
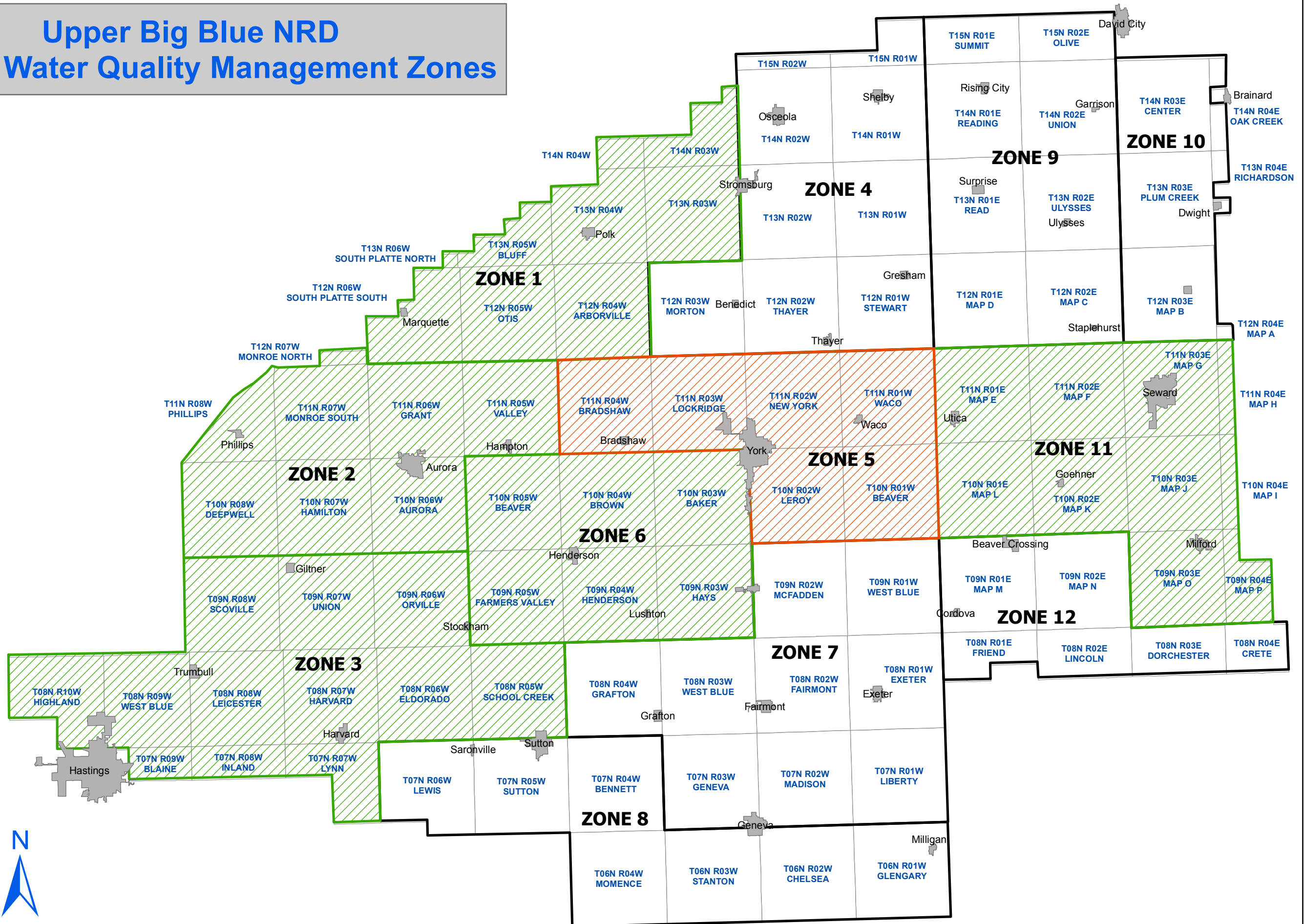


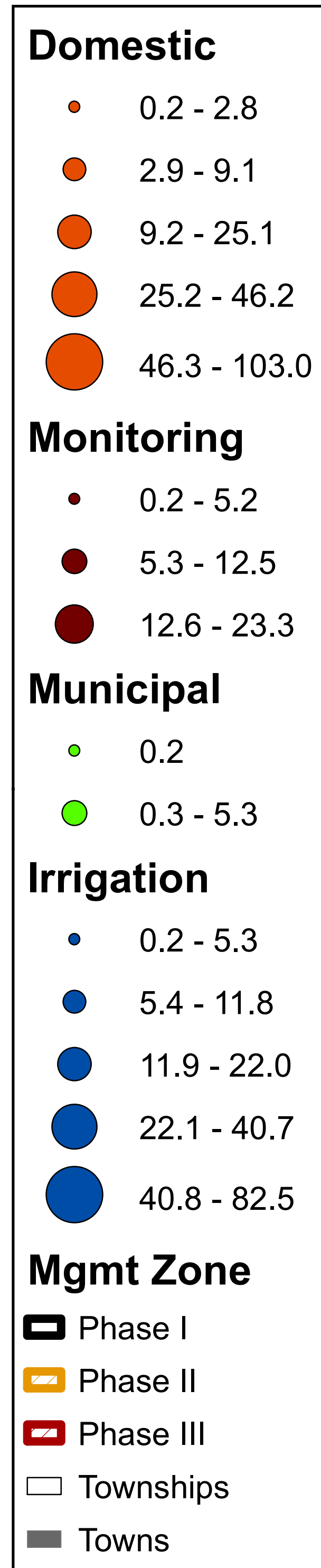
# Upper Big Blue NRD Ground Water Quality Management Zones

## Legend

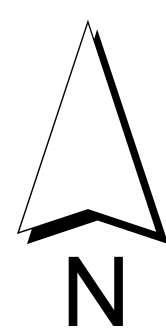
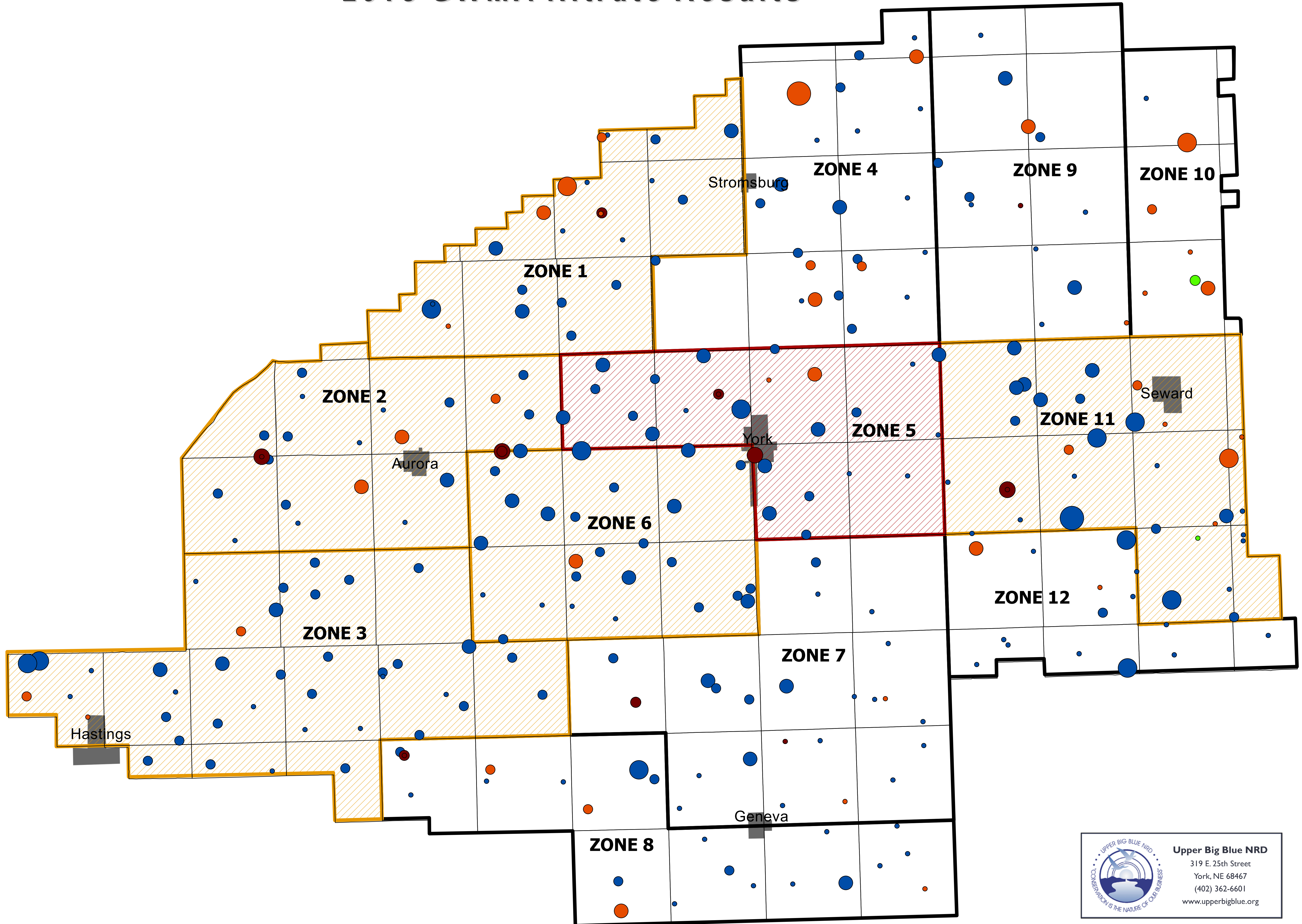
-  Town
-  Township
- Mgmt Phase**
-  I
-  II
-  III



