

Nationwide list of priority safety issues

Safety assessments and Safety Analysis Toolkit



**Environmental:**

**Deliverables**

**Resources and Contacts**

**Short Term - Next Four Years**

Develop a format/process for regions to track wildlife-vehicle collisions and hot-spots, and report annually

Scope of work to assist regional coordinators to begin to focus on priority field stations

The Western Transportation Institute at Montana State University

Implement and monitor the FWS Roadway Design Guidelines for use across the Service

Accountability tracked through the Design Guidelines Project Acknowledgements Worksheet by both FWS and FHWA

The FWS Roadway Design Guidelines

Expand the Service’s Climate Leadership in Refuges (CLIR) tool so all stations can use it to track emissions. Encourage/require annual emissions reporting for transportation sources

Full roll-out of CLIR tool to stations with Visitor Surveys and assistance on transportation related items

Transportation at FWS HQ Refuge System and Business Management/Ops.

Follow the principles of Adaptive Mitigation to achieve no net loss when designing, building or restoring transportation facilities including: Avoidance, Minimization, Rehabilitation and Restoration

Develop standard methodology to quantify the environmental impacts of construction activities

501 FW 2 - Mitigation Policy

**Long Term - Four Years Plus**

Further study of terrestrial and aquatic organism passage issues as they relate to transportation (e.g. wildlife/vehicle collisions in and around Service lands)

National list of high priority corridors. Best practice guidance for connecting fragmented habitat, roadside maintenance and revegetation practices (e.g. planting of milkweed along roadsides in monarch butterfly I-35 flyway corridor)

FHWA Office of Natural Environment and the Roadway Design Guidelines

Where feasible, reroute high-speed roadways around refuge lands or work with partners to mitigate negative impacts

State and local transportation organizations

# Short and Long Term Actions



## Access, Mobility and Connectivity:

### Short Term - Next Four Years

Collect and analyze information to characterize access, congestion levels, high use, economic generators and alternative transportation systems (ATS) at Service units. Consider census population projections as a proxy for future visitation

Determine where multi-modal transportation opportunities are most feasible with priority for Urban Refuges

Develop online presence for the transportation program. Content should include: data, planning tools, documents, links, projects, etc.

### Long Term - Four Years Plus

Incorporate transportation access, mobility, congestion, and connectivity in CCPs, LRTPs, visitor use plans, and unit-level transportation plans, paying particular consideration to underserved, underrepresented, and disadvantaged populations

Continue to work collaboratively with the NWRS Vision Implementation team and its Urban Refuge initiative

### Deliverables

Work with urban initiatives and other access programs to highlight areas of need and projections for future connectivity

Compile a National Alternative Transportation Evaluation (NATE) using completed regional surveys. Make suggestions to prioritize needed improvements at key field stations, conduct needs assessments at Urban Refuges

FWS Transportation Program Webpage

Official FWS plans, presentations and policy materials

To be determined by Transportation and Urban Implementation teams

### Resources and Contacts

Transportation at FWS HQ and The Volpe Center

The Volpe Center and the RATE surveys, Urban Implementation Team

Transportation at FWS HQ and The Volpe Center

The Volpe Center

Urban Implementation Team at FWS HQ





## Visitor Experience:

Visitor Experience:	Deliverables	Resources and Contacts
<p><b>Short Term - Next Four Years</b></p>		
<p>Ensure all relevant wayfinding information is on refuge and hatchery websites and printed materials</p>	<p>Carry out regular inspections and conduct as-needed maintenance on all internal and external refuge and hatchery signage</p>	<p>Branch of Communications at FWS HQ</p>
<p>Develop strong working relationships between the Service and local public agencies to encourage connections to transportation providers and inclusion of unit information into ITS databases, displays and signs</p>		<p>Local agencies, non-profits, governmental entities and DOTs/MPOs</p>
<p>Catalog opportunities to develop interpretive/educational elements into transportation facilities</p>		
<p>Work with external mapping providers (such as Google Maps and Garmin) to verify locations of main entrance routes, roads, trails and points of interest</p>		<p>Cartography office at FWS HQ and external data services</p>
<p><b>Long Term - Four Years Plus</b></p>		
<p>Adopt and follow Manual on Uniform Traffic Control Devices for Streets and Highways (MUTCD) compliant standards for static signage design and procurement</p>	<p>FWS standard transportation signage design manual</p>	<p>Facilities and Transportation at FWS HQ</p>
<p>Enlist refuge and hatchery friends groups to assist in wayfinding efforts using innovative information distribution platforms</p>	<p>Mobile apps, QR codes, text alerts, etc.</p>	<p>National Friends Group Coordinator at FWS HQ office</p>
<p>Continue to participate in visitor satisfaction and transportation related questionnaires to the public</p>	<p>Strategic data collection at priority stations</p>	<p>FWS Human Dimensions office</p>

