

2018 Native Prairie Restoration/Reclamation Workshop

DUC – Wetland Restorations on Agricultural Lands in Saskatchewan

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Wetland Restorations

Why?

DUC and Wetlands

- habitat, food source, protection other species
- Water Quality, flood protection, and....

Wetland Restoration:

- Constant Threat of Loss
- Agriculture Lands increased value
- Improved efficiencies, larger equipment
- limited value in an annual cropped system
- topography, soil zone, moisture, adequate outlets

Drainage Ditching in the Assiniboine River Watershed



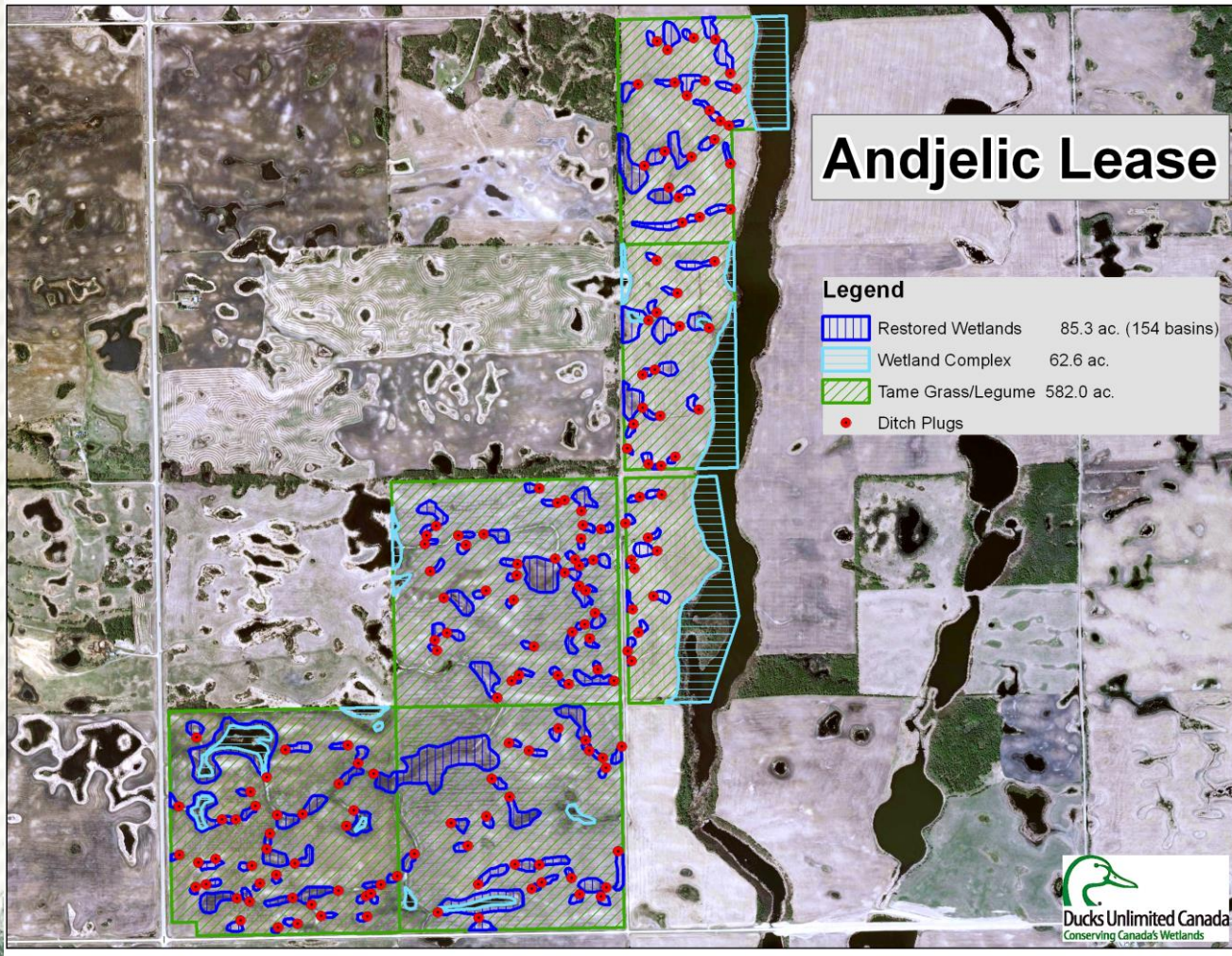
Natural Landscape

Wetland

Ditches



Wetland Restoration Program



Wetland Restoration Program

- Strategies to Acquire
 - Forages (hay or pasture, water source)
 - Financial Incentive
- End User Requirements
 - DUC
 - Mitigation

Wetland Restoration Programs

- Over 3,000 restored basins
- Tagged to existing forage program (top up of \$50 per acre) - 2006
- Reverse Auction – Price Discovery (2008-2011)
- Flat Rate on Incremental Wetlands (2013-2016)
- Purchase Lands to Restore Wetland (ongoing)
- Conservation Easements (ongoing)

Wetland Restoration Programs (Results)

- **Term Programs on Private Lands**

(Partners – Local Watersheds, Lake Winnipeg Basin Stewardship Fund, National Wetland Conservation Fund)

30 landowners, 54 quarters, 475.3 acres (340 basins)

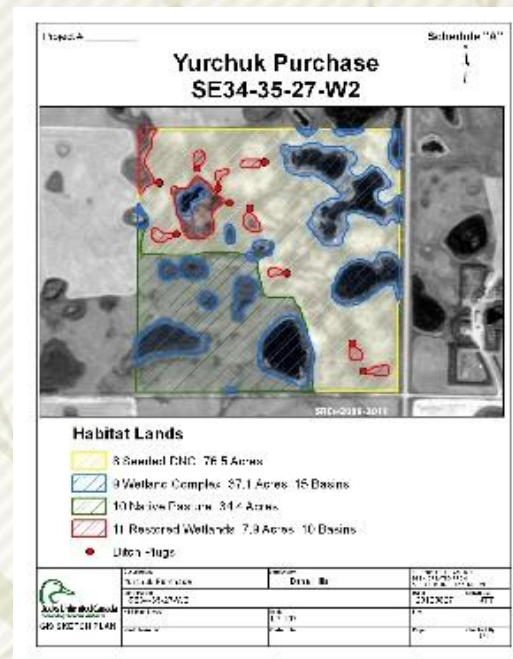