# 2018 GWMA Nitrate Results

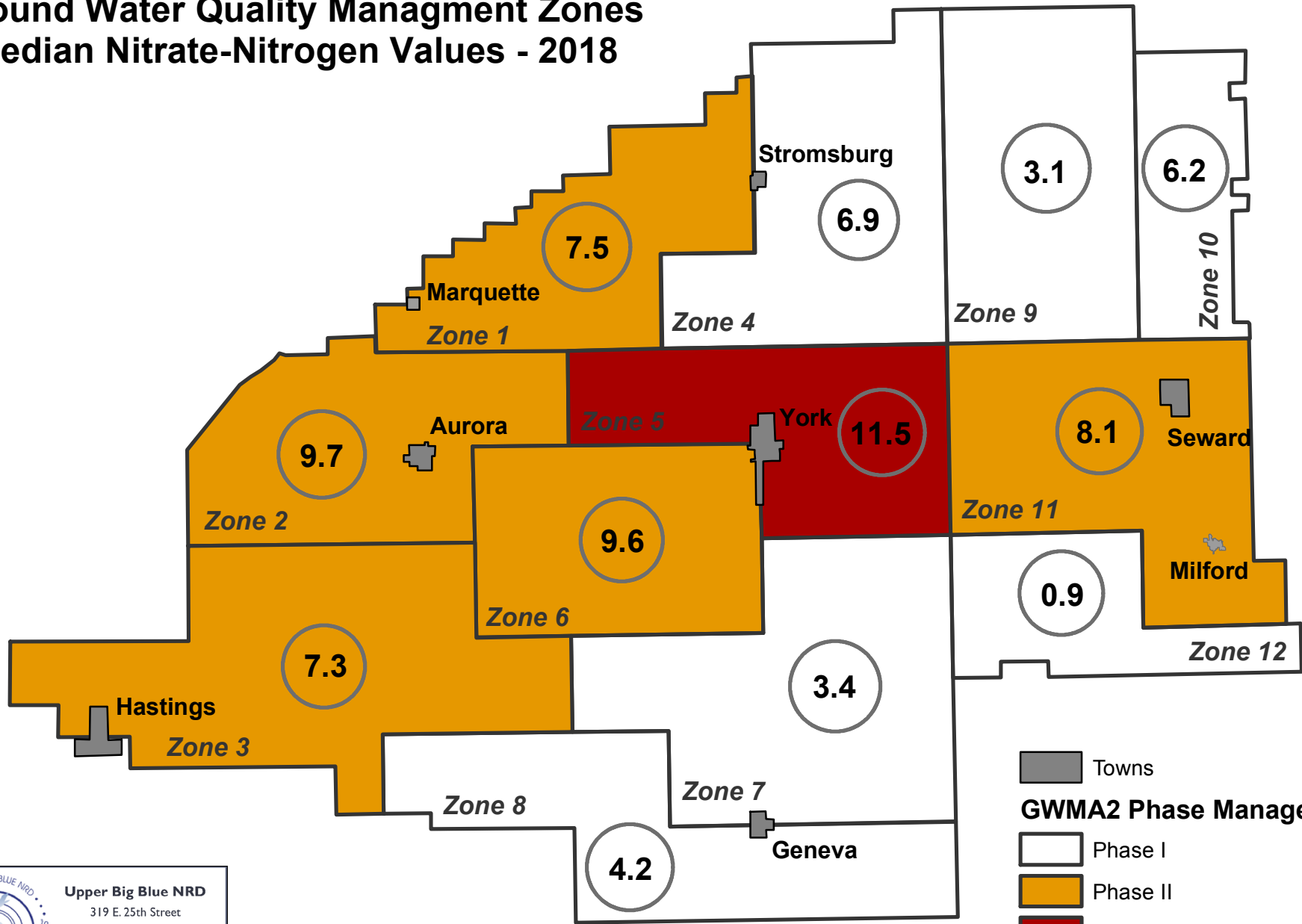


\*Results in ppm



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# Upper Big Blue NRD Ground Water Quality Management Zones Median Nitrate-Nitrogen Values - 2018



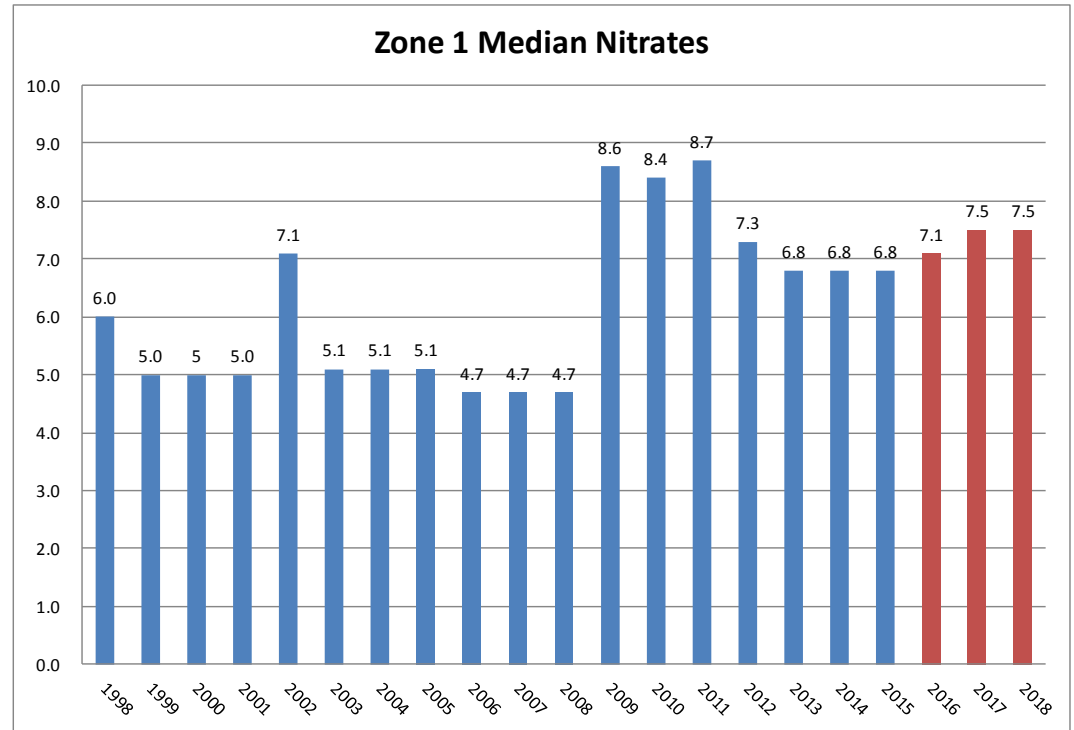
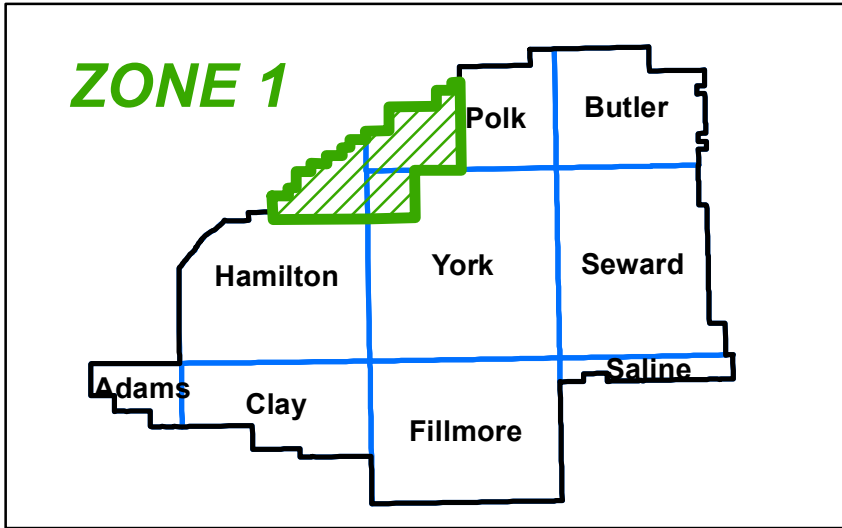
**Towns**

**GWMA2 Phase Management**

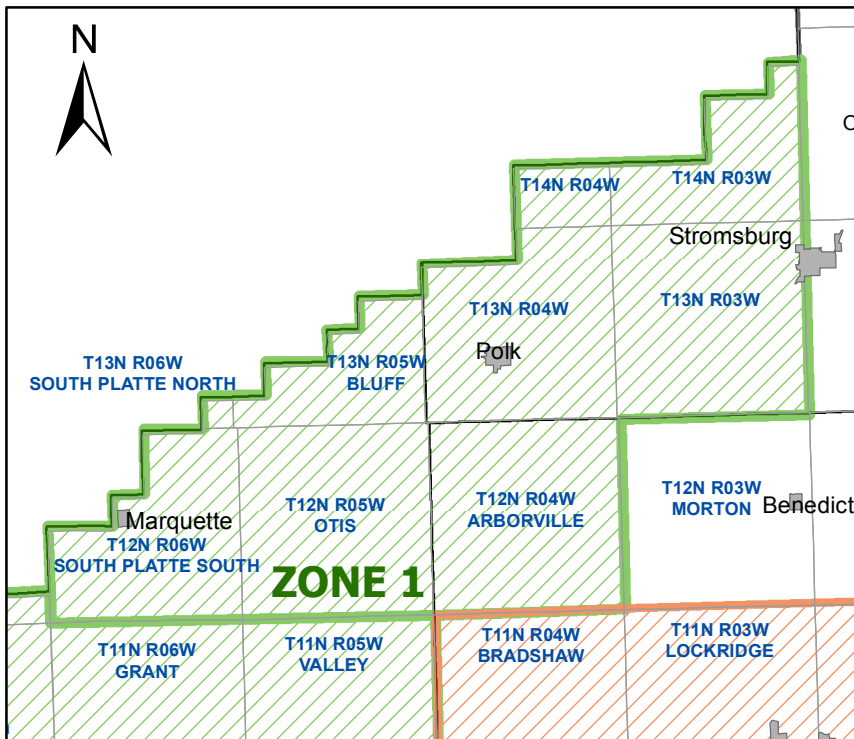
- Phase I
- Phase II
- Phase III

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# Management Zone #1 20-Year Median Nitrates



