Roseville Public Works, Environment and Transportation Commission
Meeting Agenda

Tuesday, November 22, 2011, at 6:30 p.m.
City Council Chambers, 2660 Civic Center Drive
Roseville, Minnesota 55113

6:30 p.m.	**1.**	**Introductions/Roll Call**
6:35 p.m.	**2.**	**Public Comments**
6:40 p.m.	**3.**	**Approval of October 25, 2011 Meeting Minutes**
6:45 p.m.	**4.**	**Communication Items**
7:00 p.m.	**5.**	**Ramsey County Solid Waste Policy**
7:30 p.m.	**6.**	**Neighborhood Traffic Management Policy Final Review**
8:00 p.m.	**7.**	**Organized Collection Continued Discussion**
8:30 p.m.	**8.**	**Change of Date/Possible Items for Next Meeting – December 27, 2011**
8:35 p.m.	**9.**	**Adjourn**

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Roseville Public Works, Environment and Transportation Commission

Agenda Item

Date: November 22, 2011 **Item No:** 3

Item Description: Approval of the Public Works Commission Minutes October 25, 2011

Attached are the minutes from the October 25, 2011, meeting.

Recommended Action:

Motion approving the minutes of October 25, 2011, subject to any necessary corrections or revision.

Move: _____

Second: _____

Ayes: _____

Nays: _____

Roseville Public Works, Environment and Transportation Commission Meeting Minutes

Tuesday, October 25, 2011, at 6:30 p.m.
City Council Chambers, 2660 Civic Center Drive
Roseville, Minnesota 55113

1. Introduction / Call Roll

Chair Jim DeBenedet called the meeting to order at approximately 6:30 p.m.

Members Present: Chair Jim DeBenedet; and Members Jan Vanderwall; Dwayne Stenlund; Joan Felice; and Steve Gjerdingen

Staff Present: Public Works Director Duane Schwartz and City Engineer Debra Bloom

Others Present: Several Roseville residents; and various representatives invited to speak during the organized trash collection discussion.

2. Public Comments

No one appeared to speak at this time.

3. Approval of September 27, 2011 Meeting Minutes

Member Stenlund moved, Member Felice seconded, approval of the September 27, 2011 meeting as amended.

Corrections:

- **Page 2, 3rd full paragraph (Gjerdingen)**
  Correct intersection reference to Snelling and Lydia
- **Page 2, last partial paragraph (Felice)**
  Correct high priority as the Pathway on County Road B-2 between Lexington Avenue and Rice Street

Ayes: 5
Nays: 0
Motion carried.

4. Communication Items

Public Works Director Duane Schwartz noted that updates on various construction projects were included in tonight's meeting packet or available on-

line at the City's website at www.cityofroseville.com/projects, and as detailed in the staff report dated October 25, 2011.

Specific discussion included new construction and/or reconstruction of pathways and applicable funding sources, including through the annual maintenance budget; opportunities to address neighborhood concerns during reconstruction projects, but not always available during maintenance projects (e.g. mill and overlay); clarification that the proposed mill and overlay project is for the Snelling Avenue west frontage road as a maintenance project, and not on Snelling Avenue itself that could address the barrier wall concerns expressed by residents in that area, but discussions held by staff with MnDOT staff on the barrier wall and other aesthetics, with no word from the MnDOT area manager to-date; and rationale in determining proposed work project areas to reduce costs for contractor mobilization.

Further discussion included alerting the School District No. 623 transportation coordinator of seal coating timing (planned for July) around Fairview Community Center due to early childhood classes; lining and/or reconstruction of water and/or sewer lines still in the planning stages and dependent upon City Council action on proposed utility rate increased and ultimate funding available; and notification by staff that survey crews had begun working on County Road C-2 as the design stage of that newly-authorized project is initiated for the 175' connection and narrowed parking bays, in addition to a concrete sidewalk along County Road C-2 in that area, as an extension of that being installed by the developer at Josephine Woods, ordered for 2012..

Additional discussion included completion of the Pulte Homes portion of County Road C-2 in the spring of 2012, depending on weather, and those streets (Dunlap Court and Dunlap Street) showing up on maps in 2012; extensive concrete rehabilitation construction plans of Ramsey County around County Road B-2 and Snelling Avenue, in the Rosedale area, with no widening proposed other than for turn lanes, and rotated entrances at Rosedale during the construction process; and erosion control in place for the Josephine Woods project being authorized and monitored by staff during the construction project.

Member Stenlund expressed appreciation during the Fairview Pathway construction project of the use of compost logs at Evergreen park rather than a silt fence, which he opined was an appropriate use in that relatively flat work area, and served as the best preservation of the park edge.

Ms. Bloom advised that both the north and south segments of the Fairview Pathway should have pavement by November, weather permitting.

Member Gjerdingen commented on his experiences with the bicycle lanes on the newly-construction Rice Street project area, and discussion included similar

bicycle lane stenciling, striping and other options that staff could address with Ramsey County for the next phase of the Rice Street project.

5. Neighborhood Traffic Management Policy

Ms. Bloom provided an updated draft of the Roseville Neighborhood Traffic Management Program (TMP), including changes that she'd incorporated from individual member comments, other than those from Chair DeBenedet and Member Gjerdingen that had yet to be incorporated, pending additional consideration and review by the full Commission.

1.1 Purpose (page 1)

Discussion ensued regarding comments related to violation of traffic laws and addressing aggressive drive behavior; and whether identifying it may increase that aggressive road behavior.

Ms. Bloom opined that staff felt the purpose of the plan was well-defined as written at this time. Ms. Bloom noted that there is already a standing Traffic Safety Committee, and when that was the decision-making body and the threshold for something becoming a TMP issue and traffic safety discussion.

Mr. Schwartz opined that the TMP should be written around infrastructure design issues rather than enforcement issues.

Member Vanderwall noted that both suggestions identified driver behaviors, and the results of driver behavior, and opined that this may be redundant; with the overlying issue being the result of driver behavior making for unsafe neighborhoods, and suggested that the intent of the TMP was to alleviate those conditions, without seeming to be accusatory of drivers. In other words, Member Vanderwall suggested that the TMP was based on how we manage traffic, not how we manage drivers.

Chair DeBenedet opined that traffic was managed through managing traffic behavior; however, he agreed to not including "violation of traffic laws," in this draft of the TMP. However, Chair DeBenedet opined that wherever else it was addressed, it should be broadly defined in the Purpose Statement.

Mr. Schwartz noted that in the enforcement section of the TMP (page 7), this strategy was addressed.

Ms. Bloom sought direction from the Commission on how to best encapsulate the enforcement item.

Discussion included providing positive versus negative terminology to define it without judgment; whether the intent of the TMP was to address the negatives, and the need to identify conditions that prompt using this procedure; staff was directed to include a separate sentence that addressed promoting safe walking, or

to promote safe neighborhoods with respect to traffic for all users of the roadway, and to alleviate conflicts between real and/or perceived traffic using the same corridor; defining the jurisdiction of roadways in the Definition Section to clarify the type of streets and to be consistent with and reference the Transportation Plan of the Comprehensive Plan (e.g. local streets, arterials, or collectors).

4.0 Procedure Summary

Step 1

Ms. Bloom summarized the various steps proposed, based on staff's review of the City of Edina's TMP and the relationship to and definition of benefitted areas, project areas, and benefitted neighborhoods, and the implementation based on 51% of the neighborhood; effectiveness of an application from an individual versus a petition of more than one individual; and how to define project areas.

Discussion included project areas defined as a block between cross streets; recognizing the need to define dead-end streets and/or cul-de-sacs differently as project areas; assessment area(s) for affected neighborhoods determined by staff unless there was a disagreement between staff and the neighbors on defining the project area, at which time the Public Works, Environment, and Transportation Commission would serve as the third-party appeal group to provide an unbiased resolution or if staff determines the affected area should be broadened; and preference to keep the process as simple as possible in determining the project area; clarifying the definition of the project neighborhood as the stretch of street between intersections or the entire cul-de-sac; and identifying the notice area for the entire affected area.

Section 2.0 Policies

Member Stenlund noted the need for consistent language for "strategies" and/or "devices."

Section 3.0 Definitions

Discussion included consistent identification of collector and arterial streets, with staff suggesting further internal review following staff's changing the language to "local streets," and whether the context still remained; with consensus to remove lines 5 – 16 in their entirety with the exception of the fifth sentence that was to remain intact; and intent of the processes and strategies for local streets to "improve neighborhood traffic conditions."

Step 3 – Data Collection and Traffic Study (page 5)

Discussion included steps to determine if a request falls under the guidelines of the internal Traffic Safety Committee or the Traffic Management Plan for initial review; the process of an engineering study, as needed, in that process; and informing the neighborhood before any application has staff time invested; affected area versus benefitted or impacted area; establishment of project boundaries; and the role of the Public Works, Environment and Transportation Commission and how/when requests are considered: annually or as they're

received to be reviewed by the Commission for recommendation to the City Council as applicable with staff's evaluation and assigning a timeline for those projects given consideration.

General Commission consensus was the, unless there was a dispute, professional staff work with neighborhoods and not bring items to the Commission other than as information or if an appeal was filed beyond staff.

Member Gjerdingen expressed his preference that the policy mention something about the Commission being made aware of requests to ensure the public didn't have a perception that some things were being fast-tracked.

Step 4 – Develop/Evaluate Traffic Management Strategies (page 7)
Discussion included various strategies, whether permanent or temporary and related costs (e.g. installing signage versus construction) and rationale behind those items and their effectiveness, whether perceived or actual, and what was attempting to be accomplished with those strategies.

Further discussion included signage paid for by individual homeowners or blocks versus signage installed by the City, with staff advising that they would need to approve installations and perform the work to ensure other City Code and legal requirements were adhered to; how to raise awareness in neighborhoods of various situations (e.g. pedestrian crossings; deaf children, etc.); and how to break down the types of signage or traffic control devices recognizing that neighborhoods change, and the types of strategies that were permanent or those temporary.

Additional discussion addressed Table 3 (page 9) and the type of implementation and projected costs and funding allocations; how to determine demonstrated or known benefits of each particular strategy; with staff asked to review this section and the various strategies again using other TMP models from other communities.

Further discussion included neighborhood signage (e.g. plastic pedestrian crossing signage and/or paper signs installed in private driveways) and how neighbors and the City could work together on those types of strategies while remaining temporary; how to change human nature and cultures to recognize crosswalks and pedestrian areas; with staff asked to review this section to consider outreach/educational issues for soft solutions.

Ms. Bloom suggested that such strategies may be more of a discussion for the Traffic Safety Committee rather than this body or including them in the TMP.

Member Stenlund opined that staff should include information each spring in the City newsletter that the legal default speed limit in MN, if not signed, is 30 mph.

Ms. Bloom advised that revisions would be included in the next draft and formatted for easier reading.

Staff was asked to add "maintenance" to the list of implementation strategies.

Cost Estimate and Funding
Ms. Bloom noted that cost information, whether assessable or not, needed to include the installation costs as well as the City's maintenance costs; how to identify costs for maintenance, noting that the City of St. Paul assessed for maintenance costs; and current Assessment Policy of 25% for reconstruction of City streets, with mill and overlay not assessed; and residential properties not required to maintain their sidewalks, nor were they assessed for their installation, while commercial properties were required to maintain their sidewalks and were assessed for their construction.

Chair DeBenedet suggested that annual average cost be included in the Table (page 9), with a footnote that that it was included for informational purposes only.

Member Gjerdingen noted several typographical errors on page 21 (traffic control devices).

Step 10 - Design, Final Assessment Roll and Construction (page 11)
Ms. Bloom advised that she include information related to Minnesota Statute, Chapter 429, using the City of Edina model to explain the process used; with further definition needed on benefitted areas as previously discussed.

General Discussion
Ms. Bloom advised that staff would now continue with the next steps in developing the TMP, using the Blaine model, while attempting to make it more specific to Roseville and incorporating Commission discussion and directives.

Discussion included the intent of the TMP to address current problems or unique situations; and future traffic problems addressed using standard operating procedures to design those projects including public involvement.

Recess
Chair DeBenedet recessed the meeting at approximately 7:50 p.m. and reconvened at approximately 7:58 p.m.

6. Organized Trash Collection Discussion

Chair DeBenedet noted purpose of tonight's presentation and discussion time with various interested parties invited to provide a presentation and discussion in the short time allotted for this ongoing discussion. Chair DeBenedet noted that no decisions would be made at tonight's meeting, but it was simply to allow have a demonstration from staff on a new software tool to determine road impacts of various vehicles based on their weights; as well as to allow invited audience

members another chance to provide their input to the Commission. Chair DeBenedet advised that staff would be compiling information previously provided to the Commission over the last few years and now in one packet; allowing for future Commission review and discussion and for their final recommendation to the City Council.

Road Impact Tool Demonstration

Ms. Bloom provided background information on this software tool developed as part of a research project on which she serves as a technical liaison, with the research project funded by the local road research board; and entitled "Heavy Vehicle Impact Tools" to determine the impact of heavy traffic generators on streets, based on their designs, conditions, and usage; and basing that on industry standards, with the information then tailored to individual communities and linking the data to real information to determine ESAL lives of a street.

Discussion among Commissioners included determining a baseline for traffic on all Roseville street segments, and then determining variables and incremental vehicle uses (e.g. empty, half-full and/or loaded trucks to determine actual wear); how to determine actual sample segments other than through staff observation; consulting with individual refuse haulers or other heavy vehicle owners to determine typical routes; and individual Commissioners providing information to staff for their specific neighborhoods to provide additional sample streets while ensuring accuracy of that information.

Member Stenlund noted the need for the tool to analyze braking or high-speed turnarounds on cul-de-sacs creating tremendous sheers on those streets.

Ms. Bloom noted that had been part of the discussion at the last technical meeting; with a lot of vehicles and/or equipment now being designed to have less pushing. Ms. Bloom clarified that this tool would be restricted to looking at pavement and life expectancy of that pavement, but that it could obviously not address human factors for various vehicles and their impacts.

Public Comment

Ann Berry, Representing the League of Women Voters (LWV) Position

Ms. Berry advised that she had consulted one of the LWV original committee members and their previous, 1970's era discussion on garbage hauling, and their concerns with the number of garbage trucks on City streets every day or the week on every street. Ms. Berry advised that the LWV study occurred in the late 1970's and early 1980's, with an actual position statement completed in 1982. Ms. Berry advised that the statement supported individual composting and government support for community composting; with that study further refined in 1985 with more through study and individual LWV member assignments for review of Roseville citizens; and subsequent vote of LWV members at that time supporting organized refuse collection and curbside collection of recyclables.

Ms. Berry noted that the 1982 position statement resulted in removing recyclables from landfills; and government support of composting, with community government and individual sites for composting materials. Ms. Berry noted that the LWV 1984 study supported establishment and supervision by the municipality of curbside recycling and source separation, with the City contracting for recycling haulers and variable haulers for individual homeowners for refuse haulers.

Ms. Berry noted that this continued to be the position of the LWV through the years anytime discussions were held regarding eliminating composting and in lobbying the City for separate garbage days for each neighborhood rather than five (5) separate collection days. Ms. Berry noted the overwhelming response in 1990 when the first hazardous waste collection in Roseville was held.

Ms. Berry noted that she experienced at least eight (8) garbage trucks in her neighborhood on Woodhill, but that she had seen some improvement with a one day/week collection. While the Roseville LWV Chapter has merged with those of other communities (Falcon Heights, Arden Hills, Maplewood and Little Canada), Ms. Berry noted that the LWV had been way ahead of the curve in reviewing this issue; and the Chapter continued to vote annually (majority rule) – unless the issues had been successfully legislated – on whether to keep, drop or update their positions statements, and were willing to lobby on any level to support the organized collection issue.

Chair DeBenedet summarized that the LWV had taken and continued to hold in favor of organized trash collection, with Ms. Berry responding affirmatively.

Douglas Root, 2468 Hamline Avenue, Roseville Citizens League (RCL) Position

Chair DeBenedet noted that he and Member Stenlund had attended the forum on organized trash collection that the RCL had hosted; and welcomed Mr. Root to update the Commission on the RCL's findings from that forum.

Mr. Root advised that he had led a working group of the RCL over an approximate 1.5 year period to look at trash collection and a potential forum for citizen input and information to and from those citizens. Mr. Root noted that this process had been deliberate and slow and resulted in a trash collection forum held on September 15, 2011 with approximately eight-five (85) people in attendance.

Mr. Root advised that the forum was mediated by a volunteer moderator with invited speakers from a large number of groups, including a representative of the League of Minnesota Cities (LMC) to address the legal process for municipalities in considering organized trash collections. Mr. Root noted representatives of other communities (North St. Paul, Little Canada, and Maplewood) were also present to provide their individual community experiences with organized trash collection, providing both the pros and cons.

Mr. Root noted that individual trash haulers and the National Solid Waste Organization served as part of the panel to provide their point of view; with Roseville citizen Richard Lambert also speaking specifically regarding how organized trash collection could be implemented with an opt-out position. Mr. Root noted that written questions were taken from the audience and addressed by the panelists with various options were presented. In polling citizens as they left the forum, most advised that they felt they had been informed through the forum and that their general questions had been answered.

Subsequent to that forum, Mr. Root advised that the RCL voted unanimously to recommend to the City of Roseville government that organized trash collection be considered, or that a process be initiated to move toward that type of collection. While not being totally clear on the result of such a process, Mr. Root advised that the RCL recommended that Roseville begin the process for that consideration.

Member Gjerdingen noted that a volunteer had recorded the forum; however, due to technical difficulties, the sound was relatively poor and asked if a refined copy was now available to provide to City staff for public dissemination.

Discussion included paper handouts available at the meeting from various sources; and information available on the trash hauler's association webpage.

Doug Carnival, Attorney representing that National Solid Waste Management Association (NSWMA), Waste Hauler Position

Mr. Carnival stated that the NSWMA was not in favor or organized trash collection; but instead supported continuing the free enterprise system. Mr. Carnival noted that there was a reason why twenty (20) different communities had reviewed the option and had found their citizens adamantly opposed to organized trash collection and had subsequently not adopted it. Mr. Carnival stated that citizens indicated to City Councils in those communities that they preferred to make those decisions themselves; and cited examples from some of those communities, opining that citizen opposition was overwhelmingly opposed, with citizens preferring to make those decisions themselves and continue their relationships with haulers, many of them long-term relationships; and many representing small, locally-owned haulers. Mr. Carnival opined that citizens liked competition and their ability to negotiate with haulers; with their preference based on price, service and individual relationships.

Mr. Carnival opined that if the City chose to go to organized trash collection, it would create a monopoly; and would have a severe and negative impact on small community haulers, who compete fiercely to develop and retain their business; while attempting to do so at the most reasonable cost possible for their customers. Mr. Carnival further opined that if the City chose to go to a one-hauler system it would force some of the smaller businesses to leave the community and give up

hundreds of customers; resulting from nothing they had done wrong other than the City claiming that they can make the decision better than their own citizens.

Mr. Carnival stated that current haulers didn't have any monopoly issues in Roseville; and based on criteria of respective families, the NSWMA compared this to a municipality attempting to negotiate for cell phones, cable, gas or groceries. Mr. Carnival noted that individual small haulers used discounts or other incentives to remain innovate and grow their markets and this ultimately benefited all consumers.

Mr. Carnival noted that with a government-managed, one-hauler system, the customer was the city not individual homeowners; and the haulers would no longer be accountable or responsive to customers on the block, but only to the City. Therefore, Mr. Carnival noted that City staff would be taking on the additional responsibility of fielding those calls, adding further expense to the City.

Regarding road wear, Mr. Carnival noted that a study was currently being undertaken by MnDOT to determine road wear; and that to-date, there was no scientific evidence in twenty (20) communities that were evaluated that organized collection saved any money all. Mr. Carnival advised that wear was determined more on the number of axels, distribution or weight, number of trucks and how they were loaded. Mr. Carnival recognized a City Engineer from the City of Arden Hills who stated that weather was the biggest factor on road wear, not truck traffic. Mr. Carnival questioned if the City was prepared to regulate wear and tear from other trucks and buses in a community using those same streets and having significant impact.

Given the current economy, as well as the other reasons previously stated, Mr. Carnival opined that this was not the time for government to become involved in the garbage business, but that citizens should be allowed to make that decision themselves based on their own circumstances and in a competitive marketplace resulting in no injury to small haulers attempting to compete in that open market place.

Mr. Carnival advised that haulers were more than willing to sit down with City staff and/or Commissions to determine problem areas and specifically address them; and that they were more than willing to do so in Roseville as well.

At the request of Member Vanderwall, Mr. Carnival provided a list of the small haulers who were a member of the NSWMA and those who were not members.

Roger Toogood, 601 Terrace Court
As an attendee at the RCL forum, Mr. Toogood noted hearing the amazement expressed by citizens on their way out of the forum at what they didn't know and opportunities existing to decrease their costs and improve the quality of service. Mr. Toogood opined that this was an important fact; and in reference to the

twenty (20) communities choosing to say "no" to organized collection, their rationale may have been based on the 1991 legislation, lobbied for by waste hauler associations, passed and the many complex steps in moving toward organized collection, making it difficult for many communities to work through. Mr. Toogood noted that current legislators had expressed their willingness to look at the 1991 legislation and make it less complex and/or costly for cities to implement.

Mr. Toogood opined that in the current economy, if cities and their citizens could cut their costs as well as reduce maintenance of roadways, it was worthwhile to look at organized collection.

Mark Stolt, Resident of Shoreview and General Manager of Randy's Environmental Services (based in Delano, MN)
Mr. Stolt advised that Randy's had no market share in Roseville at this time; however, he was a member of the Technical Advisory Committee referenced previously by Ms. Bloom. Mr. Stolt advised that he was speaking on behalf of independent and small business people and haulers, and while not being present in the early 1990's when organized hauling statutes were adopted, it was his understanding that they were put forth to protect independent business people and allow them receive due consideration. Mr. Stolt opined that it should be difficult for government to take away market share from independent businesses, especially when all businesses were cash hungry and competing with national companies; with many small haulers continuing to come up with innovative ways to service their customers; and many having to mortgage their homes or put personal guarantees on their homes to purchase trucks and carts. Mr. Stolt noted that losing customers would only force small haulers to lay off people until they were able to find additional customers to replenish those lost to government management.

Recognizing that it was not an easy decision, Mr. Stolt noted that independent haulers in Roseville had worked long and hard to provide specialized service to Roseville customers; and invited the City to take a hard look at whether or not to remove this revenue stream from independent businesses, exclusive of safety and road issues. Mr. Stolt suggested working with those small haulers to address specific concerns and come to a mutual resolution; opining that those haulers would be committed to work with the City to find remedies to those major concerns.

Mr. Stolt noted that, when the City of Coon Rapids was considering organized collection, they talked to the Peter Built truck builder, and the number of truck firms who purchased chassis similar to those of garbage trucks, with Peter Built estimating over 200 firms. Mr. Stolt opined that there were ways to remedy haulers through license fees; addressing better loading of the vehicles; and using ESAL tools to address how each hauler ran their routes and attempting to achieve efficiencies through those methods. Mr. Stolt noted that how the equipment was

operated affected the equipment and ultimate costs for the haulers as well as impacts to community roads.

Mr. Stolt suggested that consideration be given, beyond the calculator, to define roles of the municipality and haulers to work together, including starting and stopping resistance.

Member Stenlund questioned if Mr. Stolt's firm was awarded the contract for organized collection as an independent contractor, would he benefit from having that entire contract rather than the current competitive method.

Mr. Stolt responded negatively; noting that his firm was a larger independent hauler with 50,000 customers, and he would not want to lose that business since his firm couldn't compete with the deep pockets of a national firm. Mr. Stolt advised that his business model was based on better customer service and specialized service. Mr. Stolt noted that independent haulers had been receptive to-date to municipal issues and concerns; and continued to be involved in innovative programs, such as MPCA organic collection programs, originally initiated by haulers, not through state mandates. Mr. Stolt opined that independent haulers were more than willing to help cities achieve their goals.

Commission Discussion

Chair DeBenedet thanked speakers for their input; noting that the Commission would receive background materials and information to-date once compiled and received from staff; and invited audience members and members of the listening public to attend or listen to the November meeting for further Commission discussion and possible recommendation to the City Council.

7. Possible Items for Next Meeting – November 22, 2011

- Utility Undergrounding Draft Policy
- Ramsey County Solid Waste Policy
- Review and potential update of the City's Solid Waste Policies as mandated by year-end

8. Adjourn

Member Vanderwall moved, Member Stenlund seconded, adjournment of the meeting at approximately 9:06 p.m.

Ayes: 5
Nays: 0
Motion carried.

Roseville Public Works, Environment and Transportation Commission

Agenda Item

Date: November 22, 2011 **Item No:** 4

Item Description: Communication Items

- Projects update-
  - Check for City Construction project updates at: www.cityofroseville.com/projects
  - Fairview Pathway (NE Suburban Campus Connector)- the Contractor will complete the restoration work between County Road B and Larpenteur Avenue the week of November 14th. The remaining work will be completed in Spring 2012.
  - Josephine Woods – The contractor is focusing on completing the public improvements on the north south segment of Dunlap Street between County Road C-2 and the Dunlap cul- de- sac. Utility installation should be completed by Thanksgiving. Curb and gutter and paving of this segment will be weather dependent. The utility and street work on Maple Lane (the street segment connecting Dunlap to Fernwood) will likely be completed next spring.

- Budget process update
- Other

Recommended Action:
None

Attachments:

Roseville Public Works, Environment and Transportation Commission

Agenda Item

Date: November 22, 2011 **Item No:** 5

Item Description: Ramsey County Solid Waste Policy

Background:
The City Manager was contacted by Ramsey County regarding the required update of the County Ramsey County Solid Waste Management Master Plan. He requested the PWETC review and comment on this plan update. Zack Hansen from Ramsey County will be at the meeting to discuss the update and seek feedback. The following is the message the Manager received and it contains the link to the Plan:

For the PWETC a link to Ramsey County's Draft Solid Waste Master Plan
http://www.co.ramsey.mn.us/NR/rdonlyres/1333C8CA-3ABE-4A94-AB50-A6795634DBAA/25751/draft_ramsey_county_solid_waste_master_plan.pdf
<http://www.co.ramsey.mn.us/NR/rdonlyres/1333C8CA-3ABE-4A94-AB50-A6795634DBAA/25751/draft_ramsey_county_solid_waste_master_plan.pdf>

Good afternoon! This email is being sent to city managers and administrators, as well as municipal recycling coordinators and Saint Paul planning district recycling coordinators. Revision to the draft Ramsey County Solid Waste Management Master Plan are now available for public review, and I am calling your attention to its availability, and to seek your comments.

Comments are being taken on the master plan through November. At this time we expect to bring the master plan forward to the County Board for consideration in January. Between now and then a regional component to the plan will also be completed; when that is available for review we will let you know. At the bottom of this email is information about how to find the draft plan, and how to comment.

In March, 2011 the Commissioner of the Minnesota Pollution Control Agency (MPCA) adopted the Metropolitan Solid Waste Management Policy Plan, 2012-2030. State law requires metropolitan counties to revise their solid waste master plans to implement the new Policy Plan. Ramsey County staff has been working on revisions to the County's Solid Waste Management Master Plan since April, and we have provided progress reports over the summer as that process continued. During this time we have sought, and received, significant public engagement in the planning process, and the draft plan incorporates a lot of what we have heard.

