2019 Water Summit: Bridging Science and Society

Lightning Round
Fast-paced Idea Sharing

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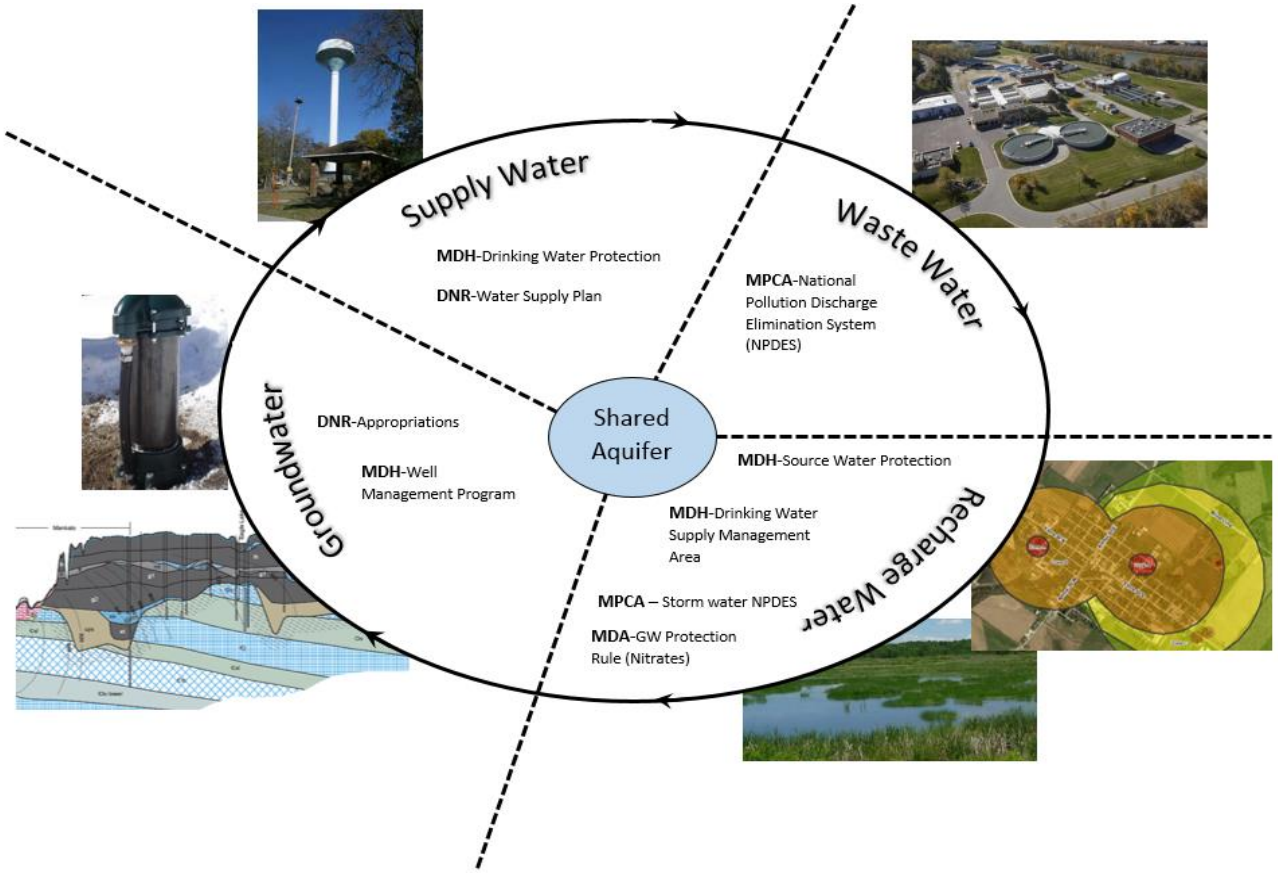
Articulating Outcomes for Clean Water

- Voters approved 3/8% sales tax increase in 2008; ~$100 million a year for clean water available
- Minnesotans seek answers/accountability: Is my drinking water safe? Is our water clean? Is my local lake fishable and swimmable?
- Scientific, comprehensive approach defies simple answers/plain language difficult
  - Reduced risk? Acceptable TMDL? Sound planning?
- What info would mean the most to Minnesotans? ("beta")
  - Focus on specific contaminants and how we address them
  - Get local with data and give context
  - Outline expectations (protect some + restore others & by how much)
  - Show how people get to "yes"—collaboration, tech assistance
  - "Approved plan" = $$ → Action

Learning from and with

Shared work
Flexible content
Defined commitment
Cohort model
Personal stories

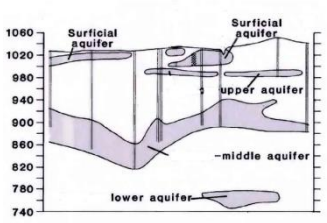
CAMP: Community-based Aquifer Management Partnership

