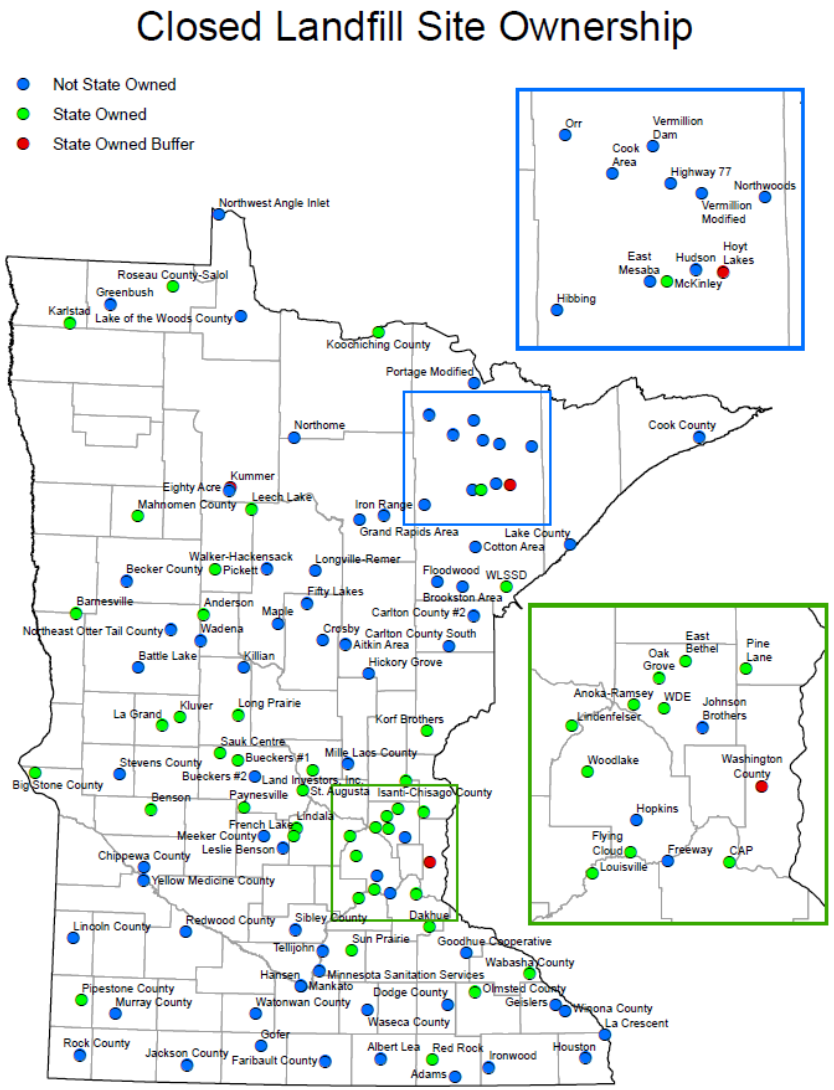
MPCA's priority Closed Landfills:
WDE Landfill (Andover) and Freeway Landfill (Burnsville)

July 18, 2018

Closed Landfill Program



The Legislature created the Closed Landfill Program in 1994.

MPCA is responsible for managing closed landfills that were permitted to hold mixed municipal solid waste that are enrolled in the program.

Goal: Mitigate risks to the public and the environment.

Today: 109 closed landfills statewide (114 eligible)

Closed Landfill Program Priorities

Closed landfills are scored based on:

- presence and degree of hazards at each site - groundwater, surface water, and methane gas
- conditions that exacerbate those hazards (fractured bedrock, drinking water impact)
- the likelihood the public will be exposed to those hazards (distance to wells, homes)
- other risk factors (volume of waste, history of trespass, etc.)

Numerical values are assigned to each of these risks and are totaled to calculate a site's risk priority score.

This ranking process is completed annually.