The MPCA is asking the metropolitan counties to meet very high goals, and to consider significant changes to their master plans in order to protect public health, protect the environment, and hold costs for businesses and residents who pay for waste management and recycling services. Ramsey County is using its current master plan as a foundation for this change, with some changes in emphasis. For example, there is increased emphasis on recycling and organics management. This includes increasing opportunities for residents through municipal programs. The County will be increasing the level of communication, technical assistance and consultation about both, and will continue to use the County Environmental Charge as an incentive. The County intends to stay the course with many of our priorities including regulation, toxicity reduction and processing.

The County Board reviewed and discussed the draft plan on October 11, prior to its release for comment. At that meeting the question was raised about whether the existing model of municipally-provided recycling service is still the best and most efficient and effective fit, given the economic and funding challenges that cities and counties face. We will be examining that issue over the next few months.

The County is also working through the Solid Waste Management Coordinating Board (SWMCB) on a Regional Solid Waste Master Plan. It is expected that the draft of the regional plan will be available in November. You can expect a final, comprehensive document, including the regional and Ramsey County elements, for public review in mid-December.

The draft plan is available on the web at
www.co.ramsey.mn.us/ph/rt/planning_beyond_the_garbage_can.htm,
along with other information about the planning process.

If you have comments or questions, you can contact Deborah Carter McCoy (651-266-1162) at Deborah.McCoy@Co.Ramsey.mn.us, or me at Zack.Hansen@Co.Ramsey.mn.us, or 651-266-1160)

Zack Hansen, R.E.H.S.

Environmental Health Director
Saint Paul - Ramsey County Department of Public Health
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Maplewood, MN 55109-1320
Phone: 651.266.1160
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Recommended Action:
Receive presentation and discuss concerns or changes with Ramsey County staff.

Attachments:
A. none

Roseville Public Works, Environment and Transportation Commission

Agenda Item

Date: November 22, 2011 **Item No:** 6

Item Description: Neighborhood Traffic Management Program

Background:
The Commission reviewed the draft Neighborhood Traffic Management Program at the October meeting. Staff has made a number of changes based on feedback received. We have attached a revised draft of the main body of the policy for approval.
Some of the changes that were made:

- Reviewed policy for consistent use of defined terms.
- Reviewed the toolbox of Traffic Management Strategies, eliminating some.
- Reorganized some sections for continuity.
- Updated text from passive to active voice.
- Expanded Table 4 to include additional maintenance costs.
- Added resident cost participating when the traffic study calls for used of consultants.
- Added process for staff removal of strategies
- Created a definition appendix

A couple of items that we would like to focus on for the commission discussion:

- Resident cost participation when the traffic study calls the use of consultants
- Process for Staff removal of strategies.
- Discussion of Traffic Circles and Roundabouts
- Definitions

Staff will update the Toolbox detail sheets to fit the format of the overall plan.

Recommended Action:
Recommend Neighborhood Traffic Management Program to City Council for further review and approval

Attachments:
A. Draft Neighborhood Traffic Management Program

Roseville Neighborhood Traffic Management Program

1.0 Introduction

Concerns about~~Increasing~~ traffic volumes and higher speeds have become important issues throughout the metro area and are having an increasing impact on local streets in the City of Roseville. The City of Roseville is continually striving to strengthen and protect its neighborhoods by improving the quality of life ~~in residential areas~~. A goal of the Roseville ~~Transportation Plan~~Comprehensive Plan is for the transportation system to address community issues and concerns while maintaining and enhancing neighborhoods, providing connectivity, and the sense of community cohesion.

~~Discussion with traffic engineers in cities with established traffic management programs provided insight into the need for a formal process.~~ An established traffic management process:

- Allows the city to better respond to residents and businesses,
- Provides the opportunity for better understanding of the issues, and
- Allows consistent application across the community.

Therefore, for ~~residents~~ citizens to obtain consideration for the installation of ~~any given~~a traffic ~~management~~control ~~measures~~strategy on either a street or within a larger neighborhood area they are required to follow a process. The process will ensure that neighborhoods with demonstrated traffic issues and community support for traffic management have equal access to the neighborhood traffic process. The Neighborhood Traffic Management Program depends upon citizen involvement and may vary from year to year based upon citizen participation and available funding. Various terms are used throughout this document, see Appendix A for Definitions.

~~1.1~~ Purpose

This document was developed to guide city staff and inform ~~residents~~citizens about the processes and procedures for implementing traffic management strategies on local streets to address traffic concerns such as excessive ~~volumes and~~ vehicle speeds, high volumes of non-local through traffic, ~~and~~ vehicle crashes in neighborhoods, and alleviate conflicts between motorized and non-motorized users. ~~.~~ The document includes a summary of the City of Roseville's Policies for the Traffic Management Program, background on the history of traffic management, the City of Roseville's process for implementing strategies, and a toolbox of common traffic management ~~measures~~strategies.

2.0 Policies

The following policies are established as part of the Neighborhood Traffic Management Program ~~for neighborhood streets~~:

- Compatibility with transportation goals in ~~City of~~ Roseville's ~~Transportation Plan~~Comprehensive Plan, Chapter 5, Transportation.
- Implementation limited to local streets. A local street is a street under the jurisdiction of the City of Roseville. ~~(no arterials or collectors) as identified in the Roseville Transportation Plan.~~
- Implementation of strategies will be funded by a combination of city funds and neighborhood participation.

- Trucks are allowed on all City streets unless otherwise posted (by State law trucks must be allowed on all Municipal State~~-~~ Aid~~ed~~ Roads~~roadways~~.)
- The program intends to take a system-wide approach when addressing a neighborhood traffic problem. For each project, city staff will determine a logical project boundary that will be necessary for the approval process and will help address the issue of displacement/diversion to other local streets.
- Implementation strategies will be limited to those local streets where the 85% speed exceeds 5 mph above the posted speed limit or where other traffic impacts affecting the livability of the neighborhood exist~~s~~.
- Implementation of traffic management strategies will be in accordance with the procedures set forth in this document, and in keeping with sound engineering practices, as well as be within the city's available financial and staff resources.
- Implementation of any device~~s~~ will be consistent with the guidelines in the Minnesota Manual on Uniform Traffic Control Devices.
- Implementation of strategies shall be consistent with recommended strategies included in the Mn/DOT Safety Handbook.
- Initial deployments are considered temporary for study purposes and subject to an interim review by City staff prior to permanent installation.

3.0 Traffic Management Background

The United States has used street closures and traffic diverters dating back to the late 1940s and early 1950s, but it was not until the 1970s that Seattle, Washington completed area-wide demonstrations of traffic management strategies. Since then, traffic management has been continually studied and implemented throughout the United States. Strategies include street closures, traffic diverters, speed humps/bumps, signing, increased enforcement and many others, but they all are implemented to accomplish one of the following:

- Modify driver behavior (reduce speed)
- Modify traffic characteristics (reduce volume)
- Improve safety for~~(~~ pedestrian and bicyclists~~)~~

Traffic management can be simplified as a ~~two~~ three step process: (1) identify the nature and extent of traffic-related problems on a given street or area ~~and~~ (2) select and implement the proper strategy for reducing the identified problem and (3) evaluate effectiveness, accept, modify or revert. The traffic management strategies discussed in this document are solutions to a narrowly defined set of problems and are not universally applicable or effective at solving all problems. ~~The wrong~~A traffic management strategy used in the wrong application will not improve conditions - it will only increase City costs and may even make conditions worse.

Since not all strategies are appropriate for every problem the City has developed a process to identify the appropriate solutions. The process includes identifying the problem, evaluating potential strategies, and implementing appropriate ~~measures~~strategies while including public participation and governmental approval. This process is summarized in Section 4.

The process and strategies included in this document are intended to be used on local streets ~~classified as local residential streets~~ to reduce speeds and volumes. The goal is promote safety for all public right of way users. ~~(Streets within the City of Roseville are classified based on definitions from the Metropolitan Council defined in Appendix C of the Roseville Transportation~~

~~Plan. The current Road Classification Map, Figure 4.10 from the Roseville Transportation Plan, identifies street classifications within the City of Roseville – see Appendix D.) By definition arterials and collector roadways are intended to have higher speeds and accommodate higher volumes; therefore it would be against the function of arterials or collectors to implement traffic management strategies. These roadways are intended to operate efficiently with high volumes and speed. When arterials and collectors are operating efficiently they provide the necessary mobility for the traveling public and prevent the need to divert to the street network.~~

4.0 Procedure Summary

A flow chart, *Exhibit 1*, provides a summary of the procedures for implementing a traffic management strategy on a local street. The process includes the following steps:

Step 1 ~~- Identify Candidate Streets/Neighborhoods~~Study Request (Application)

First ~~residents~~citizens must identify candidate streets for traffic management improvement and submit a written request to the City Engineering Department. Any requests for project proposals require a written application with ~~50~~51% of the project neighborhood signing the application. *Appendix ~~B~~A* provides a sample petition~~sample request form~~.

Step 2 ~~- -~ Preliminary Screening Review~~ and Evaluation

The City Engineering Department will review requests and determine whether they can be handled as part of the normal traffic engineering process or police enforcement function of the City or if they qualify for consideration under the Neighborhood Traffic Management Program.

Step 3 - Data Collection and Traffic Study

If it is determined that the request falls under the Neighborhood Traffic Management Program the City will undertake an engineering study of the street(s) or neighborhood including gathering relevant data of the ~~proposed~~ affected streets.

Step 4 - Develop/ Evaluate Traffic Management Strategies

Based on the traffic study and input from other departments, the City Engineering Department will make a preliminary determination of the need for traffic management ~~measures~~strategies and make recommendations as to which ~~measures~~strategy would be appropriate.

Step 5 ~~- –~ Receive Neighborhood Feedback~~Conduct Neighborhood Meeting and Survey~~

A neighborhood meeting will be held, or a summary letter will be sent, to present the conclusions of the traffic study and discuss appropriate next steps in the process. At this time a survey will be sent out to determine neighborhood support for the recommended traffic management strategy and to receive input from affected ~~residents~~citizens.

Step 6 - Traffic Management Strategy Recommendation and Approval

The recommended strategy will not be implemented without the support of 65% of the ~~project neighborhood~~benefited area and ~~50~~51% of the affected neighborhood. In addition to neighborhood approval, the City Council must also approve the implementation of the traffic management strategy.

Step 7 - Implement Temporary ~~Measures~~ Strategy and Monitor

If a strategy is ~~measures are~~ approved it may be possible to implement first a temporary ~~measure~~strategy. If a temporary measure is used, it will be monitored for a minimum of 3 months to determine its effectiveness.

Step 8 - Strategy Evaluation~~Approve Permanent Measures~~

Results from the monitoring of the temporary measure will be used to determine if the strategy will ~~receive~~ be recommended for final approval from the City Council. If the temporary measure is not effective the Engineering Department will revisit the analysis and development of strategies (Steps 3 and 4) or choose to not continue the process.

Step 9 ~~--~~ City Council Action

Based on the strategy evaluation, City staff members will provide a recommendation to the City Council regarding the proposed traffic management strategy.

Step 10 - Design, Final Assessment Roll and Construction

If the project is approved, City staff prepares and recommends the final project as required under authority granted by Minnesota Statute Chapter 429.

Step 11 - Monitoring

Once a traffic management strategy has been implemented the City will continue to conduct periodic monitoring of the site to collect data for future implementation of strategies and to document the effectiveness of the ~~existing~~ installed ~~measures~~strategy. This program and the associated Toolbox may be amended at any time by the City Council.

~~***Appeals*** - Decisions of staff can be appealed to the City Council. The appeals process will follow established City procedures.~~

~~***Removal*** - Existing traffic management measures and/or measures installed under the Program may be requested to be removed. The request for removal of a project will be processed generally using the same procedures as outline in this program requiring written request and appropriate neighborhood approval.~~

5.0 ~~Procedural~~ Procedure Details

Step 1 - ~~Identify Candidate Streets/Neighborhoods~~Study Request (Application)

~~Residents~~Citizens may identify candidate streets or areas for traffic improvements. Some request may be handled by phone or verbally from ~~residents~~citizens to City Staff, which could result in increased police enforcement or placement of the City's speed display equipment. Any requests for permanent traffic management strategies require a written application with ~~50~~51% of the project neighborhood~~project neighborhood~~ signing the application. *Appendix B~~A~~* provides a sample petition ~~and request letter~~.

Application of these strategies on ~~collector or~~ arterial streets is excluded ~~and not included in~~from this process.

Step 2 - Preliminary ~~Screening~~ Review and Evaluation

The City Engineer will review requests to determine whether or not they should be handled as part of normal traffic engineering procedures or police enforcement of the City, or if they qualify

Traffic Management Process

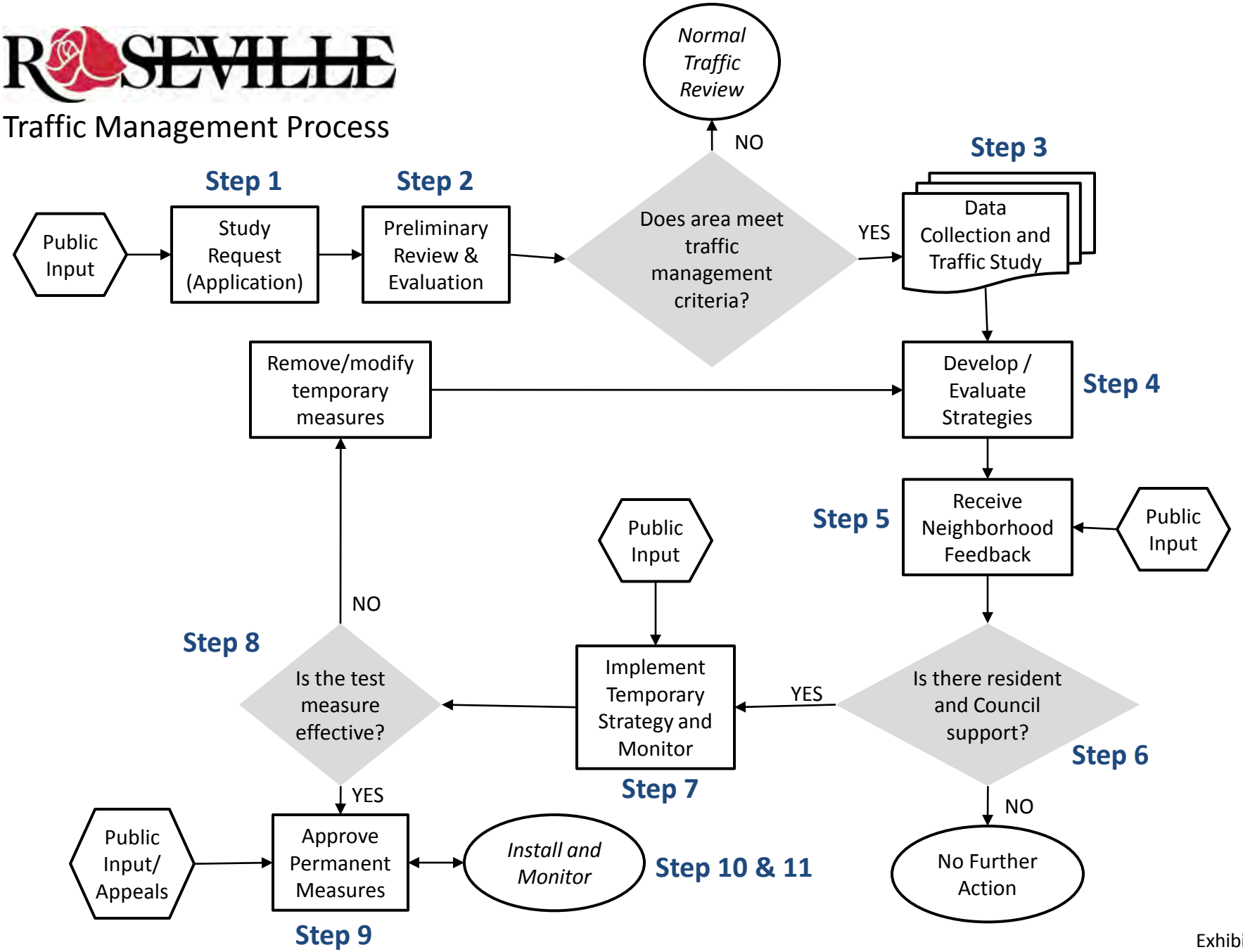


Exhibit 1
Neighborhood Traffic Management Process Flow Chart

for consideration under the Neighborhood Traffic Management Program. Some requests may be able to be handled within the current Capital Improvement Program such as planned infrastructure improvements or reconstructions. In addition, common requests for increased traffic enforcement, and placement of the variable speed display equipment are commonly handled by ~~requests to~~ the City Traffic Safety Committee.

Review of requests will consist of comparing the identified street characteristics with the following initial criteria:

- The street in question must be classified as a ~~Local~~ local street in the City of Roseville ~~Transportation Plan~~ (see ~~Figure 4.10 from Roseville Transportation Plan in~~ Appendix ~~C~~D for roadway jurisdiction map).
- The requests must be related to speeding, excessive traffic volumes, crashes, cut-through traffic, truck traffic, non-motorized transportation safety or other related impacts on a local street.

If it is determined that the request falls under the function of this plan, then Step 3 will be initiated. If not, the request shall be followed up as appropriate by the City Engineer as part of the Departments normal function, including coordination with Police, Fire, and Public Works Departments as needed.

Step 3 - Data Collection and Traffic Study

If it is determined that the request falls under the guidelines of the management program, the City Engineer will conduct an engineering study of the street(s) or neighborhood. The study will include the following actions:

Define ~~Project~~ Benefited Area ~~/~~ / Impacted Area

The definition of the ~~project~~ benefited area and impacted areas sets up the project boundaries and will be used to determine neighborhood support during the petition process and for the assessment process if a strategy is implemented.

Data Collection

Traffic data collection will include (as appropriate based on identified problem) one or more of the following:

- Traffic volume counts (24 hour counts in 15 minute increments, truck volume counts)
- Non motorized transportation counts
- Speed surveys
- Cut-through traffic estimates
- Crash information (three years minimum- 5 years recommended)
- Roadway Geometry (sight distance, lane configuration, etc.)
- Land Use Mix (density of residential and presence of sidewalks, pedestrian generators such as schools, parks, bus routes, unique features)

Evaluation of Traffic Data

From the data collected the traffic problems associated with the neighborhood street can be documented. The documentation will be valuable in the development of possible traffic management strategies.

From the data collected the City will also be able to rank the potential projects for further study. *Table 1* provides the ranking criteria. This ranking will be beneficial if the number of request submitted is beyond the fiscal and staffing ability of the city. By ranking requests based on the criteria set forth in *Table 1*, the city can prioritize the projects to focus funding accordingly.

TABLE 1 Ranking of Traffic Management Requests	
Pathway adjacent to ~~project area~~Benefited Area (0 to 100 points)	None +100 All of 1 side +50 All of 2 sides +0
Public school yard, parks, playground development adjacent to benefited area (0 to 200 points)	None +0 All of 1 side +100 All of 2 sides +200
Residential development adjacent to benefited area (0 to100 points)	None +0 All of 1 side +50 All of 2 sides +100
Number of reported correctable crashes based on up to ~~last~~ 5 years of available data (0 to 200 points)	20 per crash; maximum of 200 points
Average residential density adjacent to ~~project area~~Benefited Area (0 to 50 points)	0 dwelling units per 100 lin. ft. = 0 points 5+ dwellings units per adjacent 100 lin. ft. = 50 points
85th Percentile speeds 5 mph over posted speed limit (0 to 200 points)	Yes - +200 No - +0
Average Daily Traffic Volumes - ADT (0 to 200 points):	ADT divided by 10; maximum 200 points For intersection, street segments or multiple streets, use higher volume street
Percent of potential assessment properties supporting project by petition (180 to 300 points)	3 points per percent; maximum 300 points

Step 4 - Develop/Evaluate Traffic Management Strategies

Using the data collected during the development of the traffic study and applying recognized traffic engineering standards, the City Engineering Department will recommend the use of one or more neighborhood traffic management strategies. A "toolbox" of strategies is included in *Section 6.0* of this plan. While it is not inclusive of all strategies, it provides a summary of the most applied and successful ~~measures~~strategies as documented in the research summarized in *Appendix ~~B~~C.* The toolbox includes a brief description of the strategy, its effects on volume, speed, noise, and safety, a discussion of its advantages and disadvantages and design considerations. The following strategies are included in the toolbox:

Traffic Control Devices

- ~~Vehicle Restrictions~~
- ~~Turn Restrictions~~
- One-Way Streets
- ~~Watch for Children Signs~~
- Stop Sign Implementation
- All-Way Stop Sign Implementation
- Parking Restrictions
- Pavement Markings/ Crosswalk Striping
- Speed limits

Roadway Adjustments

- Narrowing Lanes
- Intersection Chokers
- Mid-Block Narrowing
- Chicane
- Sidewalks

Vertical Elements

- Speed Tables
- Raised Crosswalk
- Median Barrier
- Traffic Circle
- Street Closure
- Full/ Diagonal Diverter
- Partial Diverter

Enforcement

- Increased Enforcement
- Variable Speed Display Board

Management Strategy Effectiveness ~~of Strategies~~

As stated earlier, traffic management strategies are not universally applicable or effective at solving all problems. The Institute of Transportation Engineers has collected data on the effectiveness of traffic management strategies implemented throughout the United States. *Table 2* provides a summary of this data and can be useful in the selection of appropriate traffic management strategy to implement. Along with the information provided in Table 2 on effectiveness, the following are some other effectiveness considerations:

- Traffic control devices, by themselves, are almost never effective at reducing traffic volumes or vehicle speeds.
- Enforcement can be effective if applied regularly and over an extended period of time.
- In most cases, enforcement will result in local ~~residents~~citizens being ticketed.
- Roadway adjustments (narrowing) have proven to be moderately effective but at high implementation costs.
- Vertical elements (primarily speed humps/bumps) have proven to be moderately effective but neighborhood acceptance has been mixed.
- The combination of enforcement plus other strategies has proven to be the most effective approach.

TABLE 2 ~~Effectiveness~~ Management ~~of~~ Strategy Effectiveness~~ies~~	**Volume Reduction**	**Speed Reduction**	**Safety Improvement**	**Increase in Air / Noise Pollution**	**Emergency Access Issues**	**Access Restriction**	**Increased Maintenance Efforts**	**Cost**
Traffic Control Devices								
~~Vehicle Restriction~~	~~Poss~~	~~Poss~~	~~Poss~~	~~No~~	~~Poss~~	~~Yes~~	~~No~~	~~Low~~
~~Turn Restrictions~~	~~Yes~~	~~Poss~~	~~Poss~~	~~No~~	~~No~~	~~Yes~~	~~No~~	~~Low~~
One-Way Streets	Poss	No	Poss	No	Poss	No	Poss	Low
~~Watch for Children Signs~~	~~No~~	~~No~~	~~No~~	~~No~~	~~No~~	~~No~~	~~No~~	~~Low~~
Stop Sign Implementation	No	No	No	Yes	Yes	No	No	Low
All-Way Stop Implementation	No	No	Poss	Yes	No	No	No	Low
Parking Restrictions	No	No	Poss	No	No	No	No	Low
Pavement Markings/ Crosswalk Striping	No	No	No	No	No	No	No	Low
Speed limits	No	No	No	No	No	No	No	Low
~~Painted Crosswalks~~	~~No~~	~~No~~	~~No~~	~~No~~	~~No~~	~~No~~	~~No~~	~~Low~~
Roadway Adjustments								
Narrowing lanes	No	Poss	Poss	No	No	No	No	Mid
Intersection Chokers	No	Poss	Yes	No	Poss	No	No	High
Mid-Block Narrowing	No	Poss	Poss	No	No	No	No	Mid
Chicane	Poss	Poss	No	No	No	No	Yes	High
Sidewalks	No	No	Poss	No	No	No	Poss	Mid
Vertical Elements								
Speed ~~Bumps/~~ Humps/ Tables	Poss	Yes	Poss	Poss	Poss	No	Poss	Mid
Raised Crosswalk	Poss	Yes	Poss	Poss	Poss	No	Poss	Mid
Median Barrier	Yes	Poss	Poss	No	Yes	Yes	Poss	High
Traffic Circle	No	Poss	Poss	No	Poss	No	Yes	High
Street Closure	Yes	Poss	Poss	No	Yes	Yes	Poss	High
Full/ Diagonal Diverter	Poss	Poss	Poss	No	Yes	Yes	Poss	High
Partial Diverter	Poss	Poss	Poss	No	No	Yes	Poss	High

Enforcement								
Increased Enforcement	No	Yes	Poss	No	No	No	No	Mid
Variable Speed Display Board	No	Yes	Poss	No	No	No	No	Low

Cost Estimate and Funding

For the purpose of discussions with affected ~~residents~~citizens, a cost estimate will be developed for the recommended strategy. ~~It is the policy of the City of Roseville that t~~The following cost sharing will occur with an approved traffic management strategy:

- City of Roseville will pay the cost of administrative work, traffic study and data collection.
- If the traffic study requires expertise that is not available in house, the City may need to hire a consultant to complete the traffic study. If this occurs, the cost for the study will be incorporated into the 25/75 cost share described below.
- City of Roseville pays 25% of the construction and installation costs of major strategies while the neighborhood affected will pay 75% of the cost (minor items such as installation of a limited number of signs or painting of crosswalks and other pavement markings would be assumed completely by the City) Construction cost includes direct engineering, legal and project administration.

Costs associated with implementing traffic management strategies vary significantly from just over $250 for installing a speed limit sign to $10,000 or more for a landscaped median construction. *Table 3* provides a summary of typical implementation costs for traffic management strategies.

TABLE 3
Typical ~~Implementation~~ Costs

Type of Implementation	Unit	Unit Cost	Maintenance cost
Warning Signs	Per sign	$250	Replace every 10 yrs average
Pavement Markings - Roadway Striping - Crosswalk Striping	 Per linear foot Per crosswalk	 $1 $150	Same Cost every 3 years to refresh paint
~~Textured Pavement~~	~~Per crosswalk~~	~~$1,500~~	
Street Lighting	Per fixture	$7,500	$1~~8~~50/ year
Raised Crosswalk	Per crosswalk	$4,000	$~~2,000~~500/ year
Speed Humps/ Table	Per table	$5,000	$~~2,000~~500/ year
Mid-Block Choker	Per choker	$5,000	$~~2,000~~500/ year
Intersection Choker	Per approach	$5,000	$~~2,000~~500/ year
Mid-Block Speed Table	Per table	$7,500	$~~2,000~~500/ year
Intersection Speed Table	Per intersection	$25,000	$~~2,000~~500/ year

Traffic Circle	Per intersection	$15,000	$~~2~~1,000/ year
Center Island	Per approach	$15,000	$~~2~~1,000/ year
Half Closures	Per intersection	$40k to $60k	$~~2,000~~500/ year
Full Closures	Per intersection	$120,000	$~~2~~1,000/ year
Sidewalk (6 ft concrete)	Per Foot	$81	$1.1~~4~~0
Trail (8 ft Bituminous)	Per Foot	$70	$1.14

Source: City of Minneapolis & ITE, Traffic Calming - State of the Practice

While the city will cost share only the implementation costs, the consideration of future maintenance costs are also a factor for determining the most appropriate strategy. While the implementation of a traffic sign may appear to be the least expensive option at only $250, the additional per year cost of annual maintenance needs to be considered. A comparison of the annual costs for the most common strategies for speed reduction, increased enforcement and speed humps, is included in *Table 34.*

~~**TABLE 4**~~
~~Comparison of Annual Costs~~

~~Measure~~	~~Initial Cost~~	~~Annual Cost~~	~~Annual Revenues~~
~~Photo-radar (ownership option)~~	~~$85,000~~	~~$145,000~~	~~$40,000~~
~~Photo-radar (lease option)~~		~~$214,000~~	~~$40,000~~
~~Targeted Police Enforcement~~	~~$70,000~~	~~$194,000~~	~~$40,000~~
~~Speed Humps~~	~~$300,000~~	~~$30,000~~	~~$0~~

~~Source: ITE, Traffic Calming - State of Practice~~

Step 5 - Receive Neighborhood Feedback~~Conduct Neighborhood Meeting and Petition~~

After the completion of the traffic study and the development and evaluation of potential strategies, the city will either hold a Neighborhood Meeting or distribute a letter to inform the community on the process and results of the traffic study and provide information on the recommended strategies. Based on the engineering study and input from ~~residents~~citizens, the city will make a preliminary determination and recommendation for the need of traffic management strategies.

