

# Devils Lake Basin

## Identifying Drained Wetlands

**Project Goal:** To identify possible illegal drains within the Devils Lake Basin.

Steps involved in the process

1. Identify areas within section of SWC's Permitted Drains.
2. Identify USFWS's wetland easement areas.
3. Identify areas of drained wetlands.
4. Plot the contributing areas of drainage for wetlands.
5. Identify drains constructed on ND DOT 1959 aerial photos.
6. Create a summary of a list showing identified possible illegal drains within each section with possible identification of current landowner from current county atlas. A map of the identified suspect drain showing the drainage area would also be provided.

**Output for WRB for each Township**

1. Summary list of suspect drains showing section description and contributing area
2. Copy of NRCS Wetland Inventory map of each suspect drain.
3. Copy of map showing DRG, contributing area and drain location. (MapInfo product)
4. Copy of Procedures for Closing Non-Permitted Drains.
5. Enclosed letter.

**Project Requirements.**

**Time Frame:** 6 months

**Locations:** Development Conference Room  
Planning Conference Room

**Staff:** 4 full time employees

**Equipment:** 2 - 200 MHZ computers w/ CD ROMS \$1400 - \$1700  
2 - Monitors - 20" Color Monitors 2 @ \$1215 = \$2430  
Or 17" Sony \$700 per monitor