Waste Disposal Engineering (WDE) Landfill in Andover

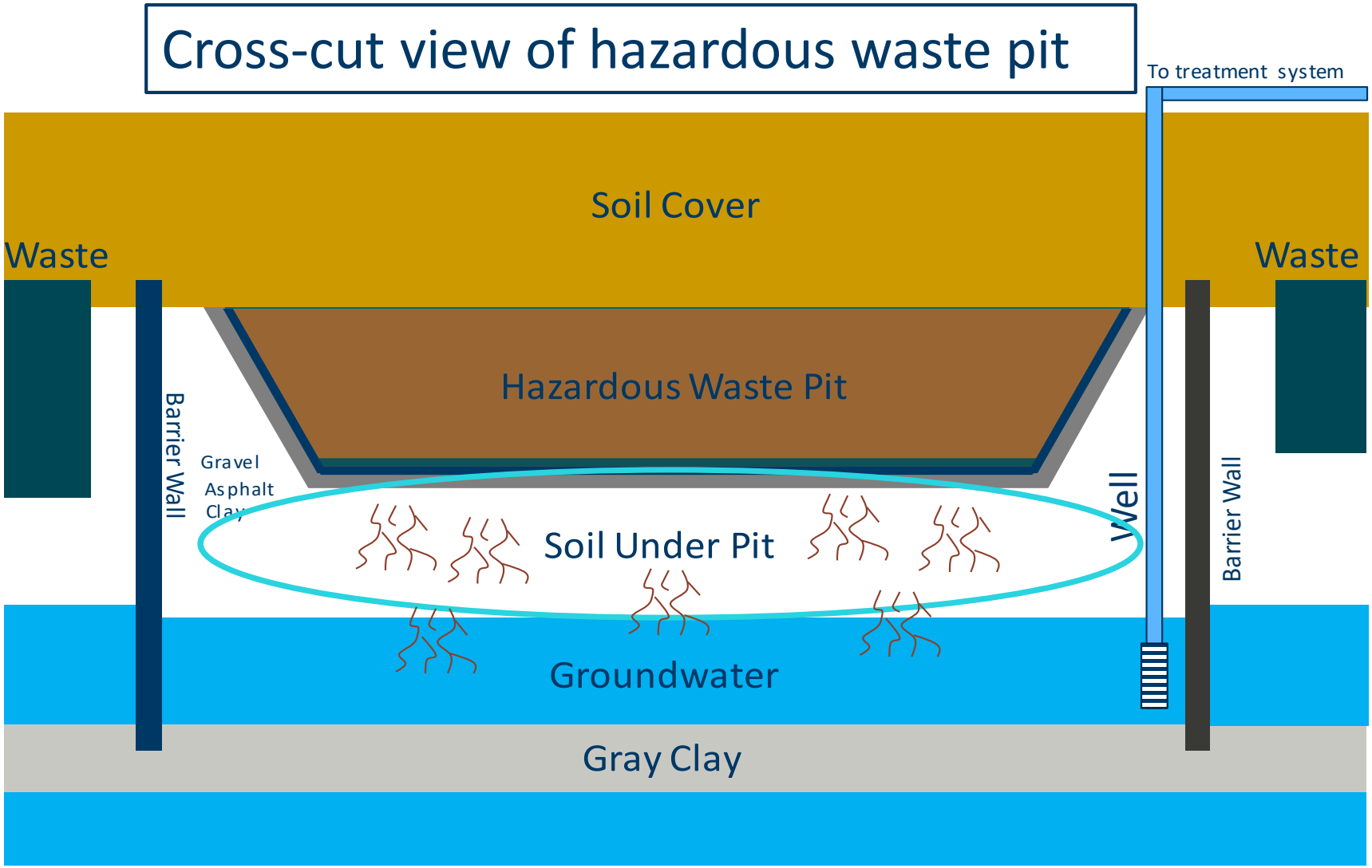
The WDE Landfill site in Andover

- 1/3 acre hazardous waste pit within 122 acre landfill
- 6,600 barrels buried in pit between 1972-74
- PCBs, paint wastes, heavy metals, solvents, VOCs
- 4 mitigation systems at landfill – plus barrier wall around pit
- FY 2016: $650,000 from General Fund for design/engineering
- FY 2017: $11.35 M in bonding for cleanup and construction

