



United States Department of Agriculture



Resource Inventory & Assessment Div.

Natural Resources Conservation Service



The National Resources Inventory

35 Years of National Resources Monitoring

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February 28, 2022

Natural Resources Conservation Service

nrcs.usda.gov/

What is the NRI?



1982

35 Years of Status, Condition, & Trends of Natural Resources in the United States

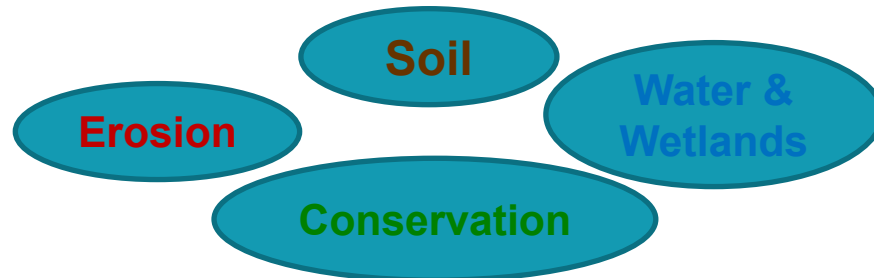
2017



- 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 – '17
- Alaska from 2007 only
- Details on non-Federal land only, except Alaska
- Nationally consistent definitions & methods
- 2018 & 2019 – at Iowa State for statistical analysis
- 2020 – at Remote Sensing Labs for image interpretation
- 2021 – Aerial Imagery flown to start the process

