The Impact of Integrating Multiple Best Management Technologies

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Plant Nutrition at a Crossroads

19th century
Understanding manures

Early 20th century
Haber process & manufactured phosphates

Mid-20th century
High-efficiency agriculture

Late 20th century
Green Revolution

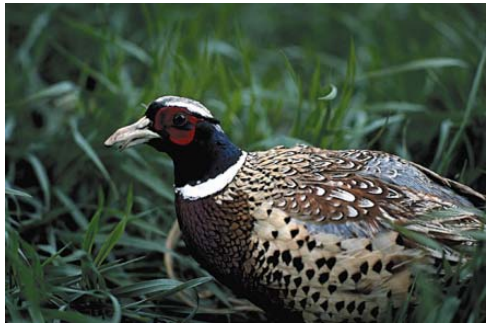
Now
4Rs era

History of CTIC

Conservation Tillage Information Center

- Founded in 1982
- Agribusiness leaders &
  National Association of Conservation Districts

CTIC Mission



CTIC champions, promotes and provides information on technologies and sustainable agricultural systems that conserve and enhance soil, water, air and wildlife resources and are productive and profitable.

A Public/Private Partnership

Connect, Inform, Champion

We've been witness to – and helped champion – major improvements in conservation technology

- Better seeding technologies
- More effective residue management machinery
- Improved hybrids and varieties
- More sophisticated management of soil fertility
- Precision application and zone management technology
- Nitrification/urease inhibitors

Connect, Inform, Champion

Connect, Inform, Champion

We bring together diverse perspectives of agribusiness, academia, environmental NGOs, agricultural trade associations and government agencies

We are that safe meeting ground where people can share ideas and hear each other's insights

EVOLUTION TO SYSTEMS PERSPECTIVE

Evolution to Systems Perspective

Initially focused on no-till and reduced tillage

- Decrease erosion
- Improve soil tilth

Evolution to Systems Perspective

Evolution to Systems Perspective

Agriculture works within systems

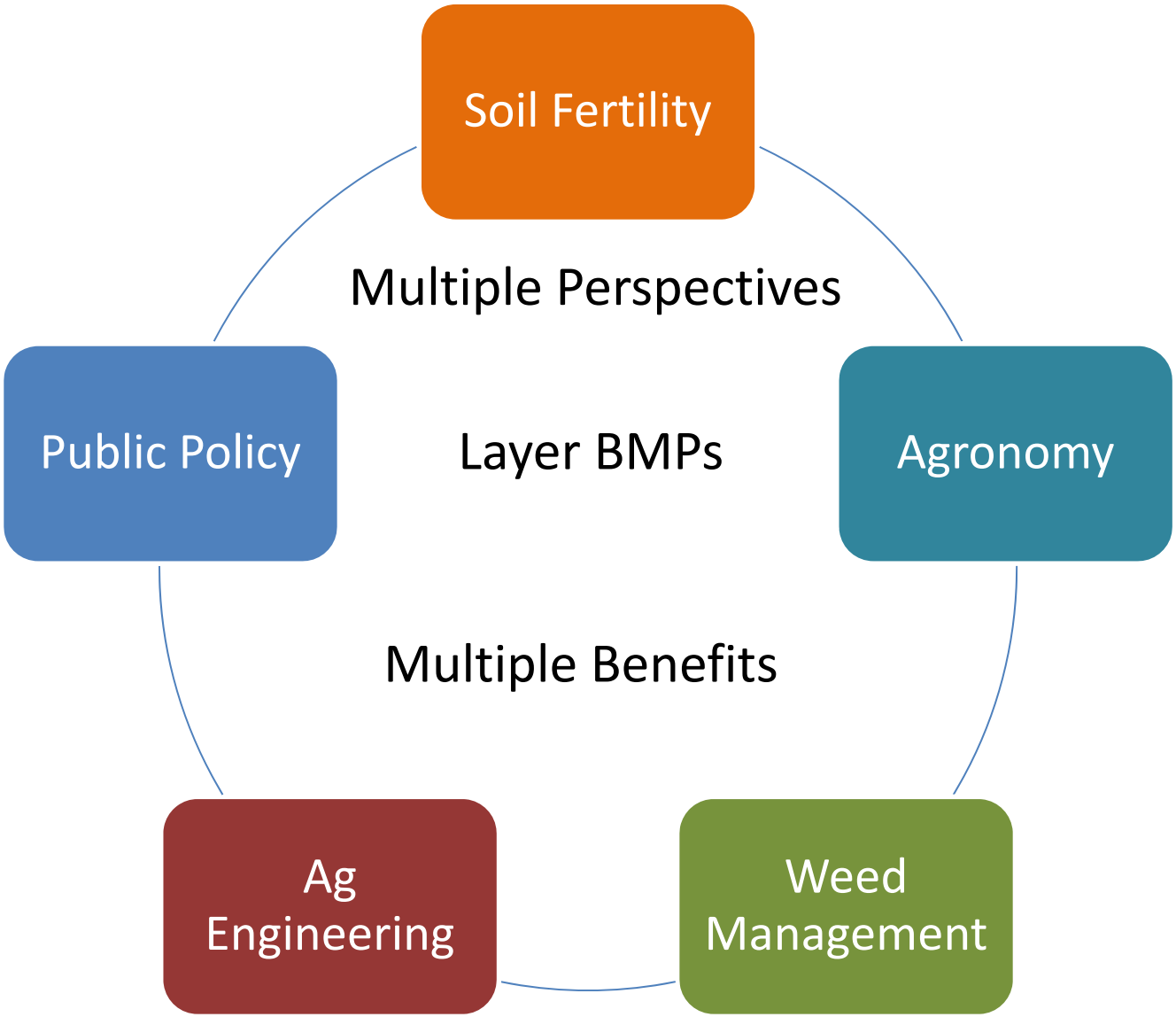
- Erosion impacts water and air quality
- Soil quality is both mechanical and biological
- How we manage water impacts the health of our soils
- The way we handle and apply our nutrients affects our water and air

