



Agriculture and America's Best Idea

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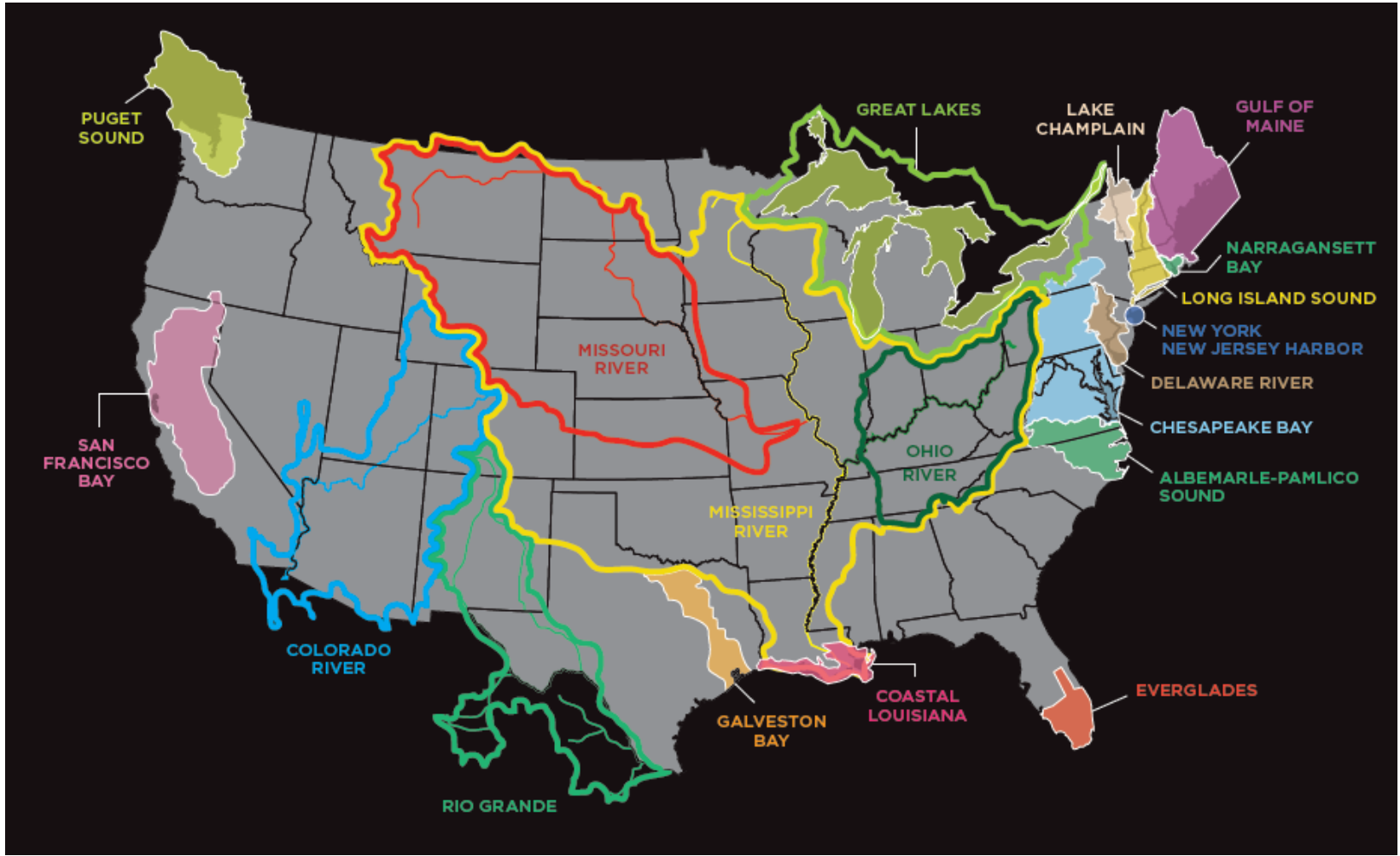
Role of National Parks Conservation Association

- Established in 1919 the National Parks Conservation Association (NPCA) is America's only nonprofit advocacy organization dedicated solely to protecting, preserving, and enhancing the U.S. National Park System.
- NPCA protects and enhances America's national parks for present and future generations by identifying threats to parks and works tirelessly to defend parks — whether on the ground, in the courtroom or on Capitol Hill

National Park Waters

- National parks represent around 10% of all U.S. shorelines and include diverse areas including lakeshores, glaciers, wetlands, beaches and coral reefs.
- There are 11,217 miles of shoreline and 2,490,839 acres of water in the 84 ocean, coastal, and Great Lakes parks.
- National Rivers, Wild and Scenic Rivers
- Protect headwaters or run through the NP
- National Water Trails

America's Great Waters



So what is so special about a National Park?



1.3.1 National Significance

NPS professionals, in consultation with subject-matter experts, scholars, and scientists, will determine whether a resource is nationally significant. An area will be considered nationally significant if it meets all of the following criteria:

- It is an outstanding example of a particular type of resource.
- It possesses exceptional value or quality in illustrating or interpreting the natural or cultural themes of our nation's heritage.
- It offers superlative opportunities for public enjoyment or for scientific study.
- It retains a high degree of integrity as a true, accurate, and relatively unspoiled example of a resource.

With respect to water resources,

- it is the policy of the National Park Service to determine the quality of park surface and ground water resources and avoid, whenever possible, the pollution of park waters by human activities occurring within and outside of parks.
- In particular the NPS will work with appropriate governmental bodies **to obtain the highest possible standards available under the Clean Water Act for protection of park waters;**
- **take all necessary actions to maintain or restore the quality of surface and ground waters within the parks consistent with the Clean Water Act** and all applicable laws and regulations; and enter into agreements with other agencies and governing bodies, as appropriate, to secure their cooperation in maintaining or restoring the quality of park water resources.

