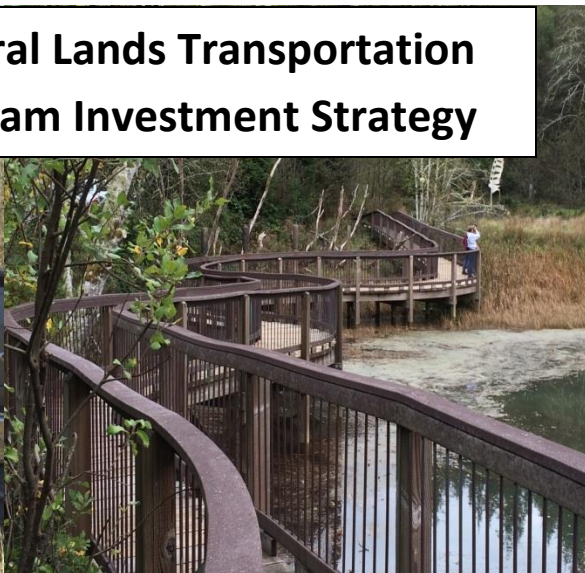


**U.S. Fish and
Wildlife Service**



**Federal Lands Transportation
Program Investment Strategy**



**For the FAST Act –
FY 2016-2020**

*“Manage the top line: your strategy
and your products - and the bottom
line will follow”*

-Steve Jobs



FWS Transportation Program Coordinators, Transportation Scholars, and Volpe Staff, San Diego Bay NWR, 2014

Introduction

The U.S. Fish and Wildlife Service (the Service or U.S. FWS) has been a program partner within the Federal Lands Transportation Program (FLTP) since 1998. Over the following 17 years, until the beginning of FY 2016, surface transportation legislation and other discretionary funding opportunities have provided the Service over \$500 Million for transportation improvements. The maturity of the program is evident in the emergence of comprehensive transportation planning, processes to assist with data-informed project selection and tools to manage and analyze data. It is also demonstrated through successful project implementation across the nation.

Following the early years of focusing on catching up with major improvement needs, the Service has developed a comprehensive approach of identifying and fulfilling needs. Unfortunately, the Service Transportation Program funding authorization was not increased in the recent passage of the Fixing America's Surface Transportation (FAST Act), significantly constraining the program in completely implementing its goals and new direction. If the Service had realized an effective 25% increase in annual funding over the next 5 years to year 2020 (like that of the National Park Service), the Service would be able to more fully implement the comprehensive strategies laid out in its Long Range Transportation Plan (LRTP) and other planning initiatives and achieve increased asset improvement.

Regardless of the current state of annual funding, the Service is poised to continue its strong management of transportation assets and strategically use the authorized funds to continue the program's legacy. With mechanisms in place through its transportation planning, the Service will be able to more fully measure and report on that success. This investment strategy follows the guidance and provides several overarching guiding principles that will be mentioned throughout the document, and then summarized at the end. The Service will diligently implement the program goals and strategies over the next few years to demonstrate a sound investment and to more fully document transportation needs. The Service will then fold that information into transportation needs papers to support potential growth of funding resources into the next surface transportation legislation.

Program and Long Range Transportation Plan Overview

Since its inception in 1998, the U.S. Fish and Wildlife Service Transportation Program has fine-tuned its processes to plan and make transportation decisions with increasingly data-driven, performance-based methods. This FY 2016 - 2020 Investment Strategy builds on those successes, describes where the program has room to grow, and outlines how it will get there.

Through the Transportation Program, the Service will continue to efficiently provide access to America's treasures. In the coming years, the Service will focus particularly on connecting to traditionally under-represented communities near Urban Refuges using multimodal transportation. Connecting with these larger population centers is imperative to building support among the future leaders of conservation.

The Service conducts transportation planning and allocates funding on a regional level based on the eight regions shown in Figure 1. For the most part, Regions follow HQ guidance, data systems, and other protocols but have flexibility to make decisions that are best for their regions. There are two full-time staff located in the headquarters office (Transportation Program Manager and Assistant Transportation Program Manager), and one full-time Regional Transportation Coordinator in each region, allowing for planning efforts and decision making along a range of scales.



Figure 1 Map of the U.S. Fish and Wildlife Regions

The program is working toward completing a Regional Long Range Transportation Plan for each region, along with a National LRTP, PLAN 2035. The program has made the following progress toward completing each of these plans:

- National Plan – (99%; Federal register review complete)
- Region 1 – Northwest and Hawaii (100%)
- Region 2 – Southwest (90%)
- Region 3 – Midwest (100%)
- Region 4 – Southeast (99%; Federal review complete)
- Region 5 – Northeast (95%; Federal register review underway)
- Region 6 – Mountains/Prairies (90%)
- Region 7 – Alaska (100%)
- Region 8 – Pacific West (50%)

The L RTPs (and this Investment Strategy) were informed by a number of other U.S. Fish and Wildlife Service studies/programs/datasets to understand the relationship between communities and the nation’s National Wildlife Refuges (NWRs) and National Fish Hatcheries (NFHs). These include:

- *Roadway Design Guidelines*
- *Banking on Nature: The Economic Benefits to Local Communities of National Wildlife Refuge Visitation*
- The Urban Wildlife Refuge Program
- The *Refuge Annual Performance Plan* (RAPP)
- The *Regional Alternative Transportation Evaluations*
- The *National Alternative Transportation Evaluation*
- The Road and Trails Inventory Program (RIP)
- Visitor Use Surveys
- Service Asset Management Database (SAMMS)
- National Bridge Inventory (NBI)
- Safety and Crash Data
- U.S. FWS Multimodal Catalog database

FLTP Funding Allocations

Under the FAST Act, the Service’s Transportation Program is authorized at \$30 million annually for FY2016 – FY2020. Over the life of the FAST Act, the Service will receive \$150 million, before take-downs and set-asides. The annual budget for the National Wildlife Refuge System is approximately \$500 million per year. On an annual basis, the Service’s authorized level represents only about 6% of the total program budget, which does not include that of the fish hatchery program. Yet, the Service’s transportation asset portfolio represents about 50% of the replacement value of all constructed real property assets across the Refuge System.

