

# **Managing Prairie with Herbaceous Biomass**

**Paul C. Charland  
US Fish and Wildlife Service  
Leopold Wetland Management  
District**

**US Fish and Wildlife Service**



**National Wildlife Refuge System**



**Wetland Management District**

**Waterfowl Production Areas**

**Waterfowl Production Areas (WPAs) are:**

Lands acquired through the Small Wetlands Program using funds from the sale of Federal Duck Stamps

Include wetlands and the surrounding uplands that **provide breeding, resting and nesting habitat for waterfowl, shorebirds, grassland birds and other wildlife.**

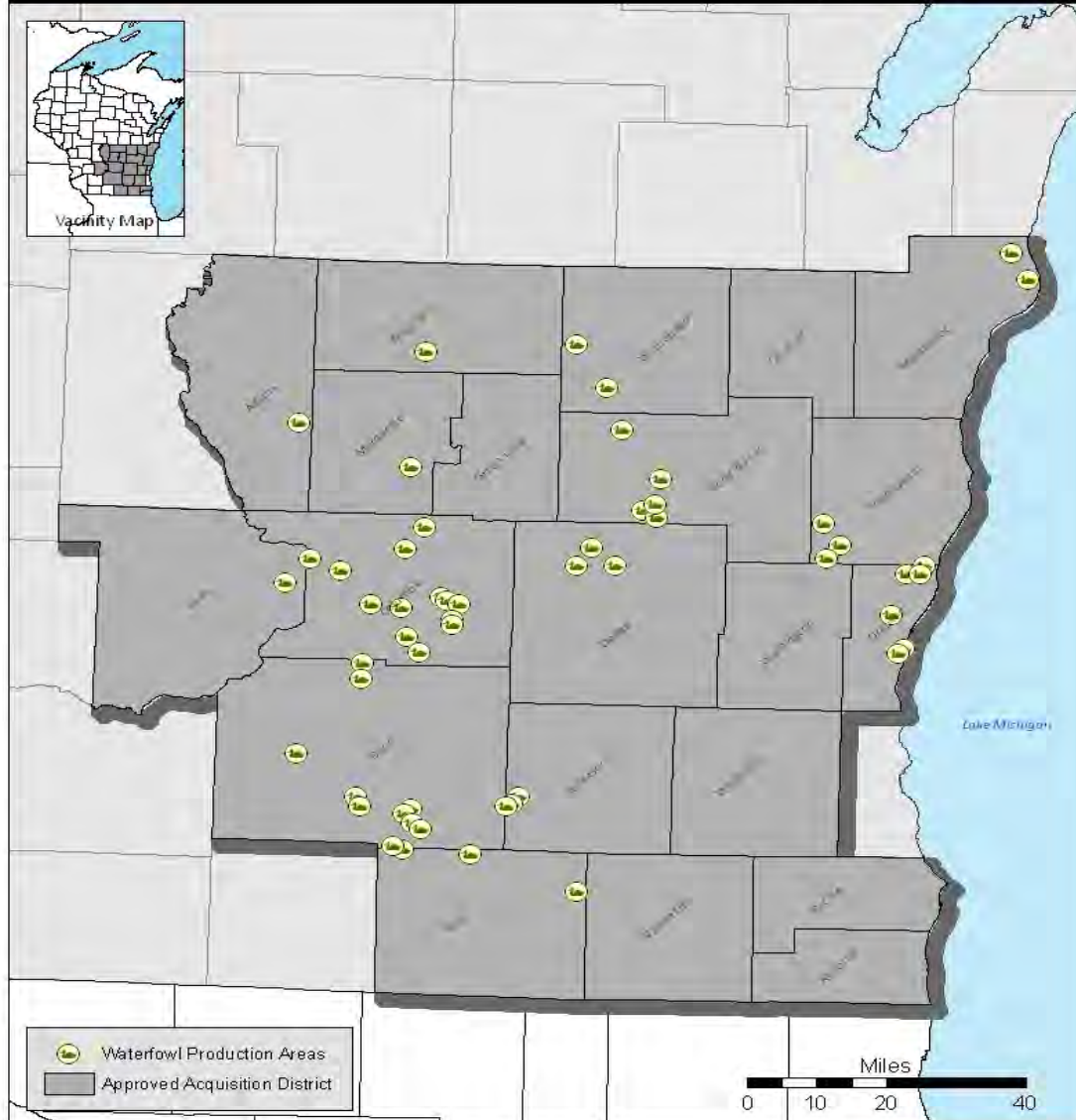


U.S. Fish & Wildlife Service  
Leopold Wetland Management District

Waterfowl Production Areas and Acquisition District



Vacinity Map





This is what we want

Grasslands require regular **disturbance**

Historically grasslands were maintained through:  
**grazing**/herbivory by bison, elk, small mammals  
**fire** – natural ignitions, native Americans

