PROJECT

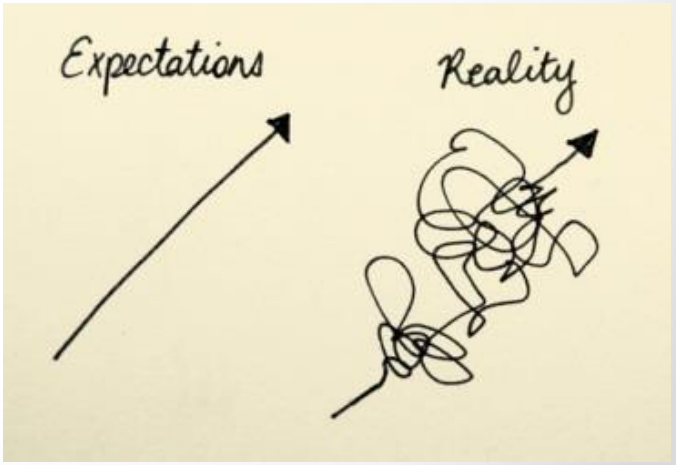
BACK TO THE FUTURE PART I

PROJECT STATUS UPDATE

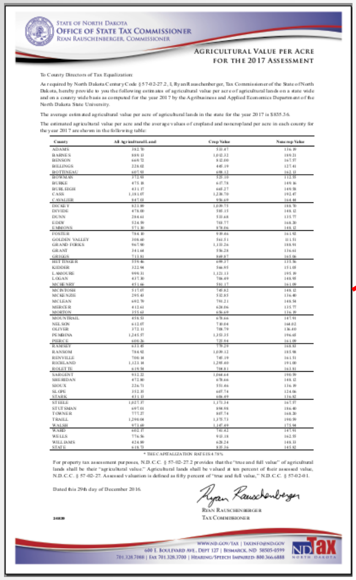
AGENDA

- Why are we here?
- Summary of North Dakota Land Valuation in Mountrail County
- GIS – Geographic Information System
- Status of Land Use
- Pilot Township
- ***Township Drawing Review Expectations***

That's You All !



ND LAND VALUATION OVERVIEW


State of North Dakota
Office of State Tax Commissioner
Ryan Rauschenberger, Commissioner

Agricultural Value per Acre
for the 2017 Assessment

To County Directors of Tax Equalization:

As required by North Dakota Century Code § 57-02-27.2, I, Ryan Rauschenberger, Tax Commissioner of the State of North Dakota, hereby provide to you the following estimates of agricultural value per acre of agricultural lands on a state wide and on a county wide basis as computed for the year 2017 by the Agribusiness and Applied Economics Department of the North Dakota State University.

The average estimated agricultural value per acre of agricultural lands in the state for the year 2017 is $855.36.

The estimated agricultural value per acre and the average values of cropland and noncropland per acre in each county for the year 2017 are shown in the following table:

NDSU Ag Values

Averages

NDSU Ag Land
Production Value 2016
Average Ag - $458.53
Cropland - $678.66
NonCrop - $147.91

How much to
Where?

Mountrail Ag Acres
1,066,808.96
X **$458.53**
=

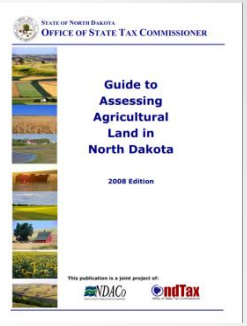
Ag Acre Total Value
$489,163,912.43
at 100% Threshold

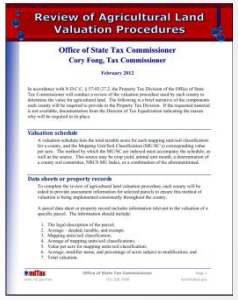
Problem: How to make Allocation Equitable?

Need to know how many crop and noncrop acres, other types of land

SUMMARY OF LAND VALUATION IN MOUNTRAIL

- Implementation of NDSU Soils values by NRCS soil type for Agricultural land valuation
  - **State Tax Dept. Ag Land valuation guide & Certification guide**
- **Fairly complex process** – 3 main systems used
  - **Sidwell GIS & FARMS system** (tracks Ag acres by soil type)
  - **NRCS Web Soil Survey (WSS)** – soil types and acres ~ 150 in Mountrail
  - **Mountrail County CPUi (Tax) system** – "system of record"
  - (not a system) – NDSU Soils valuation for county
- **State aid funds withheld**





57-02-27.2.10 *- For any county that has not fully implemented use of soil type and soil classification…….. the tax commissioner shall direct the state treasurer to withhold five percent of that county's allocation each quarter from the state aid distribution fund under section 57-39.2-26.1….*

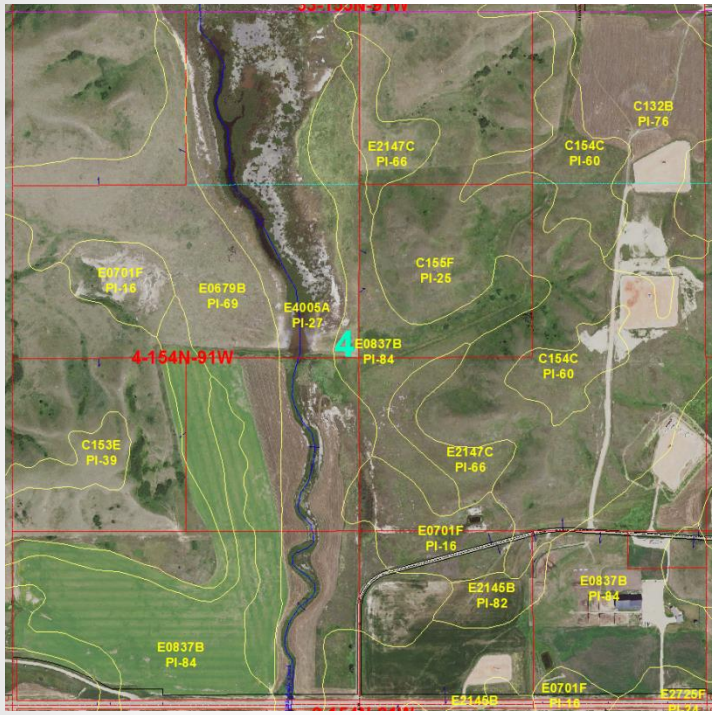
Soils Data Implementation Dollars	
Row Labels	Sum of Ag Land Valuation
2010	$0.00
2011	$0.00
2012	$0.00
2013	$36,948.11
2014	$82,474.10
2015	$93,959.23
2016	$76,519.57
2017	$69,727.76
2018	*$69,986.29*
2019	*$66,374.94*
2020	*$16,029.46*
Grand Total	**$512,019.46**

To date: $359,628.76

Forecast Amounts

LAND VALUATION

Example Section

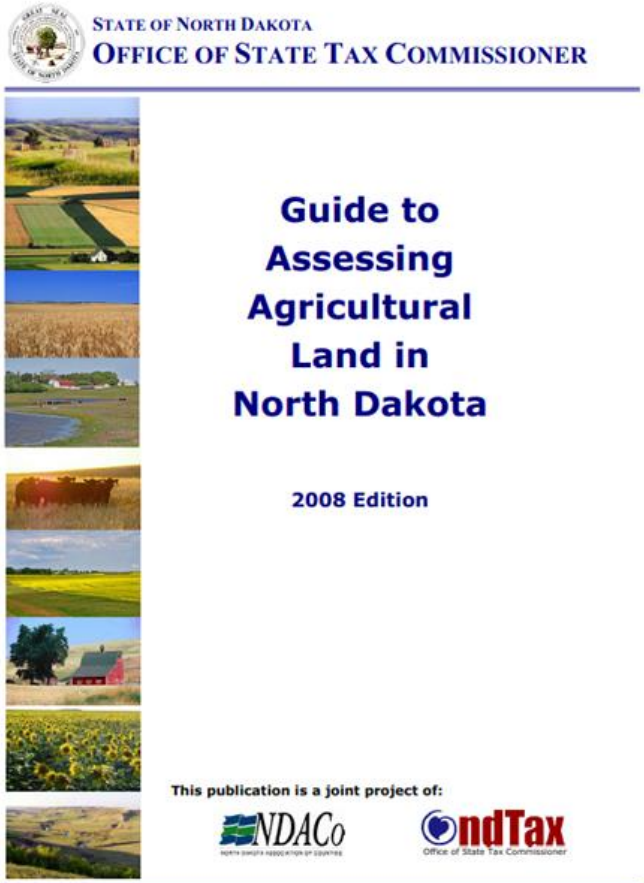


- Each parcel has various soil types within it
- Each soil type has a "Productivity index" associated
- Higher PI's = better soil
- Higher PI's have higher $ value applied, lower PI's have a lower $ value applied
- Last year Mountrail used ND State approved 'breakpoint method' in setting values – did not use actual use
- **June 2017 - County Board of equalization voted to utilize actual land use for valuation**

WENT BACK TO 2016 LAND VALUES FOR THE FUTURE OF ACTUAL LAND USE

What does actual land use look like?

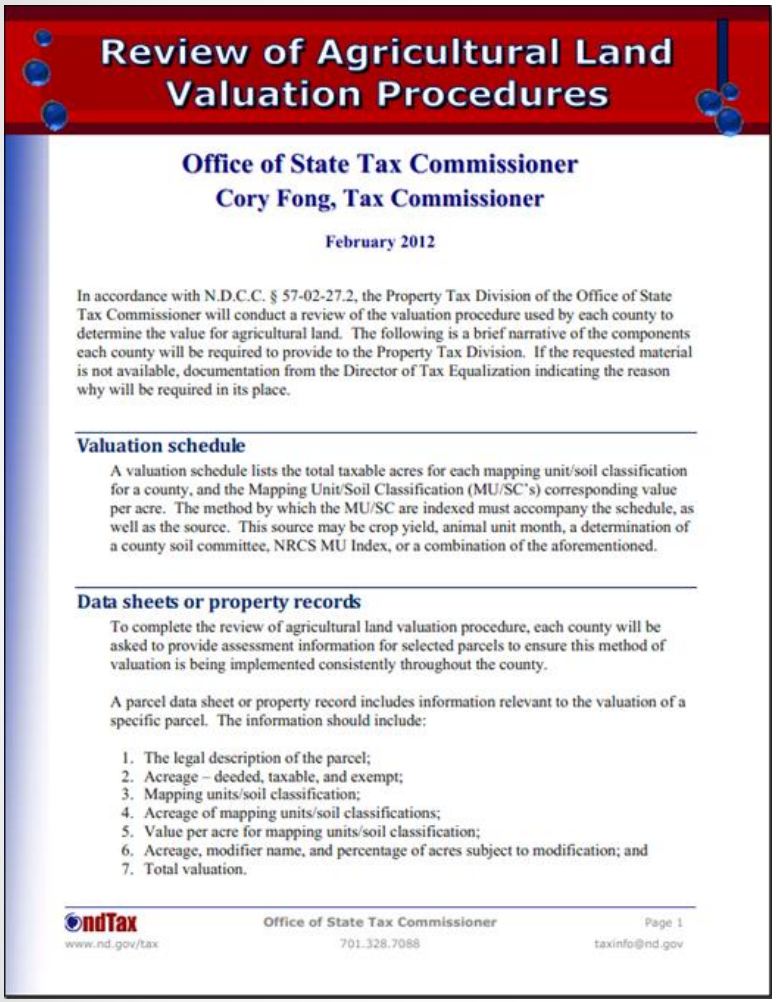
ND TAX DEPT. GUIDANCE DOC



- ***"How To Guide"***

- Table of Contents
- Introduction
- Division of Duties
- Soils Committee Development
- Method of Valuation
- Public Notification Methods
- Records Maintenance
- Reporting County Acres to NDSU

ND TAX DEPT CERTIFICATION DOC



Review of Agricultural Land Valuation Procedures

Office of State Tax Commissioner
Cory Fong, Tax Commissioner

February 2012

In accordance with N.D.C.C. § 57-02-27.2, the Property Tax Division of the Office of State Tax Commissioner will conduct a review of the valuation procedure used by each county to determine the value for agricultural land. The following is a brief narrative of the components each county will be required to provide to the Property Tax Division. If the requested material is not available, documentation from the Director of Tax Equalization indicating the reason why will be required in its place.

Valuation schedule

A valuation schedule lists the total taxable acres for each mapping unit/soil classification for a county, and the Mapping Unit/Soil Classification (MU/SC's) corresponding value per acre. The method by which the MU/SC are indexed must accompany the schedule, as well as the source. This source may be crop yield, animal unit month, a determination of a county soil committee, NRCS MU Index, or a combination of the aforementioned.