The Program allocates FLTP funds to its regions based on visitation, road mileage, and the overall condition of those roads, as shown in Table 1. This funding formula may be examined over the next few years as the Service looks at innovative ways to pool infrastructure improvement funding to make significant improvements at priority field stations.

The remaining \$7.4 million (not sub-allocated to regions) is divided into three additional categories whose amounts fluctuate slightly annually. First, \$1.5 million is held by FHWA for “off-the-top” planning for the Service, and a range of \$1.5M to \$2M is the annual obligation limitation. Second, approximately \$1 million is allocated to the Service’s headquarters office for program administration and associated costs, as well as special studies. Lastly, approximately \$3 million (depending on the annual obligation limitation) in annual authority is reserved at the Service’s headquarters and used to “move-up” next year’s projects if ready to go, fund cost estimate increases, and move forward other priority projects on the ground. The operation of the program in this manner has proven to be very effective.

	Region								
	1	2	3	4	5	6	7	8	Total
Number of Refuges Open to Public	50	46	62	111	66	97	16	40	488
Number of Urban Refuges	11	8	11	19	39	4	0	9	101
Road Mileage	469	818	375	1464	220	978	92	493	4908
Visitation (2015, millions)	7.9	7.3	7.1	14.3	5.7	3.2	1.5	1.5	48.5
Allocated Transportation Funding (\$M)	2.41	2.6	3.48	5.51	1.74	4.54	0.55	1.76	22.6

Table 1 Number of Refuges, Road Mileage, Visitation, and FLTP Funds Allocated by Region

Notes -Refuges Open to the public refers to those stations reporting any visitation in FY 2015. The annual visitation at fish hatcheries is approximately 1.5 million.

If the Service's FLTP funds available were allocated by the Regional Offices per open refuge at the regional level, there is a range of approximately \$26,000 (Region 5) to \$57,000 (Region 2) that would be allocated per Refuge. Although the Service does not allocate funds on a unit level from HQ, this rough calculation shows the real constraints of the limited resources the Service's Transportation Program is operating with. The Service does supplement the FLTP funds with grants and other sources, but ultimately larger projects (greater than \$3 million, but less than \$25 million, and eligible for other programs) that will drastically improve access to Refuges are near impossible to complete. Further, the funding available to the overall Service Construction and Deferred Maintenance funding allocations from its Appropriated Budget have *decreased* in the past few years, further diminishing the possibility of diverting those resources to transportation needs.

In order to provide access to visitors, and to ultimately succeed in accomplishing the Service's mission and goals of fostering a "connected conservation constituency," the Transportation Program will need to increase its base funding. Until then the program will continue to streamline its planning process to more efficiently and effectively use FLTP funds, as outlined in this Investment Strategy.

Element 1 - FLTP System Definition

Under this section, please define the part of your transportation system to be included in your National Federal Lands Transportation Facility Inventory as defined in 23 U.S.C. Section 203(c). This includes public highways, roads, bridges, trails, or transit systems. (Note: By separate correspondence, FLH requests your detailed inventory data for roads, trails and transit systems. For bridges, partners use the NBIS as the official repository. For public highways and roads, minimum route identification data attributes were identified in a FLH memorandum dated September 30, 2014. Partners are at liberty to use additional route ID attributes than those reflected in the memorandum for their own purposes.) For this investment strategy, please describe your current status and planned efforts related to identifying your paved, native and/or gravel roads using the minimum route ID standards for your FLTP system only, i.e., not all FLMA-owned public roads. Address how your system definition strategies will support FHWA's minimum data standards and milestones.

All partners currently possess historic data that defines the location of your road network. If you plan to significantly change your approach over the next 3 years, please describe your efforts and the benefits you anticipate.

With approximately 5,000 miles of public roadway, 2,100 miles of trails, 402 public-use bridges and 14 transit systems, the Service has a robust multimodal transportation system. Table 2 shows the total transportation facilities included in the Service's FLTP inventory.

	Region								
	1	2	3	4	5	6	7	8	Total
Public Roads - Paved (miles)*	53	106	81	111	52	39	3	10	455
Public Roads - Unpaved (miles)*	416	712	294	1353	168	939	89	483	4453
Trails - Paved (miles)**	11	22	53	15	22	6	0	4	132
Trails - Unpaved (miles)**	199	245	243	559	349	104	147	171	2018
Public Bridges (num)***	38	41	80	111	21	93	3	15	402
Transit Systems (num)**	0	5	3	2	2	0	0	2	14

Table 2 U.S. Fish and Wildlife FLTP Inventory

Data sources: *Road Inventory Program, 2014, **Multimodal Catalog, ***Internal bridge data

The Transportation Program collects road data using its Road Inventory Program (RIP). Through the RIP, the Service is able to visit and collect data from 20% of the field units every year, for a complete roads dataset every 5-6 years with data processing. The last complete cycle was finished in 2014. Since 2014, the Service has worked to re-engineer the RIP to better align with FHWA performance management practices and to more fully connect to internal databases. Those internal systems are the "systems of record" and to which the Service reports to the Department of the Interior.

The road data is compiled by FHWA and used by the Service's Transportation Program to plan and implement projects nationwide. This process has been effective in creating a comprehensive dataset that meets the minimum data standards and milestones. Data collected include condition of pavements, geometrics, and feature locations on existing roads, parking and roadway assets.