Conservation *Technology* Information Center

Conservation *Technology* Information Center

- Protecting soil from erosion
- Improving soil tilth to improve infiltration
- Maximizing nutrient efficiency
- Know Your Watershed
- Livestock Waste Management
- Hypoxia – Upstream Heroes, WIIN, Cover Crops
- Indian Creek,
- GLCCI
- CCSI

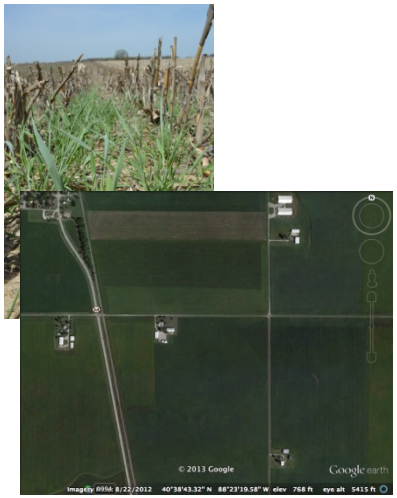
Systems Approach



Indian Creek Watershed

Indian Creek Watershed

Indian Creek Watershed



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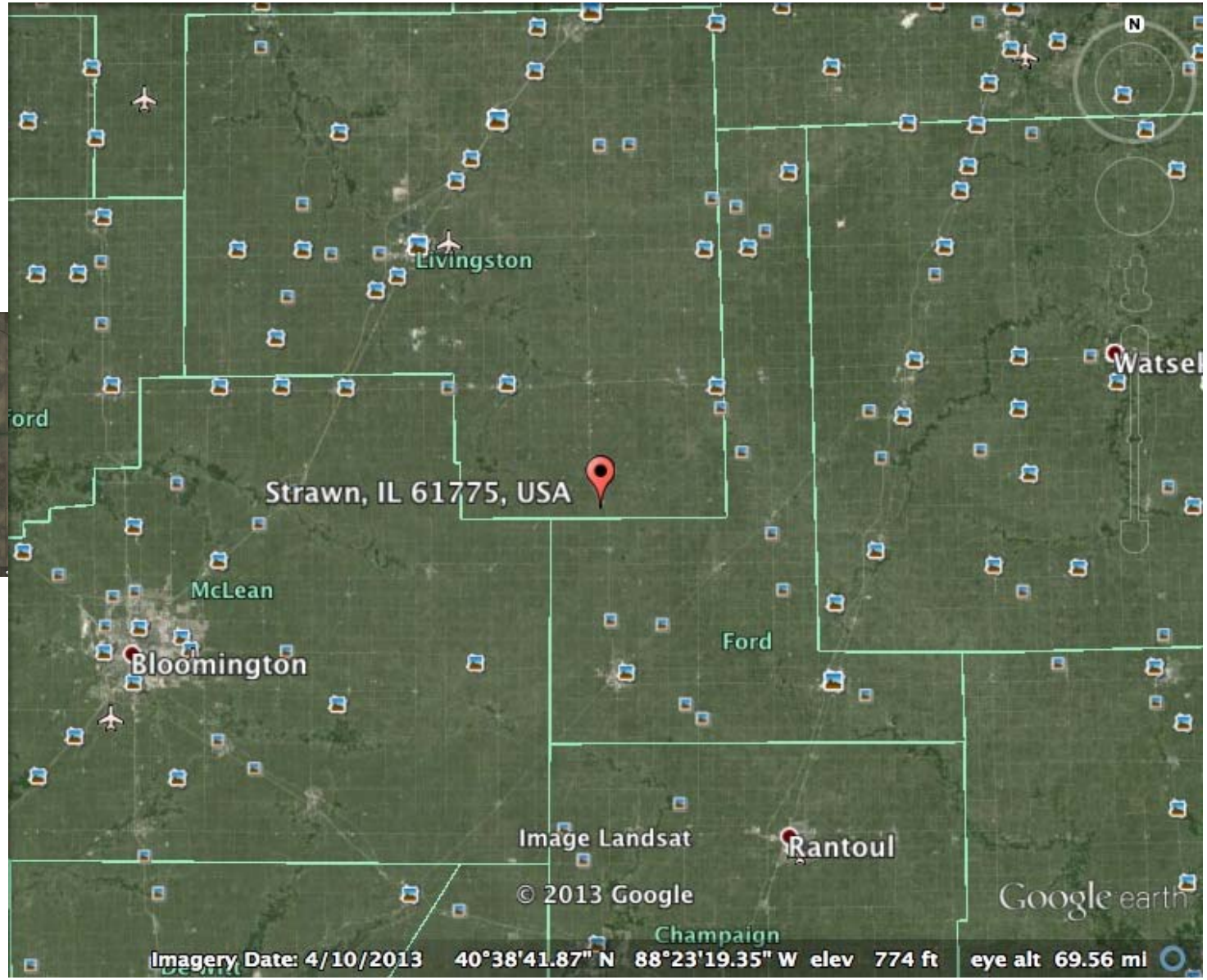