Data sheets or property records

To complete the review of agricultural land valuation procedure, each county will be asked to provide assessment information for selected parcels to ensure this method of valuation is being implemented consistently throughout the county.

A parcel data sheet or property record includes information relevant to the valuation of a specific parcel. The information should include:

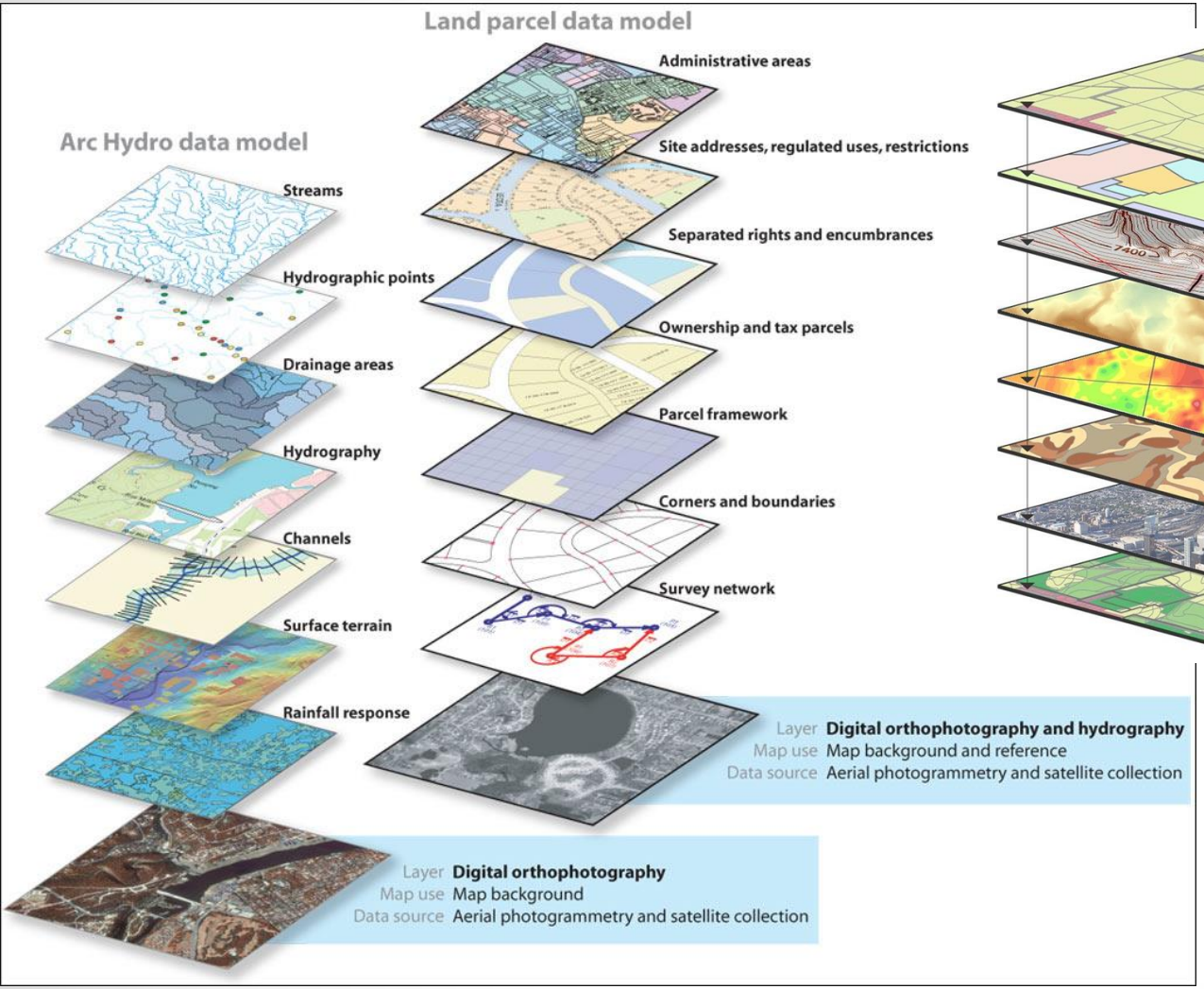
1. The legal description of the parcel;
2. Acreage – deeded, taxable, and exempt;
3. Mapping units/soil classification;
4. Acreage of mapping units/soil classifications;
5. Value per acre for mapping units/soil classification;
6. Acreage, modifier name, and percentage of acres subject to modification; and
7. Total valuation.

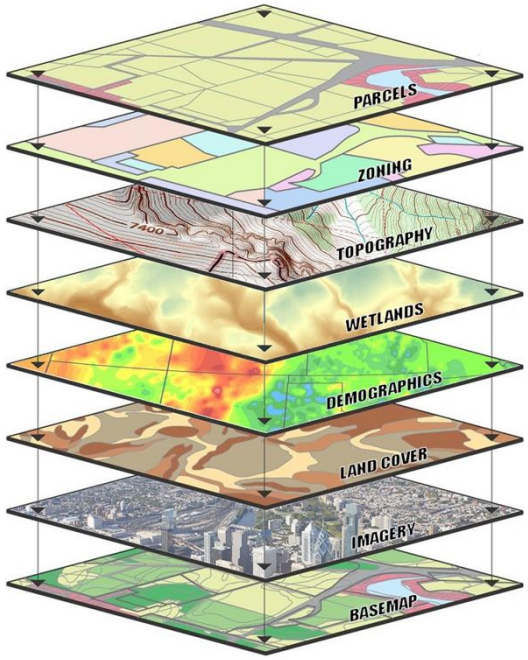
ndTax Office of State Tax Commissioner Page 1
www.nd.gov/tax 701.328.7088 taxinfo@nd.gov

- ***ND State Certification Guide***

- General Requirements:
  - Valuation Schedule-Soil Types
    - Productivity Indexes
    - Animal Unit Months (AUMs)
    - Source of data (NRCS)
  - Property valuation sheets
    - Legal description of property
    - Acreage
    - Map Units/soil classification
    - Acreages
    - Crop/noncrop and other designations
    - Valuation

GIS – GEOGRAPHIC INFORMATION SYSTEM





GIS DATA LAYERS

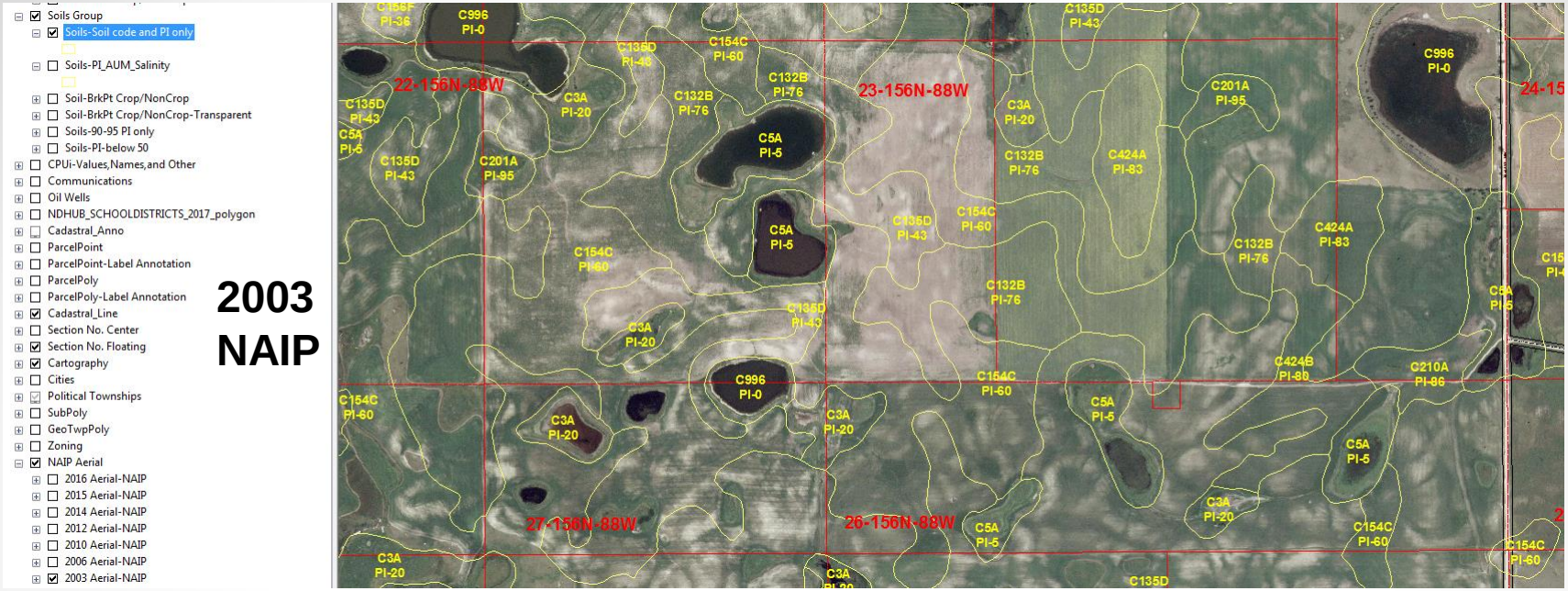
Many different types of data can be integrated into a GIS and represented as a map layer.

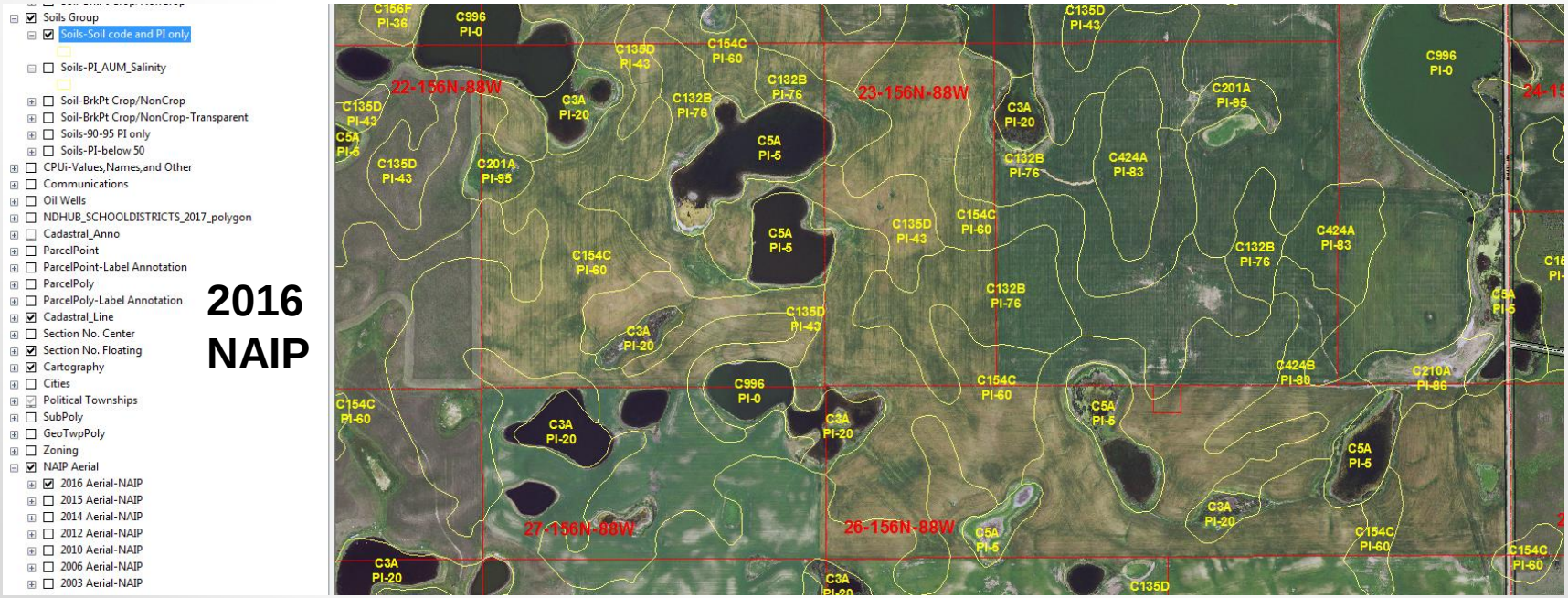
Examples can include: streets, parcels, zoning, flood zones, client locations, competition, shopping centers, office parks, demographics, etc.

When these layers are drawn on top of one another, undetected spatial trends and relationships often emerge. This allows us to gain insight about relevant characteristics of a location.