What is the role of NPS in protecting park waters?



National Park Waters

- The health of our parks depends on the waters that surround and flow through them.
- Outside park boundaries, the health of these waters is jeopardized by various threats, including nutrient pollution from agricultural production.
- More than half of all national parks have waters that are considered impaired by EPA.

What do you expect from National Park water?



Recreation, managed for primary contact-you can swim in it!

Clean habitat-so wildlife can thrive, not just barely survive.

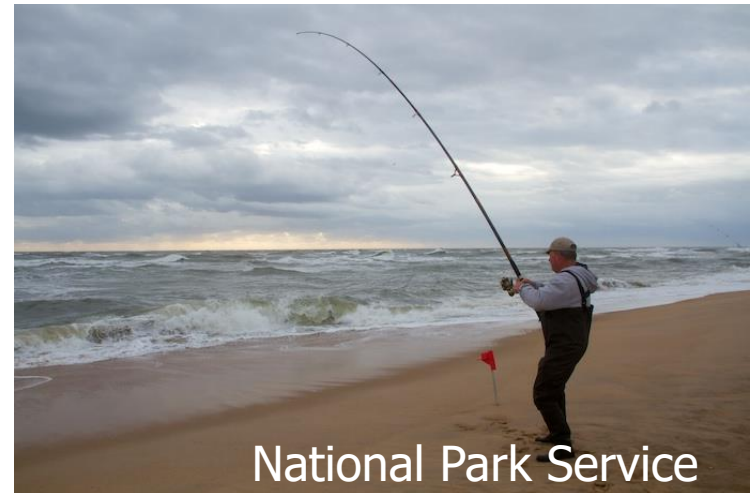


Don Nelms



Emily Jones

Fish and shellfish
will be safe for
human consumption



National Park Service

Agriculture and National Parks



Gary Reyes

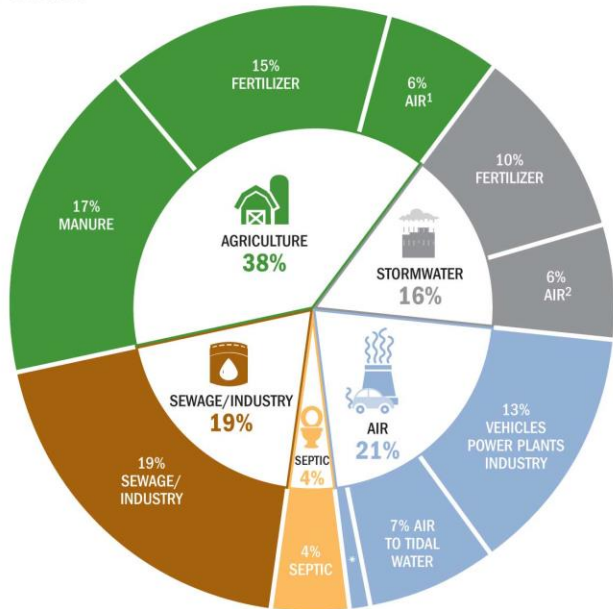


Trapp Family Farm

National Parks in the Chesapeake

Nitrogen Pollution to the Chesapeake Bay

By Sector



SOURCE: CHESAPEAKE BAY PROGRAM

* 1% NATURAL AIR POLLUTION

¹ AGRICULTURAL EMISSIONS OF AIR POLLUTION

² ASSUMING THAT ROUGHLY 40% OF TOTAL STORMWATER NITROGEN COMES FROM THE AIR

December 2012



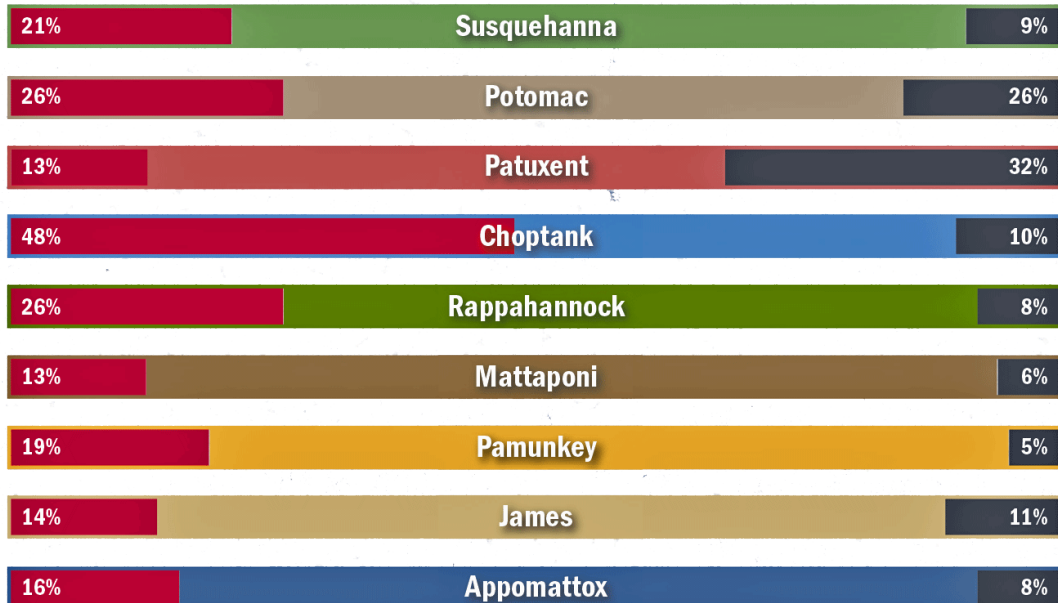
CHESAPEAKE BAY FOUNDATION
Saving a National Treasure

cbf.org



AGRICULTURAL LAND

DEVELOPED LAND



The remaining land is forested, wetlands, or other use.

