

# MINNESOTA>ENVIRONMENTAL<INITIATIVE

## Appendix H: Recycling Sub-Group Straw Proposals

### 2.1 POLICY/LEGISLATION

2.1a	Mandatory Recycling Legislation				
Description	Adopt a State mandatory recycling legislation that requires commercial sector and residential sector to achieve a 50% recycling rate by 2011 and a 60% recycling rate by 2025. If these goals are not being met, the state would implement mechanisms that will a help to achieve those goals. These mechanisms could include Deposit Legislation, Disposal Bans on specific recyclable materials that are not achieving those rates, and Mandates that all products sold in MN must internalize and fund their costs of disposal (EPR)				
Measurement Method	Should be measured and enforced at the point of generation/collection.				
Timeframe/Mileposts	50% state-wide recycling rate by 2011, 60% by 2025. There should be interim “check-in/trigger” dates established between 2011 and 2025				
Potential Implementation Parties	MN Legislature, MPCA, Regional/local governments (counties, SWMCB, WLSSD, economic development agencies, cities and townships), non-profits, private sector, private haulers, MRF operators				
Costs					
Funding Mechanisms	SCORE Funds, service fees, material revenues				
Barriers/Issues	<ul style="list-style-type: none"> <li>• Small haulers will have difficulty meeting this requirement</li> <li>• Strong opposition to implementation of disposal bans – enforcement must be at point of generation, not at disposal sites</li> <li>• Strong opposition to deposit legislation</li> <li>• Concerns over accurate measurement mechanisms to determine compliance/achievement</li> <li>• Challenges with implementation outside of centroids (reconciling stakeholder process charge with statewide goal)</li> <li>• Proposal potentially changes the entity responsible for meeting recycling goals (currently responsibility resides with counties and goals are tied to SCORE funds)</li> </ul>				
Opportunities	<ul style="list-style-type: none"> <li>• Creates strong incentives for both commercial and residential sectors to meet goals</li> <li>• We require cooperation of public and private sector to meet goals to avoid mandatory triggers</li> </ul>				
Feasibility	Feasible but very politically sensitive				
General Comments					
Centroid Information	Twin Cities	Duluth	St. Cloud	Rochester	Total
Cumulative GHG Reduction Potential					
Priority					
Centroid-Specific Comments					

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## 2.1 POLICY/LEGISLATION

2.1b	Minimum Recycled Content Requirements:				
Description	Expand and/or enforce minimum recycled content requirements to meet or exceed the US EPA Comprehensive Procurement requirements for all products that US EPA has established minimum recycled content recycled standards. All units of government will purchase remanufactured products whenever practical without reducing safety, quality or effectiveness.				
Measurement Method	Require annual reporting by all units of government of their purchasing guidelines and outcomes				
Timeframe/Mileposts					
Potential Implementation Parties	MN Legislature, MPCA, MN Dept of Admin , Regional/local governments (counties, economic development agencies, cities and townships),				
Costs					
Funding Mechanisms	State and local government purchasing budgets				
Barriers/Issues	<ul style="list-style-type: none"> <li>• Enforcement , currently there are state and local purchasing guidelines but no requirements or enforcement around them</li> <li>• Would require greater involvement and oversight of MPCA staff</li> <li>• Some products may be difficult for current venders to supply</li> <li>• Difficulty with quantification, reporting (ID uncertainties within reported data)</li> <li>• Difficult to coordinate multiple purchasing sources in an organization</li> <li>• Purchasing often decentralized, complex implications for reporting</li> </ul>				
Opportunities	<ul style="list-style-type: none"> <li>• Would strongly enhance recycling and remanufacturing markets, increasing value and decreasing costs</li> <li>• Increase awareness of the impact of recycling</li> <li>• Many recycled and remanufactured products are less expensive</li> </ul>				
Feasibility	Very feasible but will have some budget impacts				
General Comments	Need an update on the current status of programs currently in place				
Centroid Information	Twin Cities	Duluth	St. Cloud	Rochester	Total
Cumulative GHG Reduction Potential					
Priority					
Centroid-Specific Comments					