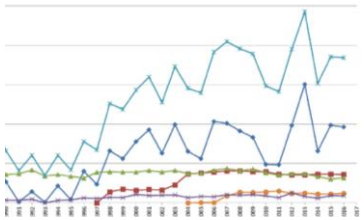


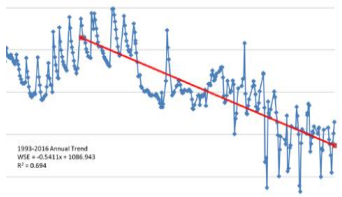
A community's water supply involves multiple agencies as the ***water molecule*** transitions from:

- Groundwater
- Supply Water
- Waste Water
- Recharge

A **CAMP Dashboard** enables the communities to ask the "next good [groundwater] question"







Bridging science and society sets the ***stage for interaction*** to the degree the community and the agencies desire

Communication → Coordination → Cooperation → Collaboration

Equality

Equity

Justice

Runoff from Farmland … Welcome to the Algae Bowl!

No surprise … vast area … tilled/manured/fertilized when most vulnerable.
Voluntary adoption of BMPs … not working … despite 30+ years effort … CWA / TMDL / I&E / research / funding / projects / legislation / cost sharing / federal / state / local / watershed …. SWCD/MPCA/EPA/USDA/BWSR/DNR/UM/UM-Extension/NGOs …

Log Jam: Water quality standards and goals unconnected from farm management … evaluating BMPs

Key Log: Farmers need their own tools to measure their own field-level environmental performance relative to watershed-level water quality goals and standards.

Soil Health Principals!

Water Education: Stormwater Reuse for Irrigation Learning Opportunities

- Authentic
- Cross-curricular
- Student focused
- Educator developed

FRESHWATER BOLTON & MENK Real People. Real Solutions. RCWD RICE CREEK WATERSHED DISTRICT Forest Lake AS GOOD AS IT SOUNDS

The Imperative is to Devise and Apply a Sustainable Systems Approach to Climate-Food-Energy-Water Challenges

- Environmental Sustainability is about systems, interconnections, and interdependence.
- Mn Water Sustainability Framework to meet goals a top five action is “address interconnected nature of water and align water, energy, land, transportation policies for sustainability” 2014 F
- We need to focus policy and investment on innovative approaches, and advanced technologies to drive cultural and market transformation while growing clean technology sector.
- Must maximize comprehensive societal benefits, and effectively address inequities.

Water Productivity is Key to Saving Energy and Addressing Climate Change

- Minimize embodied energy in water pumping, distribution, and treatment and reduce end-user water intensity saving energy and water.
- Wastewater treatment facilities should be viewed as renewable resource recovery facilities that produce clean water, recover energy, and generate nutrients.
- Policies and methods resulting in reduced water consumption, can more effectively address climate change than residential, commercial, and industrial energy efficiency strategies.
- Water, energy, and food sectors should move toward an integrated management approach from source, production and generation to end user.
- Need cross-policy and program integration to deal with interdependency and cross-cutting challenges.

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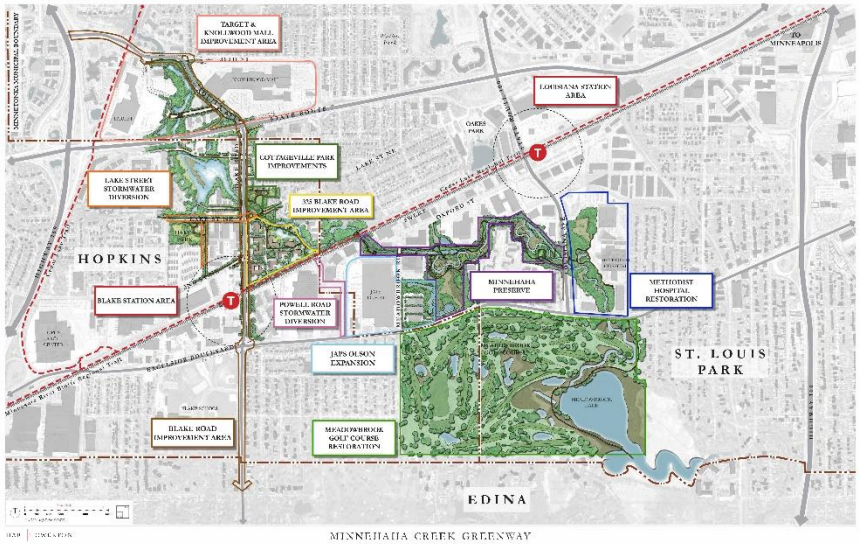
Power of Unlikely Partnerships



- One of the largest urban stream restorations in the Twin Cities
  - Partners: Minnehaha Creek Watershed District, Methodist Hospital, Japs-Olson Co., city of St. Louis Park
- Speaking to private landowner needs resulted in a natural preserve with multiple community and water quality benefits
  - Challenge: Overcoming barriers to replicating this success

