**Summary of Discussion and Action Items from Special Session 3**
**– Biofuels Workshop –**
Minnesota Society for Conservation Biology – Annual Meeting and Retreat
Conservation on Working Lands
February 23, 2007

**February 23, Friday**
2:30-4:30 p.m.
Audubon Center for the North Woods, Sandstone

Co-coordinators: Meredith Cornett, Julia Frost Nerbonne

Moderator: Tom Landwehr, The Nature Conservancy – Assistant State Director, Conservation Programs

**QUESTIONS RAISED DURING GROUP/PANEL DISCUSSION**

- Will it be possible to use grass seed from TNC lands to do the types of restoration projects that can supply cellulosic ethanol?
- Are there concerns with wildlife use over the course of the growing season? Panel mentioned that timing is a concern, but we should remember that most of the animals using these areas are adapted to fire (e.g., fall or spring burns?), another major disturbance. This is a fertile area for research.
- What is needed in terms of acres of core habitat that would be left undisturbed/ Unharvested? The panel pointed out that we should emphasize that we are taking black ground (agricultural lands) and restoring them to more functional grassland habitat. We hope this will not lead to overtaxing our already fragmented, diminished native prairie habitats.
- What would we expect the harvesting frequency to be? Brendan Jordan suggested that based on Great Plains Institute research, there is better or equal productivity if harvesting takes place every other year rather than every year. Particularly if harvesting takes place in the winter, minimizing compaction.
- What about the pollution cost of regular burning with these ethanol plants? Panel responds that with gasification the process could actually be very clean. Carbon recapture might be an option.
- Clarence Lehman made the point that we are talking about pulling carbon out of the atmosphere and putting it into the lithosphere. We can remove 1 billion tons of carbon per year in this way if we restore ½ billion ha of degraded cropland. Coincidentally, this is about how much abandoned cropland we have around the world. What an opportunity.
- We have a unique opportunity in the northern plains to lead the world on this issue – cellulosic ethanol.
- Are we concerned about soil fertility losses? How does the resulting soil fertility compare in clipping vs. burning regimes? E.g., Do we need to be spreading ash back on the harvested lands?
- How much do we know about the risk of switch grass cultivars bred for high productivity hybridizing with native genotypes? Given it is wind pollinated, it seems that

the risk is high if monotypic stands of switch grass are located in proximity to native prairies. The panel agreed this is a concern, and this needs to be looked into more thoroughly.

- If we go to some high-production switch grass monocultures, we also run the risk that over time they will become less and less productive since monocultures are thought to be more susceptible to invasions by less productive non-native exotics.
- Taking the "triad" model from forestry (Hunter and Seymore's concept of configuring/combining high productivity plantations with intensive forestry, ecologically based forestry and reserves), can we apply it to grasslands in the context of biofuels production? What would the desired pattern and arrangement be in, say, the tallgrass prairie ecoregion of western Minnesota of intensively managed vs. less intensively managed vs. managed for ecological goals?

**ACTION STEPS**

1) SF 480/HF589: Individual members of MNSCB are encouraged to write letters to our representatives on this legislation. In addition, we decided to draft a position statement on the legislation focusing on positive, multiple benefits and also on biodiversity impacts. A subcommittee volunteered to work on this project the following day so that it can be voted on by the membership at the annual meeting on Saturday. Volunteers included Kristen Blann, Meredith Cornett, Michael Rentz, and Andy Holdsworth in consultation with Rod Sando, Brian Stenquist, and Jim Manolis. Don Arnosti offered to assist us in testifying at the House Agriculture Committee on Monday, Feb. 26. (See resolution appended at the end of this summary. Dan Tix volunteered to testify, given the relevance of this issue to his PhD research, and did so successfully).

2) Comment on the biomass harvesting BMP guidelines for forests and shrublands. (Mike Rentz later volunteered to lead the charge on this as it is closely related to his PhD research).

3) Get a seat at the table- if the biofuels legislation happens- for MN SCB on the technical committee for rulemaking. This would include helping to frame the research questions and ensure that conservation of biodiversity is emphasized (Right now there is a placeholder for $13.25 million placeholder for research topics in the biofuels arena. Many of our comments in the MNSCB platform are focused on the research component of the bill).

4) Weigh in on DNR's definitions of local ecotypes (provided at the request of Sen. Wagenius), which may also be referred to in the biofuels and other legislation.

3) Consider commenting on the energy section of the Farm Bill. There was some discussion of this option, and the Conservation Committee may choose to explore this topic with their overall effort on the Farm Bill. However, there were some reservations that this might not be our highest impact strategy.