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### 2.1 POLICY/LEGISLATION

2.1c	Deposit Legislation – Bottle Bill				
Description	Minnesota Legislature should adopt a Container deposit law that requires retailers and distributors to collect a \$.10 refundable deposit on beverage containers. The deposit is paid when the container is purchased, and refunded when the container is returned for recycling. Bottle bills have proven to be highly effective in reducing litter and waste and promoting recycling.				
Measurement Method					
Timeframe/Mileposts	2011				
Potential Implementation Parties	MN Legislature, MPCA, MN Department of Commerce, Private sector retailers, distributors,				
Costs					
Funding Mechanisms	Creates own funding mechanism				
Barriers/Issues	<ul style="list-style-type: none"> <li>• Strong opposition from retailers, distributors and beverage manufacturers</li> <li>• Will have impacts on current curbside collection programs (less collection costs but also less revenue from materials collected, ie. aluminum)</li> <li>• Unredeemed deposits</li> <li>• Impacts of market fluctuations</li> </ul>				
Opportunities	<ul style="list-style-type: none"> <li>• Creates a privately funded infrastructure for the collection of beverage containers</li> <li>• Makes producers and consumers responsible for their packaging wastes</li> <li>• Achieves 66%-96% capture rates for containers covered by deposits in states that have passed legislation</li> <li>• More glass recovered through color separation at collection points, making it possible to recycle back into glass bottles</li> </ul>				
Feasibility	Very feasible but very politically sensitive				
General Comments					
Centroid Information	Twin Cities	Duluth	St. Cloud	Rochester	Total
Cumulative GHG Reduction Potential					
Priority					
Centroid-Specific Comments					

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## 2.2 FINANCIAL INCENTIVES

<b>2.2a</b>		<b>Increased Costs for Disposal</b>			
Description	Raise the costs of disposal of refuse through increases in solid waste management taxes and through tip fee surcharges at disposal sites				
Measurement Method					
Timeframe/Mileposts	2011				
Potential Implementation Parties	MN Legislature, MN Dept of Commerce, Regional/local governments (counties, economic development agencies, cities and townships), landfill operators, WTE facilities, non-profits, private sector, private haulers				
Costs					
Funding Mechanisms	Would generate funding for state and local governments				
Barriers/Issues	<ul style="list-style-type: none"> <li>• Some believe that raising taxes is not an effective way to affect behavior change</li> <li>• With increased costs of disposal, will result in increased illegal dumping</li> <li>• This necessitates Flow Control to prevent outstate transfer of waste</li> <li>• This would include the removal of all public funding for disposal methods to landfills and WTE/mass-burn facilities, which implies certain barriers</li> <li>• Difficult to attribute GHG reductions to behavioral change that might result from higher disposal costs</li> </ul>				
Opportunities	<ul style="list-style-type: none"> <li>• Creates significant increase in costs to dispose of refuse, incentivizing businesses and residents to recycle whenever possible</li> <li>• Increases funding for state and municipal governments to implement/fund waste reduction activities</li> <li>• Increases funding for state and municipal governments to fund waste reduction infrastructure</li> </ul>				
Feasibility	Feasible but very politically sensitive				
General Comments	Assumptions used in quantification activities must be well defined and transparent				
<b>Centroid Information</b>	<b>Twin Cities</b>	<b>Duluth</b>	<b>St. Cloud</b>	<b>Rochester</b>	<b>Total</b>
Cumulative GHG Reduction Potential					
Priority					
Centroid-Specific Comments					

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## 2.2 FINANCIAL INCENTIVES

2.2b	Incentivizing Behavior Change				
Description	Require cities and counties to adopt and implement Pay-as-You-Throw (PAYT) ordinances where incremental price increases are proportional to container size increases as well as to the frequency of service				
Measurement Method	Local units of government would need to have licensing requirements that would ensure compliance				
Timeframe/Mileposts	2011				
Potential Implementation Parties	MPCA, Regional/local governments (counties, SWMCB, WLSSD, cities and townships), non-profits, private sector, private haulers				
Costs	Low to municipalities – Costs paid by consumers				
Funding Mechanisms					
Barriers/Issues	<ul style="list-style-type: none"> <li>• Enforcement and compliance would be challenging</li> <li>• Private sector haulers will be concerned about proprietary pricing information</li> <li>• Public will have concerns about increased costs for current levels of service</li> <li>• Capital costs to haulers to provide new carts of different sizes to customers</li> </ul>				
Opportunities	<ul style="list-style-type: none"> <li>• Creates recognizable price incentives for reducing refuse service and source reduction efforts</li> <li>• Allows for customers to financial benefit by diverting waste into recycling streams</li> <li>• This could also include provisions that require transparency in pricing</li> </ul>				
Feasibility	Feasible to implement – enforcement challenge				
General Comments					
Centroid Information	Twin Cities	Duluth	St. Cloud	Rochester	Total
Cumulative GHG Reduction Potential					
Priority					
Centroid-Specific Comments					

