

# Pineland Sands Land and Water Study

Tuesday April 26, 2016  
Legislative Water Commission  
Barb Naramore,  
MDNR Assistant Commissioner

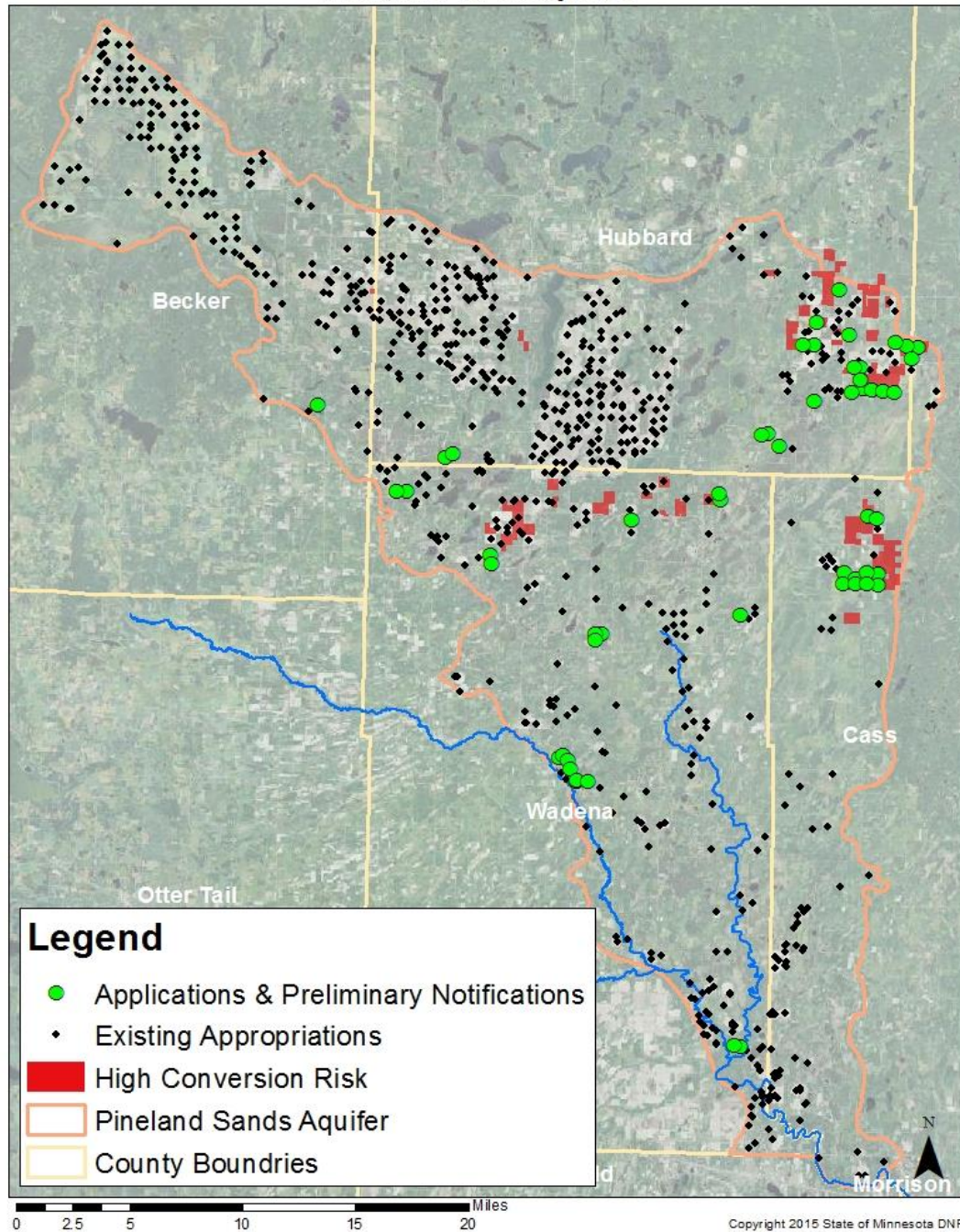
# Pineland Sands Aquifer



# Environmental Review Chronology

- **2014** — 21 appropriation applications and 33 preliminary well assessments pending from RD Offutt Co.
- **February 5, 2015** — MDNR orders Discretionary EAW
- **April 2015** — RD Offutt Co. withdraws all but 18 applications
- **June 19, 2015** — DNR vacates February Order and issues another Discretionary EAW for the 18 applications
- **Summer 2015** — Conversations with MPCA, MDA, and MDH on concept of broader Pineland Sands Study.
- **September 10, 2015** — RD Offutt Co. withdraws all but 5 applications; MDNR vacates June Order and calls for Pineland Sands Special Study