\* Zone 1 was designated Phase II in 2016



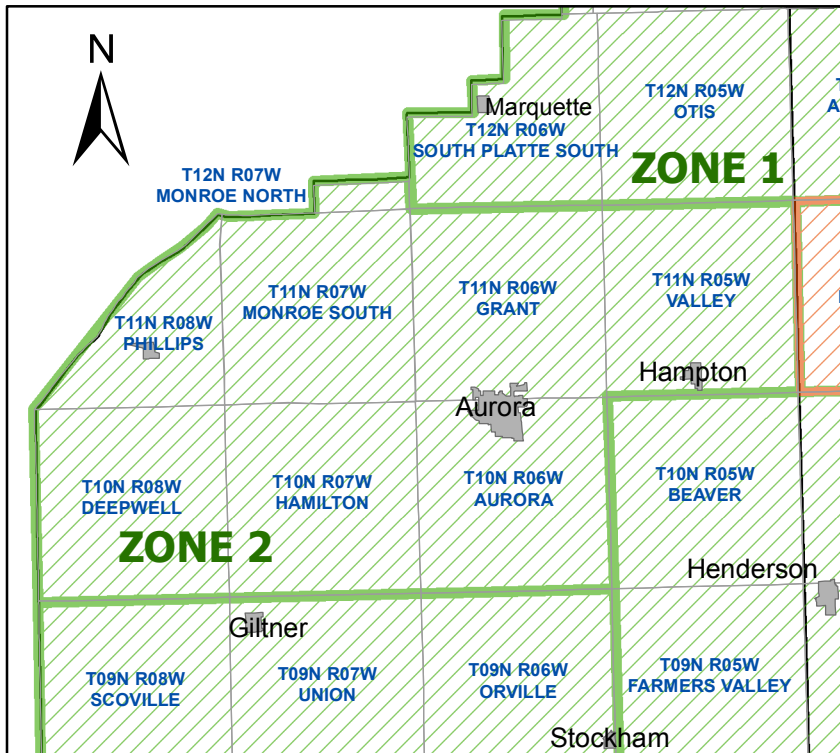
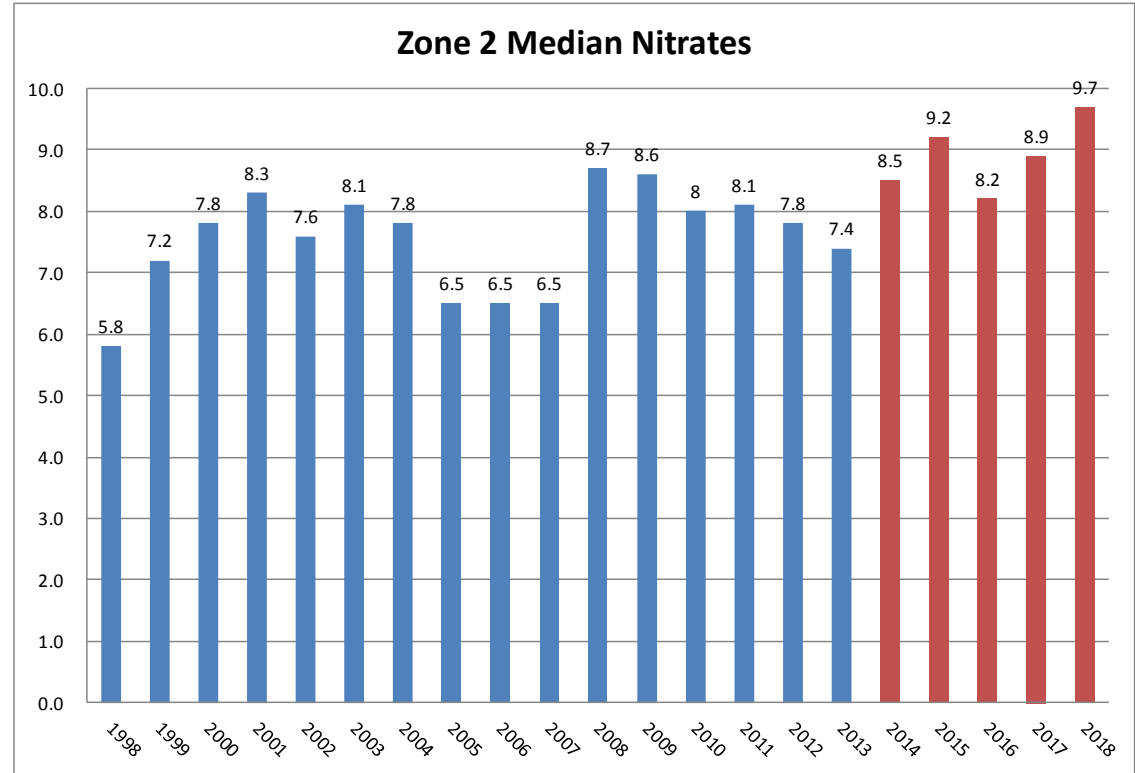
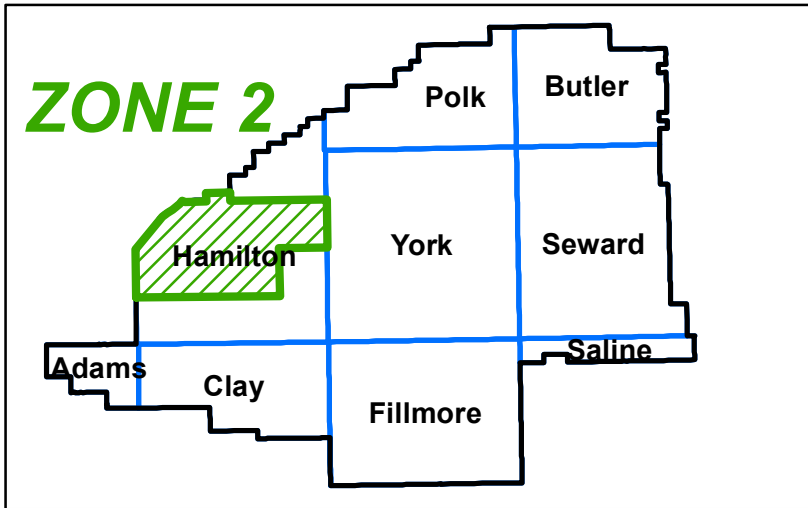
## Legend

### Management Zones

- Phase I
- Phase II > 7 ppm
- Phase III > 10 ppm

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# Management Zone #2 20-Year Median Nitrates



\* Zone 2 was designated Phase II in 2014

## Legend

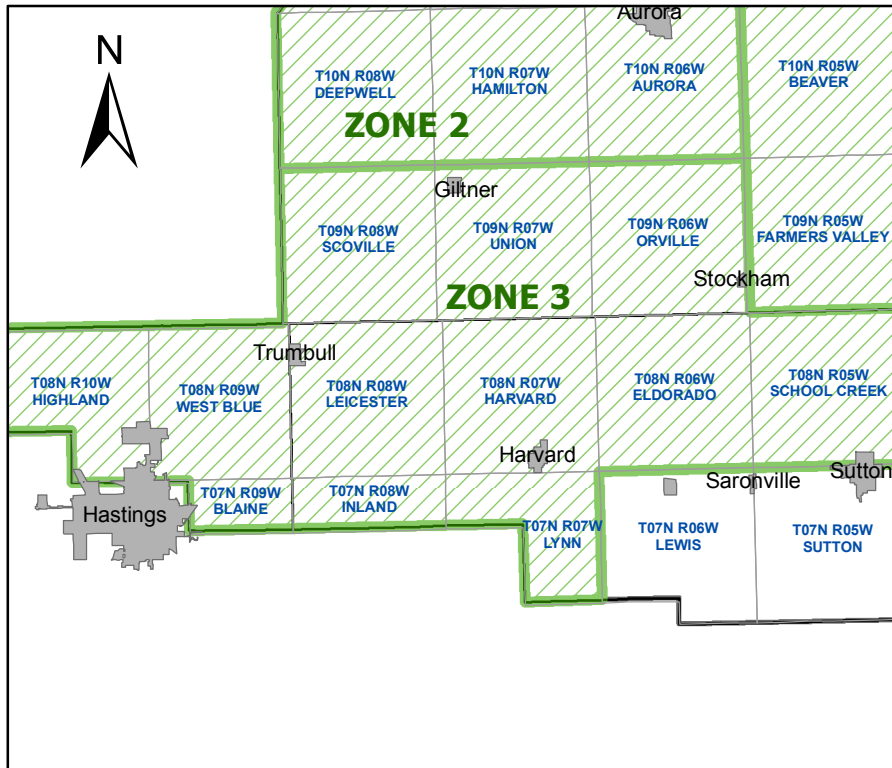
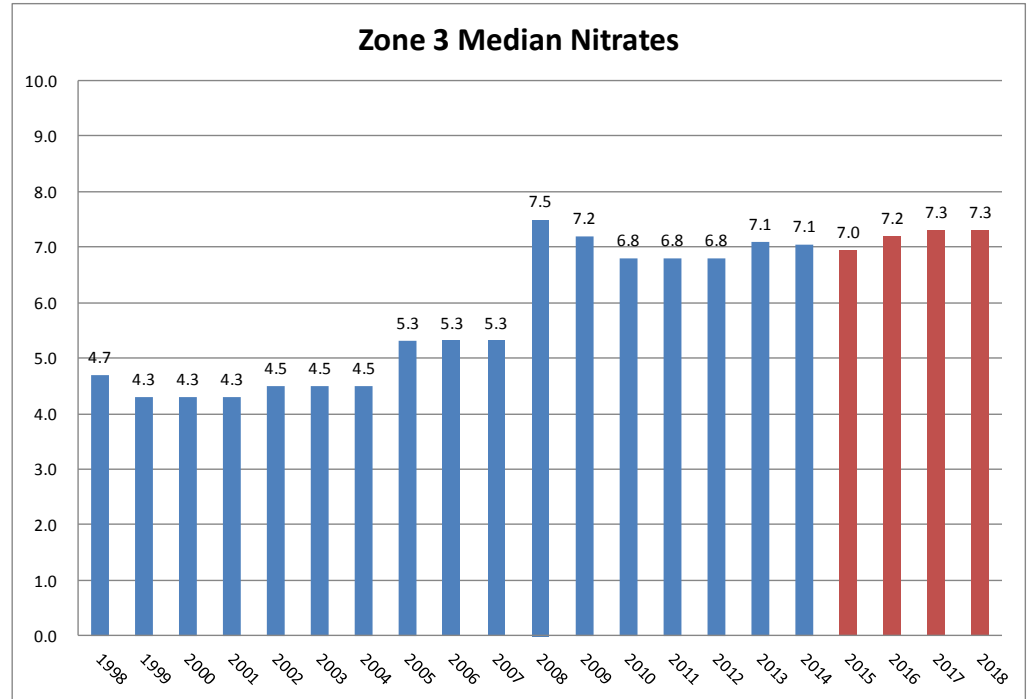
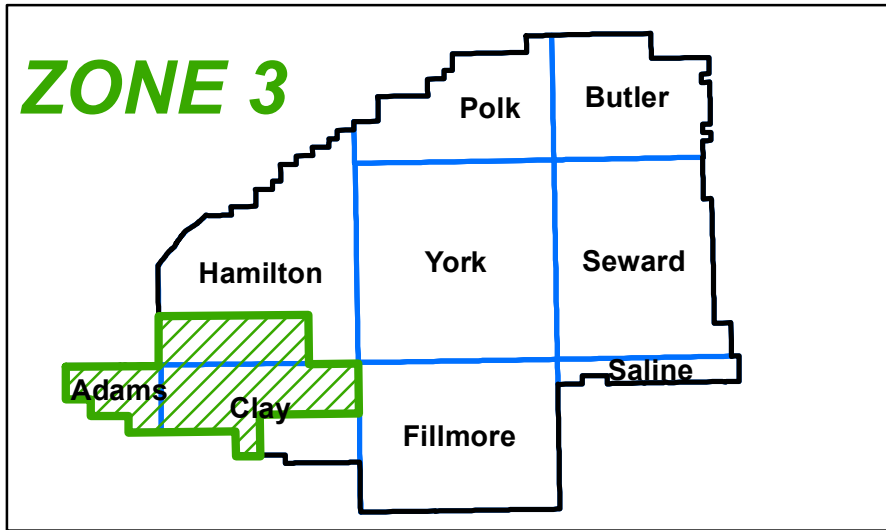
### Management Zones