Average Price \$1494/acre incentive payment – Fair Market Value for land approximately \$750/acre, Cash rent < \$50/acre

Low interest in the program

No interest in long term agreements

Wetland Restoration Programs (Results)

- **Conservation Lands (Purchased, Conservation Easements)**
 - Purchased and Retained
 - Purchased and Sold
 - Conservation Easements
 - <10 acres of restored wetland/quarter
 - Over 2100 basins



Wetland Restoration:

Construction:

- Restore to natural level
- Adjoining neighbours, RM infrastructure
- Historical Photo
- Ground investigation



Wetland Restoration Programs

- **Monitoring/Compliance Issues**
 - Term agreements
 - Ditch Plug inspections
 - Livestock impacts
- Risk of low benefit
- Limited time for naturalization

Wetland Restoration Programs

- **Monitoring/Compliance Issues**
- Historical Levels (incremental flood zone)
 - Unmanned Aerial Vehicles (UAV – Drones)

Wetland Restoration Programs

- Monitoring/Compliance Issues
- Soil Characteristics



Wetland Restoration

- **Evaluations**
 - Naturalization
 - Impacts of years of cropping
 - Impact of drought
 - Vegetative community (competition from weeds annual/perennials)
 - Other
 - Compliance Annually, Monitoring 1 in 3 years

Wetland Restoration (Future)

Wetland Mitigation – Industry

As per the Proponent's Environmental Impact Assessment Statement by Ministry of Environment (Requirement)

Saskatchewan encourages:

- Avoidance of impacts
- Minimization
- Compensation

Wetland Restoration

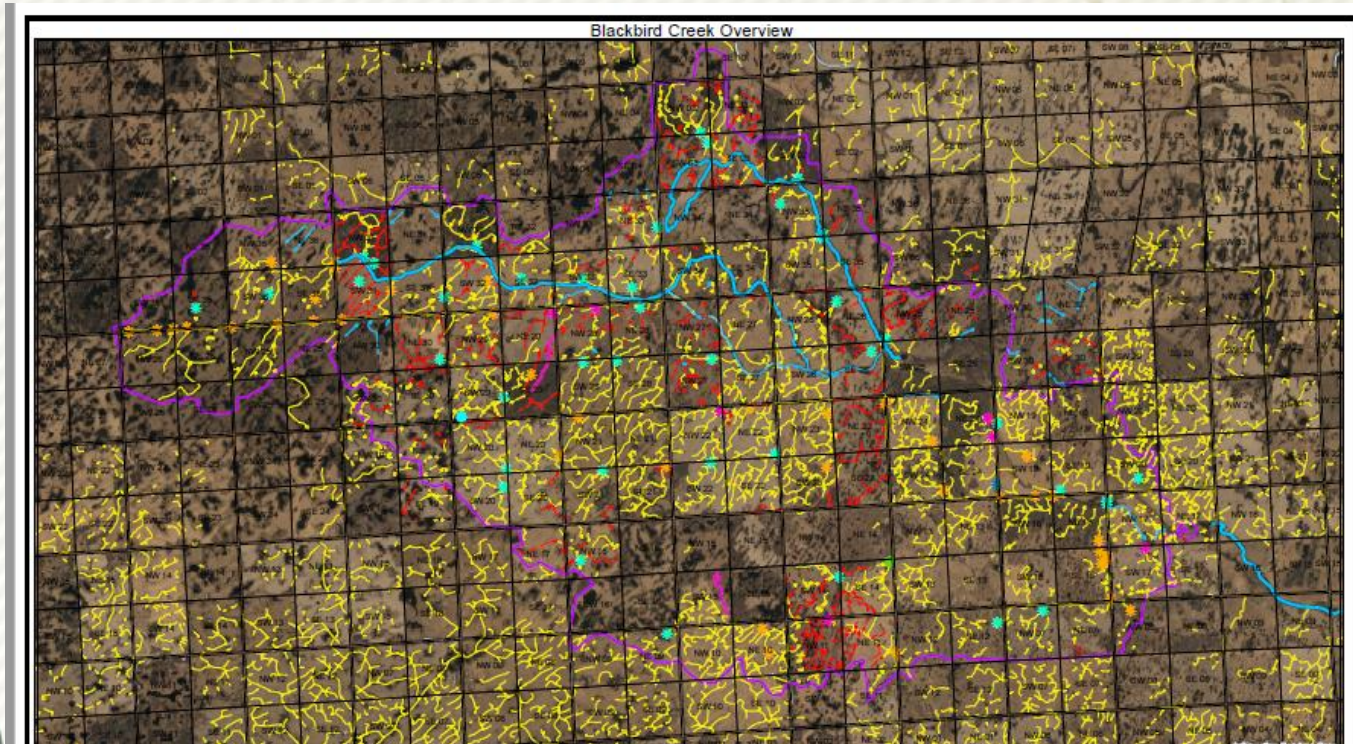
Rather than Fixed Ratio- Piloting a Debit:Credit Calculation

Considers:

- Type of wetland
- The amount of wetlands
- Method and type of compensation (restored, enhanced, secured)
- Type of securement