# Initial RDO Request



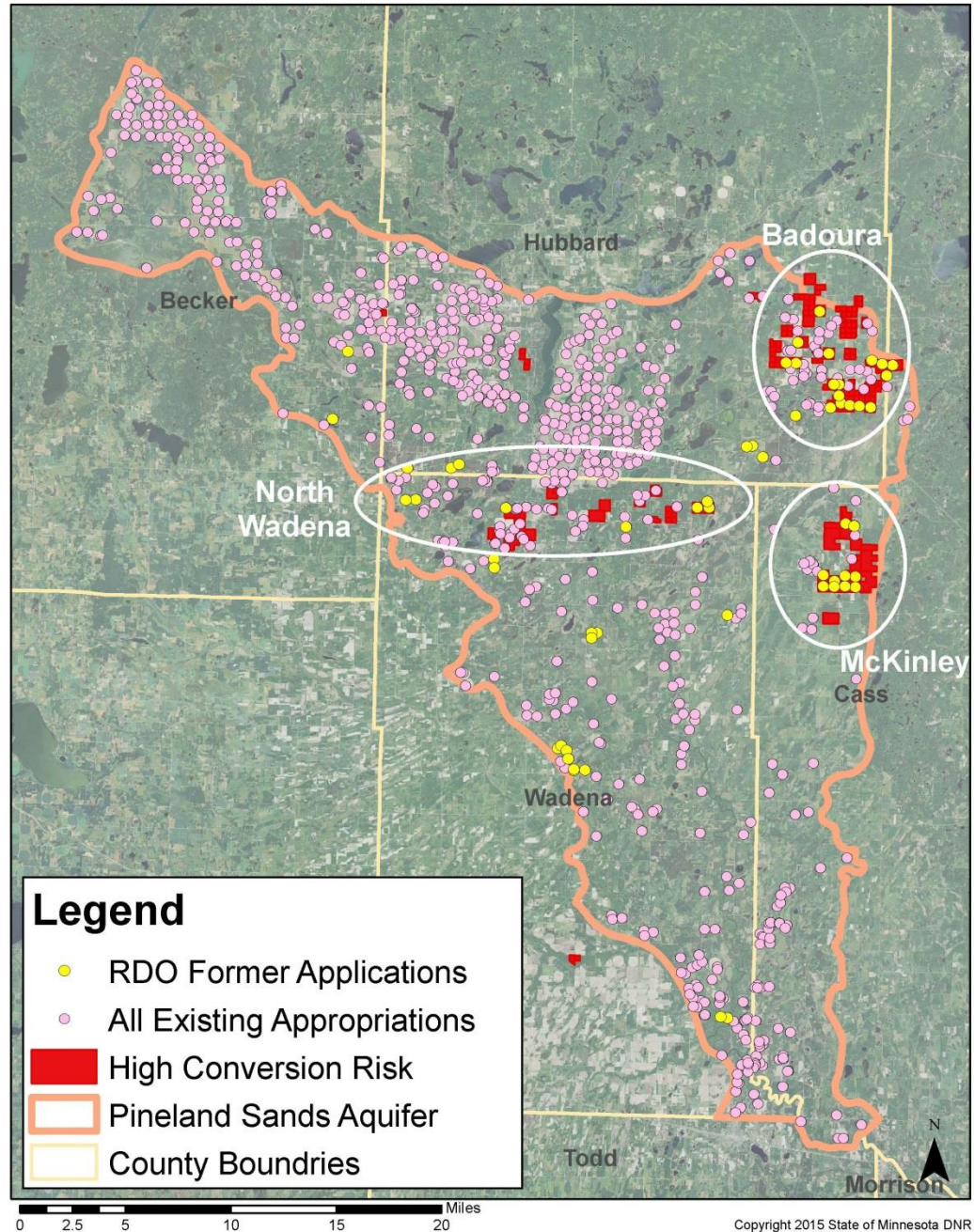
# Factors in Discretionary EAW Order

- **Large scale conversion** of pine forest to irrigated agriculture → loss of ecosystem services and biodiversity
- **Water quantity impacts** — both surface water and groundwater
- **Water quality impacts** — both surface water and groundwater
- **Potential cumulative effects** of previous and proposed appropriations

# Special Study vs. EAW

- **Significantly reduced number of applications** → can make decisions under established permitting process.
- **Potential for future development** by multiple producers (existing well infrastructure, partially cleared land, sales of forested land, etc.)
- **Scope of special study is more flexible** and can be tailored to what is needed.
- **Study includes all agricultural producers** in the area.

# Pineland Sands Focus Areas



# Special Study — Phase One

- **Establish baseline conditions** — water quantity, water quality, and land cover
- **Existing data and new data** — aquifer tests, stream gaging, pesticide concentrations, soil sampling, precipitation, etc.
- **GIS analysis** for habitat impacts and cumulative impacts
- **Model** complex interactions between land cover, groundwater, surface water, and habitat
- **Consider conversion scenarios**
- **Seek to identify sustainability thresholds**
- **Scope Phase Two**



# Special Study — Phase Two

- **Field-level analysis**
  - Test Phase One conclusions
  - Identify ways to reduce impacts of irrigated agriculture
  - Previously unfarmed fields offer unique opportunities
- **Longer term study** — across crop rotations, range of climate patterns
- **Builds on other work**
- **Involves producer participation**

# Study Timing and Cost

- **Phase One**