Land Cover/Uses

- Cropland & Crops
- Pasture
- Rangeland
- Forest
- Developed Land



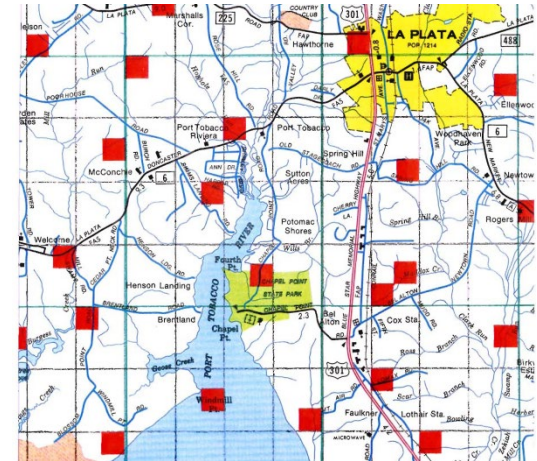
Two-Stage Sample

1st Stage: Area Segments

- Every county
- Spatially balanced
- Most are 160 acres

2nd Stage: Points

- Spatially balanced
- 3 in most segments

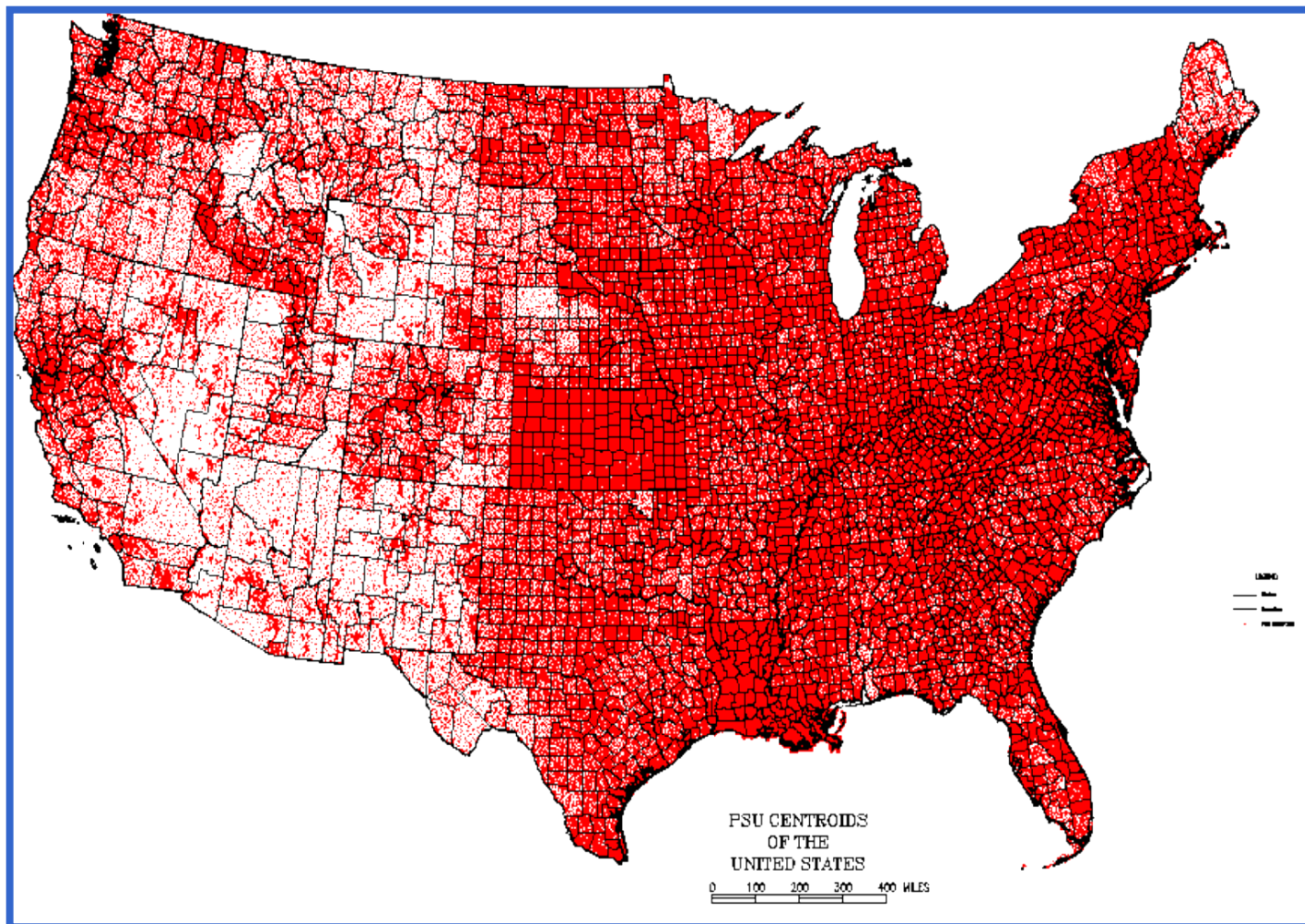


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Foundation NRI Sample Site Distribution



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NRI Collection



Aerial Photographs

72,000 images
210,000 points



Remote Sensing Labs (RSLs)

Raw Data



Iowa State University

NRI Database
(Release years)



NRCS State Offices
(with Local Center Input)

- Sample areas photographed (very high resolution 15cm)
- RSLs collect data from photos
- Cropland, pasture & CRP points sent to States
- States provide Administrative and local knowledge info.
- ISU runs complex estimation process & delivers NRI database (release years)



Confidentiality



Law: 7 USC 2276 specifically ID's the NRI and requirement for source confidentiality

