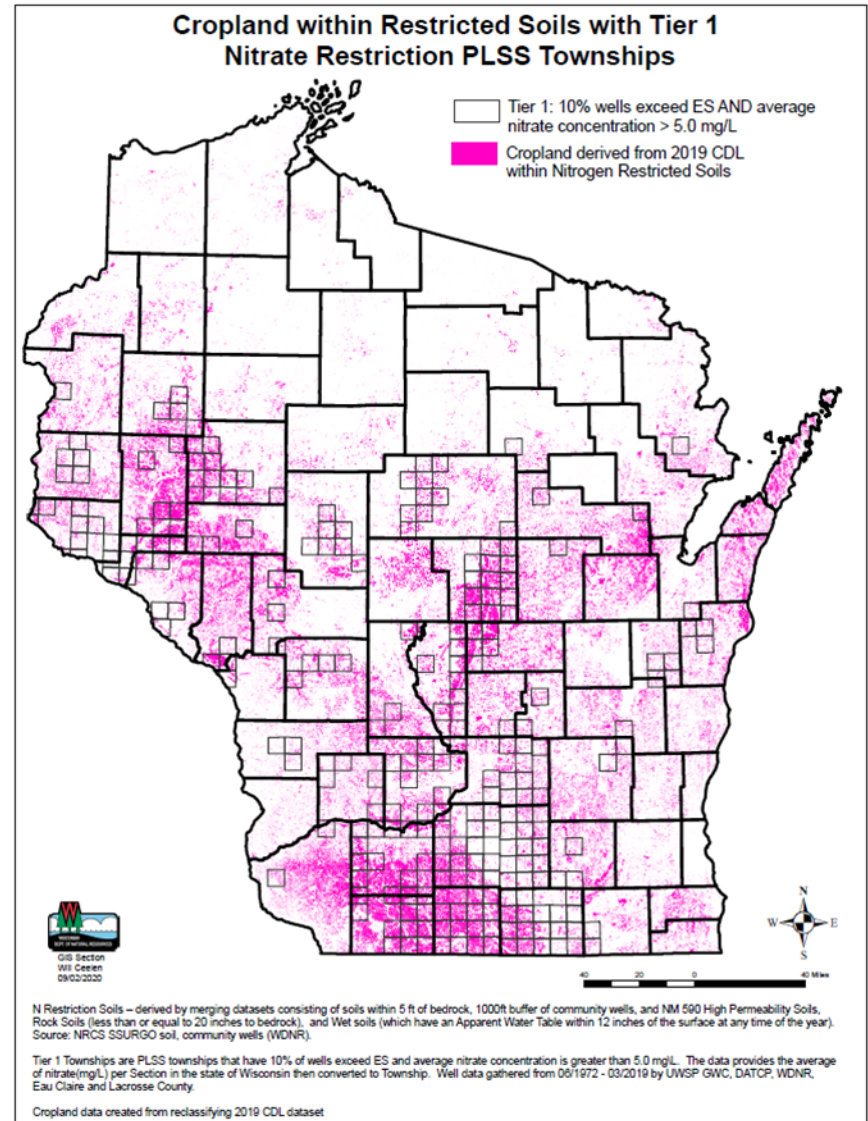


# NR 151 Technical Advisory Committee October 14, 2020



# Nitrogen Restricted Towns

- Initial screening
  - Town level (PLSS)
  - Minimum of 25 groundwater quality samples per town.
  - 10% wells exceed ES AND average nitrate concentration  $>5.0$  mg/L





# Nitrogen Restricted Towns

- Second phase screening
  - Review groundwater quality data in towns identified in the initial screening for areas with low nitrate (limit to quarter town) and remove.
  - Review adjacent towns for areas of elevated nitrates and add to nitrogen restricted town area.
  - Determine percent ag land; remove if <3%.
  - Identify towns with significant wastewater land application (>25% of ag land) and determine whether that is major source of nitrogen loss.
  - Identify point sources that contribute nitrate to groundwater.
  - Identify spill events that contribute nitrate to groundwater.