GIS System – Final Product for Online Viewing By Public

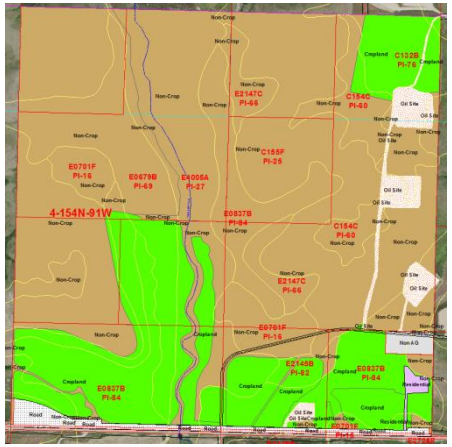
GIS LAYERS EXAMPLE-NRCS SOILS

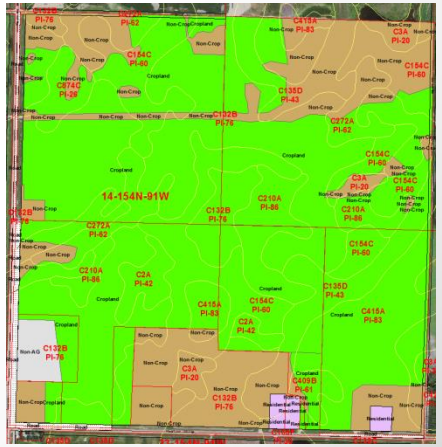




TO DATE

- GIS Software in House - ArcMAP
- **Soils Committee Formed – Mike Hynek, Charlie Sorenson, Dustin Roise, Luke Lahtinen, Keith Deutsch**
- Drawing Ruleset Defined and Approved
- Valuation Ruleset Drafted
- **3 'pre-pilot' Test Sections Drawn by Sidwell – GIS vendor**
- Review of various areas within County for potential 'challenges' in drawing of sections
  - i.e. Non-cropland areas within cropland – what size to draw down to?
- **Pilot Township Drawn In and Reviewed – Rat Lake**





GIS DRAWING RULESET

"Once Cropped, Always Cropped"

1. Moving 20 year window for land once cropped but moved to non-crop.
2. Mountrail will be identifying these areas in QA review.

20 year rolling approved

	Google Earth	*NAIP*
Latest	**1997**	***2003***
2017	20	*14*
2018	21	*15*
2019	22	*16*
2020	23	*17*
2021	24	*18*
2022	25	*19*
2023	**26**	***20***
2024	27	*21*
2025	28	*22*
2026	29	*23*
2027	30	*24*
2028	**31**	***25***

***NAIP** – National Agriculture Imagery Program - FSA

Mountrail County
Ruleset for Land Use Drawings.docx

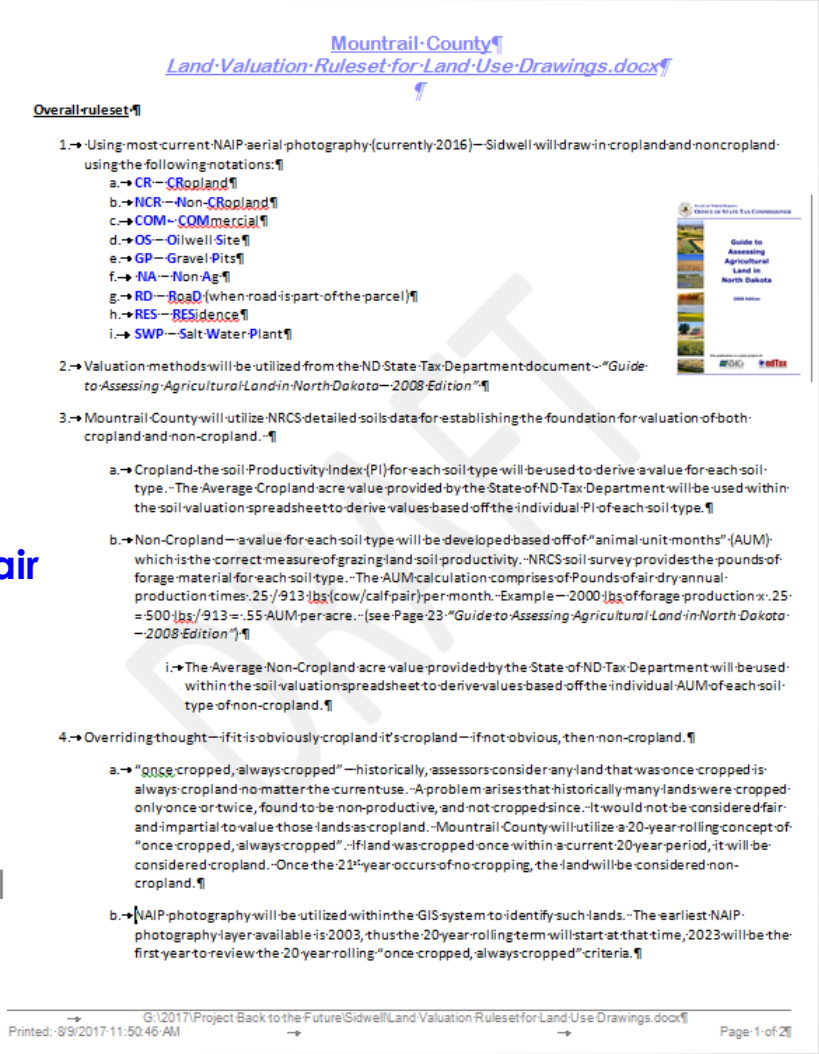
Overall ruleset

1. Using most current NAIP aerial photography (currently 2016) – Sidwell will draw in cropland and noncropland using the following notations:
   a. Cropland
      i. CR – CRopland
   b. NonCropland
      i. NCR – Non-CRopland
      ii. COM - COMmercial
      iii. OS – Oilwell Site
      iv. GP – Gravel Pits (valued as Commercial in tax system)
      v. NA – Non Ag
      vi. RD – RoaD (when road is part of the parcel)
      vii. RES – RESidence
      viii. SWP – Salt Water Plant
2. Overriding thought – if it is obviously cropland it's cropland – if not obvious, then non-cropland.
3. Using a spreadsheet breakdown of types of lands provided by Mountrail County, Sidwell will make best effort to account for the types of acreages within Ag land parcels – Ag land, Commercial land, Residential land, and Vacant land using information provided by Mountrail County. The Residential sites within Ag parcels will be drawn within .10 acres of the County standard of 2 acres (1.9 to 2.1). Other land types will be by visual review of the imagery. Parcels that are exclusively Commercial land, Residential land, and vacant land not associated with Ag land parcels will be shown as NA – Non Ag.
4. Oil sites, along with other non-commercial sites such as Salt water disposal plants will be marked separately(if no separate code exists use NCR-Non-Cropland), and will be valued as non-cropland. Roads leading to the Oil Site will be considered part of the Oil Site. Gravel pits may be included on Ag parcels but are listed as commercial property.
5. Shelterbelts of trees (long narrow rows of trees to block the wind), roughly 1 acre and above within cropland boundaries will be considered cropland. Shelterbelts of trees and intermittent trees within non cropland boundaries will be considered non cropland.
6. Farmsteads not marked as "Residential" will be considered non-cropland
7. Noncropland areas within cropland (rock piles, bush/tree growth, watery areas) should be drawn as non-cropland – rough acreage 1 acre and above.
8. During Mountrail County QA review - historical photography will be reviewed for the County's concept of "once cropped, always cropped" (land that was cropped sometime in the past years will be considered cropland) and provide updates to Sidwell accordingly. At this time "always cropped" will be a 20-year rolling timeframe. Mountrail County will utilize NAIP photography from 2003 and onwards for review of cropped / noncrop historical review. These updates along with any other corrections will be submitted to Sidwell for corrective action.
   a. CRP (Conservation Reserve Program) acreage is valued as cropland (see *ND Guide to Assessing Agricultural Land in North Dakota 2008 Edition* – Page 21) and will be exempted from 20 year rolling timeframe. If payments are still being received CRP is considered cropland. When payments end and are not renewed, the 20 year rolling timeframe would be started. CRP will be identified at Township Board Drawing Review.
9. Parcels to be accounted for in the spreadsheet will be AG parcels only. All other parcels in the source parcel polygon layer will be coded as NA – Non-AG in the land use layer.
10. In the final GIS product - The most current NRCS soils layer will be utilized. NRCS soils layer will be viewed as lines only with same color for soil code designation

LAND VALUATION RULESET

- Draft copy of valuation ruleset
- Defines how types of lands are valued
  - **Cropland** by NRCS Productivity Index (PI) values
  - **Noncropland** by NRCS lbs of forage by soil code Animal Unit Month (AUM) calculation
    - **AUM = (lbs of forage production x .25)**

      ÷ 913 lbs forage for cow/calf pair
    - **Some low PI soils become high AUM values**
- "Once Cropped, Always Cropped"
  - 20 years rolling NAIP Photography (National Agriculture Imagery Program)
  - 2003 Earliest NAIP
  - 20 years would be 2023 for crop/noncrop review



Mountrail County
Land Valuation Ruleset for Land Use Drawings.docx

Overall ruleset

1. Using most current NAIP aerial photography (currently 2016)—Sidwell will draw in cropland and noncropland using the following notations:
   a. CR—CRopland
   b. NCR—Non-CRopland
   c. COM—COMmercial
   d. OS—Oilwell Site
   e. GP—Gravel Pits
   f. NA—Non Ag
   g. RD—RoaD (when road is part of the parcel)
   h. RES—RESidence
   i. SWP—Salt Water Plant

2. Valuation methods will be utilized from the ND State Tax Department document—*"Guide to Assessing Agricultural Land in North Dakota—2008 Edition"*

3. Mountrail County will utilize NRCS detailed soils data for establishing the foundation for valuation of both cropland and non-cropland.
   a. Cropland the soil Productivity Index (PI) for each soil type will be used to derive a value for each soil type. The Average Cropland acre value provided by the State of ND Tax Department will be used within the soil valuation spreadsheet to derive values based off the individual PI of each soil type.
   b. Non-Cropland—a value for each soil type will be developed based off of "animal unit months" (AUM) which is the correct measure of grazing land soil productivity. NRCS soil survey provides the pounds of forage material for each soil type. The AUM calculation comprises of Pounds of air dry annual production times .25 / 913 lbs (cow/calf pair) per month. Example—2000 lbs of forage production x .25 = 500 lbs / 913 = .55 AUM per acre. (see Page 23 *"Guide to Assessing Agricultural Land in North Dakota—2008 Edition"*)
      i. The Average Non-Cropland acre value provided by the State of ND Tax Department will be used within the soil valuation spreadsheet to derive values based off the individual AUM of each soil type of non-cropland.

4. Overriding thought—if it is obviously cropland it's cropland—if not obvious, then non-cropland.
   a. "once cropped, always cropped"—historically, assessors consider any land that was once cropped is always cropland no matter the current use. A problem arises that historically many lands were cropped only once or twice, found to be non-productive, and not cropped since. It would not be considered fair and impartial to value those lands as cropland. Mountrail County will utilize a 20-year rolling concept of "once cropped, always cropped". If land was cropped once within a current 20-year period, it will be considered cropland. Once the 21st year occurs of no cropping, the land will be considered non-cropland.
   b. NAIP photography will be utilized within the GIS system to identify such lands. The earliest NAIP photography layer available is 2003, thus the 20-year rolling term will start at that time, 2023 will be the first year to review the 20-year rolling "once cropped, always cropped" criteria.

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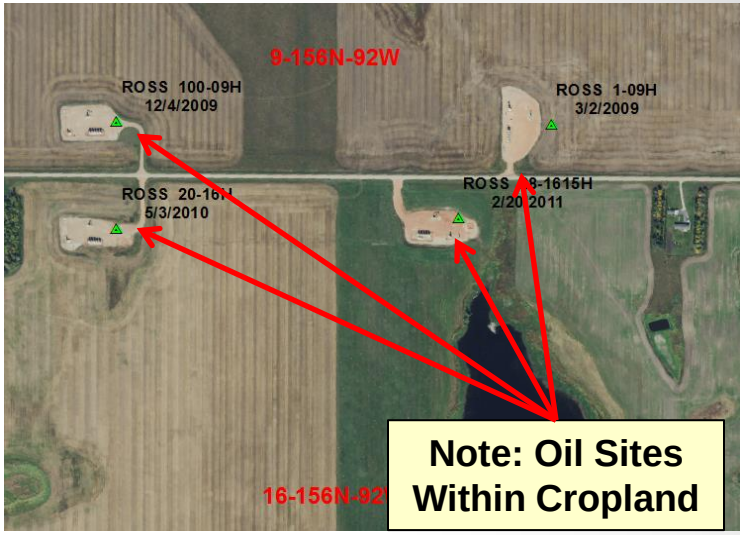
Page 1 of 2

OIL SITES

- **ND Century Code** – *"Ag property used for oil, natural gas, or subsurface minerals must continue to be assessed as Ag property for the remainder…."*
- **Challenge: Was it cropland or noncropland before?**
- Some parcels found oil sites partially on crop land, partially on non-cropland
  - **Very difficult to manage acres**



- **Simplified Approved Decision – all oil site acreage will be valued as non-cropland** based off soil types underneath oil site (includes road leading to oil site)

Land Used for Extraction of Oil, Natural Gas, or Subsurface Minerals

Land that was assessed as agricultural property at the time the land was put to use for extraction of oil, natural gas, or subsurface minerals as defined in N.D.C.C. § 38-12-01 must continue to be assessed as agricultural property if the remainder of the surface owner's parcel of property on which the subsurface mineral activity is occurring continues to qualify for assessment as agricultural property under subsection 1 of N.D.C.C. § 57-02-01.