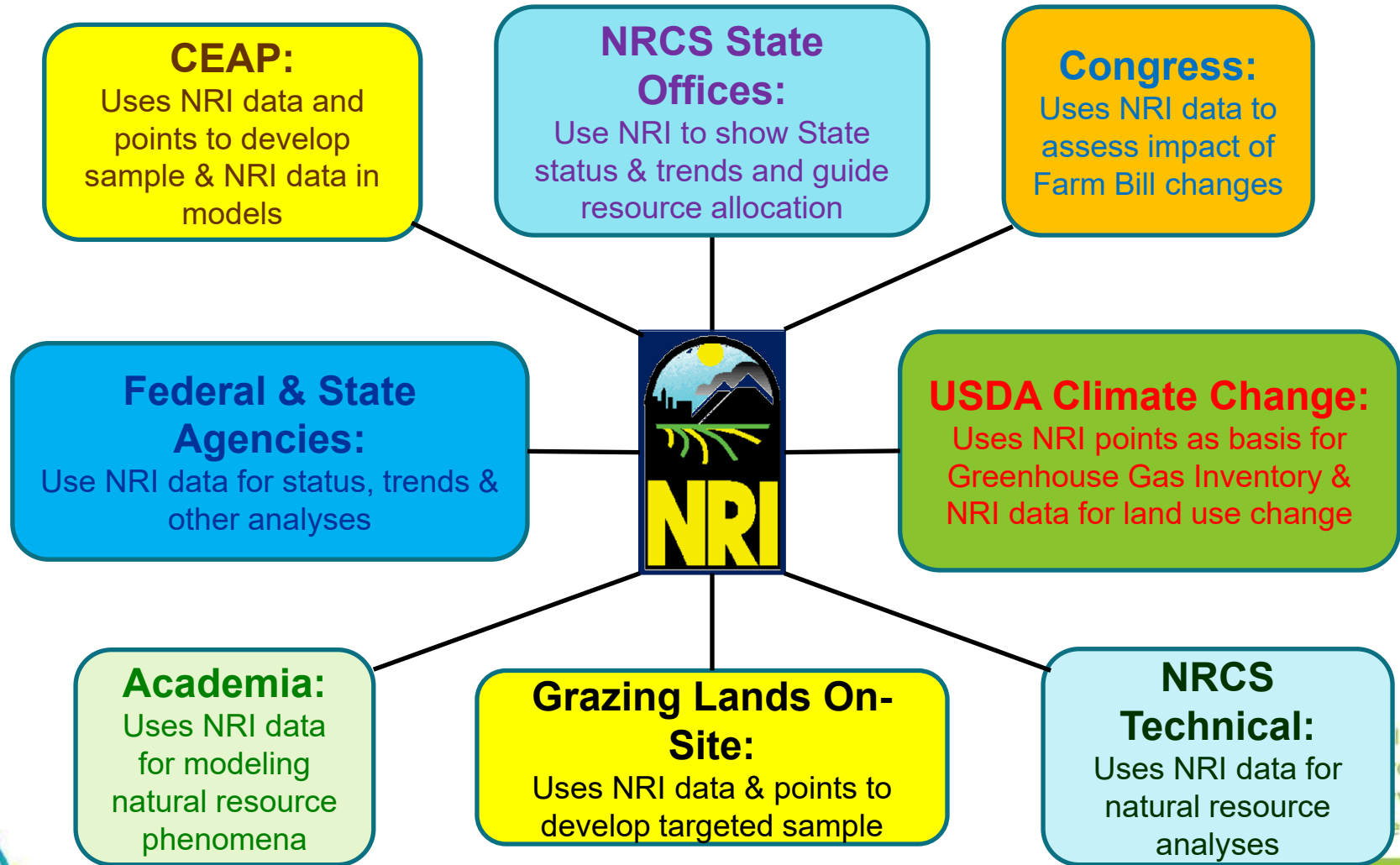
Legally: segment and point locations

Datasets with segment and point locations not releasable

Law emphasizes aggregated data only



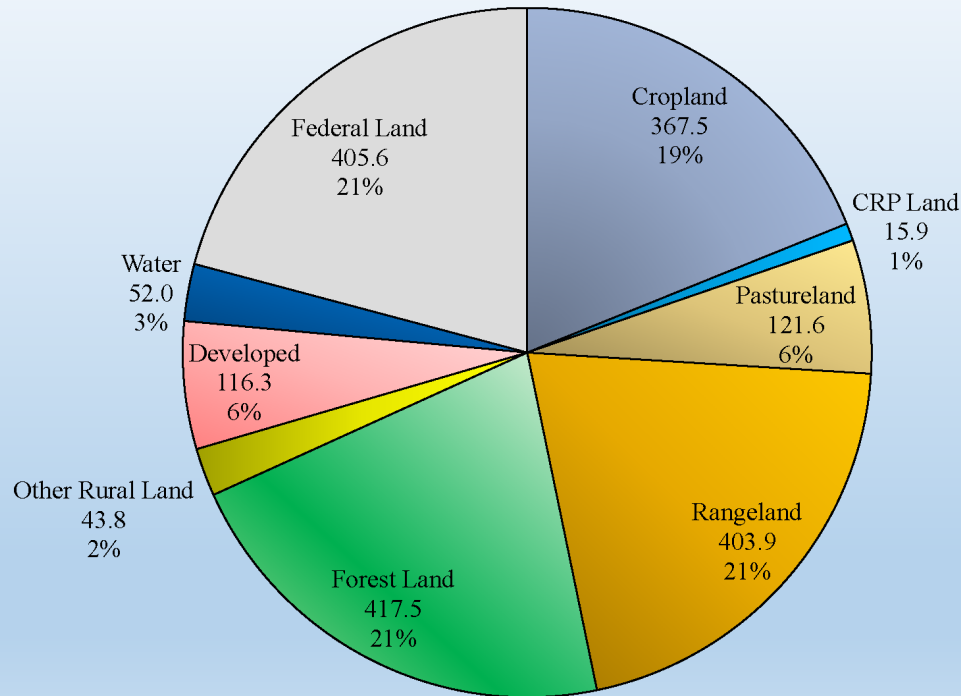
How is NRI Used?



2017 NRI Status Estimates

Non-Federal rural land makes up more than 70% of the area of the lower 49 States

Surface Area by Land Cover/Use, 2017
Millions of Acres and Percent of Total Surface Area



Total Surface Area = 1,944 Million Acres
(Cropland includes cultivated and noncultivated cropland)