Moving forward, the Service will begin collecting road data using a Services Application for Material Assessments (SAMI). SAMI is an application that will convert the data collected during the RIP process into a format that can be used in the Service-wide Asset Maintenance Management System (SAMMS). Having the most recent and complete road data in SAMMS will make it easier to track work orders and spending amounts that are charged to FLTP funded projects on Service transportation assets. It will also make planning and prioritizing projects a more fluid, informed process, increasing efficiency of the Transportation Program.

In closing, we do not foresee significant changes beyond implementation of the new process, following the guidance of the FHWA and oriented to address our own data cleanup and management needs.

Element 2 – Secretary of Transportation’s Performance Goal Areas

2.1 State of Good Repair

In your strategy, please describe the steps you will employ to collect all or partial segments of your FLTP using the road standards above. If a transition strategy is anticipated, please describe your approach including timeframes.

If applicable and available, please include your baseline FLTP paved, native and/or gravel road condition(s) information using Excellent, Good, Fair, and Poor or other rating approach now employed. Using the FAST authorization sums as an indicator, please include your target condition(s) of the entire FLTP road inventory at the close of FY2020. Please differentiate between paved and unpaved roads

FHWA is very cognizant of the inter-relationships of road asset data to other asset management and maintenance systems employed by FLMA's, i.e., evolving to a new standard has larger internal budgeting implications. We are fully prepared to work with each partner individually to tailor a plan that is realistic, scalable and acceptable to all parties using the methodologies below.

As mentioned in Element 1, the Service owns and maintains approximately 5,000 miles of public-use roads. Table 3 shows the conditions of paved and unpaved public roads, by miles, for the entire Service as of the completion of Cycle 4 in 2014. Figures 2 and 3 represent the road condition as a percentage of total road mileage, by surface type (paved and unpaved, respectively), in a given region. Nine percent of the total public roads are paved. Of all of the public roads, approximately 60% are in excellent or good condition. According to the most recent RIP data, the Service is maintaining an average pavement condition rating (PCR) of 62, and has set a goal to increase the PCR to 80 or greater over the next 20 years. This goal is very much contingent upon receiving adequate new funding in the next transportation authorization and beyond. Previous needs as documented in the Service’s “Transportation Needs and Planning for the Future – June 2013” will be updated over the next three years to reflect current needs and costs.

	Regions									
	1	2	3	4	5	6	7	8	Total	Pcnt of Total
Paved										
Excellent	4	9	17	22	3	8	0	0	63	14%
Good	0	8	4	2	1	3	0	0	19	4%
Fair	8	76	47	72	25	25	2	8	262	58%
Poor	41	13	14	15	23	3	1	2	111	24%
Sub-Total	53	106	81	111	52	39	3	10	455	100%
Unpaved										
Excellent	4	196	165	250	19	237	0	34	906	20%
Good	97	351	109	831	108	340	37	286	2158	48%
Fair	137	117	16	209	35	190	33	103	840	19%
Poor	178	48	3	63	6	171	20	59	549	12%
Sub-Total	416	712	294	1353	168	939	89	483	4453	100%
Total	469	818	375	1464	220	978	92	493	4908	100%

Table 3 Road Conditions by Region

Source: Five Year RIP Cycle Completed 2014

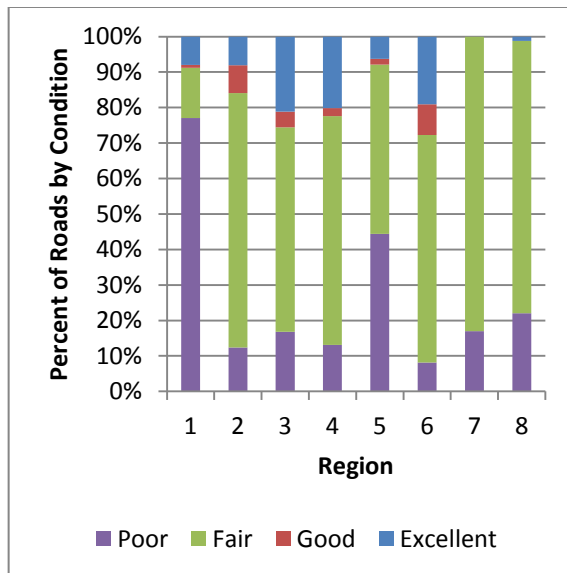


Figure 2: Paved Road Condition by Region

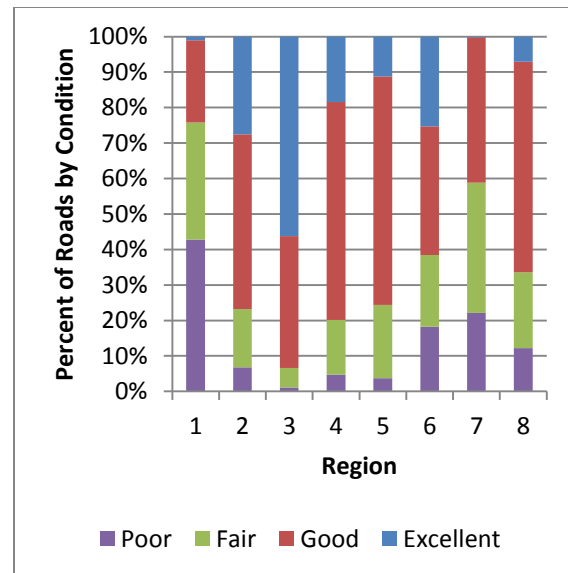


Figure 3: Gravel/Native Surface Road Condition by Region

Effectively, the Service's Transportation Program will be operating under the same FLTP funding (between \$29 and \$30 million) for over 15 years – from the passage of SAFETEA-LU in 2005 through the FAST Act's final year of 2020. The program did not see an increase with the signing of the FAST Act, and will continue to be funded at \$30 million for the next five years. The Service will not be able to maintain a state of good repair for its roads with these funding levels. With competing demands for funding (urban accessibility, popular trail improvements, etc.), the Service is likely to fall behind on maintaining its overall condition rating for roads.