FARMSTEADS AND MODIFIERS

- **Farmsteads are considered 'non-crop'** and are valued at non-cropland value based off soils under farmstead

- Taxable Rural Residences are valued separately
  - 2 acres @ $2,000 per acre

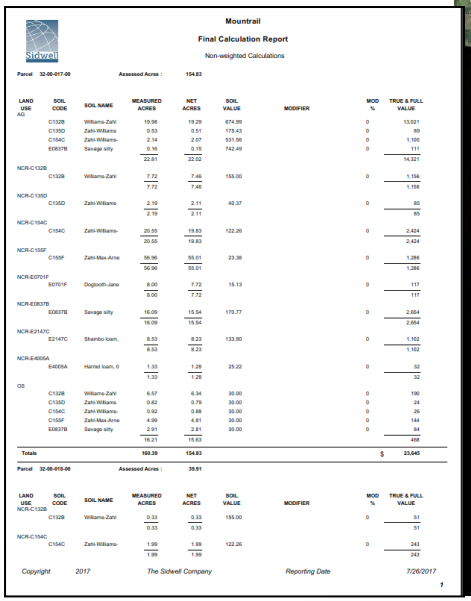
- With Actual Land use – **modifiers are not necessary** and will not be used
  - With breakpoint method, modifiers could be considered and are used for **cropland** areas only
  - **Salinity is already factored in to the Soil Code PI and AUM**
- ***Inundated Land is separate and can be used***
  - Forms filed by March 31 each year
  - 10 contiguous acres or more, Inundated for two seasons or more
  - Some other information needed

LAND VALUATION RULESET

GIS Item	Valuation Method
Cropland	***Cropland values*** - Productivity Index (PI)
Non Cropland	***Noncrop values*** – based off AUM (Animal Unit Month) calculation
Farmsteads	***Noncrop values***
Oilwell Sites	***Noncrop values***
Salt Water Wells	1) Commercial wells @ Commercial Values (Tax Dept) 2) Private Wells @ ***Noncrop values***
Taxable Rural Residence	2 Acres at $2,000 / acre
Roads	***$0 for Right-of-Way acreage*** of TWP Certified Roads, County Roads, State Highways
Commercial Land / Structures	Commercial Values (Tax Dept)
Gravel Pits	Commercial Values (Tax Dept)
Non-Ag (vacant land)	Vacant Land Values (Tax Dept)

PRE-PILOT TEST SECTIONS

- **3 sections used for 'Pre-Pilot' drawing test**
- Used to validate drawing 'ruleset'
- **Provided Mountrail and Sidwell working guidelines and test of rules**
- Includes **fictitious** valuations of soils for pre-pilot – sample reports



Mountrail

Final Calculation Report

Non-weighted Calculations

Parcel 32-00-017-00 Assessed Acres : 154.83

LAND USE	SOIL CODE	SOIL NAME	MEASURED ACRES	NET ACRES	SOIL VALUE	MODIFIER	MOD %	TRUE & FULL VALUE
AG	C132B	Williams-Zahl	19.98	19.29	674.99		0	13,021
	C135D	Zahl-Williams	0.53	0.51	175.43		0	89
	C154C	Zahl-Williams-	2.14	2.07	531.56		0	1,100
	E0837B	Savage silty	0.16	0.15	742.49		0	111
			22.81	22.02				14,321
NCR-C132B	C132B	Williams-Zahl	7.72	7.46	155.00		0	1,156
			7.72	7.46				1,156
NCR-C135D	C135D	Zahl-Williams	2.19	2.11	40.37		0	85
			2.19	2.11				85
NCR-C154C	C154C	Zahl-Williams-	20.55	19.83	122.26		0	2,424
			20.55	19.83				2,424
NCR-C155F	C155F	Zahl-Mas-Arne	56.96	55.01	23.38		0	1,286
			56.96	55.01				1,286
NCR-E0701F	E0701F	Dogtooth-Jane	8.00	7.72	15.13		0	117
			8.00	7.72				117
NCR-E0837B	E0837B	Savage silty	16.09	15.54	170.77		0	2,654
			16.09	15.54				2,654
NCR-E2147C	E2147C	Shambo loam,	8.53	8.23	133.90		0	1,102
			8.53	8.23				1,102
NCR-E4005A	E4005A	Harriet loam, 0	1.33	1.28	25.22		0	32
			1.33	1.28				32
OS	C132B	Williams-Zahl	6.57	6.34	30.00		0	190
	C135D	Zahl-Williams	0.82	0.79	30.00		0	24
	C154C	Zahl-Williams-	0.92	0.88	30.00		0	26
	C155F	Zahl-Mas-Arne	4.99	4.81	30.00		0	144
	E0837B	Savage silty	2.91	2.81	30.00		0	84
			16.21	15.63				468
Totals			160.39	154.83				$ 23,645

Parcel 32-00-018-00 Assessed Acres : 39.91

LAND USE	SOIL CODE	SOIL NAME	MEASURED ACRES	NET ACRES	SOIL VALUE	MODIFIER	MOD %	TRUE & FULL VALUE
NCR-C132B	C132B	Williams-Zahl	0.33	0.33	155.00		0	51
			0.33	0.33				51
NCR-C154C	C154C	Zahl-Williams-	1.99	1.99	122.26		0	243
			1.99	1.99				243

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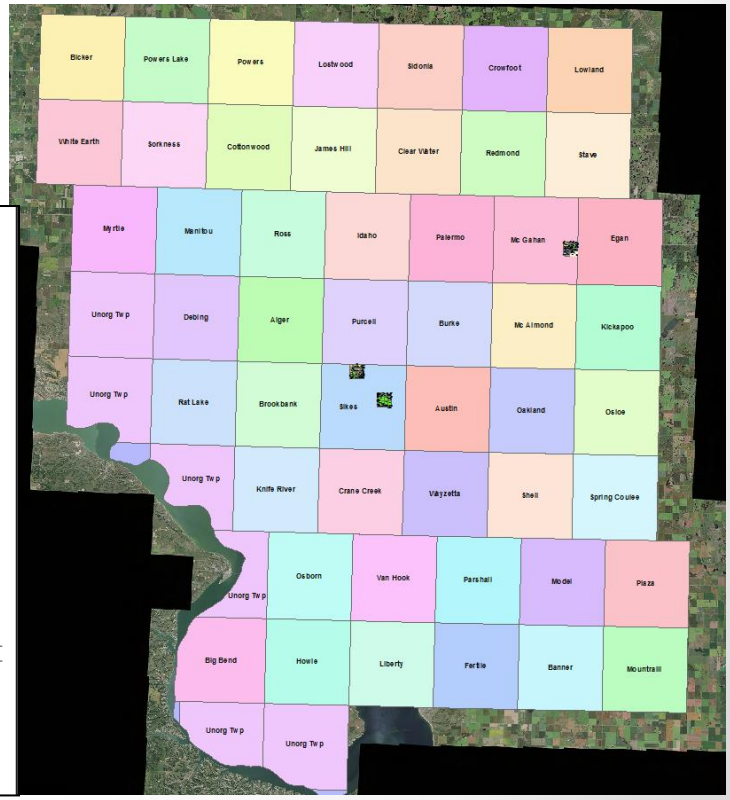


14-154-91

Sidwell – "draw what they see…"

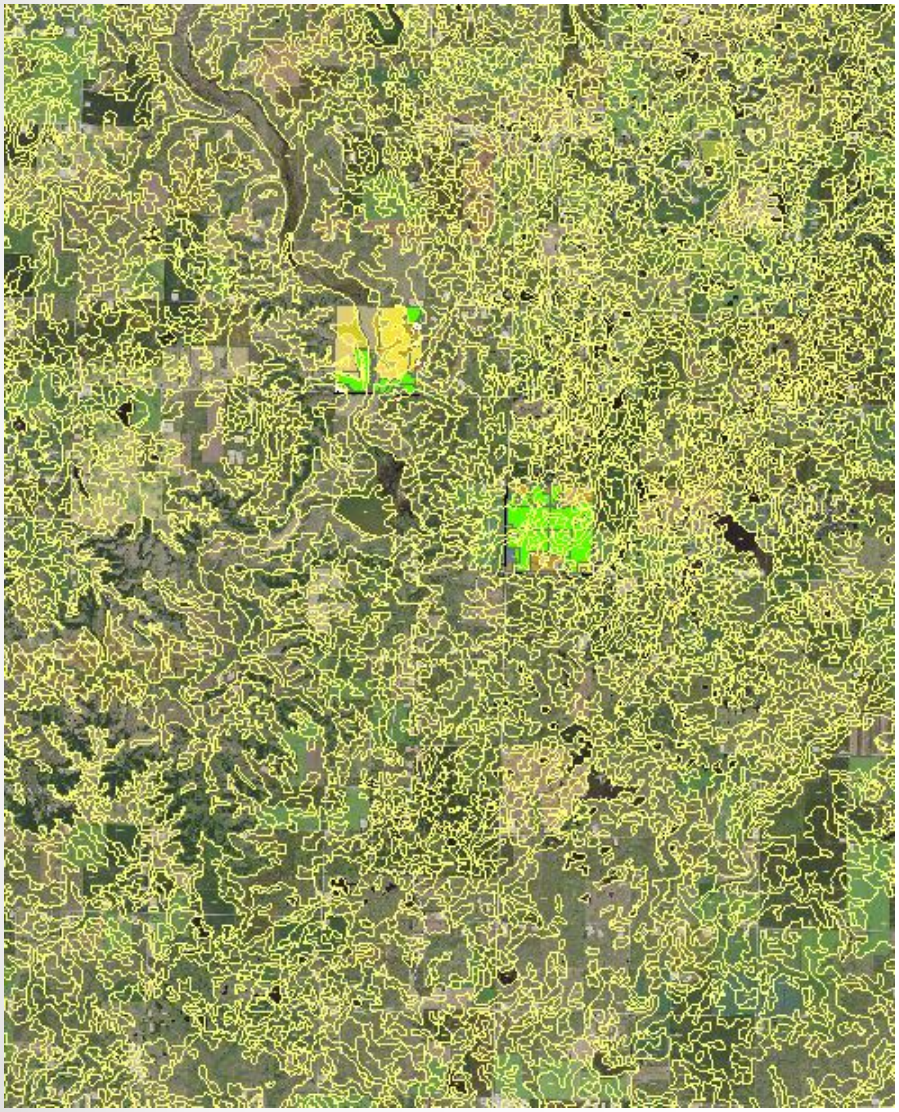
Pipeline path should be cropland as it was historically cropped
20-year rule

- Types – Cropland, non-cropland, Roads, Residential, Non-AG

ENVISIONING DATA…AN IDEA!

