

# 3 Refuges Become 1: Connectivity and Accessibility at the Potomac River National Wildlife Refuge Complex (PRNWRC)

## Potomac River National Wildlife Refuge Complex

PRNWRC formed from 3 National Wildlife Refuges (NWRs) in 1998.

**Location:** Northern Virginia; Fairfax & Prince William Counties

**Status:** Urban Wildlife Refuge

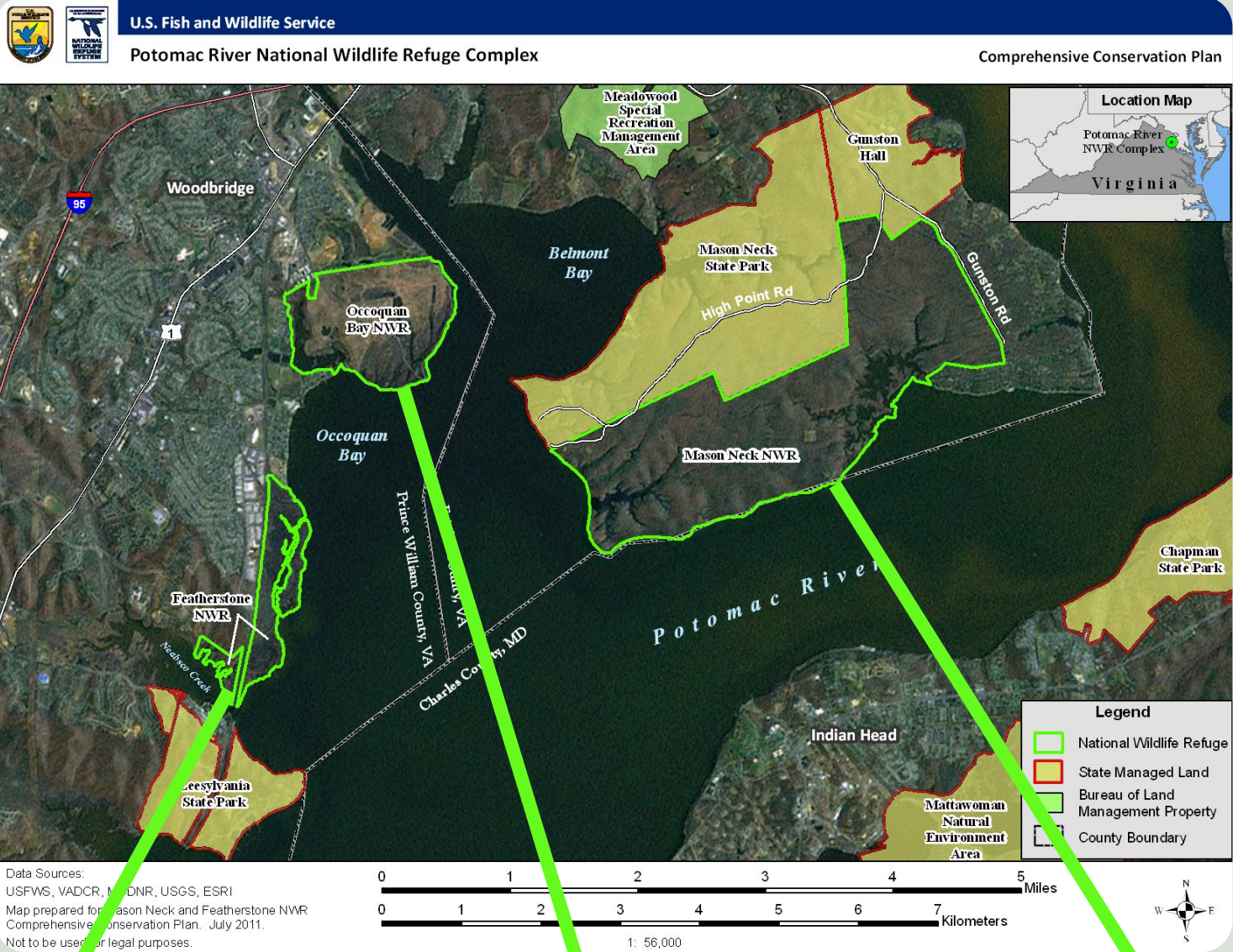
**Acreage:** 3,242

**Important Habitats**

- Forest,
- Marsh,
- Riverine,
- Grassland

**Visitor Uses:**

- Environmental education,
- Interpretation,
- Photography,
- Wildlife observation,
- Hunting



