

SUBJECT: A RESOLUTION OF THE MATANUSKA-SUSITNA BOROUGH ASSEMBLY ENDORSING COMPLETION OF THE LEACHATE TREATMENT FACILITY USING THE FILTRATION METHOD AND EXPLORATION OF A PUBLIC/PRIVATE PARTNERSHIP FOR SEPTAGE TREATMENT USING A WASTE-TO-ENERGY METHOD IN CONJUNCTION WITH SOLID WASTE DISPOSAL.

AGENDA OF: JUNE 5, 2018

Assembly Action:

*Approved Under the Consent
Agenda 6-5-18 [Signature]*

MANAGER RECOMMENDATION: Present to the Assembly for consideration.

APPROVED BY JOHN MOOSEY, BOROUGH MANAGER: *[Signature]*

Route To:	Department/Individual	Initials	Remarks
	Originator	<i>[Signature]</i> 5/22/18	
	Capital Projects Director	<i>[Signature]</i>	
	Public Works Director	<i>[Signature]</i>	23 MAY 18
	Finance Director	<i>[Signature]</i>	
	Borough Attorney	<i>[Signature]</i>	
	Borough Clerk	<i>[Signature]</i>	

ATTACHMENT (S): Fiscal Note: YES ☐ NO ☒
 Assembly Resolution Serial No. 18-042 (4 pp)
 WSAB Resolution Serial No. 18-01 and 18-02 (6 pp)

SUMMARY STATEMENT: This resolution is brought forward by Assembly Member Jim Sykes to endorse advancing the leachate treatment project through final construction and to examine a public/private partnership for a waste-to-energy facility for septage treatment and diversion of a portion of the Borough's municipal solid waste.

Septage and leachate disposal rates are expected to rise due to increased landfill size and changes in the Anchorage wastewater utility, specifically the closure of the Turpin Street station.

In 2017, Clark Engineering was selected to evaluate septage and leachate treatment, including potential for energy recovery from

waste streams. Simultaneously, Burns & McDonnell, another engineering firm, conducted an analysis of business operations for the Solid Waste Division, including waste to energy methods typical among the solid waste industry. The findings of both reports indicate that anaerobic digestion of septage and organic solid waste is a strong possibility and could garner interest from the private sector. Other types of technology, such as combustion, may also be feasible. This type of arrangement would benefit the Borough in many ways. Local treatment of septage would reduce hauling distances and associated costs for the public. Landfill tipping fees could also be held steady by minimizing future borrowing for cell expansion and closures. Additionally, some revenue may be generated through the production and sale of energy.

Recommendation of Administration: The Capital Projects Department recommends the Assembly endorse completion of the leachate treatment facility using the filtration method and exploration of a public/private partnership for septage treatment using a waste-to-energy method in conjunction with solid waste disposal.

**MATANUSKA-SUSITNA BOROUGH
WASTEWATER AND SEPTAGE ADVISORY BOARD
RESOLUTION SERIAL NO. 18-01**

A RESOLUTION OF THE MATANUSKA-SUSITNA BOROUGH WASTEWATER AND SEPTAGE ADVISORY BOARD (WSAB) RECOMMENDING ADVANCMENT OF THE DESIGN AND CONSTRUCTION OF THE PREFERRED LEACHATE TREATMENT FACILITY UTILIZING THE LEACHBUSTER SYSTEM AS IDENTIFIED IN CLARK ENGINEERING'S PRELIMINARY ENGINEERING REPORT.

WHEREAS, in 2011 the Borough Assembly adopted resolution 11-087 establishing the wastewater and septage advisory board, for the purpose of advising the assembly on issues relating to wastewater and septage issues within the borough; and

WHEREAS, in 2012 the Matanuska-Susitna Borough's Wastewater and Septage Advisory Board passed Resolution 12-01 in support of acquiring land for the construction of a regional wastewater and septage treatment facility which the Assembly provided funding for in August 2014 through Resolution 14-084; and

WHEREAS, in May 2012 the Matanuska-Susitna Borough Wastewater and Septage Advisory Board passed Resolution 12-02 in support of conducting a site feasibility study for a regional wastewater and septage treatment facility which the Assembly approved in July 2012 through Resolution 12-083; and

WHEREAS, in October 2014 the Matanuska-Susitna Borough Wastewater and Septage Advisory Board passed Resolution 14-04 recommending co-treatment of leachate and septage in a combined facility which the Assembly approved in December 2014 through Resolution 14-117; and

WHEREAS, in October 2014, the Wastewater and Septage Advisory Board recommended the Borough Assembly authorize a loan application to the State of Alaska, Department of Environmental Conservation, Alaska Clean Water Fund which the Assembly authorized through Resolution 14-110 in the amount of \$22,000,000

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for design and construction of a septage and leachate treatment and disposal facility; and

WHEREAS, the Matanuska-Susitna Borough will be allowed to apply for \$5,000,000 of the Alaska Clean Water Fund per year; and

WHEREAS, in October 2015, a \$5,000,000 loan application and Alaska Clean Water Fund agreement was initiated; and

WHEREAS, in August 2017, the Matanuska-Susitna Borough received the first loan of the Alaska Clean Water Fund in the amount of \$5,000,000 for preconstruction expenditures (e.g., planning, design and related tasks); and

WHEREAS, in 2017, Clark Engineering initiated and completed a Preliminary Engineering Report (PER); and

WHEREAS, the Wastewater and Septage Advisory Board reviewed the PER; and

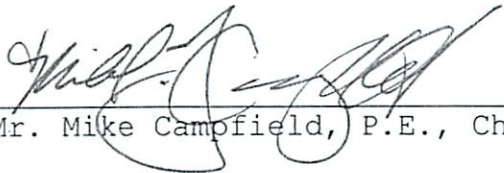
WHEREAS, the PER recommends proceeding with the Leachbuster System based on a competitive cost and a high effluent quality; and

WHEREAS, the operating costs of the Leachbuster System are lower than other previously-evaluated options.