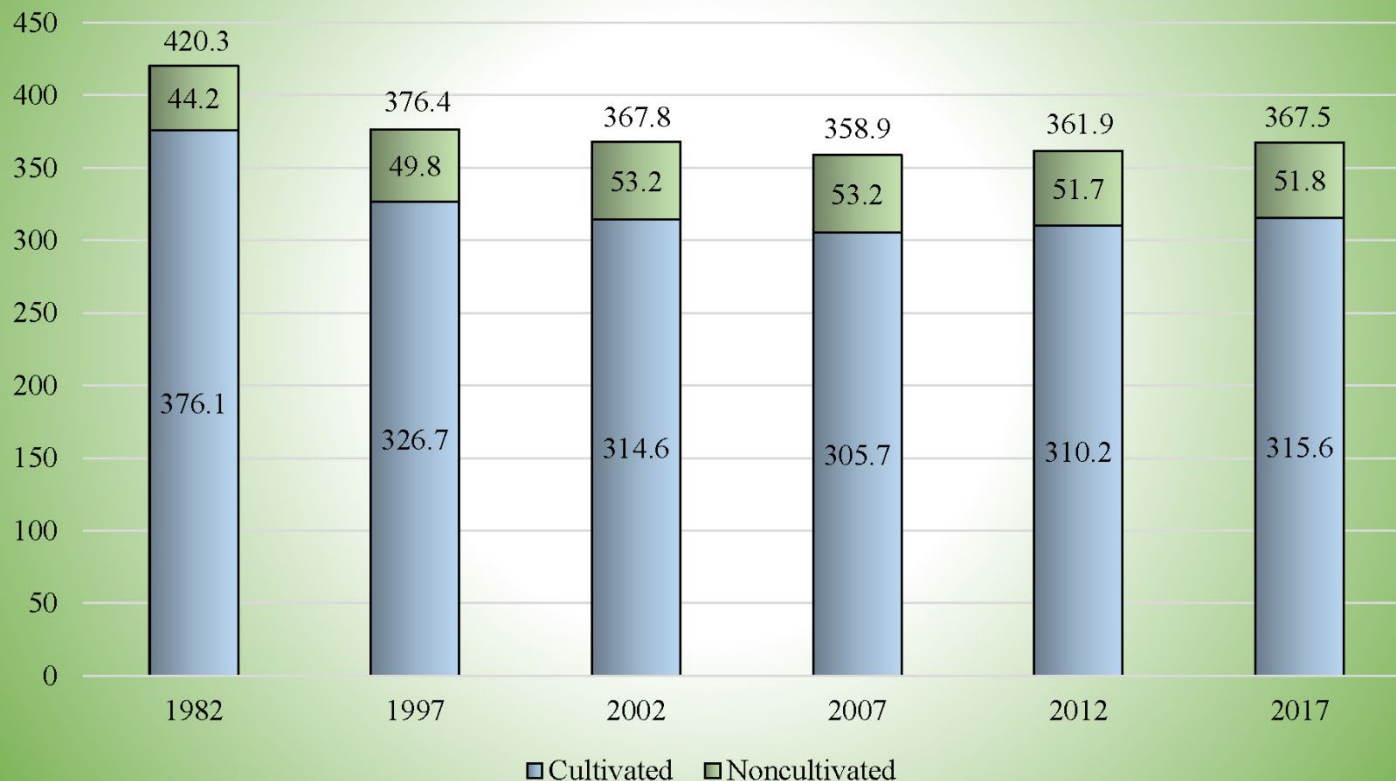
2017 NRI Cropland



Cropland, by Year

Millions of Acres

(Cropland includes cultivated and noncultivated cropland)