Step 6 - Traffic Management Strategy Recommendation and Approval

Once the traffic study results, management strategies, and cost estimates have been provided to affected neighborhood ~~residents~~citizens, a survey/petition will be circulated to ascertain whether or not the neighborhood approves of the recommended strategy and are willing to cover the potential costs of implementation. The recommended strategy will not be implemented without the support of 65% of the ~~project neighborhood~~benefited area and ~~50~~51% of any affected neighborhood.

Once approval is obtained from the neighborhood the strategy will be presented to the City Council for approval.

Step 7 - Implement Temporary Strategy and Monitor

In most cases, the strategy will be implemented with temporary materials and remain in place for approximately three to six months depending on the type of improvement. The strategy will be evaluated to determine if it addresses the identified problems and is consistent with the Neighborhood Traffic Management Program~~lan~~ goals. During the test period ~~residents~~citizens may provide comments to the City Engineering Department regarding the improvement. At any time during this test phase appeals of the decision for installing the strategy can be submitted and forwarded to appropriate staff.

If it is determined that it is not practical to install a temporary strategy, this step can be eliminated.

Step 8 - ~~Approve Permanent Strategy~~Strategy Evaluation

If it is determined that the temporary strategy does not achieve the intended goals of reducing speeds, cut through traffic or other identified problems, the City Engineering Department will review other potential ~~measures~~strategies and recommend the elimination of all strategies or test the installation of a different strategy.

Effective temporary strategies will be brought to the city council for approval for the installation of a permanent form of the approved traffic management strategy.

Step 9 -– City Council Action

Based on the strategy evaluation and survey, City staff members prepare a feasibility report and recommendations for the City Council. The report outlines the process followed, includes the project findings, states the reasons for the recommendations and includes a preliminary assessment roll. The feasibility report and preliminary assessment roll will be presented for a recommendation by the PWETC before final action by the City Council. If the feasibility report is adopted and the preliminary assessment roll is approved by the City Council, the project is ordered. If the feasibility report and preliminary assessment roll are not adopted by the Council, the plans and specifications will not be ordered and the project will be terminated. The project will thereafter be removed from the list and the Benefited Area is not allowed to reapply for a same or similar study for five years.

Step 10 – Design, Final Assessment Roll and Construction

Final design and construction supervision are administered by the City and are generally completed within 12 months after final approval and assessment by the City Council. City staff prepares and recommends the final assessment roll as required under authority granted by Minnesota Statute Chapter 429.

Step 11 - Monitoring and Future Actions

The City will conduct periodic monitoring of the fully installed traffic management strategy to determine if the project continues to provide effective improvement to the neighborhood. The monitoring will be conducted at the discretion of the City based on available funding, staffing levels, and resident comments.

If monitoring shows that the implemented strategy fails to achieve the intended goals it may be removed.

Legal Considerations

From the local government perspective, the legal issues surrounding traffic management strategies fall into three categories: statutory authority, constitutionality, and tort liability. First, the local government must have legal authority to implement traffic management strategies on a given roadway (statutory authority). Second, the local government must respect the constitutional rights of affected landowners and travelers on the roadways (constitutionality). And finally, the local government must take steps to minimize the risk to travelers from the installation of traffic management strategies (tort liability). Through documentation of the entire process, including the collection and evaluation of traffic data, the decision process, and interaction with the public, the Roseville Traffic Management Program can minimize potential legal difficulties.

Appeals
Decisions of staff can be appealed to the City Council. The appeals process will follow established City procedures.

Removal
The Traffic Management Program is intended to avoid the costly installation and later costly removal of traffic management strategies. On occasion, however, it may be determined to be desirable to remove a traffic management strategy installed under the Program.

If the removal is City initiated due to safety/ crash/ complaint issues, the removal will be at City expense. If the removal request is at the request of the Benefited Area, the removal will be charged to the property owners in the defined Benefited Area. The request will be processed generally using the same procedures as outlined in this program requiring written request and appropriate neighborhood approval.

6.0 ~~Toolbox of Neighborhood~~ Traffic Management Strateg~~y~~ies Toolbox

The following Toolbox provides information on a variety of traffic management strategies. Each strategy includes information on its purpose, its effectiveness for solving different types of traffic problems, and a summary of advantages and disadvantages for implementation. T~~o make t~~he toolbox ~~understandable and usable it~~ has been organized into types of strategy as follows:

Traffic Control Devices - the use of common traffic control devices, such as signing and pavement markings, to solve neighborhood traffic problems. Included in this category are:

- ~~Vehicle restrictions~~
- ~~Turn restrictions~~
- One-Way streets
- ~~Watch for Children Signs~~
- Stop Sign Implementation
- All-Way Stop Sign Implementation
- Parking Restrictions
- Pavement Markings/ Crosswalk striping
- Speed Limits

~~**Enforcement** - there are two options for using enforcement as a traffic management strategy: increase police enforcement and the use of Variable Speed Display Boards~~

Roadway Adjustments - there are multiple strategies for traffic management that change the appearance of the roadway including:

- Narrowing ~~of~~ lanes
- Intersection Chokers
- Mid-Block Narrowing
- Chicane
- Sidewalks

Vertical Elements - introducing vertical elements to the roadway, either as obstacles for vehicles to drive over or around, are common traffic management strategies. These include:

- Speed Humps/ Tables
- Raised Crosswalks
- Median Barrier
- Traffic Circles
- Street Closure
- Full/ Diagonal Diverter
- Partial Diverter

Enforcement - there are two options for using enforcement as a traffic management strategy: increase police enforcement and the use of Variable Speed Display Boards.

One-Way Streets

Purpose

Conversion of two-way streets to one-way operation for purposes of residential street traffic control take three forms:

CASE #1 - Divergent and convergent one-way residential streets to reduce direct through routes impacting the neighborhood.

CASE #2 - Alternating one-way streets throughout a portion of a grid system to gain safety advantages of one-way operations.

CASE #3 - Creating a one-way couplet by paring a residential street with a nearby thru street to create a corridor for thru traffic

R6-1

R6-2

Source: FHWA Manual on Uniform Traffic Control Devices

Effects

Volumes	Case #1 – reduces traffic volumes where thru traffic is a problem Case #2 – no significant effect on traffic volumes Case #3 – increases volumes on one street and reduces volumes on adjacent streets
Speed	May increase speeds due to improved motorist comfort levels.
Traffic Noise and Air	Minimal effect except in Case #1 which creates longer, circuitous routes for local traffic.
Traffic Safety	One-way streets result in fewer potential conflicting movements, improving safety.

Advantages	• Possible increased parking • Inexpensive to implement • May reduce traffic volumes • May increase roadway capacity
Disadvantages	• May be considered inconvenient for residents • Possible increase in speeds • May increase volumes on other streets
Problems Targeted	• High traffic volumes • High crashes due to conflicting movements
Design	• One way streets can be used in combinations that force turns every few blocks to minimize speeding or cut-through problems

Stop Sign Implementation

Purpose
Regulatory sign that is used to assign right-of way at an intersection. Only recommended for installation if specific guidelines are met in accordance with the Minnesota Manual on Uniform Traffic Control Devices (MnMUTCD). Stop signs should not be used for speed control or volume reduction and should not be installed on the major street unless justified by an engineering report.

R1-1

Source: FHWA Manual on Uniform Traffic Control Devices

Effects	
Volumes	Little or no effect
Speed	Little or no reduction in speed, speed possibly increases due to drivers speeding up to make up for time lost at the stop sign
Traffic Noise and Air	Noise is increased near the intersection due to the increase activity of acceleration. Air quality worsens due to deceleration, idling and acceleration
Traffic Safety	Possible increase in crashes, possibly due to the stop signs being unexpected or deemed unnecessary, therefore encouraging rolling stops or by instilling a false sense of security in crossing motorists and pedestrians.
Advantages	• Inexpensive installation costs (do require continual maintenance costs) • Defines driver's right-of-way • Increase opportunity for pedestrians to cross the roadway • May discourage cut-through traffic
Disadvantages	• Can cause negative traffic safety impacts if sign is not warranted • May result in mid-block speeding • Increasing levels of intersection control are associated with increased frequency of crashes. • Difficult to enforce full stop control compliance • Could result in increase in speeds between the signs as drivers try to make up for lost time
Problems Targeted	• At intersections where right-of-way is confusing
Design	• Guidelines need to be met as established in the Minnesota Manual on Uniform Traffic Control Devices • In most cases the street carrying the lowest volumes should be stopped to minimize the number of vehicles stopping

All-Way Stop Sign Implementation

Purpose

The All-Way STOP condition is primarily intended to address either a higher than expected intersection crash frequency or to be an interim measure at locations that have demonstrated a need for a traffic signal installation, but where the signal cannot be installed in a reasonable period of time. It is a common belief that installing STOP signs on all approaches of an intersection will result in fewer crashes. Research indicates that average crash frequency at All-Way STOP controlled intersection is 50% higher than thru/STOP intersections. Also, there is no evident to suggest that STOP signs decrease travel speeds.

R1-1

Source: FHWA Manual on Uniform Traffic Control Devic

Effects	
Volumes	Little or no effect.
Speed	Little or no reduction in speed, mid-block speed possibly increase
Traffic Noise and Air	Little or no effect.
Traffic Safety	In most cases, the installation of an All-Way STOP will increase the frequency of crashes. Only in those rare cases where the number of crashes with the Thru/STOP control is unusually high, is the forecast of safety improvement probable.
Advantages	• Inexpensive installation costs (do require continual maintenance costs) • Defines driver's right-of-way • Increase opportunity for pedestrians to cross the roadway • May discourage cut-through traffic
Disadvantages	• Can cause negative traffic safety impacts if sign is not warranted • May result in mid-block speeding • Increasing levels of intersection control are associated with increased frequency of crashes. • Difficult to enforce full stop control compliance • Could result in increase in speeds between the signs as drivers try to make up for lost time
Problems Targeted	• Unusual conditions at intersection including crash frequency, turning patterns, delay and pedestrian conflicts.
Design	• Traffic volumes and crash frequency thresholds need to be met as established in the Minnesota Manual on Uniform Traffic Control Devices. •The most effective deployment of the All-Way STOP condition is at intersections where the volume of traffic on the major and minor roads is approximately equa.

Parking Restrictions

Purpose

Parking restrictions can assist in improving residential street safety in two ways:

1) Clearance No Parking Zones to improve sight lines at intersections and crosswalks
2) Extended No Parking Zones to improve visibility of and for pedestrians along the length of the block.

Source: FHWA Manual on Uniform Traffic Control Devices

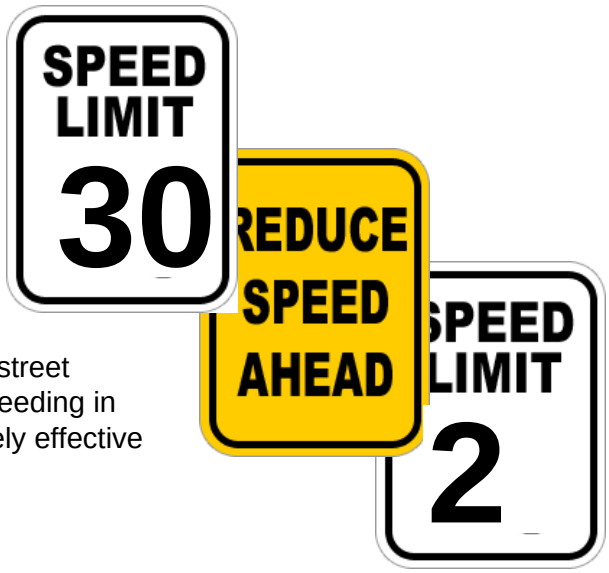
Effects	
Volumes	Little or no effect
Speed	Minimal changes unless there are extended No Parking Zones that can create the potential for increased speeds
Traffic Noise and Air	Little or no effect
Traffic Safety	Increasing sight line distances reduce right angle conflict between vehicles at intersections, alleys and driveways
Advantages	• Can reduce some types of accidents (late evening hit and run parked vehicle accidents and crashes related to parking maneuvers) •
Disadvantages	• In area where on-street parking is at capacity and there is no alternative off-street parking additional restriction to parking can be controversial to residents •
Problems Targeted	• Non-Residential parking intrusion
Design	• Should review the impacts of parking on surrounding streets

Pavement Markings/ Crosswalk Striping

Purpose
Provide a designated, marked location for pedestrians to cross residential street and make drivers more aware of potential pedestrian conflicts.

Effects	
Volumes	No effect
Speed	No effect
Traffic Noise and Air	No effect
Traffic Safety	Research has shown that marked crosswalks at uncontrolled intersection are unrelated to pedestrian safety.
Advantages	• Reasonably effective at identifying locations with potential pedestrian conflicts. • Helps to concentrate pedestrian activities at specific intersection and on specific legs of intersections.
Disadvantages	• At uncontrolled intersections, appears to create a false sense of security in pedestrians – the 8" white line with stop the oncoming 4,000 pound vehicle. • Costly to maintain • Not required to establish legal cross-walk locations.
Problems Targeted	• Concentrating pedestrian crossing activities, particularly when combined with other strategies such as advanced warning signs, systems of sidewalks, enforcement, etc.
Design	• Marking cross walks is not necessary to establish legal crossing locations and is unrelated to pedestrian safety. •Marked crosswalks may be part of a program to designate walking routes and concentrate pedestrian crossings when combined with other strategies.

Speed Limits



Purpose

Speed limits are determined by the Minnesota Department of Transportation (consistent with State Statutes) based on an analysis of the actual speed profile of the road. The basic premise of Minnesota's law is that the majority of motorists will pick a safe and reasonable speed given the horizontal and vertical design of the street, locations of driveways, sidewalks, obstructions, and the use of the street by pedestrians. Lowering the speed limit to address speeding in a neighborhood has never proven to be even moderately effective without also including very high levels of enforcement.

Effects	
Volumes	Little or no effect
Speed	Drivers generally ignore posted speed limits and travel at speeds which the drivers consider reasonable
Traffic Noise and Air	Little or no effect.
Traffic Safety	Effects of speed limit changes on traffic safety on local residential streets have not been reported. Research suggests that crash frequencies on urban roadways are unrelated to vehicle speeds.
Advantages	• Research indicates that when speed limits are set at or near the 85th percentile speed, roadway crash frequencies are at a minimum.
Disadvantages	• Speed limits on urban roadways are either set by Statute or by MnDOT. • Research suggests that crash frequencies on urban roadways are unrelated to vehicle speeds.
Problems Targeted	• High speeds through residential neighborhood
Design	•

Narrowing Lanes

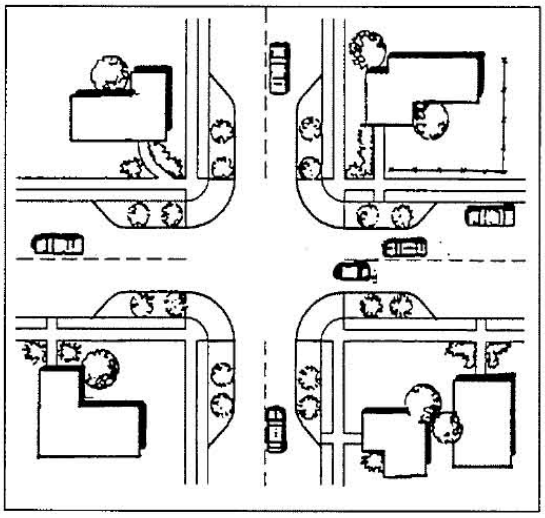
Purpose

The reduction of the typical pavement width along a roadway. The narrowing can be achieved physically by removing part of the pavement surface or by simply using pavement markings to indicate narrow travel lanes.

Effects	
Volumes	Little or no effect
Speed	Possible reduction in speed
Traffic Noise and Air	Little or no effect
Traffic Safety	Potential for improved pedestrian safety due to shorter street crossing times, but at the same time bicycle safety may be compromised by physically removing part of the pavement surface.
Advantages	• Use of pavement markings to narrow street is relatively inexpensive ($0.20 per lineal foot). • Narrowing of street may provide opportunity for street beautification programs
Disadvantages	• May require the prohibition of on-street parking causing hardship or inconvenience for residents • May result in shifting volumes to adjacent streets if number of lanes is reduced
Problems Targeted	• Wide residential streets where speed reduction is desired • Excess street volume on multilane streets
Design	• Must not create significant impact due to loss of parking

Intersection Chokers

Purpose
Narrowing of the street at an intersection to constrain the width of the traveled way. They provide shorter pedestrian crossing distances and provide protection to the beginning of a parking lane. The driver also senses the roadway narrowing when approaching one of these measures, which can result in speed reduction and a reminder that the driver is entering a residential area.



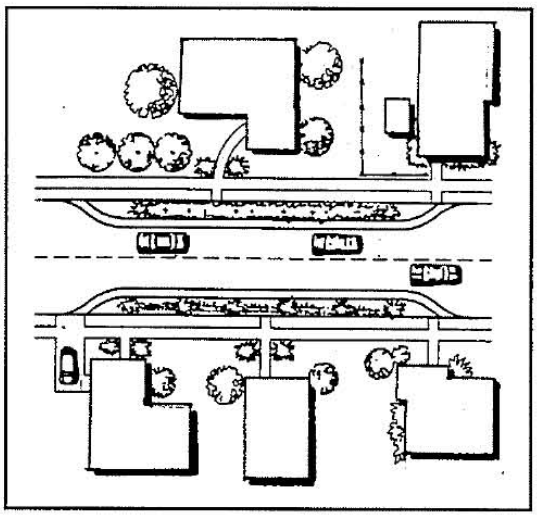
Source: Institute of Transportation Engineers
Traffic Calming: State of Practice

Effects	
Volumes	Little or no effect
Speed	Minimal changes
Traffic Noise and Air	Little or no effect.
Traffic Safety	Potential for improved pedestrian safety due to shorter street crossing times, but at the same time bicycle safety may be compromised by physically removing part of the pavement surface.
Advantages	• Good for pedestrians due to shorter crossing distance • Provides space for landscaping and neighborhood “gateway” • Should not affect emergency response time • Minimal inconvenience to drivers
Disadvantages	• May require the prohibition of on-street parking causing hardship or inconvenience for residents • May cause bicyclists to travel in same traffic lane as vehicles • May require redesign of drainage system
Problems Targeted	• Mid-block locations with speeding and/or cut-through traffic
Design	• There must be adequate turning radius for emergency vehicle access especially on narrow streets

Mid-Block Narrowing

Purpose

Segment(s) of roadway narrowing where curbs are extended toward the center of the roadway on one or both sides of the street to constrain the width of the traveled way. They provide shorter pedestrian crossing distances and provide protection to the beginning of a parking lane. The driver also senses the roadway narrowing when approaching one of these measures, which can result in speed reduction.



Source: Institute of Transportation Engineers
Traffic Calming: State of Practice

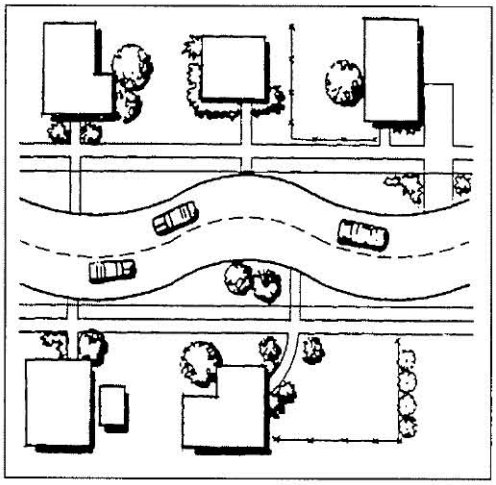
Effects	
Volumes	Little or no effect
Speed	Minimal changes
Traffic Noise and Air	Little or no effect.
Traffic Safety	Potential for improved pedestrian safety due to shorter street crossing times, but at the same time bicycle safety may be compromised by physically removing part of the pavement surface.
Advantages	• Good for pedestrians due to shorter crossing distance • Provides space for landscaping • Does not affect emergency response time • Minimal inconvenience to drivers
Disadvantages	• May require the prohibition of on-street parking causing hardship or inconvenience for residents • May create drainage issues where curb and gutter exist • May create diversion for bicyclists
Problems Targeted	• Mid-block locations with speeding and/or cut-through traffic
Design	• Must not significantly impede emergency vehicle access

Chicane

Purpose

Curvilinear reconstruction involving the introduction of curvatures on previously straight alignment. Curvilinear reconstruction can be accomplished in two different ways:

1. Reconstruct the street with a curved centerline alignment and a uniform roadway width
2. Introduce chokers or other types of barriers on alternate sides of the street to create a serpentine travel path.



Source: Institute of Transportation Engineers *Traffic Calming: State of Practice*

Effects	
Volumes	Possible reduction in volumes
Speed	Possible reduction in speeds
Traffic Noise and Air	Little to no effect
Traffic Safety	Little or no effect
Advantages	• Possible reduction in volumes and speed • No restriction in access to residents • Can be landscaped enhanced • Less disruptive for emergency vehicles than speed humps
Disadvantages	• Curbside parking must be prohibited in some locations • Winter maintenance problems • Possible impacts to drainage • High cost of reconstruction
Problems Targeted	• Excessive speeds
Design	• Not appropriate for narrow streets (22 feet is appropriate width)

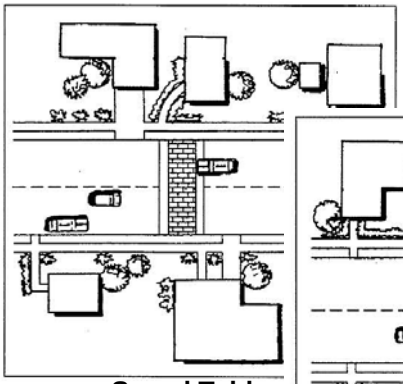
Sidewalks

Purpose
Sidewalks are intended to provide pedestrians with a safe walking location when traffic volumes or vehicle speeds make walking on the street potentially dangerous.

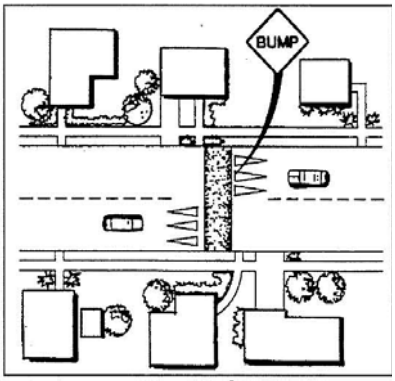
Effects	
Volumes	No Effect.
Speed	No Effect.
Traffic Noise and Air	No Effect.
Traffic Safety	Possible decrease in pedestrian crashes.
Advantages	• Positively separates pedestrians and vehicles. • Very effective at reducing pedestrian/vehicle conflicts. •
Disadvantages	• Moderately costly to implement. • Requires systematic deployment to achieve high levels of effectiveness. •Increased maintenance efforts. • Mixed neighborhood acceptance.
Problems Targeted	• High levels of pedestrian activity, especially at/near pedestrian generators (schools, parks, retail areas, etc)
Design	• Should be installed along all arterials and collectors (because of the traffic volumes and speed) and along residential streets based on providing connections to areas with high levels of pedestrian activity.

Speed Humps/ Tables

Purpose
A physical feature (usually made of asphalt or rubber mounds) that are designed to rise above the roadway surface and extend across the roadway perpendicular to the traffic flow. Typically used to reduce vehicle speeds.



Speed Table



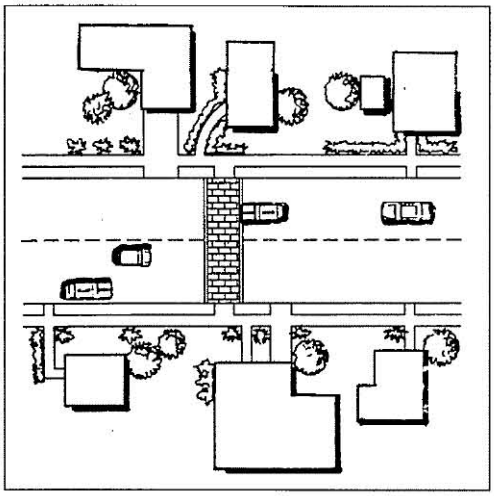
Speed Bump

Source: Institute of Transportation Engineers *Traffic Calming: State of Practice*

Effects	
Volumes	May reduce traffic volumes
Speed	Effective in slowing vehicles traveling at typical residential speeds to approximately 5 to 15 mph depending on type installed at the device – may reduce overall speeds by 5 to 7 mph.
Traffic Noise and Air	May have an increase of noise at the bumps/humps
Traffic Safety	Traffic safety has not been found to be compromised with these devices. Traffic safety benefits can be gained if speeding is involved.
Advantages	• Reduces speeds • Usually reduces traffic volumes • Does not require parking removal or interfere with bicycle/pedestrian traffic
Disadvantages	• Can potentially increase noise • Can cause traffic to shift to parallel residential or collector streets • May decrease emergency vehicles response times
Problems Targeted	• Excessive speed • High volumes
Design	• Speed humps are only effective for 250 feet on either side of the hump. Thus, a neighborhood considering speed hump installation would require two to three installations.

Raised Crosswalk

Purpose
A raised crosswalk is a speed table designed as a pedestrian crossing, usually at mid-block to provide additional warning of a pedestrian crossing



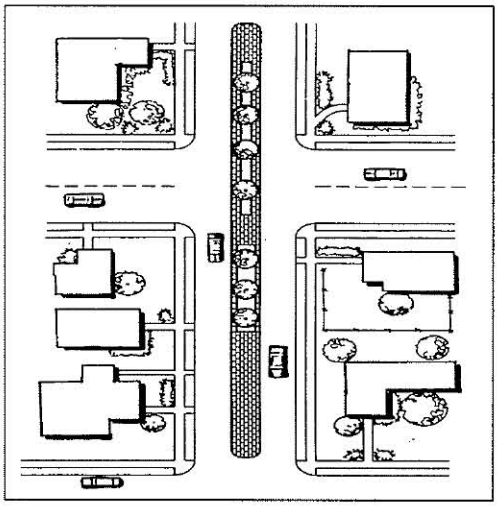
Source: Institute of Transportation Engineers *Traffic Calming: State of Practice*

Effects	
Volumes	Possible reduction in traffic volumes
Speed	Decrease in speed at crosswalk
Traffic Noise and Air	Possible increase in traffic noise
Traffic Safety	May increase awareness of pedestrians
Advantages	• Speed control at pedestrian crossing • Increases pedestrian visibility and awareness to driver • May reduce traffic volumes
Disadvantages	• Possible increase in noise • Possible diversion of traffic to other streets • May impact drainage
Problems Targeted	• High mid-block pedestrian crossing and excessive vehicle speeds
Design	• Should be placed in mid-block • Not appropriate for grades greater than 5 percent • Most common height is between 3 and 4 inches and typically have ramps 6 feet long

Median Barrier

Purpose

A physical means for preventing left turning traffic on a major street from accessing a local street and through traffic from continuing on that local street. Alternate routes fro diverted traffic should be analyzed with regard to traffic carrying capacity and desirability.



