



## Risk Analysis Report

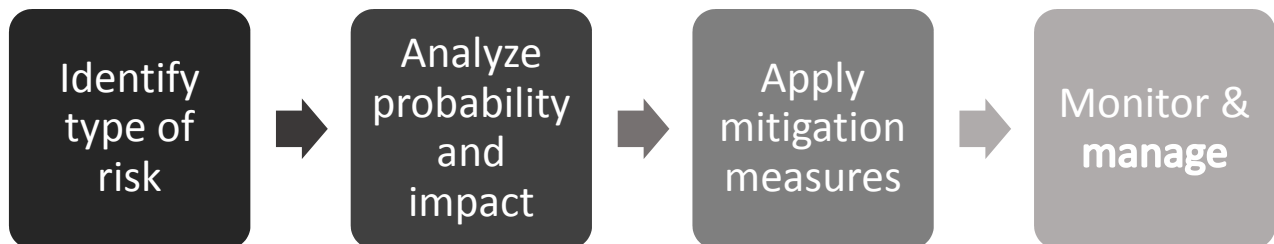
### Introduction

The purpose of this report is to provide an analysis of risks associated with public and private ownership of the Newport Facility under consideration by Ramsey and Washington Counties. This is one of several reports that provide information to the Resource Recovery Project Board as it approaches the May 2015 decision on Facility ownership.

Various risks exist as the counties pursue implementation of system changes over the coming years, regardless of facility ownership. The Finance Team working on the policy evaluation has identified a variety of risks in several categories to aid the Project Board in its decision.

The Finance Team used a Risk Impact Assessment process to develop the results presented below. That is a process that assesses the probabilities and consequences of various risk events. In this case the assessments were carried out for both private ownership and public ownership scenarios. The results were then used to prioritize risks to establish a most-to-least-critical importance ranking. Ranking risks in terms of their criticality or importance provides insights to the Project Board on where resources may be needed to manage or mitigate high probability/high consequence risks.

The following graphic illustrates the Risk Impact Assessment Process.



### Risk Impact Assessment

The risk impact tool selected by the Finance Team is called a Risk Impact Assessment. In the assessment each risk identified is evaluated by the probability of each risk multiplied by the impact of that risk to develop an impact number.

The outcome of the evaluation is a matrix that ranks risk in the following order:

		Probability	
		Low	High
Impact	Low	<p><b><i>Low impact/low probability</i></b></p> <p>Considered low level risks</p>	<p><b><i>Low impact/high probability</i></b></p> <p>Considered of moderate importance - if these things happen, the Project can cope with them and move on. However, the Project should try to reduce the likelihood that they'll occur.</p>
	High	<p><b><i>High impact/low probability</i></b></p> <p>Considered of high importance if they do occur, but they're very unlikely to happen. The Project should do what it can to reduce the impact they'll have if they do occur, and develop contingency plans in case they do.</p>	<p><b><i>High impact/high probability</i></b></p> <p>Considered of critical importance. These will be the Project's top priorities, and are risks that it must pay close attention to.</p>

This tool allowed the Finance Team to rank the risk in order of importance and develop possible mitigation strategies to temper or avoid the impacts.

Five categories of risks were analyzed for probability and impact under both private operations and public ownership.

1. Legal Risks
2. Financial Risks
3. Technology Risks
4. Operating Risks
5. Community Acceptance Risks

A score of 1 to 5 was given to each risk for both probability and impact. The following key was used for scoring.

### **Probability**

1. Very low probability – not worth considering
2. Low probability – unlikely to occur
3. Medium probability – realistic chance of occurrence
4. High probability – likely to occur
5. Very high probability – almost certain to occur

### **Impact**

1. Very low impact – not significant to project
2. Low impact – can be managed without mitigation
3. Medium impact – may require mitigation
4. High impact – significant impact on cost / schedule
5. Very high impact – can be a “project killer”

### Risk Impact Assessment Conclusions

Risk management is critical in either public or private ownership. Many of the issues of greatest risk vary under the ownership scenarios, but some are common to both. Even where risks are common to both scenarios, however, the mitigation strategies may differ. This report is a broad outline that identifies categories of risk, and relative degree of risk, and general mitigation measures. As the counties proceed with decisions on changes to the waste management system, developing specific mitigation measures are key. A team approach, with technical, legal and financial evaluation of agreements and management plans is recommended.

The risk assessment clearly identifies that the risks are higher in the private ownership scenario since the control of the waste, the Facility and the marketing of materials is determined by a private owner. The lower risk alternative is public ownership since the control of the waste, Facility and marketing of materials is determined by the counties. Risks common to ownership and operation of the Facility received higher ranking under public ownership (e.g. potential for employment litigation and environmental liability). Whereas the most critical risks under private ownership involve inability to effectively achieve goals of Project or achieve them at a reasonable cost.

The mitigation approaches from each ownership scenario are also very different. In the public ownership scenario, the two largest risks identified are employee concerns and recycling/energy market volatility. These risks are inherent in waste management activities and need careful planning and policies to reduce negative impacts if a situation arises. In the private scenario, the primary tool for risk mitigation is using contract terms for mitigation. Contract mitigation can be useful tool, but would come at a financial cost to the counties.