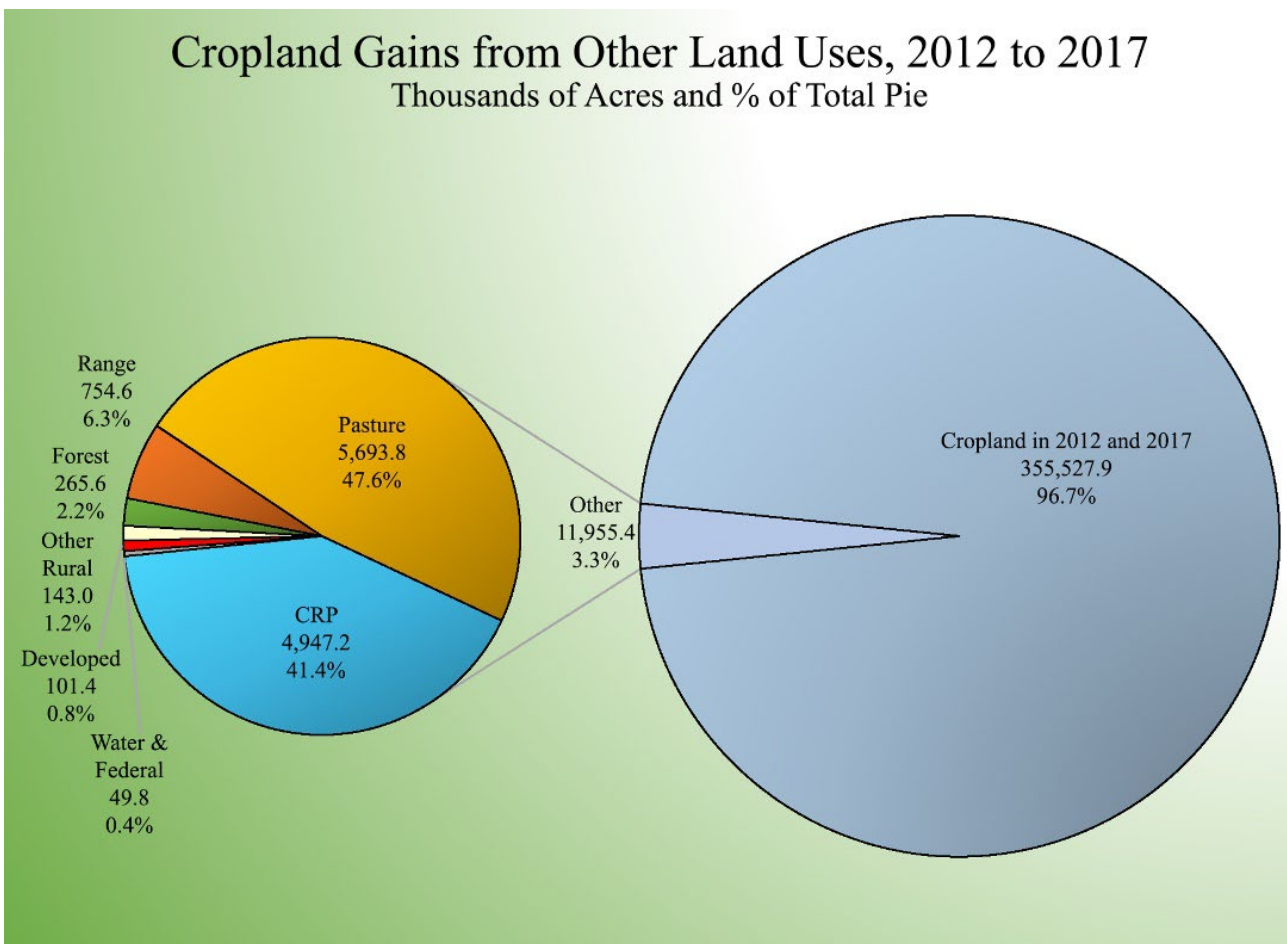
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2017 Cropland Changes