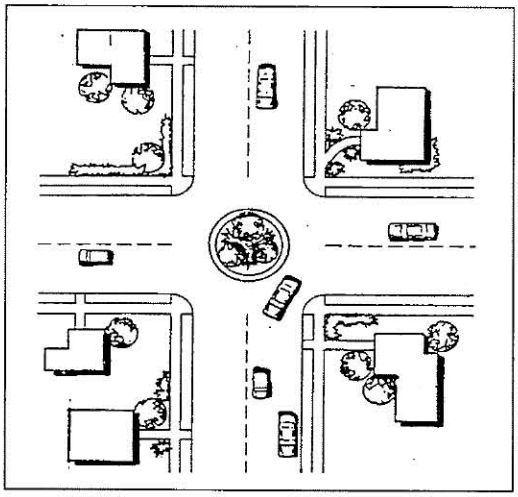
Source: Institute of Transportation Engineers
Traffic Calming: State of Practice

Effects	
Volumes	Vary depending on proportion of traffic that is prohibited by the median barrier
Speed	Small reduction possible
Traffic Noise and Air	Little or no effect
Traffic Safety	May provide some safety benefits for pedestrians as a safety island for crossing the major street
Advantages	• Assists in pedestrian crossing • Prevents vehicles from passing vehicles that are turning right • May improve safety through access limitations • Visually enhances the street
Disadvantages	• Diversion of traffic to other locations possible • Disrupts continuity of local street system • Maintenance of island required • Reduction in access for residents
Problems Targeted	• Cut through traffic • Vehicle conflicts
Design	• Must meet drainage requirements • Must not significantly impede emergency vehicle access

Traffic Circle

Purpose

A traffic circle is a raised geometric control island, frequently circular, in the center of an intersection of local streets. Typically, traffic circles would be about 20 feet in diameter. Traffic traveling through the intersection must avoid the island affecting the path and speed of the traffic.

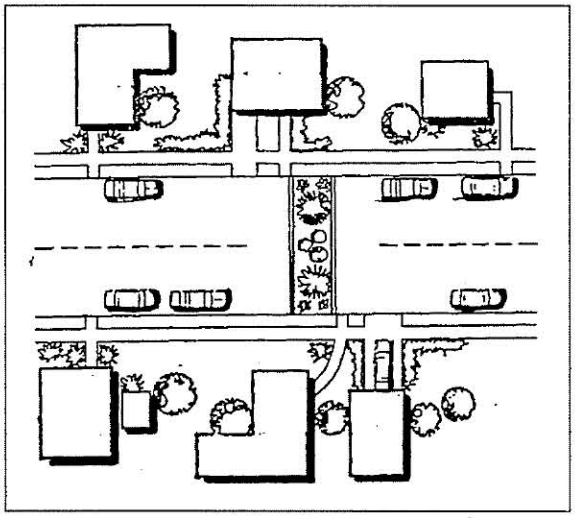


Source: Institute of Transportation Engineers *Traffic Calming: State of Practice*

Effects	
Volumes	Little or no effect
Speed	May reduce speed at intersection
Traffic Noise and Air	Little or no effect
Traffic Safety	May decreases vehicle conflicts at intersection
Advantages	• Reduces speed at intersection approach • Reduces vehicle conflicts at intersection • Provides equal access to intersection for all drivers • Does not restrict access to residents • Can be landscaped
Disadvantages	• Some parking restrictions required • Local experience has found these devices to be ineffective • Can restrict access for trucks, buses and may increase emergency vehicle response time • Winter Maintenance
Problems Targeted	• Excessive speeds • Crash history at intersection
Design	• A minimum of 30 feet of curbside parking must be prohibited at each corner of the intersection

Street Closure

Purpose
A street closure, for the purpose of this tool box, is defined as closing a street either at one end or the other, or at a mid block location to eliminate unwanted through traffic.

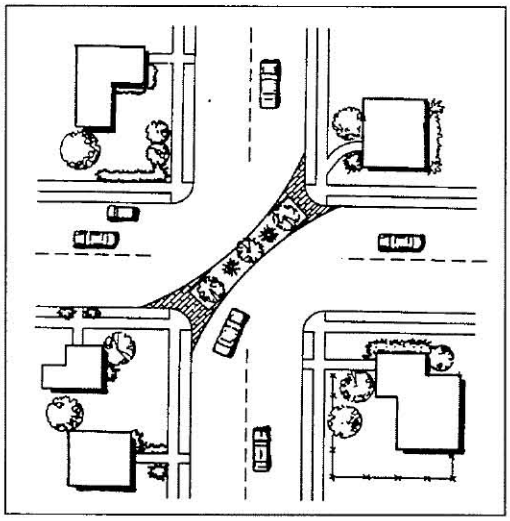


Source: Institute of Transportation Engineers *Traffic Calming: State of Practice*

Effects	
Volumes	Reduces through traffic volumes
Speed	May reduce speed
Traffic Noise and Air	Little to no effect
Traffic Safety	May improve safety of street
Advantages	• Eliminates through traffic • Possibly reduces speed of remaining vehicles • Can maintain pedestrian and bike access
Disadvantages	• Increases emergency vehicle response times • May cause inconvenience for some residents • May divert traffic to other streets • May require additional right-of-way acquisition • Winter maintenance
Problems Targeted	• Cut through traffic volumes
Design	• There needs to be a minimum of 120 foot right-of-way to accommodate the minimum turning radius of 40 feet.

Full / Diagonal Diverter

Purpose
A full diverter, sometimes called a diagonal diverter, is a raised barrier place diagonally across an intersection that physically divides the intersection and forces al traffic to make a sharp turn.

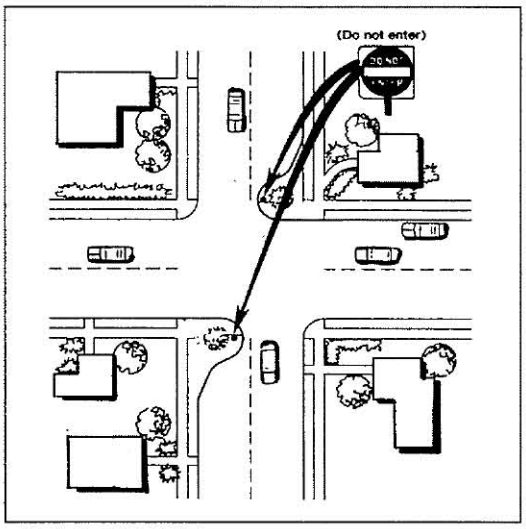


Source: Institute of Transportation Engineers *Traffic Calming: State of Practice*

Effects	
Volumes	May decrease traffic volumes
Speed	May reduce speed
Traffic Noise and Air	Little or no effect
Traffic Safety	Possible improvement
Advantages	• Reduces traffic volumes • Restricts vehicle access while maintaining bicycle and pedestrian access
Disadvantages	• Prohibits or limits access and movement • Restricts access for emergency vehicles • May impact drainage • May impact parking
Problems Targeted	• Cut through traffic • Speed – forces driver to slow to make the turn
Design	• The curvature of the diverter is dependent on the intersection roadway widths. • Special care needs to be taken with drainage design. • The intent is to divert traffic to arterial and collector streets. • Needs to be good visibility approaching the diverter for drivers to react and navigate the turn safely

Partial Diverter

Purpose
A partial-diverter is the narrowing of a two way street in order to eliminate one direction of travel. The concept can only be used at an intersection and attempts to reroute traffic attempting to use the protected street onto other roadways.



Source: Institute of Transportation Engineers *Traffic Calming: State of Practice*

Effects	
Volumes	Reduces traffic volumes in the eliminated direction
Speed	Possible speed reduction
Traffic Noise and Air	Little or no effect
Traffic Safety	Improved pedestrian crossing
Advantages	• Allows for movement of emergency vehicles • Reduces traffic volumes • Allows two-way traffic on the remainder of the street • Shorter pedestrian crossing at intersection
Disadvantages	• Parking may be impacted and reduced • Interrupts street network connectivity • Emergency vehicles do have to drive around partial closure with care
Problems Targeted	• Excessive volumes on residential street
Design	• Care has to be given in the design to not hinder unnecessarily emergency vehicles due to poor design

Enforcement

Increased Enforcement

Purpose
The effective use of public safety/police personnel to encourage reduced speeds in residential areas. Enforcement usually involves the use of radar to identify speeders and ticket violators.

Speed Watches rely on neighborhood participation to create awareness and, in turn, help control speeds in neighborhoods.

Effects	
Volumes	Little or no effect
Speed	Speed reduction as long as enforcement is maintained (the "halo" effect of infrequent enforcement is as little as 1 mile or 4 hours).
Traffic Noise and Air	Little or no effect.
Traffic Safety	May reduce overall crashes if speeds are actually reduced.
Advantages	• Easy to implement • Effective with repetitive enforcement on a non-routine basis. • Speed Watch programs have been perceived positively by neighborhood, even in areas where significant speed reductions were not measured. These types of programs may make neighborhoods find that they do not actually have a speeding problem.
Disadvantages	• Not self-enforcing; temporary measure, dependent on resources •Expensive and not always desirable to use police for traffic enforcement due to budget and manpower constraints
Problems Targeted	• Speeding • Moving vehicle violations • Running stop signs
Design	• The locations of implementation should be clearly identified to minimize the time spent enforcing and maximize the resultant speed reduction. • Actual speed surveys should be used to narrow problem to specific time (day of the week, time of day) and location.

Variable Speed Display Board

Purpose
A portable speed display board wired to a radar provides passing motorists their travel speed along with the speed limit. The display can help raise driver awareness, encourage compliance, and direct driver's attention to the posted speed limit. The purpose is to remind drivers that they are speeding to help encourage compliance.

Effects	
Volumes	Little or no effect
Speed	Lower observed speeds when device is present
Traffic Noise and Air	Little or no effect
Traffic Safety	There is the potential for sudden braking by some motorists
Advantages	• Portable Display board can be used in various locations enabling residents to borrow and place on their street • Low cost ($2,000 to $11,500 per unit) • Can be used to target timing and location of police enforcement (if data shows excessive speeds at a certain time)
Disadvantages	• Possible concerns with causing conflict between citizens involved (vigilantism) • May only provide short term effectiveness • Possible vandalism or could encourage aggressive drivers to see how fast they can go • Needs power to function • Requires personnel to move and place unit
Problem Targeted	• Any location where speeding is a problem or where drivers need to be educated about traffic issues in the area.
Design	• Variety of types of variable speed display boards available – some include traffic county abilities.

Appendix A: Definitions

Affected Neighborhood - Area for a project that is defined as those residences and businesses along local streets that are positively or negatively impacted by excessive through traffic volumes and speeding, or that may be positively or negatively impacted by proposed traffic management strategy.

Benefited Area- The properties expected to receive the majority of the positive impacts from the proposed traffic managment strategy and which are subject to assessment for the cost of installation or removal of a NTMP improvements. (Assessed Area) The typical Benefited Area extends from intersection to intersection, but may be adjusted on a project- by- project basis.

Capital Improvement Plan- or CIP, is a five years plan, which identifies capital projects and provides a planning schedule.

Chicane – Mainline deviations to deter the path of travel so that the street is not a straight line (by the installation of offset curb extensions). (Deviations, serpentines, reversing curves, twists.)

Choker – Physical street narrowing to expand sidewalks and landscaped areas; possibly adding medians, on street parking, etc. (Pinch points, lane narrowing, midblock narrowings, midblock yield points, constrictions.)

Traffic Safety Committee – (City Code Section 601.05) Administrative committee consisting of the City Manager, Director of Public Works, and Chief of Police. The Traffic Safety Committee has the following authority:

a) To investigate and study all matters relating to vehicular traffic conditions including but not limited to parking, speed, traffic control, and traffic safety hazards.
b) To implement and provide for the installation of whatever traffic control devices are necessary to improve and promote traffic safety and properly manage the use of City roads.
c) To study and recommend to other road authorities maintaining roadways within the City corrective measures that may be deemed necessary to address traffic issues that may exist as to those authorities' roads within the City.

Cut-through Traffic – Traffic that intrudes into a residential subdivision to avoid congestion or other problem from an arterial or other high level street.

Diagonal Road Closures – A barrier placed diagonally across a four-legged intersection, interrupting traffic flow across the intersection. This type of barrier may be used to create a maze-like effect in a neighborhood. (Diagonal diverter.)

Feasibility Report – A report analyzing the recommended type of construction, the estimated construction cost, estimated engineering cost and the estimated assessment.

Infrastructure – Fixed facilities, such as roadways or railroad tracks; permanent structures.

Local Street – A roadway under the jurisdiction of the City of Roseville.

Median Barriers – Raised island or barrier in the center of the street that serves to segregate traffic.

Municipal State Aid (MSA) Route – A designated City roadway that receives state funds as allocated from the State gas tax for maintenance and construction. Approximately 20 percent of the City roadways are designated as MSA routes. State of Minnesota rules and standards, in addition to local jurisdiction guidelines, apply to these roadways.

Non-Local Traffic – Traffic that does not originate from or is not destined to a location within a neighborhood or area.

Partial Street Closure – Physical blockage of one direction of traffic on a two-way street. The open lane of traffic is signed "One way", and traffic from the blocked lane is not allowed to go around the barrier through the open lane. (Half closure.)

Project Neighborhood – Property owners living on local streets that request traffic management improvements. Any request for project proposals require a written application with 51% of the project neighborhood signing the application.

Radar Speed Display Units – Driver feedback signs that use radar to provide motorists with an instant message, displayed on a reader board, telling them how fast they are driving.

Raised Crosswalk – A speed table designed as a pedestrian crossing, generally used at mid-block locations. (Raised crossings, sidewalk extensions.)

Regulatory Signs – A sign that gives notice to road users of traffic laws or regulations.

Roadway striping – Highlighting various areas of the road to increase the driver's awareness of certain conditions (e.g., edge of road striping to create a narrowing/slowing effect while defining space for cyclists).

Roundabout – Raised circular areas (similar to medians) placed at intersections. Drivers travel in a counterclockwise direction around the circle. Modern roundabouts are "yield upon entry", meaning that cars in the circle have the right of way and cars entering the circle must wait to do so until the path is clear. When a roundabout is placed in an intersection, vehicles may not travel in a straight line. (Rotaries.)

Speed– Speed is defined based on the following classifications:

a) **Advisory Speed** – A recommended speed for all vehicles operating on a section of highway and based on the highway design, operating characteristics, and conditions.
b) **Design Speed** – A selected speed used to determine the various geometric design features of a roadway.
c) **85th-Percentile Speed** – The speed at or below which 85 percent of the motorized vehicles travel.

d) **Posted Speed** – The speed limit determined by law and shown on Speed Limit signs.
e) **Statutory Speed** – A speed limit established by legislative action that typically is applicable for highways with specified design, functional, jurisdictional and/or location characteristic and is not necessarily shown on Speed Limit signs.

Speed Hump –Wave-shaped paved humps in the street. The height of the speed hump determines how fast it may be navigated without causing discomfort to the driver or damage to the vehicle. Discomfort increases as speed over the hump increases. Typically speed humps are placed in a series rather than singularly. (Road humps, undulations.)

Speed Limit – The maximum (or minimum) speed applicable to a section of highway or roadway as established by law.

Speed Table – Trapezoidal shaped speed humps in the street, similar to speed humps. (Trapezoidal humps, speed platforms.)

Street Closure – Street closed to motor vehicles using planters, bollards, or barriers, etc.

Targeted Police Enforcement – Specific monitoring of speeding and other violations by police due to observed, frequent law disobedience.

Traffic Management – A combination of mainly physical measures that reduce the negative effects of motor vehicle use, alter driver behavior and improve conditions for nonmotorized street users. Traffic managment involves changes in street alignment, installation of barriers, and other physical measures to reduce traffic speeds and cut-through volumes in the interest of street safety, livability and other public purposes. Traffic management strategies are intended to be self-enforcing. Traffic calming measures rely on the laws of physics rather than human psychology to slow down traffic.

Traffic Circle – Circular, raised island placed within the middle of intersections, requiring vehicles to divert around them, potentially forcing drivers to slow down as they traverse around the circle. (Intersection islands, similar to roundabouts.)

Appendix B- Sample Petition and Request Letter

Roadway Jurisdictions

County Roads
Ramsey County
651-266-7100

State Roads
Mn/DOT
651-234-7500

County Road
State Road

ROSEVILLE

Prepared by:
Engineering Department
December 28, 2010

Data Sources and Contacts:
* Ramsey County GIS Base Map (11/29/10)
* City of Roseville Engineering Department
For further information regarding the contents of this map contact:
City of Roseville, Engineering Department,
2660 Civic Center Drive, Roseville MN

0 500 1000 1500 2000 Feet

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mapdoc: RoadwayJurisdictions.mxd
map: RoadwayJurisdictions.pdf

Roseville Public Works, Environment and Transportation Commission

Agenda Item

Date: November 22, 2011 **Item No:** 7

Item Description: Organized Collection Continued Discussion

Background:
The PWETC received comment from the Waste Haulers Association, The Roseville Citizen's League, and The League of Women Voters at your October meeting regarding organized waste collection. As time was running short at that meeting, the Commission deferred discussion to the November meeting. The Chair requested all previous packet materials be included in this packet for the discussion and possible recommendation.

Recommended Action:
Discuss possible recommendation to the City Council.

Attachments:
A. Previous packet materials on Organized Collection
B.
C.

ROSEVILLE

Administration Department

Memo

To: Bill Malinen, City Manager

From: Tim Pratt, Recycling Coordinator

Date: August 16, 2007

Re: Organized Garbage Collection

In both the 1991 report "Options for Residential Waste Collection and Recycling in Roseville" and the 2002 report "Residential Solid Waste and Recycling Citizen Advisory Committee Report" committees of residents recommended the City adopt a system of organized collection for garbage – a system in which the City contracts for service on behalf of residents.

The primary reason they cited for switching was the ability to direct where garbage would be dumped. Minnesota has a hierarchy of waste disposal options (MN Statute 115A.02(b)) which states that if waste is not reused, recycled or composted, processing waste into fuel is preferred to landfill disposal. An organized collection contract would allow the City to stipulate that garbage collected in Roseville be taken to a processing facility such as the one in Newport.

Under the current system, haulers are able to choose where to take the garbage they collect and using data from the haulers we know that much of the garbage collected in Roseville is being landfilled. In a 2002 survey, 90% of Roseville residents said they would prefer their garbage go to a processing facility rather than being landfilled. The committees also cited these benefits for organized collection: decreased rates, increased services such as yard waste or organics collection, and decreased truck traffic.

Earlier this year you asked me to research three topics related to organized garbage collection:

1) How would the City go about switching to organized garbage collection?

2) What rates do residents pay for waste collection services in Ramsey County cities that have organized collection?

3) Can the City charge haulers a franchise fee in order to provide waste services in Roseville?

Process for Switching

The legislature has established a procedure that cities must use in order to switch to organized collection (MN Statute 115A.94). Basically 180 days before implementing an ordinance to organize collection, the Council must adopt a resolution of intent. The resolution of intent must be adopted after a public hearing. The hearing must be held at least two weeks

after public notice and mailed notice to operators of solid waste collection services in Roseville – currently there are seven licensed residential collection services. The City is then required to meet with all the currently licensed haulers to discuss implementation of organized collection. If no agreement is reached with the haulers the City may implement an organized collection system.

Organized collection may be provided by a single hauler as is done in North St. Paul and White Bear Lake or by a consortium of haulers as is done in Little Canada and Vadnais Heights.

Rates

Residents in cities with organized collection typically pay lower rates or have higher levels of service or both. Haulers realize savings through economies of scale by serving every household in a geographic area. Those savings result in lower rates or increased services.

96-Gallon Garbage Service Per Month

Little Canada	Roseville	Vadnais Heights	White Bear Lake
$20.23	$17.44 (average of all haulers)	$15.50	$15.00
Includes recycling, taxes and curbside collection of up to three bulky items annually	Does not include $1.90 monthly recycling charge or taxes which would be $6.59 on the average rate. If included the monthly charge would be $25.93 on average.	Includes recycling and taxes	Includes recycling and taxes

Vadnais Heights also offers discounted rates for the following levels of service: senior door side, senior curbside, every other week and townhome.

White Bear Lake also offers a senior rate of $7.50 a month for 30-gallon cart service.

Franchise Fee

There is precedent for imposing a fee on waste haulers as a condition of their operating license. For instance Ramsey County requires waste haulers to levy a 28% County Environmental Charge (CEC) on residential garbage bills. Fees such as the CEC charged to haulers are typically passed on to customers.

The Minnesota Supreme Court upheld the ability of cities to levy an environmental service charge which is implemented similarly to a franchise fee. The Western Lake Superior Sanitary District imposes an environmental charge on solid waste collection. WLSSD uses money

raised from the fee to pay for waste processing as well as household hazardous waste programs, composting, waste education programs, clean up days, and recycling activities.

In Zenith/Kremer Waste Systems v. Western Lake Superior Sanitary District, 572 N.W.2d 300 (Minn. 1997), the Supreme Court upheld the charge. The Court found the charge consistent with waste statutes, and not in violation of the state and/or federal constitution. Though Roseville is not in the same position as WLSSD, the concept of an environmental service charge is one that could be explored further.

Residential Solid Waste and Recycling Citizen Advisory Committee Report

Executive Summary

May 2002

Major Findings

- Since the 1991 report there have been many developments in the garbage and recycling industries. Those changes include:
  - The number of Roseville residents recycling and the amount they recycle have stayed about the same since 1992
  - Every Minnesotan is making more garbage (just over a ton a year) despite efforts at waste reduction, reuse and recycling
  - Garbage haulers are no longer required to take our trash to a facility that processes it into fuel for electricity plants
  - More of our garbage is being sent to out of state landfills
  - Consolidations in the garbage hauling industry resulting in fewer haulers serving Roseville residents

- Residents surveyed are pleased with their garbage service. Sixty-three percent rated it excellent and 33% rated it good. Seventy-nine percent said the rates seem fair for the service provided; 16% said the rates were too high for the service provided.

- Residents surveyed said they are concerned about where their garbage goes and would prefer garbage haulers take trash to a resource recovery facility instead of a landfill.

Garbage being processed at a Resource Recovery Facility.

- Residents surveyed said the most important part of a garbage collection system would be keeping it low cost.

- Among the improvements in the recycling program residents would like are: to accept more materials and to improve the bin system by either making them bigger, covered or wheeled, or to provide more bins.

- Roseville is not meeting goals set by the City Council to reduce waste and increase recycling.

- Roseville is not meeting the State's hierarchy that calls for waste reduction and reuse, recycling, composting, using resource recovery and avoiding using landfills to dispose of our trash.

- Only about a third of Roseville apartment, condo and townhome residents can recycle where they live.

- Roseville charges apartment buildings, condos and townhomes a recycling fee, but doesn't provide recycling service to them.

- Roseville's population is aging. Since 1990, Roseville had nearly four times the percentage growth in residents over age 75 as Ramsey County and Metro areas.

- Roseville has traditionally designed programs to meet the needs of elderly residents. For instance garbage and recycling haulers are required to offer walk up service. And the City of Roseville offers a senior discount on water bills; more than 25% of water accounts receive the senior discount.

- Roseville residents are paying more for garbage service than our neighbors in cities that contract for service.

- A 1999 study shows that 35% of our garbage by weight is paper and 26% is organic material such as food scraps much of which could be recycled or composted.

- A few Minnesota cities are using or testing organics collection and composting programs to help residents reduce their garbage.

- In the next five years millions of computers and television sets will become obsolete nationwide. They contain lead and other hazardous materials, however there is no organized program to collect old electronic items and keep them out of our trash.

- Seventy-eight percent of homeowners and 70% of multi-unit complex residents surveyed said they would be very likely or somewhat likely to take items to a City-organized clean up day.

- City staff says illegal dumping is not a problem on City land. However they say illegal storage of appliances, furniture, brush and other items on personal property is a significant problem.

Key Recommendations

- Offer a Citywide clean up day run by a company or companies in which residents will be charged for disposal and Roseville subsidizes 1/3 of the disposal cost.

- Expand and enhance communication to residents about the proper ways to dispose of electronics, appliances, brush, yard waste and other items that cannot or should not be put in your trash.

- Require garbage haulers to annually give their customers a complete list of their disposal services and rates.

- Expand Roseville's recycling program to include all apartment buildings, condos and townhomes.

- Explore ways to increase the number of Roseville homeowners who recycle and increase the amount they recycle.

- Meet the City's and State's environmental goals by designing a garbage system that uses environmentally preferred management of waste. Of the methods studied by the Committee, an organized collection system run by a consortium of private haulers appears to give the City the best, and perhaps only, means to meet the City's and State's environmental goals and balance citizen interests and concerns.

Report Summary

Everyone generates waste. By waste we mean things that we have, that we no longer wish to have. Perhaps it's an old piece of furniture, yesterday's newspaper or a candy bar wrapper. Sometimes we give those things away, sometimes we recycle them and sometimes we throw them in the garbage. Those are some, but not all, of the parts of the waste system.

We all use the waste system, although most of us take it for granted. Our garbage and recycling are often picked up when we're not home and taken someplace we don't see. But the choices we make, either explicitly or by default, impact lives and livelihoods, the natural environment and the business environment.

The City Council adopted a set of environmental goals in 1992. The goals were based on recommendations in the Vista 2000 report. The environmental goals adopted by the Council are:

- Identify and solve local pollution problems through clean up, mitigation and prevention.
- Continue the emphasis on waste reduction and the improvement of the community's recycling efforts.
- Continue the emphasis on strong programs which develop environmental awareness in all of our citizenry.

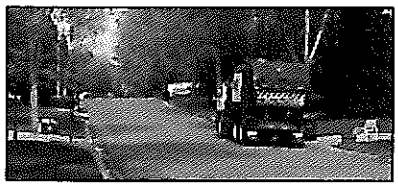
In June 2001 the Roseville City Council established a Residential Solid Waste and Recycling Citizens Advisory Committee to review Roseville's practices and policies on garbage and recycling established following a 1991 citizens report, study alternatives and make recommendations.

Committee members spent 10 months hearing presentations from officials with the State, Ramsey County and other Minnesota cities. We conducted a survey of homeowners and another of apartment, townhome and condo residents; conducted focus groups with residents, apartment owners and managers, and garbage haulers; conducted a public workshop; and took written and phone comments.

Members also toured the Resource Recovery Facility, the Household Hazardous Waste collection site, Waste Management's single stream recycling facility and other cities' clean up day programs.

Committee members found most residents are glad that their trash and recycling are picked up in a timely fashion and taken away. Residents surveyed are pleased with their garbage service. At the same time they are concerned about where their garbage goes for disposal.

At the time of the last report in 1991, Ramsey County required all garbage collected go to the Resource Recovery Facility in Newport, Minnesota. But a 1994 U.S. Supreme Court decision declared garbage hauling to be interstate commerce and the County's requirement was made moot.



Garbage haulers told the committee they now make decisions about where to take our garbage based primarily on cost.

It costs more to process waste at a resource recovery facility than to dispose of it in a landfill. As a result, a growing proportion of Minnesota garbage is being taken to landfills in other states; landfills often owned by the largest garbage haulers.

Meanwhile Roseville is not meeting goals set by the City Council to reduce waste and increase recycling. Each Minnesotan produces more than a ton of trash a year up 23% since 1993. And recycling participation rates and the amount collected have shown no pattern of consistent growth since 1992 (see graphs at right).

Using the knowledge gained from our activities, Committee members determined what we saw as the elements of an effective solid waste and recycling system and then ranked them in order of importance (see detailed list in Appendix A).