Biggest threat – invasion of **woody species**

We have many more trees now than the prairie had pre-settlement

The threats are greater, yet

naturally occurring fire is almost non-existent

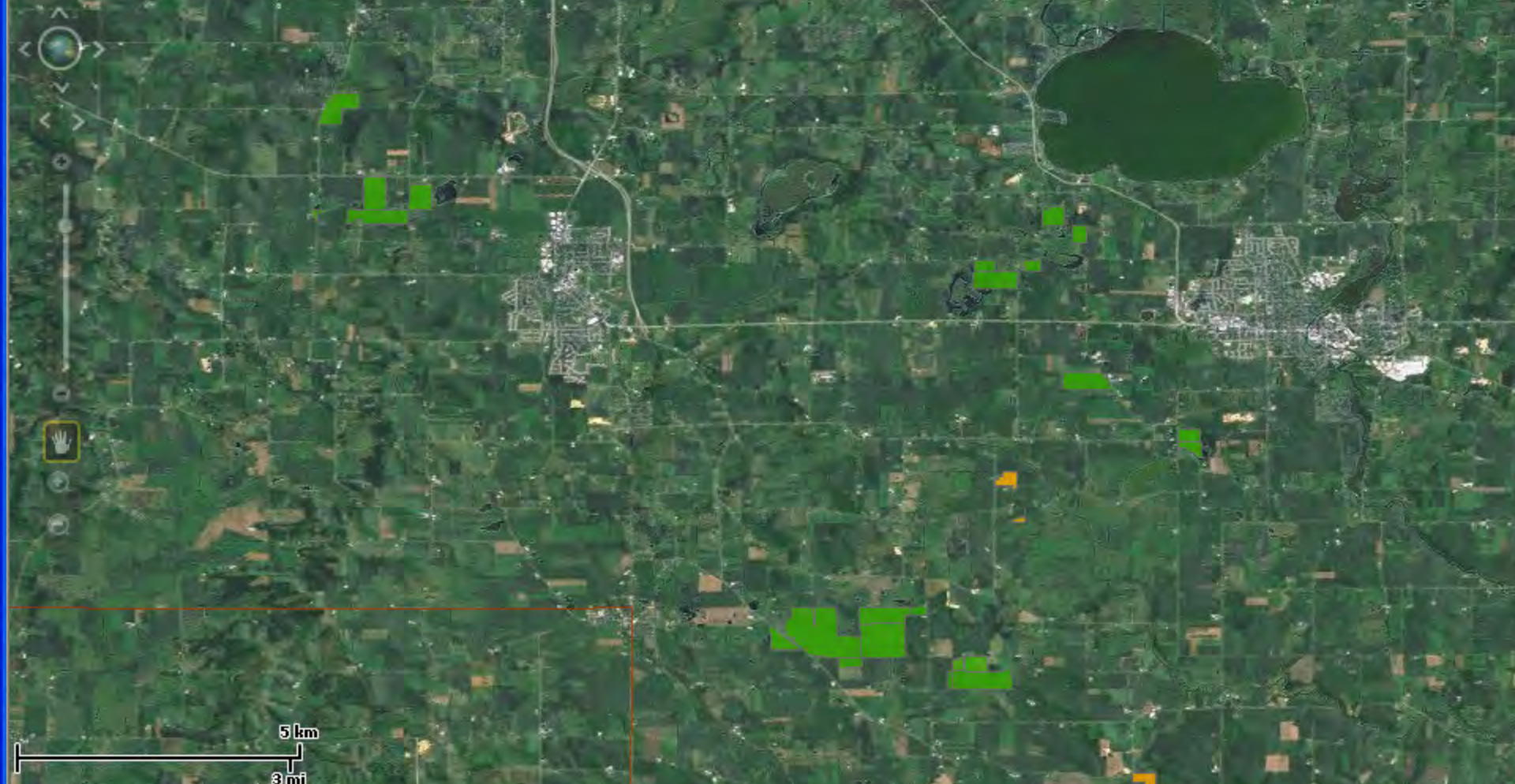
introducing grazers is logistically challenging and brings other risks



This is what can happen



This is our preferred tool





# Cutting and harvesting could also help us meet fire management goals more safely –

- fuel reduction/removal; particularly good tool in the wildland urban interface
- Reduce personnel exposure along busy roads
- Could be used for fire breaks
- Reduce smoke production
- Fall harvest, reduced fuel load during the spring season when fire danger is highest







Could this be an answer?