MUSYM	Crop_Non_Crop	Acres	MU_PI
C201A	Crop	7347.76	95
E3501A	Crop	3.45	95
C451B	Crop	2.7	93
C411A	Crop	2365.64	91
C201B	Crop	1.86	89
E0835A	Crop	119.64	89
C477A	Crop	766.15	88
F656B	Crop	10.64	88
C419A	Crop	4.9	87
F658A	Crop	4217.52	87
C210A	Crop	48406.9	86
C164A	Crop	0.33	85
C501A	Crop	432.81	84
E0837B	Crop	1977.62	84
E3527B	Crop	11.2	84
F658B	Crop	98.48	84
C210B	Crop	60185.61	83
C415A	Crop	10949.24	83
C419B	Crop	12.89	83
C424A	Crop	15575.08	83
F657B	Crop	17.42	83
C477B	Crop	488.17	82
E2145B	Crop	4828.64	82
E4137A	Crop	2324.27	82
C527A	Crop	1043.5	81
F659A	Crop	239.53	81
C424B	Crop	5507.33	80
F655A	Crop	172.14	80

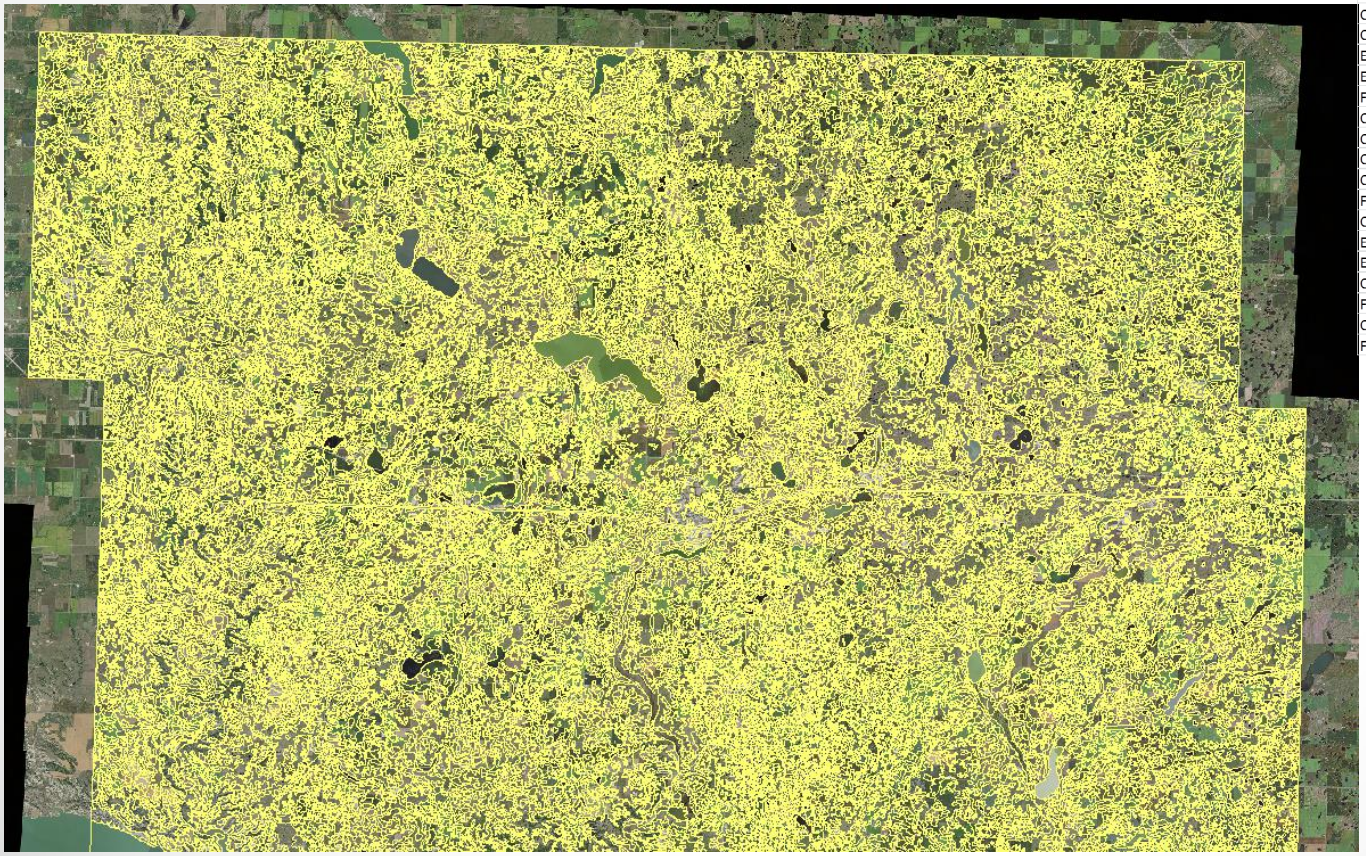
APPLYING PI VALUE TO GIS



MUSYM	Crop_Non_Crop	Acres	MU_PI
C201A	Crop	7347.76	95
E3501A	Crop	3.45	95
C451B	Crop	2.7	93
C411A	Crop	2365.64	91
C201B	Crop	1.86	89
E0835A	Crop	119.64	89
C477A	Crop	766.15	88
F656B	Crop	10.64	88
C419A	Crop	4.9	87
F658A	Crop	4217.52	87
C210A	Crop	48406.9	86
C164A	Crop	0.33	85
C501A	Crop	432.81	84
E0837B	Crop	1977.62	84
E3527B	Crop	11.2	84
F658B	Crop	98.48	84
C210B	Crop	60185.61	83
C415A	Crop	10949.24	83
C419B	Crop	12.89	83
C424A	Crop	15575.08	83
F657B	Crop	17.42	83
C477B	Crop	488.17	82
E2145B	Crop	4828.64	82
E4137A	Crop	2324.27	82
C527A	Crop	1043.5	81
F659A	Crop	239.53	81
C424B	Crop	5507.33	80
F655A	Crop	172.14	80

APPLYING PI VALUE TO GIS

North Mountrail
With Soils Layer Shown



MUSYM	Crop_Non_Crop	Acres	MU_PI
C201A	Crop	7347.76	95
E3501A	Crop	3.45	95
C451B	Crop	2.7	93
C411A	Crop	2365.64	91
C201B	Crop	1.86	89
E0835A	Crop	119.64	89
C477A	Crop	766.15	88
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C419A	Crop	4.9	87
F658A	Crop	4217.52	87
C210A	Crop	48406.9	86
C164A	Crop	0.33	85
C501A	Crop	432.81	84
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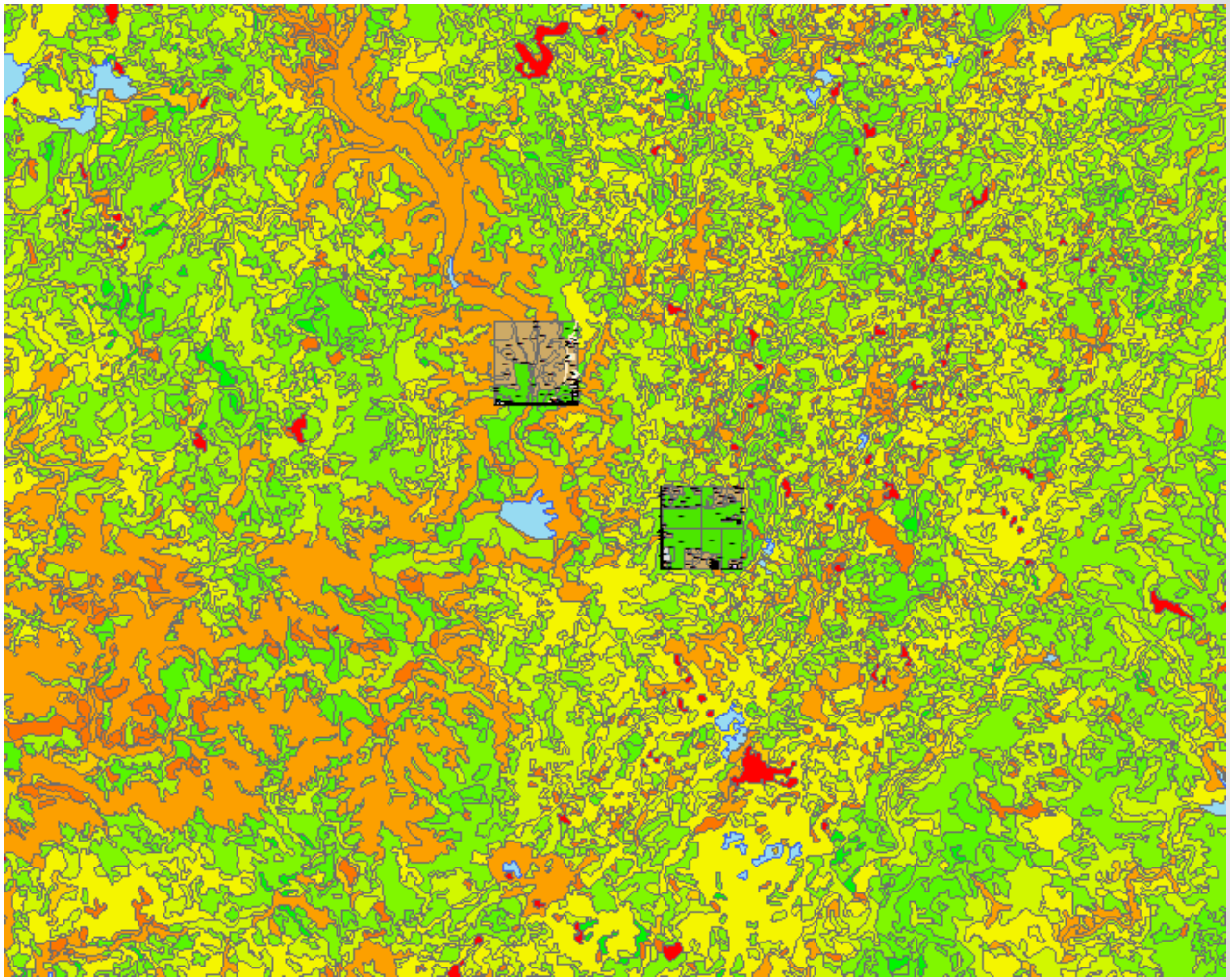
C424A	Crop	15575.08	83
F657B	Crop	17.42	83
C477B	Crop	488.17	82
E2145B	Crop	4828.64	82
E4137A	Crop	2324.27	82
C527A	Crop	1043.5	81
F659A	Crop	239.53	81
C424B	Crop	5507.33	80
F655A	Crop	172.14	80

APPLY SOIL CODE PI VALUES BY 10-STEP PRODUCTIVITY INDEX

Symbol	Range	Label
	0.000000	0.000000
	0.000001 - 10.000000	0.000001 - 10.000000
	10.000001 - 20.000000	10.000001 - 20.000000
	20.000001 - 30.000000	20.000001 - 30.000000
	30.000001 - 40.000000	30.000001 - 40.000000
	40.000001 - 50.000000	40.000001 - 50.000000
	50.000001 - 60.000000	50.000001 - 60.000000
	60.000001 - 70.000000	60.000001 - 70.000000
	70.000001 - 80.000000	70.000001 - 80.000000
	80.000001 - 90.000000	80.000001 - 90.000000
	90.000001 - 95.000000	90.000001 - 95.000000