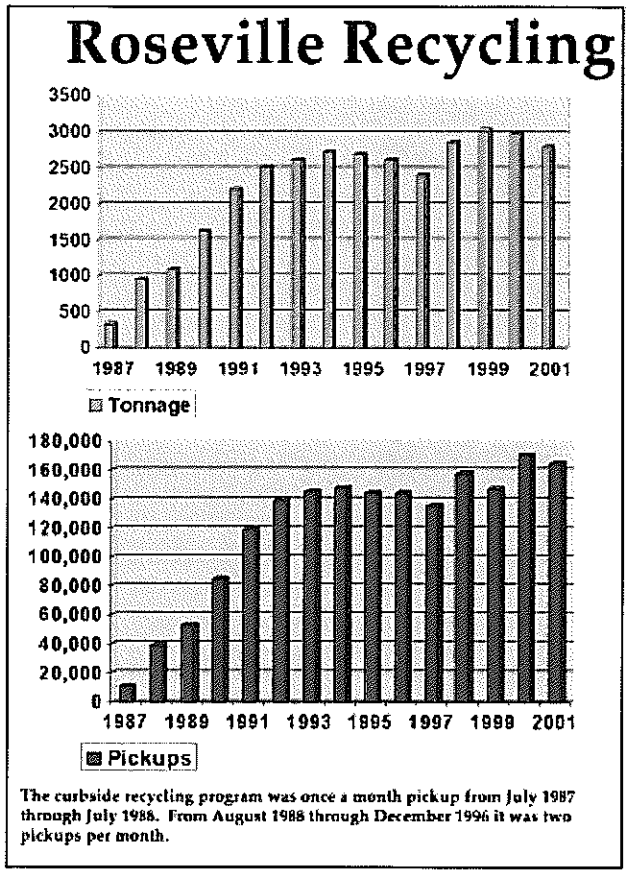
What are the elements of an effective solid waste and recycling system?

Rank	Element
1	Environmentally preferred management of waste.
2	Reasonable cost
2 (tie)	Good Customer Service
4	Education
5	Simple and Convenient
5 (tie)	Access to Service
7	Customer Choice
8	Expanded Opportunities for Disposal of Difficult Items
9	Reduce Traffic

Committee members used the City Council's environmental goals as well as their list of elements of an effective solid waste and recycling system and their knowledge of solid waste and recycling policies and programs as they deliberated various options that could be incorporated into Roseville's recycling and garbage systems.

Clean Up Day

Cities that run Clean up days organize them as an annual event residents can plan on to dispose of items that typically cannot be put in with their regular trash such as appliances, furniture and brush.



According to the Committee's 2002 Roseville resident survey there appears to be significant interest in holding a clean up day in Roseville. Seventy-eight percent of homeowners and 70% of multi-unit complex residents said they would be very likely or somewhat likely to take items to a clean up day.

Recommendations:

The committee recommends Roseville re-institute an annual clean up day run by a private company in which the City pays one-third of the disposal cost (approximately $12,000 a year). The committee also recommends the clean up day have a reuse area where residents can swap reusable items, and have electronics collection where the company guarantees the products will be dismantled and recycled in the United States.

Bulky Items

Recommendation:

The committee believes residents should be fully informed of the need for proper disposal of difficult items and of all the public and private programs to help them recycle and dispose of these items. To help inform residents, the committee recommends Roseville change its licensing for garbage haulers to require they annually inform residents of all the haulers waste services and the rates for those services.

Electronics

Recommendations:

Include in a Citywide clean up day and area for electronics drop off. Require the vendor guarantee the electronics material it receives remains in the U.S. for processing and/or disposal.

Encourage the Minnesota Office of Environmental Assistance to promote electronics recycling programs and support the MOEA's efforts at product stewardship.

Garbage

While Roseville contracts for recycling service, residents contract individually for garbage service.

Current System

Roseville homeowners contract with any of eight companies licensed by the City to remove their garbage. Homeowners may change haulers as they wish and haulers are free to recruit customers as they wish. This system is called Open Collection.

Although the system is not completely free of regulation by Roseville. Following the 1991 report, the City was divided into five zones each with its own day of the week for pickup of garbage and recycling. The City also has a set of service standards required for licensing that include offering separate pickup of yard waste and brush, and offering walk up service for which haulers can charge extra. There is, however, no monitoring for compliance.

Roseville residents surveyed are generally pleased with their garbage service. Sixty-three percent rated it excellent and 33% rated it good. Seventy-nine percent said the rates seem fair for the service provided; 16% said the rates were too high for the service provided. Focus group members said they were pleased that their garbage hauler picked up their trash and took it away so that they didn't have to think about it anymore.

But that didn't stop focus group members and survey participants from wondering what happened to their trash. Thirty-two percent of residents surveyed said they were very concerned where their garbage goes, 48% were somewhat concerned and 20% were not very concerned. Ninety percent said they would prefer their garbage goes to a resource recovery facility where it is turned into fuel for an electricity generating plant instead of going to a landfill.

State Hierarchy

The State agrees that it would rather see garbage go to a resource recovery facility. In 1980 the Minnesota Legislature established an order of preference for managing waste in order to protect the state's environment and public health. This preferential order is:

- Reduction and Reuse
- Recycling
- Yard and Food Waste Composting
- Resource Recovery
- Landfilling with methane collection
- Landfilling with no methane collection

Roseville's environmental goals to decrease waste and increase recycling fit well into the State's hierarchy. However this waste management order of preference is not being met.

Organized Collection
Some of our neighboring cities use a system of organized collection to meet environmental goals and the needs of residents.

Cities contract for service on behalf of residents with either one hauler as is done in North St. Paul and or a group of haulers as is done in Little Canada and Vadnais Heights.

Cities do this for a number of reasons including lowering costs to residents, lessening truck traffic on city streets, designating a disposal facility for the garbage in order to meet environmental goals, setting enforceable customer service standards and expanding the number of services available to residents.

Some committee members were surprised to learn that Roseville's open hauling system in which garbage companies compete against each other for customers does not offer the lowest rates.

Residents in cities with organized collection pay $3.25 to $5.75 a month less than Roseville residents for garbage and recycling service.

Recommendation:
Committee members unanimously recommend a garbage system that meets the City's environmental goals and the members' top priority of environmentally preferred management of waste. That system should also follow the State hierarchy. Of the methods studied by the Committee, an organized collection system run by private haulers appears to give the City the best, and perhaps only, means to meet the City's and State's environmental goals and balance citizen interests and concerns.

The majority of Committee members believe the best way to achieve environmentally preferred management of waste is through a contract with a consortium consisting of all the current haulers in Roseville (as was done in Vadnais Heights and Little Canada). These consortiums typically divide the cities into zones with one hauler assigned to each zone. However, Roseville may require more than one hauler per zone in order to preserve customer choice. Such service may cost residents more than a single hauler per zone system.

That contract is the only way where the City can specify that waste be managed using what is currently the environmentally preferred waste method: a resource recovery facility.

Additionally, the Committee strongly believes the City should monitor developments by the State, County and private sector to determine if a future alternative might better meet the City's and State's environmental goals and balance citizen interests and concerns.

Furthermore, the Committee believes a waste management system consisting of a consortium of current private waste haulers in collaboration with the City could also provide the following benefits to Roseville residents:

- Negotiated lower rates to customers (the top priority of the majority of residents surveyed – 53%)

- Preserve customer choice (the second highest priority of residents surveyed – 40%)

- Limited truck traffic that reduces wear and tear on streets, thus reducing or delaying property tax assessments for road maintenance or replacement

- Limited truck traffic that reduces air pollution, noise pollution and improves

or enhances neighborhood safety and appearance

❍ Strong performance and incentive-based contract provisions that would guarantee a high level of customer service

❍ Provide residents with clear, annual delineation of haulers' services and rates

❍ Expand and enhance residents' knowledge about the full range of public and private services and costs for disposal of difficult items

The Committee recognizes that there are Roseville residents who would not want the City Council to restrict their ability to choose a garbage hauler, and that there are concerns about how government involvement with the consortium of haulers might impact cost, service and small haulers' viability. The Committee understands those concerns and believes a City contract with a consortium of all the current haulers in Roseville will preserve market share for small haulers, and allow the City to set strong performance and incentive-based contract provisions that would guarantee a high level of customer service while meeting residents expressed desires for lower rates and environmentally preferred management of their waste.

Household Hazardous Waste

Ramsey County offers a free Household Hazardous Waste Collection program. There is a year round drop off site in St. Paul; Roseville hosts a seasonal site on Kent Street just east of the intersection of Larpenteur and Dale.

Ramsey County's seasonal HHW site in Roseville.

Recommendation:
The committee believes the City and Ramsey County should do even more to educate residents about Household Hazardous Waste and proper disposal of HHW.

Leaf Pickup Program

Minnesota banned the burning of leaves and other yard waste effective January 1, 1971. In response to the ban, Roseville began curbside collection of leaves. Roseville originally offered the leaf pickup program at no additional cost to residents. The City began charging a small fee in 1997 and participation dropped. However use has been growing every year since then.

Meanwhile the leaf pickup program has allowed Roseville to avoid paying to clean out catch basins and reduce the amount spent on stormwater pond cleanup.

Recommendation:
The committee believes this is a valuable program that more residents will use as Roseville's population ages and recommend it be continued. The committee believes staff should expand and enhance education to residents about the benefits of proper disposal of leaves.

Recycling

Roseville's participation rate of 65% is one of the highest in the state. But to make the program better, members believe the system

should be more convenient.

Multi-family Complexes

Roseville is not providing recycling service to most apartment, condo and townhome residents. Owners can contract with a private company if they wish, but only about a third do. Roseville has traditionally treated apartments, condos and townhomes differently than houses. But the State and Ramsey County include these multi-family complexes in their recycling requirements for cities. Additionally Roseville has been charging multi-family complex owners the City's recycling fee while not providing any service.

Recommendation:
Committee members believe the City should meet its goal to improve recycling efforts in Roseville by including all apartment, condo and townhome complexes in the City's program. To ease the transition the committee suggests this expansion be phased in adding condos and townhomes first with apartments to follow. And that complexes not be charged until they receive service.

Residential Curbside Recycling

Committee members found two main ways to do that based on resident needs: collect recycling more often or offer better bins. Residents surveyed asked that bins be larger, wheeled, covered or just more of the current bins.

An intriguing program of putting all recycling into a single, wheeled cart is just starting here in Minnesota. While the program shows great potential, there are some significant drawbacks that must be overcome. Single stream recycling processing has a higher rate of material that is damaged and can't be recycled (called residual). This can result in less material that is actually recycled into new paper, cans or jars even though more material may be collected.

Recommendation
The committee believes Roseville should do all it can to meet its environmental goal to improve the City's recycling efforts. However the committee could not reach a consensus whether the City should continue with the current system while expanding and enhancing public education campaigns, switch to every week collection or should proceed with single stream recycling collection. A list of the pros and cons of each system is included in the full report and Appendix B. Members wish to leave it to the Council or a future committee to decide.

Yard Waste

Minnesota banned putting yard waste in with your garbage effective January 1, 1990.

In response to the ban Roseville required all licensed garbage haulers to offer separate yard waste and/or brush collection.

Most Roseville residents surveyed mulch their grass and don't have to dispose of it. Twenty percent compost yard waste in their back yard, 20% arrange a special pickup with their garbage hauler and 14% take it to a free County compost site.

Recommendation:
This system is working well and the committee recommends the City continue requiring garbage haulers offer yard waste pick up, while enhancing and expanding education campaigns to residents about the benefits of low maintenance lawn care, mulching and composting.

Brush

There are no public drop off sites for brush in Roseville. Thus, most residents surveyed arrange a special pick up with their garbage hauler. Residents split almost 50/50 on whether they would use a public brush drop off site.

Recommendation:
The committee recommends Roseville offer brush drop off as part of an annual clean up day. In addition the City should expand and enhance education campaigns to residents about what to do with brush during other times of the year as well as require haulers to annually inform residents about services and rates as was mentioned earlier.

Organics

Some cities are starting or testing programs for residents to separate organic material from their trash so that it can be composted.

An example is the City of Hutchinson that operates a curbside organics collection program. Each participating household is given a 90 gallon wheeled organics cart similar to a trash cart and special kitchen waste compostable bags. Residents can put in food waste; compostable cardboard such as pizza and freezer boxes; paper products such as paper plates, napkins and paper towels along with yard waste. A Food Waste Recovery truck picks up the organics and hauls them to the City run compost facility. The finished compost is a quality product that is then sold to offset part of the cost of the program.

Hutchinson runs an actively used organics collection program. Wayzata and Burnsville are currently conducting pilot programs. St. Paul just finished an organics pilot program and is looking for a way to offer that service to residents.

Recommendation:
The committee recommends Roseville study organics collection as a way to meet the City's goals of reduced waste and increased environmental awareness of residents.

Garbage

Roseville residents select a garbage hauler and contract with that company. Roseville regulates garbage collection by dividing the City into five zones where each zone has its own day of the week for garbage collection. There are 8 companies licensed to collect garbage in Roseville.

Q16) On which day is your garbage picked up? (circle one)

Freq	(%)		
115	(28)	1.	Monday
66	(16)	2.	Tuesday
61	(15)	3.	Wednesday
107	(26)	4.	Thursday
59	(14)	5.	Friday
41		BLANK	

Q17) Which garbage service do you currently use? If you don't know, please ask someone else in your household. (circle one)

51	(12)	1.	BFI
0	(-)	2.	Gene's Disposal Service
0	(-)	3.	Highland Sanitation
5	(1)	4.	Horrigan's Hauling
1	(0)	5.	Mudek Disposal
8	(2)	6.	Superior
199	(48)	7.	Walter's
149	(36)	8.	Waste Management
4	(1)	9.	Other
32		BLANK	

Q18) How would you rate their service? (circle one)

269	(63)	1.	Excellent
139	(33)	2.	Good
15	(4)	3.	Fair
4	(1)	4.	Poor
22		BLANK	

Q19) How would you rate their cost? (circle one)

Freq	(%)		
321	(79)	1.	Rates seem fair for service provided
19	(5)	2.	Rates are reasonable, but service level should be improved
65	(16)	3.	Rates seem too high for service provided
44		BLANK	

Q20) Why did you pick that garbage hauler? (circle all that apply)

Freq	(%)*		
118	(29)	a.	Same hauler as my neighbors
132	(32)	b.	Offered a low introductory price
14	(3)	c.	Agreed to take my garbage to a processing facility instead of a landfill
84	(20)	d.	Offered the best service
75	(18)	e.	Offered the lowest long-term price
125	(31)	f.	Other (please describe)_____
40		BLANK	

Q21) Are you concerned about the effect garbage trucks have on any of the following? (circle all that apply)

91	(22)	a.	Air pollution
84	(20)	b.	Noise pollution
47	(11)	c.	How my neighborhood looks
65	(16)	d.	Street maintenance
73	(17)	e.	Safety
266	(63)	f.	No, I'm not concerned about any of these
29		BLANK	

Q22) Would you want Roseville to limit the number of garbage haulers if by doing so the City could do any of the following? (circle all that apply)

215	(53)	a.	Negotiate lower garbage rates
122	(30)	b.	Reduce wear and tear on City streets
97	(24)	c.	Require haulers to provide a high level of customer service
100	(24)	d.	Reduce pollution
56	(14)	e.	Improve the way my neighborhood looks
82	(20)	f.	Improve safety
165	(40)	g.	Would not want Roseville to limit the number of haulers
41		BLANK	

*Respondents could circle more than one answer, so the percentages will not total to 100%.

Q23) How concerned are you about how your garbage company disposes of your garbage and the impact it may have on the environment? (circle one)

Freq	(%)		
135	(32)	1.	Very concerned
204	(48)	2.	Somewhat concerned
85	(20)	3.	Not very concerned
25		BLANK	

Q24) Has your garbage hauler told you where the company takes your garbage?

157	(40)	1.	Yes
239	(60)	2.	No
53		BLANK	

Q25) Would you prefer your garbage be taken to a recovery facility where much of your garbage is turned into fuel to be burned at an electricity generating plant, taken to a landfill, or disposed of in another manner? (circle one)

363	(90)	1.	Recovery facility
19	(5)	2.	Landfill
19	(5)	3.	Another manner (please describe)_____
48		BLANK	

Q26) Would you be willing to pay more if your hauler guaranteed to dispose of your garbage at a recovery facility instead of sending it to a landfill?

212	(51)	1.	Yes ----------> Q26a)	How much more per month would you be willing to pay? (circle one)
201	(49)	2.	No	
36		BLANK		

Freq	(%)		
56	(29)	1.	$1
84	(43)	2.	$2
49	(25)	3.	$5
7	(4)	4.	$10
253		BLANK	

Q27) Roseville may change the current system of garbage collection. In making the decision about any changes it would be helpful to know which of the following issues is most important to you. Please rank them 1 - 5, with 1 being the most important and 5 being the least important. (Write one number on each blank).

(SEE APPENDIX A, PAGES A-2 TO A-4)

_____ Lower cost
_____ Guarantee a high level of customer service
_____ Ability to chose my own hauler
_____ Guarantee my garbage is taken to a recovery facility
_____ Reduce garbage truck traffic on my street

Household Hazardous Waste

State and Federal government regulations restrict what can be put in your garbage. The regulations are designed to ensure hazardous materials are disposed of in a physically and environmentally safe manner. Ramsey County operates a year-round site in St. Paul and a seasonal site in Roseville where residents may dispose of hazardous material for free such as lawn chemicals, bug spray and leftover paint.

Q28) Have you used Ramsey County's seasonal site on Kent Street in Roseville for dropping off household hazardous waste?

Freq	(%)					
183	(42)	1.	Yes ----------> Q28a)	How would you rate their service? (circle one)		
252	(58)	2.	No			
14		BLANK		Freq	(%)	
				82	(45)	1. Excellent
				89	(49)	2. Good
				8	(4)	3. Fair
				2	(1)	4. Poor
				268		BLANK

Q29) Have you used the year-round site at Bay West in St. Paul?

Freq	(%)					
57	(13)	1.	Yes ----------> Q29a)	How would you rate their service? (circle one)		
381	(87)	2.	No			
11		BLANK		Freq	(%)	
				31	(54)	1. Excellent
				24	(42)	2. Good
				1	(2)	3. Fair
				1	(2)	4. Poor
				392		BLANK

Coon Rapids / Passionate about their trash

BY DAVE ORRICK
Pioneer Press
TwinCities.com-Pioneer Press

Article Last Updated:10/01/2007 11:41:02 PM CDT

Every day is trash day in Coon Rapids.

With four waste haulers grabbing garbage on different days of the week and different schedules for recyclables and yard waste, every residential street, every morning, features lines of trash bins amid the rumble, beeping and hydraulic drone of garbage trucks.

But when several staff members in the Anoka County suburb set out to "explore the possibility" - they swear that's all they're doing - of going to one citywide waste hauler, they ran headlong into one universal truth:

People are passionate about who's going to pick up what they throw out.

In advance of a hearing today, staff and elected officials have been pounded withthousands of postcards telling them to back off their alleged monopolistic intentions. The campaign is spearheaded by waste haulers, who kicked off a leafleting effort as soon as word of the city's analysis wafted out of city hall.

It's having an effect.

"My poor wife's been home this week, and the phone hasn't stopped ringing," Mayor Tim Howe said. Then he conceded: "I just don't see us going to an organized one-hauler system, and I'm sensing that from the council."

Over the years, a number of other suburbs have similarly tried - and backed off. Arden Hills, Lauderdale and Roseville are among them. In 2002, Ramsey and Washington counties considered the idea as a way to increase garbage sent to the county-contracted Resource Recovery Facility in Newport, until some 14,000 postcards arrived telling them not to even think about it.

Here's the crux of the issue: A number of studies by municipalities suggests prices actually go down with one hauler. Plus, the argument goes, fewer garbage trucks will cruise the streets on fewer days, easing stress on roads and generally making life better. On the other side are those who say it's just wrong to take away a customer's right to choose, not to mention all the smaller independent waste haulers who could be put out of business.

The second argument seems to win out, according to the waste haulers.

"It's been our experience when this issue comes up that it's almost universal that the citizens want choice, and in every community we've seen a huge outpouring by the citizens," Doug Carnival said.

He's a lawyer for the Minnesota Chapter of the National Solid Wastes Management Association and the guy behind the Coon Rapids onslaught, which tallied more than 2,500 letters by late Wednesday, nearly all speaking out against the idea of eliminating residents' ability to shop around for their garbage man.

"Competition is what makes this country great," one resident wrote. "I WANT CUSTOMER CHOICE!!" scrawled another.

Tim Pratt's seen it before. He's the recycling coordinator for Roseville, which has thrice explored the possibility of reducing the number of waste haulers - now seven - to one. Each time - 1988, 1991, 2002 - a citizen committee recommended changing things, and each time the City Council backed off amid louder citizen opposition.

"There's just this sense in some people that 'You're trying to take away one of my God-given rights: to choose my garbage hauler,' " he said.

So why do communities keep trying?

"Residents in cities with organized collection typically pay lower rates or have higher levels of service or both," according to a city report Pratt recently completed.

According to his survey, government-managed systems in neighboring Little Canada, Vadnais Heights and White Bear Lake pay less, on average, than Roseville residents. A Coon Rapids survey concluded the same general trend, comparing its haulers' average rates with neighboring one-hauler communities such as Blaine, Circle Pines, Columbia Heights and Centerville.

Waste haulers dispute such comparisons.

"They're not necessarily comparing apples to apples," said George Walter, who has run Blaine-based Walters Refuse & Recycling with his brother Greg for nearly two decades.

Walter and others note that in areas where residents can choose their haulers, price schemes include different services and charges. For example, is yard waste included? Is there a rental fee for the bin?

In fact, in an open system, any homeowner can strike whatever deal they can bargain with a hauler. But don't think you can really find out if you're paying too much. When the Pioneer Press requested price information from several haulers in open systems, they responded it was a protected business secret.

"And if it was all about price, why do people go to Manny's or Outback to eat dinner instead of McDonald's or White Castle?" Walter said.

There's something else odd about the politics of garbage: The waste haulers and residents are silent in cities that already have gone to a one-hauler system.

"You go next door to Little Canada and Vadnais Heights and you don't have people storming City Hall demanding their God-given rights to choose a garbage hauler," Pratt observed.

In 1993, when Hastings, where Waste Management has consistently won the single-hauler contract, considered opening up its system, leaders sensed no momentum for any change, City Administrator David Osberg said.

"It reduces traffic. It saves money. Overall, it's been a very good system, and the public seems to agree," he said.

In the end, Coon Rapids may explore some compromise with haulers to eliminate the everyday parade of trucks in every corner of town - a prospect several haulers said they're open to discussing.

In the meantime, there's always the grassroots method. In May, one St. Paul resident, fed up with his alley being clogged by any one of the 23 residential haulers who operate in the city, rallied his neighbors to pick one hauler. He persuaded 22 of 24 families.

Dave Orrick can be reached at dorrick@pioneerpress.com or 651-228-2171.

How is your trash trucked?

Not all residential garbage is hauled equally. Here are the most common systems and cities that use them:

Open: It's between you and any hauler who offers service in your area. (Woodbury, St. Paul)

Organized: Haulers bid for all trash. Elected officials pick winner. (Blaine, Hastings)

Zoned/hybrids: Haulers split up turf and scheduling with various levels of regulation. (Little Canada, Brooklyn Park)

Municipal: City workers in city trucks. (Minneapolis)

Source: Pioneer Press research

Jay T. Squires
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jts@ratwiklaw.com

RRM
Ratwik, Roszak & Maloney, P.A.

January 8, 2009

Mr. Bill Malinen
City Manager
2660 Civic Center Drive
Roseville, MN 55113-1899

SUBJECT TO ATTORNEY-CLIENT PRIVILEGE

RE: *Organized Waste Collection Process*
Our File No. 4002(1)-0001

Dear Mr. Malinen:

You requested a brief summary of the organized collection process. Following is a short description of the process under law.

Minnesota law contains requirements relating to the adoption of any contract or ordinance concerning the collection of solid waste. These requirements would apply in any situation in which the City regulates the collection of waste in the City. The Minnesota Organized Collection Statute outlines the procedure for the City to adopt an ordinance or contract for the organized collection of waste.[1] These requirements are summarized as follows:

Notice of Hearing. The first step is for the City to give public notice that the City Council will be holding a public hearing to consider a resolution of its intent to organize collection of solid waste. The City must mail notice of the hearing to persons the City knows are collecting solid waste in the City. The public and mailed notices must be done at least two weeks before the hearing is conducted.

[1] Minnesota Statute § 115A.94.

Public Hearing. The City Council then holds the public hearing and adopts a resolution of its intent to organize collection of solid waste. An ordinance, contract, or license for organizing collection cannot be adopted for at least 180 days from the passage of the resolution. The resolution must also invite interested persons, including those licensed to collect solid waste, to participate in the planning of the organized collection.

90-Day Planning Period. During the 90-day period after the resolution is adopted, the City must develop plans or proposals for the organized collection. During this 90-day planning period, the City must invite and use the assistance of persons licensed to operate solid waste collection in the City.

90-Day Negotiation Period. For an additional 90-day period following the 90-day planning period, the City must discuss possible organized collection arrangements with all licensed collectors operating in the City who have expressed interest in participating in the process. If the City is unable to reach an agreement with a majority of the licensed participants, or at the end of the 90 days, the City can implement an ordinance, contract, or license for organized collection of solid waste.

Findings. In enacting an organized collection method, the City must make specific findings. These findings must describe in detail the procedures the City used to plan organized collection and attempts to implement organized collection through an arrangement with interested collectors. Findings that evaluate the collection method in terms of achieving stated goals, minimizing displacement of collectors, ensuring participation of all interested parties in the decision-making process, and maximizing efficiency in solid waste collection are also required.

Abbreviated Procedure. An organized collection system can be put into place in less than 180 days if the City and all the licensed solid waste collectors agree on a plan.

Please contact me if you have any additional questions or comments regarding this matter.

Regards,

Jay T. Squires

JTS/cg

RRM: #126875

Answers to Potential Resident Concerns About Organized Garbage Collection
(6/19/2009)

1) It's not broken, so why are you trying to fix it?
It's not completely broken, but it's not operating as efficiently and effectively as it could. As many as six haulers could drive a truck up and down a street on collection day. That means additional wear and tear on streets, increased diesel emissions, increased traffic, increased noise and a possible decrease in public safety.

Residents in cities with organized collection such as Little Canada, Vadnais Heights, North St. Paul, and White Bear Lake pay lower costs and receive more levels of service than Roseville residents.

Currently two-thirds of the garbage collected in Roseville is sent to landfills. The state adopted a hierarchy of waste management methods with source reduction being the best method and landfilling as the worst. Only with organized collection could Roseville direct that all garbage collected in the city be sent to a waste to energy or processing facility. Waste to energy is considered by the state to be a renewable source of energy and is preferred to landfilling.

In a 2002 survey 70% of Roseville residents surveyed were either very or somewhat concerned about where their garbage goes. And 90% said they would prefer their garbage goes to a recovery facility instead of a landfill. A majority of residents surveyed (51%) even said they would be willing to pay more to have their garbage taken to a recovery facility.

2) Why would government expand to start running garbage service?
Private haulers would continue to provide garbage service. The City is basically facilitating group purchasing. Collections will become more efficient. There will be other benefits that come from the economies of scale of haulers providing service to contiguous neighborhoods, and those benefits will be passed along to Roseville residents.

