1) City of Burnsville Water Supply
2) Why did Burnsville need enhanced Water Supply Protection?
3) Drinking Water Protection Overlay District Strategy
4) Ordinance Development
5) Implementation
6) What have we learned and what’s next?
7) Questions
City Water Use

• Annually, the City of Burnsville pumps more than 3.2 billion gallons of water. Service area includes approximately 90,000 residents (includes Savage)

• 1.1 billion gallons comes from quarry intakes, with the balance supplied by 17 wells.

• In 2016, Burnsville provided 89% (about 764 MG) of Savage’s water via a water use agreement (year 9 of agreement).

• On peak days the City system pumps more than 20 MG
Why Did Burnsville Need Enhanced Water Supply Protection?

- Burnsville’s drinking water aquifers and quarry sources are susceptible to potential pollution from regulated substances in certain areas of the City.
  - Fully developed City
  - Heavy and lite industrial uses in close proximity to drinking water sources.
  - 1 open and 2 closed landfills/dumps, power plant, rail line and quarry in close proximity to drinking water sources.

- Maintain Consumer Confidence

- An overlay district would provide a framework for verifying existing regulations through inspection program.
Aquifer Susceptibility
Uses

- Heavy Industrial
- Burnsville Sanitary Landfill
- KMM Quarry
- Freeway Landfill
- Freeway Dump
- Lite Industrial
- Black Dog Power Plant
- Quarry Intake
- Water Treatment Plant
- Black Dog Power Plant
- Burnsville Sanitary Landfill
- KMM Quarry
- Freeway Landfill
- Freeway Dump
- Lite Industrial
- Quarry Intake
- Water Treatment Plant
Drinking Water Protection Overlay
District Strategy

1) Model area groundwater to better understand potential risks. **DONE**

2) Implement proactive testing protocol to ensure pollutants aren’t present. **DONE**

3) Develop long term management strategy. **ONGOING**

4) Implement 2 part ordinance. **ONGOING**
Overlay District
Two Part Ordinance
(Adopted by City Council in June of 2015)

1. Provisions for new development, building expansions or land disturbance activities in the overlay district.

2. Provisions for all existing businesses in the overlay district.
Part One: Development/Land Disturbance Activities

Verification of:

- Paving required
- Floor drains
- Grit traps
- Wash Pads (New Requirement)
- Grading and Drainage Plans
- Stormwater basins are lined
- Evidence of required permits for Regulated Substances (New Requirement)
Part 2: Business Provisions (New)

1. Regulated substances are properly secured and stored

2. Commercial application of Regulated Substances shall meet requirements in code

3. Provisions for secondary containment

4. Emergency Spill Response Plan required

5. Evidence of required permits for Regulated Substances
How Will the City Monitor and Implement the Ordinance?

• Implemented drinking water impact analysis part of development review process for district.

• Education - Annually information will be provided to all property owners and businesses subject to this section.

• Inspection of all properties/businesses, operations and sites to ensure proper procedures for the storage, handling, and usage of Regulated Substances are met.

• Additional targeted informational/educational efforts will be focused on properties determined to be especially vulnerable to contamination due to location, uses or presence of regulated substances.
Inspection Data Collection

• GIS used to identify number of sites and address information within the Overlay District (783 total)

• Used DWPOD ordinance to establish a prioritization of sites “Low,” “Medium,” or “High” risk for aquifer contamination

• MPCA/MDA “What’s In My Neighborhood?” database review

• Educational mailer and survey sent to all sites (poor response)

• Windshield surveys completed from public right-of-way
Site Prioritization (Low, Med, High)

- Historical leaks, spills, releases, or evidence of contamination
- Bulk petroleum or chemical storage tanks, bulk containers, or drums
- Type of hazardous waste generator permit
- Private water wells
- Exterior wash pads and treatment of wastewater
- Exterior vehicle/equipment storage and surface type
- Chemical storage and general housekeeping practices
Inspection Program

- Site prioritization results (2017)
- City wanted to inspect all “High” risk sites year 1
- Contacted and schedule onsite inspections (approx. 30 min – 1 hr.)
- Using web-based data collection system and iPad
- Completed 50 onsite inspection in 2017
Inspection Program - Access

• How did we gain access for inspections?

• WSB was the buffer between City and private businesses

• Partnership/collaboration vs enforcement

• Code in place for enforcement but considered last resort
Inspection Results

- Larger facilities, in compliance with regulated materials storage and handling
- Smaller facilities, less aware of regulated material storage and handling standards
- No inspection observations or findings required immediate correction
- Various site findings were flagged for follow up during 2018 inspections
GIS/AMS Integration

• Inspection results organized within Enterprise GIS database and made available via:
  
  • DataLink (GIS)
    – Web application accessible by all City staff
    – High-level overview of inspection results
  
  • VUEWorks (AMS)
    – Asset Management platform
    – Assign priorities, access inspection results
    – Track future inspections / follow-up remediation
Public Outreach

- Annual education mailers/flyers
- Ongoing updates to City’s DWPOD website and GIS-based Story Map
- Follow up and identify funding sources to correct threats to the water supply
Lessons Learned: Changes for 2018

- Most site owners/tenants were cooperative
- Scheduling of inspections was difficult
- Perform onsite inspections, inquiry, or follow-up:
  - High Risk Sites – Yearly
  - Medium Risk Sites – 3 Year Cycle
  - Low Risk Sites – 5 Year Cycle
- Annual review of new business/tenant changes within the DWPOD
- Biannual review of MPCA/MDA WIMN database changes with DWPOD
Questions?

• Contact Steve Albrecht
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• Contact Ryan Spencer
  rspencer@wsbeng.com

• Information available on City Website at:
  www.burnsville.org/drinkingwaterprotection