Source: Les Vilcek, Retired Biologist and GIS Support, USFWS, 2011



Featherstone National Wildlife Refuge (NWR)



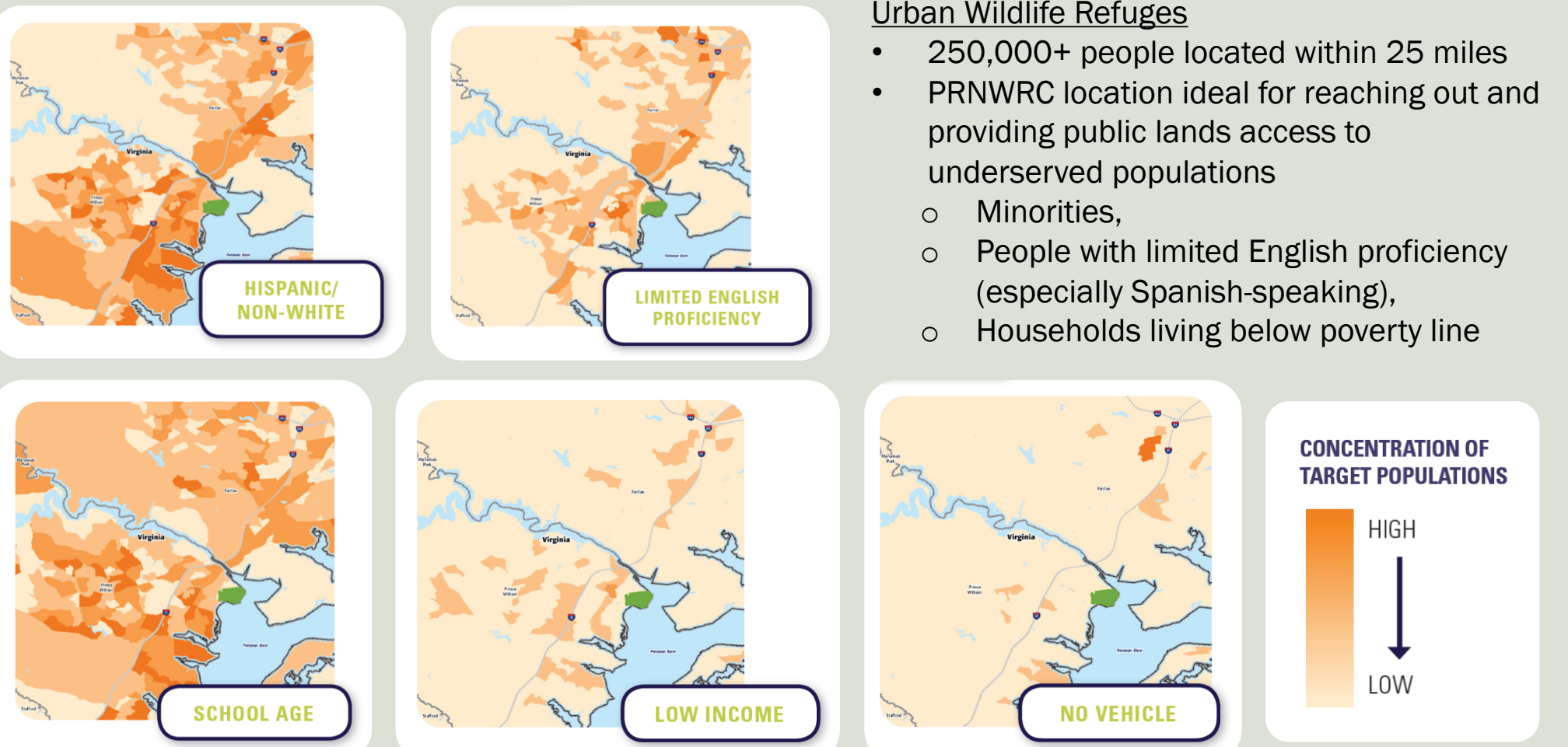
Occoquan Bay (OB) NWR



Elizabeth Hartwell Mason Neck NWR

© Bill Wallen


**Demographics**



Source: Occoquan Bay Refuge Access Plan, USFWS Urban Transportation Connections Study, 2017

## Trails & Infrastructure

### Potomac Heritage National Scenic Trail (PHNST)



**Description:**


- 800-mile trail network
- Runs along Potomac River from Chesapeake Bay to Alleghany Highlands (PA)
- Allows users to connect to culture, history, and natural beauty of the Potomac River
- Designated as a National Park Service “unit”
- Managed locally through partnerships

**Objectives:**

- Help connect all three refuges with PHNST
- Use PHNST for staff, intern, and volunteer transportation
- Include information about PHNST in new interpretive elements
- Place bike/pedestrian counters (eco-counters) at both Occoquan Bay and Featherstone trail sections
  - Obtain user counts for PRNWRC and Prince William County to use to justify future projects

Future bike/hike path connecting Occoquan Bay and Featherstone NWRs.  
Source: Christopher Wicker, PRNWRC Biologist, USFWS, 2019

### Mason Neck Trail Extension



**Objectives:**

- Seeking Federal Lands Access Program (FLAP) funding to:
  - Extend bike and pedestrian access through the Mason Neck peninsula
  - Applicant: Fairfax County, VA
- Improve access to E.H. Mason Neck NWR
  - Construct missing links of multiuse trail on Gunston Road from US Route 1 to Great Marsh trailhead