Source: Chesapeake Bay Program



Why is there agriculture in parks?

- Authorized by the park's **enabling legislation**
- **Retained as a right** subsequent to NPS land acquisition
- Contribute to the maintenance of a **cultural landscape**
- Carried out as part of a **living exhibit** or interpretive demonstration



Agricultural Activities

- **Crops** – corn, soybean, alfalfa, sorghum, wheat
- **Grazing**
- **Hay** – warm and cool season grasses
- **Vegetables** – community gardens

The Process

Leases

- Usually associated with a historic building/structure
- Duration: 5 – 10 years
- Considered more rigid
- Can be inherited or specified in enabling legislation

Special Use Permits

- For open land, usually without any buildings
- Duration: 5 years
- Considered more flexible

Parks with Agriculture

- Antietam National Battlefield
- Appomattox Court House National Historical Park
- Fredericksburg & Spotsylvania National Military Park
- Gettysburg National Military Park
- Harper's Ferry National Historical Park
- Manassas National Battlefield Park
- Monocacy National Battlefield
- Richmond National Battlefield Park
- Appalachian National Scenic Trail
- Blue Ridge Parkway
- Chesapeake & Ohio Canal National Historical Park
- Delaware Water Gap National Recreation Area
- Eisenhower National Historic Site
- George Washington Birthplace National Monument
- Piscataway Park

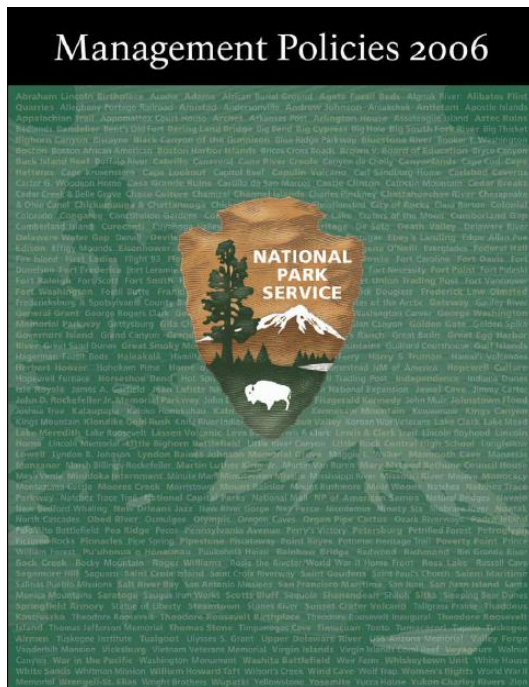
Parks with Agriculture

- Range from hundreds to thousands of acres
- Rental rates are determined independently by a park
- No minimum acreage requirement for a lease or permit
- Most farmers also own or lease agricultural lands outside park borders

What does NPS require of farmers?

- **Management Policies 2006**
- **Director's Order #53**
- **Reference Manual #53**
- **Reference Manual #77**

“Agricultural activities should be conducted in accordance with accepted **best management practices**”



“NPS should foster best management practices that **conserve soil, protect natural waterways** and groundwater, control proliferation of diseases, exotic plant species and noxious weeds, and **avoid contamination of the environment**”

Best Management Practices (BMPs)

Soil

- **Conservation tillage**
- **Cover cropping**
- **Crop rotation**
- Cultivation of native warm-season grasses with deep roots
- No-mow zones around karst landscape areas
- Periodic soil testing
- **Soil conservation plans**

Crop

- Crop consultants
- Minimal fertilizer usage
- **Nutrient management plans**
- Prohibited use of chicken litter, biosolids, etc. for fertilization
- Removal of invasive species
- **Required NPS approval of all pesticides and herbicides**
- Use of Integrated Pest Management principles

Best Management Practices (BMPs)

Water

- **Exclusion fences**
- Filter strips, grass waterways and grass terraces
- Protecting water quality to meet Chesapeake Bay Total Maximum Daily Load (TMDL) pollution limits
- **Regular water quality monitoring**
- **Riparian buffers**
- Spraying and tilling prohibited within 15 feet of any streams, wetlands, water bodies
- Storm water discharge collection

Wildlife

- **Restricted number and timing of hay harvests** to protect ground-nesting birds
- Rotational mowing of hay fields

Cattle

- Limited grazing period
- Restricted number of animals allowed per acre of pasture
- **Rotational grazing**
- Separate watering systems for cattle