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### 2.3 EDUCATION AND OUTREACH

2.3a	Expanded Education Efforts about the Benefits of Waste Reduction				
Description	Expand statewide and local education efforts to inform all Minnesotans about the benefits of Recycling and waste reduction regarding the environmental, GHG, and economic benefits of these activities. This could be done through broad incorporation of the 3R's into school curriculums, through the promotion of the fact that recycling services are not taxed, through a targeted multifamily recycling outreach campaign (similar to Recycle More), and through educational information at points of sale.				
Measurement Method					
Timeframe/Mileposts					
Potential Implementation Parties	MPCA, Department of Education, Regional/local governments (counties, SWMCB, WLSSD, cities and townships), School Districts, non-profits, private sector, private haulers				
Costs					
Funding Mechanisms	State apportion additional solid waste tax money for SCORE grants to governmental entities to implement new and innovative programs with measurable performance standards that lead to increased recovery of recyclable material. State funding, Industry, School Districts, etc				
Barriers/Issues	<ul style="list-style-type: none"> <li>• Adequate funding for educational programs</li> <li>• Independent governance of school districts from local units of government</li> <li>• School districts and waste and recovery services are not the same as municipal services in many circumstances, creating problems with universal messages</li> <li>• Behavior change is hard to quantify</li> <li>• Difficult to measure effectiveness of education programs</li> </ul>				
Opportunities	<ul style="list-style-type: none"> <li>• Creates opportunities for Centroid wide Educational initiatives</li> <li>• Opportunities for public/private/institutional cooperation</li> <li>• Develop Public/Private partnerships to promote recycling through the expansion of programs such as ReTap, WasteWise, and Certs</li> <li>• Opportunity for targeted education on specific material streams, informed by 2005 baseline data for each Centroid</li> </ul>				
Feasibility					
General Comments					
Centroid Information	Twin Cities	Duluth	St. Cloud	Rochester	Total
Cumulative GHG Reduction Potential					
Priority					
Centroid-Specific Comments					

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## 2.4 REGULATION AND PERMITTING

2.4a	Compliance with Current Legislation and Goals				
Description	Enforce/require that all public entity laws and requirements are being abided by; that solid waste planning requirements are being met, that new goals be reflected in those plans; that all MRF's and MSW transfer, processing and disposal facilities are required under permitting to report all materials handled and final destinations to ensure that solid waste taxes and recycling tax exemptions are being accurately applied				
Measurement Method	MPCA, County and Facility reporting requirements				
Timeframe/Mileposts	2011				
Potential Implementation Parties	MN Legislature, MPCA, MN Dept of Commerce, Regional/local governments (counties, economic development agencies, cities and townships), landfill operators, WTE facilities, non-profits, private sector, private haulers				
Costs					
Funding Mechanisms	SCORE FUNDS				
Barriers/Issues	<ul style="list-style-type: none"> <li>• Planning is tied to SCORE funding, which has not increased with growth or requirements</li> <li>• Governance for Centroid goals may require regional jurisdiction, not independent county planning</li> <li>• There is an inherent motivational and educational problem for local units of government to understand county goals and have the desire to meet them</li> <li>• Counties will need timelines and mandates to meet goals</li> <li>• Barriers to enforcement: funding, staffing, follow through, education; markets drive program implementation more than solid waste plans</li> <li>• Multitude of county entities complicates implementation</li> <li>• Tying funding to data points that are not terribly precise is an issue</li> </ul>				
Opportunities	<ul style="list-style-type: none"> <li>• With auditable reporting requirements as part of permitting process, accurate reporting from all facilities will provide more detailed information for planning</li> <li>• Public sector compliance with current laws will provide leadership and increase recycling</li> <li>• SCORE funding is currently tied to completion and submission of a plan to the state. Could change funding based upon the execution/achievement of the plan.</li> </ul>				
Feasibility	Very Feasible				
General Comments					
Centroid Information	Twin Cities	Duluth	St. Cloud	Rochester	Total
Cumulative GHG Reduction Potential					
Priority					
Centroid-Specific Comments					

