

Information Item:
**Southeast Metro Water Reclamation
Facility Update**

Jeannine Clancy, Assistant General Manager, Technical Services
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Environment Committee: May 14, 2019



Wastewater Reuse Policy

Council's role as stated in Thrive MSP 2040 Plan

Pursue wastewater reuse where economically feasible as a means to promote sustainable water resources.



2040 Water Resources Policy Plan



**Work with
our
partners**

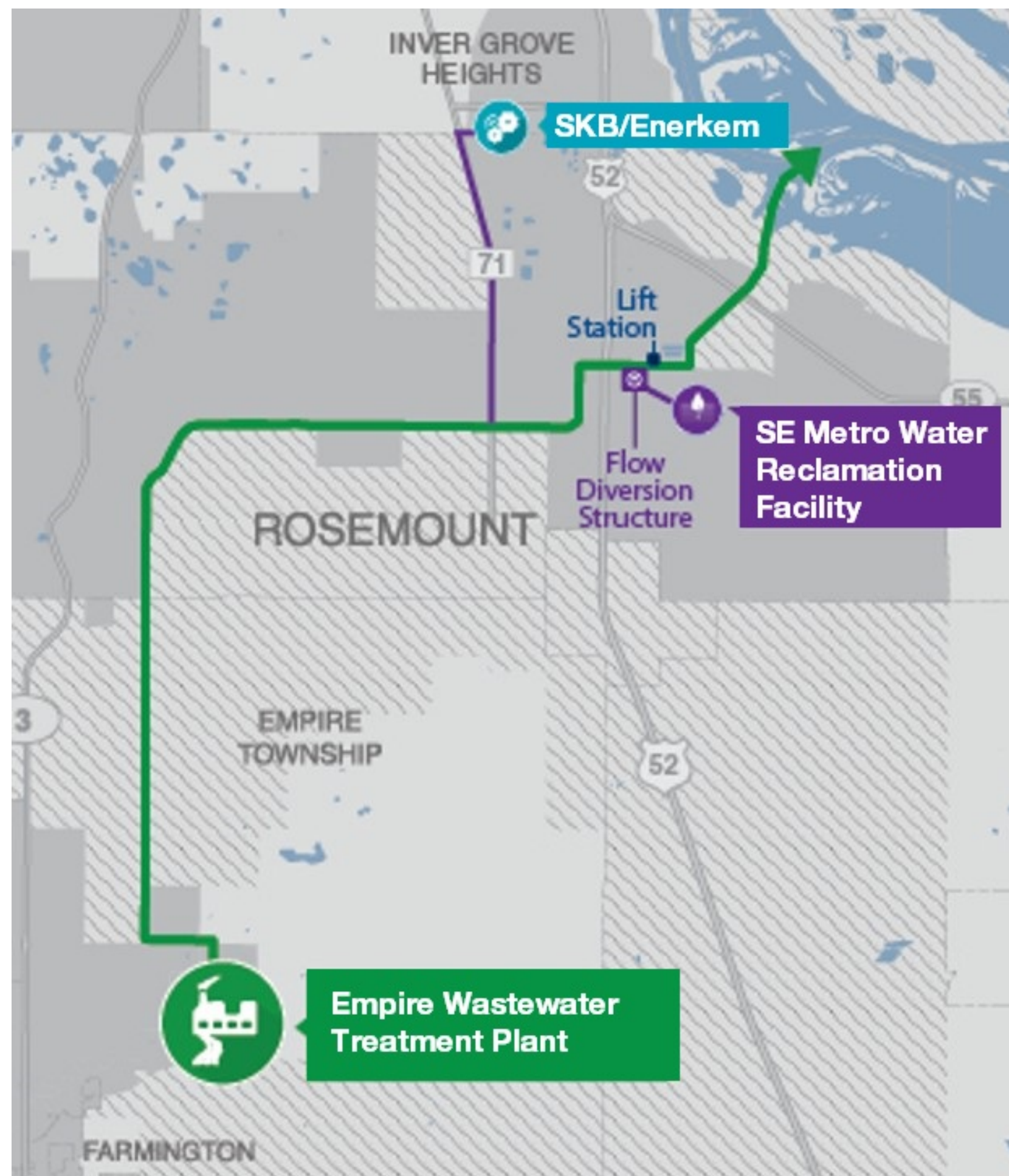


**Maximize regional
benefits from
regional
investments**

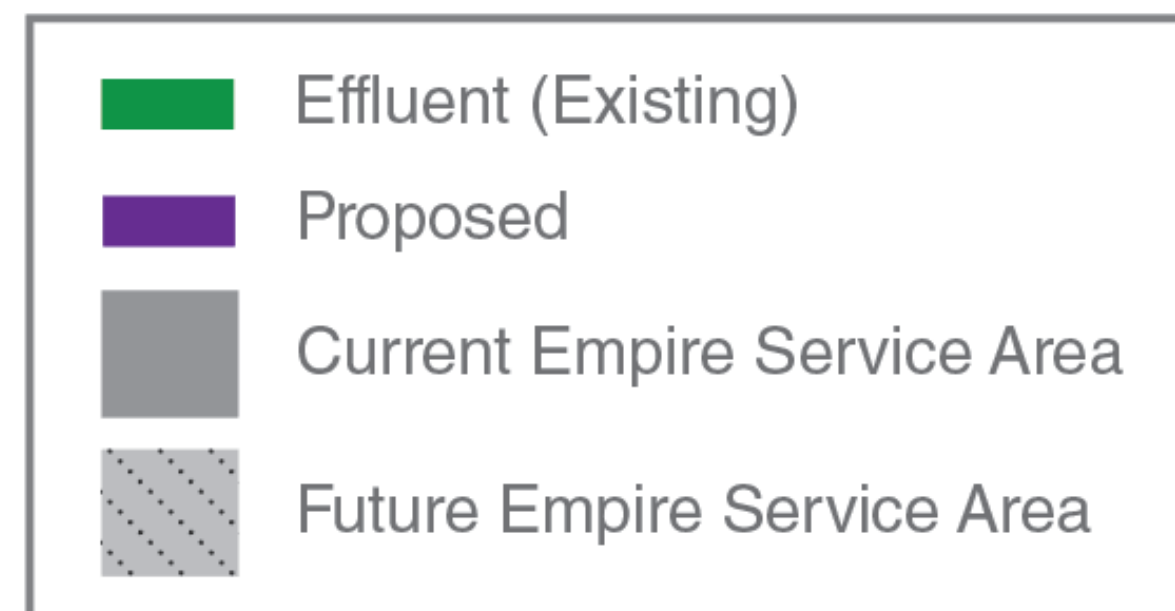


**Provide efficient,
high-quality,
sustainable
wastewater
services**

Proposed Southeast (SE) Metro Water Reclamation Facility



Reclaimed water:
Effluent that has received additional treatment to make it suitable for specific reuse applications or beneficial use.



Key Project Dates

Timeframe	Activity
March 1, 2017	Enerkem submitted letter of interest in reclaimed water
February 14, 2018	Council authorized staff to negotiate memorandum of understanding & design deposit agreement with Enerkem
April 11, 2018	Council authorized public hearing for Southeast Metro Water Reclamation Facility Facility Plan
May 31, 2018	Public hearing for SE Metro Water Reclamation Facility Facility Plan
June 27, 2018	Council adopted SE Metro Water Reclamation Facility Facility Plan
July 3, 2018	Submitted SE Metro Water Reclamation Facility Facility Plan to Minnesota Pollution Control Agency (MPCA) for Public Facilities Authority (PFA) funding review
September 13, 2018	MPCA granted preliminary approval for SE Metro Water Reclamation Facility Facility Plan
December 12, 2018	Council authorized staff to execute memorandum of understanding and preliminary design deposit agreement with Enerkem and grant agreement with MPCA
April 3, 2019	Enerkem informed MCES that its Inver Grove Heights waste-to-biofuel project is delayed due to funding

SKB-Enerkem's Potential Waste-to-Biofuel Facility

\$200 million

investment (no subsidies)