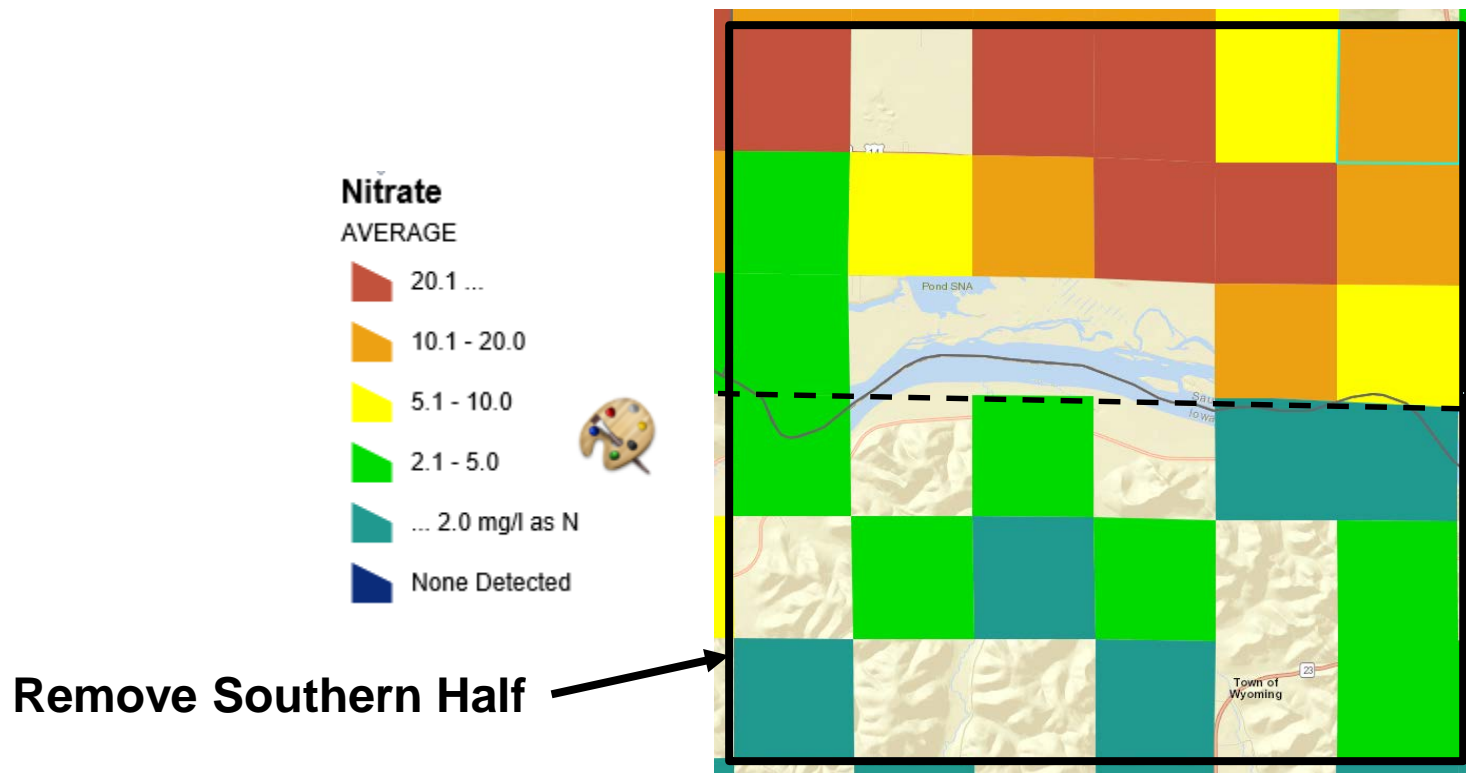


# Nitrogen Restricted Towns

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    - ~~– Identify towns with significant wastewater land application (>25% ag land) and determine whether that is major source of nitrogen loss.~~
    - ~~– Identify point sources that contribute nitrate to groundwater.~~
    - ~~– Identify spill events that contribute nitrate to groundwater.~~
- Strikethrough = not much of an impact