- Connect visitors to local public lands:
  - BLM Meadowood Recreation Area,
  - Mason Neck State Park,
  - Pohick Regional Park,
  - Gunston Hall Historical Plantation
- Create a trail segment addition to the PHNST.

Mason Neck Trail existing and planned segments from US Route 1 to E. H. Mason Neck NWR, VA.  
Source: Christopher Wicker, PRNWRC Biologist, USFWS, 2019

**Fellow Assistance**

- Coordinate with all partners to move forward with FLAP application
- Collaboratively write application
- Coordinate with contractors
- Help with interpretive element design
- Obtain and install eco-counters

# Naomi Fireman Public Lands Transportation Fellow Potomac River National Wildlife Refuge Complex


## Refuge Entrance Design & Transport Hub



Current entrance to Occoquan Bay NWR

**Challenges:**

- Dawson Beach Rd. = industrial corridor with large, boxy buildings
- Cars park illegally on road shoulder every day
- No sidewalk
- Chain-link and barbed wire make refuge fence intimidating
- Removal of old Visitor Contact Station
- Only one sign indicating NWR entrance



Entrance vision

**Entrance Vision:**

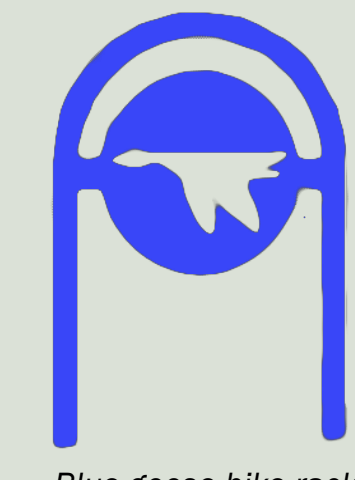
- Establish aesthetically pleasing and welcoming refuge entrance aimed to:
  - Help the public understand they are entering a NWR,
  - Reflect refuge values
- Create visitor rest area where PHNST crosses refuge entrance
- Incentivize Prince William County to improve street elements leading to refuge
- Develop inter-community connections and environmental stewardship
- Ensure entrance continues to meet security needs for infrastructure protection