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## 2.4 REGULATION AND PERMITTING

2.4b	Access to Recycling through Permitting				
Description	Expand permitting requirements to include equal access to recycling for all public event permits, through modifying state building codes and regulations requiring equal opportunity/space to recycle in building design and require recycling services as part of ongoing operations, as well as during the construction/renovation process				
Measurement Method	Reporting requirements as part of permitting				
Timeframe/Mileposts	2011				
Potential Implementation Parties	MN Legislature, MPCA, MN Dept of Commerce, Regional/local governments (counties, economic development agencies, cities and townships), non-profits, private sector, private haulers, C&D landfill operators, contractors and building trades				
Costs					
Funding Mechanisms	Permit Fees				
Barriers/Issues	<ul style="list-style-type: none"> <li>• Enforcement and follow-up will be imperative for this to be successful</li> <li>• Difficulties to apply requirements to pre-existing buildings with lack of space when applying for renovation permits</li> <li>• Objections from public and contractors/developers for too many containers on limited space on some new construction/renovation projects</li> <li>• Small haulers will have difficulty meeting this requirement</li> </ul>				
Opportunities	<ul style="list-style-type: none"> <li>• Puts recycling and other waste reduction services on equal access with waste services</li> <li>• Makes the commercial/retail/development sector responsible to provide services</li> <li>• Creates additional infrastructure for away-from-home recycling</li> </ul>				
Feasibility	Very Feasible to implement – difficult to enforce				
General Comments					
Centroid Information	Twin Cities	Duluth	St. Cloud	Rochester	Total
Cumulative GHG Reduction Potential					
Priority					
Centroid-Specific Comments					

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### 2.4 REGULATION AND PERMITTING

2.4c	Preprocessing of MSW				
Description	Require that no unprocessed waste may be landfilled in the state of Minnesota. All MSW must go through a pre-processing facility that separates out recyclable materials and materials that are suitable for composting. Materials that have no recyclable value and materials that are not well suited for composting but that are combustible should be directed to an energy recovery facility. Only materials that are non-recyclable, non compostable, and are non-combustible should be disposed of in a land-fill				
Measurement Method	New permit requirement for all pre-processing and disposal facilities				
Timeframe/Mileposts	2011				
Potential Implementation Parties	MN Legislature, MPCA, MN Dept of Commerce, Regional/local governments (counties, economic development agencies, cities and townships), landfill operators, WTE facilities, non-profits, private sector, private haulers				
Costs					
Funding Mechanisms	Disposal Fees				
Barriers/Issues	<ul style="list-style-type: none"> <li>• Currently a rule for no unprocessed waste going into Landfills in the Metro, but not being enforced</li> <li>• No unprocessed waste in landfill is not the same as preprocessing of all waste</li> <li>• Enforcement would be critical to achieve compliance</li> <li>• Potential to increase burden on disposal facilities, not generators</li> <li>• Concerns about the nuances in definition of what is “recyclable, compostable, combustible”</li> <li>• Whose judgment on what is suitable and the value of materials?</li> <li>• Does not take into account if something is “combustible”, but may be harmful if burned (ie PVC)</li> <li>• Recyclable and compostable materials will be more contaminated for end markets</li> </ul>				
Opportunities	<ul style="list-style-type: none"> <li>• Similar to the European model which has demonstrated higher recycling and composting rates</li> <li>• Creates equal requirements for disposal sites and methods</li> <li>• Capture materials that otherwise would be disposed off and not recovered</li> </ul>				
Feasibility	Feasible but very politically sensitive and				
General Comments					
Centroid Information	Twin Cities	Duluth	St. Cloud	Rochester	Total
Cumulative GHG Reduction Potential					
Priority					
Centroid-Specific Comments					

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### 2.5 COLLECTIONS AND PROCESSING