WDE Landfill - Extensive contamination discovered

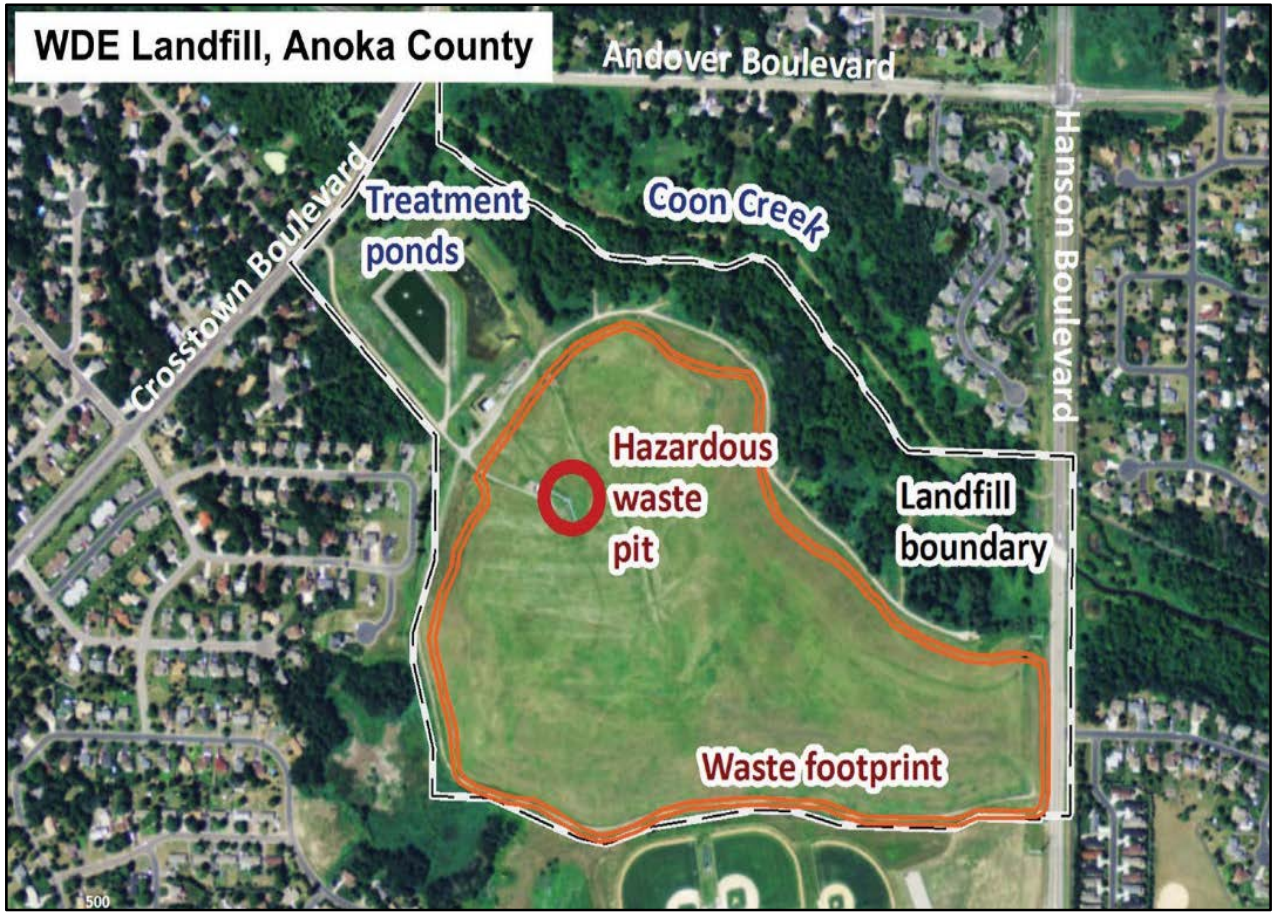
September 2017

- Existing hazardous waste liner is completely dissolved, not just degraded
- 20 feet of soil under the pit is saturated with hazardous waste
- Underlying aquifer is contaminated



2018 Bonding: $6 M for WDE Landfill

- An additional $6M is needed to finish the cleanup at WDE.
- Additional sampling is underway
- Community meeting in Fall 2017
- Neighbors have high interest in cleanup plans
- City, county, MPCA, residents maintain 2-way communications
- Projected cleanup: Winter 2018-19