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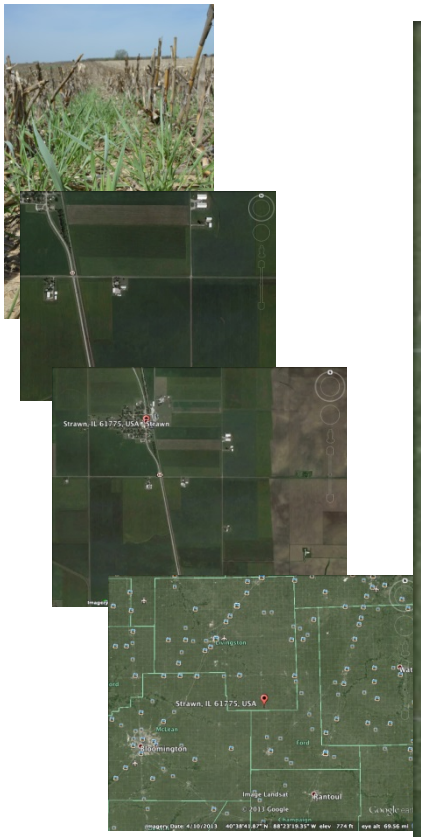
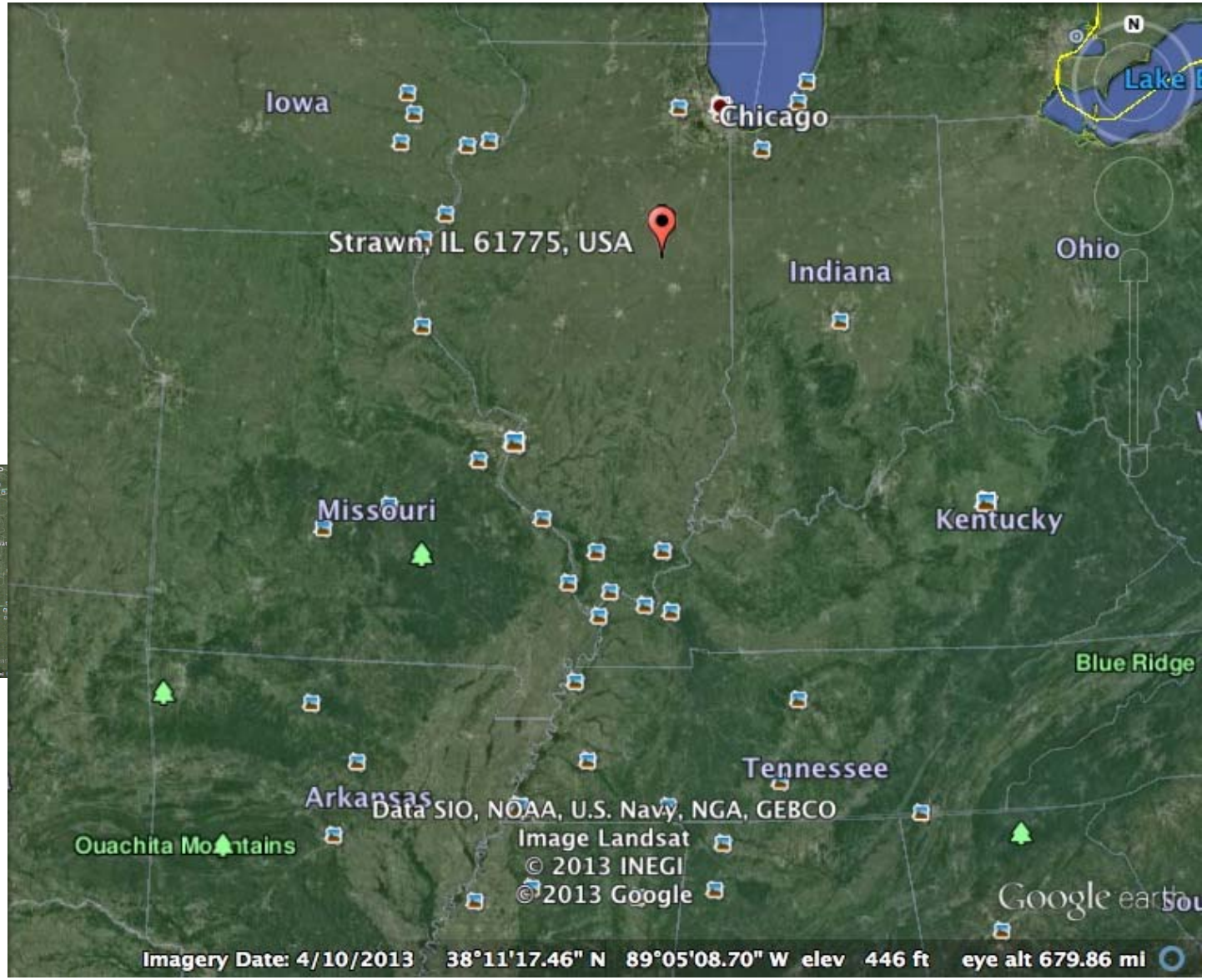
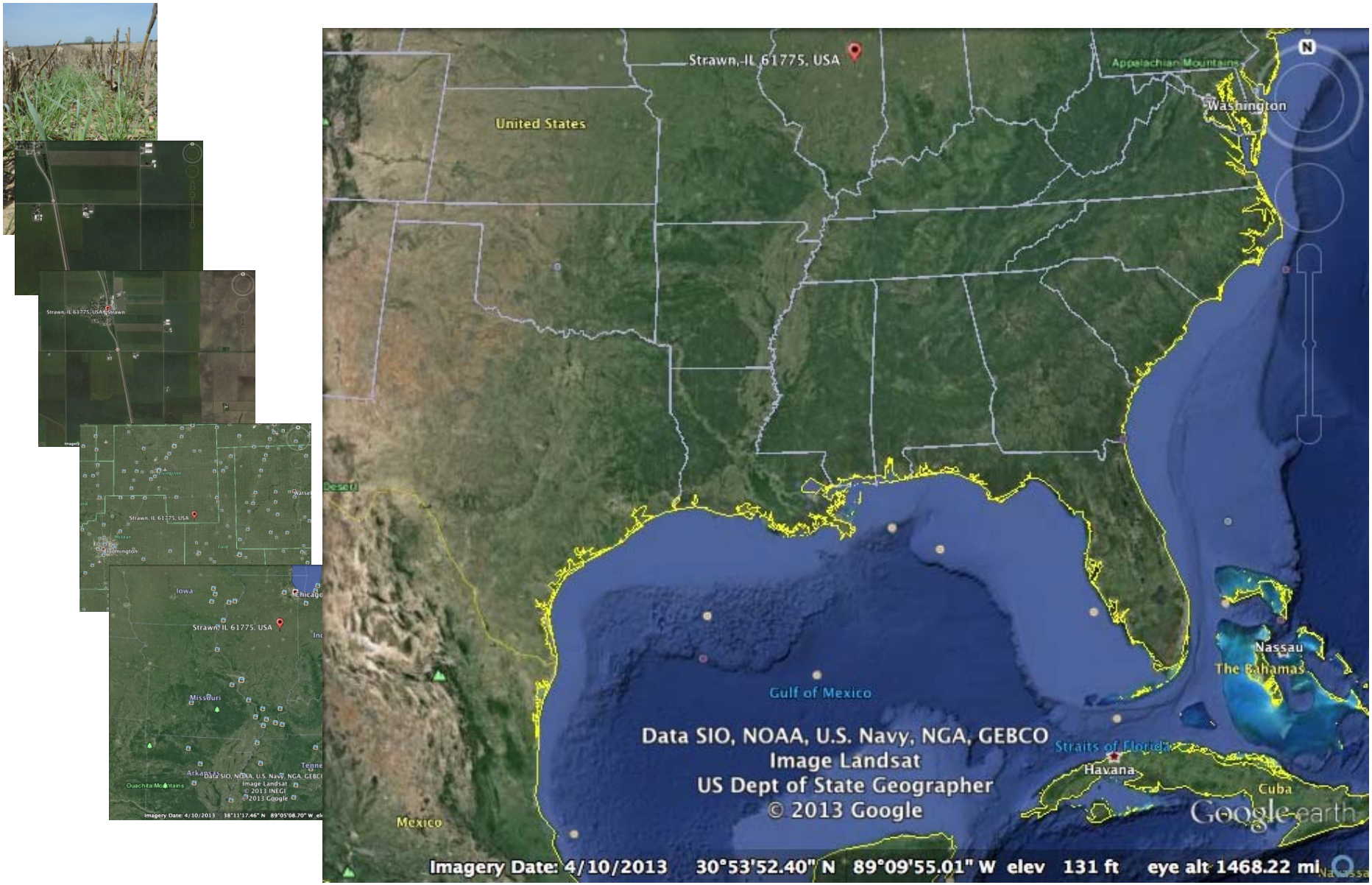




