

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.

Adopted: 06/05/18

**MATANUSKA-SUSITNA BOROUGH
RESOLUTION SERIAL NO. 18-42**

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.

WHEREAS, in 2011 the Matanuska-Susitna Borough (Borough) Assembly adopted Resolution Serial No. 11-087 establishing the Wastewater and Septage Advisory Board (WSAB) for the purpose of advising the Assembly on issues relating to wastewater and septage issues within the Borough; and

WHEREAS, in February 2012 the WSAB passed Resolution No. 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 Serial No. 14-084; and

WHEREAS, in May 2012 the WSAB passed Resolution No. 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 Serial No. 12-083; and

WHEREAS, in October 2014 the WSAB passed Resolution 14-04 recommending co-treatment of leachate and septage in a combined facility which the Assembly approved in December 2014 through Resolution Serial No. 14-117; and

WHEREAS, in October 2014 the WSAB recommended the Borough Assembly authorize a loan application to the Alaska State Department of Environmental Conservation, Alaska Clean Water Fund, which the Assembly authorized through Resolution Serial No. 14-110 in the amount of \$22,000,000 for design and construction of a septage and leachate treatment and disposal facility; and

WHEREAS, in April 2015 the WSAB recommended the Borough Assembly designate the landfill as the preferred site for the septage and leachate facility through Resolution No 15-02, which the Assembly approved through Resolution Serial No. 15-060; and

WHEREAS, in August 2017 the 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 March 2017 the Capital Projects Department solicited for engineering consultants to design a septage and leachate facility, and Clark Engineering submitted the only proposal; and

WHEREAS, in January 2018 Clark Engineering completed a Preliminary Engineering Report (PER) evaluating septage and leachate treatment alternatives, as well as the potential for waste-to-energy technology in conjunction with solid waste disposal; and

WHEREAS, current leachate disposal costs associated with hauling to Anchorage average approximately \$400,000 per year and will rise with landfill expansion; and

WHEREAS, the estimated total cost for the leachate treatment facility is \$4,000,000, which is anticipated to be paid for within 10 years through the savings on hauling costs; and

WHEREAS, the PER recommends proceeding with a filtration method for leachate treatment based on a competitive cost and a high effluent quality; and

WHEREAS, in May 2018 the WSAB passed Resolution 18-01 recommending advancement of the design and construction of the preferred leachate treatment facility utilizing the filtration system identified in the PER; and

WHEREAS, all septage generated in the Borough is currently hauled to Anchorage for disposal at the Turpin Street station; and

WHEREAS, the Municipality of Anchorage plans to close the Turpin Street station, which will escalate septage disposal costs; and

WHEREAS, the PER identified anaerobic digestion as a potential means of energy recovery from septage, along with organic solid waste, to generate gas for heat and electricity; and

WHEREAS, a separate analysis of the landfill operations commissioned by the Solid Waste Division and authored by Burns & McDonnell in 2018, identified anaerobic digestion as a viable

energy recovery method for organic solid waste in conjunction with septage treatment; and

WHEREAS, the anaerobic digestion of organic waste, such as food, paper product, and yard trimmings would divert an estimated 50 percent of the solid waste from the landfill; and

WHEREAS, an anaerobic digestion system would reduce the need to discharge septage treatment effluent underground and also eliminate a significant portion of solid waste that would otherwise take up valuable air space in the landfill; and

WHEREAS, a public/private partnership minimizes the costs and risks to the Borough for construction of a septage treatment facility; and

WHEREAS reduction of the amount of waste will extend the life of the landfill, significantly reduce opening and closing cell costs and is expected provide opportunities for a public/private partnership that will reduce overall landfill and septage treatment costs.

NOW, THEREFORE, BE IT RESOLVED, that the Assembly supports continuing efforts to find the best long-term, cost-effective means to process septage and municipal waste, as well as extending the life of the landfill and its associated costs.

BE IT FURTHER RESOLVED, that the Assembly endorses advancing the project through final design and construction of the preferred leachate treatment facility using a filtration system and

exploration of a public/private partnership for septage treatment using a waste-to-energy method in conjunction with solid waste disposal.

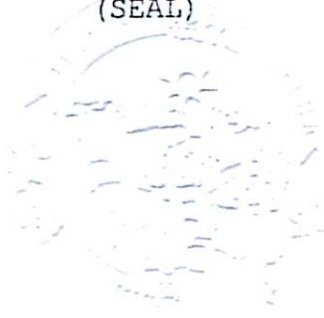
ADOPTED by the Matanuska-Susitna Borough Assembly this 5 day of June, 2018.


VERN HALTER, Borough Mayor

ATTEST:


LONNIE R. McKECHNIE, CMC, Borough Clerk

(SEAL)



PASSED UNANIMOUSLY: Sykes, McKee, Leonard, Mayfield, Doty, and Kowalke