February 20, 2015

Chief Jason Weller
Natural Resources Conservation Service
U.S. Department of Agriculture
1400 Independence Ave., SW, Room 5105-A
Washington, DC 20250

**Re: Conservation Group Comments on Proposed Changes to Section I of the Iowa, Minnesota, North Dakota, and South Dakota State Technical Guides, Docket No. NRCS-2014-0013.**

Dear Chief Weller,

The undersigned organizations represent millions of conservationists, including hunters, anglers, outdoor enthusiasts, wildlife managers, and scientists. We sincerely appreciate the opportunity to comment on the Natural Resources Conservation Service's (NRCS) proposed State Offsite Methods (Docket Number NRCS-2014-0013) for wetland determinations under the wetland conservation compliance requirements of the Food Security Act of 1985, as amended. The proposed State Offsite Methods (SOSM) would replace the existing state wetland mapping conventions for Iowa, Minnesota, North Dakota, and South Dakota.

Since its creation in 1985, conservation compliance has been a hugely effective and important Farm Bill conservation provision. Conservation compliance created a conservation compact that exists to this day between taxpayers and agricultural producers. As you know, under conservation compliance producers agree to meet baseline conservation standards in return for various farm program benefits. In addition to significant reductions in soil erosion, conservation compliance has protected between 1.5 million and 3.3 million acres of vulnerable wetlands (Claassen 2012).

Conservation compliance policy has been of great significance to wetland conservation in the Prairie Pothole Region (PPR), a region that includes parts of the four states covered by the proposed SOSM. Prairie Pothole wetlands provide important societal benefits like nutrient retention, groundwater recharge, and flood abatement. The PPR is also an area of continental importance for wildlife conservation. The Prairie Potholes typically produce 50 percent of North America's waterfowl (Smith 1995), supporting a 3.4 billion dollar migratory bird hunting industry. The wetland-grassland complexes of the region also support a suite of other priority species. Unfortunately, PPR wetlands are rapidly being converted; a recent U.S. Fish and Wildlife Service (USFWS) study found that the PPR lost more than 107,000 wetland basins from 1997-2009 (Dahl 2014). Both Congress and the Administration have rightly prioritized the conservation of the PPR through a variety of funding and policy initiatives.

The vast majority of wetlands in the PPR are temporary or seasonal in nature; in the U.S. portion of the PPR, nine out of ten wetlands have seasonal or temporary hydrology according to the National Wetlands Inventory (NWI). These wetlands are critical to the production of waterfowl

and other wildlife, as well as the protection of water quality and flood attenuation. They comprise the very essence of why the PPR is a globally unique landscape.

The central goals of our comments and recommendations below are twofold. **First, we want to ensure that the proposed SOSM produce wetland determinations that are at least as accurate as the previous state wetland mapping conventions**. Accurate and reliable certified wetland determinations are in the best interest of both agricultural producers and the taxpayer. **Second, we want to ensure that the SOSM are not systematically biased against the seasonal and temporary wetlands** that are so important and so prevalent in the PPR. If the proposed SOSM fail to accurately identify temporary and seasonal wetlands, NRCS may inadvertently exacerbate the problem of wetlands loss in the region. Merely achieving equal numbers of false negative and false positive determinations is not a sufficient indicator of accuracy, as landowners would likely appeal false positive determinations, but rarely if ever appeal false negatives.

We appreciate NRCS' attempts to use the SOSM to incorporate new data sources and technologies into the wetland determination process, and to reduce the regional wetland determinations backlog by addressing capacity bottlenecks. However, we can only be supportive of the proposed SOSM to the extent that they are accurate and do not under-detect seasonal or temporary wetlands. We respectfully request that you consider our recommendations below.

## SOSM Field Verification and Independent Validation

For our organizations to meaningfully evaluate the proposed SOSM we would first need to review empirical evidence comparing results of the proposed offsite procedures to both onsite wetland determinations and to the existing state wetland mapping conventions. **NRCS should field verify the proposed SOSM before implementation to both ensure accuracy and to minimize the under-detection of seasonal and temporary wetlands. The results and methodology of this field verification process should be made public.**

An Environmental Assessment released May 27, 2010 by South Dakota NRCS analyzing that state's wetland mapping convention update serves as a useful example. The Assessment compared offsite method alternatives to onsite determinations, and tracked changes in wetland labels (both non-wetland to wetland, and wetland to non-wetland). The analysis sought an offsite alternative that would both protect wetlands and decrease NRCS staff workload. Before implementing the proposed SOSM, **NRCS should conduct an analysis similar to the South Dakota Environmental Assessment comparing the proposed SOSM and alternatives to onsite determinations.** NRCS should then compare the net change in wetland labels between the preferred SOSM alternative and the existing state wetland mapping conventions, to ensure the new SOSM are at least as accurate as existing methods.