Antietam National Battlefield



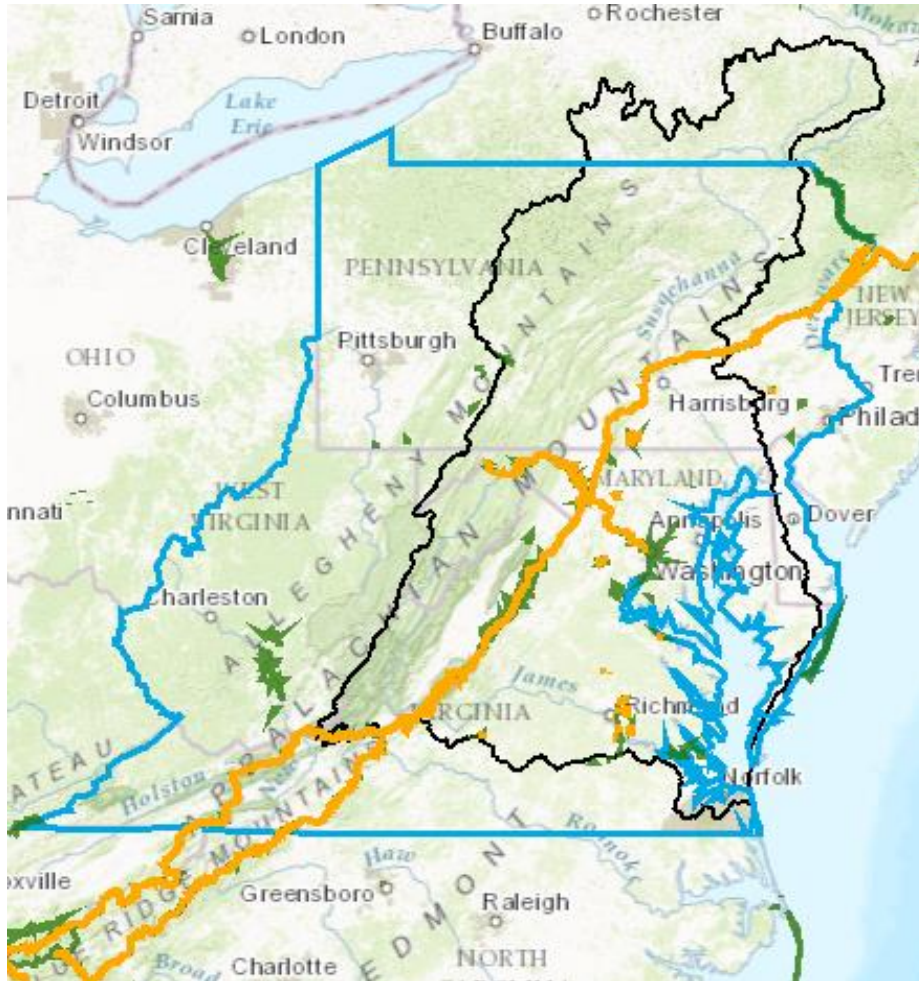
How agriculture enhances national parks

- Preserve the historical and cultural landscape
- Cost-effective and resource-efficient method of land management
- Additional wildlife habitat
- Foster engagement with local agricultural communities

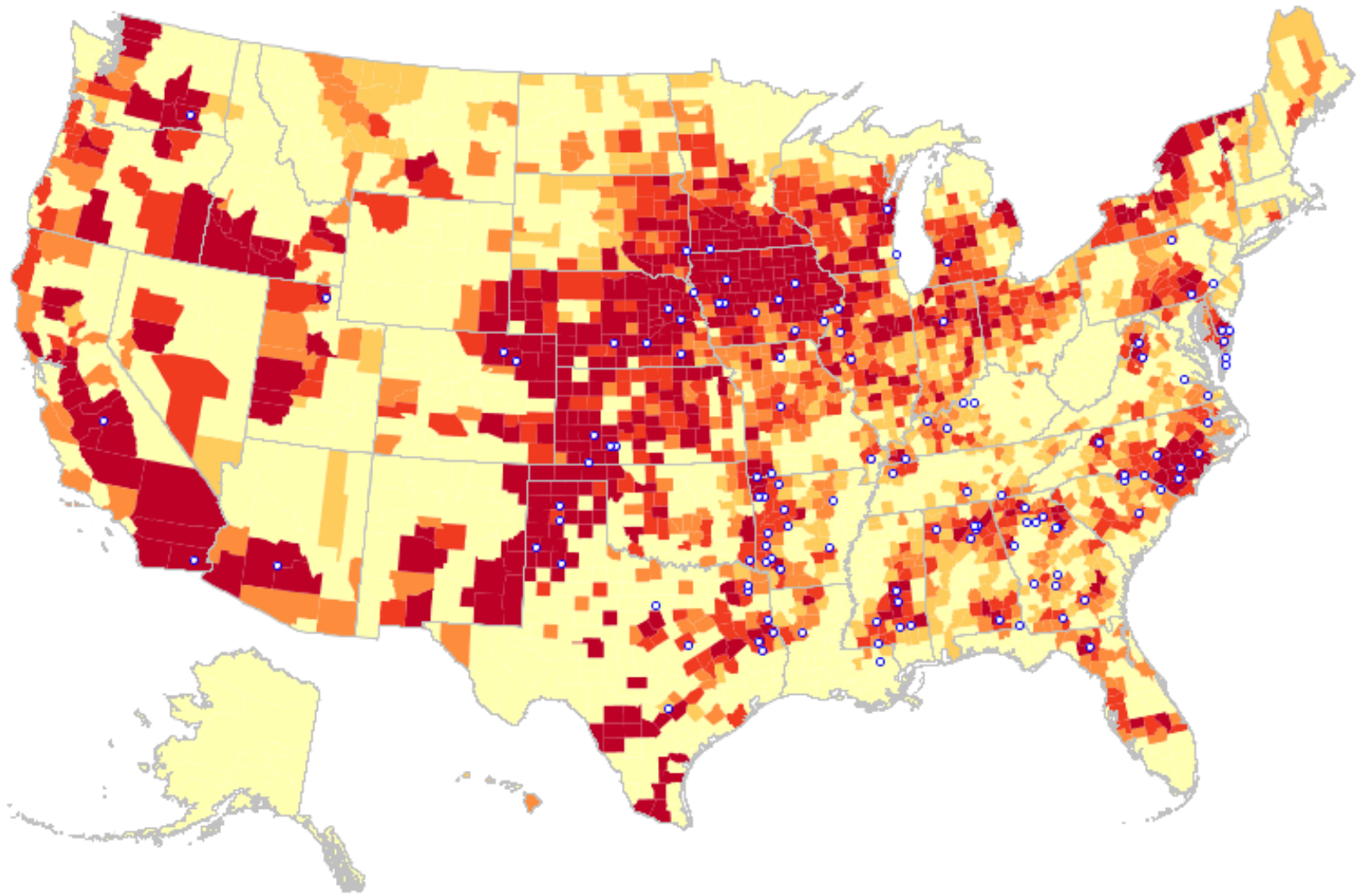
Challenges to agriculture in parks

- Balancing conservation and historical needs with economic interests of farmers
- Pest and weed management with minimal environmental impact
- Administrative costs
- Disruption of wildlife breeding seasons
- Future of agriculture

Agriculture StoryMap



- Highlights 15 parks with agriculture in the Mid-Atlantic region
- Information on agricultural activities and their extent
- Lists implemented BMPs



Factory Farm Map from USDA 2012 Census

What's a CAFO?