- Phase I
- Phase II > 7 ppm
- Phase III > 10 ppm



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# Management Zone #3 20-Year Median Nitrates



\* Zone 3 was designated Phase II in 2015

## Legend

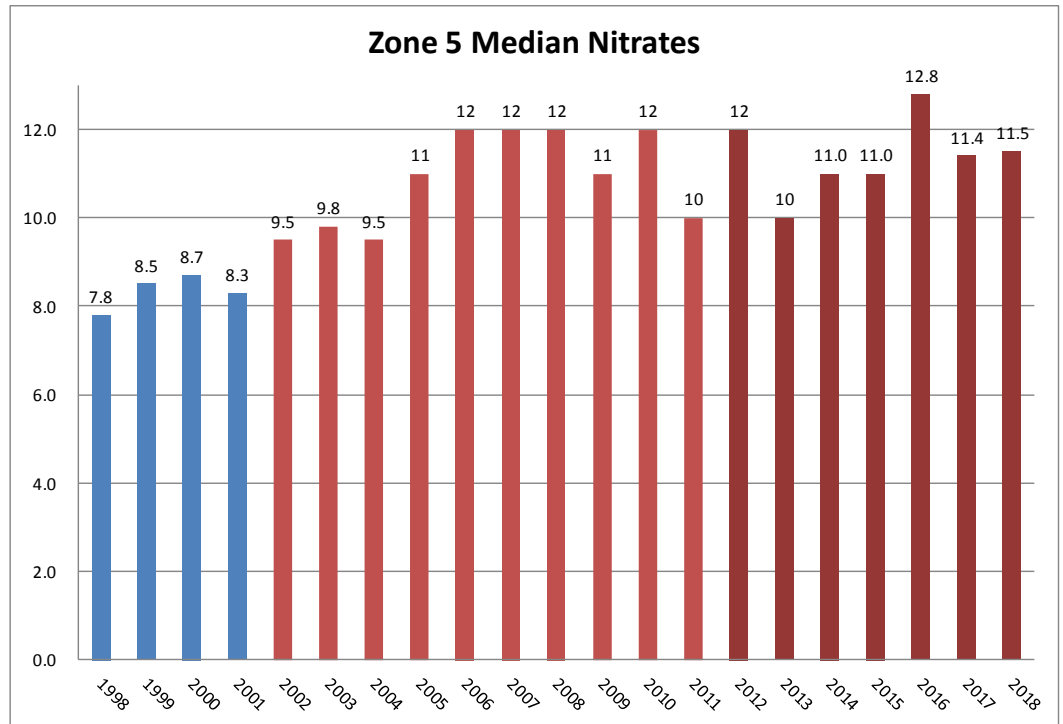
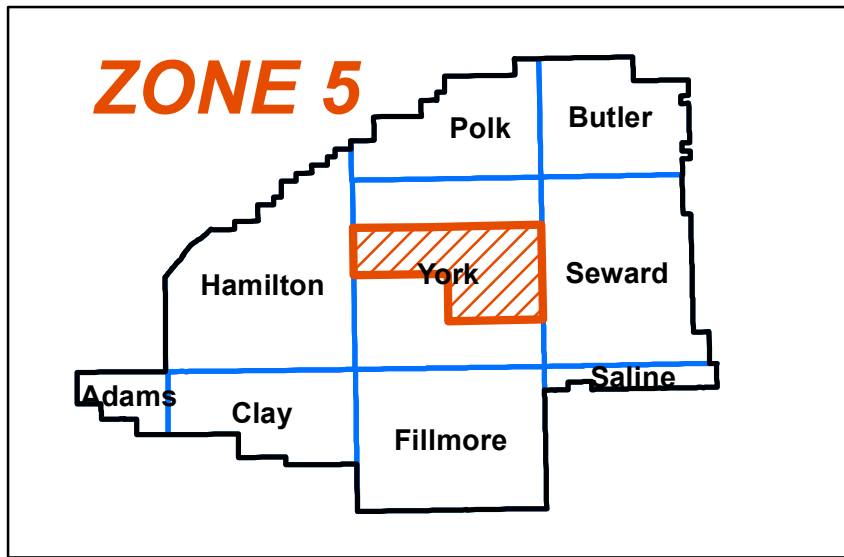
### Management Zones

-  Phase I
-  Phase II > 7 ppm
-  Phase III > 10 ppm

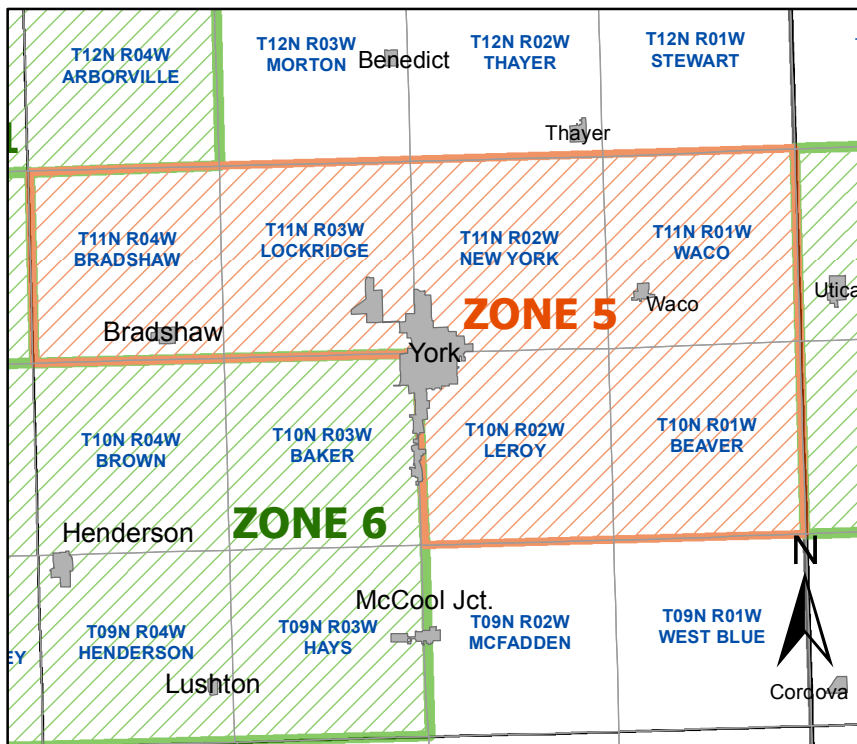


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# Management Zone #5 20-Year Median Nitrates