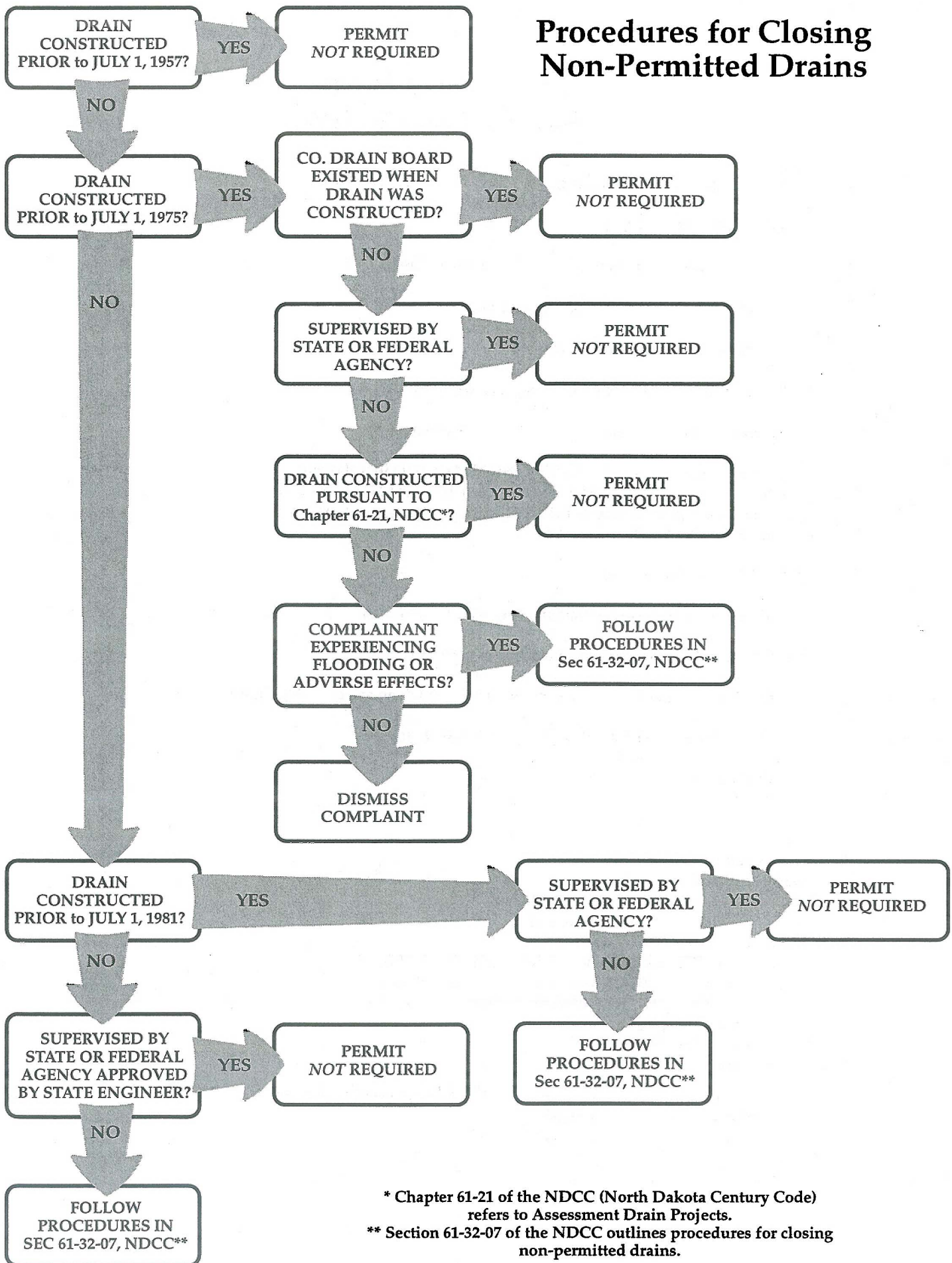
**Software:** MapInfo

**Supplies:** Color Print Cartridges - \$300

**Total Expenditures**

Staff	\$60,000	- \$15.00/hr - 6 months - 4 persons
Equipment	\$ 4,130	
Software	\$ 2,000	
Supplies	\$ 300	
<b>Total</b>	<b>\$66,430</b>	

# Procedures for Closing Non-Permitted Drains



\* Chapter 61-21 of the NDCC (North Dakota Century Code) refers to Assessment Drain Projects.

\*\* Section 61-32-07 of the NDCC outlines procedures for closing non-permitted drains.

Possible Illegal Drainage Investigation  
County Breakdown Totals

6/2/99

County	Total Number of Drains	Surface Area of Drained Wetlands (acres)	Number of Permitted Drains	Surface Area of Permitted Drained Wetland (acres)	Number of non-permitted Drains with Watershed >80 acres (to be looked at in photos)	Number of those drains that are pre-1957	Possible Illegal Drains	Contributing Area of Possible Illegal Drains (acres)
Benson*	1,458	1,857	52	53	24	11	13	1,807
Cavalier*	2,879	6,742	198	551	92	46	45	6,090
Nelson	1,152	2,375	529	1,035	18	3	15	1,894
Pierce	673	992	29	14	13	4	9	1,023
Ramsey*	8,840	18,408	3,130	7,051	158	52	105	17,777
Rolette	1,387	2,105	0	0	27	11	16	2,024
Towner	5,028	6,065	125	208	78	34	33	6,632
Walsh	1,147	2,728	28	75	13	4	9	1,067
Eddy	11	32	0	0	0	0	0	0

\*Active Twps (13) - still investigating particular drains

Total: 22,575      41,305      4,091      8,986      423      165      245      38,313

