

The Changing Landscape of Federal Lands: Increasing Access to Urban Wildlife Refuges via Alternative Transportation

Rocky Mountain Arsenal National Wildlife Refuge (RMANWR)

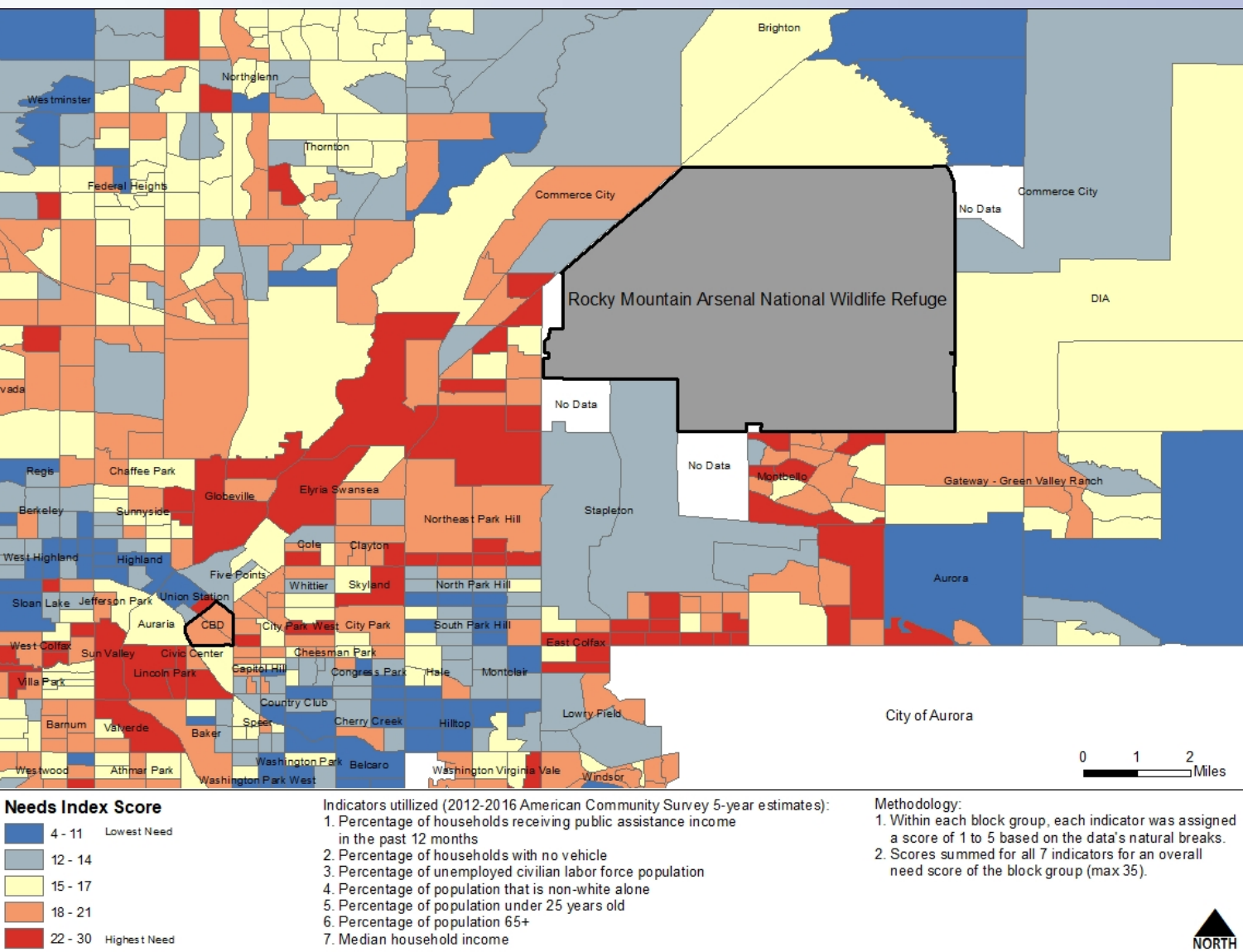


Objective

Enhance transportation options to and from RMANWR through:

- Implementing \$3.9 million Federal Lands Access Program grant
- Creating a bicycle plan
- Planning for sustainable visitor growth by expanding access via alternative transportation options

Understanding the Community



Needs Index Map:

- Better understand local context
- Address barriers that underserved populations face in pursuing outdoor recreation
- Suitability map
- Methodology adapted from CAR-LESS California study¹ (USFWS, USFS, NPS, BLM)

Compared to region, communities surrounding Refuge tend to be:

- Lower income
- More diverse
- Less likely to own a vehicle
- Younger (high proportions of youth)

How are federal lands changing?