3) Government will make it less efficient than if left to the private sector.
Currently there are six licensed residential garbage haulers operating in Roseville. So up to six garbage trucks could make stops on a street on collection day. This resulting inefficiency is one reason why rates are higher in Roseville as compared to our neighboring cities that have organized collection.

Haulers realize efficiencies by having all the stops in a compact, contiguous region. Those efficiencies result in a cost savings that is passed on to residents.

Officials in neighboring cities with organized collection report their system works well. And that they get few if any complaints.

4) You're taking away my right to choose the hauler that can best meet my needs.
Garbage service becomes a utility much like electricity and water service. You don't choose your provider for those services.

The City would negotiate for a menu of services and you would be able to select from that menu just as you do now.

Most residents do not pick a garbage hauler based on the services they provide. In a 2002 survey 32% of residents said they picked their hauler because it offered a low introductory rate, and 29% picked their hauler because it was the same as their neighbors.

When residents were asked to rank the importance of various garbage collection issues, 46% ranked lower cost as the most important followed by 25% who ranked ability to choose your own hauler as most important. And 25% said choosing your own hauler was the least important to them of the five issues (lower cost, high level of customer service, ability to choose hauler, guarantee garbage is taken to a recovery facility, reduce truck traffic).

5) I can get lower rates/better service by negotiating on my own.
Typically that's not true. Haulers will offer teaser rates that get customers to switch. But those rates go up over time. Plus haulers are free to add or increase fuel surcharges and other fees at any time.

A survey of rates in our neighboring cities with organized collection show that they all have lower rates than what haulers offer to residents of Roseville. In a 2002 survey 53% of residents said they would want Roseville to limit the number of haulers if the City could negotiate lower rates.

Haulers have also unilaterally begun adding on to their bills items such as Fuel Surcharges and Cart Retrieval Fees. If the City were to negotiate rates, then fees could only be added by mutual agreement.

6) Is any plan set in stone, or how could changes be made?
Haulers sign a contract with the City which is typically for three years. The City can make changes to the contract when rebidding or negotiating an extension.

7) Market forces are the most effective way to solve problems.
Market forces currently in place have not given Roseville residents the lowest rates or the widest array of possible services.

A public/private partnership leverages the unique strengths of the haulers and the City to provide for efficient and effective service.

8) My hauler has to directly compete for my business which makes them more responsive to my needs.
Most residents pay little attention to their garbage service, so they make few demands of their hauler.

As a result we see things such as a "Cart Retrieval Fee" that appeared in small print on one company's bills. The language also said that merely by paying the bill, the customer was giving consent to pay the fee which could be imposed in the future. A number of customers that paid the

bill and later were assessed the fee have called City staff to complain. The residents said the company told them there would be no negotiation or compromise on the fee.

Another practice is creeping price increases. Some companies make minor upward adjustments in prices over time. Here is one example out of many reported to City staff: a resident who had been involved in a study of garbage practices many years ago called City staff to ask for the list of licensed garbage haulers. She said that the hauler she has had for more than 30 years has raised rates and she wanted a cheaper alternative. Staff advised her to call her current hauler and ask for a lower rate. She did and reported back to staff that her hauler cut her bill nearly in half. She also said that she felt her hauler had taken advantage of her inattention to raise her rates.

Residents that called to complain felt the added fees in small type and gradual rate increases demonstrated the haulers were unresponsive to their needs.

9) Won't it cost the City more because it will have to administer the contract?
Administrative costs are incorporated into the contract.

10) I chose my hauler from the group of licensed haulers, now you're going to tell me I may have to use a hauler that I declined to pick.
Each hauler in a consortium would be assigned a segment of the city where they would provide service. Additionally the City would establish customer service standards in the contract. The City oversees the contract to ensure those customer service standards are met.

11) Organized collection will squeeze out the little haulers.
The recommendation from the resident task force is to set up a consortium of haulers. All the haulers currently doing business in the city would be invited to join the consortium.

Currently the little haulers are being squeezed out. In 1992 there were 21 licensed haulers serving Roseville. In 2009 there are six. The largest haulers have been buying up the smaller haulers and increasing their market share.

12) Won't this lead to job cuts at companies that lose market share?
Under a consortium agreement, haulers could ensure their market share. They could, however, voluntarily sell their business to another hauler.

13) What if I end up receiving poor customer service?
You could contact your hauler just as you do now, except now you have more clout. Because the City administers the contract, the City has regulatory powers and can intervene to ensure the service from the haulers meets Roseville standards.

14) Won't this mean we should restrict delivery trucks and school buses?
Different types of heavy vehicles have different equivalent single axle loads or ESALs. ESALs compare the wear caused by a heavy vehicle to the wear caused by a passenger car. MnDOT uses a conservative ESAL factor that states one garbage truck trip is equivalent to 1000 car trips. School buses are about half as much and delivery trucks are only about a quarter as much as garbage trucks. Residential streets have average daily traffic counts of 200 to 500 vehicles.

15) Will I lose the ability to share a garbage container with my neighbor?
No. The contract can provide for opt out provisions such as garbage sharing or taking your residential garbage to your business.

What they couldn't do is refuse garbage service and then sneak their bags into a dumpster.

16) Low polluting CNG trucks aren't available and current model trucks have to meet lower emissions standards so how would this clean up the air?
Pre-2007 trucks do not have to meet lower emissions standards and there are many older trucks currently operating in Roseville. By contracting the City can require that all vehicles meet the lower emissions standards.

A recent study by the State shows that there are fewer vehicle miles traveled by garbage trucks in cities with organized collection. Fewer miles traveled will result in fewer emissions.

17) Landfills must meet state and federal environmental standards, so disposing of stuff there is not bad.
All new landfills must be lined so that leachate does not get into the ground water – as has happened with the 3M landfill. Metro area landfills also capture landfill gas from closed sections and burn it before it can enter the atmosphere.

Even so, the U.S. EPA calculates that landfills are responsible for nearly two percent of all greenhouse gas emissions in the country.

Roughly a third of all garbage collected in Ramsey County is shipped to Wisconsin landfills that do not capture landfill gas. And the metro area landfills do not capture landfill gas from the active dumping areas. As a result the EPA calculates that landfills with capture systems only capture 75% of all the methane produced.

Waste is not processed before being dumped in a landfill. At processing facilities steel and aluminum are captured for recycling – approximately 5% of the material processed at the Elk River plant is separated as recyclable metal.

18) There's not a shortage of space for landfill disposal in this country.
There are no new landfills being sited in Minnesota. The three metro area landfills in Inver Grove Heights, Burnsville and Elk River are all projected to run out of space within 20 years.

19) Landfill gas is collected and burned to generate electricity just as is done with RDF.
The U.S. EPA estimates that landfills with gas capture systems only capture 75% of all the landfill gas produced. And not all gas that is captured is burned to produce electricity. Some is simply flared so that the methane is not released into the atmosphere. Methane (CH4) is a greenhouse gas many times more potent than carbon dioxide (CO2). If waste is processed into refused derived fuel (RDF) no methane is produced in the incineration process.

According to the U.S. EPA combusting one ton of mixed municipal solid waste (MSW) instead of landfilling avoids the production of .61 tons of carbon dioxide equivalents. CO2 is the main gas linked to global warming.

20) How does a garbage truck cause damage?
MnDOT estimates than one garbage truck trip down a street is equivalent to 1,000 car trips down the same street. That's substantially more wear.

Also when trucks are stopped for collection they put pressure on the pavement. Newer trucks have technology that allows for compaction while moving which has lowered the amount of stoppage time.

A study from the University of Michigan Transportation Institute shows that starting forward and stopping by garbage trucks increases the amount of wear depending on the speed of the truck and the weight of the load being carried. That factor can be a 50% to 100% increase in wear.

21) Side load tandem axle trucks don't cause as much damage as rear loading single axle trucks.
Side load trucks have an extra axle that means that less weight is transferred from the truck to the point of impact with the street. Thus there is less wear caused by a side loading truck as compared to a rear loading truck. But there is still a significant amount of wear caused.

22) Trucks have to meet new efficiency standards so the diesel exhaust is not as bad a problem as people make it out to be.
Trucks that are 2007 model and newer have to meet lower federal emissions standards. California has even tighter emissions standards and fleets there are switching to compressed natural gas and other alternative fuels.

However, significant amounts of the fleets currently operating in Roseville do not have to meet the higher emissions standards. Roseville could negotiate with the haulers to ensure than only newer vehicles are used to service the City.

23) Waste incineration emits harmful substances into the air & the ash has to be landfilled.
Plants that burn waste to generate electricity are newer than most of the coal fired plants in the state. Thus they have to meet much more stringent emissions standards. The waste burning plants are well below their emissions ceilings.

The ash from the incineration is inert. Some fly ash (from the smokestack) has been used as an ingredient in cement. Burn plants are seeking permission to find more uses for more of their ash. Ash that is landfilled is sent to special landfills. It is not allowed to be stored above ground or near bodies of water as was the case with the coal ash spill in Tennessee.

24) Can the city negotiate senior discount rates?
Trucks that are 2007 model and newer have to meet lower federal emissions standards. California has even tighter emissions standards and fleets there are switching to compressed natural gas and other alternative fuels.

However, significant amounts of the fleets currently operating in Roseville do not have to meet the higher emissions standards. Roseville could negotiate with the haulers to ensure than only newer vehicles are used to service the City.

25) Can the city negotiate bulky item pick up?
Yes. Little Canada allows residents to have up to two bulky items picked up at the curb each year. Other cities such as Robbinsdale allow residents to pay a small fee for bulky item pick up. Those fees are less than what Roseville residents are currently charged for similar service.

26) Can the city negotiate for organics collection?
Yes. The City can negotiate rates and services to meet the needs of residents. Wayzata has curbside cart service for food scraps and non-recyclable paper. Anywhere from 25 – 35% of household trash in Minnesota is materials such as these that could be composted. Composting takes unwanted items and turns them into a valuable resource. Wayzata saw a 9% reduction in the amount of garbage collected in the first year of organics collection.

As a result many households can switch to a smaller garbage cart. Wayzata even had 180 households switch to every other week garbage collection as a result of organics collection.

27) How would the City work with haulers to educate residents about waste reduction?
The City and the haulers each have various communication tools they use. The City and the haulers would develop a communications plan that creates consistent messages and identifies the best means to send those messages to residents.

28) I get free yard waste pickup from Walter's will I lose that service?
The City will negotiate rates and services with all the haulers that will provide service to Roseville residents. As a result individual agreements will no longer be in place. While the price for an individual service may go up, the net annual cost may go down.

29) Will the city be liable for any toxic material that is illegally disposed of in the trash?
Any responsible party is liable for illegal dumping. The City does assume a portion of liability if toxic material were to be dumped and cause contamination. However, since the City would only be providing for residential service as opposed to business service, the likelihood that an individual homeowner will attempt to illegally dispose of large amounts of toxic material is slim. Additionally state and federal investigators would pursue the individual resident responsible.

30) The Newport Resource Recovery Facility is already operating at capacity.
Actually the Newport is not operating at capacity. A few years back there was a dispute between the haulers and Ramsey and Washington Counties and the haulers decided to swamp the RRF with all the garbage they collected in Ramsey and Washington Counties. So for one year only, the RRF did have more material come in than it could process and ending up sending some garbage to landfills.

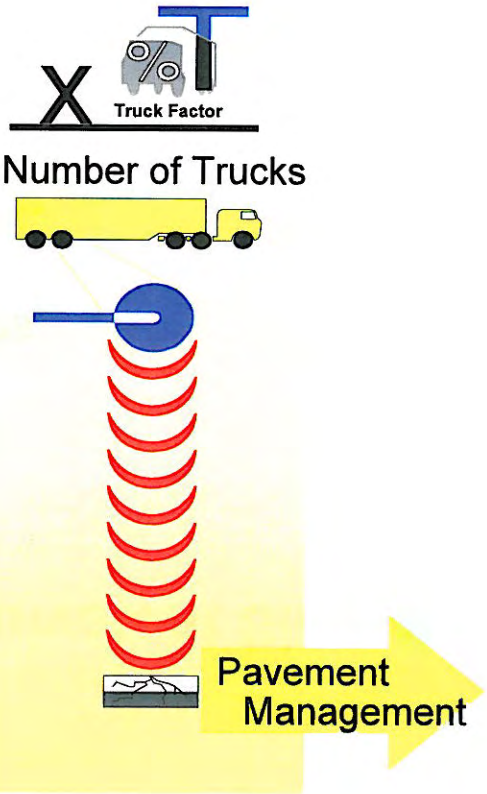
Since then a private company, RRT, bought the Newport and Elk River processing facilities and operates them jointly. As a result there is capacity to process all garbage generated in Roseville.

Pros and Cons of Organized Garbage Collection

Pros	Cons
Lower rates	Some residents develop personal relationships with their hauler that could be lost
Fewer trucks on streets resulting in less wear and tear on streets	Some residents perceive this as government meddling in the free market
Fewer truck miles travels resulting in less diesel emissions	Some residents believe that only an open system will result in the best possible system
City can designate where garbage goes for disposal. Thus direct garbage be taken to a processing facility instead of a landfill	Could lose free yard waste pickup for current Walter's customers
Fewer trucks on streets resulting in less noise	
City enforces contract to ensure high level of customer service	
Can get accurate information about how much garbage is generated in the city	
City can negotiate for additional services such as the inclusion of curbside bulky waste collection	
Creates a partnership between the City and haulers in order to promote City goals on being an environmentally friendly community	

TRAFFIC DATA FOR PAVEMENT MANAGEMENT

MAY 6-9,2007

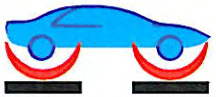


•Harshad Desai,
•Federal Highway Administration

ESAL

Equivalent Single Axle Load

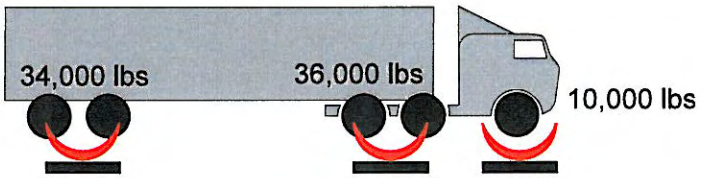
4,000 lbs



.0002 .0002

.0004 ESAL

80,000 lbs

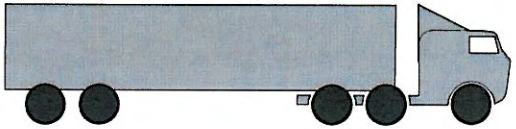


1.09 1.38 .09

2.56 ESAL

ESAL

Equivalent Single Axle Load

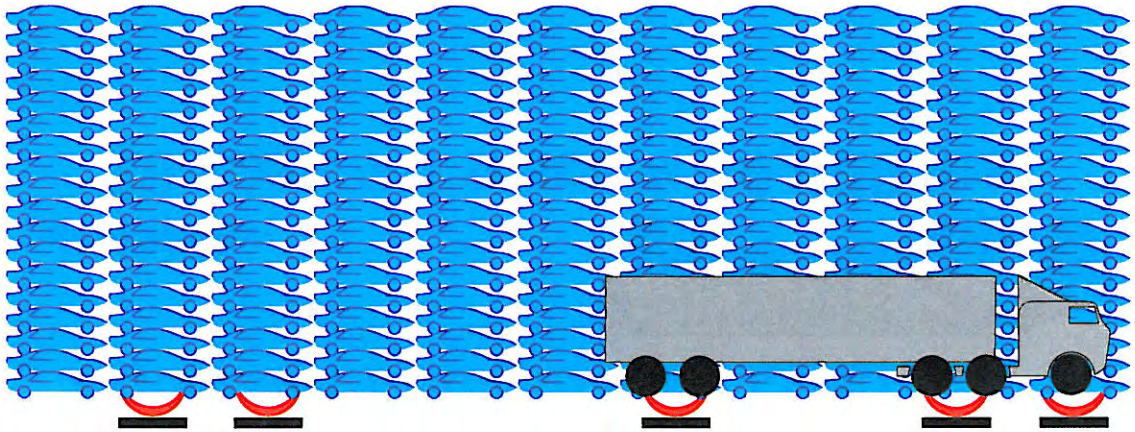


20 cars = 1 truck = 80,000 lbs

ESAL

Equivalent Single Axle Load

20 cars = 1 truck = 80,000 lbs



6,400 cars = 1 truck = 2.56 ESALs

(FHWA estimates 9600:1)

Review of Trash Collection Impacts

This section provides an analysis of the following trash collection service impacts:

- Street Maintenance Impacts;
- Air Quality / Vehicle Emissions;
- Neighborhood Aesthetics;
- Noise; and
- Safety.

Street Maintenance Impacts

Background / Overview

Road maintenance is designed to address deterioration. While roads will eventually deteriorate if simply left unused, most deterioration is associated with use; and the damage caused by vehicles goes up much more than proportionately with size and weight. Hence, costs associated with maintenance are greater for trips made by heavy vehicles. A single large truck can cause as much damage as thousands of automobiles, and the configuration of the truck can affect the amount of damage as well. If the load is spread over more axles, so there is less weight on each wheel, then the damage is reduced.[6]

Trash trucks are typically the heaviest vehicles regularly operating on residential (local) streets. As a result, they are a major contributor to the wear and tear on those streets. While trash trucks also contribute to the wear and tear on collector and arterial streets, those streets are designed to a higher standard and experience significantly more vehicle trips and large truck trips than local streets. As such, the relative impact of a trash truck on collector and arterial streets is significantly less than that on local streets. Commercial solid waste collection in the City, however, is provided through an open competition license system, with approximately 10 licensed commercial haulers currently operating in the City. This large number of commercial haulers increases the impact of trash trucks on the City's collector and arterial streets compared to a system in which there are fewer licensed haulers or a single service provider (e.g., a municipal or contracted system).

The pavement condition index (PCI) is a common unit of measure used to rate the condition of pavements. The PCI rates pavements on a score of 0 to 100 with a higher value indicating better pavement condition. Rapid deterioration of pavement typically

[6] A. Rufolo, *Cost-Based Road Taxation*, Cascade Policy Institute, November 1995.

Section 2

Review of Trash Collection Impacts

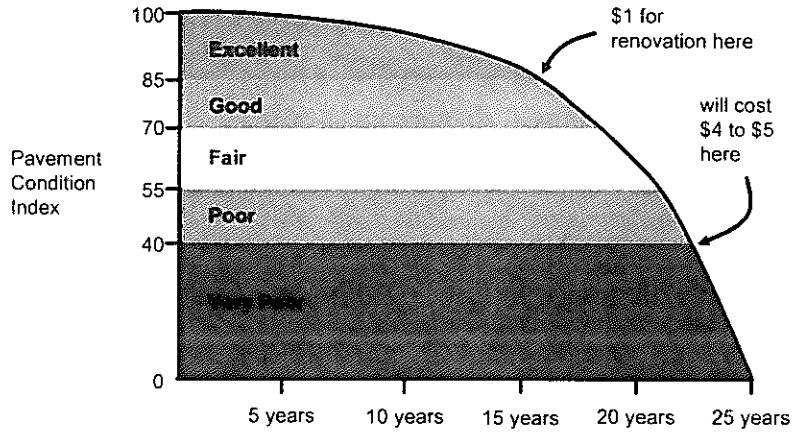
R3

occurs after roadways drop to a PCI score of 60 or lower. Studies have shown that every dollar spent performing preventative maintenance on a roadway with a PCI of 70 or higher saves $4 in future costs – it would otherwise cost about $5 to rehabilitate the same roadway once rapid deterioration occurs[7] (as shown in Figure 1). Ensuring adequate funding for an effective pavement management system is, therefore, critical to achieving a cost effective pavement management system.

Figure 1

Good Roads Cost Less to Maintain

Pavement Condition Index Goal 70+



The goal of a pavement management program is to bring all roads up to a "good" to "excellent" condition where they can be maintained most cost effectively. The strategy often recommended is referred to as the "Best First Approach", which concentrates spending initially on routine and preventative maintenance on those roads that are currently in "fair" to "good" condition. This extends the useful life of those roads, preventing rapid deterioration. Spending money on routine maintenance now prevents additional spending in the future on more expensive repairs.

The City's goal is to maintain a PCI of greater than 70 which falls within the "Good" range. The City has been able to maintain its streets at or near this target which has allowed it to provide cost effective maintenance. The 2008 and 2009 approved budgets, however, do not provide sufficient funding to maintain streets at their current level. The 2008 budget is more than $1.0 million less than that required to maintain streets at their current level while the 2009 budget is more than $2.5 million less than required. If

[7] J. Gerbracht, *Bay Area Roads Close to "Tipping Point"*, Metropolitan Transportation Commission, Street Talk, March 2006.

R3

funding continues to be less than that required to maintain the streets at their current condition the quality of the City's streets will decrease over time and maintenance costs will increase. This is a negative cycle and one that should be avoided if at all possible.

Analysis

Open Competition vs. Districted Collection Impacts

In general, all other factors the same, moving from an open competition collection system to a districted collection system would be expected to reduce the number of vehicle miles traveled with a corresponding decrease in the associated street maintenance impacts. However, when considering trash truck street maintenance impacts and the potential effect of districted collection on those impacts it is important to consider that:

- Both the size of the collection vehicles and the average number of passes each vehicle makes down each residential street segment may change under a districted system. As a result the impact per vehicle may be more or less than under the current open competition system.
- At least one hauler provides both residential and commercial service with the same vehicle. If that hauler was not awarded a residential district its vehicles would continue to impact those residential streets it uses to access commercial accounts, assuming it continued to provide commercial service.
- If a hauler(s) not currently providing residential or commercial service in the City was awarded a district under a competitive procurement, that hauler might also compete for commercial accounts with a resulting increase in commercial trash truck impacts.

Our approach to projecting trash truck street maintenance impacts is based on common principles of pavement design and vehicle loading. The basic premise is that all vehicles, including trash trucks, exert an impact on streets that can be quantified. That impact or "vehicle loading" can be expressed as an Equivalent Single Axle Load (ESAL), which is a function of the vehicle's weight and the distribution of that weight over the vehicles axles. By projecting the number and type of vehicles (e.g., cars, trucks, trash trucks) that travel on a street over its design life, and the average ESAL associated with each vehicle type, the total ESALs that street will experience can be calculated. The relative impact associated with a specific type of vehicle (e.g., trash trucks) can then be determined based on the percentage of the total ESALs attributed to that vehicle type.

For purposes of our analysis, we requested information on the types of residential trash and recycling trucks used by the licensed haulers and their average load weights. We also obtained

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Review of Trash Collection Impacts

manufacturer axle weight profiles for the same or similar truck types and reviewed traffic count data and street maintenance expense and funding information provided by the City. Information provided was used to develop residential trash and recycling truck axle weight profiles. This information was then used to project the impacts of trash and recycling trucks on the City's residential streets, which was expressed as percentage of the total vehicle impacts experienced by those streets.

In developing the projections it is important to note that the calculated impacts are based in part on various assumptions including:

- The average number of vehicle trips per residential street;
- The percentage of total vehicle trips made by trucks other than trash and recycling trucks and the average axle weights of those vehicles; and
- The average number of trash and recycling truck trips per week on a typical residential street.

Reasonable changes to those assumptions can have a material impact on the calculated impacts.

Note: *One hauler uses vehicles with a single fixed rear axle and a pusher axle[8]. The impact of those vehicles increases significantly if the pusher axle is not used during collection operations. Also pusher and tag axles generally have two tires per axle rather than four, which also increases the impacts relative to a fixed rear axle with four tires.*

Table 1 below provides a comparison of the calculated combined trash and recycling truck impacts on residential streets as a percentage of the total vehicle impacts. The table presents the results for various assumptions regarding the average number of passes trash and recycling trucks make each week on residential streets.

The table also provides:

- The allocation of the annual cost required to maintain the residential streets at their current condition to trash and recycling trucks in proportion to their calculated vehicle impacts; and
- The projected annual carbon dioxide (CO2) emissions associated with each scenario.

[8] A dead axle, also called lazy axle, is not part of the drive train but is instead free-rotating. Many trucks and trailers use dead axles for strictly load-bearing purposes. A dead axle located immediately in front of a drive axle is called a pusher axle. A tag axle is a dead axle situated behind a drive axle (Source: Wikipedia).

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Table 1

RESIDENTIAL TRASH & RECYCLING VEHICLE IMPACTS						
Average Vehicle Passes / Week / Residential Street			Percent of Total Vehicle Impacts	Allocated Portion of Total Annual Cost to Maintain Residential Streets at Current Condition ($2008)	Annual CO2 Emissions[1]	
Trash Truck Passes	Recycling Truck Passes	Total Passes			Pounds	Tons
6.0	6.0	12.0	20.1%	$ 506,000	813,000	407
5.0	5.0	10.0	17.1%	$ 432,000	678,000	339
4.0	4.0	8.0	14.0%	$ 354,000	542,000	271
3.0	3.0	6.0	10.8%	$ 272,000	407,000	204
2.0	2.0	4.0	7.4%	$ 186,000	271,000	136
1.0	1.0	2.0	3.8%	$ 96,000	136,000	68

[1] EPA Emission Facts: Average Carbon Dioxide Emissions Resulting from Gasoline and Diesel Fuel

For purposes of a base case analysis of the effects of changing from the current open competition system to a districted collection system we assumed that:

- There are an average of 4 residential trash truck and 4 recycling truck passes on each residential street segment each week for the open competition system (e.g., 2 trash trucks and 2 recycling vehicles making two passes down each residential street each week); and
- There will be an average of 2 residential trash truck and 2 recycling truck passes each week for a districted collection system.

Table 2 below provides a comparison of the trash and recycling truck impacts and the allocated street maintenance cost for the current open competition system and a districted collection system based on these assumptions. As shown, the associated impacts and allocated pavement maintenance costs for a districted system are essentially half that for the current open competition system based on the noted assumptions.

The effect of changes to the assumed number of vehicle passes for the open competition system and/or a districted collection system listed above can be determined using the information

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Review of Trash Collection Impacts

presented in Table 1 above. As an example, if we assume an average of 6 rather than 8 total trash and recycling trips per week for the current open competition system, the associated "Percent of Total Vehicle Impacts" is 10.8% rather than the 14.0% for the base case shown in Table 2. The associated reduction in the "Percent of Total Vehicle Impacts" in this case is 3.4% (10.8% - 7.4%) rather than 6.7%. The corresponding reduction in the "Allocated Portion of Total Annual Cost to Maintain Residential Streets at Current Condition" would be approximately $86,000 ($272,000 - $186,000) rather than the $168,000 for the base case ($354,000 - $186,000) shown in Table 2.

Table 2

COMPARISON OF OPEN COMPETITION AND DISTRICTED COLLECTION TRASH & RECYCLING VEHICLE IMPACTS

Collection System	Total Trash & Recycling Vehicle Passes / Week / Residential Street	Percent of Total Vehicle Impacts	Allocated Portion of Total Annual Cost to Maintain Residential Streets at Current Condition ($2008)	Annual CO2 Emissions	
				Pounds	Tons
Open Competition	8.0	14.0%	$ 354,000	542,000	271
Districted Collection	4.0	7.4%	$ 186,000	271,000	136
Reduction (Districted vs. Open)[1]	**4.0**	**6.7%**	**$ 168,000**	**271,000**	**136**

[1] The Districted Collection "Percent of Total Vehicle Impacts" and "Annual Cost to Maintain Residential Streets at Current Condition" is greater than half the calculated impacts for the Open Competition System due to the methodology used, which assumes a constant number of vehicle trips for each scenario.

While the estimated impacts are subject to changes in the various underlying assumptions, we believe that the analysis provides a reasonable projection of the magnitude of trash truck impacts on the City's residential streets, which is supported by various independent third-party estimates. Appendix C (Comparative Trash Truck Load Factors) provides a comparison of the estimated passenger car equivalents estimated for the residential trash and recycling trucks operating in the City to independent references in support of the reasonableness of the estimates used in our analysis.