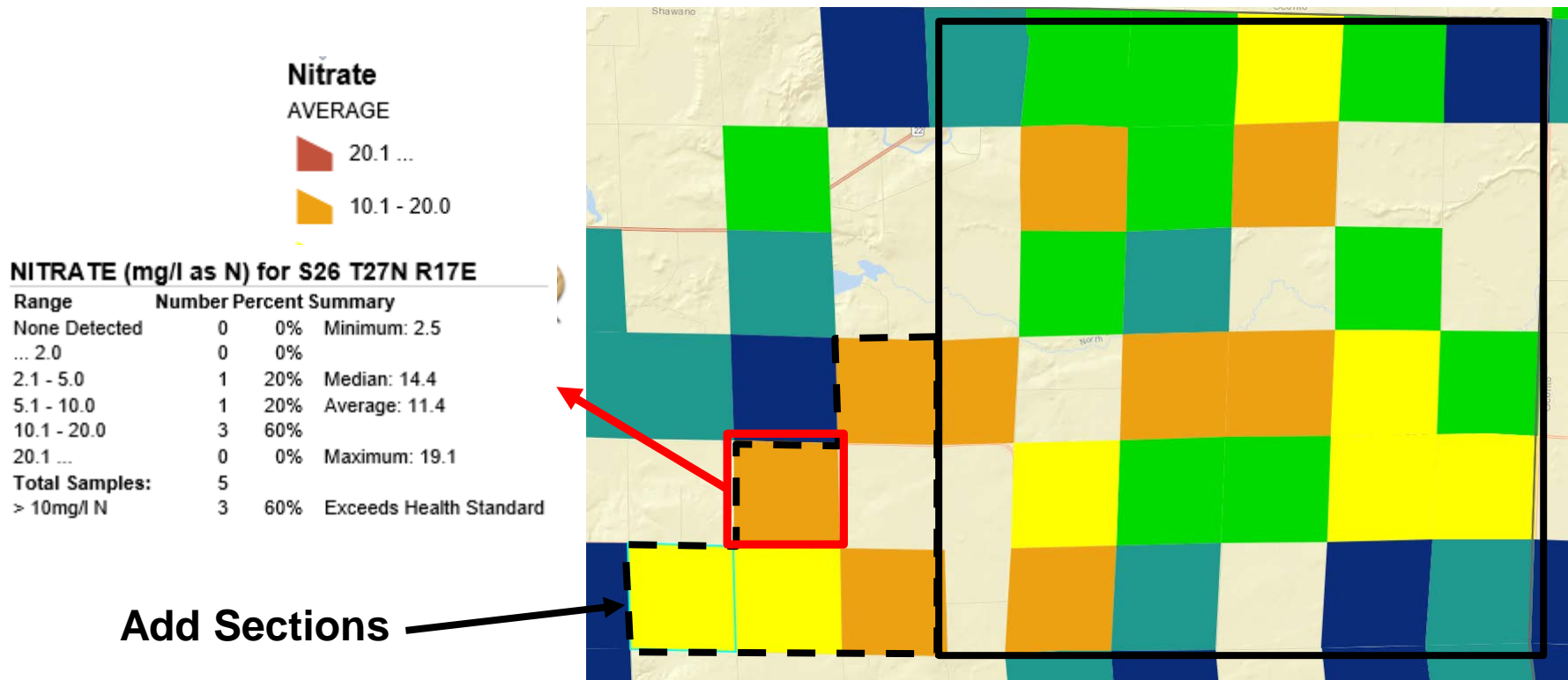
# Nitrogen Restricted Towns

- Second phase screening
  - Review groundwater quality data in towns identified in the initial screening for areas with low nitrate (limit to quarter town) and **remove**.
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# Nitrogen Restricted Towns

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  - Review groundwater quality data in towns identified in the initial screening for areas with low nitrate (limit to quarter town) and remove.
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# Nitrogen Restricted Towns