To make sure the Service is able to improve access while maintaining a state of good repair, the Transportation Program has identified in its LRTP various ways of becoming more efficient. For example, the program is going to decommission less-used roads to spend less on maintaining them. It is also going to prioritize larger projects that will have a greater impact on access than the sum of several smaller projects.

With the successful launch of the new RIP process in FY 2016, the Service will be able to more effectively and efficiently gather data on overall road condition and associated features. With stagnant funding levels, however, it will be extremely difficult for the Service to maintain current condition levels.

2. 2 Safety

Please describe your plans to collect and report safety crash data (fatalities and serious injuries) data to influence FLTP programming decisions. The extent and type of safety crash data partners collect vary and may include information on: number of fatalities and/or serious injuries, location of crashes, nature of crash (run-off-the-road, intersection, wildlife collision), causal factors (infrastructure-related and/or behavioral (alcohol related, visual impairment). For partners who may have very few crashes and contend transportation safety is not a high risk area on their lands, please include evidence-based processes, e.g., safety data, incident management procedures, local law enforcement reports, you employ to support this conclusion. Put plainly, how do you know if you do/do not have a safety problem on your FLTP inventory?

Unlike many State DOT programs, the Service's Transportation Program generally serves transportation facilities with relatively low speeds and low volumes of traffic. Therefore, the benchmark for safety on Service facilities is higher than what many State DOTs can set. The Service is working towards zero fatalities and zero crashes on its internal transportation system (from National LRTP), for both visitors and Service staff. Some common safety issues for the Service's transportation program include ingress and egress at entrances to refuges, vehicles running off of roadways, animal strikes, and severe weather.

Currently, the Service relies on collision data collected from the Service's Law Enforcement (LE) and the national Fatality Analysis Reporting System (FARS) for predominately crashes on connecting facilities. The Service also has additional empirical and anecdotal safety analysis included in the Regional Alternative Transportation Evaluations (RATEs) and other studies.

The Service is just emerging from several attempts to standardize crash data collection across the Department, and will soon be able to report traffic incidents from both 2014 and 2015 calendar years. In 2014, there were 199 traffic incidents reported by Service law enforcement. The data fields collected include:

- | | |
|-------------------|----------------------|
| • Incident number | • Date |
| • Officer name | • Refuge station |
| • Officer badge | • Latitude/longitude |

Recognizing the limits of these data fields, the Transportation Program has been working with Law Enforcement to increase data collecting procedures to include (in addition to those listed above):

- | | |
|--|--|
| • Severity (fatality, injury, property damage) | • Weather |
| • Time of day | • Type of collision (i.e. angle, rear end, head-on, sideswipe) |
| • Route name/number | • Object struck (rock, ditch, bridge structure, tree) |
| • Crash location (i.e. on roadway, at intersection, etc.) | • Vehicle-wildlife collisions |
| • Cause of crash (i.e. speeding, impaired driver, obstructed view, etc.) | • Road characteristic (straight and level, on curve, etc.) |
| • Lighting conditions | |

The Service identified these additional data fields to study trends in recurring situations. For example, latitude/longitude data can reveal hotspots where accidents are occurring more frequently. Collecting data on the cause of crashes could highlight recurring problems that the Service needs to address; if there are many accidents caused by blind curves, for example, the Service may need to adjust its roadway design standards to include longer sight lines. Discussions are underway between the Transportation Program and Law Enforcement staff on collecting these more detailed data features.

In addition to enhanced data collection, the Service has begun to develop an improved Safety Management System (SMS) to store safety data. The SMS provides a system to document these concerns and assist the Service with prioritizing safety issues, developing countermeasures, and tracking the impact of safety improvements completed at refuges and hatcheries.

The SMS provides a more formal process for ensuring that the Service reviews all available safety data each year and develops countermeasures to address safety concerns. Safety data includes crash data as well as surveys, studies, and other efforts to discern areas on the Service's transportation facilities where safety concerns may exist, even if no crashes have been identified. The Service will seek to address all areas with safety concerns through appropriate safety improvements, and will use the SMS to assist in identifying, prioritizing, mitigating, and tracking the results.

In addition to the SMS, the Service is also working toward completing a Safety Analysis Toolkit (SAT). The SAT will help unit staff identify problem areas and suggest best practices to help improve safety.

While the on-going SMS effort is on hold until the Transportation Program is able to resolve data reporting issues with law enforcement, the Service is being proactive by implementing an on-going Road Safety Audit/Safety Assessment Program. Completing Road Safety Audits (RSA) is one of the seven FHWA's proven safety countermeasures. The Service set a target of completing five RSAs annually (approximately \$35k for each RSA), which equals approximately \$175,000 annually in planning funds set aside to support this effort.

One concrete safety countermeasure employed at many NWRs over the past few years is the addition of ingress and egress lanes at critical locations. For example, the principal ingress of San Luis NWR in California 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. The Service's Transportation Program worked with CalTrans to build access improvements from both northbound and southbound approaches, increasing safety for the over 100,000 yearly visitors and administrative personnel.

2.3 Bridge Condition

FAST officially allows the continued use of FLTP funds to be used on public bridges outside your FLTP inventory. Please provide the baseline number of public bridges owned and operated by your agency including public bridges outside your FLTP inventory. This number should mirror the number in the National Bridge Inventory System. Within the FY2016 baseline data, please include the number or percent of bridges that are structurally deficient. Please include the target number and percentage of structurally deficient bridges at the conclusion of FY2020.