- Public lands face challenges to relevancy
 - Over 80% of Americans live in urban areas
 - People spending less time outdoors
 - Increased diversity nationwide
- U.S. Fish and Wildlife Service recognizing urban areas as strategic opportunity
 - Reach new audiences
 - Launched Urban Wildlife Refuge Program in 2013

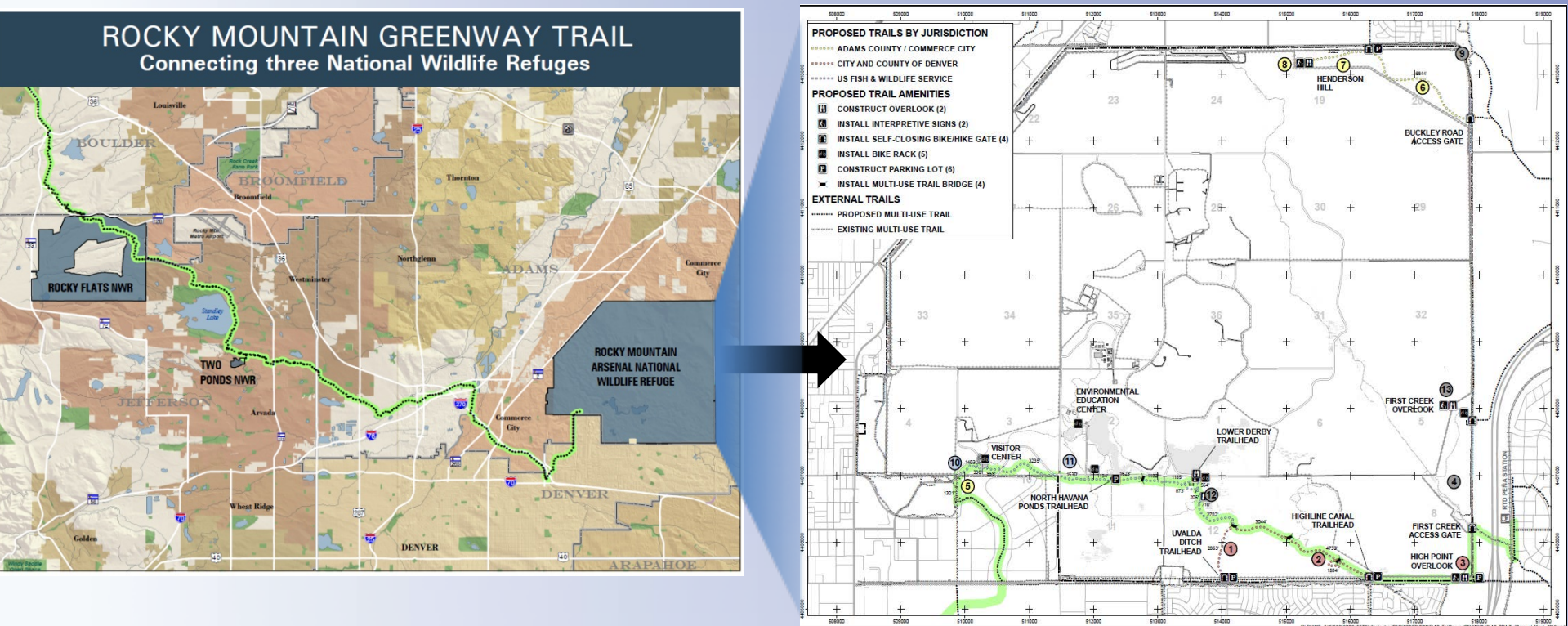
Connecting Three Urban Wildlife Refuges

Rocky Mountain Greenway (RMG) Trail:

- 80-mile uninterrupted trail and transportation link
- Passes through 10 municipal jurisdictions and 6 counties
- Connect 4 federal public land areas:
 - 3 National Wildlife Refuges in Complex
 - Connect metro Denver to Rocky Mountain National Park



Connecting Neighborhoods and Nature



Colorado Front Range National Wildlife Complex:

- 3 refuges in Complex receive varying levels of visitation
- FLTP funds constructing ~3 mile section of RMG through RMANWR connecting to light rail station (above right)