\* Zone 5 was designated Phase II in 2002 and Phase III in 2012



## Legend

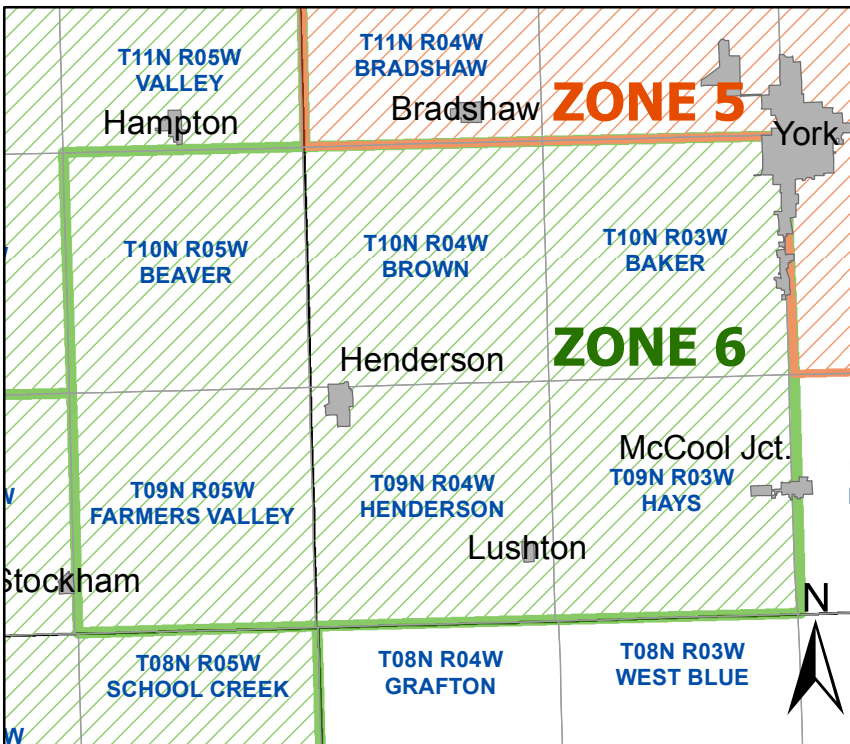
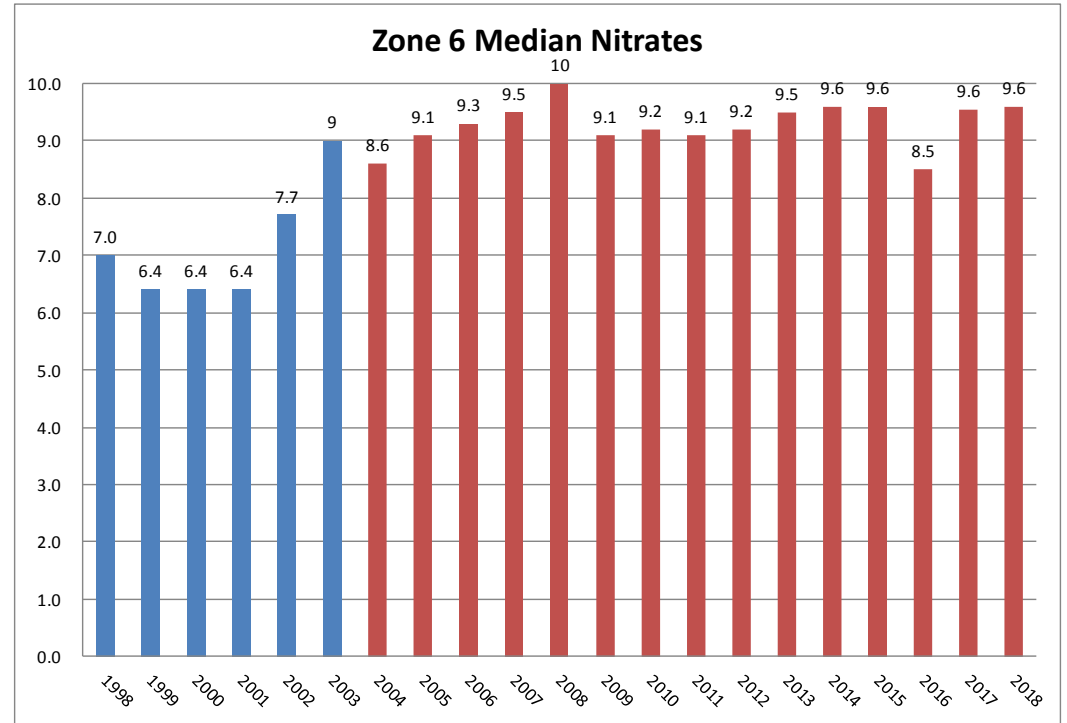
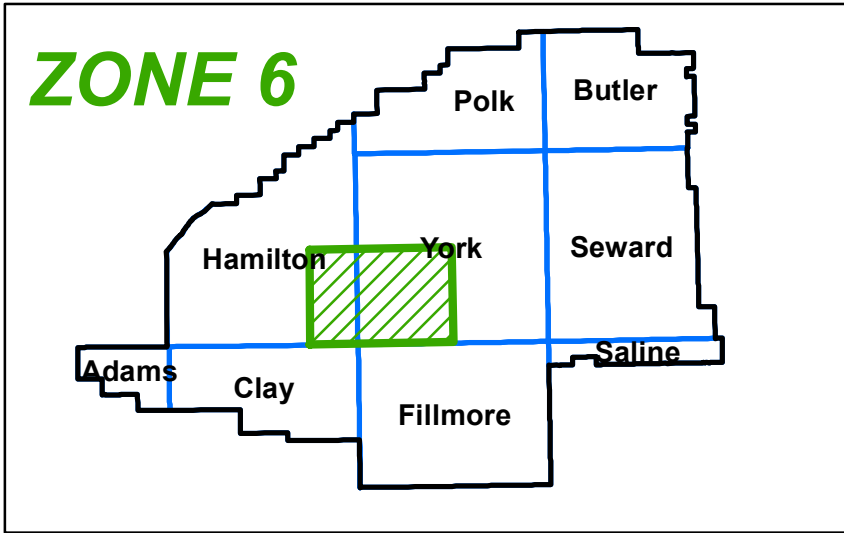
### Management Zones

-  Phase I
-  Phase II > 7 ppm
-  Phase III > 10 ppm



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# Management Zone #6 20-Year Median Nitrates



\* Zone 6 was designated Phase II in 2004

## Legend

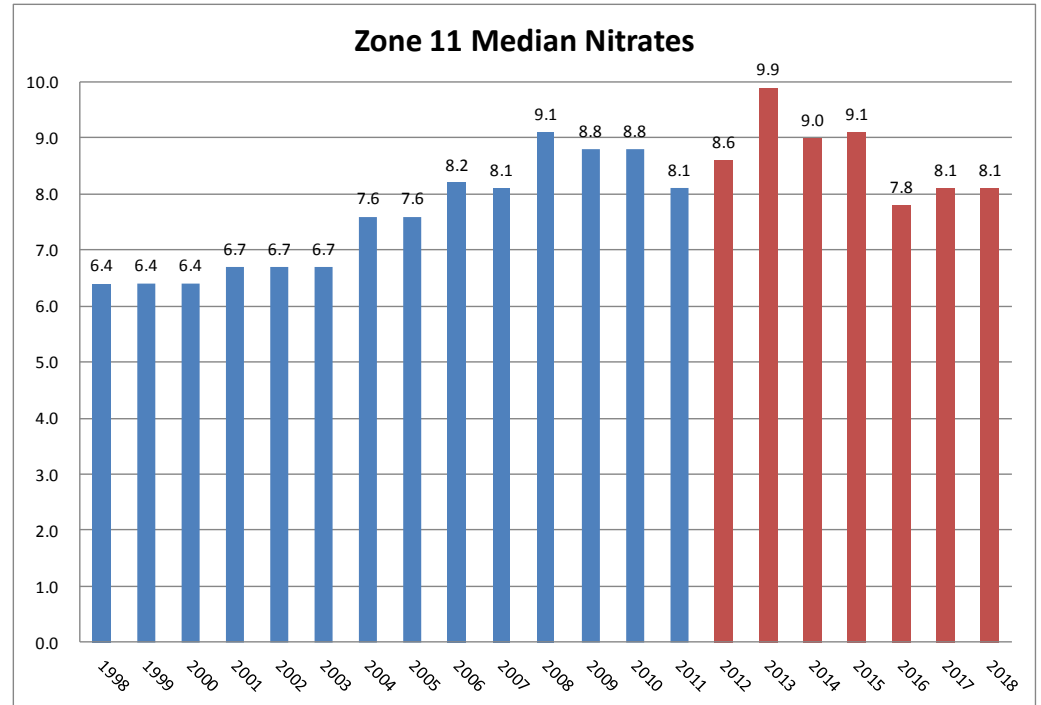
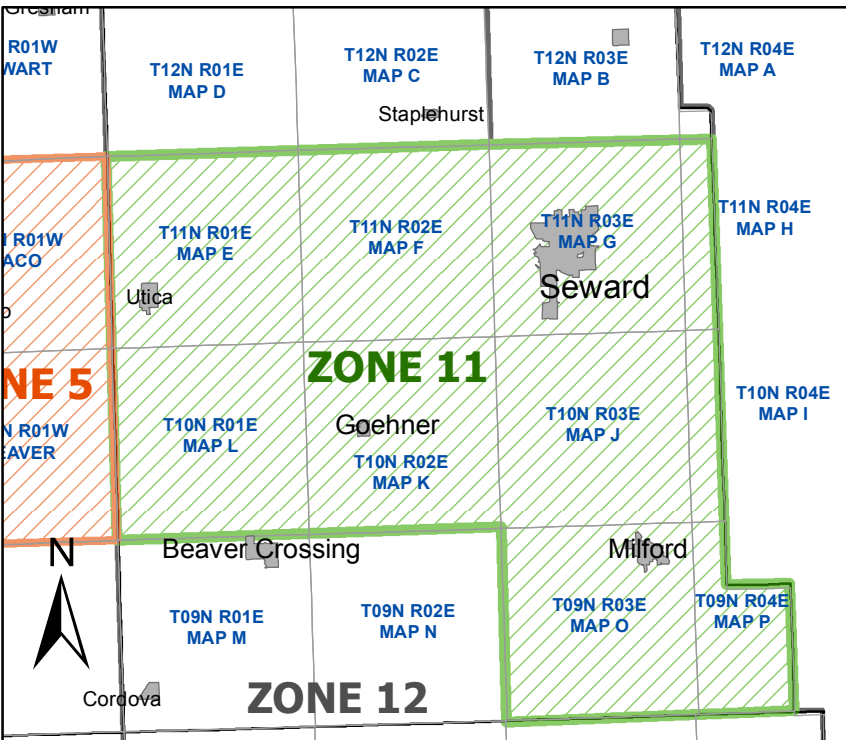
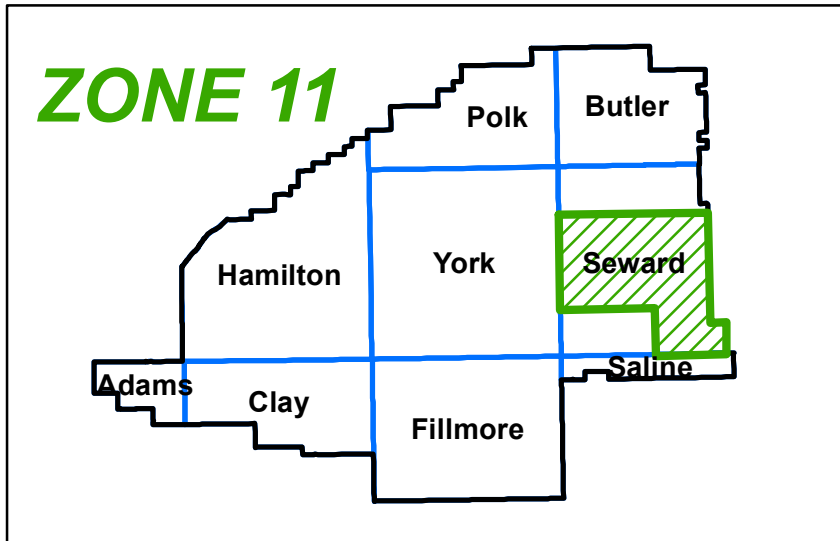
### Management Zones

- Phase I
- Phase II > 7 ppm
- Phase III > 10 ppm

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# Management Zone #11 20-Year Median Nitrates