**Transportation Hub**

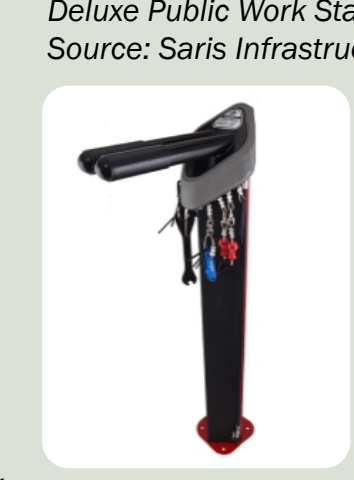
- Install bike racks, bike fixing station, and shaded benches for trail users
- Improve refuge entrance signage
- Explore transportation options
  - Lime e-bike rental station,
  - Lyft ridesharing program,
  - PRTC OmniRide bus stop
- Extend sidewalks and bike infrastructure from local neighborhoods to refuge
- Install creative pavement markings that display emblems
- Improve refuge branding by creating our own emblems and using the blue goose symbol

**Fellow Assistance**


- Create entrance vision and design
- Engage with stakeholders
- Coordinate with contractors
- Find funding
- Obtain entrance design elements
  - Bike racks,
  - Deluxe public work stand,
  - Decorative fencing,
  - Benches and small pavilion



Blue goose bike rack



Deluxe Public Work Stand  
Source: Saris Infrastructure



Bike Racks at Patuxent NWR  
Source: Jennifer Chin, USFWS, 2019

# What is the Public Lands Transportation Fellows (PLTF) Program? The PLTF program provides fellowships to recent graduates in a transportation-related field. The fellows are provided with a unique opportunity for career development and public service working directly with staff of Federal Land Management Agencies (FLMAs) on key visitor transportation issues. The assigned projects help the land units develop transportation solutions that preserve valuable resources and enhance the visitor experience. See footer for a list of sponsors.


## Electric Tricycle Fleet

With completion of nearby portions of PHNST and their new multi-purpose facility on OB NWR in 2021, PRNWRC is considering alternative modes of work-related transportation for travel between OB and Featherstone NWRs.

Electric tricycles are the main option being considered, and thus we will launch a single e-tricycle pilot to understand user reactions and assess if more are worth purchasing.

**Objectives:**

- Facilitate work efficiency improvements
- Establish new multi-purpose facility as central location among refuges
- Reduce vehicle fleet maintenance costs
- Reduce transportation-related carbon emissions
- Increase fun and enjoyment of moving within and between the refuges
- Promote employee health



E-Wheels EW29, \$1499  
Source: E-Wheels Dealers

**Considerations:**

- Capital and operating costs
- Funding sources
- Maintenance
- Accessibility
- Helmet use
- Liability waivers
- Safety training
- Secure storage area
- Charging capacity
- Secretarial order 3376

**Increasing Rec Opportunities through the use of E-Bikes: Secretarial Order 3376**

E-Bikes... provide options for people who wish to ride a bicycle, but are limited due to fitness level, age, or disability

1 can reduce traffic congestion and demand for vehicle parking spaces while increasing number and visibility of cyclists on the road

2

3 support active modes of transport for park staff and visitors

4 can reduce greenhouse gas emissions and improve air quality when used as an alternative to gas or diesel-fueled modes of transport

Source: Secretary Bernhardt, Dept. of Interior, 2019

**Who is affected by 3376?**

FLMAs housed under Department of Interior:

- National Park Service,
- U.S. Fish & Wildlife Service,
- Bureau of Land Management,
- Bureau of Reclamation

“E-bikes shall be allowed where other types of bicycles are allowed [...]”

**Fellow Assistance**

- Research
- Develop pilot
- Prepare staff and volunteers for future fleet
- Find funding
- Begin acquisition

**Partnerships & Outreach**

