DEPARTMENT OF NATURAL RESOURCES

# Aggregate Resource Mapping Program- Access to Maps and Geographic (GIS) Data

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Visit the Aggregate Mapping Website |
http://www.dnr.state.mn.us/lands_minerals/aggregate_maps/index.html

# Aggregate Mapping Audience

**Who is interested in aggregate potential maps and data?**

- Local units of government; such as counties, townships, and cities
  - Land use planners
  - GIS specialists
- Public citizens
- Private companies
- State agencies
- Educational institutions
- Legislators

# Access to Aggregate Mapping Products

**Over the years, how have we provided information in an easy and transparent manner to our audience?**

- 20 to 30 years ago (1987-1997)
  - Distribute free printed maps and/or disks of geographic (GIS) data and digital maps
- 10 to 20 years ago (1997-2005)
  - Added website to distribute digital maps and data
- 10 years ago to today (2005-2017)
  - Added interactive web map, one downloadable database, and option to sign up for updates via email

# Printed and PDF Maps

**What is on a county aggregate resources map?**

- Sand and gravel and/or crushed stone potential
  - Classified by limited, low, moderate, & high
- Current or historic gravel pits and quarries
- Geologic field observations
- Test drill holes
- Text about the program, project geology, methods, and map legend

# GIS Data – *Rich information behind the map*

**How does GIS data add value to the aggregate maps and what data does the program distribute?**

GIS data allows for more information to be added to a feature shown on the map. This richness provides greater depth not seen on the printed map.

- **Aggregate Resource Potential:** Sediment, description, geologic landform, potential class, probability, thickness, overburden, ice lobe
- **Gravel pit and quarry inventory:** Type, field verified, material(s), size, thickness, overburden, depth to water table, status, reclamation, ice lobe
- **Test drill holes:** depth, material(s), description, thickness, overburden, sampled, %gravel, %sand, %silt-clay, aggregate quality
- **Field observations:** type, material(s), description, thickness, overburden, sampled, %gravel

# GIS Data Consolidation – *1 download instead of 21*

**To make it easier for our GIS-savvy audience to access the GIS data we have compiled all the data into one downloadable database**

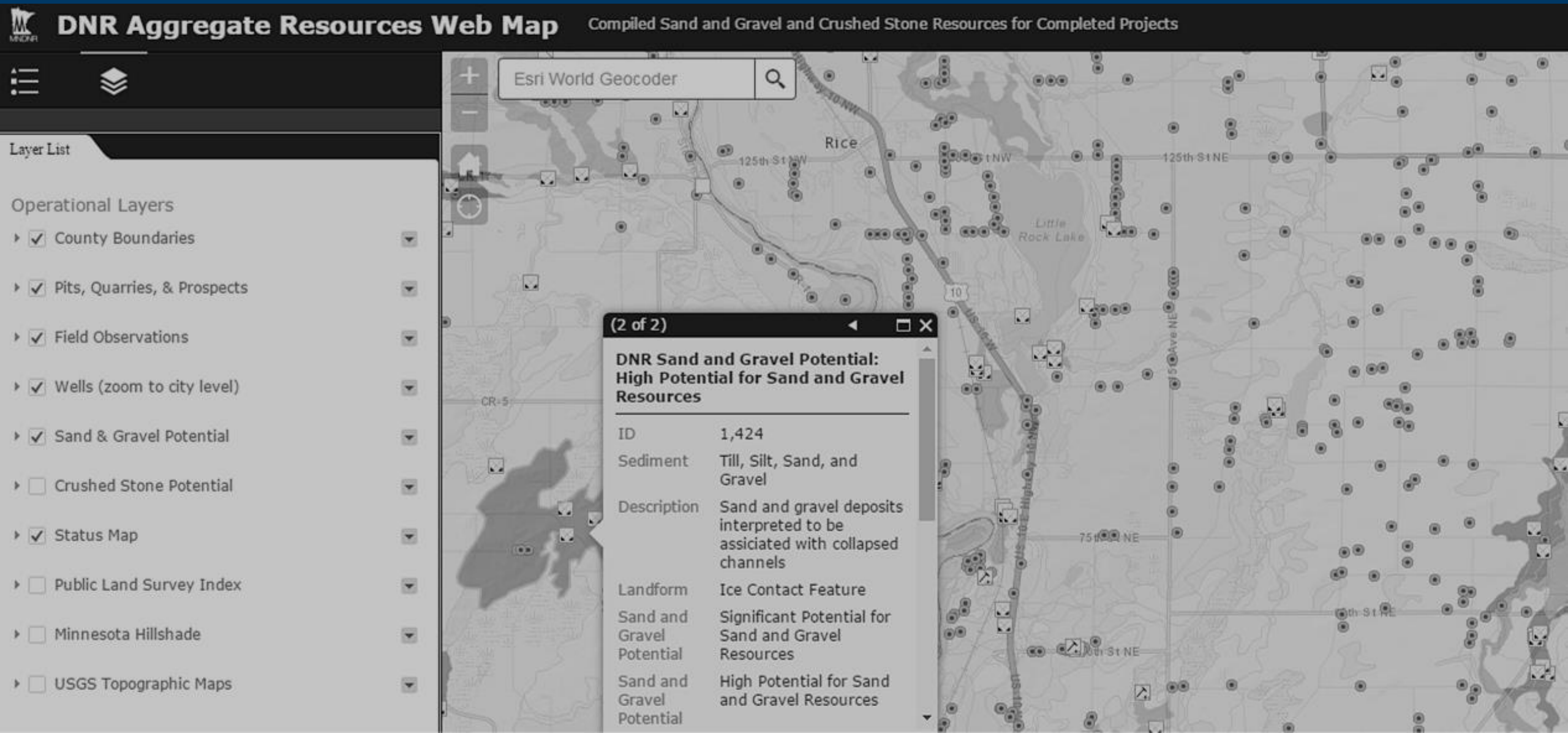
- In 2015, all 21 project databases compiled into one database
- Database is available on our website and the go-to state GIS repository so it is easier to find

# Web Maps – *Bringing GIS data to all*

**To better address our non-GIS audience we have created a single web map application that allows any user with an internet connection access to our GIS data**

- First aggregate web map published in 2007
- New web map application published in 2015
- Search and query the aggregate mapping GIS data
- Link to project webpages and printed maps
- Choose from 10 different base maps

# Web Map Demonstration – 6 minutes



# Website – *Access all the information easily online*

*http://www.dnr.state.mn.us/lands_minerals/aggregate_maps/index.html*

## All the information discussed is available on our website

- View or download completed maps (53)
- Request by phone or email free printed maps and data disks
- Download GIS data
- View GIS data on the web map application
- Sign up for program updates via email
- Program information, methods, and fact sheets

**How often is the website visisted?**

- **10,000** website views last year
- **4,000** web map app views since 2016