

Form 12

ST. LOUIS COUNTY 2015 - 2019 CAPITAL IMPROVEMENT PROGRAM

PROJECT NAME: Landfill Gas Collection and Management System - Virginia

Department: Environmental Services **Contact:** Mark St. Lawrence Extension: 7639

Start Year: 2016 End Year: 2018 Project Goal: Healthy, Viable Ecosystem

Project Purpose & Justification

The Regional Landfill is the key component in the integrated waste management system for St. Louis County. The proposed project will increase the life of the landfill, provide long term economic and environmental benefits and comply with state and federal regulations.

Project Description & Location

Regional Landfill in Virginia - Installation of several infrastructure changes and upgrades to the current Municipal Solid Waste Landfill for the collection and management of the methane gas produced. These changes and upgrades include leachate recirculation lines, gas wells, piping and a gas flaring system.

Attachments Prepared:

Effect on Operating Budget (including Energy & Operational Efficiencies Achieved, if applicable)

The Environmental Services Department is dedicated to the efficient management of the Regional Landfill and the economic impacts and environmental concerns associated with its operation and long term care. As such, the effects on the operating budget are managed meticulously with most of the work associated with the outlined project performed by contractors.

Project Priority: Necessary Estimated Return On Investment: Unknown New Asset Life Cycle: 20-40 years

Priority Rationale: Environmental

Year	Property Tax	Bonding	Federal/State	Other	Total	Cost Breakdown	Total Cost
2015						Architect/Engineer	\$150,000
2016				\$520,000	\$520,000	Construction	\$1,220,000
2017				\$400,000	\$400,000	Consulting	\$100,000
2018				\$600,000	\$600,000	Furnishing/Equip	
2019						Contingency	\$50,000
TOTAL				\$1,520,000	\$1,520,000	Other	

Last Project Estimate Update: March 11, 2015

Total Cost \$1,520,000

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ST. LOUIS COUNTY 2015 - 2019 CAPITAL IMPROVEMENT PROGRAM

PROJECT NAME: Leachate Field Expansion - Regional Landfill - Virginia

Department: Environmental Services Contact: Mark St. Lawrence Extension: 7639

Start Year: 2015 End Year: 2018 Project Goal: Strong County Infrastructure

Project Purpose & Justification

The Regional Landfill in Virginia has been operated the original 22 acre leachate sprayfield for more than 20 years. With increased leachate production resulting from ongoing landfill expansion, the construction of a new spray field is proposed for 2015.

Project Description & Location

The Regional Landfill in Virginia has an existing 22 acre leachate spray field. With expansions of the landfill over the last 20 years, additional acreage is needed to better manage increased leachate production. The Department is proposing the development of a new 40 acre land application sprayfield to accommodate increased leachate production from the landfill.

Attachments Prepared:

Effect on Operating Budget (including Energy & Operational Efficiencies Achieved, if applicable)

Very little effect on operating budget - operation of system will be added to existing spray system expenses. The new field will reduce the more costly and less environmentally desirable option of hauling leachate to a waste treatment facility.

Project Priority: Recommended Estimated Return On Investment: 10-20 years New Asset Life Cycle: 10-20 years

Priority Rationale: Environmental

Year	Property Tax	Bonding	Federal/State	Other	Total	Cost Breakdown	Total Cost
2015				\$300,000	\$300,000	Architect/Engineer	\$90,000
2016				\$300,000	\$300,000	Construction	\$700,000
2017				\$150,000	\$150,000	Consulting	\$30,000
2018				\$100,000	\$100,000	Furnishing/Equip	
2019						Contingency	\$30,000
TOTAL				\$850,000	\$850,000	Other	

Last Project Estimate Update: March 11, 2015

Total Cost \$850,000

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ST. LOUIS COUNTY 2015 - 2019 CAPITAL IMPROVEMENT PROGRAM

PROJECT NAME: Leachate Filtration Construction - Regional Landfill - Virginia

Department: Environmental Services Contact: Mark St. Lawrence Extension: 7639

Start Year: 2016 End Year: 2017 Project Goal: Strong County Infrastructure

Project Purpose & Justification

The Regional Landfill in Virginia has operated the original 22 acre leachate spray field of more than 20 years. With increased leachate production resulting from ongoing landfill expansion, the construction of a new filtration process is proposed for 2016. Additionally, pre-treatment of incoming landfill leachate is crucial to the spray application process. Therefore, filtration process construction is necessary for long term leachate treatment and management.

Project Description & Location

The Regional Landfill in Virginia has existing storage/treatment ponds which can accommodate up to 10,000,000 gallons of leachate. With expansions of the landfill over the last 20 years and new state regulations, additional treatment is needed for increased leachate production from the landfill. A new filtration treatment system is proposed to accommodate pre-treatment of increased liquid leachate produced from the landfill.