Society for Conservation Biology

**Biofuels Resolution (**SF 480/HF 589)
**Minnesota Chapter of the Society for Conservation Biology**

The Society for Conservation Biology (SCB) is an international professional organization dedicated to the scientific study of the phenomena affecting the maintenance, loss, and restoration of biological diversity (the variety of life on Earth). Membership comprises a wide range of professionals interested in the conservation and study of biological diversity: resource managers, educators, government and private conservation scientists, and students make up the more than 10,000 members world-wide. The mission of SCB is to advance the science and practice of conserving the Earth's biological diversity. The Minnesota Chapter of the Society for Conservation Biology represents over 100 members. Resolutions of the Minnesota Chapter of the Society for Conservation Biology (MNSCB) do not necessarily reflect the views of the Society for Conservation Biology.

WHEREAS SCB recognizes the valuable contribution of Minnesota's natural heritage to quality of life for the state's citizens and the nation as a whole, and the critical importance of conserving remnant natural habitats, especially untilled native prairies, and maintaining no net loss of wetlands, forest lands, and perennial grasslands including CRP and working forest and grazing lands

WHEREAS native, perennial, biodiverse landscapes provide a wealth of benefits to the citizens of Minnesota including recreation, hunting, wildlife viewing, tourism, and ecosystem services such as flood storage, water filtration, wildlife and fish habitat, carbon sequestration, maintenance and enhancement of natural resource based economies

WHEREAS cellulosic biofuels represent a promising component in the mixture of technologies needed to address the critical threat of global climate change, reduce carbon emissions, achieve energy independence, and transition to a sustainable, renewable energy system in Minnesota

WHEREAS the development of an advanced biofuels industry in Minnesota poses enormous opportunities both for restoration and conservation of Minnesota's native grasslands, biodiversity and ecological communities, as well as significant potential risks (including production acreage increases for biofuels that may drive additional loss and conversion of valuable natural lands, threats to biodiversity from introduction of non-native genetic material and invasive species, etc.)

WHEREAS, cellulosic biofuels derived from biodiverse native perennial cropping systems have the potential to generate win-win outcomes for Minnesota's environment and economy, including economic opportunities related to development of biofuels technology and industry, and development of sustainable cropping systems with multiple benefits that have the potential to be carbon negative while outperforming current cropping systems with respect to farm income and profitability, sustainability of rural communities, water quality, hydrology, fish and wildlife habitat, and biodiversity services

WHEREAS both the specific technologies developed, as well as the speed and scale of implementation, have a range of implications including the potential to generate dramatic transformations of the landscape, local economies, and food systems, in both positive and negative ways that are likely to result in many unanticipated and/or unintended consequences

WHEREAS there are many uncertainties and many unanswered questions concerning the implications of biofuels production, harvest, and specific harvest practices for a range of native species and habitats

WHEREAS development and implementation of biofuels policy will require the input of citizens and experts on a range of topics to ensure needed policy-relevant research, critical analysis, and robust decision-making

WHEREAS appropriate implementation and rule-making requires the continuous iterative input and expertise from diverse citizens, experts, groups, and stakeholders

WHEREAS as we move down the path towards biofuels, we must seize the opportunity to work with, rather than against, the diversity of native habitats and the plants and animals they harbor, to develop and refine best practices, and to ensure that technologies and practices developed and implemented are sustainable and adaptively managed to ensure net benefits to society

THEREFORE, the Minnesota Chapter of SCB supports SF 480/HF 589 (Renewable Biofuels) contingent on the inclusion of the following provisions:

- funding for demonstration projects with multidisciplinary ecological research components and focusing on native species and diverse native prairie
- establishment of a cellulosic fuels target as a component of the Minnesota Renewable Fuel Standard (*2.17-2.20*)
- sustainable perennial biomass supply and standards with attention to best practices, integrative sustainability science, and adaptive management, including a Reinvest in Minnesota Clean Energy Program (*7.1-9.3*)
- provide adequate funding for monitoring, research, technical assistance, and adaptive management (*11.1-11.12*)
- a commitment to utilizing native species of local origin, recognizing that these plants are the best adapted to local conditions
- a commitment to planting and sustaining diverse communities of plants rather than monocultures, recognizing the emerging science from the University of Minnesota that diverse systems are more stable—and hence will provide a more stable fiber resource
- A commitment to balancing the needs of wildlife and ecosystem services with biofuels production. This may be achieved through research to determine optimum harvesting regimes that balance wildlife and biomass production.

The Minnesota Chapter of SCB welcomes the opportunity to participate in research and dialogue as the state moves forward towards a renewable energy future that also sustains native biodiversity.