

NERP Ready Checklist

Are You 4R Inside?

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Are You Ready for NERP?

The Nitrous Oxide Emission Reduction Protocol (NERP) is in the final stages of development and will be launched this fall. Included in the launch will be training opportunities so that qualified individuals can gain the Accredited Professional Advisor (APA) credentials required under NERP.

Producers, Project Developers and potential APA's will need to ensure a number of things happen this fall, if they want cropping events in the 2010/11 crop year to be eligible for offset credits under NERP. These include at a minimum.....

- Follow the 4R approach to nutrient management and develop beneficial management practices (BMPs).
- Make sure yield data is available for the 2010 crop.
- Take soil samples prior to N application.
- Ensure that all forms of N applied to a field are quantified.
- Ensure fall fertilizer N sources are ammonium based (Right Source).
- Ensure that fall fertilizer N applications are made after the soil temperature has been below 10°C for three consecutive days. (Right Time).
- Ensure that fall fertilizer N applications are banded with an eligible opener (Right Place).
- Ensure that fall fertilizer N rates are based on scientifically sound recommendations (Right Rate).
- Ensure that fall nutrient management operations and inputs are clearly documented.

See the attached Frequently Asked Questions for further information on the checklist above.



4R Nutrient Stewardship - 4R Inside Checklist



Is your nutrient management system 4R compliant? The *4R Nutrient Stewardship* concept defines the right source, rate, time, and place for plant nutrient application as those producing the economic, social, and environmental outcomes desired by all stakeholders in the soil-plant ecosystem. This concept is rapidly becoming the international standard for ensuring that nutrient management programs meet sustainability criteria. The 4R approach is based on using best management practices (BMP) derived from the best available science

to manage nutrient resources in ways that optimize sustainability. The following checklist outlines the requirements for compliance with *4R Nutrient Stewardship* standards. Meeting the standards allows producers, service providers, educators, and policy makers to certify their programs as *4R Inside* and use the *4R Nutrients Stewardship* logo in their promotional material.

Does your nutrient management program.....

- Balance the three areas of sustainability – economic, social, and environmental.
- Includes BMPs that address all 4R performance areas – source, rate, time and place.
- Provide site-specific recommendations that address regionally specific soil, climate and operational issue.
- Balance nutrition to ensure that N, P, K, secondary nutrients and micronutrients are in adequate supply to meet crop production expectations.
- Use appropriate tools such as soil testing, tissue testing, and nutrient balance in assessing nutrient requirements and recommending the Right Rate.
- Consider all sources of nutrients (fertilizer, soil organic matter, manure, crop residue etc.) during planning and recommendation development.
- Comply with applicable nutrient management regulations in your region.
- Measure the effectiveness of selected BMPs and use assessments to support continuous improvement.
- Use concepts and terminology consistent with defined 4R standards.
- Provide and maintain clear documentation of the nutrient management plan and its implementation.

For more information on *4R Nutrient Stewardship* including details on how to self-certify your programs as *4R Inside* visit <http://www.ipni.net/4R>.



Fall N and NERP

- Fall N is allowed under NERP in the drier regions of Canada.
- Dry is defined as $P/PE < 1$.
- All the Prairie Province Ecodistricts are classified as dry.
- Criteria defining 4R for fall in the context of NERP.



Right Source for Fall N

- Right Source Products $\geq 2/3$ Ammonium-N
- AA, Urea, AS qualify
- AN does not qualify
- UAN does not qualify for fall but does for spring
- Use of an nitrification inhibitor or coated product for the intermediate and advanced levels may be recommended under some circumstances.



Right Time for Fall N

- Soil Temperature at 5 cm or deeper below 10°C for three consecutive days.
- Use dates from NERP protocol.
- Measure your own?
- Use available 3rd party verified data.
- Use a calculator based on air temperature?



Third Party Data

Weather Forecast

ACIS Maps

Live Station Data

Automatic Data Feeds
(RSS)

About ACIS

Questions and Comments

Tell us what you think

AgroClimatic Information Service (ACIS)

- Directions

1. Choose the hourly or daily option and the items of interest from the tabs below
2. Select up to 5 stations by clicking on the pins in the map or use the drop down station menu above the map
3. Select date range and then graph and/or download your data

- Legend

- Available for all selected stations Not available for some selected stations
 Not available for any selected stations

New - frost probabilities are now available under the Normals tab.