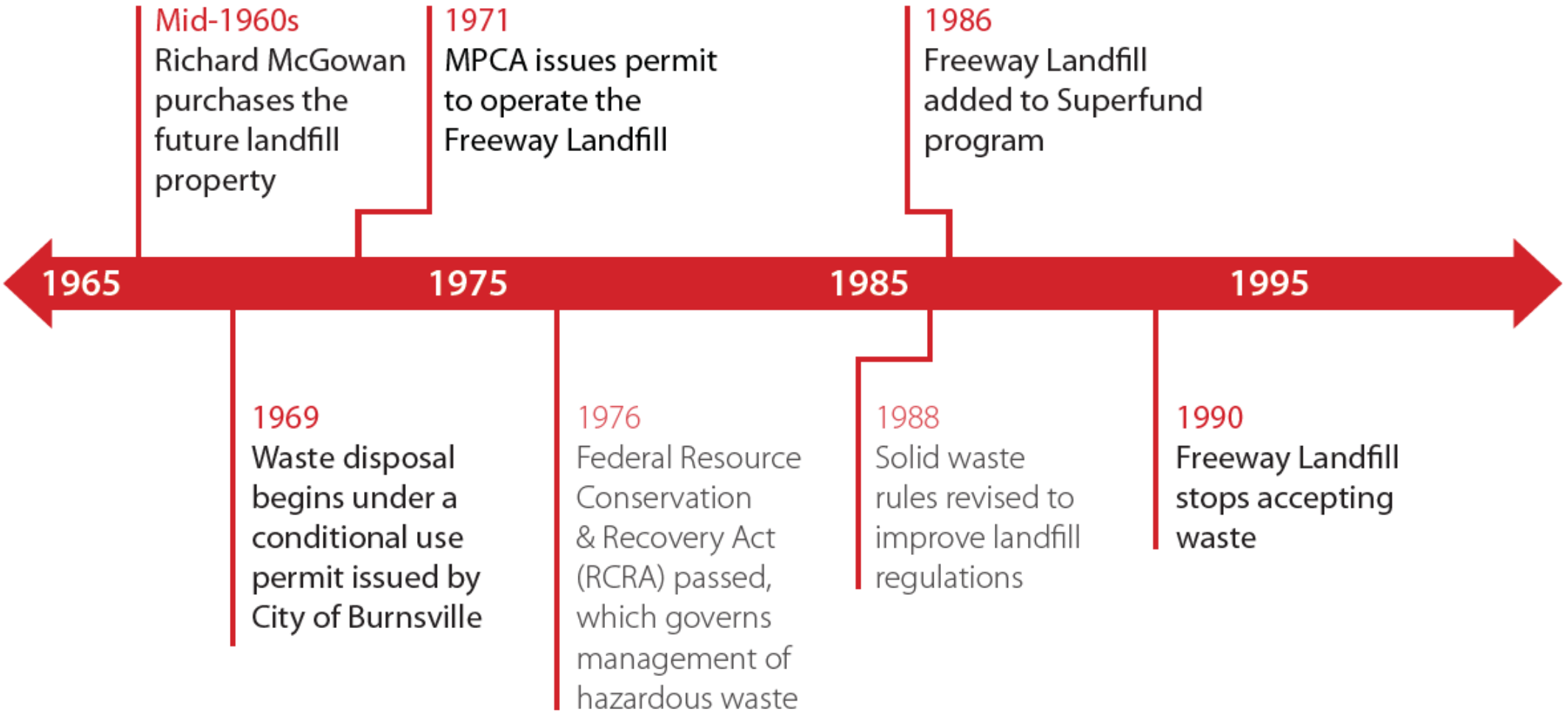


Freeway Landfill & Dump in Burnsville

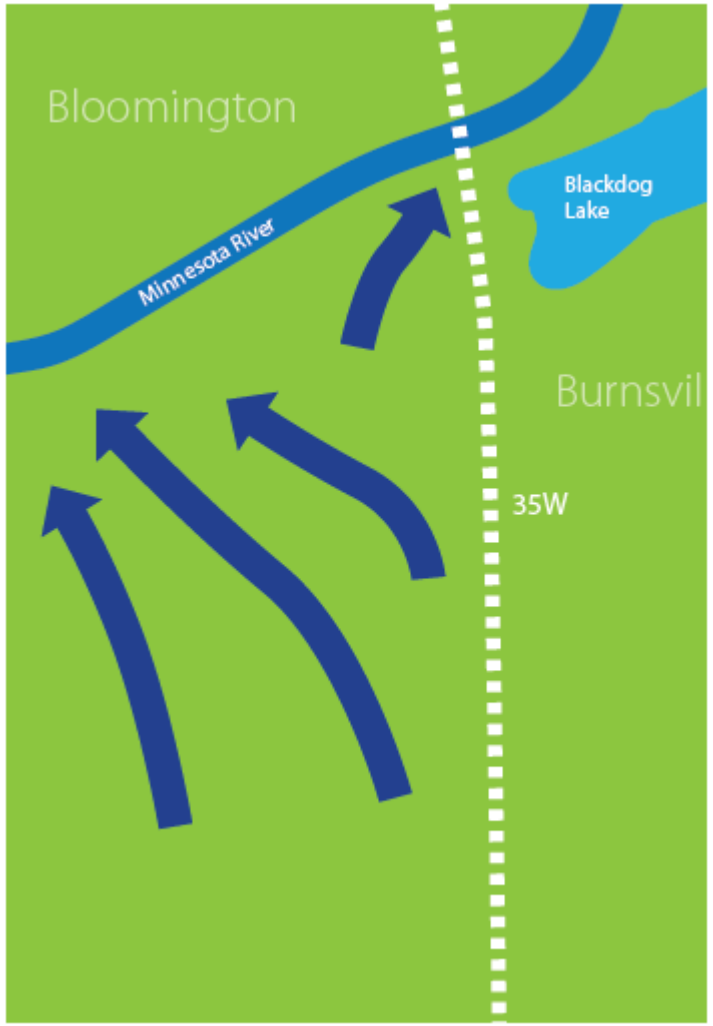
Freeway Landfill & Dump in Burnsville

- Freeway Dump
  - Operated 1961-71
  - 28 acres
  - 600,000 – 1 million cubic yards
- Freeway Landfill
  - Operated 1969-90
  - 150 acres
  - 5 million cubic yards
- Both are **unlined**
- Located above drinking water source for Burnsville and Savage
- Built on former wetland south of and adjacent to Minnesota River