All Service bridges are inspected according to the National Bridge Inspection Standards and the draft U.S. Fish and Wildlife Service Bridge Inspection Manual. The information gathered and generated as a result of the field inspections are recorded in the cloud based Bentley InspectTech bridge inspection management system. Facility Management Coordinators (FMCs) and Transportation Coordinators in each region extract the information from the Bridge Inspection Management System (BIMS) and it informs the Service's asset management system, which is used to prioritize repair and rehabilitation work for bridge and other asset projects.

Table 4 shows all of the Service owned bridges as of 2015. The bridges included in the National Bridge Inventory (NBI) are public bridges that are over 20 feet long. Non-NBI bridges are all other public and non-public use bridges over 10 feet long. The Service has 301 NBI bridges, with an additional 101 non-NBI public-use bridges. Of the 402 public bridges owned by the Service, 5 are poor/deficient, representing just 1.2% of the public bridges.

The Service also maintains/operates an additional 33 bridges that are owned by other entities and are not shown in this table. Of those 33, 2 are poor/deficient.

The Service has 253 of its 402 (62%) public bridges in good condition. The Transportation Program has set a goal in the LRTP to reach 95% in good condition by the end of 2035. This will involve repair or rehab of 129 bridges, or approximately 6 bridges per year. Improving and or maintaining bridges that are in fair or good condition is a critical bridge management strategy that the Service employs. Keeping maintenance of bridges up to a certain standard will reduce the likelihood of bridge condition migrating to poor or deficient condition.

	Region									FWS Totals	Pcnt of Total
	1	2	3	4	5	6	7	8	9**		
NBI Bridges*											
Good	9	12	41	72	7	35	2	10	0	188	62%
Fair	18	13	30	23	10	14	0	2	0	110	37%
Poor/deficient	0	0	0	2	0	1	0	0	0	3	1%
Sub-Total	27	25	71	97	17	50	2	12	0	301	100%
Non-NBI Bridges											
Public											
Good	5	7	6	11	2	31	1	2	0	65	64%
Fair	5	9	3	3	1	12	0	1	0	34	34%
Poor/deficient	1	0	0	0	1	0	0	0	0	2	2%
Sub-Total	11	16	9	14	4	43	1	3	0	101	100%
Non-Public											
Good	4	15	26	50	8	46	1	16	0	166	65%
Fair	5	7	11	26	4	17	1	6	1	78	31%
Poor/deficient	1	2	0	6	1	0	0	0	0	10	4%
Sub-Total	10	24	37	82	13	63	2	22	1	254	100%
Additional Closed Bridges											
Sub-Total	2	5	9	11	3	7	0	5	0	42	N/A
All Bridges Summary											
Good	18	34	73	133	17	112	4	28	0	419	60%
Fair	28	29	44	52	15	43	1	9	1	222	32%
Poor/deficient	2	2	0	8	2	1	0	0	0	15	2%
Closed	2	5	9	11	3	7	0	5	0	42	6%
Total - All FWS Owned Bridges	50	70	126	204	37	163	5	42	1	698	100%

*NBI bridges are bridges that are greater than 20 feet long and open to the public.

** Region 9 is the FWS National HQ office and the National Conservation Training Center (NCTC)

Table 4 Bridge Condition by Region, 2015

Source: Bridge Inspection Management System

2. 4 Trail Condition

Trails are an important means of transportation and visitor experience across Service-managed lands. Maintaining a state of good repair on the Service's trails is imperative to providing the multimodal access that it is striving to improve. Trails not only provide access to refuges and fish hatcheries, but also allow for movement within the units. Quality trails allow Refuges to provide the learning opportunities for this and the next generation of conservationists. Without them, visitors would not be able to connect with nature in the way the Service wants them to.

The Service owns and maintains 2157 miles of trails. Table 5 shows the condition of those trails by surface type (paved and unpaved). In total 62% of Service trails are considered to be in excellent condition.

	Regions										
	1	2	3	4	5	6	7	8	9*	Total	Pcnt of Total
Paved (miles)											
Excellent	9	9	23	15	21	6	0	4	2	89	66%
Good	1	0	2	0	0	0	0	0	0	3	2%
Fair	0	11	28	0	0	0	0	0	0	40	30%
Poor	0	0	0	0	0	0	0	0	0	0	0%
Unknown	0	2	0	0	1	0	0	0	0	3	2%
Sub-Total	11	22	53	15	22	6	0	4	2	134	100%
Unpaved (miles)											
Excellent	103	107	172	396	231	75	101	106	4	1295	64%
Good	0	0	5	5	7	0	0	0	1	19	1%
Fair	8	14	9	26	33	5	33	0	0	128	6%
Poor	3	3	9	5	1	3	13	0	0	36	2%
Unknown	86	121	49	127	77	20	0	66	0	545	27%
Sub-Total	199	245	243	559	349	104	147	171	5	2022	100%
Grand Total	210	268	296	575	371	110	147	175	7	2157	N/A

* Region 9 is the FWS National HQ office and the National Conservation Training Center (NCTC)

Table 5 Trail Condition by Region

Source: FLTP Multimodal Catalog

Elements 3 and 4 - Secretary of Interior's or Agriculture's Performance Goals and Additional FLTP Criteria

1. Please identify your Department's and/or agency's related performance goals. Within the description and if available, please include baseline data as of October 1, 2015 and your targets at the end of FY2018.
2. Describe how you incorporate, or will incorporate, DOT, DOI and/or DOA performance goal information into your performance-based planning and programming processes.
3. Please provide information (list and/or maps) that demonstrates the linkages between your high use federal recreation areas and/or federal economic generators and your FLTP facilities that provide access to them.

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

-U.S. Fish and Wildlife Service Mission

Although conservation of habitat for fish and wildlife is the main mission for the U.S. Fish and Wildlife Service, the Service also focuses heavily on providing learning and engagement experiences for the public. It also supports active recreation such as hunting and fishing for the benefit of the visiting public. Inviting current and future conservationists to the refuge system is the only way to achieve that mission, and providing a safe, comfortable, equitable, efficient transportation system is the way to get them there.