NRCS should also support an independent validation of the proposed SOSM. The USFWS has a wide variety of technical wetland resources and scientific capacity in the PPR. The USFWS is able to work in partnership with NRCS to help build additional scientific rigor into the new proposed SOSM by providing NRCS with access to long-term wetland hydrology data sets that can be used to verify and strengthen the accuracy of wetland determinations. **NRCS should**

**collaborate with USFWS to use the best available data in an independent validation of the proposed SOSM.**

Given that farm, commodity, and conservation groups are in agreement over preferring onsite determinations, it is reasonable for NRCS to invest in ongoing improvement of SOSM accuracy to earn stakeholder and taxpayer trust in the procedures. NRCS should use this period of offsite procedure revision as an opportunity to improve its system for collecting and storing wetland determination data nationally. **NRCS should create a digital wetland determination database that can be queried, rather than relying solely on paper worksheets.** A digital database would make future validations easier and allow for regular improvements to the procedures, to everyone's benefit.

**Use of Spring Imagery and Other Data Sources**

NRCS' offsite wetland determinations rely on Farm Service Agency (FSA) aerial imagery. The FSA imagery is collected for monitoring crop production, and therefore is collected in late summer. While ideal for crop monitoring purposes, the late summer FSA imagery has serious limitations when used to identify seasonal or temporary wetlands in the PPR, which are usually ponded or saturated only in the early spring.

NRCS recognized the limitations of using late summer FSA aerial imagery to assess wetland hydrology, and integrated NWI maps into state wetland mapping conventions. We appreciate that NRCS included NWI maps as a data source in the proposed SOSM sampling unit and hydrophytic vegetation procedures. We also support NRCS' inclusion of Ecological Site Descriptions, land-based photography, and Light Detection and Ranging (LIDAR) technology in the proposed SOSM.

While these inclusions of NWI and other data sources should be retained, they are not sufficient to overcome the limitations of the late summer FSA imagery. Only early growing season imagery would capture the unique hydrology patterns of PPR wetlands and would allow NRCS staff to evaluate sampling units based on conditions found during the "wet portion of the growing season," as required by regulation. As NRCS seeks to improve its data, our groups fundamentally believe the integration of spring imagery is critical. **NRCS should begin collecting spring imagery, particularly in the PPR, and begin incorporating it into offsite wetland determinations.**

We encourage NRCS to collaborate with stakeholders to explore the logistics and benefits of annually collecting spring imagery. At least one Prairie Pothole state, Minnesota, has identified a number of needs for regularly-collected spring imagery and would be willing to discuss potential cost-sharing options. Without the addition of early growing season imagery to the current wetlands determination process, our organizations are concerned that more wetlands will be lost in the PPR.

## Defining Normal Conditions

Conservation compliance regulations and policy require that NRCS evaluate potential wetlands under "normal climatic conditions" or "normal environmental conditions." The proposed SOSM require imagery review from all available normal precipitation years back to 1980. **While we support the review of all normal year slides (rather than a subset of normal years), NRCS should revise its methods for determining which years are considered "normal."**

The determination of normal must be adjusted to more accurately reflect the normal circumstances for wetlands in the four states. The SOSM proposal would use weighted precipitation data from a WETS table from the three months prior to when the image was taken to determine if the image came from a normal year. Normal slides would have precipitation data from the previous three months fall between a 30 percent lower and upper boundary. However, in the PPR, wetland hydrology is heavily influenced by precipitation during fall, winter and spring (Winter 1995). Studies in the prairie pothole region of North Dakota showed that the single largest water rise in prairie pothole wetlands was due to snowmelt runoff, and that this snowmelt runoff represented 65 percent of the total annual precipitation (Winter 1995).
To capture temporary and seasonal wetland hydrology during the wet portion of the growing season, precipitation from fall, winter, and spring needs to be reflected in the process of determining normal imagery. Examining precipitation conditions only in the three months prior to a late summer image omits most of the precipitation conditions that influence a wetland's hydrology in that year. To decide if an image was collected in a "normal" year, **NRCS should examine precipitation from the month prior to when the image was taken back to September of the previous year to capture all antecedent moisture.**

## Wetness Signature Thresholds for Determining Hydrology

The proposed SOSM would determine wetland hydrology was present for a sample unit if wetness signatures were found on at least 50 percent of all normal year slides. We are concerned that the 50 percent wetness signature threshold appears to have been selected arbitrarily. In the previous state wetland mapping conventions, NRCS conducted field visits both for wetness signatures between 30%-65% and for wetness signatures of less than 30% that were mapped as wetlands on the NWI. Given that the month the slide imagery is taken is during late summer, and that wet years have been eliminated, 50 percent is likely to be too high a threshold. At a minimum, **NRCS should field verify the proposed SOSM procedure to ensure that the 50 percent threshold is accurate and does not under-detect seasonal and temporary wetlands**.