History of Freeway Landfill

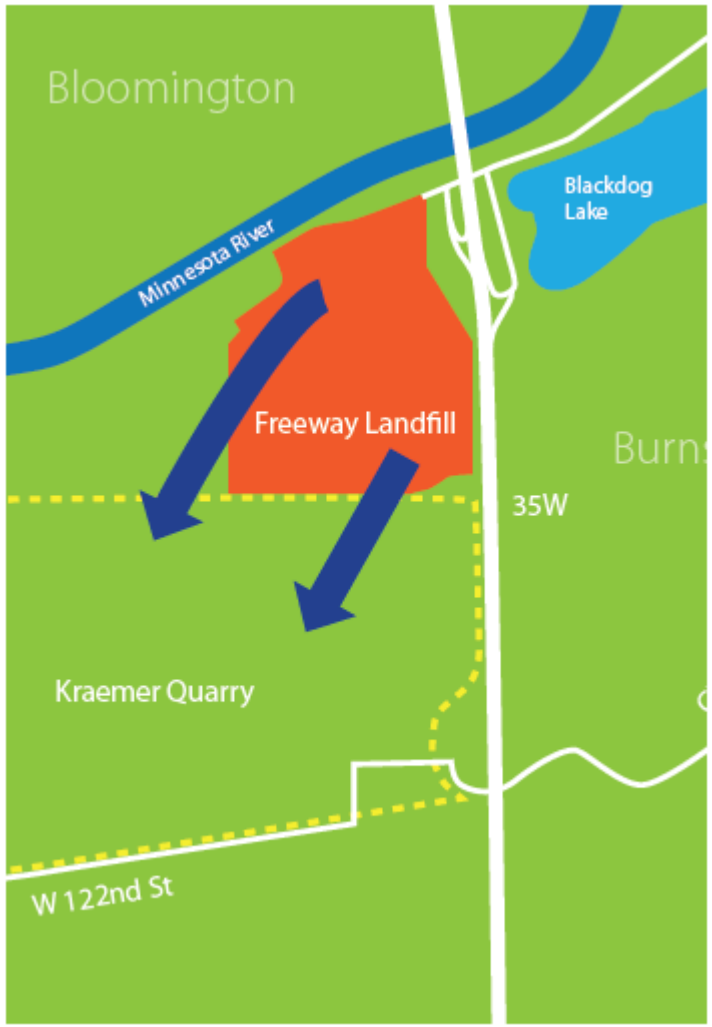


Groundwater flow: historical



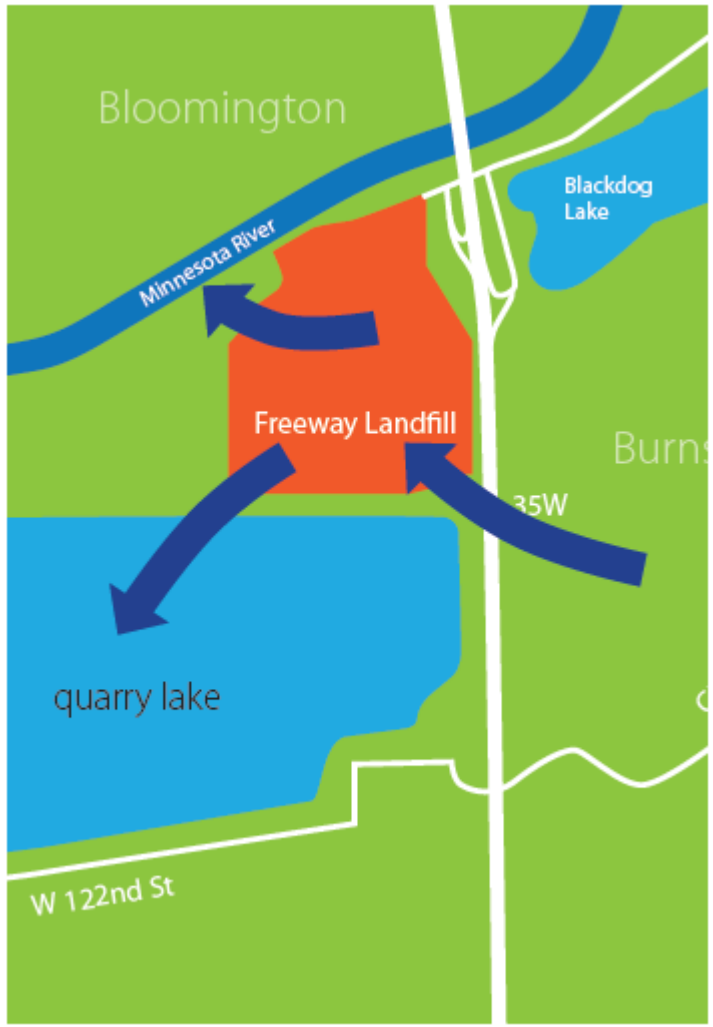
- Before the landfill existed, this site was a wetland.
- Groundwater flowed mainly to the Minnesota River.
- Today's regulations would never allow a landfill to be placed on such a site.

Groundwater flow today



- Kraemer Quarry pumps 10 million gallons of groundwater per day away from the landfill and the river.
- This lowers the water table, preventing the waste in Freeway Landfill from sitting directly in groundwater.