How do CAFOs impact NP Waters?

- More Nutrients than the Farmer can use
- Manure and Phosphorus Runoff = contamination and algae blooms
- Manure management systems ineffective, unmonitored
- Ultimately the cost of the waste management system passed on to you as a taxpayer and America's waters can't handle the nutrient load

The cost of cheap animal protein to America's National Parks

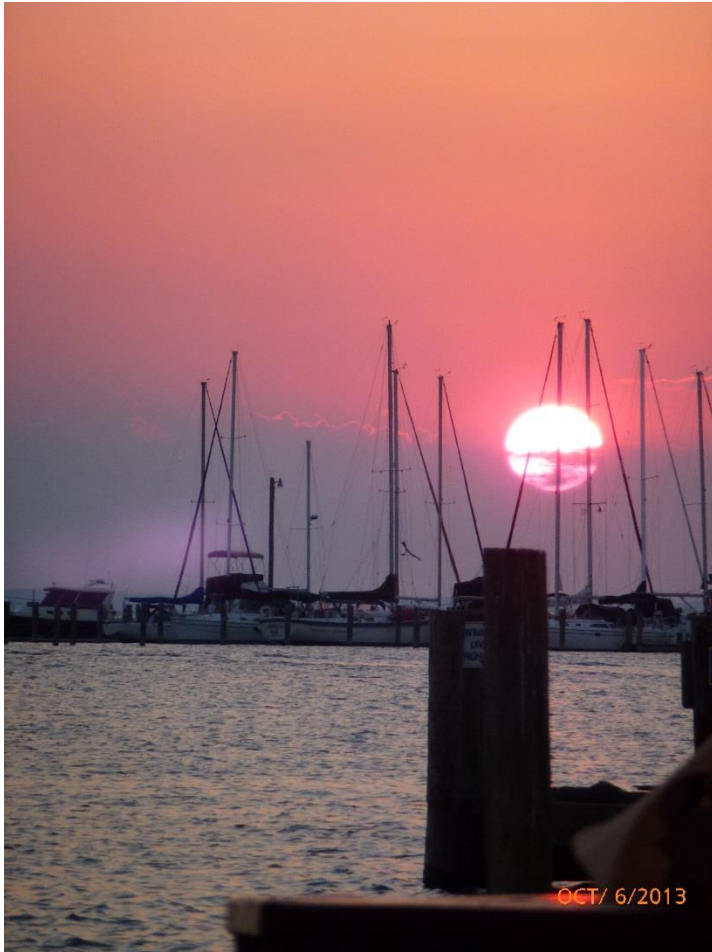
- Water Quality
- Wildlife & Biological Diversity
- Air Quality
- Visitor Experience & Recreation
- Public Health risk
- Money & staff time for water quality monitoring, NPS not reimbursed by producer, integrator or permitting agency.
- Local tourism economy
- Conversion of contiguous land from forest to fields to spread manure & litter.
- Nutrients, heavy metals, antibiotics flow downstream.

Landscape Level Water Quality Restoration

Late 1980s federal suit against State of Florida involving phosphorus reduction led to numerous projects to clean up the water from Lake Okeechobee to Everglades National Park

Everglades National Park
and Loxahatchee National Wildlife Refuge

Chesapeake Bay Program



The pollutants that are largely responsible for pollution of the Chesapeake Bay are nutrients, in the form of nitrogen and phosphorus, and sediment.

*These pollutants come from many sources, including sewage treatment plants, city streets, development sites, agricultural operations, and deposition from the air onto the waters of the Chesapeake Bay and the lands of the watershed.
Executive Order May 2009*

Great Lakes Restoration Initiative



Apostle Islands National Lakeshore



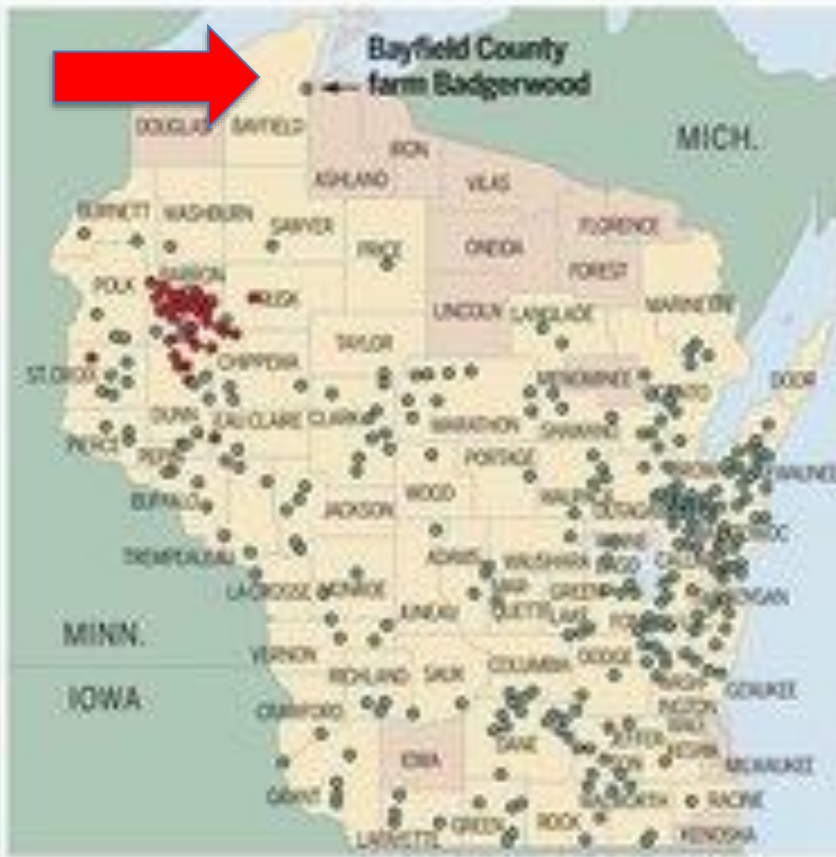
Lake Superior

Apostle Islands

Large-scale livestock farms

A proposed hog farm in the Town of Eileen in Bayfield County would be the first large-scale livestock farm in the Lake Superior basin. Most concentrated animal feeding operations are in southern and central Wisconsin.