\* Zone 11 was designated Phase II in 2012

## Legend

### Management Zones

-  Phase I
-  Phase II > 7 ppm
-  Phase III > 10 ppm

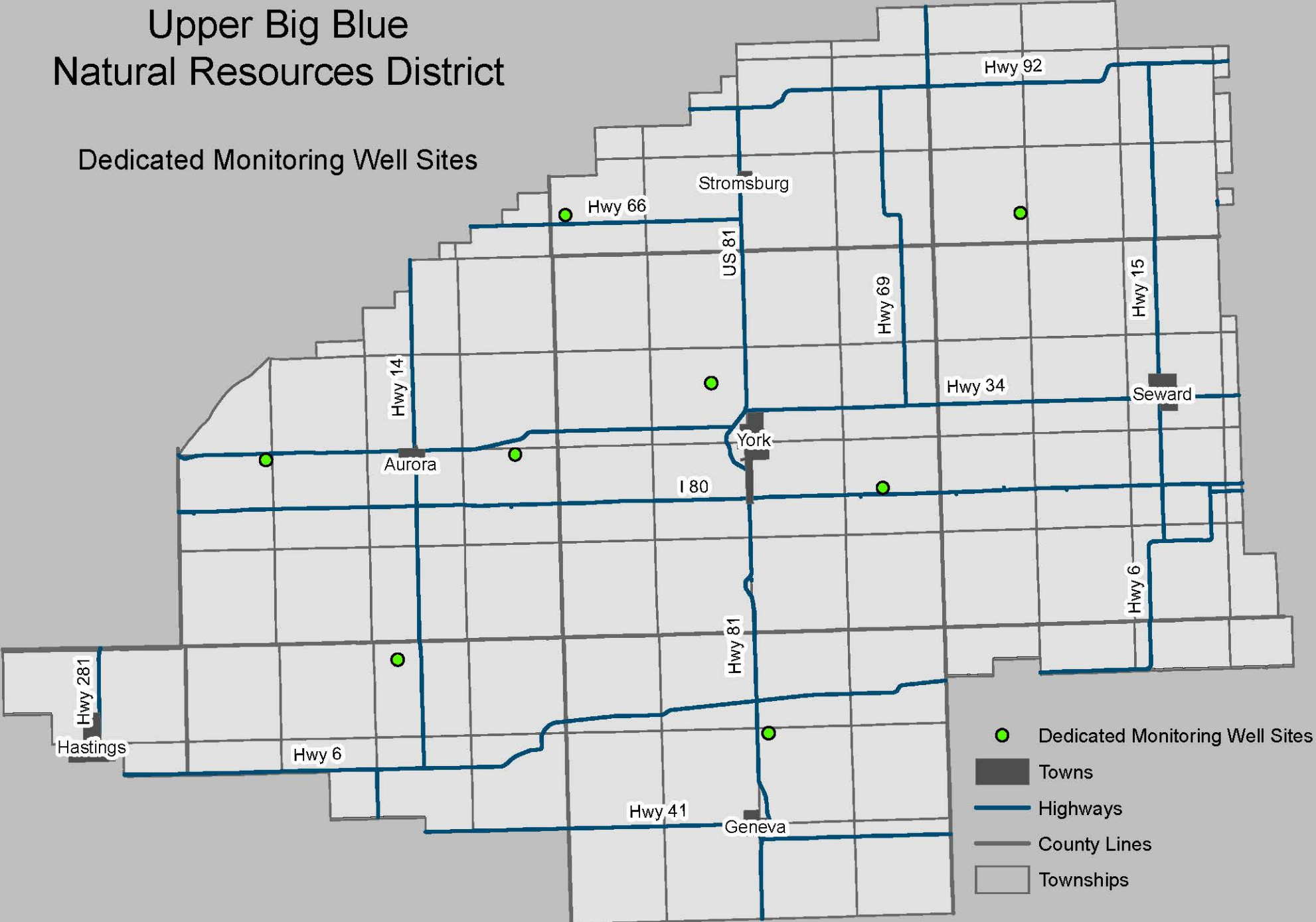


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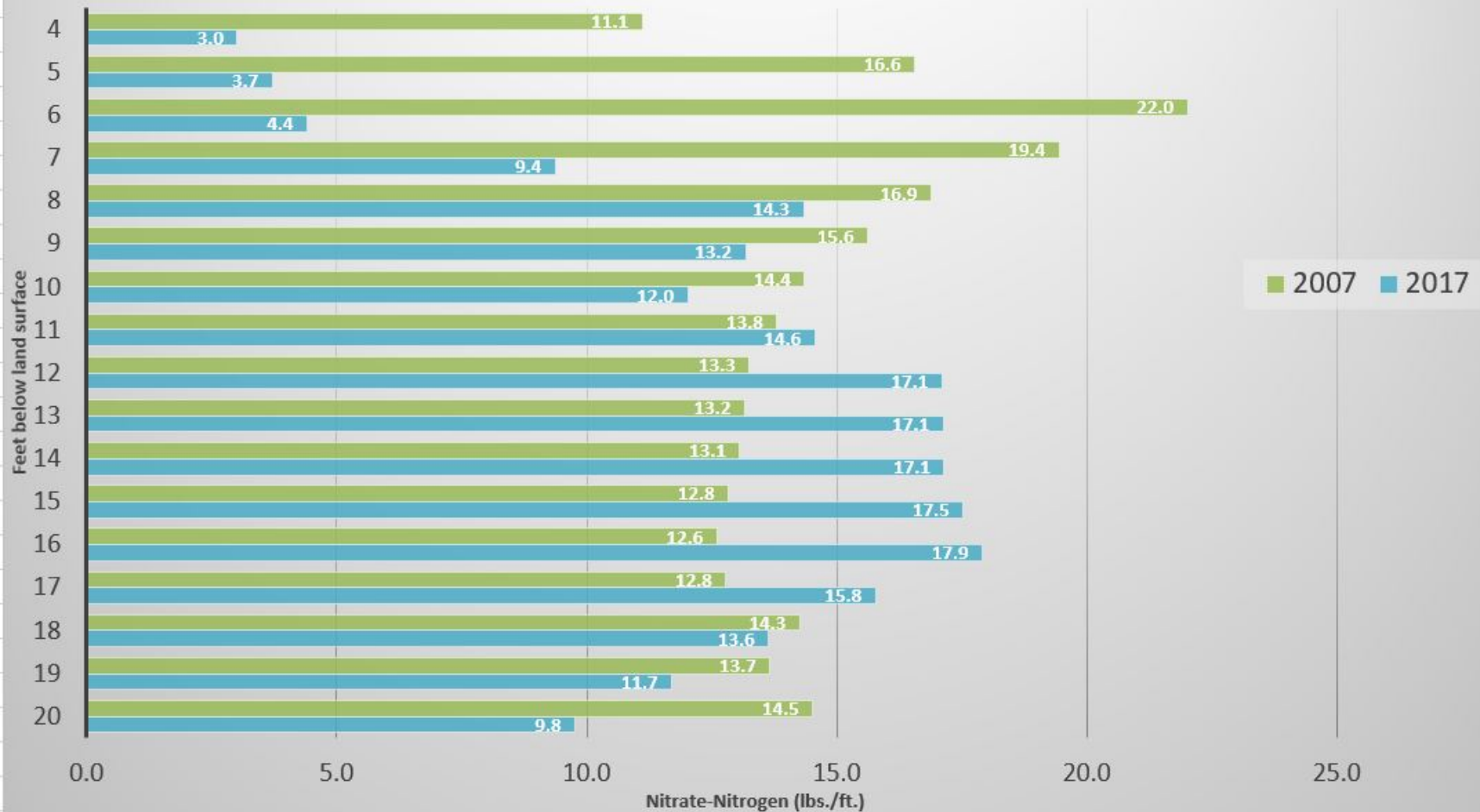
The next 5 pages represent  
unsaturated zone soil nitrates  
from fields near the NRD's  
dedicated monitoring well sites