PI Breakdown

- 0-Blue-Water
- PI 10 – Step Color change
- Above 50 varying shades of green



TOWNSHIPS BY PI

- Red, Orange, Yellow lower PI's
- Greens are higher PI's

Symbol	Range	Label
	0.000000	0.000000
	0.000001 - 10.000000	0.000001 - 10.000000
	10.000001 - 20.000000	10.000001 - 20.000000
	20.000001 - 30.000000	20.000001 - 30.000000
	30.000001 - 40.000000	30.000001 - 40.000000
	40.000001 - 50.000000	40.000001 - 50.000000
	50.000001 - 60.000000	50.000001 - 60.000000
	60.000001 - 70.000000	60.000001 - 70.000000
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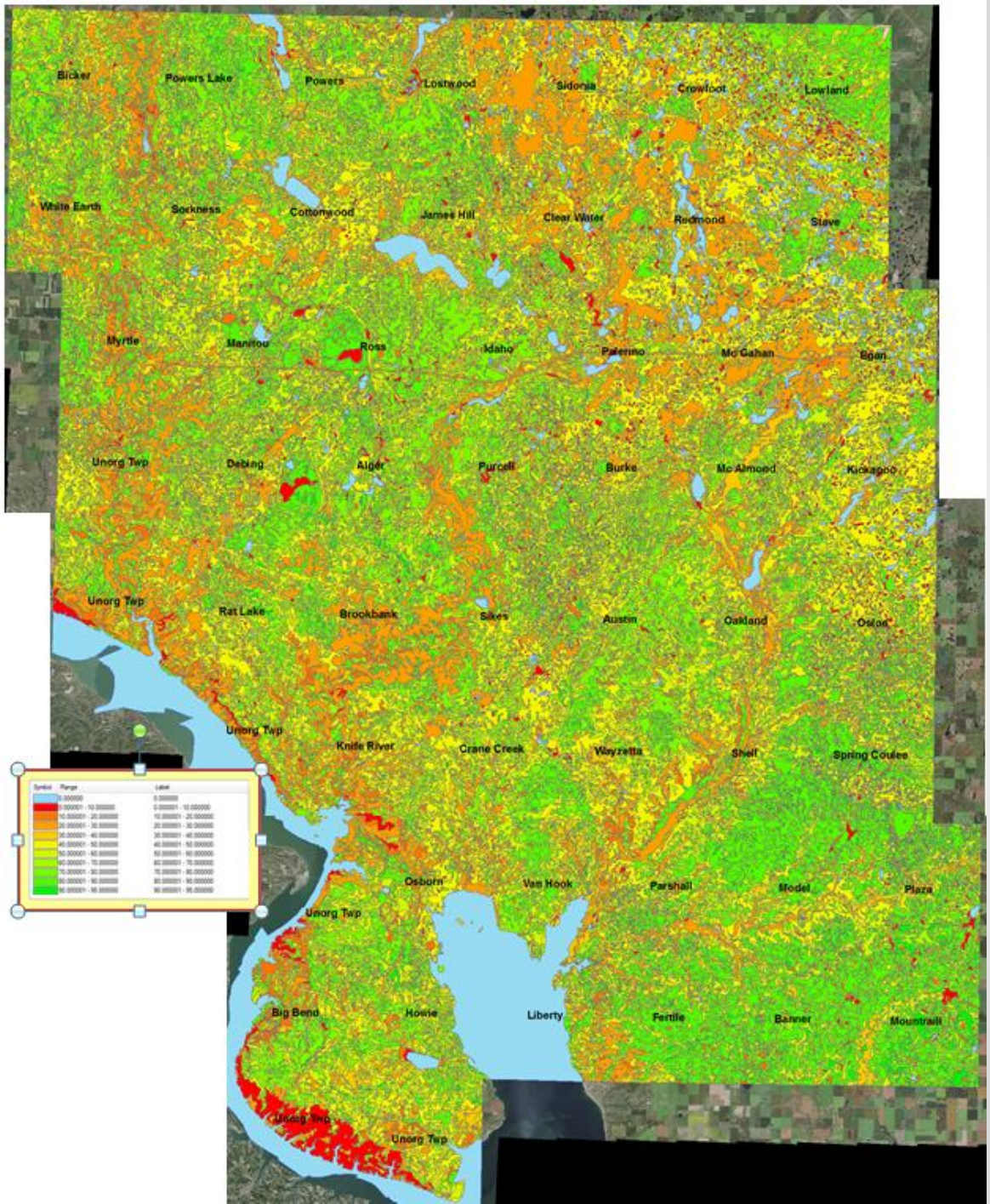
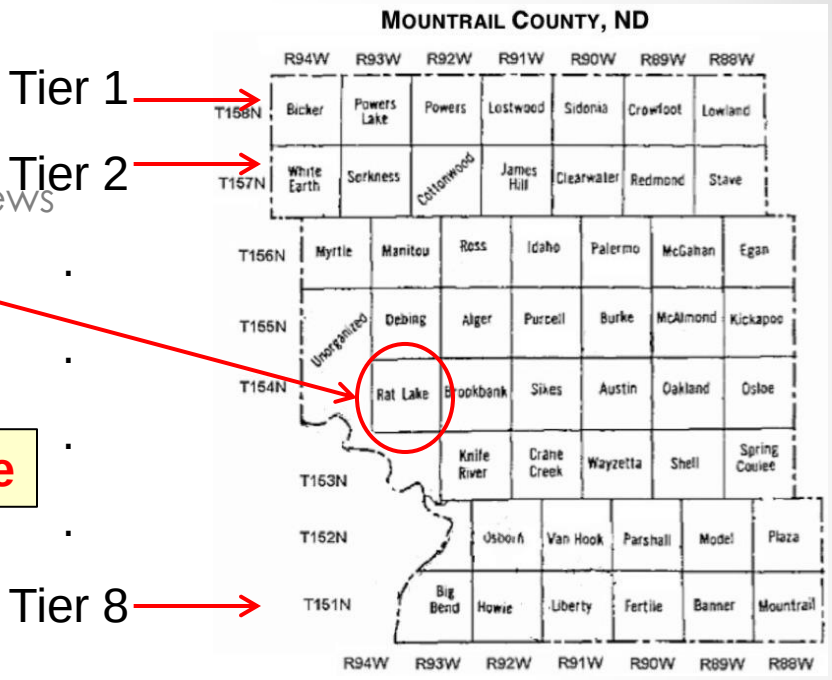
	80.000001 - 90.000000	80.000001 - 90.000000
	90.000001 - 95.000000	90.000001 - 95.000000



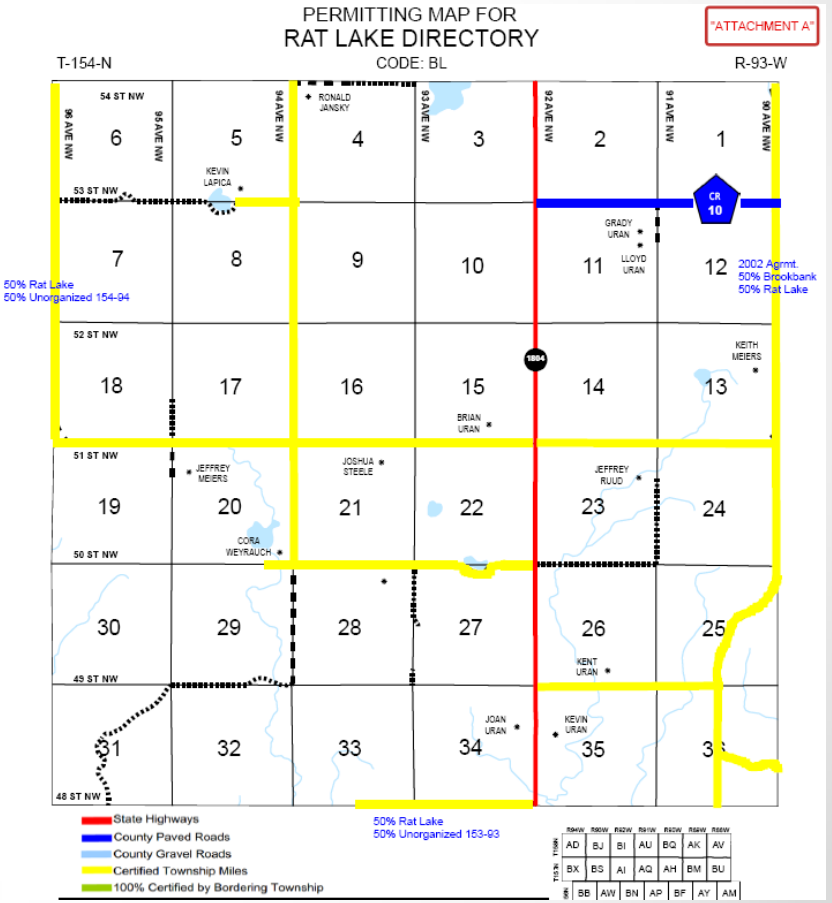
GIS DRAWING STEPS

- Contract with Sidwell ✓
- Pilot Township ✓
  - Sidwell draws **current NAIP**, Mountrail reviews
  - Soils Committee Review
  - Updates to Sidwell
  - Prove the Process
- Tier GIS Drawing Steps
  - **Tier 1 Drawing** ← **We are here**
  - Mountrail Review
  - Sidwell starts Tier 2
  - Soils Committee and ***TWP Review**** → New enhancement - Will be discussed in a later slide
  - Updates to Sidwell – by TWP/section
    - ***1 round of updates as per contract***
  - Mountrail Review of Updates
  - Repeat Tier 2-8
  - ***Sidwell Estimates 4-6 weeks per Tier initial Drawing***
    - ***Review and update cycles about the same***
- Completion – TBD
  - Pilot Township to provide better level of effort timing
  - As Tiers are complete – improved effort timing



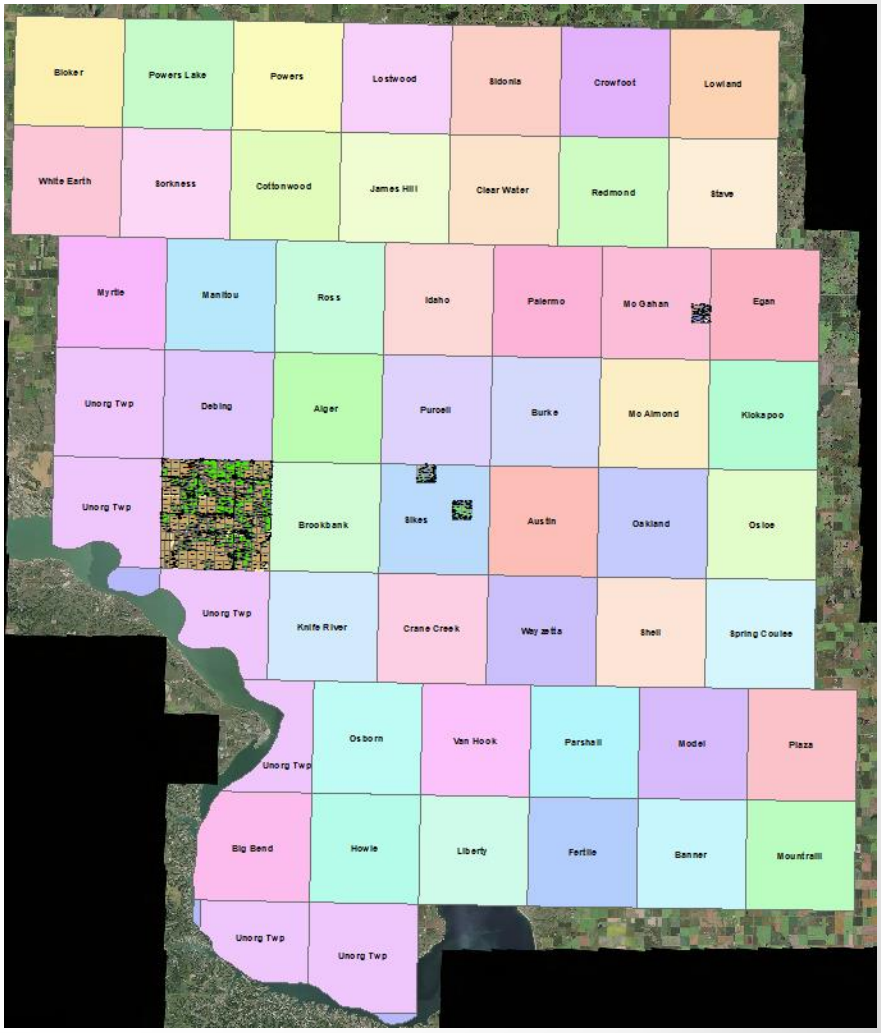
ROADS …

- Maps received from Mountrail Road and Bridge dept.
- "Roads" for drawing purposes are the colored lines
  - County Roads
  - Township Roads
  - Highways
- Copies of TWP Maps provided to Sidwell drawing team
- **'Roads' are valued at $0 per acre**
- Other dirt trails and gravel roads are marked and valued at non-crop
- Roads were Biggest 'problem' found in Pilot Township exercise
  - Alleviated by providing Sidwell the PDFs – will only draw colored lines and highways