The detailed processing for identifying impact number per risk is detailed below.

### Risk Impact Assessment Findings

After identifying the risks (see Appendix A for list of all risks), the Finance Team went through an exercise to assign a probability level (scored 1 – 5) and an impact level (scored 1 – 5). (See Appendix B for Definitions and Assumptions)

For each risk the probability level was multiplied by the impact level, to arrive at an overall score, called an Impact Number. Below are the ten highest ranked risks, ranked from highest to lowest risk, for each of the ownership scenarios. Also included are potential mitigation strategies for each risk. All risks that scored above a 15 are shown. Those risks that are common to both scenarios are marked with a flag (F); even though the risks identified are the same in these cases, the mitigation strategies are different under each scenario.

Public Ownership		
Risk Description	Mitigation Strategy	Impact Number
Community Acceptance of ownership and vision F	Clearly communicate the Project scope and vision to various audiences, including focus on 75% recycling goal, increased SSO/SSR, and waste as a resource. Engage with haulers, municipalities and interested parties early and often. Explain the thorough evaluation conducted from 2013 – 2015. Provide transparency of reports and analyses.	15
Conflict/disagreement between two counties F	Assure the joint powers agreement has a clear conflict resolution process; develop a protocol for raising concerns and mitigating disagreements between two counties. Ensure frequent updates to Project and county members.	
Changes in waste assurance law or other regulatory law that impact permitting and or the ability to get waste to the facility	Regular communication with permitting and other government agencies to ensure ongoing compliance and understand potential forthcoming changes in regulation and/or laws.	12
Potential for environmental liability for significant air/water/land emissions. e.g. Landfills that receive residue	Assure high quality facility management and procedures to reduce risks of release. Design contracts with third parties to transfer and limit risks, and reduce long term liability. Understand whether special insurance is needed.	12
Volatility in energy and materials markets F	Closely monitor markets; in contracts carefully consider who bears the upside and downside risks of market swings in prices paid for products and inputs to the system.	12
Technology functioning as commissioned/planned Example: What if gasification technology does not work as anticipated	Sufficient due diligence before accepting the technology; high quality procurement process; well written contracts with clear pathways to resolve issues; transfer technology risk by contract as much as possible	12

Employment	Assure that good labor agreements and conflict resolution processes are in place; assure good management and consistent human resources policies and procedures	9
Contract disputes associated with engineering procurement contract, offtake, and processing contract disputes	Need for strong project legal team support and on-going contract mitigation and risk analysis.	9
Higher than anticipated maintenance costs for RDF facility	Ensure facility budget includes large enough contingency budget to cover potential maintenance and other problems.	9
Characterization and Composition of waste stream changes over time	Design the system for flexibility; conduct regular review of waste characterization and composition to ensure facility/scope can manage changes effectively. Examine use of other waste streams.	6

<b>Private Ownership</b>		
<b>Risk Description</b>	<b>Mitigation Strategy</b>	<b>Impact Number</b>
Changes in private owner of the facility	Negotiate Service Agreement language allowing the counties rights related to private owner; include right of first refusal for facility sale.	25
Inadequate control of facility usage and goals	Include clear and accountable contract terms that specify joint investigation, construction and implementation of the various goals in the Project's scope. Outline pathways for financing. Devise strong communication protocols with private owner. Understand that achieving goals under a private approach will cost more.	16
Ability to Raise Revenue (CEC, tipping fees)	Monitor market pricing coordinated with the Facility owner; provide a fund balance for emergency payment needs; Maintain the CEC as the principal revenue raising tool.	16
Conflict/disagreement between two counties (present or emerging) P	Assure the joint powers agreement has a clear conflict resolution process; develop a protocol for raising concerns and mitigating disagreements between two counties. Ensure frequent updates to Project and county members.	15

Appropriate use of public dollars	Develop clear well written contracts that specify vendor expectations and methods of payment. Assure good management of county contractual obligations. Periodic review of finances by elected officials. Negotiating annual subsidy/fees would be critical.	15
Community Acceptance of ownership and vision R	Clearly communicate Project scope and vision to various audiences including focus on 75% recycling goal, increased SSO/SSR, and waste as a resource. Engage with haulers, municipalities and interested parties early and often.	15
Contract Disputes (Service Agreements)	Contract mitigation – clear and accountable contract terms with private entities such as Newport Facility, AD or gasification companies that includes dispute mitigation and clear communication protocols.	12
Changes in regulatory law	Regular review to assure facility (-ies) within the Scope are meeting permit requirements and discuss with permitting agencies any potential changes in regulation.	12
Volume of waste stream decreases or increases over time.	Contract mitigation - seek long term contracts with haulers, public entity waste generators, and others to secure steady waste supply.	12
Volatility in energy and materials markets R	Closely monitor markets; in contracts carefully consider who bears the upside and downside risks of market swings in prices paid for products and inputs to the system.	9

## Appendix A: Identified Risks

Below is the list of all risks identified and ranked. While the impact number associated with each risk did not rank in the top ten as previously discussed, all risks remain important and the counties will want to address in either ownership scenario.