NOW, THEREFORE, BE IT RESOLVED that the Matanuska-Susitna Borough Wastewater and Septage Advisory Board respectfully requests that the Matanuska-Susitna Borough Assembly approve advancing the project through final design and construction of the preferred leachate treatment facility utilizing the Leachbuster system as identified in Clark Engineering's Preliminary Engineering Report.

ADOPTED by the Matanuska-Susitna Borough Wastewater and Septage Advisory Board this 2nd day of May, 2018.

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Mr. Mike Campfield, P.E., Chair

ATTEST:


Debbie Passmore, Board Administration

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**MATANUSKA-SUSITNA BOROUGH
WASTEWATER AND SEPTAGE ADVISORY BOARD
RESOLUTION SERIAL NO. 18-02**

A RESOLUTION OF THE MATANUSKA-SUSITNA BOROUGH WASTEWATER AND SEPTAGE ADVISORY BOARD (WSAB) RECOMMENDING THE EXPLORATION OF WASTE-TO-ENERGY ANAEROBIC DIGESTION AS A PUBLIC-PRIVATE PARTNERSHIP.

WHEREAS, in 2011 the Borough Assembly adopted resolution 11-087 establishing the wastewater and septage advisory board, for the purpose of advising the assembly on issues relating to wastewater and septage issues within the borough; and

WHEREAS, in 2012 the Matanuska-Susitna Borough's Wastewater and Septage Advisory Board passed Resolution 12-01 in support of acquiring land for the construction of a regional wastewater and septage treatment facility which the Assembly provided funding for in August 2014 through Resolution 14-084; and

WHEREAS, in May 2012 the Matanuska-Susitna Borough Wastewater and Septage Advisory Board passed Resolution 12-02 in support of conducting a site feasibility study for a regional wastewater and septage treatment facility which the Assembly approved in July 2012 through Resolution 12-083; and

WHEREAS, in October 2014 the Matanuska-Susitna Borough Wastewater and Septage Advisory Board passed Resolution 14-04 recommending co-treatment of leachate and septage in a combined facility which the Assembly approved in December 2014 through Resolution 14-117; and

WHEREAS, in October 2014, the Wastewater and Septage Advisory Board recommended the Borough Assembly authorize a loan application to the State of Alaska, Department of Environmental Conservation, Alaska Clean Water Fund which the Assembly authorized through Resolution 14-110 in the amount of \$22,000,000 for design and construction of a septage and leachate treatment

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and disposal facility; and

WHEREAS, the Matanuska-Susitna Borough will be allowed to apply for \$5,000,000 of the Alaska Clean Water Fund per year; and

WHEREAS, in October 2015, a \$5,000,000 loan application and Alaska Clean Water Fund agreement was initiated; and

WHEREAS, in August 2017, the Matanuska-Susitna Borough received the first loan of the Alaska Clean Water Fund in the amount of \$5,000,000 for preconstruction expenditures (e.g., planning, design and related tasks); and

WHEREAS, in 2017, Clark Engineering initiated and completed a Preliminary Engineering Report (PER); and

WHEREAS, the Wastewater and Septage Advisory Board reviewed the PER; and

WHEREAS, the cost to build a Leachbuster Septage Facility does not provide clear financial advantage compared to other alternatives evaluated; and

WHEREAS, the PER includes a discussion of potential waste-to-energy facilities to convert septage and organic solid waste to a biogas fuel; and

WHEREAS, the fuel could be used to create heat, electricity and other valuable commodities that generate revenue; and

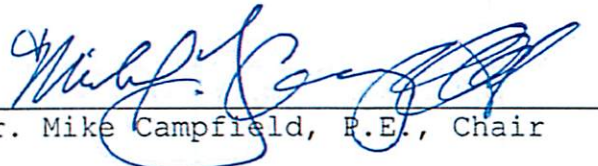
WHEREAS, diversion of solid waste could extend the life of the landfill and therefore reduce tipping fees; and

WHEREAS, a public-private minimizes the costs and risks to the Matanuska-Susitna Borough.

NOW, THEREFORE, BE IT RESOLVED that the Matanuska-Susitna Borough Wastewater and Septage Advisory Board respectfully requests that the Matanuska-Susitna Borough Assembly approve the exploration of waste-to-energy anaerobic digestion as a public-private partnership.

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ADOPTED by the Matanuska-Susitna Borough Wastewater and
Septage Advisory Board this 2nd day of May, 2018.


Mr. Mike Campfield, P.E., Chair

ATTEST:


Debbie Passmore, Board Administration