Possible Illegal Drain Percentage of Total Number of Drains: 1.09%

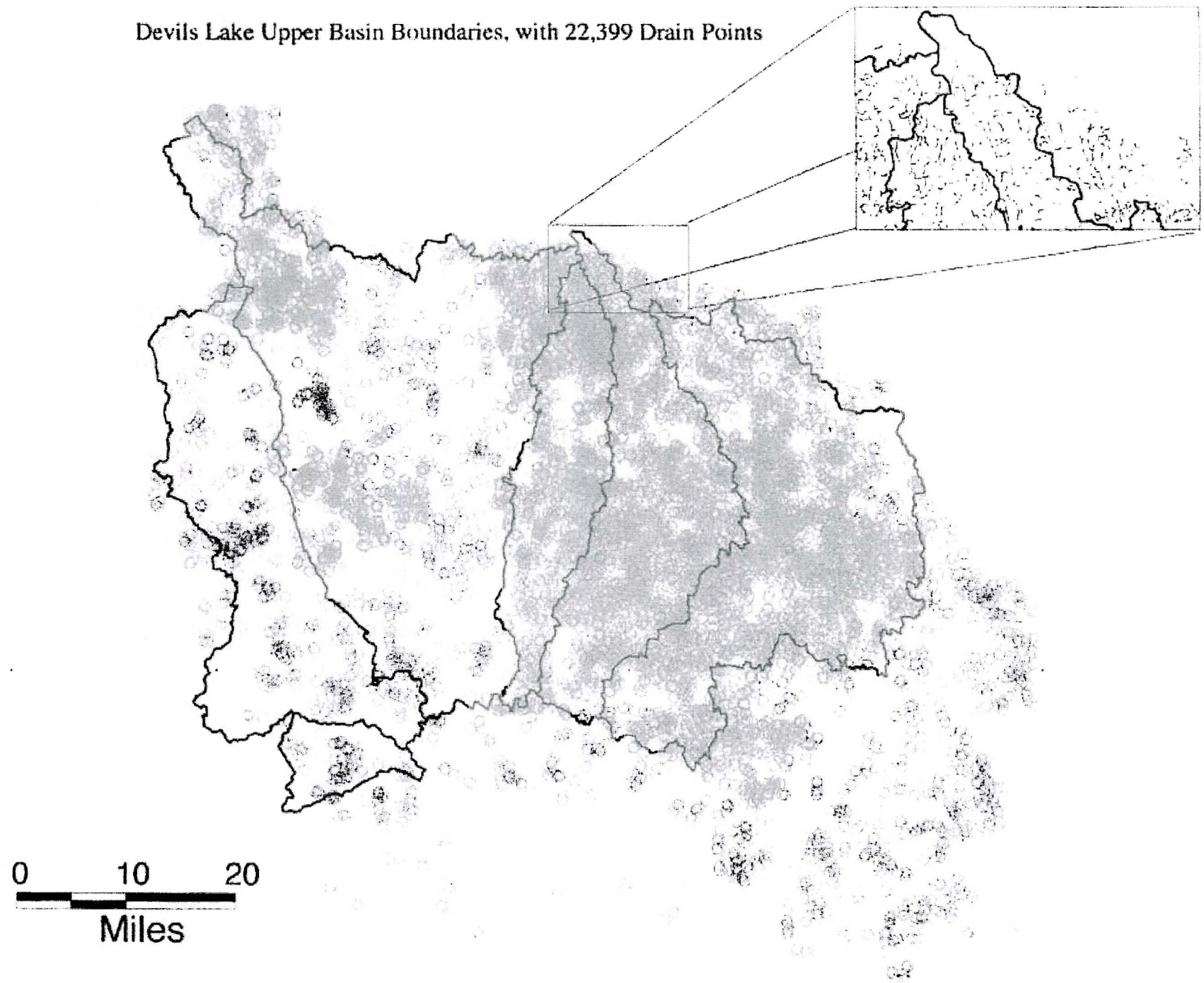
Stump Lake Basin				
County	Total Number of Drains	Surface Area of Drained Wetlands (acres)	Number of Permitted Drains	Surface Area of Permitted Drained Wetland (acres)
Nelson	<u>1,152</u>	<u>2,375</u>	<u>529</u>	<u>1,035</u>
Ramsey	<u>171</u>	<u>506</u>	<u>22</u>	<u>65</u>
Walsh	<u>338</u>	<u>998</u>	<u>22</u>	<u>32</u>
Total:	1,661	3,879	573	1,132