Change in Street Design Standards

The City adopted new design standards for streets in 1999 that are expected to increase the available vehicle loads streets can handle over their lifetime. These new standards do not affect the calculated percentage impacts of trash and recycling trucks on residential streets, since that calculation is not based on street design standards. Those standards would, however, be expected to reduce annual maintenance costs over time. As a result, the

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allocated street maintenance costs attributed to trash and recycling trucks would be reduced accordingly.

Options / Recommendations

- ✓ ***Require that haulers not load vehicles in excess of manufacturer's recommendations or limitations imposed by state or local vehicle weight restrictions (see Appendix A for sample language). Require haulers to implement an ongoing monitoring program to assure compliance with that requirement;***
- ✓ ***Require 2 fixed rear axles on all new vehicles. Require full time use of pusher or tag axle on any existing vehicles with a single fixed rear axle;***
- ✓ Encourage the Police Department to more aggressively monitor and enforce vehicle weight limits;
- ✓ Establish a street maintenance impact fee to provide funding to offset pavement maintenance cost impacts associated with trash collection services (see Appendix A for sample contract language);
- ✓ Require co-collection vehicles[9]; and
- ✓ ***Implement a Districted Collection System or City-Wide Contract for Services to reduce the number of residential trash truck miles traveled and the associated street maintenance impacts.***

Air Quality / Vehicle Emissions

Background / Overview

The nation's trash truck fleet is huge, more than three times the size of urban bus fleets, and nearly 100% dependent on diesel fuel. That diesel fuel is often burned in old engines that operate without state-of-the-art pollution controls. Trash trucks are also one of the most fuel inefficient vehicles on the roads today, with an average fuel efficiency of approximately 2.8 miles per gallon. As a result, trash trucks are a major cause of air pollution in cities across the country. Diesel engines have, however, gotten cleaner since the late 1980's. In fact, with new federal emissions standards diesel engines manufactured in the United States starting with the 2007 model year are the cleanest in the world.

EPA Standards

In 2000, the EPA established stringent standards designed to reduce emissions from on-road heavy-duty trucks and buses by up to 95 percent and to cut the allowable levels of sulfur in diesel

[9] Co-Collection vehicles have split bodies that allow for collection of two materials (e.g., trash and recyclables) in the same vehicle thereby reducing the number of vehicle trips per street segment.

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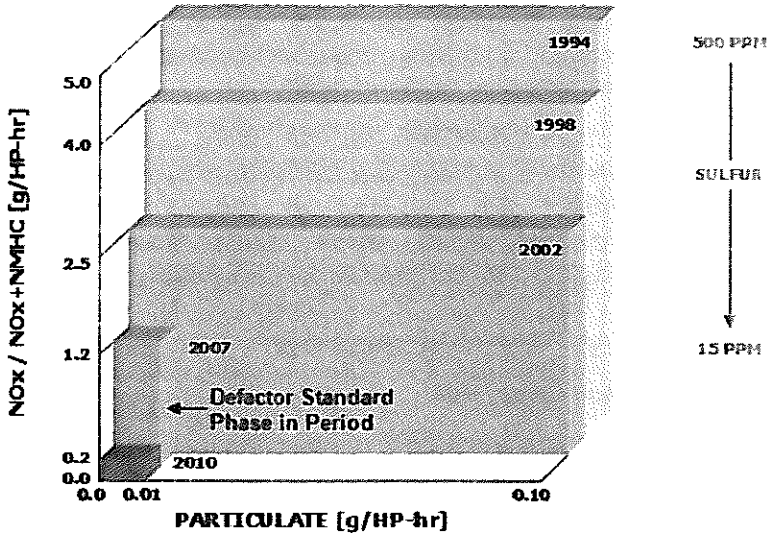
fuel by 97 percent[10]. The EPA rule was the most significant mobile source initiative since the 1970 Clean Air Act Amendments establishing the U.S. Mobile Source Emission Control Program. Beginning with the 2007 model year, 100 percent of the on-road diesel heavy duty engines (HDEs) are required to use a diesel particulate filter and 50 percent of the engines are required to use nitrogen oxide (NOx) exhaust control technology. Beginning with the 2010 model year, 100 percent of the on-road heavy-duty diesel engines will require NOx exhaust technology.

Figure 2 below provides an illustration of the improvements in engine emissions that have occurred over the last 25 years. With the 2010 standards the emissions from model year 2010 HDE's will be a small fraction of what they were less than 10 years ago.

Figure 2

Emission Standards Time Line



Source: http://www.cumminswestport.com/products/emissions.php

It is important to understand, however, is that these standards apply to engine manufacturers and not to fleet operators. There are no requirements that fleet operators, including trash haulers, comply with the standards within any specific time period. Relying

[10] As of 2006, refiners and importers nationwide are required to ensure that at least 80% of the volume of the highway diesel fuel they produce or import is ultra low sulfur diesel (ULSD) compliant. By 2009 95% of diesel fuel will have a sulfur limit of 15 parts per million (ppm). By December 1, 2010 100% of the diesel fuel sold will need to meet that limit. ULSD fuel enables the use of cleaner technology diesel engines and vehicles with advanced emission control devices, resulting in significant improved air quality.

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solely on fleet turnover to achieve the full benefits of the new engine standards could take up to 20 years due to the reliability of diesel engines. In the meantime many of the older dirtier diesel engines will continue to remain in service.

Natural Gas Vehicles

Natural gas engines offer the potential for significant reductions in trash truck emissions. Natural gas is also a secure, domestically produced fuel that reduces the demand for petroleum-based fuels and imported oil. Replacing 50% of the estimated 136,000 diesel trash trucks operating in the country with natural gas trucks would annually displace approximately 600 million gallons of diesel fuel, the equivalent of 14.3 million barrels of oil – a meaningful step toward energy security[11]. An added benefit is that natural gas engines are significantly quieter than diesel engines.

In the past four years the number of natural gas trucks in the United States has more than doubled, and nearly 700 natural gas garbage trucks are in operation today. By 2010 it is projected that over 2,200 natural gas garbage trucks will be operating in the US[12]. Two-thirds of the estimated 700 natural gas garbage trucks in operation in the US operate on liquid natural gas (LNG), while the rest use compressed natural gas (CNG).

Natural gas engines have already shown that they can meet the 2010 EPA emission requirements while also generating half the NOx emissions of 2010 compliant diesel engines. Natural gas trucks, however, produce lower torque (power), are heavier and take longer to fuel than diesel vehicles. While natural gas vehicles can cost substantially more than diesel, the new emission requirements and rising diesel fuel costs could erase the cost advantage that diesel trucks have had over natural gas.

A major impediment to natural gas trash trucks in the City is the lack of fueling infrastructure.

Biodiesel

Biodiesel is clean burning alternative fuel, produced from domestic, renewable resources. Biodiesel contains no petroleum, but it can be blended at any level with petroleum diesel to create a biodiesel blend. It can also be used in compression-ignition (diesel) engines with little or no modifications. Biodiesel is biodegradable, nontoxic, and essentially free of sulfur and aromatics. Each of the licensed residential haulers reported that they have experimented with Biodiesel with mixed results. Problems with clogging of filters, jelling, cost and warranty issues were cited.

[11] INFORM; Greening Garbage Trucks: Trends in Alternative Fuel Use, 2002-2005.
[12] Ibid.

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Operate-at-idle Technology

Operate-at-idle technology can also reduce emissions. Operate-at-idle systems allow an engine to run at much lower revolutions per minute (RPM) and thus conserve diesel when compared with collection vehicles that do not have the technology. Operate-in-gear-at-idle systems save fuel by using a larger hydraulic pump that produces the extra flow of fluid needed for a trash collection vehicle to load and compact garbage at standard speeds while the engine remains at idle. Without the systems, truck operators must shift the transmission and throttle the engine to power the hydraulic system every time they make a route stop or want to pack the load. There is minimal effect on truck performance and fuel savings of as much as 20% have been attributed to operate-at-idle systems.[13] Operate-at-idle technology is generally standard on all new side loading equipment. Retrofitting existing vehicles can be done at a cost of from $1,500 to $10,000. Truck manufacturers are just starting to test operate-at-idle technology on rear- and front-loading vehicles.

An added advantage of operate-at-idle technology is that it significantly reduces engine noise. Most of the loud engine noise associated with garbage trucks comes from revving the engine to pack the load. With an operate-at-idle trash truck the hydraulic system is capable of packing without revving the engine and generating the associated engine noise.

Automatic Engine Shut-Off Systems

Idling engines can burn up to one (1) gallon of fuel per hour. On-board engine controls can be installed that automatically cut off the engine after a set time period if a driver leaves it idling. Waste Connections, a national solid waste management firm, has installed automatic engine shut off devices on some of their vehicles that shut the engine down after five minutes of idling. This five minute standard is consistent with the proposed time frame in EPA's Model State Idling Law.

Other Options

On the horizon, several other fuel and technologies are being tested in prototype vehicles including:

- Hybrid-electric drive trains
- Bio-methane (biofuels)

While these technologies may offer future benefits they have yet to be proven in a large scale commercial environment. Volvo, however, recently introduced the first hybrid garbage truck in Sweden. If testing goes well, Volvo plans to begin producing the

[13] Ideal Idle Idea; K. Simpson, Waste Age, Sep 1, 2006 12:00 PM

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hybrid trucks in 2009. Volvo's hybrid technology consists of a 320 horsepower diesel engine which shuts down at rest combined with an electric motor that powers the truck at speeds up to 12 miles per hour. Regenerative braking is used as a means to recapture energy to recharge the lithium ion batteries. Besides being much quieter, gas savings and CO2 emission reductions on the order of 20-30 percent are expected.[14]

Waste Management Inc. has reported that it is exploring using waste methane (bio-methane) from its landfills as a fuel for trash trucks. The Orange County Transportation Authority in southern California is currently using methane from the county's landfills in a portion of its LNG fleet.

Reducing engine idle speeds, maintaining proper tire pressure, maintaining air filters and other steps can also be taken to improve fuel efficiency and minimize engine emissions.

Analysis

As discussed above, with the 2010 EPA standards emissions from new diesel engines will be a fraction of what they were less than 10 years ago. When all trash trucks achieve compliance with those standards there will be a significant improvement in the emissions from trash trucks operating in the City. The most significant step the City can take to reduce trash truck emissions is, therefore, to establish a specific timeline for licensed haulers (residential and commercial) to bring their fleets into compliance with EPA's 2010 emission requirements. The State of California established such a timeline requiring fleet operators to bring their fleets into compliance with specific standards within a relatively short time frame). At a minimum the City could ban the registration of any truck prior to 1994, in order to remove some of the dirtiest, most polluting engines from the road. Idle-in-gear technology and automatic engine shut-off systems would also provide for additional emission reductions[15].

While natural gas engines already meet the 2010 requirements the lack of local fueling infrastructure and other factors likely preclude this as a viable short- to medium-term option in the City. Also, while Biodiesel may offer some emission benefits, operational problems cited by some of the haulers will need to be addressed for this to represent a reliable long term option.

Implementing a Districted Collection System or City-Wide Contract for Services would also be expected to reduce overall vehicle

[14] Volvo introduces first hybrid garbage truck, works on DME fuel, *Posted Apr 8th 2008 11:41AM by Jeremy Korzeniewski; www.autobloggreen.com.*

[15] This could then be followed by an ongoing graduated compliance schedule that would ban vehicles prior to 1998, 2002 and 2007 over some reasonable time frame.

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emissions as a result of the reduction in the number of residential trash collection vehicle miles traveled. As illustrated in Table 1 above, it is estimated that residential trash trucks operating in the City generated as much as 200 to 300 tons per year of CO2 emissions annually, in addition to nitrogen oxide and particulates. These emissions might be reduced by as much as half with a Districted Collection System or City-Wide Contract for Services.

Options / Recommendations

- ✓ ***Work with the haulers to develop a schedule for fleet compliance with the 2010 EPA Emission Standards;***
- ✓ Prohibit the use of any truck with an engine older than model year 1994 in the City;
- ✓ Require operate-at-idle technology on all new vehicles; require existing vehicles to be retrofitted;
- ✓ Require installation of automatic engine shut-offs and mandate shut down after a set number of minutes of idling (e.g., 5 minutes consistent with EPA's Model State Idling Law);
- ✓ Encourage hauler use of synthetic oils, effective tire maintenance programs and other fuel saving measures;
- ✓ Limit the number of residential and commercial licenses (e.g., issue no more than the current number);
- ✓ Require natural gas vehicles if the necessary fueling infrastructure can be developed;
- ✓ Evaluate opportunities for other alternate fuel / alternate technology vehicles (e.g., hybrid electric drive trains) as they become commercially viable; and
- ✓ ***Implement a Districted Collection System or City-Wide Contract for Services to reduce the number of residential trash collection vehicle miles traveled and the associated vehicle emissions:***
  - ***Require EPA 2010 Emission Standard compliant vehicles as a condition of the award of districts;***
  - Require operate-at-idle technology on residential vehicles as a condition of the award of the districts; and
  - Require use of County Landfill to reduce vehicle miles traveled.

Neighborhood Aesthetics

Background / Overview

The appearance of a neighborhood is impacted by trash collection services both with respect to the presence of containers and the vehicles providing collection services. Under an open competition

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system adjacent residents collection schedules may vary resulting in containers placed at the curbside for collection on multiple days of the week. Additionally, containers currently come in all shapes and sizes and differing colors and bags are also used. Under a districted system, all services would typically be provided on the same day in a given neighborhood so streets are free of trash and recycling containers six days out of the week. Containers can also be standardized to provide a more uniform appearance.

The City currently has few if any permit requirements related to the appearance and condition of trash collection vehicles. Standards can be established regardless of the collection system structure related to, among other things:

- Cleaning and maintaining vehicles so that they present a "clean, professional and new-like appearance";
- Minimizing vehicle oil, fuel and other fluid spills; and
- Controlling litter.

Analysis

Collection Days

Unless the City were to pursue a districted collection system or require that all collection operations under the current open competition system occur on a specific day in each neighborhood (i.e., districted service days) it is likely that many neighborhoods will continue to have multiple trash service days. Should the City implement districted collection, however, collection services could be limited to one day per week.

Standardizing Containers

Districted collection would also allow for standardizing residential trash collection containers. In which case the City could own the containers and have the City logo rather than the haulers logo on the containers. Regardless of the collection system structure the City could provide for the universal roll-out[16] of City-owned standardized single stream recycling containers.

Cleaning and Painting Trucks

The City's municipal code does not specify any requirements for cleaning and painting trash trucks or commercial containers or any other requirements related to aesthetics including controlling litter and vehicle spills. Such requirements are standard in many franchise agreements and contracts and to lesser degrees license requirements. The City of Lone Tree's recent residential solid waste collection agreement with Pro Disposal specifies, among other things that the contractor shall use *"vehicles that are*

[16] All residential accounts would be provided with a recycling container rather than needing to request one. Any customer not wishing to participate would need to specifically request to "opt-out".

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maintained in a clean, first-class manner" and that vehicles *"shall be thoroughly washed not less than once each week and shall be repainted as necessary."*

Options / Recommendations

- ✓ ***Establish vehicle cleaning and painting requirements as a condition of the required license (see Appendix A for sample language);***
- ✓ Establish performance standards related to controlling litter, spills etc. (see Appendix A for sample language);
- ✓ Provide universal roll-out of City-owned standardized single stream recycling containers with City logo (see Appendix A for sample contract language); and
- ✓ ***Implement a Districted Collection System or City-Wide Contract for Services to reduce the number of trash trucks on residential streets, the number of days per week collection service occurs and allow for standardizing trash containers:***
  - ***Roll-out City-owned standardized wheeled trash containers with City logo.***

Noise

Background / Overview

Noise from trash trucks can be related to a number of factors including:

- Engine noise;
- Backing alarms;
- Noise at Point of Collection (Dumping of material such as glass in curbside recycling systems); and
- Dumping commercial bins.

The specific strategies and options to reduce those noise impacts depend in large part on the source of the noise. Some jurisdictions have established specific noise standards (e.g., decibel ratings within a specified distance from the vehicle) that haulers must comply with during collection operations.

Analysis

Engine Noise

Engine noise associated with residential trash trucks is largely related to revving of the engine when the vehicle is packing. Diesel garbage trucks can generate noise levels of up to 100 decibels. Two of the most significant options available to reduce trash truck engine noise are:

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- Converting to either a compressed natural gas (CNG) or liquefied natural gas (LNG) engine; and
- Using "operate-at-idle" technology[17].

In addition to the above options, a well built, tight fitting, well maintained vehicle can also help reduce noise.

A study in the Netherlands found there were noise reductions with natural gas vehicles of 90% inside the truck, 98% beside the truck and 50% behind the truck compared to diesel powered vehicles.[18] As mentioned above, a major impediment to the use of natural gas trash trucks in Fort Collins is the lack of required fueling infrastructure.

As discussed previously, in addition to fuel savings operate-at-idle technology also significantly reduces engine noise. Most of the loud engine noise associated with garbage trucks comes from revving the engine to pack the load. With an operate-at-idle trash truck there is a separate hydraulic system on the truck body. This separate hydraulic system provides the pressure needed to pack the load without revving the engine and generating the associated engine noise.

Backing Alarms (Beepers)

Vehicle backing and noise associated with vehicle backing alarms are most often associated with commercial collection activities. Placing limits on commercial collection activities near residential neighborhoods can help address related noise issues. "Smart" back-up alarms can also be used. These alarms sense the level of ambient noise and adjust accordingly. In quiet conditions the alarm beeps at a much quieter level.

Noise at Point of Collection

Noise at the point of collection (i.e., emptying containers) can be reduced by taking various actions to reduce engine noise, as discussed above. In addition, efforts to reduce noise associated with the dumping of materials, particularly glass recovered through the curbside program can also be taken. These include commingling of glass with other recyclable materials, reducing dump heights and potentially eliminating glass from the curbside program.

Overall noise associated with residential collection operations at the point of collection would not be reduced under a districted collection system since it does not reduce the number of pickups,

[17] With non operate-at-idle vehicles the engines need to rev when the body is packing. With an operate at idle vehicle there is an hydraulic system on the body which is capable of providing the hydraulic pressures need to pack without revving the engine, which creates noise.

[18] Ahhhh...the Peaceful Sounds of Garbage Trucks; N. Stiles; MSW Management May/June 2007.

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only the number of vehicles making those pickups. The noise produced in transit from point-to-point would be reduced however due to fewer vehicles. The noise associated with collection operations would also be limited to a specific day and time in each neighborhood.

Dumping Commercial Bins

Dumping of commercial bins can be very noisy and particularly noticeable in the early morning hours. A number of options are available to reduce the noise associated with commercial collection activities including[19]:

- Treating lid supports with sound-deadening material - Lid supports are small metal arms that are anchored on one end which can be rotated to support the lid in an open position. During dumping the arm swings freely and can strike other metal objects;
- Treating the containers with sound-deadening materials - The reverberation of the sides of metal containers creates loud noises;
- Treating the forks of trucks with sound-deadening material - A great deal of noise is generated by the metal forks used to pick up the containers within the sleeves on the container;
- Using plastic lids or plastic dumpsters where the Fire Marshall will allow their use;
- Promoting the use of larger storage containers and reduced collection frequency; and
- Encouraging "Best Practices" training for drivers - Driver behavior is one of the single most important factors affecting noise generation.

Time of Collection

Section 15.421 of the City's Municipal Code states that, "*No collector shall operate any vehicle for the purpose of collection of solid waste or recyclable materials on any street designated by the City as "local residential" or "local collector" between the hours of 7:00 p.m. and 7:00 a.m. (the "Nighttime Hours")*". Time restrictions placed on residential collection activities are common. Some jurisdictions also limit the time of commercial collection activities, which by their nature are noisy, within a specified distance of residential neighborhoods (e.g., not before 7:00 a.m.

[19] Report and Recommendations of the Noise Review Board on Reducing Nighttime Noise from Garbage and Recycling Collection; September 8, 2005, City of Portland Noise Review Board Subcommittee on Garbage Collection.

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within 200 feet of a residential area). The City's municipal code does not place any limits on the time of commercial collection.

Vehicle Maintenance

Effective vehicle maintenance can also reduce noise. Assuring that vehicles are well built, tight-fitting and well maintained will help reduce vehicle noise.

Options / Recommendations

- ✓ ***Establish noise standards that are to be met by all haulers as a condition of their license and require haulers to verify and report on compliance with those standards. (see Appendix A for sample language);***
- ✓ Require operate-at-idle technology on all new vehicles; require existing vehicles to be retrofitted;
- ✓ Require natural gas vehicles if the necessary infrastructure can be developed;
- ✓ Require "Smart" back-up alarms;
- ✓ Remove glass from the curbside recycling program;
- ✓ Require various steps to be taken to reduce the noise generated by the collection of commercial containers near residential areas (e.g., treating containers, lid supports and truck forks with sound deadening materials; using plastic lids or dumpsters);
- ✓ Limit the time commercial collection activities can occur within a specified distance of residential areas (see Appendix A for sample contract language);
- ✓ Require vehicles to be well maintained; and
- ✓ ***Implement a Districted Collection System or City-Wide Contract for Services to reduce the number of trash trucks on a typical residential street and vehicle miles traveled:***
    - ***Require operate-at-idle technology on residential vehicles as a condition of the award of the districts.***

Safety

Background / Overview

Solid waste operations can pose safety risks to employees and the general public. The consideration of "Safety First" is central to an effective solid waste management operation as safe operations enhance productivity and profitability.

According to the Department of Labor Statistics, Refuse and Recyclable Material Collectors have the one of the most dangerous job in the country with a fatality rate approximately 10

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times the national average. A University of Miami study found that the leading cause of on-the-job fatalities for refuse and recyclable material collectors is impatient motorists who try to pass the garbage truck and hit the collector.

Trash collection activities also result in interaction with the general public and as such generate the potential for public safety issues. Efforts to reduce those interactions (e.g., districted collection), make the public more aware of collection vehicles and drivers (e.g., signage, lights) and provide drivers with additional training and tools to provide for safer collection operations (e.g., video recorders) all contribute to increasing public safety as it relates to trash collection services.

Industry Safety Initiatives

Waste Management Inc., the largest solid waste services provider in the country, has a model "Mission to Zero" plan and has significantly reduced worker injuries since the model was implemented. Allied Waste Industries, the second largest solid waste provider in the country, has paid particular attention to vehicle safety, including adding or replacing all incandescent lights with LED's and additional LED strobe lights on each side and the front of the vehicles. As a result of these and other actions Allied's accident rate declined approximately 20 percent in each of the first three years following implementation and driver feedback has been very positive.

Slow Down to Get Around Safety Campaign

Jurisdictions throughout the country have adopted the "Slow Down to get Around" safety campaign to enhance the visibility of the collection vehicles and have dramatically reduced rear-ending accidents.[20] The program is designed to raise safety awareness when passing utility, waste and service vehicles. The aim is to encourage drivers to use the same amount of caution as when passing a school bus, emergency vehicle or road construction crew.

Fully Automated Vehicles

The use of fully-automated vehicles can greatly contribute to worker safety. Automated collection eliminates the constant manual lifting of cans and bags associated with manual collection systems and is more efficient than semi-automated collection. Automated collection uses wheeled carts that are lifted by a mechanical arm on the side of the truck. The driver controls the entire collection process without leaving the drivers seat. Automated systems have been shown to result in decreased workers compensation costs and allow experienced older (often

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[20] See http://www.rumpke.com/Our_Commitment/Safety.asp for more information on the Slow Down to get Around safety campaign.

safer) workers and others who might not be able to effectively function in a manual system to remain on the job.

DriveCam

DriveCam is an exception based video event recorder that is mounted on the windshield behind the rearview mirror and captures sights and sounds inside and outside the vehicle. Exceptional forces such as hard braking, swerving, collision, etc. cause the recorder to save critical seconds of audio and video footage immediately before and after the triggered event. DriveCam reports that its video system and safety program has reduced vehicle damages, workers' compensation and personal injury costs by 30 to 90 percent in more than 70,000 commercial and government vehicles around the world. Waste Connections, the nation's fourth largest collection company recently announced that it has begun implementing the DriveCam solution nationally across all major business lines in all four geographic regions.[21] GPS systems can also be used to identify risky driver behavior and other activities to improve safety and is becoming more widely used in many parts of the solid waste industry.

Analysis

It is in the interest of the haulers to operate safely and it is assumed that they are dedicating appropriate care and attention to safety and safety related issues. The City may, however, be able to enhance overall hauler safety by establishing certain safety related requirements as a condition of the hauler license. This could include requiring haulers not to overload vehicles and assuring that all vehicles are specified with certain safety equipment (e.g., ABS breaking systems, strobe lights, reverse motion sensors). Appendix B contains a list of various trash truck safety devices that the City may wish to consider encouraging/requiring the haulers to use. It is suggested that any consideration of requiring certain vehicle specifications related to safety be done in conjunction with the haulers to assure that any such requirements are reasonable, appropriate and provide meaningful benefit.

Options / Recommendations

- ✓ ***Require that haulers not load vehicles in excess of manufacturer's recommendations or limitations imposed by state or local vehicle weight restrictions. Require haulers to implement an ongoing monitoring program to assure compliance with that requirement (see Appendix A for sample contract language);***

[21] http://www.drivecam.com

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- ✓ Work with haulers to develop appropriate and effective safety specifications for all new vehicles (e.g., rear and side strobe lights) and a timeline for retrofitting existing vehicles as a condition of the hauler license (see Appendix A for sample contract language);
- ✓ Require haulers to participate in City sponsored/initiated "Slow Down to Get Around" safety campaign; and
- ✓ ***Implement a Districted Collection System or City-Wide Contract for Services to minimize vehicle miles traveled:***
  - Require fully-automated vehicles;
  - Require vehicles to have appropriate optional safety equipment; and
  - Establish safety incentives (e.g., sliding scale profit ratio based on safety record).

Other Vehicle Street Maintenance Impacts

As part of the analysis of trash truck impacts we evaluated the impacts of trash trucks relative to other types of vehicles, including delivery trucks and buses. Table 3 below provides a comparison of the average ESAL's for the various vehicle types noted[22] to the estimated ESAL's of residential trash and recycling trucks operating in the City. The impacts are also presented in Passenger Car Equivalents.

Table 3

COMPARISON OF TRASH AND OTHER VEHICLE IMPACTS

Vehicle Type		Number of Axles	ESAL Factor (1)	Passenger Car Equivalents
General Classification	AASHTO Classification			
Cars	Passenger Cars	2	0.0008	1
Vans/Pickups	Other 2-Axle/4-Tire Trucks	2	0.0052	7
Large Pickups / Delivery Vans	Panel and Pickup Trucks	3	0.0122	15
Large Delivery Trucks	3 or More Axle Trucks	3	0.1303	163
Local Delivery Trucks	2-Axle/6-Tire Trucks	2	0.1890	236
Residential Recycling Trucks		**2**	**0.2190**	**274**
Buses	Buses	2 or 3	0.6806	851
Residential Trash Trucks		**3**	**1.0230**	**1,279**
Long Haul Semi-Trailers	Various Classifications	3 - 5+	1.1264	1,408

R3

[22] Based on sample data reported by American Association of State Highway and Transportation Officials (AASHTO) Guide for Design of Pavement Structures.