200,000 square feet

of building space

400,000 tons per year

of municipal solid waste

20 million gallons per year

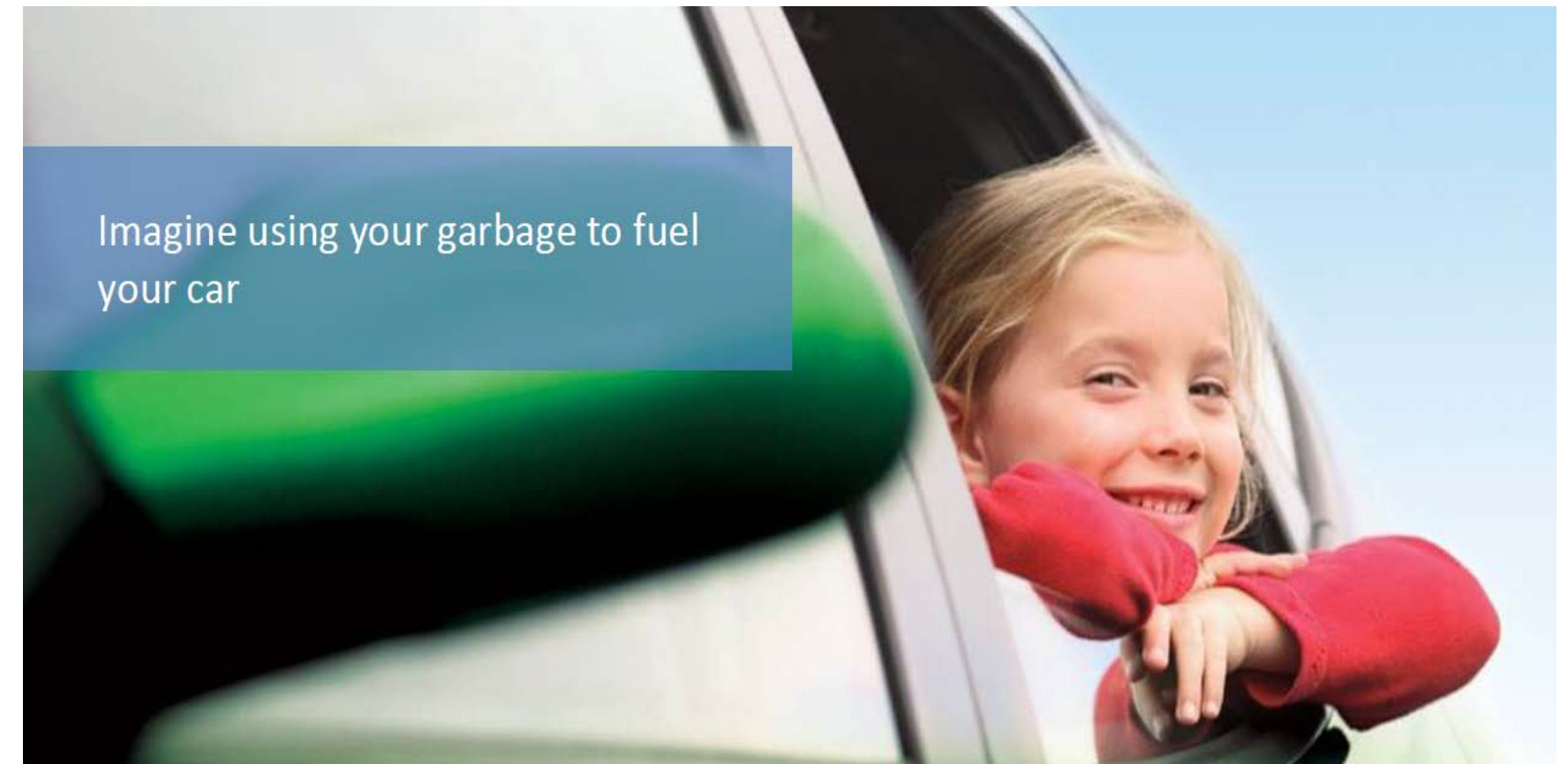
of clean, cellulosic ethanol

104

direct green jobs created

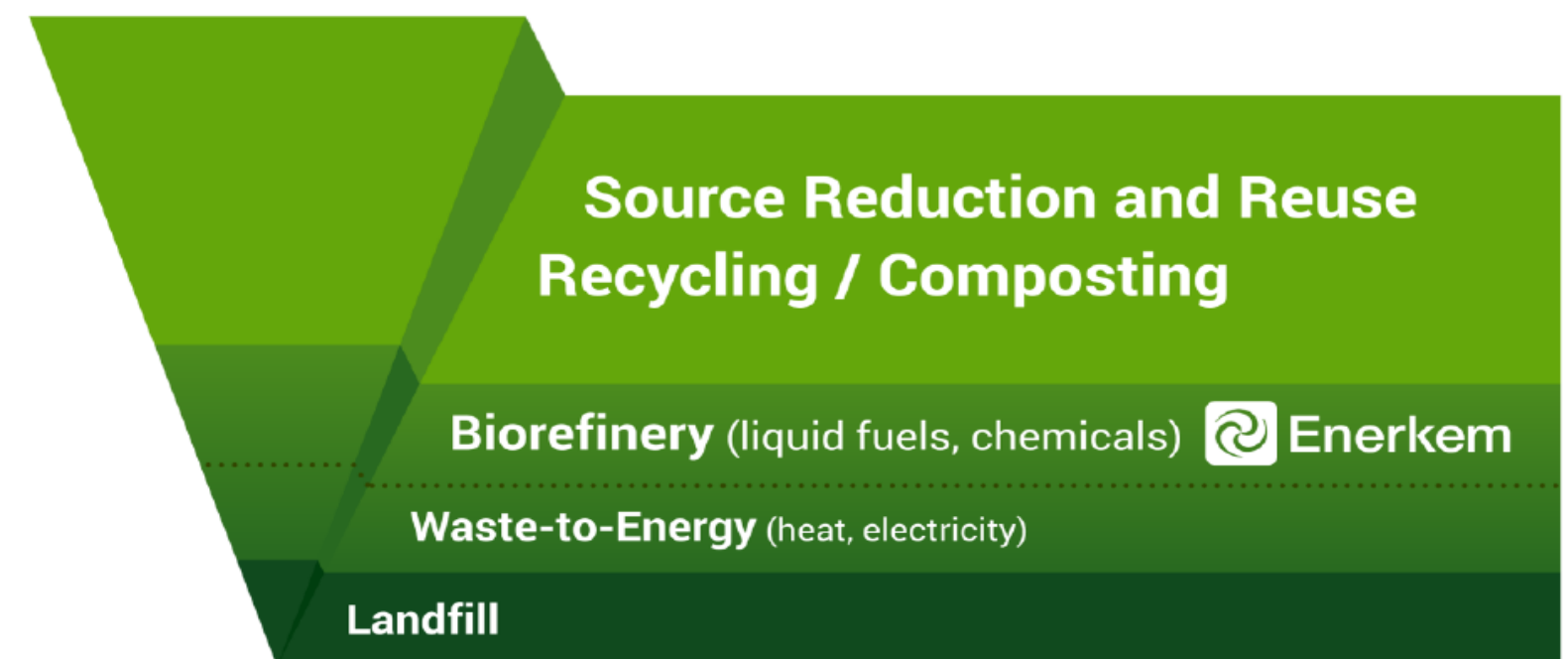