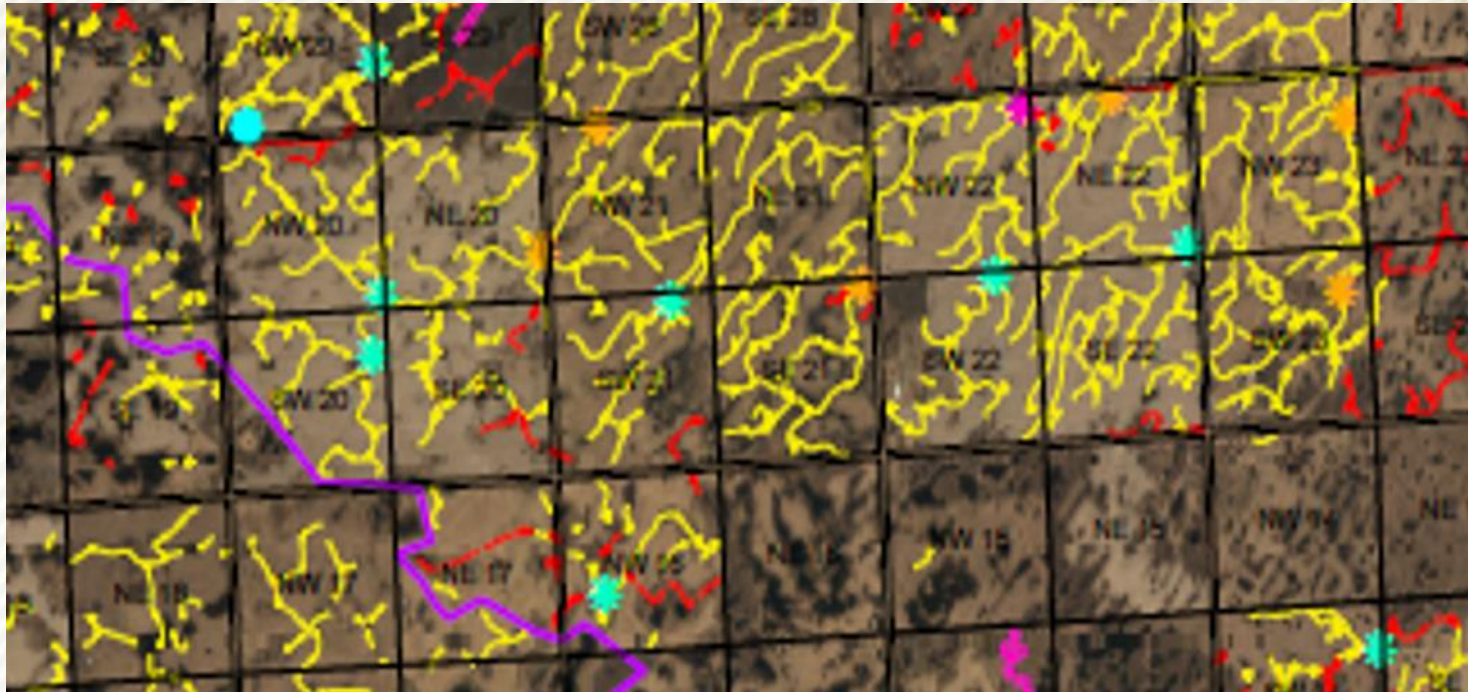
Wetland Restoration (Future)

Wetland Loss in Agriculture continues.