● CONCENTRATED ANIMAL FEEDING OPERATIONS ● JENNIE-O-TURKEY STORE (37 sites covered under one individual permit)



Source: Wisconsin Department of Natural Resources

Journal Sentinel



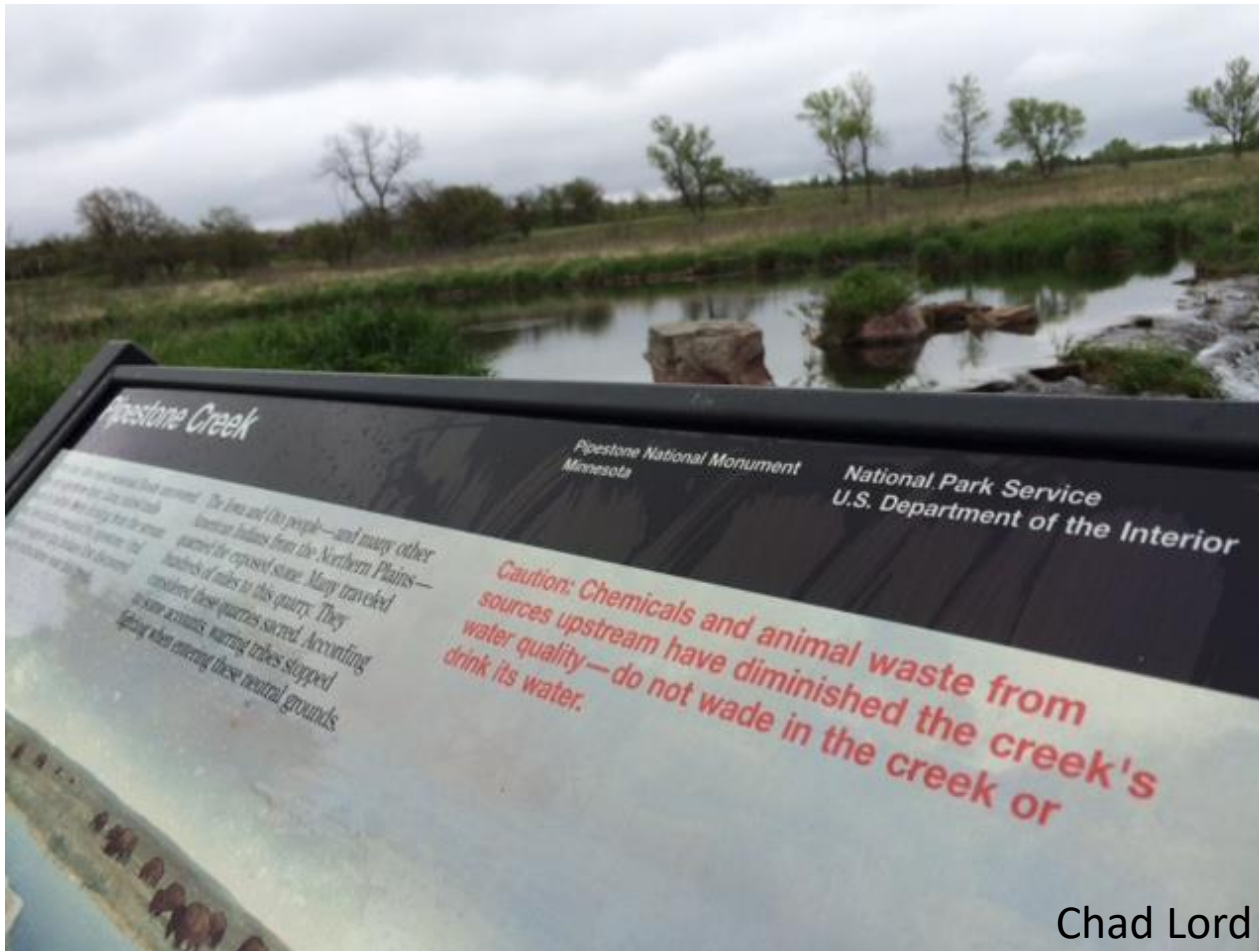
Chequamegon Bay on Lake Superior

Provides drinking water to the town of Ashland

Pipestone National Monument



Pipestone Creek



Buffalo National River



Emily Jones

Over 360 caves & thousands of sinkholes, sinking streams & springs