1.6 million gallons per day

of water needed



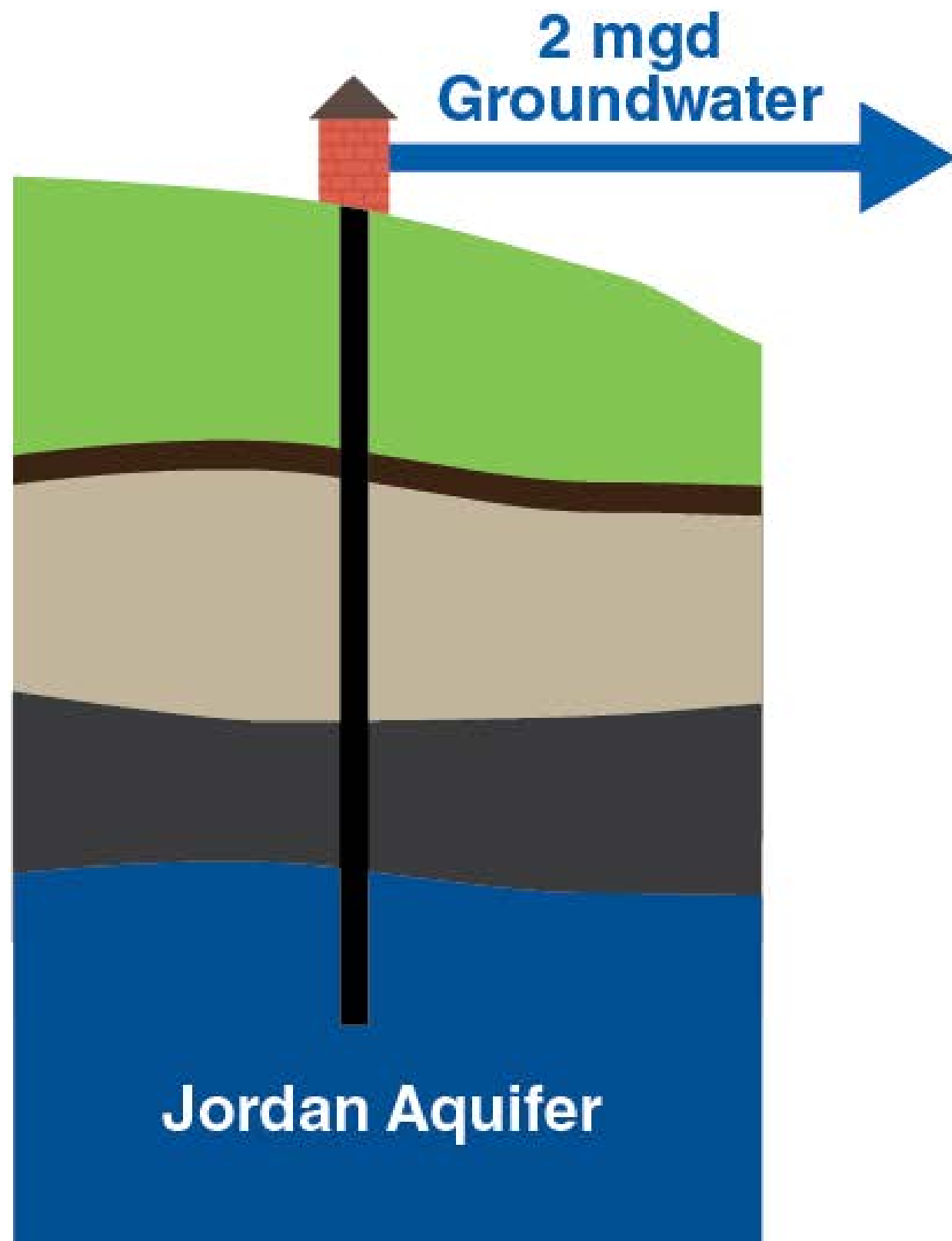
Sustainable alternative to landfilling