Total Annual Visitors (year)			
Existing and anticipated visitation to federal land along the Rocky Mountain Greenway:			
Rocky Mountain Arsenal NWR	200,000	2014	
Two Ponds NWR	15,000	2014	
Rocky Flats NWR	10,000	Future open years 1-3	
Rocky Flats NWR	85,000	Future open years >5	
Rocky Mountain National Park	3,400,000	2014	

Challenges and Needs:

- Segmenting trail
 - Highly variable cross-sections and use profile
 - Needs to be contextually consistent with environment around it
 - Urban vs. rural
 - Pavement type
 - Recreational use
 - Amenity nodes and types

- Ensuring wildlife dependent recreation through refuges via design elements
 - Using crusher fines instead of concrete

- FLTP application did not include amenities
 - Need to retroactively include these planning/program elements

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Public Lands Transportation Fellow

Rocky Mountain Arsenal National Wildlife Refuge

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What is the Transportation Fellows Program?

The Public Lands Transportation Fellows program provides public lands with transportation professionals for six to 12 months who assist in transportation planning and implementation to help public lands reduce traffic, congestion and pollution while improving visitor experiences. These programs are designed to place individuals with substantial knowledge and expertise in transportation planning and related areas. *See footer for a list of sponsors.*

Planning for Bicycles on Refuge



Why bicycles?

- Urban biking in Denver grew 130% between 1990 and 2013²
- Expand access to new user groups who may not own vehicles (lower income and millennials)
- Encourage sustainable behavior
- Reduce maintenance costs on refuge roads
- Refuge now part of regional bicycle network with construction of RMG

How can Refuge safely and successfully encourage bicycle use?

- Bicycles are not currently allowed beyond Visitor Center → **Policy update**
- Planning infrastructure and safety measures → **Regulations, bike racks, signage**
- Informational outreach → **Refuge specific bicycle brochure, interactive online map**
- Regional wayfinding and non-profit partnerships → **Safe Routes to Parks and Bicycle Library**

Safe Routes to Parks



Safe Routes to Parks (SRTP):

- National Recreation and Park Association campaign
 - environmental, policy, and program strategies
 - create safe and equitable access to parks for all people

Activating Communities Program: tailored technical assistance for communities to develop SRTP action plans, awards \$12,500 to begin implementation

RMANWR partnered with Sand Creek Regional Greenway to apply for a grant to:

- Implement wayfinding from the Greenway to new Refuge entrances in the community
- Encourage bicycle access to the Refuge
- Connect recreation resources

As of this printing, 2019 grants have not been awarded.

Bicycle Library

- 2012 National Wildlife Refuge Visitor Survey for RMANWR indicated that 60% of visitors were likely to use a bike share program on the Refuge

- Partnership with Northeast Transportation Connections (NETC), a transportation demand management non-profit for neighborhoods adjacent to the south of the Refuge

- Brings opportunity to provide free of charge bicycle rentals on site, similar to a bike share

- Funded and maintained by NETC
 - Minimal Refuge staff time, no cost on Refuge side – two major barriers to providing this service

- Provides an opportunity for community engagement
 - Installing bicycle storage shed and decorating with custom, Refuge relevant art

Pilot projected: Fall 2020 (post-FLAP construction)



Sustainably Serving Wildlife Drive

Wildlife Drive

An estimated 245,000 visitors took the 11-mile Wildlife Drive in 2015. Each year, this equates to:



2,695,000 miles driven



1,089 tons of carbon dioxide emitted



163 homes' electricity use



5 railcars of coal burned



Shuttle Tours

Existing Conditions:

- Refuge owns a 50 passenger vehicle and programs guided tours roughly once a month
- Limitations to a more regular shuttle tours:
 - Staff time
 - Possession of a commercial drivers license
 - Long-term sustainability of qualified volunteers

Potential Alternative: Autonomous Vehicles

- Autonomous vehicle shuttles can eliminate staff constraints and offer a sustainable tour option
- Audio tour could easily be offered in multiple languages with headphones
- Should be revisited over the next 5 years



Current tour bus



Autonomous tram prototype by Easymile

References:

1. Roberts, Nina S. CAR-LESS California Technical Memorandum #1. San Francisco State University. 2012.
2. Bicycle Commuting Data. The League of American Bicyclists. 2015. https://bikeleague.org/sites/default/files/Bike_Commuting_Growth_2015_final.pdf