RISK DESCRIPTION	NOTES
<b>Legal Risks</b>	
Contract Disputes	Risks associated with Engineering Procurement Contract and Processing contract disputes.
Contract Disputes (Service Agreements)	Risk associated with Service Agreements contract disputes assuming a long term agreement with a private vendor.
Changes in financing and tax law or regulation	Risk that federal, state or law laws, including tax laws, will change and affect the financial or operating status of the facility.
Changes in solid waste policy law	Risk that federal, state or law changes will change and affect the financial or operating status of the facility. For example, the 2014 Minnesota State Law mandating a 75% recycling goal.
Changes in regulatory law	Risk that federal, state or law changes will impact permitting.
Changes in waste assurance law or regulation	Risk that federal, state or law changes will impact the facilities' ability to get waste to the facility, i.e. 473, MPCA, flow control.
Potential for environmental liability	Risks associated with environmental and nuisance liability including odor. Potential for environmental liability for significant air/water/land emissions for RDF Technology including ash disposal, MWP Processing, AD Processing, Gasification, and Landfills.
<b>Financial Risk</b>	
Volatility in energy markets	Risks associated with varying prices in markets for the sale of energy and/or pricing for energy outputs.
Construction Risk (i.e. delays in construction timeline)	Risks associated with construction related to the Facility in Newport, or facilities that use materials from Newport.
Volume of waste stream decreases or increases over time	Risks associated with changing amount of solid waste over time and its potential impact on operations. For example, less waste could affect revenues resulting in reduced tipping fee income and reduced CEC collections.
Significant negative changes to commodity (recyclables/organics) values	Risks associated with variations in prices for materials marketed for recycling.
Access to Capital/control of capital (Newport RDF only)	Capital for new improvements/not in operating budget and capital acquisition. Capital will only be used for acquisition and upgrades at Newport. Gasification and AD are assumed privately held.

Ability to Raise Revenue (CEC, tipping fees)	Risks associated with the ability to collect operating revenue.
Residual value risk	Risks associated with the value of the facility after a period of time; in the case of the resource recovery facility it is the value of the facility after the bonds have been retired.
<b>Technology Risk</b>	
Technology functioning as commissioned/planned for the various technologies	Risk that the chosen technology will not be effective or become outdated.
<b>Operating Risk</b>	
Characterization and Composition of waste stream changes over time	Risk that the character of waste changes, affecting the anticipated output of the Facility, such as RDF, recyclables, organics.
Higher than anticipated maintenance costs for RDF Facility	Risk that maintenance costs are higher than planned.
Facility does not operate as designed (i.e. safety, labor dispute, schedule risks)	Risk that operating the facility is more challenging than anticipated for reasons not related to the design.
Uncontrollable circumstances	Risk that circumstances will arise that affect the ability of a facility to operate and provide a public service. For example, what extreme economic recession, unforeseen problems at the facility such as flooding, fire, or explosions.
Employment	Risk associated with hiring and managing employees (i.e. liability, management, HR issues, and union disputes).
<b>Community Acceptance Risk</b>	
Public opposition including: <ul style="list-style-type: none"> <li>• Public opposition to public purchase of facility (Facility)</li> <li>• Government entry to private market (Greater Government)</li> <li>• Public opposition to scope of technologies (Technology)</li> <li>• Public opposition to projects being built in their community</li> </ul>	Risks associated with community acceptance of ownership and operations including host City of Newport and haulers.
Appropriate use of public dollars	Risk that public funds for a service, public or private, are not efficiently or effectively used.
Inadequate control of facility usage and goals.	The Counties ability to direct the system to assure that Facility goals align with County and regional goals/scope/vision.
Conflict/disagreement between two counties	The risk that the parties disagree.
Changes in private owner of the facility	Risks associated with the private owner of the Facility selling it to another entity, with the counties not able to select their private partner



## Appendix B - Definitions and Assumptions

- The Risk Impact/Probability is based on the principle that a risk has two primary dimensions:
  - *Probability* - A risk is an event that "may" occur. The probability of it occurring can range anywhere from not likely to occur to very probable.
  - *Impact* - A risk, by its very nature, always has a negative impact. However, the size of the impact varies in terms of cost and impact on health, environment, economic base or other critical factor.
- U.S. Government Accountability Office (GAO) defines risk and risk management the following way (Source: Government Accountability Office, Report # GAO-06-91, December 2005). These were the definitions used by the Finance Team in framing the Risk Impact Assessment.
  - *Risk* - An event that has a potentially negative impact and the possibility that such an event will occur and adversely affect an entity's assets, activities, and operations.
  - *Risk Management* - The continuous process of assessing risks, reducing the potential that an adverse event will occur, and putting steps in place to deal with any event that does occur. Risk management involves a continuous process of managing—through a series of mitigating actions that permeate an entity's activities—the likelihood of an adverse event and its negative impact. Risk management addresses risk before mitigating an action, as well as the risk that remains after countermeasures have been taken.