The Service uses its transportation systems to work toward achieving many of its goals. The three primary sets of goals the Transportation Program addresses are:

- The "Six Strategic Goals" in the Long Range Transportation Plan;
- The Refuge Annual Performance Plan; and,
- The Urban Refuge Program's Standards of Excellence

The following sub-sections explain each set of goals and how the Transportation Program is working to achieve them.

Six Strategic Goals – LRTP

The Service is working toward completing a National Long Range Transportation Plan and an LRTP for each of the eight regions. All of the previous planning efforts resulted in the following goals/objectives that are generally consistent across all of the LRTPs:

Asset Management Goal

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.

Access, Mobility, and Connectivity Goal

Ensure that units open to public visitation have adequate access, mobility and connectivity for all potential users, including underserved, underrepresented, and disadvantaged populations.

Coordinated Opportunities Goal

Seek joint transportation opportunities that support the Service's mission, maximize the utility of Service resources, and provide mutual benefits to the Service and its external partners.

Safety Goal

Provide a transportation system that ensures Service staff and visitors traveling to and within Service lands arrive at their destinations safely.

Visitor Experience Goal

Enhance the visitor experience through improvement and investment in the transportation network.

Environment Goal

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

To reach the goals in the LRTP, the Service identified measurable objectives with targets along a variety of time points. Achieving the objectives set out in the LRTP was calculated to cost an estimated \$95 million annually (annual program need for MAP-21 reauthorization papers). As shown in Table 6, a substantial growth in funding will need to occur for the Transportation Program to fully address all of its needs. Table 7 outlines all of the objectives and targets set out in the LRTP. The Transportation Program has used existing data to inform the baseline conditions for many of the objectives. For those that read, "baseline established at year one," the Service will begin to measure upon official adoption of the LRTP, which is expected to happen in the Spring of 2016.

The Service will continue to collect road, bridge, safety, and trail data to track success as described in previous sections of this report.

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

Table 6 National LRTP Objectives and Performance Targets/MAP-21 Reauthorization Funding Needs

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

		Current Performance	20 Year Target Performance
Coordinated Opportunities Objectives:	▪ 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 yearly number of transportation projects using multiple funding sources	Baseline established at year 1	5 per year nationally
Asset Management Objectives:	▪ 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 Objectives:	▪ 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 Objectives:	▪ 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 Objectives:	▪ Increase the total number of multi-modal connections to refuges and hatcheries (The pending Multi-Modal Catalog, being drafted by the Volpe Center, will provide guidance with this)	Baseline established at year 1	3 per year
	▪ Increase the number of multi-modal transportation options on refuges and hatcheries (Also, see Multi-Modal 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 Objectives:	▪ 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

Table 7 National LRTP Objectives and Performance Targets

Source: PLAN 2035: National LRTP

Refuge Annual Performance Plan

In addition to the “Six Strategic Transportation Goals” detailed in the LRTP, the Service measures its performance on an annual basis in its Refuge Annual Performance Plan (RAPP). The RAPP does not include measures on how visitors access Refuges, but it does reveal ways visitors use the Refuges, which may have implications on transportation facilities. The RAPP is designed to collect performance measures and planning targets from individual field stations. RAPP data are collected annually in August and are finalized by the end of September.

Table 8 shows a selection of RAPP performance measures for years 2010 and 2015. The measures shown here were selected because they may have implications on the FLTP inventory.

	2010	2015	Pcnt Change '10-'15
Total Number of Visitors	44,482,399	48,477,661	9%
Demand on Transportation Facilities			
Number of foot trail/pedestrian visits	14,224,391	15,482,773	9%
Number of auto tour visits	9,938,359	11,336,286	14%
Number of boat trail/launch visits	2,580,474	3,054,138	18%
Number of bicycle visits	789,904	976,774	24%
Group Visits			
Number of education participants involved in on- and off-site environmental education programs.	651,806	681,031	4%
Number of interpretation participants in on- and off-site talks/programs	1,806,385	2,624,646	45%
Number of special events hosted on- and off-site	2,284	2,762	21%
Number of participants in special events on- and off-the refuge or administrative site	345,129	724,066	110%
Volunteer Efforts			
Number of volunteers	42,242	36,211	-14%
Volunteer hours for maintenance	260,708	262,944	1%

Table 8 Refuge Annual Performance Plan Measures

Source: 2015 Refuge Annual Performance Plan

Visitation has steadily increased over the last 5 years (9% total). There has been an increased demand on all of the transportation facilities studied in the RAPP, most notably in the number of bicycle visits (increased 24% over five years). The Service has also attracted a growing number of group activities that creates a strain on facilities that receive larger visitation at one time. Although the number of volunteers has decreased by 14% over the past five years, the Service is continuing to see a heavy reliance on using volunteers for maintenance activities. This could show that maintaining our transportation facilities is a priority to Refuge staff as they are continuing to focus volunteer efforts on maintenance. It also shows that the Service is efficiently using resources for annual maintenance of transportation facilities.

Urban Refuge Program – Standards of Excellence

In 2011, the Service adopted a future vision called “Conserving the Future: Wildlife Refuges and the Next Generation.” This product outlined 24 recommendations that challenged the Service to enhance the relevance of the NWR System in the face of a rapidly changing America. With over 80% of Americans living in urban areas, the Service has begun to prioritize maintaining relevance among urban audiences. The Urban Refuge Program adopted the following standards of excellence to help reach its goal of engaging urban communities in wildlife conservation in partnership with the Service:

1. Connect urban people with nature via stepping stones of engagement
2. Build partnerships
3. Be a community asset
4. Ensure adequate long-term resources
5. Provide equitable access
6. Ensure that visitors feel safe and welcome
7. Walk the sustainability walk

Transportation is a key element in many of the standards of excellence, particularly numbers 5, 6, and 7. Through implementation of the LRTP, the Transportation Program is working toward these standards of excellence. More specifically, the Service has identified 14 priority urban NWRs across the nation that could most benefit from improved investment, including providing multimodal access to the Refuges’ neighboring communities.