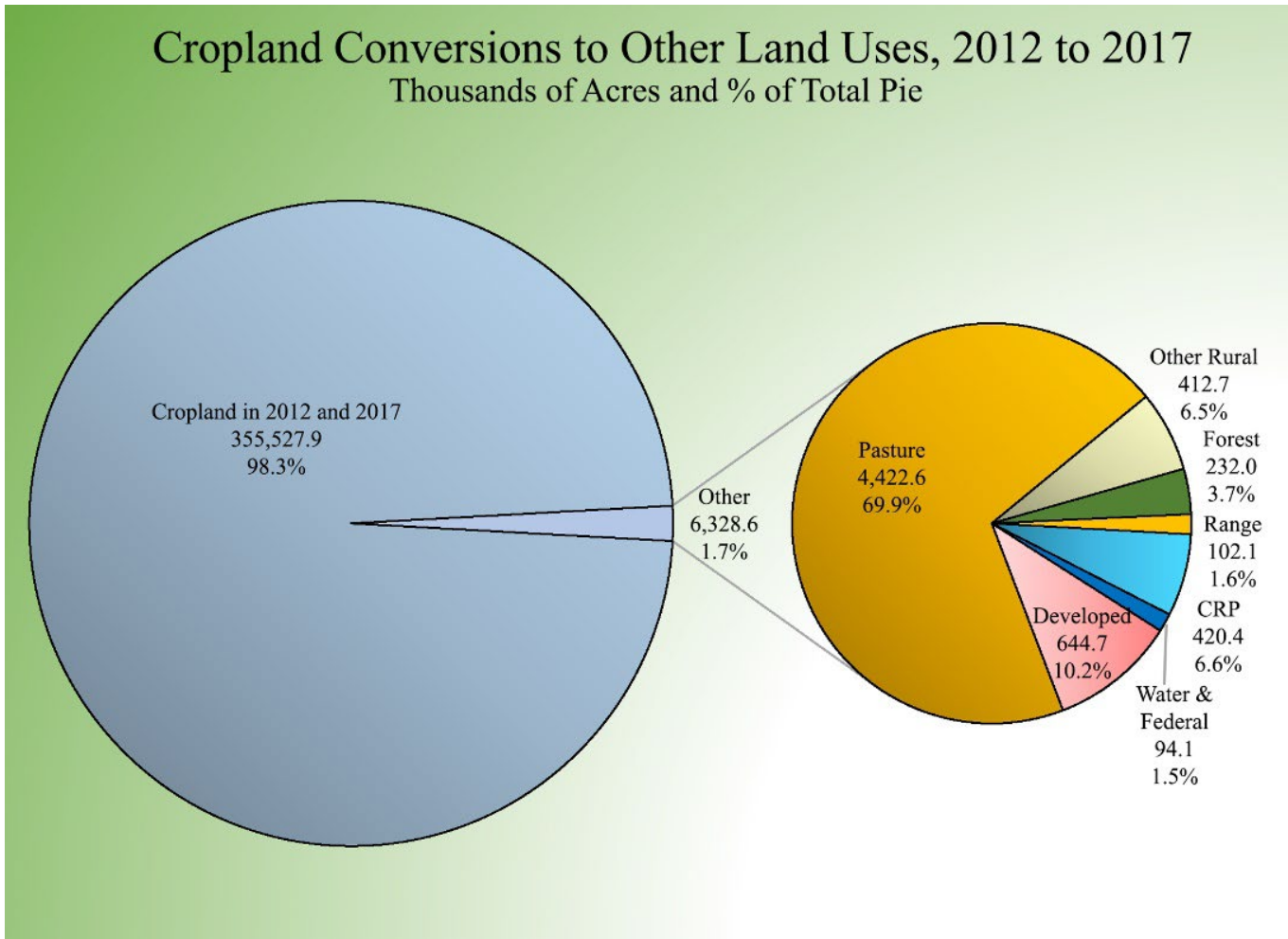
Cropland Gains from Other Land Uses, 2012 to 2017
Thousands of Acres and % of Total Pie