We recommend NRCS instead establish a wetness signature threshold that is scientifically defensible and based on field-verified, publicly available data. NRCS should compare wetland labels assigned based on different wetness signature thresholds to results from on-site determinations. **NRCS should set the final SOSM wetness signature threshold at the level that produces omission and commission error rates that are at least as accurate as the previous state wetland mapping conventions and that minimize false negative determinations.**

## Wetland Sizing Procedures

NRCS proposes in the SOSM to size wetlands based on images from the 2-4 years locally determined to best typify normal environmental conditions. However, this procedure ignores the dynamic nature of wetland systems in the PPR. NRCS would use late season imagery from "normal" years to define the size of wetlands that are supposed to be evaluated based on the "wet portion of the growing season." Sizing wetlands with arbitrarily chosen, late-season slides is likely to systematically undersize wetlands. The tile setback distances calculated based on the resulting wetland sizes could limit or even eliminate normal wetland fluctuations and exacerbate downstream flooding.

Instead, **NRCS should size wetlands using fine resolution LIDAR combined with the maximum extent depicted on the normal year slides.** LIDAR with a resolution of 12 inches or finer would be an important indicator of whether a potential wetland is in a water-receiving position in the landscape. Given that basins in the PPR are typically shallower than two feet, resolution of 12 inches or less is very important. LIDAR data, combined with the maximum extent depicted on the normal year slides would provide a better approximation to wetland size during the wet portion of the growing season.

## SOSM Consistency Among States

The SOSM Federal Register announced that proposed SOSM for four states (Iowa, Minnesota, North Dakota, and South Dakota) were available for review and comment. All four SOSM stated, "As directed by the Secretary of Agriculture, these SOSM were developed consistently with other states in the…Prairie Pothole Region." We support the Secretary's intent to bring consistency to these offsite methods, and so encourage NRCS to reconcile the following potentially problematic differences among states:

- The "note" under Section 2.1.B of the Minnesota, North Dakota, and South Dakota SOSM states that 2-4 images will be used to size wetlands, but Iowa's SOSM states that three images will be used. In Section 4.2, the Iowa's SOSM adds that NRCS will size wetlands based on "the year or years of imagery specified in section I of the Field Office Technical Guide." NRCS should reconcile these inconsistencies by requiring that sizing should be based on LIDAR combined with the maximum extent depicted on the normal year slides.

- In Section 2.4 in the case of perennial vegetation, Iowa's SOSM changed "field verification is required" to "field verification may be necessary." All states should require field verification when wetness signatures are not readily visible in perennial vegetation.

## Concluding Comments

The wetland conservation provisions of conservation compliance are essential, effective tools to conserve wetlands for the benefit of all Americans, in a way that is both workable for agricultural producers and meets the public's need for confidence in and legal defensibility of the

wetland determination process. The seasonal and temporary wetlands of the Prairie Pothole Region provide significant environmental, societal, and economic benefits, but many are at a high risk of conversion. It is of the utmost importance that wetland determination procedures in this region – either offsite or onsite – produce reliable results. Our organizations can be supportive of the proposed SOSM only to the extent that they are accurate, do not under-detect seasonal or temporary wetlands, and have acceptable error rates.

Overall, our organizations support NRCS' effort to bring consistency and improved data to offsite wetland determination procedures in the Prairie Pothole states. We also recognize the capacity challenges NRCS faces in addressing wetland determination backlogs in the four states. The proposed SOSM could be a needed improvement if NRCS field verifies, independently validates, and incorporates spring imagery into the procedures. Additional needed improvements include revising how NRCS calculates "normal environmental conditions," establishing an evidence-based wetness signature threshold, and sizing wetlands based on LIDAR and the maximum extent depicted on the normal year slides. Lastly, NRCS should address important inconsistencies among the four state proposals.

Thank you for your consideration of our comments. If you have any questions, or need additional information, please do not hesitate to contact Julie Sibbing at 202-797-6832.

Sincerely,

National/Regional Organizations
American Bird Conservancy
Association of Fish and Wildlife Agencies
Ducks Unlimited
Izaak Walton League of America
National Wildlife Federation
Pheasants Forever
Quail Forever
The Nature Conservancy – Minnesota, North Dakota and South Dakota
The U.S. Shorebird Conservation partnership
The Wildlife Society
Theodore Roosevelt Conservation Partnership
World Wildlife Fund

Iowa
Iowa Chapter of The Wildlife Society
Iowa Division – Izaak Walton League
Iowa Wildlife Federation
Missouri Valley Waterfowlers Association
The Nature Conservancy – Iowa
West Central Chapter – Izaak Walton League

Minnesota
Coalition for a Clean Minnesota River

Minnesota Center of Environmental Advocacy
Minnesota Conservation Federation
Minnesota Division – Izaak Walton League

North Dakota
North Dakota Natural Resources Trust
North Dakota Wildlife Federation
North Dakota Chapter – Wildlife Society

South Dakota
29-90 Sportsmen's Club
Friends of the Big Sioux
High Plains Wildlife Association
Kampeska Chapter – Izaak Walton League
McCook Lake Chapter – Izaak Walton League
Rapid City Chapter – Izaak Walton League
South Dakota Chapter of the Wildlife Society
South Dakota Division – Izaak Walton League
South Dakota Sierra Club
South Dakota Wildlife Federation
Sunshine Chapter – Izaak Walton League

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