2.5a	Organized Collections				
Description	Promote the implementation of organized collection of MSW services through lessening the requirements and timeframes governmental units to implement organized collections, as well as to encourage joint purchasing efforts/cooperatives for the procurement of waste services				
Measurement Method					
Timeframe/Mileposts	2011				
Potential Implementation Parties	MN Legislature, MPCA, MN Dept of Commerce, Regional/local governments (counties, economic development agencies, cities and townships), non-profits, private haulers, private sector				
Costs					
Funding Mechanisms					
Barriers/Issues	<ul style="list-style-type: none"> <li>• Private haulers strongly oppose organized collections. It limits their opportunities to compete. Spent years building their businesses under a open hauling system and have built their business models accordingly</li> <li>• This should be done through public/private partnerships</li> <li>• Some residents like the ability to choose for themselves who will be their hauler. Creates political issues for city councils, etc</li> <li>• There exist other ways to address opportunitites (i.e. citywide licensing, etc)</li> <li>• Creates monopolies</li> <li>• Puts small haulers out of business</li> </ul>				
Opportunities	<ul style="list-style-type: none"> <li>• Creates opportunity to provide community wide education about the program</li> <li>• Can increase overall capture of materials by providing consistent service to all residents.</li> <li>• Can provide for multiple haulers to provide services by splitting cities into regions or allowing different haulers to collect each stream.</li> <li>• Decreased truck traffic, road wear and tear</li> <li>• Licensing requirement, citizen mandate as alternative to organized collection</li> <li>• Help cities create increased differential pricing</li> <li>• One hauler may be able to take over the market</li> <li>• Allows the city to control the waste contract for the entire community, possibly meaning more opportunities for WMC.</li> </ul>				
Feasibility					
General Comments					
Centroid Information	Twin Cities	Duluth	St. Cloud	Rochester	Total
Cumulative GHG Reduction Potential					
Priority					

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Centroid-Specific Comments					
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### 2.5 COLLECTIONS AND PROCESSING

2.5b	New Collection and Processing Technologies				
Description	Support should be provided to the development of new technologies and the implementation of existing technologies to effectively separate or collect recyclables and organic materials. Separate collection vehicles for recyclables, compostables and refuse is a contributor to GHG emissions and results in unnecessary energy consumption				
Measurement Method					
Timeframe/Mileposts					
Potential Implementation Parties	MPCA, Regional/local governments (counties, economic development agencies, cities and townships), private sector, non-profits				
Costs					
Funding Mechanisms	SCORE Funds, MPCA Capital grants				
Barriers/Issues	<ul style="list-style-type: none"> <li>• Private haulers would have to swap out their fleets and buy expensive new equipment. Spent years building their businesses under a open hauling system and have built their business models accordingly for the stream of materials that they collect</li> <li>• Major cost implications with indeterminate benefit</li> <li>• Concerns if this would lead to the commingling of streams and rely on processing to separate recyclables from MSW, etc. Would lead to more contamination of materials</li> <li>• Might only be applicable in organized collection systems</li> </ul>				
Opportunities	<ul style="list-style-type: none"> <li>• Could create efficiencies in collections that would lower the cost for collections</li> <li>• Have other beneficial effects of having fewer trucks on the roads, such as decreasing road wear</li> </ul>				
Feasibility					
General Comments					
Centroid Information	Twin Cities	Duluth	St. Cloud	Rochester	Total
Cumulative GHG Reduction Potential					
Priority					
Centroid-Specific Comments					

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### 2.5 COLLECTIONS AND PROCESSING

2.5c	New Licensing Requirements and City Ordinances				
Description	Cities must require that all haulers be licensed in their communities. Require all licensed haulers to provide recycling collection services as a condition of licensing.				
Measurement Method	Requirement of licensing would be annual reporting of materials collected				
Timeframe/Mileposts					
Potential Implementation Parties	Regional/local governments (counties, SWMCB, WLSSD, economic development agencies, cities and townships), private haulers.				
Costs	Low costs.				
Funding Mechanisms	Service costs would be paid directly by residents to their hauler				
Barriers/Issues	<ul style="list-style-type: none"> <li>• Only requires haulers to offer services, but not to provide to all customers</li> <li>• Cities are already required to ensure that residents have the opportunity to recycle curbside unless too small.</li> <li>• Does not require cities to mandate services, only an option</li> <li>• Minimizes education opportunities that city –wide uniform services offer</li> </ul>				
Opportunities	<ul style="list-style-type: none"> <li>• Can provide for multiple haulers opportunity to provide services</li> <li>• Expedites implementation</li> </ul>				
Feasibility	Very feasible				
General Comments					
Centroid Information	Twin Cities	Duluth	St. Cloud	Rochester	Total
Cumulative GHG Reduction Potential					
Priority					
Centroid-Specific Comments					
Other Comments					