- Second phase screening

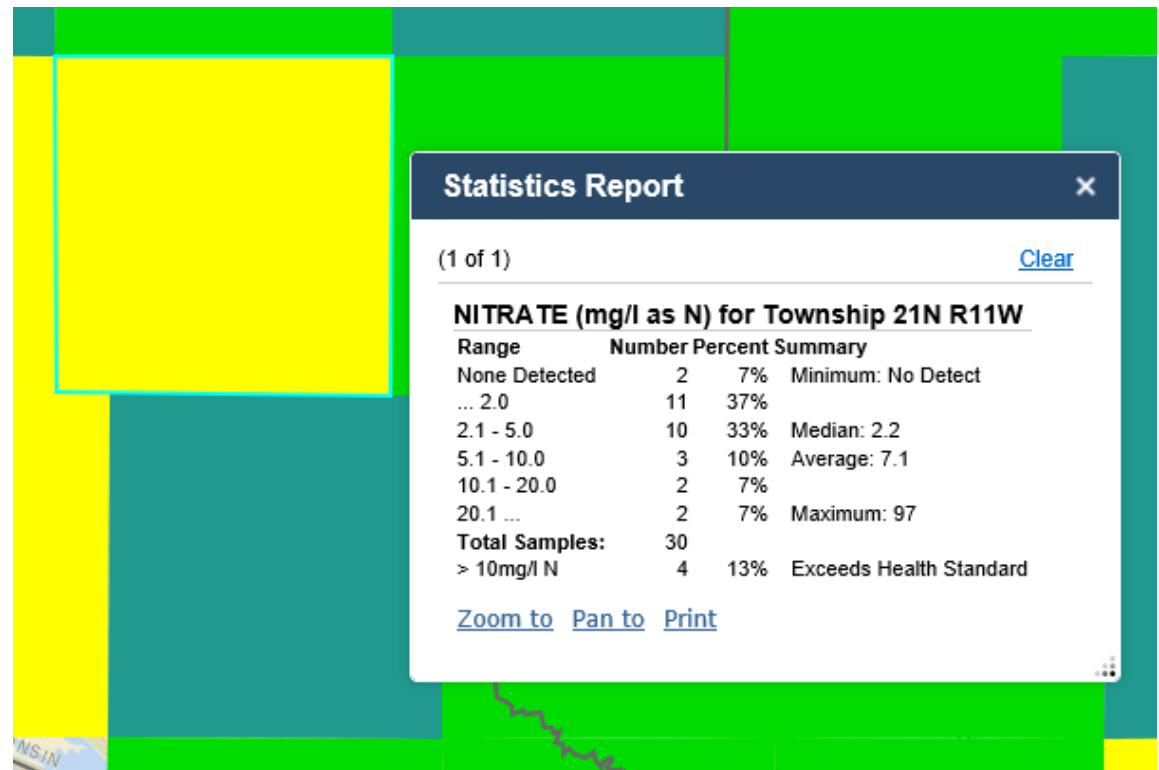
- Review groundwater quality data in towns identified in the initial screening for areas with low nitrate (limit to quarter town) and remove.
- Review adjacent towns for areas of elevated nitrates and add to nitrogen restricted town area.

- Review data:

- 97 clearly an outlier
- If remove:
  - % Exceedance falls below 10%
  - Average falls to 4 mg/L

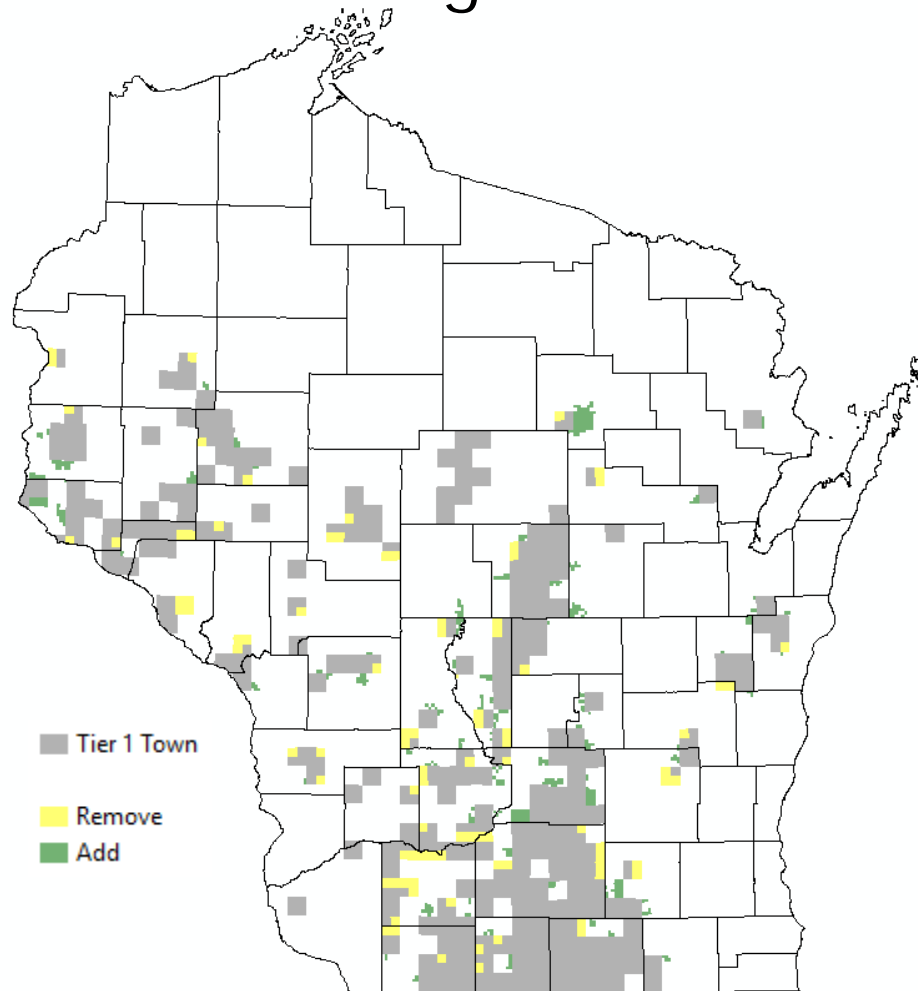
Result: remove entire town.