# Short and Long Term Actions



## Funding:

## Deliverables

## Resources and Contacts

### Short Term - Next Four Years

Refine the future annual transportation needs within the Service and work with FHWA and other partners to express these needs at strategic times (like during transportation bill reauthorization).

Focus funding on Tier 1 and 2 roads, as classified by the Service Facilities Branch (Tier 3 roadways will still be eligible for FLTP funding, but at low priority)

Regional transportation program coordinators, Facilities Branch at FWS HQ

Develop a Service-wide strategy for accessing funds from new discretionary funding sources (FLAP and Transportation Alternatives Program).

Consider dedicated staff for this effort

Regional transportation program coordinators and Federal Lands Highway offices

Adopt a national project prioritization process with standardized criteria to develop programmatic consistency.

Project selection process

Regional and national transportation program coordinators

### Long Term - Four Years Plus

Determine how to use RIP, SAMMS, and RAPP data consistently for funding decisions. This includes finding ways to consistently report and apply asset priority index, facility condition index scores and visitation counts.

Transportation at FWS HQ

Improve tracking of transportation program expenditures (by funding source, region, year, and unit).

Yearly national roll-up of budgetary expenditures

Regional transportation program coordinators, the Volpe Center



## Headquarters Office:

### Deliverables

### Resources and Contacts

#### Short Term - Next Four Years

Develop centralized repository for transportation related data, initiatives, policy structure and general programmatic information.

Transportation program web portal on FWS.GOV

The Volpe Center

Seek ways to communicate the accomplishments of the transportation program as a means to maintain current funding levels or demonstrate needs.

High quality 'glossy' products that communicate progress and achievements to appropriate audiences

National Wildlife Refuge Association and Transportation at FWS HQ

Develop list of 'national priorities' across ten different elements of the transportation program including: auto tour routes, primary access routes (both FWS and non-FWS owned), parking areas, bridges, safety projects, wildlife/vehicle interaction hot spots, alternative transportation, trails and large (>\$3M) projects.

Continued participation in annual data call

All Transportation group staff

Develop a method to track and analyze progress over time of performance targets.

Yearly or biennial report card for national performance based on strategic goal area

Based on RATE surveys, synthesize a National Alternative Transportation Evaluation (or NATE) to guide long-range alternative transportation programming decisions.

Develop method to track SAMMS work orders and spending amounts that are charged to FLTP funded projects on FWS transportation assets.

Facilities Branch at FWS HQ

Identify and fill short and long-term staffing needs to add operational capacity to the program.

New staff positions and/or organizational structure

Volpe Center staffing analysis

# Performance Targets

■ Coordinated Opportunities:	Current Performance	20 Year Target Performance
▪ Increase the total number of official Fish and Wildlife partners and friends groups year to year	230 Unique organizations	Plus 10% nationally
▪ Increase the percentage ratio of supplemental funding to base funding for projects and planning	23% or about \$7M/yr. (10 yr. avg)	40%
▪ Increase the number of transportation projects that leverage multiple funding sources	Baseline established at year 1	5 per year nationally
■ Asset Management:		
▪ Increase percentage of road miles in good or excellent condition	62% RIP Cycle 4	80% or higher
▪ Maintain percentage of trail miles in good or excellent condition	84% RIP Cycle 3	Greater than or equal to current performance
▪ Increase percentage of bridges in good or excellent condition	65%	95% or higher
▪ Increase percentage of programmed FLTP projects that have been scored and prioritized via a standardized selection process	None (0%)	50% in 2 years, 100% in 5 years
■ Safety:		
▪ Complete safety assessments for highly visited refuges	Baseline established at year 1	5 per year nationally
▪ Reduce number of transportation related fatalities that occur on refuges and hatcheries	2 Fatalities in past 5 Years	Zero fatalities
▪ Reduce number of wildlife/vehicle collisions	Baseline established at year 1	Zero collisions