Profits, Pork Chops & Pollution



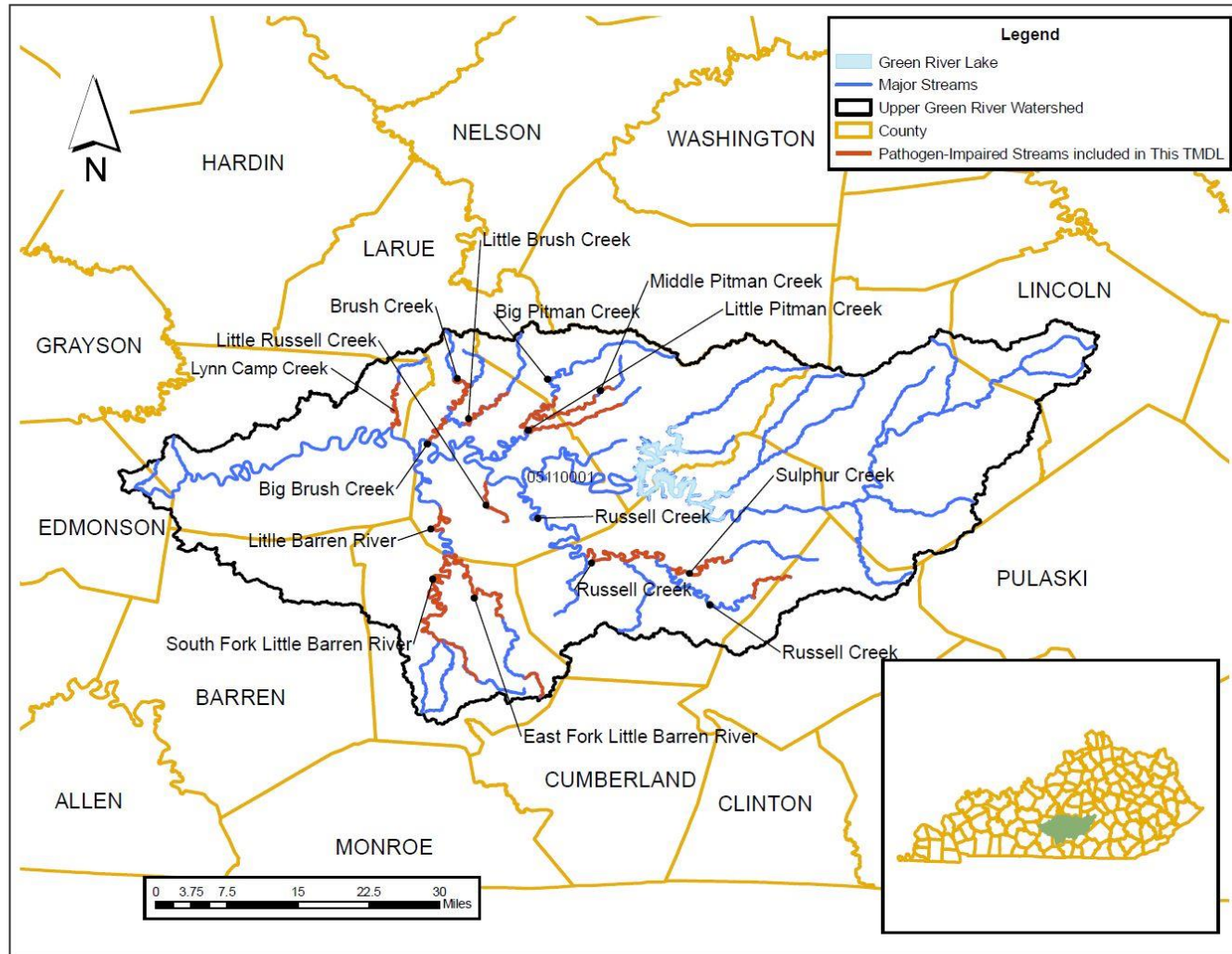
From a presentation
by Mike Masterson &
John VanBrahana

Mammoth Cave National Park



National Park Service

Figure 1 – Location Map of Fecal Coliform Impaired Streams in the Upper Green River Watershed USGS HUC 05110001 Addressed in this TMDL



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KY's Upper Green River Watershed