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### 2.6 MARKET SECTOR (ORIGIN AND END MARKETS)

2.6a	Subsidizing New Market/Product Development				
Description	Increase viability of local recycling markets by subsidizing new market/product development. Green jobs program similar to JOBZ with associated tax incentives for companies to locate or expand end markets which also encourages creation of businesses which use recyclable materials in production				
Measurement Method	Track revenue and job creation numbers for companies that utilize program				
Timeframe/Mileposts					
Potential Implementation Parties	MN Legislature, MPCA, MN Dept of Commerce, Regional/local governments (counties, economic development agencies, cities and townships)				
Costs					
Funding Mechanisms	MPCA Capital Grants and Loans				
Barriers/Issues	<ul style="list-style-type: none"> <li>• Current underfunding of MPCA grant and loan funds</li> <li>• Difficult to quantify benefits</li> <li>• Should look at multi-state approach to this concept due to interstate nature of commodity flows</li> </ul>				
Opportunities	<ul style="list-style-type: none"> <li>• Increases overall tax base with new job creation in both the new markets as well as up stream with collection and processing sectors</li> <li>• MPCA will have more tools to assist in recruiting market development</li> <li>• Stimulate market forces, harnessing private sector to bring capital to material recovery</li> </ul>				
Feasibility					
General Comments					
Centroid Information	Twin Cities	Duluth	St. Cloud	Rochester	Total
Cumulative GHG Reduction Potential					
Priority					
Centroid-Specific Comments					

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### 2.6 MARKET SECTOR (ORIGIN AND END MARKETS)

2.6b	Opportunity to Recycle in Institutional, Commercial and Multifamily Sectors				
Description	Extend opportunity to recycling to non-residential by developing recycling requirements for schools, public entities and businesses. Require School districts to create and implement solid waste plans for recycling and composting. Implement public space recycling requirements for all parks, malls, and convenience stores requiring recycling containers wherever there is a trash container. Require that all state entities employ resource management contracts for their MSW services.				
Measurement Method	Include Institutional and Commercial sectors in SCORE reporting				
Timeframe/Mileposts	2011				
Potential Implementation Parties	MN Legislature, MPCA, MN Dept of Commerce, Department of Education, Regional/local governments (counties, economic development agencies, cities and townships), private sector, non-profits, private haulers, end markets				
Costs					
Funding Mechanisms	SCORE Funds				
Barriers/Issues	<ul style="list-style-type: none"> <li>• Lack of enforcement</li> <li>• Adequate funding for implementation and education about requirements and goals</li> <li>• There is an inherent motivational and educational problem for local units of government to understand county goals and have the desire to meet them</li> <li>• Need for significant technical support to provide assistance in program establishment in all applicable locations</li> <li>• Increased financial burden on strapped school systems</li> </ul>				
Opportunities	<ul style="list-style-type: none"> <li>• MPCA should promote and facilitate the use of resource management contracts</li> <li>• This could lead to the use of more resource management contracts</li> <li>• Develop Public/Private partnerships to promote recycling through the expansion of programs such as ReTap, WasteWise, and Certs,</li> <li>• Develop strong small business recycling programs.</li> <li>• Encourage/incentivize company sustainability plans.</li> <li>• Enhance value for end markets through increased participation</li> <li>• Opportunities for private business partnership/sponsorships with schools</li> <li>• Create a simple template planning tool for schools, entities</li> <li>• Increase technical assistance to entities</li> </ul>				
Feasibility					
General Comments					
Centroid Information	Twin Cities	Duluth	St. Cloud	Rochester	Total
Cumulative GHG Reduction Potential					
Priority					
Centroid-Specific Comments					