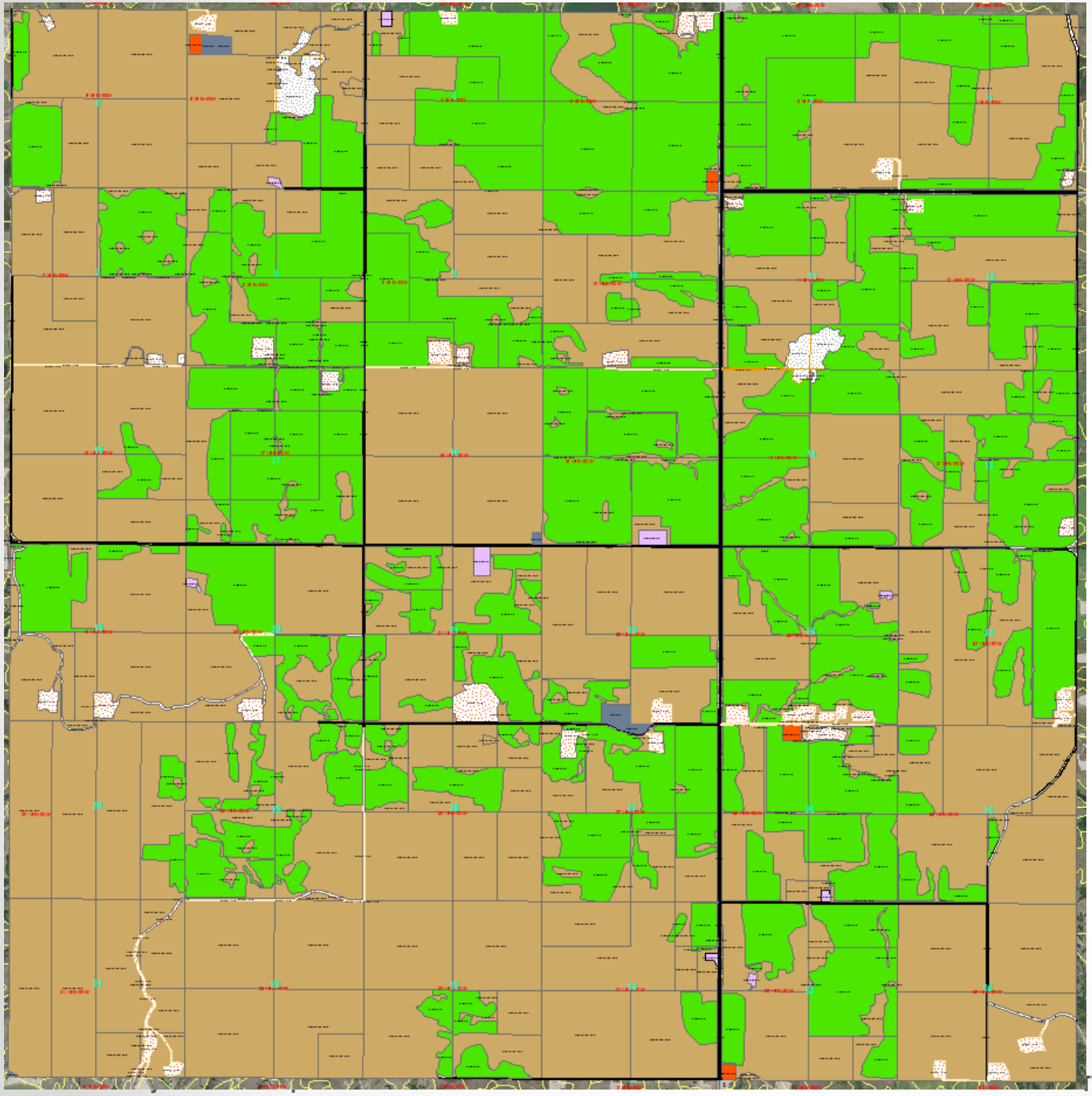


Overview of Sidwell Drawing Process

- 3 "Pre-Pilot" Sections
- **Pilot Township**
  - **Rat Lake**
  - ***VERY* Accurate**
- Tiers 1 – 8
- Uses 2016 NAIP Photography
  - *"Draw what they see"*
  - *No interpretation*
  - *"Once cropped always cropped" 20 year by Mountrail County*



RAT LAKE

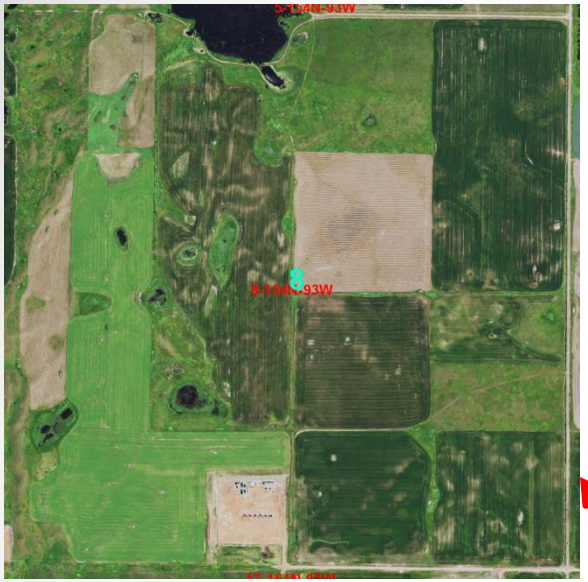


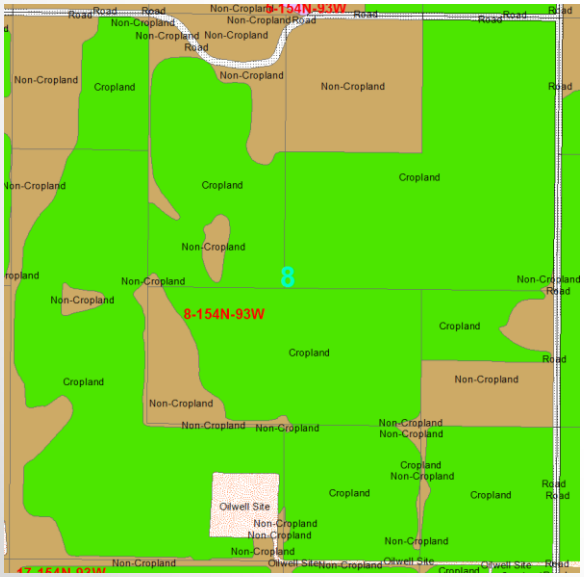
- Cropland
- Non-Cropland
- Oil Sites
- Gravel Pits
- Commercial
- Residential
- Roads
- Non-Ag

Symbol	Value	Label
	<Heading>	LUCode
	COM	Commercial
	CR	Cropland
	GP	Gravel Pits
	NA	Non-Ag
	NCR	Non-Cropland
	OS	Oilwell Site
	RES	Residence
	RD	Road
	SWP	Salt Water Plant

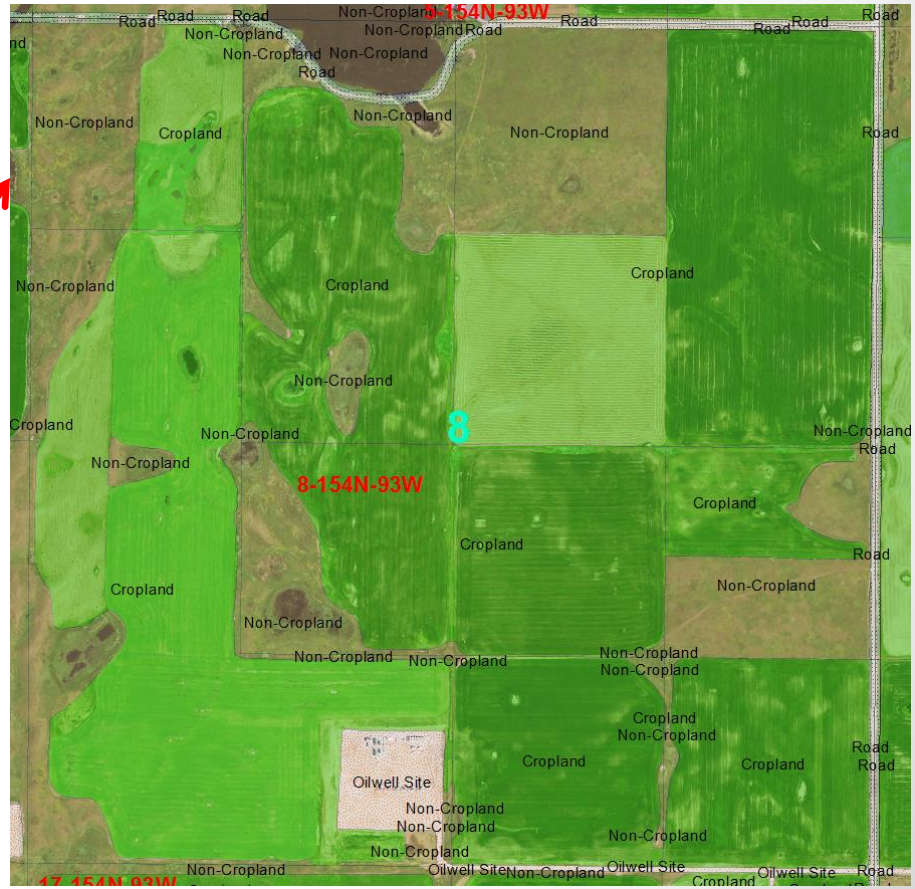
TWP REVIEW – WHAT IT LOOKS LIKE

- **By Section: Original,** "Cartoon", and **Transparency – 60%**
  - Ability to 'see' through the layer
  - Sec-TWP-Range on each for easy identification
  - **Will be using Original and Transparent for reviews**
  - Soils layer ***NOT*** shown – but have it in the office

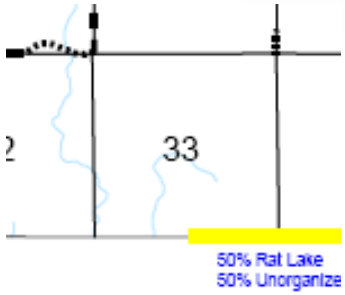




Used for Review

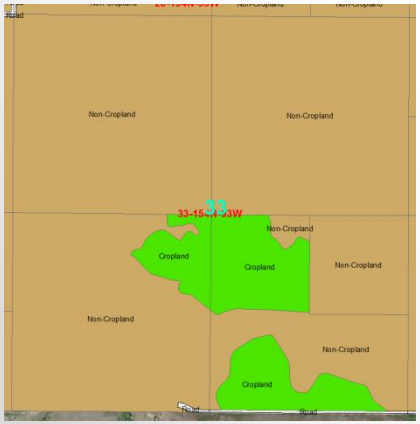


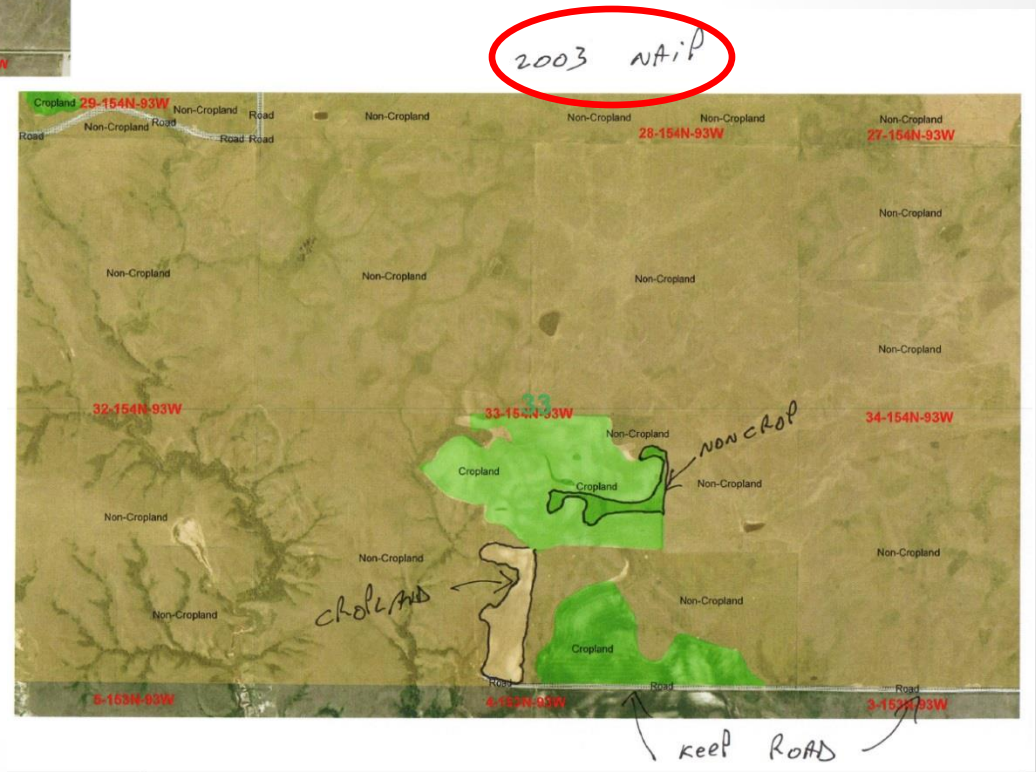
REVIEW STEPS-EXAMPLE 1



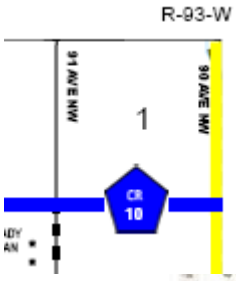
Symbol	Value	Label
	<Heading>	LUCode
	COM	Commercial
	CR	Cropland
	GP	Gravel Pits
	NA	Non-Ag
	NCR	Non-Cropland
	OS	Oilwell Site
	RES	Residence
	RD	Road
	SWP	Salt Water Plant