**Cutting helps us meet our biological management goals**

**Removal/harvest helps us meet our fire management goals**

**Can we pelletize it and heat our facilities with it?**

**Not a novel idea**

- **Hudson Valley Grass Energy, NY**
- <http://grassenergy.wordpress.com/author/hvgenergy/>
  
- **Enviro Energy LLC**
- <http://www.enviroenergyny.com/>
  
- **Agrecol**
- [http://www.agrecol.com/Prairie-Fuel-Pellets\\_ep\\_47.html](http://www.agrecol.com/Prairie-Fuel-Pellets_ep_47.html)

# Jackson Lab Grassland Ecology

Agronomy Department  
University of Wisconsin-Madison

[HOME](#)

[PEOPLE](#)

[RESEARCH](#)

[PUBLICATIONS](#)

[PROSPECTIVE  
STUDENTS &  
POST-DOCS](#)

[CONTACT US](#)



# GRATTON LAB

Department of Entomology, University of Wisconsin-Madison

Education

Research  
Interests

Academic  
Positions

Teaching

Grants &  
Awards

Publications

Professional  
Activities

Gratton Lab  
Home

## DR. CLAUDIO GRATTON Gratton Lab Advisor

444 Russell Labs  
1630 Linden Drive  
Madison, WI 53706

Phone: 608-265-3762  
Fax: 608-262-3322  
Email: [gratton@entomology.wisc.edu](mailto:gratton@entomology.wisc.edu)

### Education

**Ph.D.** University of California at  
Berkeley, 1997 (Entomology)

**BS** University of Illinois at Urbana-  
Champaign, 1991 (*summa cum laude*,  
Honors Biology)

### Research Interests

Food web ecology, insect-plant-virus  
interactions, herbivore-natural enemy  
interactions, invasive species, biological  
control, soil food webs.

[More information...](#)



# COOPERATIVE RESEARCH UNITS

Education, Research And Technical Assistance For Managing Our Natural Resources

HOME | INTRANET | DIGITAL MEASURES | HE



Headquarters Wisconsin Wildlife

- CRU HOME
- WISCONSIN WILDLIFE HOME
- ABOUT US
- ASSISTANCE
- COOPERATORS
- DOCUMENTS
- EDUCATION
- FAQ
- HISTORY
- PEOPLE
- RESEARCH
- CURRENT STAFF
- Federal Staff:
- Masters Students: 2

## WISCONSIN COOPERATIVE WILDLIFE RESEARCH UNIT



The Wisconsin Cooperative Wildlife Research Unit (WCWRU) is a partnership of the US Geological Survey, the Wisconsin Department of Natural Resources, the University of Wisconsin-Madison, U. S. Fish and Wildlife Service and the Wildlife Management Institute. It is one of 40 similar cooperative Fish and Wildlife Units located in 38 of the 50 states; the cooperative unit program began in 1933. The WCWRU was established in 1972 to facilitate cooperation between the partners and to conduct programs of research and education related to fish and wildlife resource management.

### UPCOMING MEETINGS

- ➔ Wisconsin Wildlife Unit Annual Coordintaor Meet October 26, 2011

### LINKS

- ➔ Chronic Wasting Disease
- ➔ Department of Forest and Wildlife Ecology



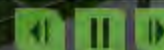


## Depots Could Help Biomass Supply Challenges

Creating biofuels from region-specific biomass could make a huge dent in fossil fuel use for transportation. But moving lightweight, bulky biomass from farms to factories could leave a large carbon footprint, and get expensive quickly.

[Our Core Research](#)
[Ask an Expert](#)
[Our Feature Stories](#)


Learn more about this GLBRC research.



### NEWS

## Agriculture Secretary Vilsack Announces Funding to Produce Renewable Energy for Rural Communities and Reduce Energy Costs for Small Businesses and Farms in Eight States

*U.S. Department of Agriculture*

MERRILL, Wis., October 26, 2011 – Agriculture Secretary Tom Vilsack today announced that USDA is funding anaerobic digester projects in eight states to encourage renewable energy production, reduce energy costs and reduce greenhouse gas emissions and farm-based pollution.

[MORE...](#)

### UPCOMING EVENTS

- 10/31/2011** Platts 6th Annual Next-Generation Biofuels Conference
- 11/02/2011** Midwest Biomass Conference
- 11/04/2011** Integrated Crop Pollination: Adventures with Bees, Blueberries, and Biofuels
- 11/08/2011** Using Computations to Reconstruct, Analyze and Redesign Metabolism
- 11/21/2011** Structure Based Analysis of the Type III Secretion Apparatus in Pathogenic Bacteria

[VIEW ALL UPCOMING EVENTS](#)

CHECK OUT OUR  
**EMAIL NEWSLETTER**