Helping increase waste diversion to 90%



Source Options for SKB-Enerkem's 1.6 Million Gallon Per Day Water Demand

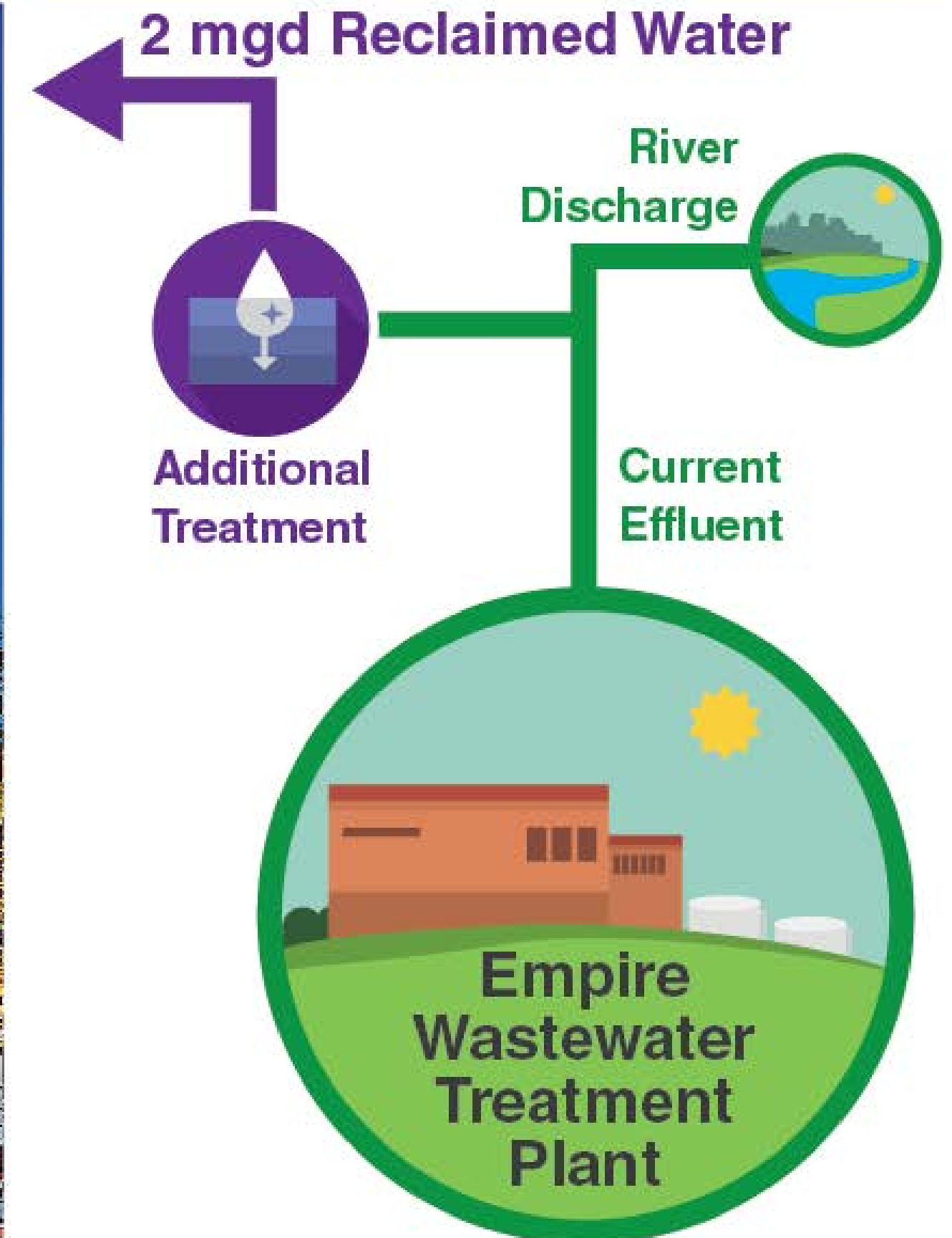