# Upper Big Blue Natural Resources District

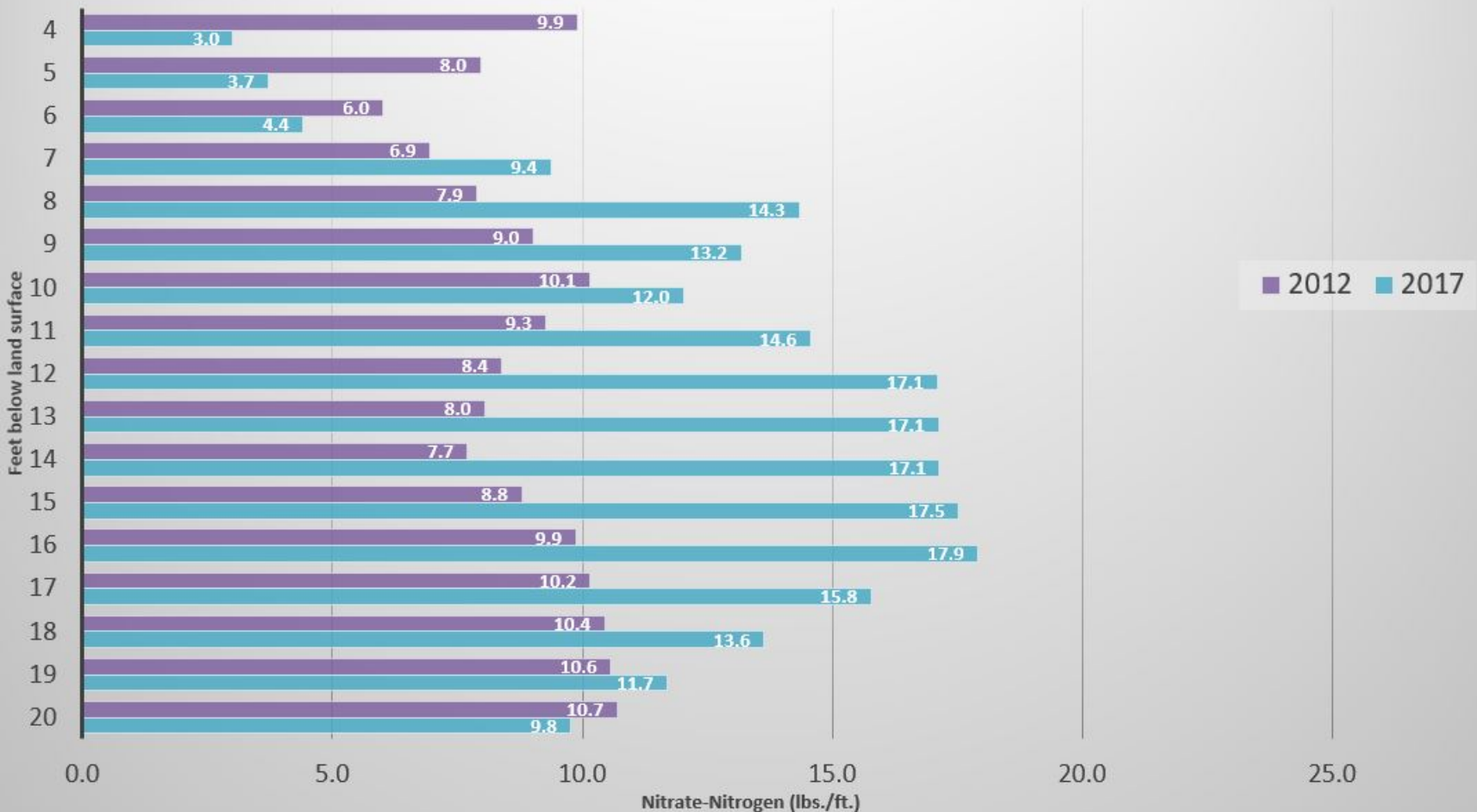
## Dedicated Monitoring Well Sites



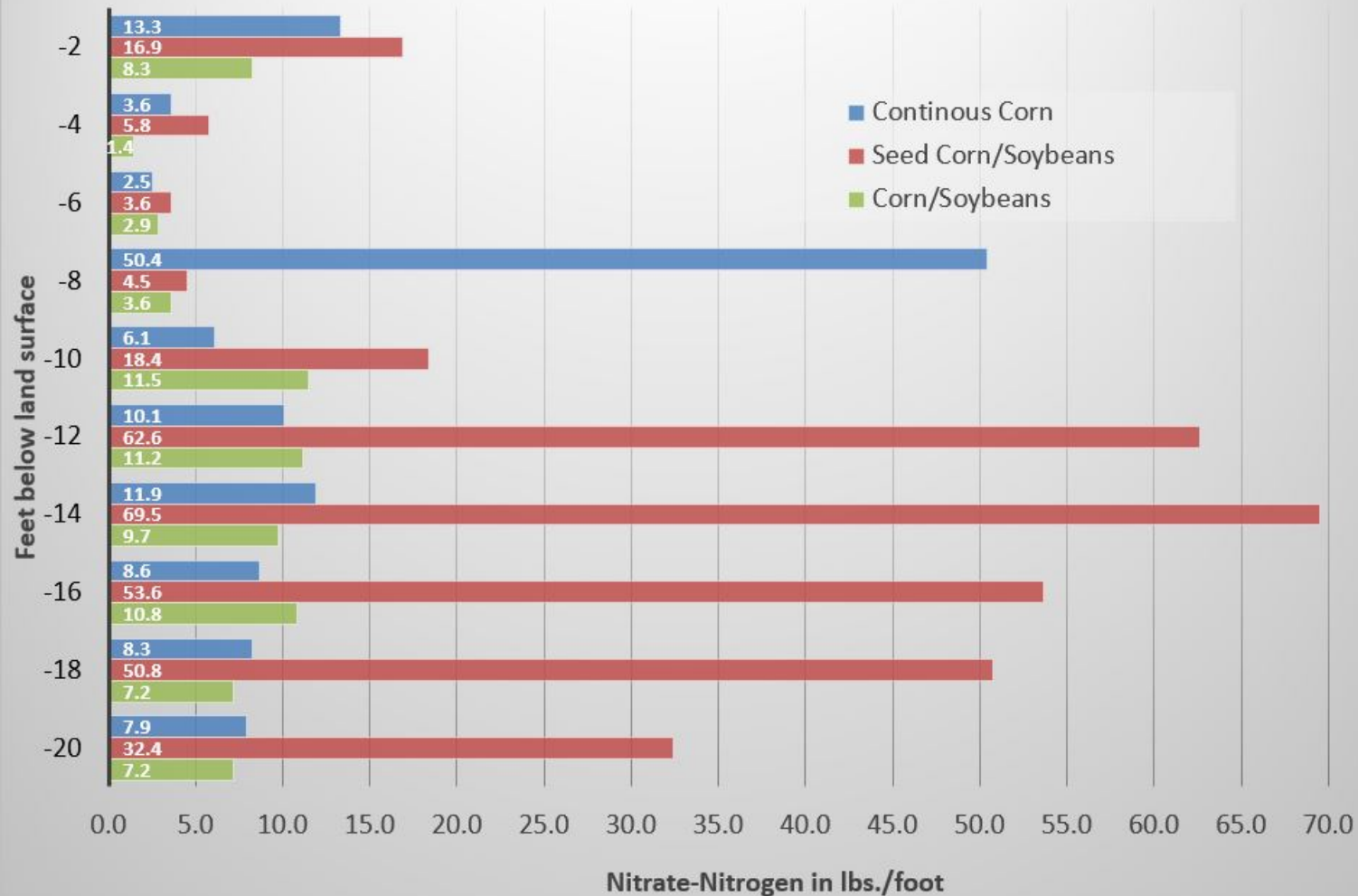
# Average Unsaturated Zone Nitrates Irrigated Fields Sampled Near Dedicated Monitoring Wells in Phase II and III Zones



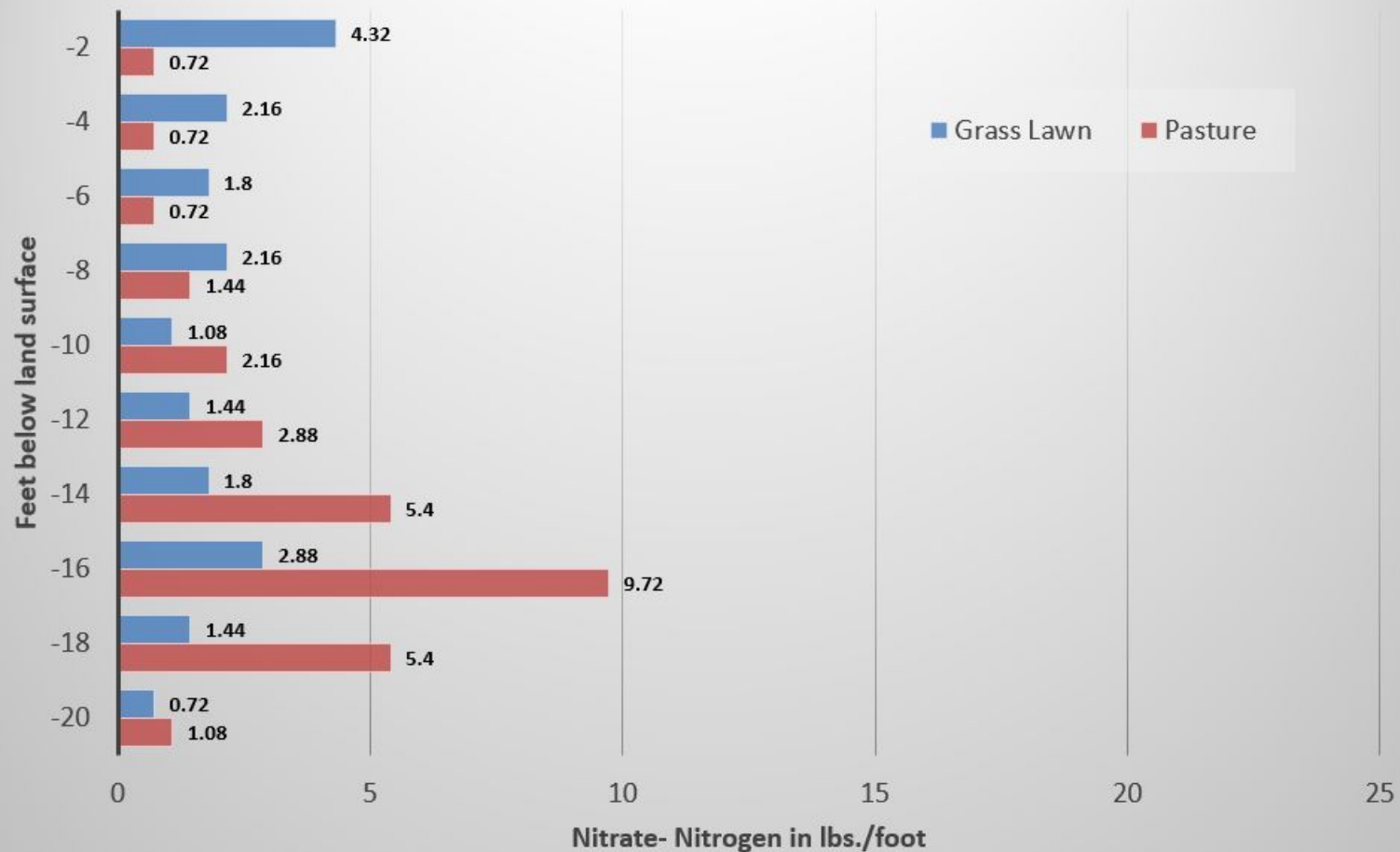
# Average Unsaturated Zone Nitrates Irrigated Fields Sampled Near Dedicated Monitoring Wells in Phase II and III Zones



# Example of Unstaturated Zone Soil Nitrates Irrigated Crops 2017



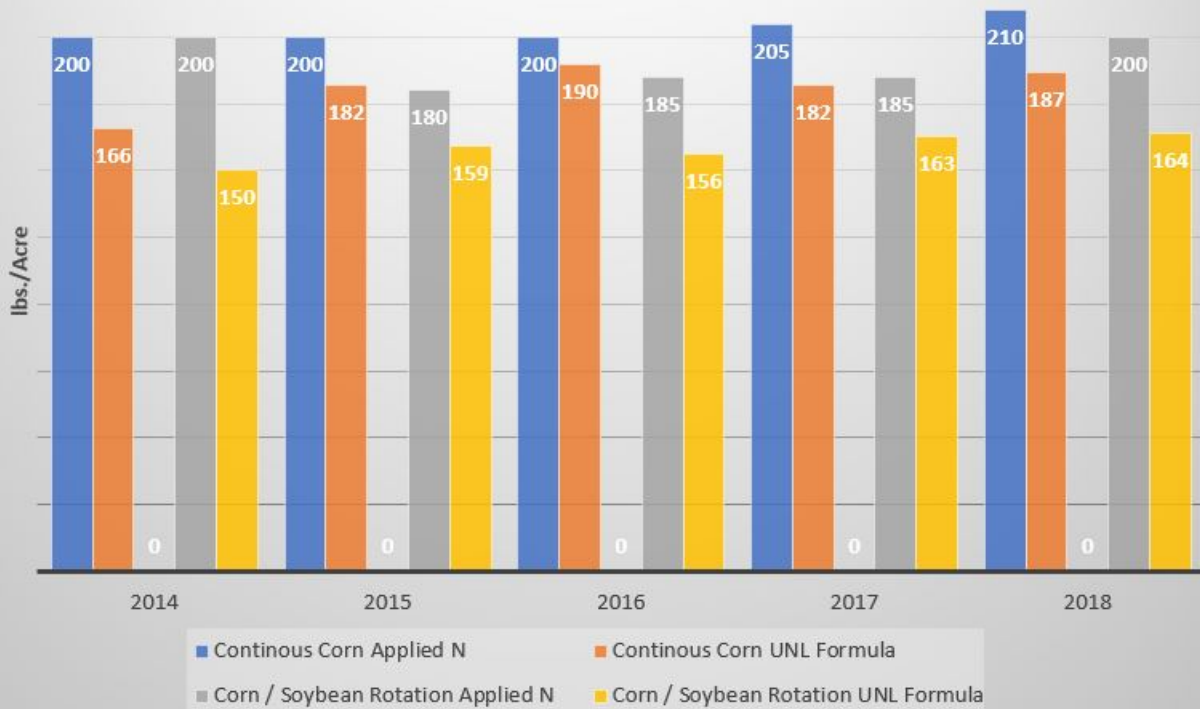
# Example of Unstaturated Zone Soil Nitrates Rainfed Grass 2017