Attachments Prepared:

Effect on Operating Budget (including Energy & Operational Efficiencies Achieved, if applicable)

Very little effect on operating budget - operation of system will be added to existing system expenses. The new filtration process will reduce possible hauling of leachate to a waste treatment facility which would be very costly.

Project Priority: Recommended Estimated Return On Investment: 10-20 years New Asset Life Cycle: 10-20 years

Priority Rationale: Environmental

Year	Property Tax	Bonding	Federal/State	Other	Total	Cost Breakdown	Total Cost
2015						Architect/Engineer	\$150,000
2016				\$1,200,000	\$1,200,000	Construction	\$1,100,000
2017				\$150,000	\$150,000	Consulting	\$50,000
2018						Furnishing/Equip	
2019						Contingency	\$50,000
TOTAL				\$1,350,000	\$1,350,000	Other	
						Total Cost	\$1,350,000

Last Project Estimate Update: March 11, 2015

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ST. LOUIS COUNTY 2015 - 2019 CAPITAL IMPROVEMENT PROGRAM

PROJECT NAME: Cold Storage Building - Regional Landfill - Virginia

Department: Environmental Services Contact: Mark St. Lawrence Extension: 7639

Start Year: 2014 End Year: 2015 Project Goal: Strong County Infrastructure

Project Purpose & Justification

A cold storage building is required at the Virginia landfill for storage of equipment indoors to prevent weather damage; exposure to weather shortens the useful life of vehicles and equipment. A storage building also provides a shelter for personnel while mobilizing equipment for use.

Project Description & Location

This 40' X 80' building will be located at the landfill and will be sited to be accessible to employees for equipment storage but away from the busy areas of landfill operations. The soil composition is irregular mine waste rock which will require extra excavation to construct a solid gravel floor or slab foundation for the building. This will be a steel sided building with adequate strength to handle snow loads and wind stresses that are normally encountered in the Virginia, MN area.

Attachments Prepared:

Effect on Operating Budget (including Energy & Operational Efficiencies Achieved, if applicable)

Operational efficiencies will result from properly stored equipment that is available for use over a longer useful life. It will also be more efficient to have shelter available while deploying equipment for use.

Project Priority: Necessary Estimated Return On Investment: Unknown New Asset Life Cycle: 20-40 years

Priority Rationale: Operations

Year	Property Tax	Bonding	Federal/State	Other	Total	Cost Breakdown	Total Cost
2015				\$140,000	\$140,000	Architect/Engineer	\$5,000
2016						Construction	\$135,000
2017						Consulting	
2018						Furnishing/Equip	
2019						Contingency	
TOTAL				\$140,000	\$140,000	Other	
						Total Cost	\$140,000

Last Project Estimate Update: March 11, 2015

Form 12

ST. LOUIS COUNTY 2015 - 2019 CAPITAL IMPROVEMENT PROGRAM

PROJECT NAME: Landfill Closure - Regional Landfill - Virginia

Department: Environmental Services

Contact: Mark St. Lawrence

Extension: 7639

Start Year: 2019

End Year: 2021

Project Goal: Healthy, Viable Ecosystem

Project Purpose & Justification

The Regional Landfill is the key component in the integrated waste management system for St. Louis County. As designed elevations within current landfill cells are reached, state regulations and MPCA-issued MSW Landfill Permit SW-405 require these cells to be officially closed within a mandated time period.

Project Description & Location

Regional Landfill Closure Closure Project; Fund 607001 - \$1,500,000; Location - Virginia, MN

Attachments Prepared:

Effect on Operating Budget (including Energy & Operational Efficiencies Achieved, if applicable)

The Environmental Services Department plans phase closure activities in accordance with operation logistics, current regulations and landfill permit requirements. The Department manages these projects in a manner that coincides with additional landfill cell development. Closure projects are associated with long term management of the landfill and are budgeted as such. There is potential resource capture associated with closure activities that could offset overall construction costs.

Project Priority: Necessary

Estimated Return On Investment: Unknown

New Asset Life Cycle: Not Applicable

Priority Rationale: Mandate/Code/Statutory

Year	Property Tax	Bonding	Federal/State	Other	Total	Cost Breakdown	Total Cost
2015						Architect/Engineer	\$150,000
2016						Construction	\$1,350,000
2017						Consulting	
2018						Furnishing/Equip	
2019				\$1,500,000	\$1,500,000	Contingency	
TOTAL				\$1,500,000	\$1,500,000	Other	
						Total Cost	\$1,500,000

Last Project Estimate Update:

March 11, 2015