Groundwater Appropriation



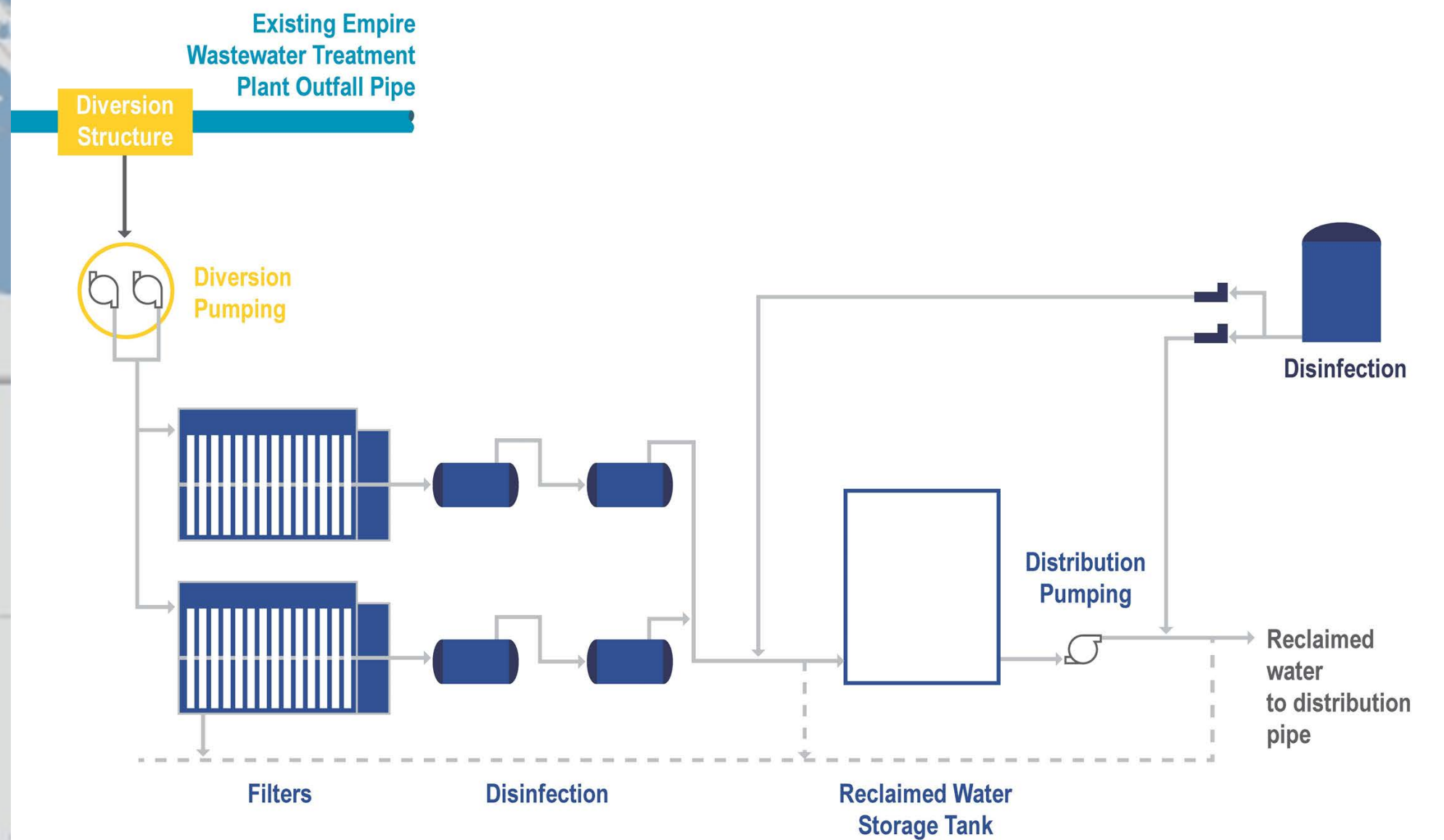
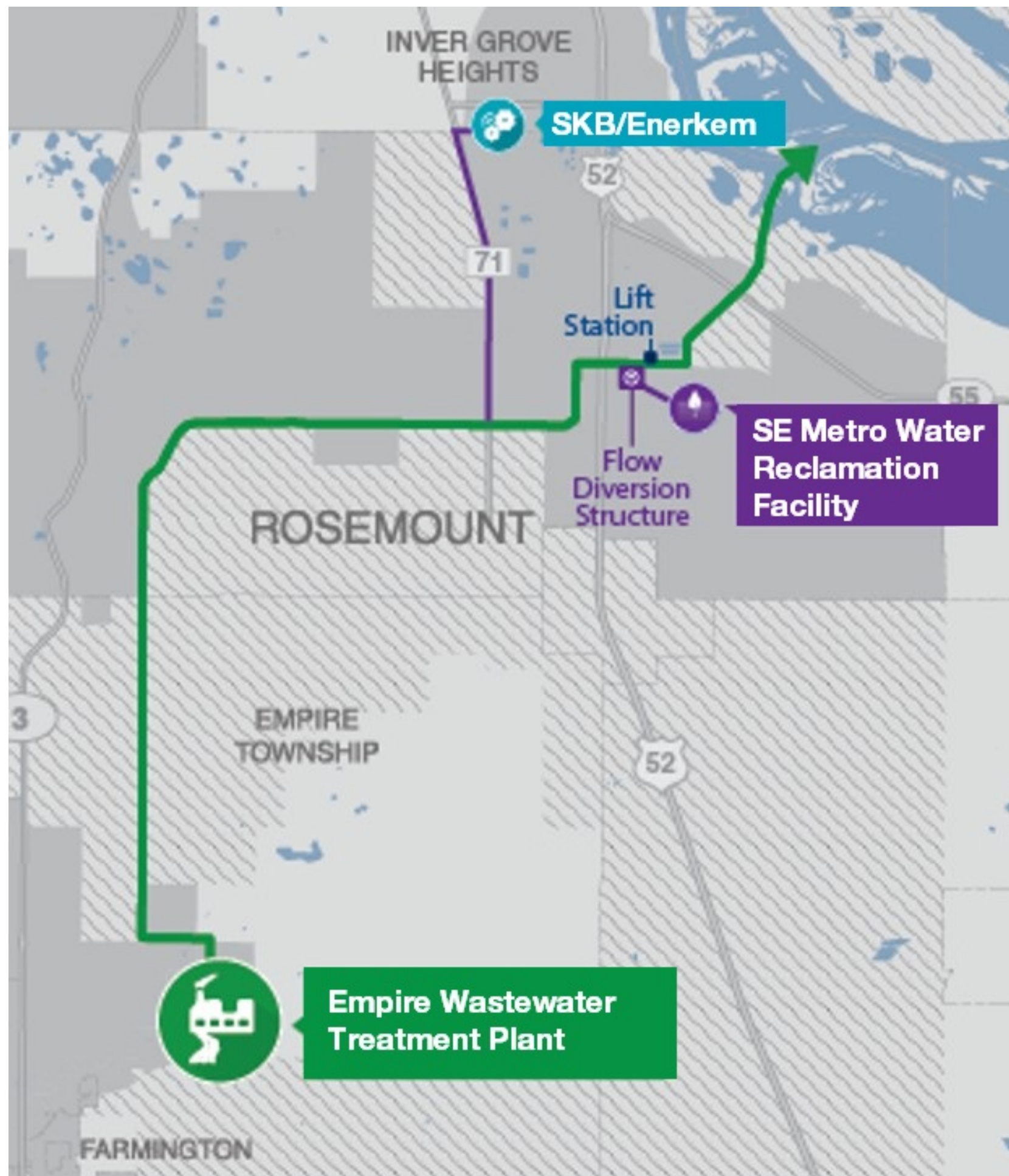
OR