Sometimes this resulted in adding areas as well.



# Nitrogen Restricted Towns

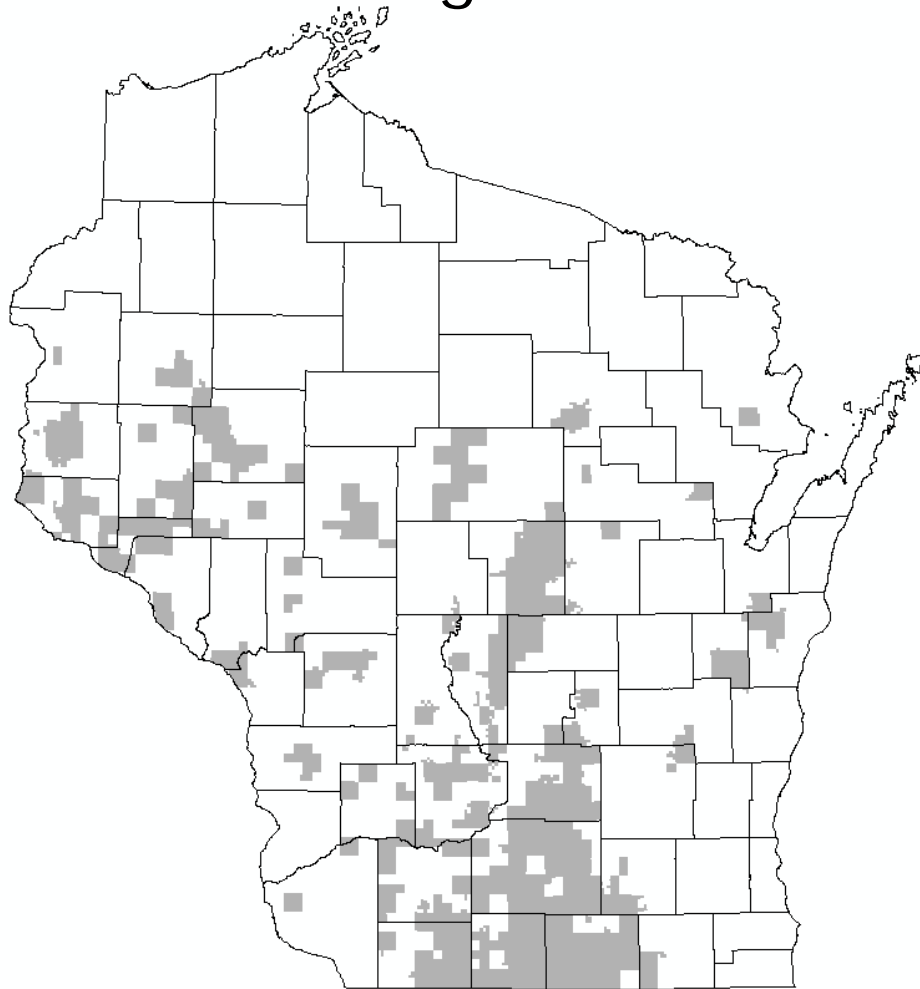
- Second phase screening - results





# Nitrogen Restricted Towns

- Second phase screening - results





# Nitrogen Restricted Towns

- Second phase screening – results
  - Removed Areas
    - 525,000 total acres
      - 232,000 agricultural (44%)
      - 29,000 developed (6%)
      - 264,00 forested, shrubland, wetland or open water (50%)
  - Added Areas
    - 308,000 total acres
      - 189,000 agricultural (61%)
      - 23,000 developed (8%)
      - 96,000 forested, shrubland, wetland or open water (31%)

# QUESTIONS