Wetland Restoration

Proposed Drainage Network

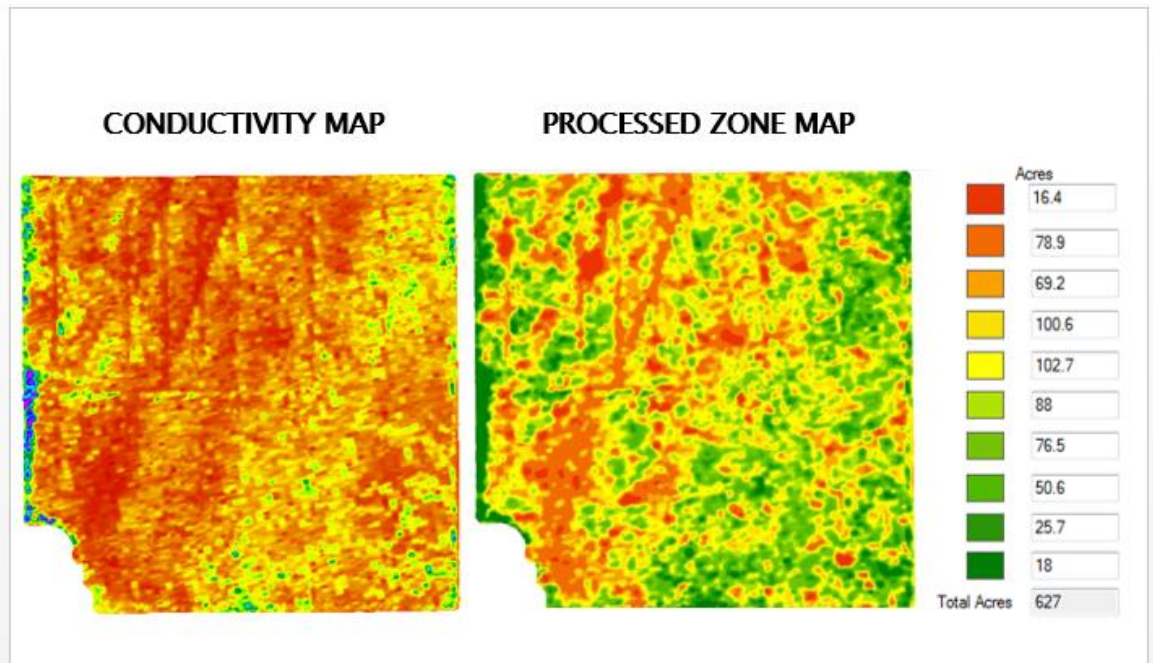
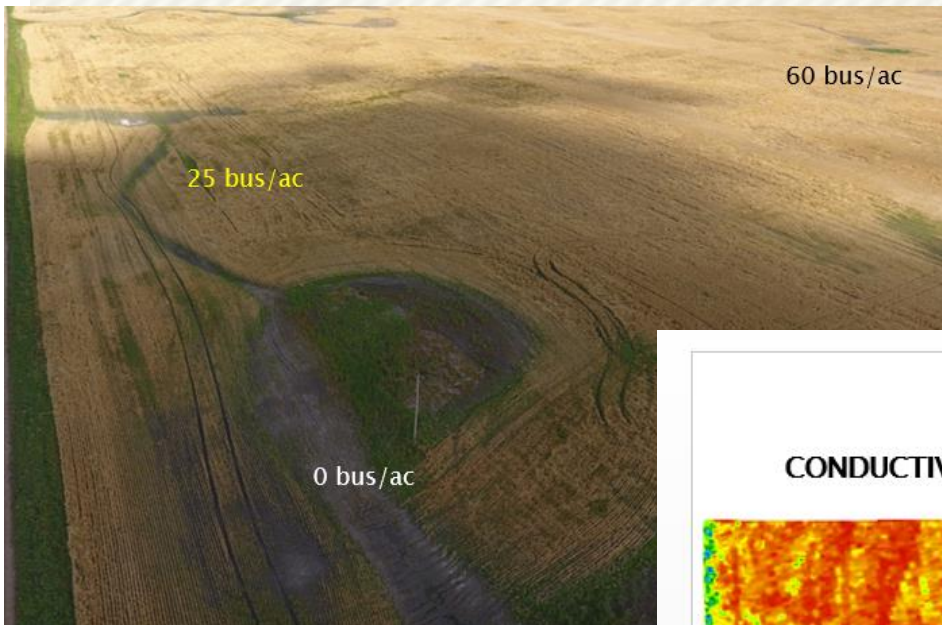


Wetland Restoration Agriculture Opportunities..

Agriculture

- yield mapping, data analysis, profit/loss per acre
- Sectional Control Seeding Equipment, GPS guidance systems
- Variable rate technology
- If not profitable, other options

Wetland Restoration Agriculture Opportunities..



Wetland Restoration

- Continue to monitor and evaluate
- Predictive tool (opportunities), indicators to help early assessment
- Time & Patience



Thank You

DUC – Wetland Restorations in Agriculture Lands

PCAP

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