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MINNEHAHA CREEK WATERSHED DISTRICT

Hansen Park Comprehensive Water Management Project

- A water quality improvement & flood control project in New Brighton
  - This project success story included installation of state's first automated and continuously operating iron-enhanced sand filter
- There were mixed responses from the community throughout this process. Social media was used by some adjacent homeowners to spread misinformation and support their agenda
- Working to address the negative side or misinformation of social media

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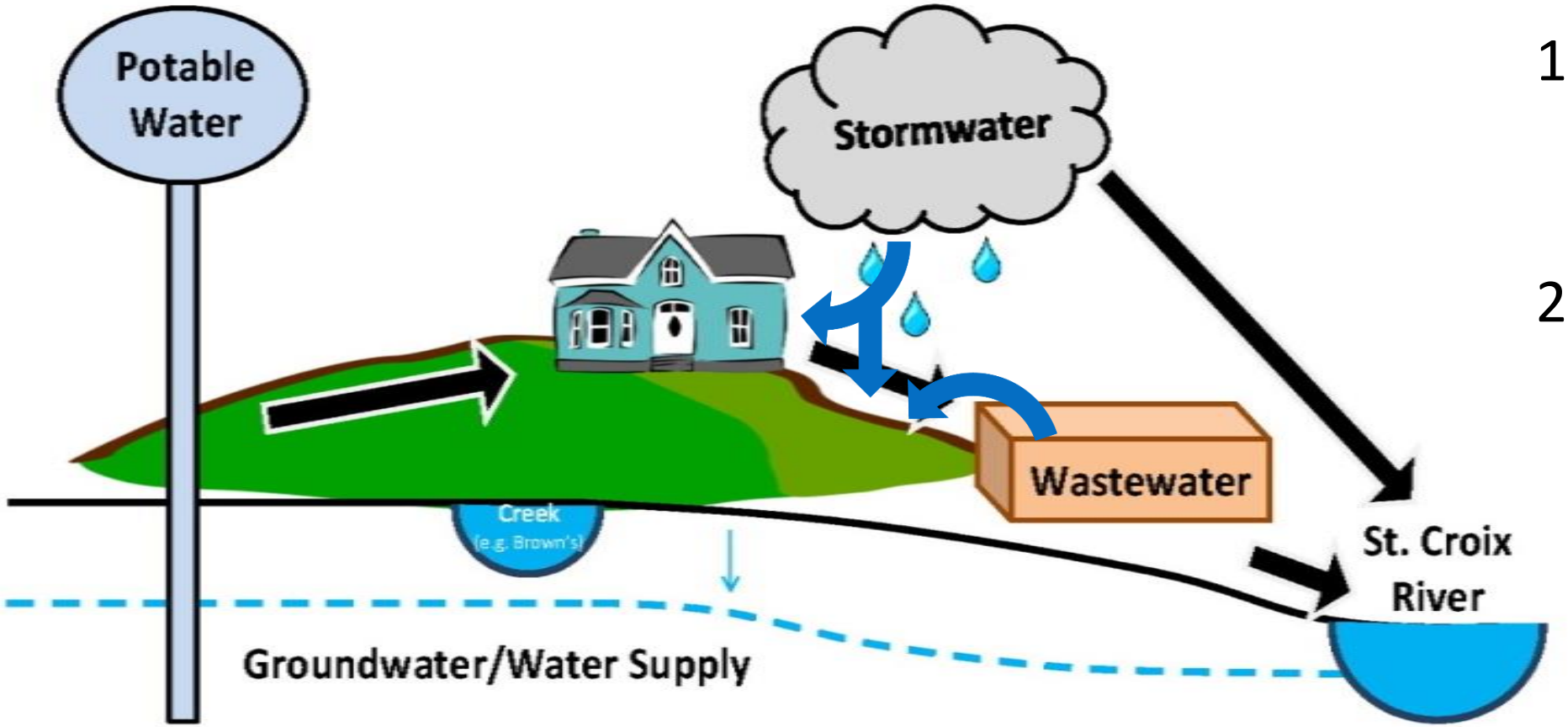
Breaking Linear Thinking



Declining GW due to:
- GW Pumping
- Climate Change
- Reduced Recharge

1. Pay to "dispose" of runoff
2. Pay again for potable water
   - $
   - Environment
   - Energy

Wait until you hear THIS story!

- Stories have the power to engage people in a way that facts and figures can't: www.eastmetrowater.org

- Using stories, EMWREP has developed a tribe of water champions that support watershed projects and TAKE ACTION.

- **Here are a few tips for telling stories that inspire and engage:**
  - Don't be boring.
  - Don't overload your stories with jargon, facts, or a list of governmental partners.
  - Share the good news and let people know how they can be part of the solution.
  - Don't be an anonymous bot.

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