last update: 11/10/98

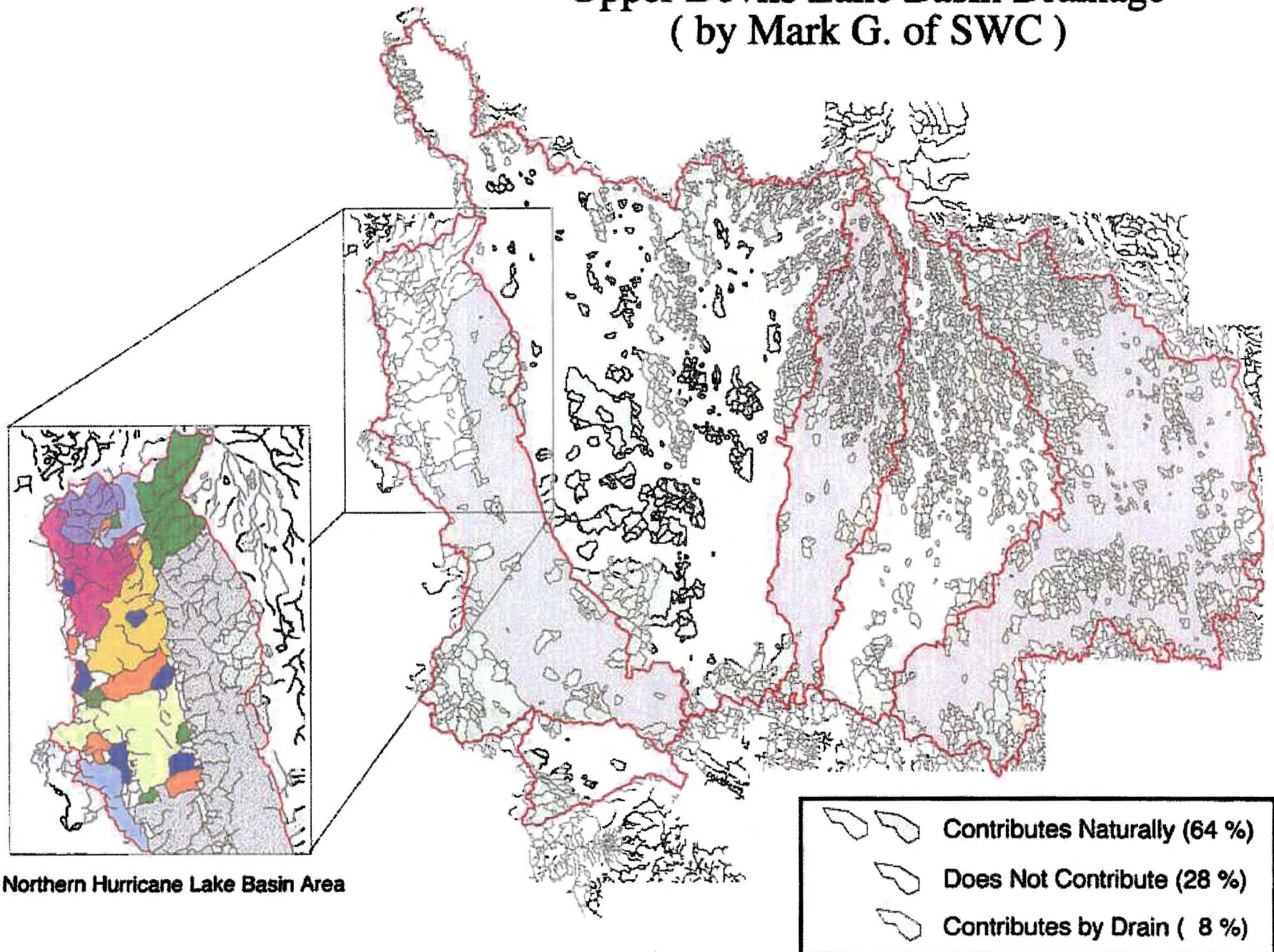
Devils Lake Basin minus Stump Lake Basin				
	Total Number of Drains	Surface Area of Drained Wetlands (acres)	Number of Permitted Drains	Surface Area of Permitted Drained Wetland (acres)
Total:	20,914	37,427	3,518	7,854



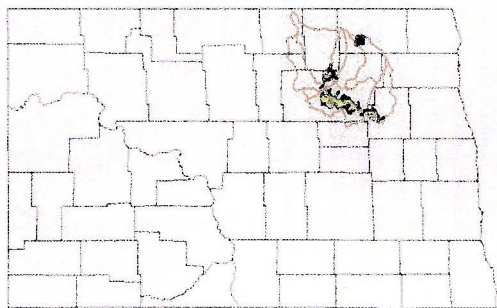
Devils Lake Upper Basin Boundaries, with 22,399 Drain Points











# Upper Devils Lake Basin Drainage ( by Mark G. of SWC )







-  National Wetland Inventory identified "drained"
-  National Wetland Inventory NOT identified "drained"
-  Fish & Wildlife Easement Area
-  Permitted Drain Area  
Permit Number
-  Possible Illegal Drain  
(Contributing Area greater than 80 ac.)
-  Drain
-  Contributing Drainage Area (acres)
-  Pumping Site