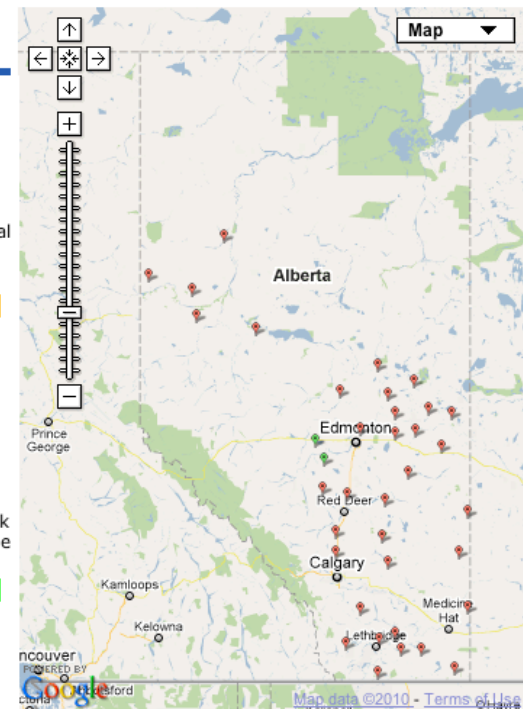
Period: Precip Unit: Select Station(s):

- Elements** **Derivatives** **Normals**
- Precip. (mm) [Clear Elements](#)
 - Precip. Accumulated (mm) [Clear All Tabs](#)
 - Precip. 6-hrly (mm)
 - Precip. 6-hrly Accumulated (mm) [Definitions](#)

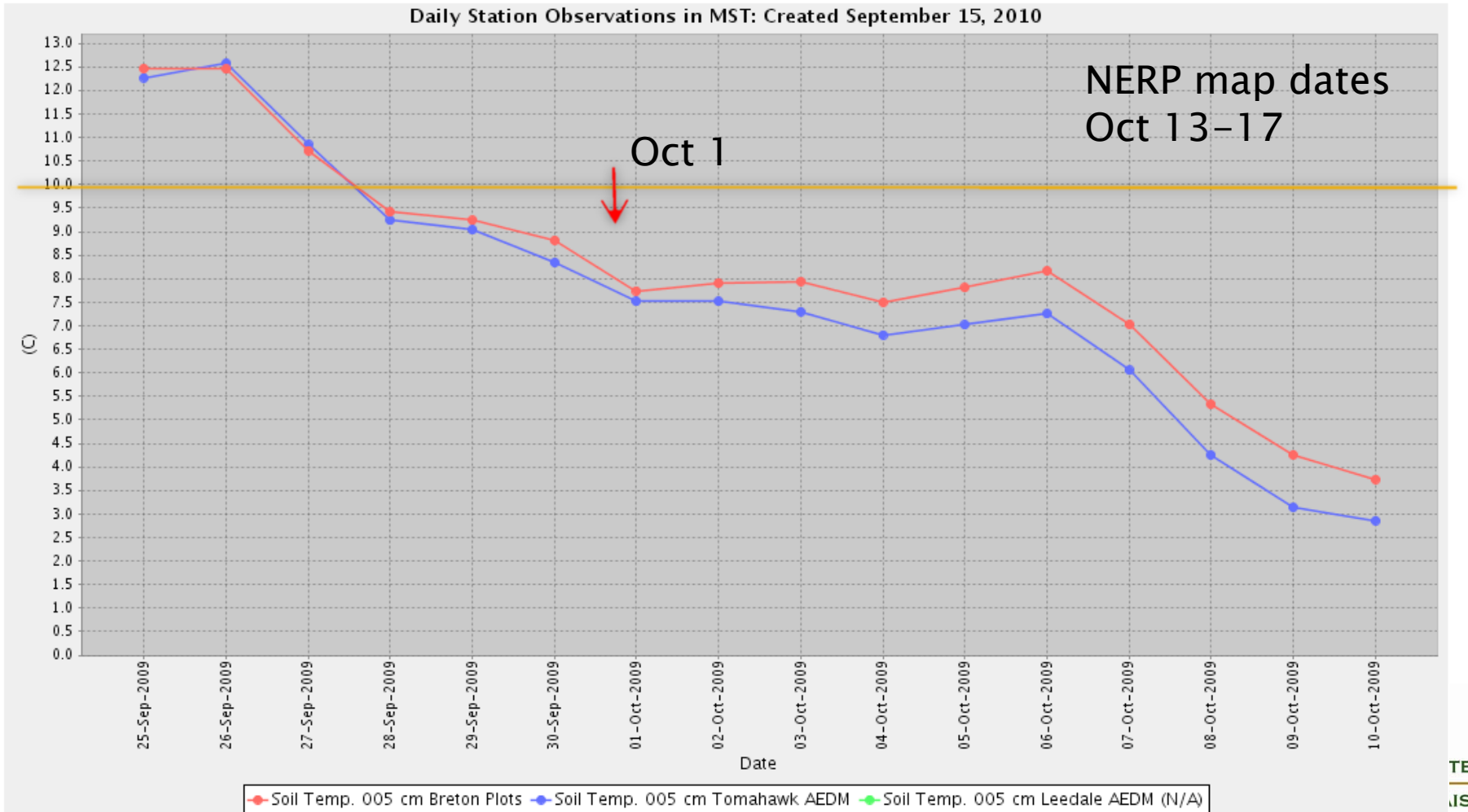
	Inst.	Ave.	Max.	Min.	Total
Air Temp. at 2m (°C)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Relative Humidity at 2m (%)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Solar Rad. at 2m (W/m2)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Snow Depth (cm)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