As part of the larger Urban Transportation Program, the Service has begun the Urban Transportation Connection study, using a contractor through FHWA. Some of the key elements and deliverables of the study include:

- For seven refuges, an analysis of currently available modes of transportation to and from the refuge and an identification of gaps in the transportation modes and routes which may potentially serve those refuges. Development of a conceptual transportation plan that includes projects and strategies that ease the burden of transportation to the refuge or provides for the necessary improvements. This will focus on communities with underserved populations with key demographic factors (e.g., low vehicle ownership).
- To help the Service manage the access needs and elements required to allow Service to meet certain criteria into the future, the Consultant shall create an urban transportation template. Initially, this product has been envisioned to be a typical matrix to compile and manage information relevant to demographic, transportation data, and access needs. A web-based format will also be developed for broader information dissemination and in context with a nascent “urban hub” for the website being developed by the Service’s Urban Team.
- Develop a preliminary assessment/hierarchy for the non-prioritized Refuges for future investigations.

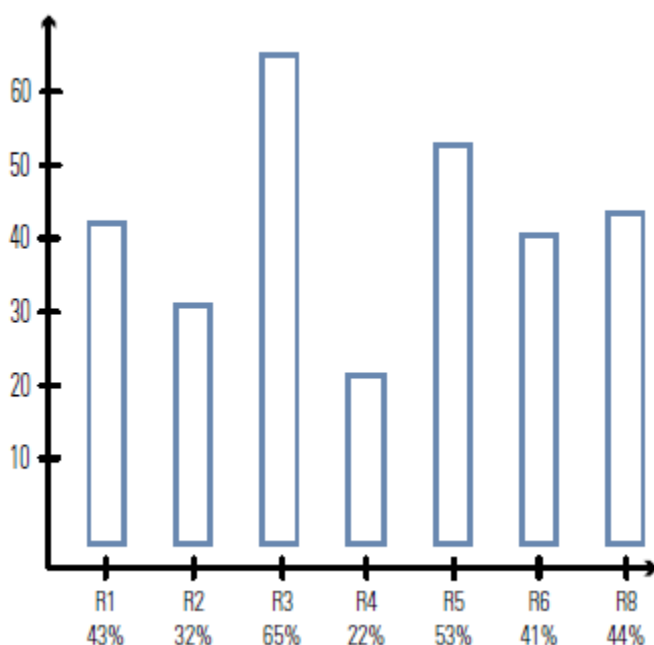
The study builds on previous efforts to understand the existing multimodal facilities on and around Refuges, data that the Service has collected and contributed into the Federal Lands Multimodal Catalog. By cataloguing the opportunities available, the gaps in transit and trail systems become apparent. Connecting to existing alternative transportation systems can improve the diversity of the audiences the Service reaches, cost less than developing new alternative transportation systems, and reduce the

environmental footprint. This effort is not only for urban Refuges, but also for rural Refuges that may have nearby rural transit, or intercity bus routes, or trail facilities.

The Service has already planned to obligate approximately \$18.9 million to transportation projects at the urban NWRs for FY2016 through FY2018, and will continue to obligate funding to achieve these standards of excellence beyond FY 2018.

High-use Federal Recreation Areas and/or Federal Economic Generators

The Service prioritizes projects that improve access to Refuges that have the ability to attract large number of visitors, particularly from urban areas. This focused effort will help generate a significant amount of economic activity for neighboring communities. The Service studied the economic impact of NWR's in its Banking on Nature report, completed in 2013. It found that every \$1 (of the total \$500 million annually) appropriated to the National Wildlife Refuge System generates \$4.87 in local economic activity.



The Transportation Program defines its high-use Refuges and Hatcheries as those that have a higher visitation than the average for the region (excluding sites with zero visitation). Figure 4 shows the percentage of transportation funds that are allocated to high-use recreation sites by region (excludes Alaska Region 7). The Transportation Program has allocated more than 50% of FLTP transportation funds to high-use sites in two regions. This benchmark will be analyzed into the life of the FAST Act, and be used to potentially change our strategy in the future.

Figure 4 Percent of Regional FLTP Allocations Programmed at High-Use Recreation Sites, 2011-2015

Source: National LRTP

A sampling of the highest visitation Refuges in 2015 is shown in Table 9. Several correlations could be made between investment in transportation spending, Refuge visitation, and economic activity. For now, the Service recognizes the allocations shown in Figure 4 as a baseline condition. The Service will move toward an increased percentage of transportation dollars being invested at high-use sites. Additional funding in the future will assist with this balance across a complex, national system of lands.

Refuge	Region	Number of Visitors in 2015
Oregon Islands NWR	Region 1	4,194,254.00
Havasu NWR	Region 2	3,200,000.00
Wichita Mountains Wildlife Refuge	Region 2	1,682,269.00
Upper Mississippi River NWR-McGregor District	Region 3	1,500,000.00
Pea Island NWR	Region 4	1,500,000.00
Chincoteague NWR	Region 5	1,381,907.00
Merritt Island NWR	Region 4	1,242,428.00
Kenai NWR	Region 7	1,139,200.00
J.N. Ding Darling NWR	Region 4	880,339.00
Crab Orchard NWR	Region 3	863,609.00

Table 9 Refuges with Highest Visitation in 2015

Source: 2015 Refuge Annual Performance Plan

Summary and Annual Progress

To successfully administer a performance based program, metric data is needed to gauge progress and/or shortcomings. FLMAs are asked to provide an annual accomplishment report that identifies the outputs and/or outcomes associated with Title 23 funds. In the report, partners are asked to share specifically the annual progress they are making in achieving their 5 year, FY2020 targets, i.e., is your annualized target data trending in the right direction to preclude any surprises at the conclusion of FY 2020. FLH understands certain performance data may not be fully available on an annual basis. At the conclusion of FY18, we highly encourage all partners to possess and report high quality, complete performance data since this data will be used to inform Congress, OMB and other stakeholders in preparation of the next Act. Guidelines on the format of the report are included here. Revisions were made to simplify the process and collect data once for multiple purposes.