■ Environmental:	Current Performance	20 Year Target Performance
▪ Increase percentage of transportation projects that track the elements of the Roadway Design Guidelines through the Project Acknowledgements checklist	Baseline established at year 1	60% at year 1, 100% by year 5
▪ Increase the number of projects that enhance aquatic or terrestrial organism passage	Baseline established at year 1	5 per year nationally
▪ Complete assessments on existing wildlife crossings and aquatic passages	Baseline established at year 1	2-3 per year nationally
▪ Reduce or offset the carbon footprint of the transportation network (The Climate Leadership In Refuges, or CLIR tool, will provide guidance with this)	Baseline established at year 1	20% below 2010 baseline
■ Access, Mobility and Connectivity:		
▪ Increase the total number of multi-modal connections to refuges and hatcheries (The pending Multimodal Catalog, being drafted by FLH, will provide guidance with this)	Baseline established at year 1	3 projects per year
▪ Increase the number of multimodal transportation options on refuges and hatcheries (Also, see Multimodal Catalog)	Baseline established at year 1	5 projects per year
▪ Increase number of projects that improve access at main ingress/egress points	Baseline established at year 1	2-3 projects per year
■ Visitor Experience:		
▪ Integrate wayfinding and ITS into transportation projects	Baseline established at year 1	2-3 projects per year
▪ Maintain or improve transportation satisfaction ratings (Based on National Visitor Survey)	75% 'Highly Satisfied' with 'Very Important' elements	Greater than or equal to current performance

# Performance Management and Planning

MAP-21 set up certain requirements for project selection and parameters for performance management for FHWA and Federal Land Management Agencies. When using programmatic funding with the Federal Lands Transportation Program, transportation improvements are to be considered to the extent that they support:

- Transportation goals, including a state of good repair of transportation facilities, reduction in bridge deficiencies, and improvement of safety.
- High-use federal recreational sites or federal economic generators.
- Resource and asset management goals of the Secretary of the respective Federal Land Management Agency.

## Meeting Performance Management

The policy structure of this plan is consistent with the MAP-21 performance management parameters, namely through the program principles and goals. This plan also adds specific items related to visitor experience and coordinated opportunities, all of which carry through to actions. In addition, the proposed performance measures in the previous section consider draft FHWA performance measures generated in 2013, and add to that list to include items important to the Service and the transportation program.

### Actions:

- Starting in FY 2016, develop more robust program applications for the FWS transportation program that propose work plans at various potential funding levels. Applications (funding scenarios and associated work plans) will be consistent with the guidance in this LRTP.
- The transportation program will prepare baseline numbers for the performance measures outlined in this plan and track/evaluate progress over time.
- Elevate the percentage of program funding obligated for transportation improvements at high-use recreational sites. From the historical data and projection over the next few years, FWS has obligated about 40% of its funds at higher use stations (based on overall visitation numbers). As a goal, FWS will work toward targeting expenditure at a majority of field stations (>50%) that meet the FWS definition of high-use.

## Future Planning

The national LRTP will be updated every 4 to 5 years. Because the policy structure of the next transportation authorization is unknown, this document will be refined in accordance as needed once the new authorization or reauthorization is signed into law. In future plan revisions, the transportation program may consider additional factors for setting priorities at a national level, including guidance on leveraging supplemental (discretionary or competitive) funds.

### Actions:

- Develop Service wide strategies for accessing funds from supplemental funding sources (Federal Lands Access Program, Transportation Alternatives Program, etc.)
- Refine or update the project selection process outlined in this plan to track with performance management and other legislative requirements in any future transportation authorization.
- Quantify the future annual needs for motorized, non-motorized and alternative transportation maintenance and operations both on and off Service lands.
- Seek ways to communicate the accomplishments of the Service transportation program as a means to maintain current funding levels or seek future increases.
- Improve tracking of transportation program expenditures through FBMS and Federal Lands Highway financial systems by funding source, region, year, and unit).

# Regional LRTP Development

This plan is intended to provide direction for the development of forthcoming regional LRTPs to further strengthen program stewardship and link Service goals with planning process. This guidance provided for regional LRTPs is intended to provide a common starting point (or update point) for each and will ensure that minimum requirements for regional plans are met.