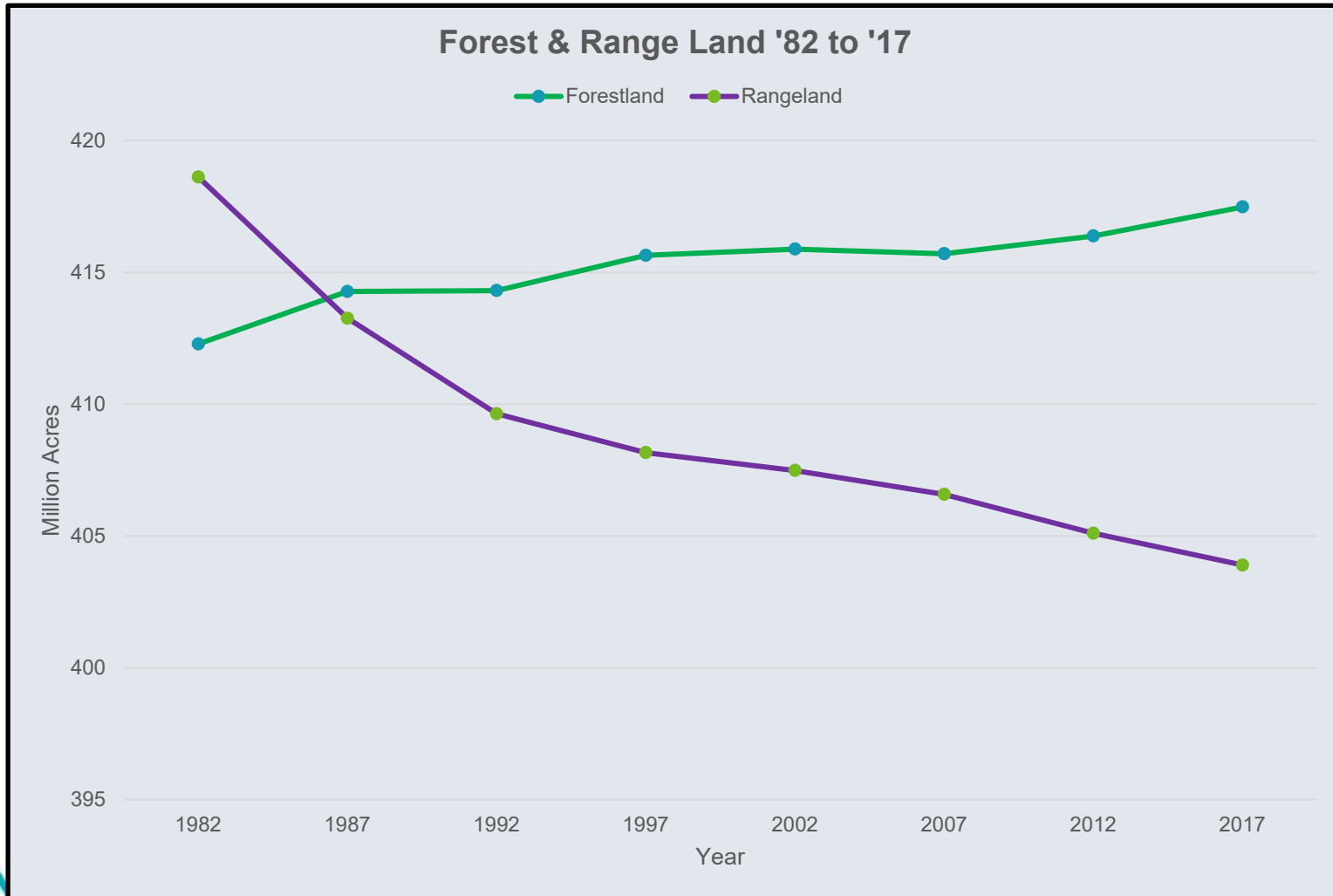
2017 Cropland Changes (Cont.)



