The National Resources Inventory (NRI)

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What is the Primary NRI?

1982 30 Years of Status, Condition, & Trends of Natural Resources in the United States 2012

- National sample of 800,000 points on land & water
- 49 States & Caribbean (Puerto Rico & Virgin Islands)
- Data at each point from ’82, ’87, ’92, ’97, & ’00 – ’12
- Alaska from 2007 only
- Details on non-Federal land only, except Alaska
- Nationally consistent definitions & methods

Land Cover/Uses
- Cropland & Crops
- Pasture
- Rangeland
- Forest
- Developed Land

Erosion

Water & Wetlands

Soil
1st Stage: Area Segments
- Every County
- Spatially balanced
- Most are 160 acres

2nd Stage: Points
- Spatially Balanced
- 3 in most segments
How is the NRI Done?

Remote Sensing Labs

Aerial Photographs

72,000 images

Raw Data

Cases for Local Data

Local Data

Iowa State University

NRCS State Offices

• Sample areas photographed
• RSLs process photos & collect data
• Cropland, pasture & CRP points sent to States
• States provide Administrative and local knowledge info.
• ISU runs complex estimation process & delivers NRI database
Change over Time

Repeated Collection at Points Allows Measuring Gross Change

Ex. #1 => Gross: 4.6M acres of pasture became cropland (above left) & 4.8M acres of cropland became pasture (above right)
Net: 0.2M acres converted from cropland to pasture

Ex. #2 => Gross: 5.5M acres of CRP became cropland & 0.8M acres of cropland became CRP
Net: 4.7M Acres Converted from CRP to Cropland
Dominant Land Uses, 2012

Each dot represents 50,000 acres
- Red: Cropland
- Blue: Pastureland
- Yellow: Rangeland
- Green: Forest Land
- White: Federal Land

Dots are distributed randomly within each area - defined in this map as the combination of state boundaries and 10-by-10 mile cells for the continental U.S. counties for Hawaii and NRCS service areas for the U.S. Virgin Islands. Note that dots do not represent actual feature locations or points.

Map ID: m13674
Data Source: 2012 National Resources Inventory, U.S. Department of Agriculture, Natural Resources Conservation Service

Approximate land use totals for the U.S. in 2012:
- Cropland: 363 million acres
- Pastureland: 121 million acres
- Rangeland: 406 million acres
- Forest land: 413 million acres (Alaska, the Pacific Basin, and Federal lands are excluded)
How Primary NRI is Used?

**CEAP:**
Uses NRI data and points to develop sample & NRI data in models

**NRCS State Offices:**
Use NRI to show State status & trends and guide resource allocation

**Congress:**
Uses NRI data to assess impact of Farm Bill changes

**Federal & State Agencies:**
Use NRI data for status, trends & other analyses

**USDA Climate Change:**
Uses NRI points as basis for Greenhouse Gas Inventory & NRI data for land use change

**Academia:**
Uses NRI data for modeling natural resource phenomena

**Grazing Lands On-Site:**
Uses NRI data & points to develop targeted sample

**NRCS Technical:**
Uses NRI data for natural resource analyses
Grazing Lands On-Site

NRI Segments w/ Range

Rangeland On-Site
2004 – Present
(2003 Initial Year)

Bureau of Land Management
Rangeland On-Site

NRI Segments w/Pasture

Pastureland On-Site
2013 – Present
(‘09 – ’11 Pilot)
On-Site Protocols

GL Health
“Targeting Areas”

Soil & Landscape
“Soil Survey input”

Vegetation
“Invasive plants, species monitoring”

Conservation Practices

Resource Concerns
On-Site Data Use

Originally: Analysis Team (NRCS, ARS, USGS)

- USDA Greenhouse Gas Inventory
- RHEM Model & Other Research
- LANDFIRE
- Initiatives: Sage Grouse, Monarch
- NRCS States’ Use?
Questions?

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