Regional LRTPs should lay out a clear set of goals, objectives, data collection processes, and recommendations for a project selection process. This guidance allows for wide-ranging flexibility to accommodate unique regional goals, conditions, values, data, performance, action items, and recommendations while remaining consistent with the national plan.

## Regional LRTP Compatibility

As regions develop or update their LRTPs, they should integrate and/or expand upon the below elements in the following ways:

- Regional goals should follow or elaborate upon the six strategic goals expressed in the national plan
- Existing conditions (baselines) should be determined to help set regional targets
- Needs and investment strategies must be defined
- Priority projects should be defined based on needs, investment strategies and selection processes
- Transportation planning needs for CCPs, step-down plans and safety studies, must be assessed and clearly documented
- National strategies proposed for addressing annual and deferred maintenance should be considered
- Regional plans should stipulate adherence to the Roadway Design Guidelines
- The project selection criteria and basic process outlined in the national plan will be adopted and refined
- The performance measures outlined in this plan will be calculated on regional levels using best available data

## Additional Elements

The majority of the detailed content in regional LRTPs should be unique to that specific region. There are many opportunities to adapt guidelines provided by the national plan to fit a regional context. During the development or update of regional LRTPs, regions should expect to collect or refine data that are not available or not feasibly collected at the national level. The following additional elements should be developed by regions so that they may be incorporated into future planning efforts:

- Additional goals (with measurable objectives) if desired
- Strategies to achieve objectives
- Modifications to Roadway Design Guidelines based on regional conditions
- A method for, and commitment to, report and track wildlife-vehicle collisions
- Regional Climate Change Action Priorities
- Database of partners at the regional level
- Identification of gateway communities, state DOTs, and planning organizations for issues related to access, mobility, and connectivity
- Refinement of strategies for partnerships and priorities for Access Program (FLAP) implementation and new knowledge about partnerships
- Unit-level safety concerns
- Sub-criteria and details for project selection
- Additional performance measures

# Final Thought



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*Nisqually NWR*

Washington



# Work Today to Conserve for Tomorrow

Natural resource management requires dedicated work from a varied group of professionals, technicians and managers. Ultimately, the FWS transportation network exists to enable these individuals to conserve habitat and wildlife while at the same time facilitating the enjoyment and use of these resources by the visiting public. In other words, there would be no need for a transportation program if there were no natural resources to manage.

At its core, this is a resource management plan, not a transportation plan. Its policies are derived from well established principles and guidelines in the transportation field, yet that guidance had to be adapted in a way that ultimately supports a resource conservation mission.

With the adoption of this plan, the Service is taking an important step in fulfilling its promise to guarantee the long term sustainability of biodiversity in the United States.

# List of Acronyms

AID	Accelerated Innovation Deployment	Grant Program
API	Asset Priority Index	Mission Dependency Calculation
ATS	Alternative Transportation System	Non-Private Vehicle Transportation
CCP	Comprehensive Conservation Plan	Refuge Management Document
CIP	Capital Improvement Program	5 Year Improvement Plans at Region
DOE	Department of Energy	Federal Department
DOI	Department of Interior	Federal Department
DOT	Department of Transportation	Federal Department
ERFO	Emergency Relief Federally Owned	Disaster Relief Program
FARS	Fatality Analysis Reporting System	Data Gathering
FBMS	Financial and Business Management System	Asset Management System
FCI	Functional Class Index	State of Repair Calculation
FHWA	Federal Highway Administration	USDOT Agency
FLAP	Federal Lands Access Program	Funding Mechanism
FLHP	Federal Lands Highway Program	Program (Past)
FLTP	Federal Lands Transportation Program	Current Program
FWS	Fish and Wildlife Service	Federal Agency
FWSTP	Fish and Wildlife Service Transportation Program	Program
LRTP	Long Range Transportation Plan	Planning Document
MAP-21	Moving Ahead for Progress in the 21st Century	Transportation Act
NWRS	National Wildlife Refuge System	Agency Program
RAPP	Refuge Annual Performance Planning	Data Gathering
RATE	Regional Alternative Transportation Evaluation	Data Gathering
RIP	Roads Inventory Program	Data Gathering
RRP	Refuge Roads Program	Program (Past)
SAMMS	Servicewide Asset Maintenance Management System	Asset Management System
SMS	Safety Management System	Data Gathering



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