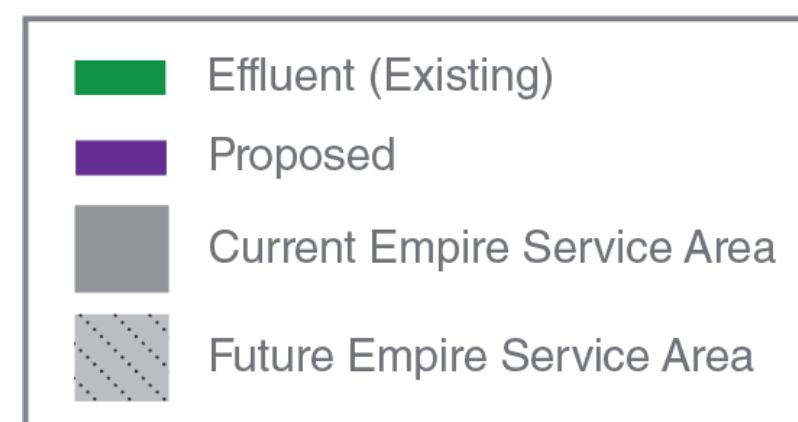
Reclaimed Water from MCES



Proposed SE Metro Water Reclamation Facility



Estimated capital project cost: \$27.7 M



Previous Project Schedule (Does not Reflect Enerkem's Schedule Delay)

Timeframe	Activity
January - June 2019	Preliminary design
July – December 2019	Detailed design
January – April 2020	Construction contract bid & award
May 2020 – October 2021	Construction
October – December 2021	Commissioning & startup

SE Metro Water Reclamation Facility Proposed Funding

Project Phase	Proposed Funding Mechanism
Preliminary Design	Enerkem design deposit for preliminary design
Detailed Design	Enerkem design deposit for detailed design
Construction	Debt service to be paid by Enerkem via reclaimed water service agreement
Startup and Commissioning	Debt service to be paid by Enerkem via reclaimed water service agreement
Operation and Maintenance	Debt service to be paid by Enerkem via reclaimed water service agreement

Enerkem Funding Challenges

- Major investor in Enerkem's potential waste-to-biofuels project withdrew, citing the carbon intensity of Minnesota's electrical generation portfolio and challenges with being able to market the cellulosic ethanol in California
- Investor continues to invest in other Enerkem projects
- No estimate on duration of schedule delay

Factors Contributing to Enerkem Project Feasibility

- Ramsey/Washington County Recycling and Energy Board: commitment to negotiate a contract with Enerkem to gasify refuse derived fuel
- MPCA: prioritizes alternatives such as waste-to-biofuels over landfill disposal
- Dakota County Solid Waste: Enerkem project is a way to meet Solid Waste Master Plan goals
- Minnesota State Statute 41A.16 Advanced Biofuels Production Incentive: Enerkem project likely meets incentive requirements.
- City of Inver Grove Heights supports locating Enerkem project in the community

Questions

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