	5- cm	20- cm	50- cm	100- cm
Soil Moisture (%)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Soil Temperature (°C)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

	Syno. Sp.	Ave. Sp.	Syno. Dir.	Ave. Dir.	Peak Sp.	Peak Dir.	Peak Time
Wind at 2m	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Wind at 10m	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

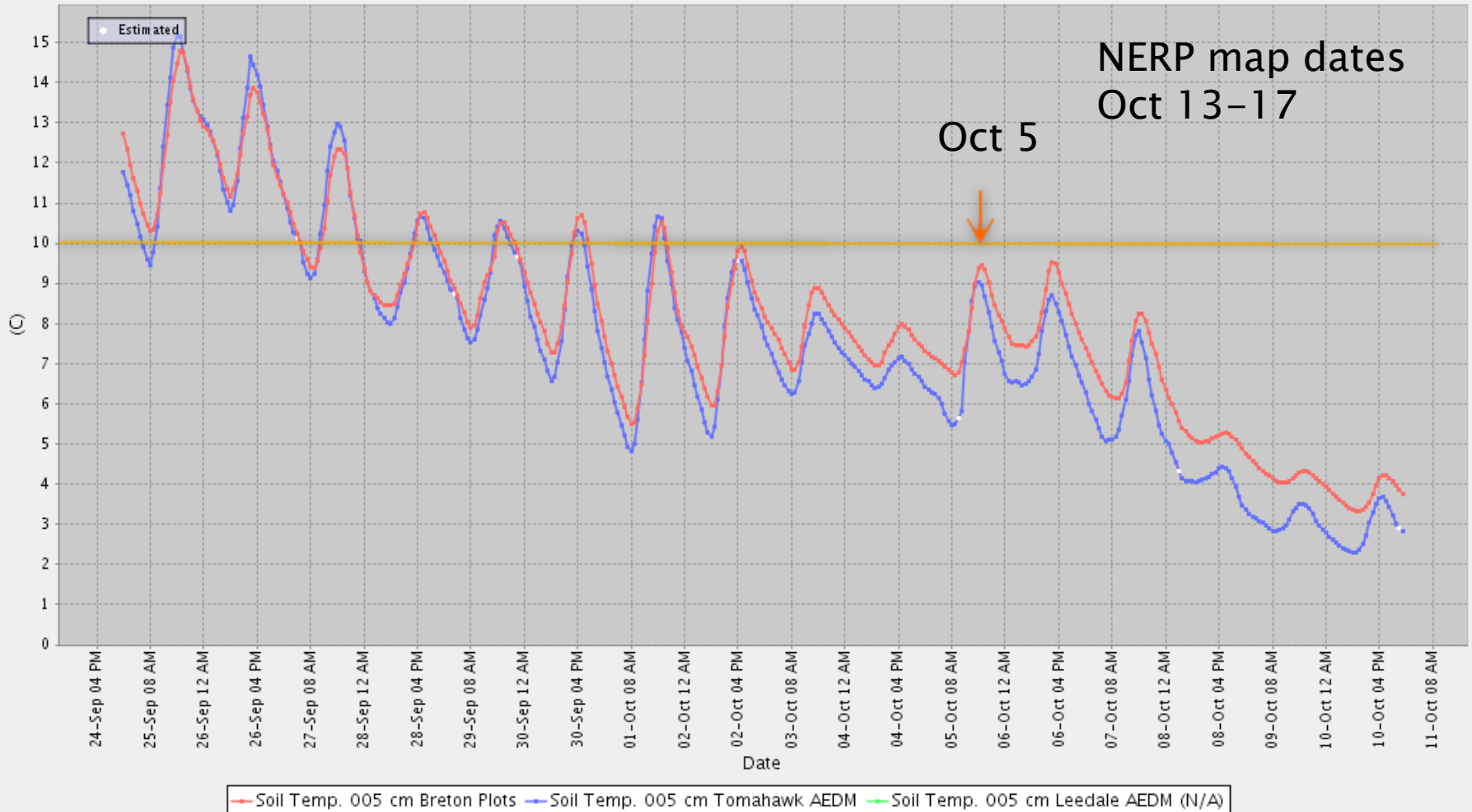


Fall Soil Temperatures



Fall Soil Temperature

Hourly Station Observations in MST: Created September 15, 2010



Right Place for Fall N

- Broadcast and Broadcast Incorporated are not allowed.
- Banding with narrow openers qualifies.
- Narrow is defined as Percent Band Concentration (PBC) $\leq 30\%$

$$\% \text{Band Concentration} = \frac{\text{Width of Spread}}{\text{Row Spacing}} \times 100$$



Right Rate for Fall N

- Account for all forms of N in formulating rate
- Make sure you have yield data for 2010 crop
- Test manure or compost for N before application
- Soil test N to a depth of 24 in before application



Documenting 4R Plan

- Tie to a geographic location
- Time stamp or date stamp
- Measure grain or forage removed in 2010
- Measure N added as fertilizer or manure
- Analysis or book values for manure before application





Frequently Asked Questions www.interactivestandards.com

Thank You



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