The next 2 pages represent  
information received from  
annual producer reports in  
Phase 2&3 water quality  
management areas



# Median Applied Nitrogen Fertilizer vs. University of Nebraska Formula



Data Based on Upper Big Blue NRD Operator Annual Water Quality Reports

**Upper Big Blue NRD**  
**Water Quality Report Information**  
**Summary**

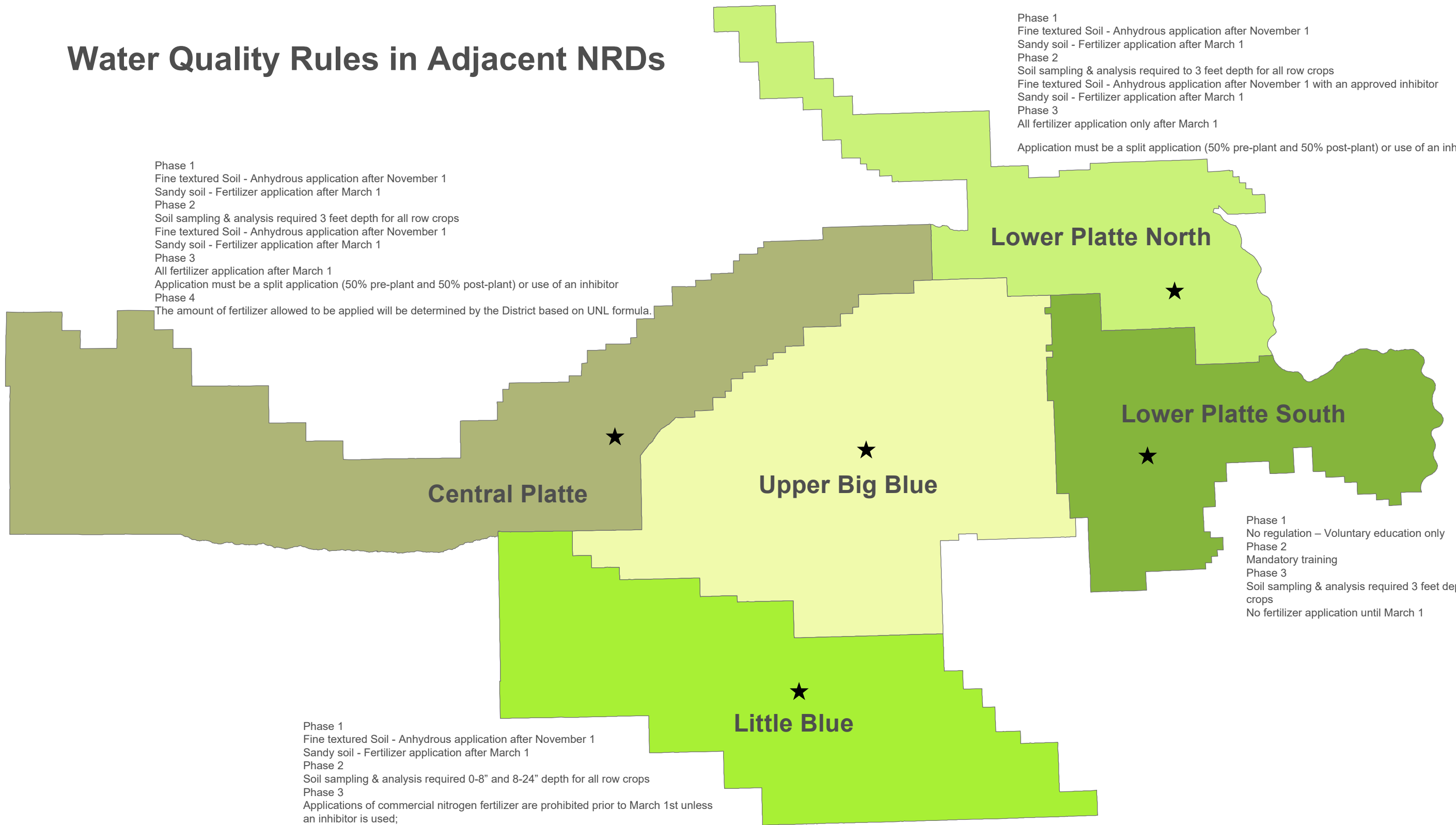
	2018 Phase II and III Report Summary Corn following Corn (Irrigated)				2018 Phase II and III Report Summary Corn following Beans (Irrigated)			
	Yield Goal bu/ac	Actual Yield bu/ac	UNL Formula Recommended N lbs/ac	Total Applied N lbs/ac	Yield Goal bu/ac	Actual Yield bu/ac	UNL Formula Recommended N lbs/ac	Total Applied N lbs/ac
<b>Highest</b>	300	305	303	356	320	308	212	396
<b>Lowest</b>	160	65	0	0	120	16	0	54
<b>Average</b>	244	233	181	201	237	228	158	200
<b>Median</b>	250	238	187	210	240	235	164	200
	2017 Phase II and III Report Summary Corn following Corn (Irrigated)				2017 Phase II and III Report Summary Corn following Beans (Irrigated)			
	Yield Goal bu/ac	Actual Yield bu/ac	UNL Formula Recommended N lbs/ac	Total Applied N lbs/ac	Yield Goal bu/ac	Actual Yield bu/ac	UNL Formula Recommended N lbs/ac	Total Applied N lbs/ac
<b>Highest</b>	300	359	268	370	280	292	247	356
<b>Lowest</b>	120	70	0	0	100	13	0	0
<b>Average</b>	239	232	173	198	233	224	156	178
<b>Median</b>	240	235	182	205	240	230	163	185
	2016 Phase II and III Report Summary Corn following Corn (Irrigated)				2016 Phase II and III Report Summary Corn following Beans (Irrigated)			
	Yield Goal bu/ac	Actual Yield bu/ac	UNL Formula Recommended N lbs/ac	Total Applied N lbs/ac	Yield Goal bu/ac	Actual Yield bu/ac	UNL Formula Recommended N lbs/ac	Total Applied N lbs/ac
<b>Highest</b>	290	320	325	308	300	275	266	280
<b>Lowest</b>	140	94	0	0	120	55	0	0
<b>Average</b>	242	214	184	195	234	213	154	181
<b>Median</b>	250	216	190	200	240	216	156	185
	2015 Phase II and III Report Summary Corn following Corn (Irrigated)				2015 Phase II and III Report Summary Corn following Beans (Irrigated)			
	Yield Goal bu/ac	Actual Yield bu/ac	UNL Formula Recommended N lbs/ac	Total Applied N lbs/ac	Yield Goal bu/ac	Actual Yield bu/ac	UNL Formula Recommended N lbs/ac	Total Applied N lbs/ac
<b>Highest</b>	290	291	270	288	335	289	255	292
<b>Lowest</b>	120	70	0	0	115	51	10	0
<b>Average</b>	236	225	176	194	229	223	152	181
<b>Median</b>	240	228	182	200	230	225	159	180
	2014 Phase II and III Report Summary Corn following Corn (Irrigated)				2014 Phase II and III Report Summary Corn following Beans (Irrigated)			
	Yield Goal bu/ac	Actual Yield bu/ac	UNL Formula Recommended N lbs/ac	Total Applied N lbs/ac	Yield Goal bu/ac	Actual Yield bu/ac	UNL Formula Recommended N lbs/ac	Total Applied N lbs/ac
<b>Highest</b>	300	283	263	294	270	285	211	285
<b>Lowest</b>	78	60	0	0	100	45	0	0
<b>Average</b>	235	213	156	187	216	188	138	150
<b>Median</b>	240	220	166	200	225	220	150	200

# Water Quality Rules in Adjacent NRDs

Phase 1  
 Fine textured Soil - Anhydrous application after November 1  
 Sandy soil - Fertilizer application after March 1  
 Phase 2  
 Soil sampling & analysis required to 3 feet depth for all row crops  
 Fine textured Soil - Anhydrous application after November 1 with an approved inhibitor  
 Sandy soil - Fertilizer application after March 1  
 Phase 3  
 All fertilizer application only after March 1  
 Application must be a split application (50% pre-plant and 50% post-plant) or use of an inhibitor

Phase 1  
 Fine textured Soil - Anhydrous application after November 1  
 Sandy soil - Fertilizer application after March 1  
 Phase 2  
 Soil sampling & analysis required 3 feet depth for all row crops  
 Fine textured Soil - Anhydrous application after November 1  
 Sandy soil - Fertilizer application after March 1  
 Phase 3  
 All fertilizer application after March 1  
 Application must be a split application (50% pre-plant and 50% post-plant) or use of an inhibitor  
 Phase 4  
 The amount of fertilizer allowed to be applied will be determined by the District based on UNL formula.

Phase 1  
 No regulation – Voluntary education only  
 Phase 2  
 Mandatory training  
 Phase 3  
 Soil sampling & analysis required 3 feet depth for all row crops  
 No fertilizer application until March 1



Phase 1  
 Fine textured Soil - Anhydrous application after November 1  
 Sandy soil - Fertilizer application after March 1  
 Phase 2  
 Soil sampling & analysis required 0-8" and 8-24" depth for all row crops  
 Phase 3  
 Applications of commercial nitrogen fertilizer are prohibited prior to March 1st unless an inhibitor is used;

**Central Platte**

**Upper Big Blue**

**Lower Platte North**

**Lower Platte South**

**Little Blue**