- Original Copy
- Landuse Layer
  - 60% Transparency
- Annotations

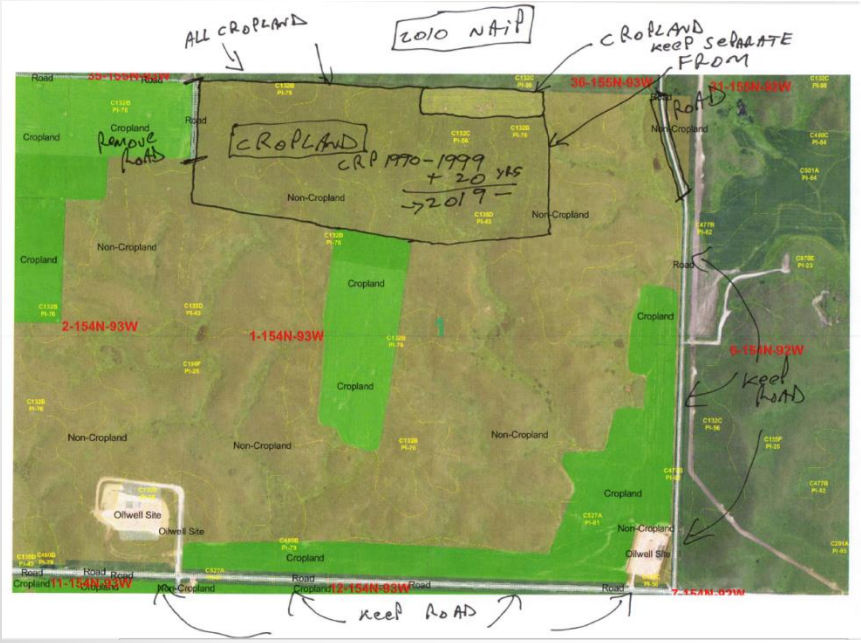




REVIEW STEPS-EXAMPLE 2



Old Maps



SIDWELL DRAWING ACCURACY
RAT LAKE

Rat Lake Changes.xlsx

Issue Acres

Sum of Acres	Column Labels				
Row Labels	Soils Comm	Tax Dept	TWP Review	Grand Total	
Commercial		4.03	1.09	5.12	1.12%
Cropland	10.44	12.90	12.59	35.93	7.87%
Gravel Pit			5.06	5.06	1.11%
Non-Ag		5.39		5.39	1.18%
Noncrop		267.83	128.95	396.78	86.89%
Oil Site		8.35		8.35	1.83%
Road					
Grand Total	10.44	298.50	147.69	456	
	2.3%	65.4%	32.3%		

New Use Acres

Sum of Acres	Column Labe			
Row Labels	Soils Comm	Tax Dept	TWP Review	Grand Total
Commercial		10.49		10.49
Cropland			125.90	271.44
CRP				122.29
Gravel Pit			3.05	3.05
			18.74	45.33
				4.03
			147.69	456.63

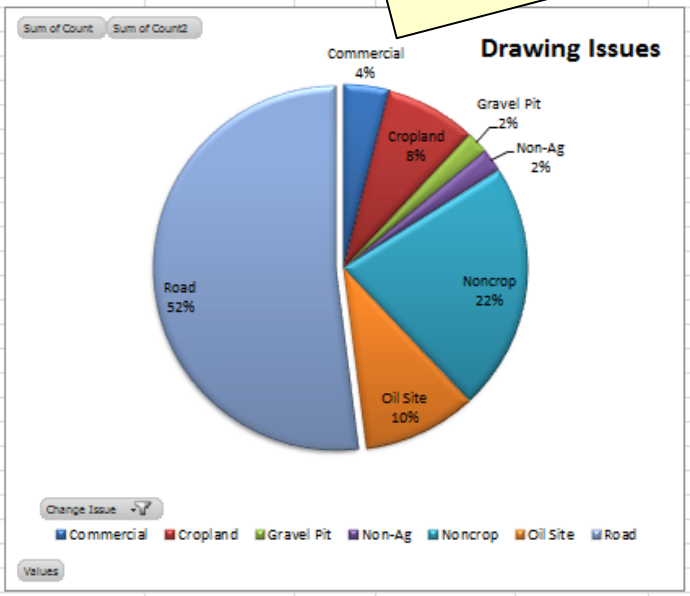
Sidwell Acreage Accuracy	
Rat Lake Acres	22,908.45
Issue Acres	456.63
Issue %	1.99%
Accuracy %	98.01%

98% Accuracy !

	Sum of Count	Sum of Count2
	1	2%
Tax Dept	43	86%
TWP Review	6	12%
Grand Total	50	100%

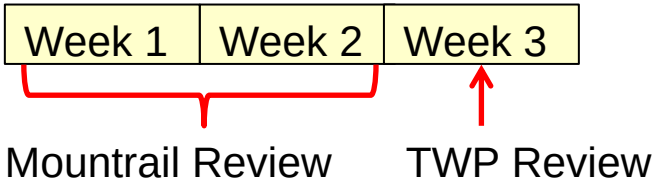
Row Labels	Sum of Count	Sum of Count2
Commercial	2	4%
Cropland	4	8%
Gravel Pit	1	2%
Non-Ag	1	2%
Noncrop	11	22%
Oil Site	5	10%
Road	26	52%
Grand Total	50	100%

Row Label	Sum of Count	Sum of Count2
Soils Comm	1	2%
Croplanc	1	2%
Tax Dept	43	86%
Commer	1	2%
Croplanc	2	4%
Non-Ag	1	2%
Noncrop	8	16%
Oil Site	5	10%
Road	26	52%
TWP Revie	6	12%
Commer	1	2%
Croplanc	1	2%
Gravel Pi	1	2%
Noncrop	3	6%
Grand Total	50	100%

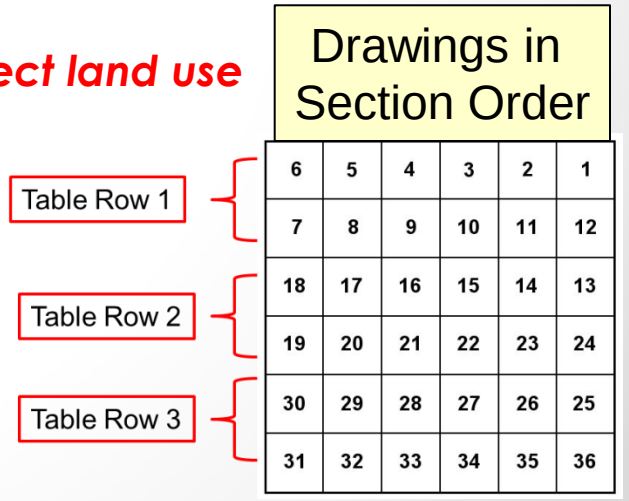


SOILS COMMITTEE REVIEW

- ***After Soils Committee Review – Process Simplification suggestions***
  - *Sidwell Draws and sends to Mountrail - 3 week review cycle*



  - ***TWPs are immediately scheduled to review at 'week 3'***
  - ***Mountrail Reviews and annotates during weeks 1 and 2***
  - ***'week 3' – Township board / other Township landowners in for review***
    - ***One Township at a time***
    - ***Just review Cropland and Noncropland for correct land use***
    - ****CRP Acre* Identification***
  - *Soils Committee Regional Rep at review*
  - *All Mountrail and TWP updates and changes then sent to Sidwell*



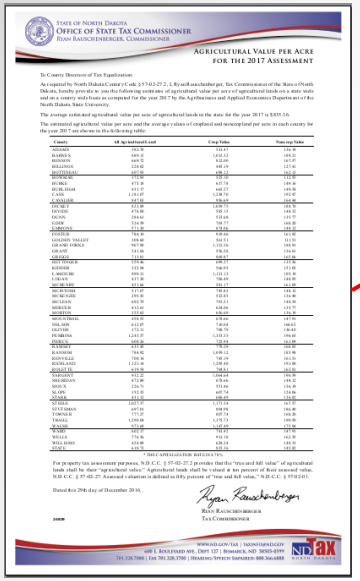
- ***Rat Lake Township Reviewed***
  - ***TWP Officers and Other Interested Land owners***

SUMMARY AND NEXT STEPS

- In process - Tiers 1-8
- Tier roughly takes 4-6 weeks to draw; 3 weeks to review
- **Township Clerks will be notified 3 weeks out of date and time of review**
  - **Clerks will contact rest of Township officers and other interested land owners for review**
- All Townships reviewed by Tier Order
  - Within a Tier, all TWPs reviewed during the 'week 3'
- Final updates sent back to Sidwell for GIS update
- Ongoing Maintenance updates

Information Table with samples

ND LAND VALUATION OVERVIEW


STATE OF NORTH DAKOTA
OFFICE OF STATE TAX COMMISSIONER
RYAN RAUSCHENBERGER, COMMISSIONER

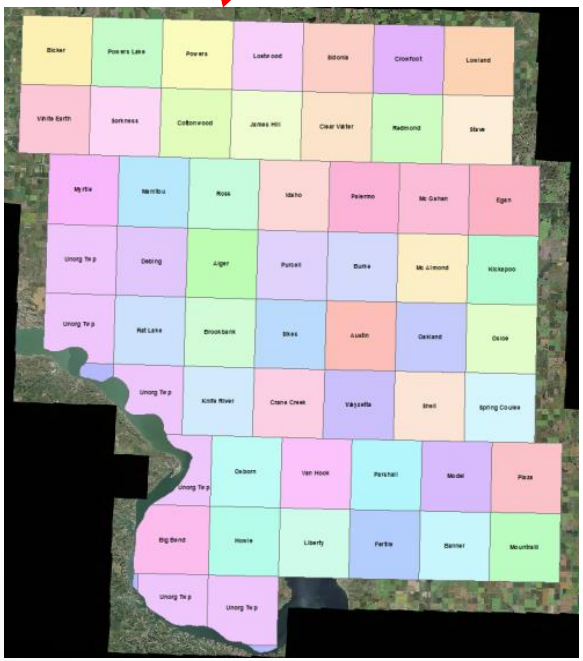
AGRICULTURAL VALUE PER ACRE
FOR THE 2017 ASSESSMENT

NDSU Ag Values

Averages

NDSU Ag Land
Production Value 2016
Average Ag - $458.53
Cropland - $678.66
NonCrop - $147.91

How much to
Where?



Mountrail Ag Acres
1,066,808.96
X **$458.53**
=

Ag Acre Total Value
$489,163,912.43
at 100% Threshold

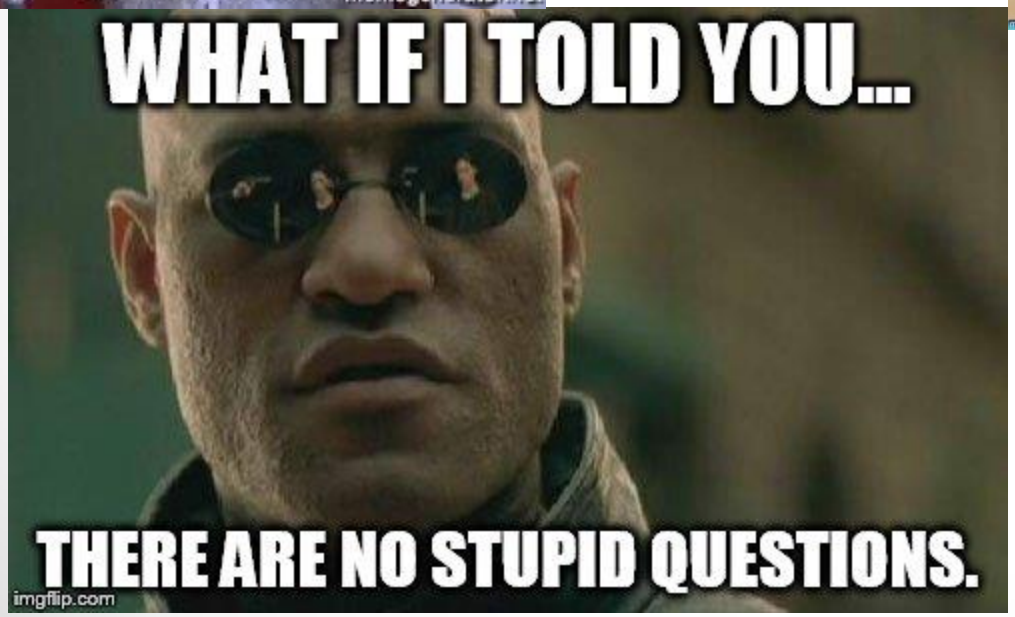
Problem: How to make Allocation Equitable?

Need to know how many crop and noncrop acres, other types of land

QUESTIONS?


PRESENTATION FINISHED
ANY "QUESTIONS" LEFT?
memegenerator.net


ANY
QUESTIONS?


WHAT IF I TOLD YOU...
THERE ARE NO STUPID QUESTIONS.
imgflip.com


PRESENTATION FINISHED
ANY QUESTIONS?

TOWNSHIPS BY PI

- Red, Orange, Yellow lower PI's
- Greens are higher PI's

Symbol	Range	Label
	0.000000	0.000000
	0.000001 - 10.000000	0.000001 - 10.000000
	10.000001 - 20.000000	10.000001 - 20.000000
	20.000001 - 30.000000	20.000001 - 30.000000
	30.000001 - 40.000000	30.000001 - 40.000000
	40.000001 - 50.000000	40.000001 - 50.000000
	50.000001 - 60.000000	50.000001 - 60.000000
	60.000001 - 70.000000	60.000001 - 70.000000
	70.000001 - 80.000000	70.000001 - 80.000000
	80.000001 - 90.000000	80.000001 - 90.000000
	90.000001 - 95.000000	90.000001 - 95.000000