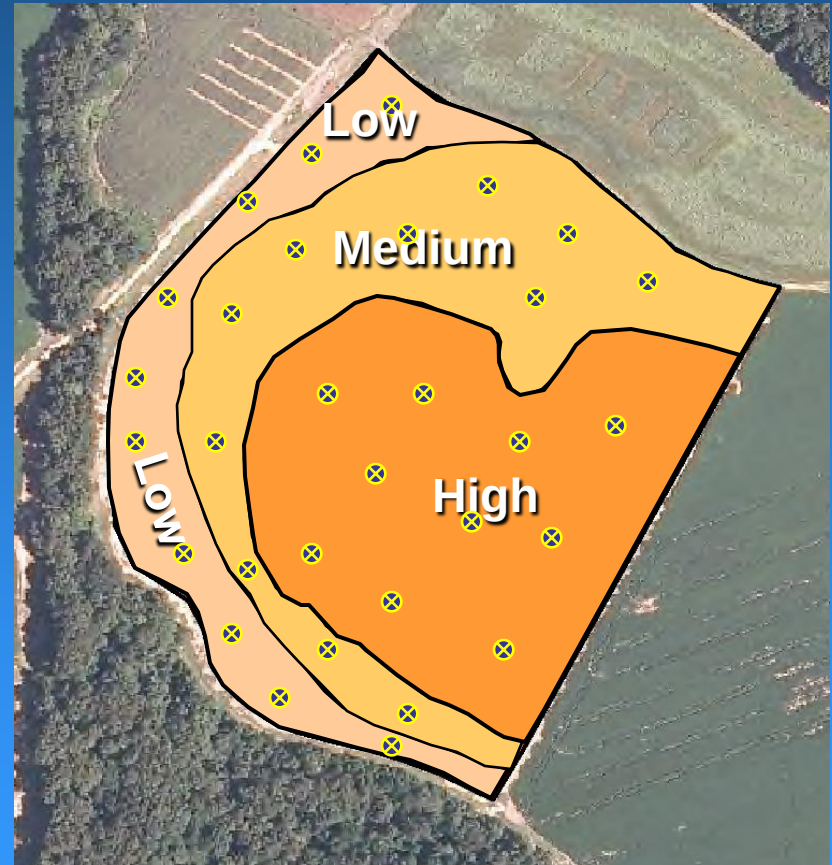


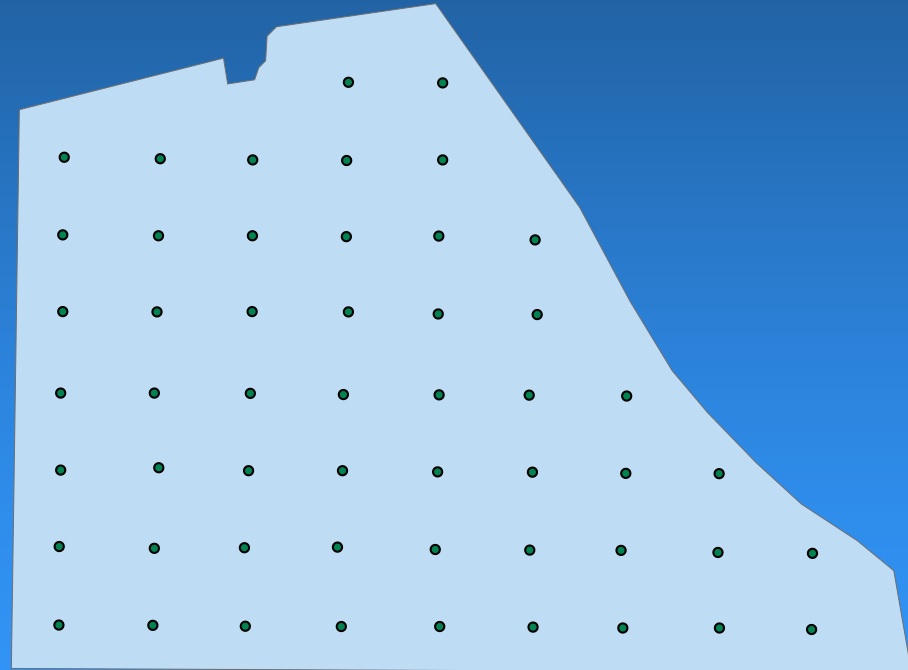
Soil Sampling the Zones

- **Directed Sampling**
 - Sample within zones
 - 1 sample/7-10 acres
 - Subsample across the 15 acres
 - **Advantages**
 - Reduce sampling time, cost, labor, etc.
 - **Disadvantages**
 - Loose soil variability information



Sampling the Zones

- **Grid Sampling**
 - Sample every X acres (X is judgment call)
 - Advantages
 - With or without management zones
 - Good measure of soil variability
 - Disadvantages
 - Time and labor consuming
 - Costly analysis



Developing a Management Zone For The First Time

- **Start simple**
 - Use the information that is readily available and balances the cost and yield relationship.
 - Good information should be
 - Quantitative
 - Densely or continuously sampled
 - Stable over time
 - Examples
 - Bare soil photos
 - Soil survey maps
 - Topography

Developing a Management Zone For The First Time

- **Second step is to refine zones over time**
 - **Add information that describes yield variations**
 - **Examples**
 - **Yield maps (multi-year)**
 - **Grid or targeted soil sampling**
 - **Aerial photographs at different crop stages**

Developing a Management Zone For The First Time

- **Third step is to evaluate zone effectiveness**
 - Are management zones responding to treatments?
 - Is maximum economic yield increasing?
- **Look for main yield-limiting factors within zones**
 - Are factors stable?
 - Are factors variable?

Last Thoughts on Management Zones

- **Ways to use management zones are only limited by the imagination**
- **Management zones are only as good as the decisions and sampling procedures that determined them**