- Estimated 12-18 months to complete at a cost of \$1.5 million

- **Phase Two**

- Scope and cost Phase Two will be developed based on Phase One
- Potential long term study component by MDA to test various agricultural practices (including alternative rotations) under land conversion conditions.

# EAW Petition Chronology

- **November 19, 2015** — petition for an EAW on remaining RD Offutt Co.'s 5 pending applications
- **November 19, 2015** — on same day DNR learned of petition, had just issued one permit; other applications put on hold
- **November 2015-February 2016** — DNR evaluated petition and held discussions with petitioners and company
- **February 10, 2016** — RD Offutt Co. withdrew two more applications
- **February 12, 2016** — DNR denied EAW petition

# EAW Petition Denial

- Type and extent of potential impacts from the two pending permit applications were not likely to be significant.
- Issues can be managed as part of DNR's established permitting process.
- Distinction between EAW criteria and need to better understand and manage impacts in the Pineland Sands
- We need the proposed Pineland Sands Study to get at issues of concern to both DNR and the petitioners

# Some Petitioner Study Concerns

- Clarify scope of analysis
- Need clear commitment to public engagement
- Collect more baseline data
- Need more on pesticide impacts—environmental and human health
- Potential impacts to ecosystem not covered adequately
- Potential role of RD Offutt Co. and other producers—how to ensure independent study
- More land potentially converted as part of Phase Two

# Next Steps

- If Pineland Sands Special Study is funded:
  - Establish project advisory team
  - Refine study scope
  - Ensure coordination with related efforts
  - Initiate implementation