From its infancy, the Service's Transportation Program has grown to a fully-implemented transportation program with many needs and demands on the program funding. The framework and structure are in place to excel into the future, and the Service is poised to realize funding growth in future authorizations and/or discretionary funding programs. Fundamental to a complete strategy is developing a project selection process borne out of the transportation planning process – one that espouses the investment strategies portrayed in this document and one that can be measured over time.

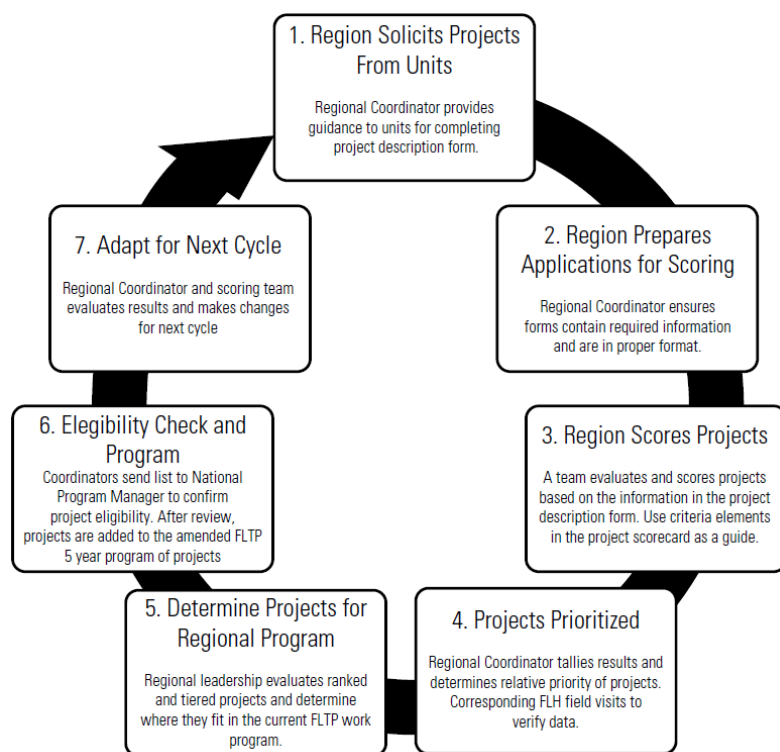


Figure 5 Project Selection Process

Through LRTP implementation, the transportation program is moving toward standardizing and unifying data collection and making finding and using data easier for staff across the Service. The Service will more quickly develop targeted reports with quantitative and condition data for each transportation asset. This will help regional and headquarters staff to identify and prioritize needs.

The program has also begun to standardize project selection, with an adopted regional project selection cycle (Figure 5). Lastly, the LRTP emphasizes increasing efforts to leverage FLTP funds through grants and partnerships to make each FLTP dollar go further.

The Service’s Annual Transportation Program Accomplishments report will summarize the outlay and success of the annual authorization of Title 23 dollars to needed Service improvements – following the details outlined in the National LRTP and other guiding documents. This 2016-2020 investment strategy attempts to generalize and connect certain strategies and actions from the LRTP into a cohesive structure to pinpoint the theory or substantive direction behind certain actions. Figure 6 highlights the strategies that the Service will either be continuing to implement or introduce over the life of the FAST Act. We look forward to reporting to FHWA and other stakeholders on our success of implementing this new legislation with an eye to the next one to realize greater resources to grow the program.

Overarching Strategies

- 1 Emphasize a multimodal transportation system: improve access, mobility, and connectivity to and within NWR's with priority given to Under-served communities, willing partners, and/or Urban Refuges
- 2 Increase number of national priority projects that drastically improve access to field units
- 3 Increase number of projects utilizing strategic funding sources:
 - Leverage FHWA funds by using as a match for grants
 - Pool funds from other FWS sources including deferred maintenance and construction funds
- 4 Utilize advanced maintenance technology to stretch available dollars and improve condition
- 5 Allocate money to needs at field stations with above average visitation for the region

Roads & Parking Lots

- 1 Focus on primary access roads and popular auto tours
- 2 Improve condition of priority paved and unpaved roads and parking areas
- 3 Right-size road and parking facilities with improved traffic flow and visitor experience

Safety

- 1 Increase number of Road Safety Audits utilizing a strategic approach with limited planning money
- 2 Implement lower-cost fixes, e.g. improved signage, sight-lines, pavement striping, etc.
- 3 Work with local governments and willing DOT's to identify priority ingress/egress improvements across entire system

Bridges

- 1 Maintain bridges that are currently in fair or better condition to prolong life
- 2 Rehabilitate and replace priority bridges in poor/deficient condition with emphasis on the "Every Day Counts: Geosynthetic Reinforced Soil-Integrated Bridge System" and other techniques
- 3 Improve aquatic and terrestrial passage with all bridge and culvert projects

DOI Performance Goals and Additional FLTP Criteria

- 1 Invest in projects that satisfy the Six Strategic Goals included in the National Long Range Transportation Plan
- 2 Prioritize projects that achieve the Seven Standards of Excellence of the Urban Refuge Program
- 3 Invest in projects that enhance the visitor experience and improve the measures studied in the Refuge Annual Performance Plan
- 4 Prioritize projects with a larger impact on local economies

Figure 6 Investment Strategies Summary