Indian Creek Watershed



Indian Creek Watershed

Indian Creek Watershed

Comprehensive approach – rate/place/time/product

- Adaptable
- Can be tied to all sorts of informational materials
- Can improve farmer's bottom line
- It can make a difference on the ground, starting today

Benefits

BENEFITS

System Benefits

New Approaches, New Technologies

More minds, more questions…and ultimately more answers

Three-dimensional view of challenges and solutions

More opportunities to learn and teach

System Benefits

Not bounded by business units or academic departments or state lines –

We open up wider perspectives

Proven Synergies

Greater success

Proven Synergies

Conservation has to be economically and environmentally sustainable

Conservation has to be a good business decision for the farmer

NUTRIENT MANAGEMENT PROGRAMS

Nutrient Management

Integral to successful systems

- Indian Creek Watershed
- Great Lakes Cover Crop Initiative
- Conservation Cropping System Initiative
- Conservation in Action Tours

Crop Nutrients in the Crosshairs

- Comprehensive Nutrient Management Plans
- Special groundwater management zones
- TMDLs for nutrients under Clean Water Act
- Increasing regulation

Conservation System Solutions

- Improving nutrient management
- Protecting soil, water and air quality
- Making farms more efficient and profitable

GET INVOLVED

Get Involved

Fertilizer companies play vital roles up and down the line

- HQ
- Regional expertise
- Active dealerships

Get Involved

Clearinghouse of information

Perspectives from other areas

Advocates for the practices crop advisors need to keep their farmers productive and profitable

Join Us Around the Table

- Membership
- Participate – help us ask the questions, find solutions, and share the answers, join a committee
- Connect your field team to us
- Encourage them to tap into our information resources

www.ctic.org

Join Us Around the Table

The plant nutrition industry can take a leading role in agricultural conservation

With the spotlight focusing increasingly on nutrient issues, this is your time

Join Us Around the Table

Our goal is to help farmers grow crops, not algae in streams, lakes or the Gulf

- That's good for the fertilizer industry
- It's good for the farmers
- Ultimately, it's what's going to keep us all going…sustainably

Join Us Around the Table

We can create a future where nutrient management is assessed – and profit is made – by proper placement and efficiency rather than in pennies per pound