Cropland Conversions to Other Land Uses, 2012 to 2017
Thousands of Acres and % of Total Pie



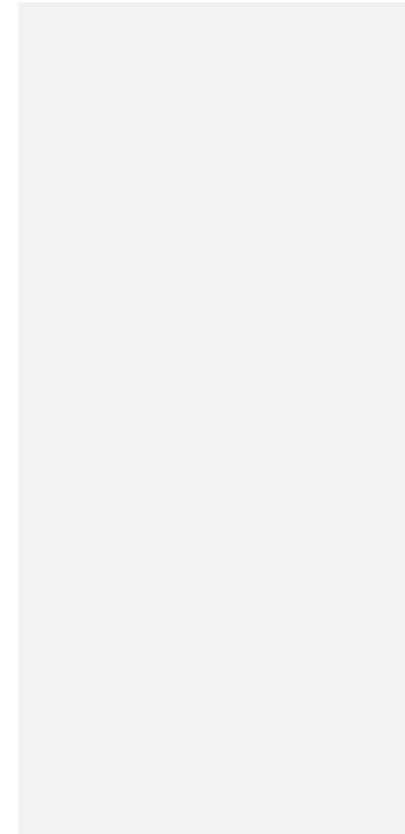
Forest & Range '82 – '17



Changes Since 1982



- **Ground Collection to Aerial Photographs**
- **Refined Collection of Developed Land**
- **Annual Collection**
 - Centralized Data Collection (Consistency)
 - Core & Rotation Subsample
 - Very Complex Estimation Methods
 - Stable Workload
- **Erosion Modeling**
- **Improved Data Collection Methods**



NRI Future Plans



- **Coverage: Alaska, Pacific Territories & Federal**
- **Erosion Model Improvements**
- **Metadata & Quality Studies**
- **Data Relevance Reviews**
- **Data Availability**
 - LUCID => Public availability 12/31/2022
 - Faster Releases
- **“No Change” Automated Data Collection**



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NRI Web Site

<http://www.nrcs.usda.gov/technical/NRI>

Additional Estimates:

<http://www.nrcs.usda.gov/wps/portal/nrcs/rca/national/technical/nra/rca/ida/>

NRI Help Desk: nri@wdc.usda.gov