## Devils Lake Drain Inventory

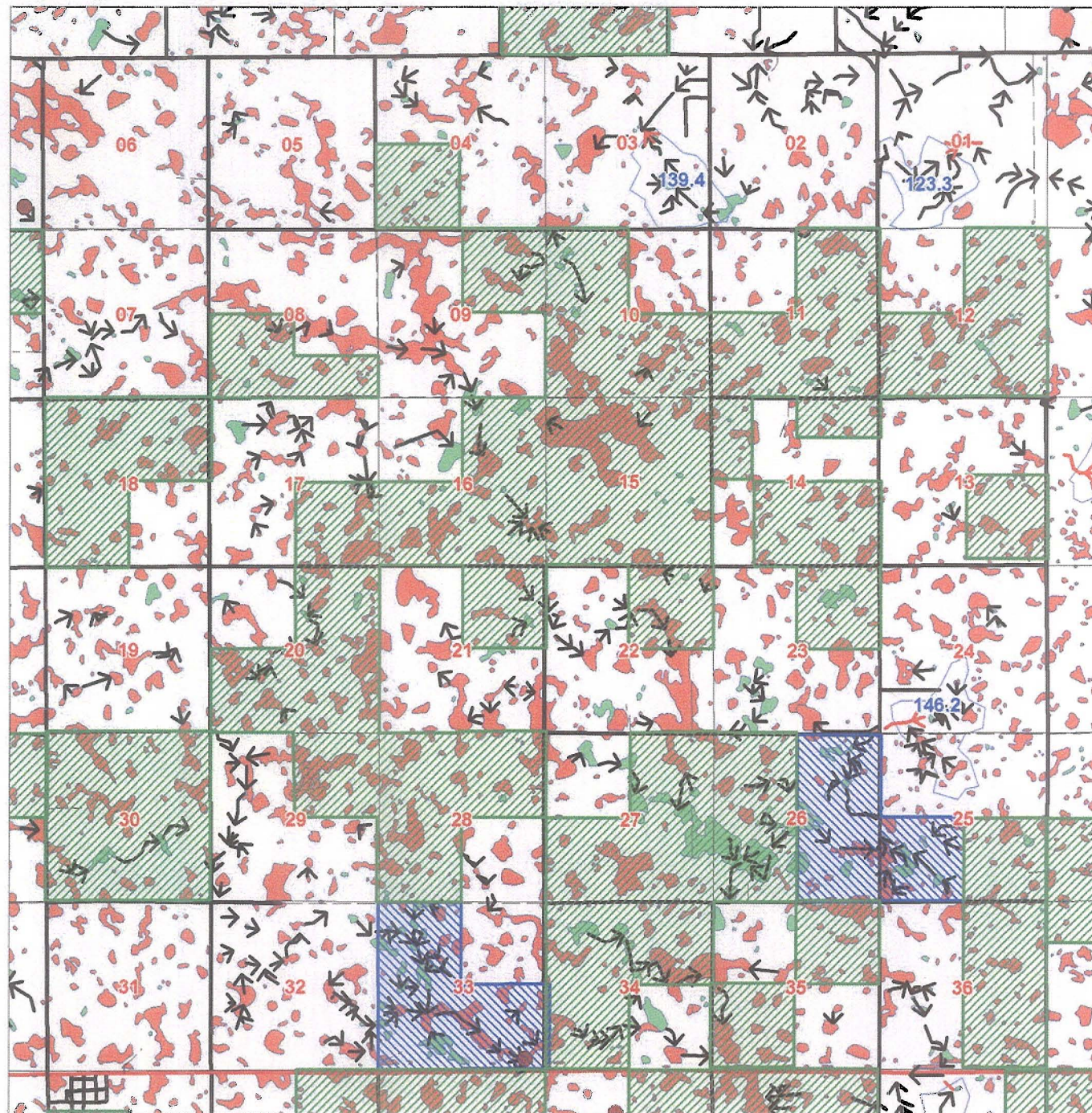
Total Number of Drains: **22,600**

Surface Area of  
Drained Wetlands: **41,300 Ac**

Number of Permitted Drains: **4,100**

Surface Area of Permitted  
Drained Wetlands: **9,000 Ac**

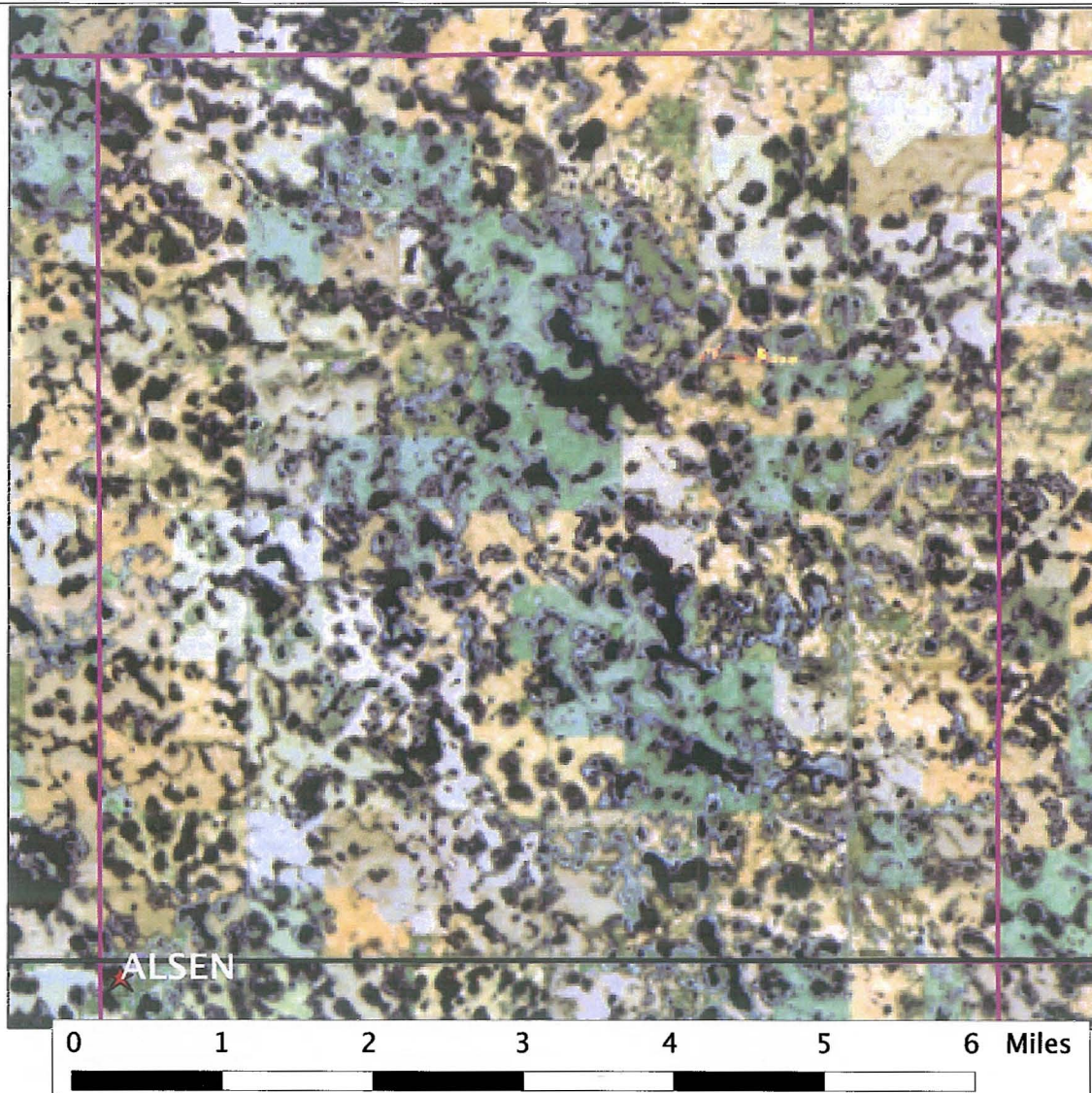
Number of Identified  
Potentially Illegal Drains: **245**



**Gordon Township (160-062) - Cavalier County - Devils Lake Basin - North Dakota**



*Upper Devils Lake Basin: T160-R062 (near Alsen, ND)*



**Legend**

Image collected on\_May15, 2010

— Landsat : Bands 7-5-3

Township Boundaries



NDak Towns



State & Federal Highways

— Highway #66

**Landsat on May 15, 2010  
Bands 7-5-3**

Produced by N. Dak. SWC on June 2010 (mhove)