Groundwater flow in the future



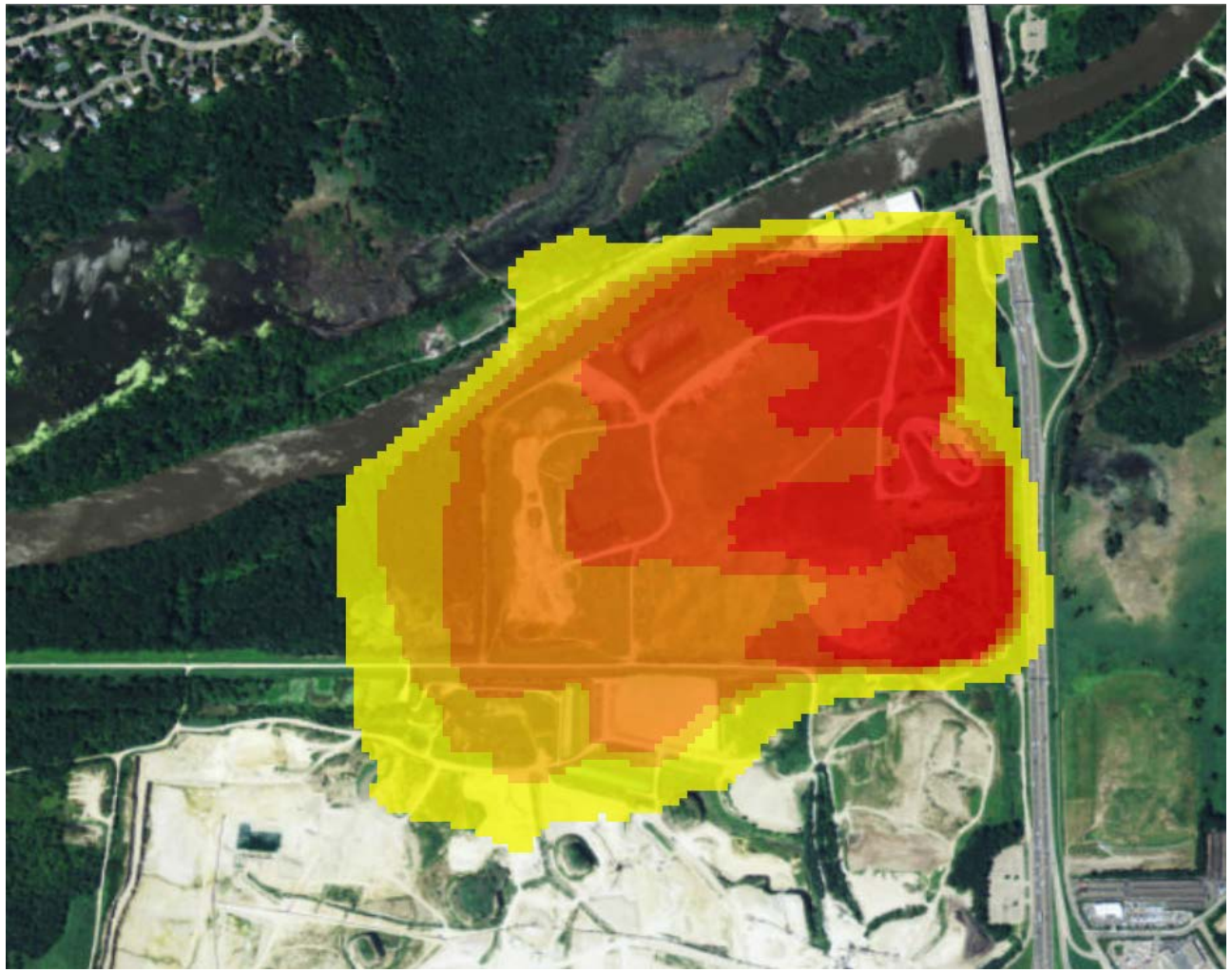
- When Kraemer Quarry stops pumping, groundwater will again flow toward the Minnesota River, through Freeway Landfill.
- The Quarry will fill with water and become a lake.
- Both the river and the lake will be at risk for contamination from the landfill.

Freeway Landfill: a looming threat to groundwater

- The groundwater level will also rise in the months after Kraemer Quarry stops pumping.
- When this happens, the waste and leachate at the bottom of the landfill will be in direct contact with groundwater.
- Under current estimates, cleaning Freeway Landfill and Freeway Dump will take about five years.

Freeway Landfill: a looming threat to groundwater

- Over time, this contamination will reach both the Minnesota River and the Quarry Lake.



Preliminary results of 2018 investigation

- Outer boundaries of waste still under investigation
- Methane detected above the lower explosive limit
- Contamination in groundwater above health standards for:
  - 1,4-Dioxane
  - PFCs (PFOS, PFOA)
  - VOCs (BTEX, TCE)
  - Metals
- Contamination in on-site surface water above criteria:
  - VOCs (BTEX, Vinyl Chloride)
  - Metals

Recent Legislation on Freeway Landfill

2017 Legislation:

- Expanded closed landfill program authority to initiate cleanup activities & provide third party protections when there is a non-voluntary party
- Directed MPCA to obtain lead agency role from US EPA
- Added Freeway Dump
- Appropriated $3 M from Closed Landfill Investment Fund for site evaluation and design.

In 2018 Session:

- Governor's Bonding Request included $ 52.763 M for 2 years' worth of cleanup activities at Freeway Landfill,
- $0 bonding was appropriated and Freeway Landfill was NOT included in either House or Senate Bonding bills,
- Legislature directed LCCMR to consider funding cleanup at Freeway Landfill.

Three approaches to handling pollution

Prevent it

Manage it

Clean it up