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## 2.7 RESEARCH

2.7a	Standardized calculation and consistent reporting				
Description	MPCA needs to develop and implement a standardized method for all counties and municipalities to calculate source reduction, recycling, organics recovery, WTE and land-filling in order to have full, accurate, and consistent reporting for tracking MSW in the state. In addition, MPCA should develop a materials management model that tracks costs for each method of material handling				
Measurement Method	TBD				
Timeframe/Mileposts	2011				
Potential Implementation Parties	MPCA, Regional/local governments (counties, economic development agencies, cities and townships), non-profits, landfill operators, WTE facilities, private haulers, other reclamation businesses				
Costs					
Funding Mechanisms	SCORE Funds				
Barriers/Issues	<ul style="list-style-type: none"> <li>• Difficult to capture information from commercial sector on a voluntary basis</li> <li>• Defining and determining all businesses and locations engaged in recovery activities and getting reporting information will require significant resources</li> <li>• Some additional admin and enforcement</li> </ul>				
Opportunities	<ul style="list-style-type: none"> <li>• Accurate tracking by county will provide valuable information for Solid Waste plans</li> <li>• Cost models will educate local policy makers on the overall system costs and inform their decisions</li> </ul>				
Feasibility	Very Feasible				
General Comments					
Centroid Information	Twin Cities	Duluth	St. Cloud	Rochester	Total
Cumulative GHG Reduction Potential					
Priority					
Centroid-Specific Comments					

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### 2.8 CD & I

2.8a	Create and Expand Recovery Opportunities for C&D Materials				
Description	Create and expand efforts to develop end markets for C&D materials. Continue efforts to establish a spec for recycled tear-off roofing in asphalt pavement. Continue market development for gypsum sheetrock recycling. Continue environmental review and feasibility of C&D wood waste derived biomass fuel. Continue to require that C&D processing facilities be permitted and well regulated/enforced in order to ensure proper management and to avoid improper operating practices and material end uses, as well as opportunities for preprocessing materials for recovery of materials.				
Measurement Method					
Timeframe/Mileposts					
Potential Implementation Parties	MPCA, Regional/local governments (counties, economic development agencies, cities and townships), landfill operators, private haulers, contractors and building trades				
Costs					
Funding Mechanisms					
Barriers/Issues	<ul style="list-style-type: none"> <li>• Important to make sure that end-markets are environmentally appropriate and have actual GHG benefits (i.e. not daily cover)</li> <li>• Renovation materials are very difficult to identify</li> <li>• An unknown amount of materials are already separated at job sites. Difficult to track and report that data</li> <li>• Painted and treated wood, painted Sheet-rock are examples of hard to determine what materials are they treated with. No uniformity in materials and hazard identification</li> <li>• Education of building trades professionals</li> </ul>				
Opportunities	<ul style="list-style-type: none"> <li>• Promote job site separation and recovery as an effective way to capture quality materials</li> <li>• LEED certification and other Green building programs are creating growing awareness of issue</li> <li>• State requiring job-site recycling and recycled content materials for state construction projects would go a long way in creating market demand for services</li> </ul>				
Feasibility					
General Comments	Growing demand for Green/energy efficient/recycled content building materials and projects statewide.				
Centroid Information	Twin Cities	Duluth	St. Cloud	Rochester	Total
Cumulative GHG Reduction Potential					
Priority					
Centroid-Specific Comments					

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### 2.9 OTHER

2.9a	Program and Infrastructure Development Option for Rural Recycling and Waste Collection Opportunities				
Description	Develop centralized rural recycling and waste collection drop-site network to manage and capture wastes and recyclables currently being buried or burned on site in rural areas of the state where waste collection services are not available.				
Measurement Method					
Timeframe/Mileposts					
Potential Implementation Parties	MPCA, MN Dept of Commerce, Regional/local governments (counties, economic development agencies, cities and townships), non-profits, private sector				
Costs	Low capital costs				
Funding Mechanisms	SCORE Funds, Property taxes, User fees				
Barriers/Issues	<ul style="list-style-type: none"> <li>• Difficult to implement and enforce burning bans</li> <li>• Will require significant education and awareness campaign to change behavior</li> </ul>				
Opportunities	This type of system could be implemented for a low capital cost with dramatic effects. Modeled on the system in place in Houston County where the county operates 5 Staffed drop-sites where residents can take MSW, recyclables, and demolition debris “free” of charge, this program is actually funded by property fees (\$30.00/Household Annually).				
Feasibility	Very Feasible but politically sensitive				
General Comments					
Centroid Information	Twin Cities	Duluth	St. Cloud	Rochester	Total
Cumulative GHG Reduction Potential					
Priority					
Centroid-Specific Comments					