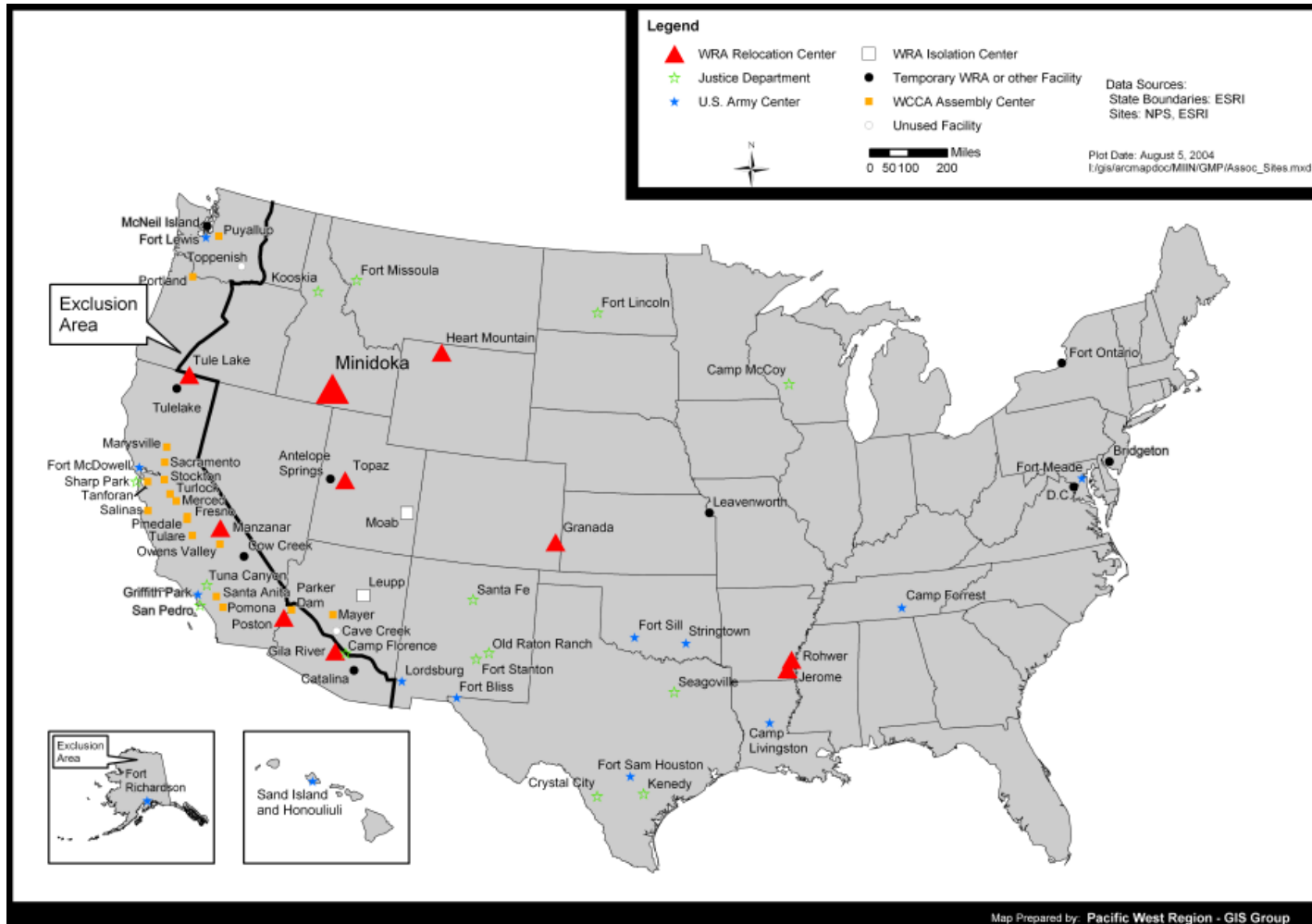
Minidoka National Historic Site



National Park Service

Historical & Cultural Resources also impacted by CAFO

10 relocation centers across US



Minidoka NHS

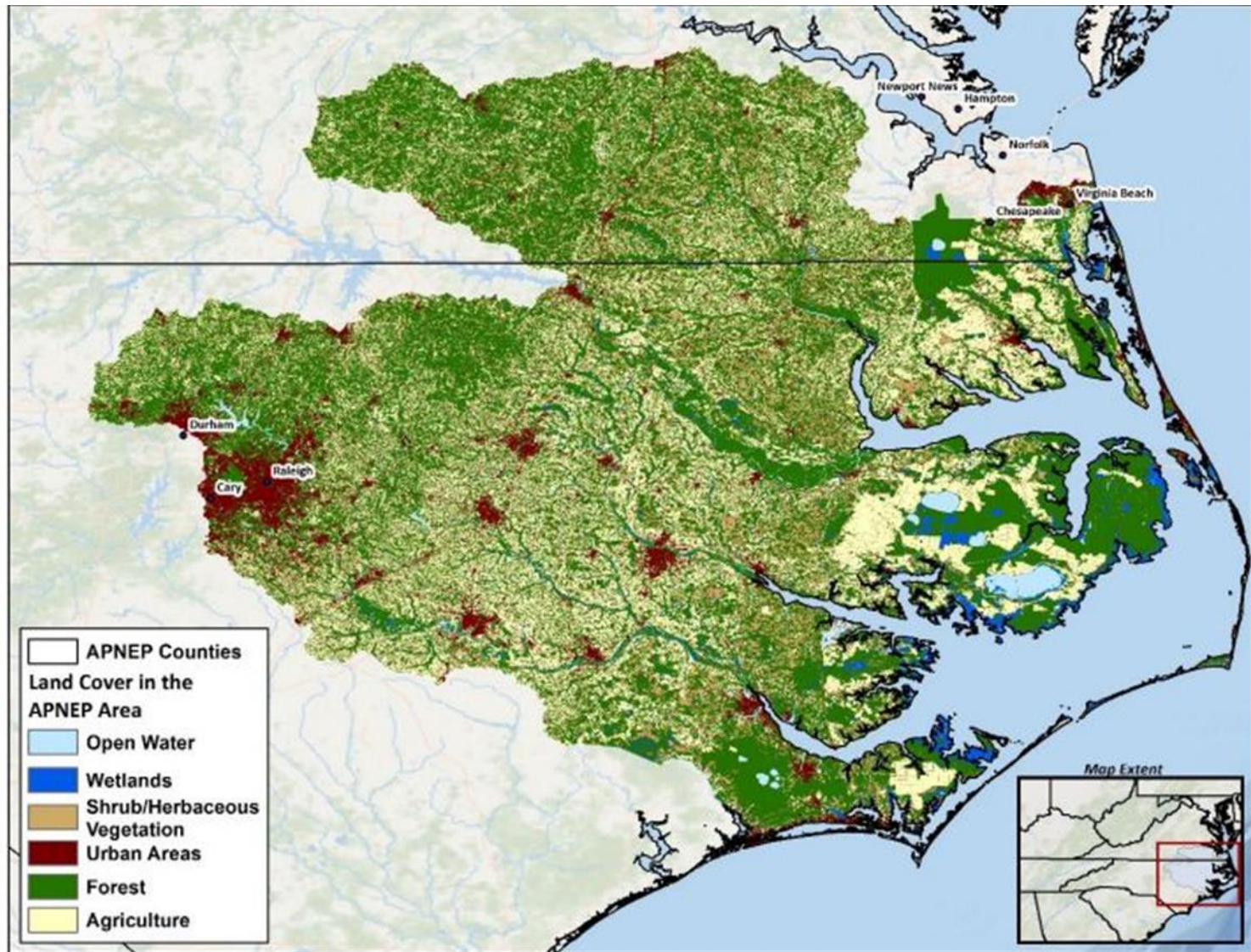


National Park Service

Albemarle Pamlico Sound Cape Hatteras and Cape Lookout National Seashores



Amelia Wallace



North Carolina CAFO post 2016 Hurricane Matthew



Crystal Coast Waterkeepers

State Legislators seek to relax regulations on CAFO