As shown, residential trash trucks have an estimated impact equivalent to approximately 1,300 passenger cars. This is comparable to the findings of other studies that we have conducted as well as that reported by various independent third parties (Appendix C). The impact of recycling trucks is much less but still significant, and roughly equivalent to the impact of local delivery trucks[23]. One point to note is that the impact of large delivery trucks (3 or more axles) is approximately two-thirds that of local delivery trucks (2-axle / 6 Tire Trucks) based on the sample population. This tends to support the positive benefit additional axles can have on lowering overall vehicle impacts.

In reviewing this comparison it is important to note that the impacts shown are based on a random sampling of vehicles. There can be wide variability of impacts within the general vehicle types noted. As an example a larger local delivery truck hauling construction materials, heavy furniture or food supplies may have a significantly greater impact than a smaller local delivery truck hauling overnight packages.

Impact of Overloaded Vehicles

Background / Overview

The impact that a vehicle exerts on a section of pavement is related to the vehicle's axle weights. As axle weight increases the impact increases at a rate much greater than proportionally. As such, overweight vehicles exert a significantly greater pavement maintenance impact than that same vehicle at or below its legal weight, in addition to presenting a potential safety hazard.

Analysis

A trash truck operating at one (1) ton over a legal payload of 10 tons (10% overweight) exerts an impact approximately 50% more than a vehicle loaded to its legal weight. That same vehicle operating at two (2) tons (20% overweight) over its legal payload exerts an impact approximately 100% higher than when loaded to its legal weight[24].

The fact that the Larimer County Landfill, and certain other neighboring landfills, do not have scales and charge haulers based on volume presents a potential incentive for haulers to maximize vehicle payloads. This may foster the overloading of vehicles. While this potential may exist, it does not necessarily

[23] Our projection of recycling truck impacts is based on the smaller non-compacting vehicles that two of the haulers are currently using. It is certainly conceivable that larger compacting vehicles could be used for collection of single stream recyclables in the future with a much larger associated impact.

[24] Source: AASHTO Guide for Design of Pavement Structures.

R3

mean that haulers are overloading their vehicles, which can cause increased vehicle wear-and-tear. One of the haulers reported having recently completed a route audit that included weighing vehicles and modifying routes in an effort to ensure legal payloads.

R3

Review of Diversion Issues

This section provides an evaluation of the following diversion issues:

- Diversion Rate Metrics and Measurements;
- Current Policies, Practices and Programs; and
- Current Recycling Efforts.

Evaluation of Diversion Rate Metrics and Measurements

Background / Overview

Fort Collins is one of the leaders in recycling in the State of Colorado. The City's current diversion rate is estimated at 27% and it has adopted a diversion goal of 50% by 2010. The City has undertaken a range of programs and policies in support of its recycling efforts including a Pay-As-You-Throw (rate structure) ordinance and the requirement that licensed haulers provide recycling services to residential accounts upon request. The City completed a *5-Year Strategic Plan: Strategies to Reach 50% Diversion from Landfill Disposal* (Strategic Plan) in 2006. That Plan evaluated a wide range of options to increase diversion resulting in Phase 1 and Phase II Strategic Plan Staff recommendations, which are provided in Appendix D.

While the City currently tracks an overall Citywide diversion rate, it does not regularly track and report diversion by waste stream (residential, commercial, roll-off), program (e.g., curbside recycling) or by licensed hauler.

Analysis

Diversion Calculation Limitations

An important component of the City's efforts to increase diversion is the availability of complete and accurate data to allow it to accurately track tonnages diverted and disposed. There is, however, a limitation to the City's ability to accurately calculate its diversion rate. The Larimer County Landfill, and other neighboring landfills used by the licensed haulers do not have scales. Tonnage is estimated by multiplying the volume of the vehicle by a density factor established by each licensed hauler. In recent Tonnage Summary Reports the three licensed residential haulers reported density factors of 500, 750 and 900 pounds per cubic yard. Changes to those estimates would materially impact the calculated disposal tonnages and the City's calculated diversion rate. The lack of scales at the landfills places a relatively high degree of uncertainty on the City's disposal data and the associated calculated diversion rates.

Section 3

Review of Diversion Issues

R3

Waste Collection Rates

Residents in cities with organized collection typically pay lower rates or have higher levels of service or both. Haulers realize savings through economies of scale by serving every household in a geographic area. Those savings result in lower rates or increased services.

96-Gallon Garbage Service Per Month

Other cities rates include recycling and taxes

Little Canada	North St. Paul	Roseville	Vadnais Heights	White Bear Lake
$23.15	$27.84	Total = $28.35 $19.15 (average of all haulers) $1.96 recycling $7.24 taxes	$18.24	$17.70
Includes curbside collection of up to three bulky items annually	Includes unlimited curbside collection of bulky items	Does not include fuel surcharges or other fees.	Includes one free bulky item pickup. The hauler consortium also contributes $125/month into a promotions fund for city use. Also offer discount rates for seniors and every other week collection.	Also offers discounted senior rate.

FW Hauler market share

From: Tim Pratt
Sent: Monday, August 24, 2009 1:11 PM
To: Bill Malinen; Duane Schwartz
Subject: FW: Hauler market share

FYI

From: Wozniak, Joe [mailto:joe.wozniak@CO.RAMSEY.MN.US]
Sent: Thursday, August 20, 2009 3:53 PM
To: Tim Pratt
Subject: Hauler market share

Tim -

Here are the residential account numbers for Roseville as reported by haulers in their license application forms:

Hauler Name	# Accounts	% of Total
Ace	125	1.9%
Allied	750	11.2%
Gene's	231	3.5%
Horrigan	114	1.7%
Veolia	464	7.0%
Walter's	3,500	52.5%
Waste Mgmt	1,487	22.3%
TOTAL	6,671	

With the exception of one hauler's figures, the account numbers come from the 2009-10 hauler license applications, which were submitted between April and July of 2009. The exception is for Gene's, who did not give account figures, so I took their county-wide account total and multiplied it by the percentage of county residents living in Roseville, for an estimate.

Joe Wozniak

Environmental Health Section

St. Paul - Ramsey County Dept. of Public Health

Phone: 651-266-1187

FAX: 651-266-1177

Survey results – Open market cities

No limits on number of licenses:
Brooklyn Park (currently has 8)
Mounds View
Bloomington (6)
Edina (5) – has "glanced" at limiting; would freeze at current number if they did
Fridley
Roseville (6)
Eden Prairie
Shorewood (7)
Apple Valley (5)
Burnsville (5)
Minnetonka (6)
Maple Grove (9)
Plymouth (9)

Cities that limit residential hauling licenses:
Cottage Grove – 3
Oakdale – 5
Lakeville – 6
St. Michael – 6
Rosemount – Put a cap (8) on licenses at the end of 2008, when ordinance was updated. Automatically reduces number if hauler goes out of business.
Eagan – 7 (Web site lists 6 haulers, however)
West St. Paul – 6 (They shrink the number as companies go out of business.)

Apple Valley ordinance (just amended to create hauling zones/days):

Each licensee shall submit a monthly report to the city that identifies separately the weight, in tons, of refuse, recyclables, yard waste and special pick-up materials that were collected by the licensee from Apple Valley sources. The report must be provided on or before the fifteenth day of the month following the month being reported, and shall be on a form provided by the city. The report shall also identify the weight of each type of collected recyclable derived via actual weighing of each individual material or through the application of recyclable waste stream percentages acceptable to Dakota County. The report shall include a summary, including receipts, of all revenues derived by the collector for each targeted recyclable material market during the month. The report shall distinguish residential collection tonnage from commercial/ industrial tonnage and shall also include a brief description of the methodology used in computing the reported weights. The city reserves the right to request additional relevant information from the licensee as deemed necessary in order to plan for and evaluate its waste disposal system;

A license fee as specified in the appendix to Chapter 35, based on the number of vehicles to be used by the applicant in applicant's operations under the license, shall accompany the application and, upon granting of the license, the fee shall be deposited in the general fund.

Notes from Rosemount:

1. Until this year Rosemount did not limit the number of residential licenses we would issue. Anyone who had a truck, insurance, and $320 could get a license. At the end of last year the City Council updated our waste hauling ordinance to put a cap on the number of residential licenses we issue.
2. That cap is the current number of licenses, eight. This is for residential haulers only. We do not now and do not intend to limit commercial licenses. When the economy turns around we will have a lot of construction going on and many firms license just to handle construction and remodeling debris. So we do not expect to limit these haulers.
3. According to the Met Council, there were 7,104 households in Rosemount in 2007, the last year for which information is available.
4. Yes, when the Ordinance was revised, the following language was included:

Limitations On Licensing: The city council, in the interest of maintaining healthful and sanitary conditions in the city, hereby reserves the right to specify and assign certain areas to all licensees, and to limit the number of licenses issued. The council finds that by reducing the number of collection vehicle trips through a neighborhood, the neighborhood will be more safe for children and pedestrians, the amount of wear on the street surface will be reduced, and the total amount of emissions produced by the collection vehicles will decrease.

Only haulers licensed as of the effective date hereof will be allowed to renew their license. When a hauler leaves the industry or merges with another hauler, the total number of residential hauling licenses available in Rosemount will automatically be reduced.

5. As you can see, there is no set numerical limit to the number of licenses we issue. Anyone who currently has a license will be allowed to continue getting a license. But we did introduce a method to reduce the number we issue over time as firms merge or leave the business.
6. Like I said, anyone who currently has a license will be allowed to re-license.
7. So far, no one has challenged us but this ordinance was revised after the 2009 hauling licenses were issued. So the fall of 2009 when we re-license for 2010 would be the first time anyone might challenge this. We don't expect any since we have been pretty liberal in the past most anyone that wanted to work in our city is already here.

8. No, we will not allow a transfer of a license. If a hauler sells his company, that is our opportunity to actually reduce the number we allow.

West Saint Paul:

Subd. 4. Rubbish Hauling License.

a. Residential License. No person may haul, collect, or transport rubbish from residences, other than the person's own residence, within the City without a residential hauler's license pursuant to City Code Section 1005. The Council may impose conditions to the license at any time for cause or violations of any of the conditions of this Section. The City will issue no more than six residential haulers licenses at any time.

Cottage Grove:

Allows three, but Tennis owns two of the licenses, so there are essentially two companies hauling residential trash. No limits on commercial licenses.

The City Council considered increasing the number of licenses to four a few years ago, but rejected the idea, based on the added truck traffic in neighborhoods and wear and tear on the roadways.

Eagan:

C. The council, in the interest of maintaining healthful and sanitary conditions in the city, hereby reserves the right to specify and assign certain areas to all licensees, and to limit the number of licenses issued. The council shall issue no more than seven single-family-multiple dwelling-individual household service hauling licenses.

No license shall be transferable between persons or entities. Any change in individual or corporate ownership or substitution in partners shall constitute a transfer and shall automatically terminate the license. Upon the termination of a license as a result of change of ownership as provided herein, a license application of the new hauler shall be granted license approval preference over any other license applicant, provided the hauler makes application within 30 days of the license termination and the hauler meets all conditions and regulations for licensing as required herein. If the licensee's name changes and the change is not due to change of ownership during the period of the license within 30 days of the name change, a new application for license must be submitted to the city and subsequently approved by the city in order for license to remain in effect.

J. All single family/multiple dwelling-individual household service hauling licenses shall be subject to the licensee providing single family/multiple dwelling-individual household hauling services to not less than 250 residential households in the city, with their own equipment, excluding multiple dwelling units which fall within the definition of commercial/multiple dwelling-commingled service hauling. The licensee shall file with the city clerk by the end of each calendar year a written certification of compliance with this paragraph on a form provided by the city. The licensee shall make available for inspection upon request, a list of all single family/multiple dwelling-individual household service accounts, by address, within the city. If the licensee fails to provide proof of providing single family/multiple dwelling-individual household service hauling services to households as required herein by the end of the calendar year, (December 31 of all years), the license shall automatically terminate.

1. Single family/multiple dwelling-individual household service hauling licensees rates shall include a minimum of three levels of regular service, priced on the basis of volume or weight with a rate structure designed to encourage reduction, re-usage and recycling.

ROSEVILLE

Administration Department

Memo

To: Duane Schwartz, Public Works Director

From: Tim Pratt, Recycling Coordinator

Date: January 22, 2010

Re: Public input on garbage service

Public Works, Environment and Transportation Commission members indicated that they wanted to gather public input on garbage service. So you asked me to detail various options that could be used to do that.

Mail survey
Roseville is developing a mail survey to gauge residents' assessment of various city services. Staff will be using a survey template developed by the International City/County Management Association. Questions about garbage service could be blended into the survey. However, since the survey will be covering numerous city services, the number of questions about garbage service would be limited. Staff would use the same method to identify participants as was used in the 2002 survey thus ensuring the survey results would be statistically valid. Staff has not identified a time period for the survey.

Focus group
A focus group is a sample of approximately 20 people who would be invited to gather and talk about garbage issues. Focus groups generate qualitative data rather than quantitative data. The session is run by a facilitator and the small group setting allows participants to speak in greater depth about a topic.

Open meeting
The public could be invited to come in and speak at an open meeting. Typically turn out is light unless there is an issue that has a direct physical or emotional impact on the resident. For instance, for the past few years the City Council has dedicated a portion of one meeting for residents to talk about budget concerns. It has been promoted through the website and the Roseville Review. Turnout has been five or fewer people each year. On the other hand, neighborhood development hearings at the Planning Commission tend to have higher turnout. For instance, the public hearing for the proposed telecommunications tower in Acorn Park had approximately 30 neighbors attend. Neighbors are notified by postcard of the public hearing.

Online survey
Roseville can promote an online survey form for residents to fill out – printed copies can be made available as well. This option is currently being used by the Parks and Recreation System Master Plan committee. It provides residents an opportunity to respond without having to speak in public or appear at a public meeting on a specific date at a specific time. The survey would not face the same space limitations as with the mailed survey. Because respondents are self-selected the results are not statistically valid. We would use certain precautions to inhibit one respondent from answering multiple times, but could not prevent it.

Pages from 2/22/11 packet

TwinCities.com

Maplewood braces for trash talk as centralized hauling considered

By Sarah Horner
shorner@pioneerpress.com

Updated: 02/15/2011 11:32:14 PM CST

Maplewood is gearing up for a debate over who should take out the trash.

In an effort to cut costs for road improvements and rates for residents, the Maplewood City Council is considering switching to a city-controlled trash-collection system. Residents now choose from among nine licensed garbage collectors, but city officials say there could be advantages to cutting that to as few as one.

Local trash haulers are worried such a move would hurt business. Meanwhile, residents have expressed concerns about losing the right to choose who touches their trash.

"For whatever reason, people like their hauler, and they want to keep it that way," council member Marvin Koppen said.

About 150 people turned out for a meeting on the topic in October and similar numbers are expected at a March hearing, said Shann Finwall, environmental planner for Maplewood. The city council will listen to opinions before deciding whether to call for further study on changing trash collection.

Past attempts to do so in Maplewood have been met with such a public outcry that council members retreated, Finwall said.

"The hauling community gets people totally up in arms about the loss of freedom and scares of government takeover," she said. "It makes a city's attempt to do anything really difficult."

Residents aren't always aware of the potential benefits of buying services in bulk and reducing the number of trucks on the road, Finwall said.

According to a 2009 study by the

Minnesota Pollution Control Agency, residents in cities with organized trash systems like the one Maplewood is considering paid 19 percent to 53 percent less for trash collection than those in cities without them. Studies also indicate benefits to the environment, Finwall added.

Some of Maplewood's neighbors have made the switch, including Little Canada, North St. Paul, White Bear Lake and Vadnais Heights.

"We had some concerns about this being a form of communism in the beginning, but most people seem s atisfied now ... and we know we get better rates," said Joel Hanson, Little Canada city administrator.

Little Canada splits its city into sections to allow multiple haulers the chance to be involved and lessen any harm on the hauling industry, a key concern of Willie Tennis, co-owner of Tennis Sanitation, a garbage collector in the Maplewood area.

Tennis said he's worried his local business won't be able to be competitive in the bidding.

"The big companies can afford to cut their rates because they can make it up in other places," Tennis

TwinCities.com

said. "We can't do that."

The National Association of Solid Waste sent a mailing to drum up support for haulers at the last meeting, and Tennis said he expects a similar turnout for the March 28 hearing.

"It's just garbage, you'd think," he said, "but people are really funny when it comes to their garbage hauler."

Sarah Horner can be reached at 651-228-5539.

Agenda Item H.1.

MEMORANDUM

TO: James Antonen, City Manager
FROM: Shann Finwall, AICP, Environmental Planner
Steve Kummer, Engineer
Chuck Ahl, Assistant City Manager
SUBJECT: Public Hearing to Consider the Adoption of a Resolution of Intent to Organize Trash Collection
DATE: March 22, 2011 for the March 28 City Council Meeting

INTRODUCTION

On February 28, 2011, the City Council scheduled a public hearing for March 28, 2011, to consider the adoption of a resolution of intent to organize trash collection. Minnesota Statute, Section 115A.94 (Organized Collection) sets the process a city must follow when considering organized trash collection. The adoption of a resolution of intent to organize trash collection is the beginning step in a planning process and will initiate additional public participation. All trash collection system options will be evaluated, including evaluation of the city's current open trash collection system for potential improvements.

DISCUSSION

Goals

During the February 28, 2011, City Council meeting staff recommended that the City Council rank the eight main goals identified by the Environmental and Natural Resources (ENR) Commission and City Council for an organized trash collection system. Four City Councilmembers submitted their ranked goals, ranking the most important goal as number 1 and least important goal as number 8. The numbers were added to create the following overall goal ranking:

Main Goal	Score
1. Economic	7
2. Service	8
3. Environmental	11
4. Safety	17
5. Efficiency	22
6. Planning Process	25
7. Aesthetics	27
8. Hauler Impacts	27

The City Council should refer to these goals as the city moves forward with the evaluation of trash collection system options. A full list of the ranked goals and objectives can be found on Attachment 1.

What Does it Mean to Consider Organized Trash Collection?

Citizens: Save money. This is the City Council's number one goal for an organized trash collection system.

Trash Haulers: A method of managing waste. The City Council will evaluate all methods of managing waste, including evaluation of the city's current open trash hauling system for potential improvements.

Environmental Issues: Fewer trash hauling trucks creates less pollution.

For Public Safety and Infrastructure: Fewer trash hauling trucks in our neighborhoods will be better for our roads and safer for citizens than more trucks.

Minnesota Pollution Control Agency

Throughout the city's review of trash collection, the ENR Commission and City Council referred to the Minnesota Pollution Control Agency's (MPCA) 2009 collection system study. The study, Analysis of Waste Collection Service Arrangements (2009), offered expert analysis of open versus organized trash collection systems. MPCA staff has submitted a letter to the Mayor which further explains the study and MPCA's position on organized collection (Attachment 2). In summary, based on the study MPCA recognizes that organized collection can offer environmental benefits, economic opportunities, and operational efficiencies to cities in the metro area.

Trash Hauler Comments

Maplewood has 15 licensed trash haulers doing business in the city in 2011. Nine of those haulers service residential homes. Of the nine residential haulers, two have notified the city that they are not opposed to the city's efforts to organize trash collection – Waste Management and Veolia Environmental Services. The e-mail correspondence from these haulers is attached (Attachments 3 and 4).

City Public Hearing Notification

In order to meet state statute and city ordinance notification requirements for the March 28, 2011, public hearing, city staff has submitted a public hearing notice to the St. Paul Pioneer Press (published March 19, 2011), Maplewood Review (published March 16, 2011), and all licensed trash haulers in the city (Certified Mail on March 10, 2011). Additionally, staff has mailed a public hearing notification post card to all residential properties in the city (Attachment 5), included an article on the subject in the March edition of the Maplewood Monthly, and updated the city's website on the front page and on the Collection System Analysis webpage with the public hearing date and information.

National Solid Wastes Management Association Notification

The National Solid Wastes Management Association submitted a notice dated March 10, 2011, to residents of Maplewood and some surrounding cities (Attachment 6). In summary, the notice states that government managed collection will eliminate consumer choice and limit competition; government managed collection will increase city budget; and the association invites residents to help on March 28th to preserve choice, competition, and quality service.

Mixed-Municipal Solid Waste

After the February 28, 2011, City Council meeting, Councilmember Nephew requested information on Ramsey County trash haulers' requirements for disposing of mixed-municipal

solid waste (MSW). Following is a summary of MSW prepared by Dan Krivit of Foth Infrastructure & Environment, LLC:

1. Most trash haulers in Ramsey County take a majority of their MSW to the Ramsey/Washington County Resource Recovery facility in Newport. The current, primary legal mechanism for these MSW supply deliveries are individual, business-to-business contracts between the haulers and the Newport facility contract operator (Resource Recovery Technologies). Therefore, while the trash haulers are not required to bring their MSW loads from Maplewood to Newport, they currently have financial and contractual incentives to do so.

2. Under the city's current open trash collection system, the city has no direct means of designating MSW (commonly known as "flow control") to a resource recovery facility.

3. Under a new organized trash collection system, the city's contract must specify recovery of MSW consistent with Ramsey County plans and policies. For example, if the city initiates an organized trash collection contract, then state law, proposed new state policies, and existing county policies would require the city to specify processing/recovery of MSW to a facility such as the Newport plant. Such contract provisions by cities, as purchasers of hauling services via contracts, have been upheld as a legal and legitimate means for cities to act as market participants in designating MSW to public resource recovery facilities.

Special City Council Meeting Summary

During the October 4, 2010, special city council meeting scheduled to take public testimony on trash collection systems, approximately 150 people attended the meeting, with 41 residents and 5 representatives of trash hauling businesses speaking to the matter. The City Council kept a list of the comments and separated them into pros, cons, pet peeves, and a wish list. A summary of the people who spoke at the meeting, comments received, and the notes taken can be found on Attachment 7.

Additional Public Comment

Since the February 28, 2011, City Council meeting, staff has received nine comments from residents of Maplewood regarding trash collection. These comments may not have been reviewed by the City Council previously, as they were specifically addressed to staff or submitted via U.S. Mail. Please refer to the comments found on Attachment 8.

Statutory Process

Minnesota Statute, Section 115A.94 (Organized Collection) sets forth the process by which a city may organize trash hauling collection. Once a city takes the first step of adopting a resolution of intent, the process could take a minimum of 180 days. There is no maximum limit on the amount of time a city studies, plans, or negotiates the issue. Further, there is no requirement that a city take action after the process if an organized system does not seem warranted. It is a planning process designed by Legislators to ensure participation from all interested parties prior to a city's decision. Following is a summary of the statutory process:

1. Notice of Hearing: A city must give a two-week notice to the public and must mail notice to all solid waste collectors operating in the city of the intent to begin planning for the establishment of an organized collection system.

2. Public Hearing: The city must hold a public hearing to consider the adoption of a resolution of intent to begin planning for the establishment of an organized collection system. The resolution is required to be adopted at least 180 days before a city can implement an organized collection system.

3. 90-Day Planning Period: After adoption of the resolution of intent, the city must develop, or supervise the development of plans for an organized collection system. The planning process must invite the assistance of solid waste collectors in the city.

4. 90-Day Negotiation Period: After the planning period, the city must discuss the organized collection arrangements with all licensed solid waste collectors who have expressed interest in participating. If the city is not able to agree on a system with a majority of collectors who have expressed interest, or upon expiration of the 90-day period, the city can propose an alternate method of organizing.

5. Findings: To document its decision, the city must make findings that describe and detail the procedures to plan and attempt implementation of organized collection, and evaluate the proposed organized collection method in light of the following standards:

   a. Achieving the stated organized collection goals of the municipality.
   b. Minimizing displacement of collectors.
   c. Ensuring participation of all interested parties in the decision making process.
   d. Maximizing efficiency in solid waste collection.

   No one factor is determinative and other local considerations may be relevant.

6. Implementation: After all these steps are taken, and after at least 180 days from the adoption of the resolution of intent, the city can proceed to implementation of an organized collection plan. Such a plan would require amendments to a city's collection ordinance. This process has its own statutory requirements and could take three months to one year to accomplish.

RECOMMENDATIONS

1. Take public testimony on the City Council's consideration to adopt a resolution of intent to organize trash collection.

2. Adopt the attached resolution of intent to organize trash collection (Attachment 9). This resolution is required by Minnesota Statutes, Section 115A.94, Subdivision 4 to begin the planning process for organized trash collection.

Attachment:
1. Ranked Goals and Objectives
2. MPCA Letter to the Mayor of Maplewood Dated March 21, 2011
3. Waste Management E-Mail Correspondence Dated September 30, 2010
4. Veolia Environmental Services E-Mail Correspondence Dated February 14, 2011
5. Maplewood Public Hearing Post Card
6. National Solid Wastes Management Association Public Hearing Notice
7. October 4, 2010, Special City Council Meeting Public Testimony and Notes
8. Additional Public Comments (Comments Received by Staff Since the February 28, 2011, City Council Meeting)
9. Resolution of Intent to Organize Trash Collection

Attachment 1

Maplewood Collection System Analysis
Goals and Objectives
March 28, 2011

Following is a ranking of goals and objectives for trash collection systems as submitted by four City Councilmembers since the February 28, 2011, City Council meeting.

1. Economic
   - Cost savings on road repairs and reconstruction.
   - Lower cost for residents (cost per household per month) due to competitive bidding.

2. Service
   - Greater leverage to correct problems with service.
   - Customized service options for residents such as:
     - Rebates for extended vacations (e.g., over four weeks without service)
     - Special collection options (e.g., garage-side pickup)
     - Large/bulky items pick up.
     - Special events pickups (e.g., Spring and Fall Clean Up events)

3. Environmental
   - To better manage solid waste and recycling.
   - Better able to direct waste to the best environmental destination.
   - Less gas and/or diesel burned.
   - Less CO_2 emitted into the atmosphere.

4. Safety
   - Safer streets.

5. Efficiency
   - Maximizing efficiency in solid waste collection.

6. Planning Process
   - Achieving the stated organized collection goals of the city.
   - Ensuring participation of all interested parties in the decision-making process.

7. Aesthetics
   - Less traffic, noise, and dust.
   - More consistent and neater looking streets during collection days.

8. Hauler Impacts
   - Minimizing displacement of collectors.

Minnesota Pollution Control Agency
520 Lafayette Road North | St. Paul, MN 55155-4194 | 651-296-6300 | 800-657-3864 | 651-282-5332 TTY | www.pca.state.mn.us

March 21, 2011

The Honorable Will Rossbach
Mayor, City of Maplewood
1830 County Road B East
Maplewood, Minnesota 55109

Dear Mayor Rossbach:

It was a pleasure meeting with you and the other Maplewood representatives on March 18, 2011, regarding Maplewood's (City) interest in organized residential garbage collection service. The Minnesota Pollution Control Agency's (Agency) recent report on organized collection (Analysis of Waste Collection Service Arrangements, June 2009), recognizes that organized collection can offer environmental benefits, economic opportunities, and operational efficiencies to cities in the metro area. The Agency recommends that each community conduct several evaluations of their programs and their impacts to determine the environmental benefits of organized collection for each community. We recommend that you study the following items in the City to help you make an informed decision.

- Efficiency of the system – Is garbage collection in Maplewood as efficient as it can be? Will organized collection improve the efficiency of the existing system? Are there additional services that the citizens and/or city would like to see provided?
- Road Impact – Garbage trucks are among the heaviest on the roads. What is their impact on the roads in the City and how much does that cost the City and taxpayers to repair?
- Recycling – Are residents of the the City recycling at an acceptable level? Will organized Municipal Solid Waste collection allow the City to improve recycling in the community through contract language with the hauler?
- Cost to Residents – Can organized collection offer residents reduced costs for garbage collection? Or increased services for the same cost and same level of garbage service?
- Local Air Emissions – Will air pollution (particulates and carbon monoxide) be reduced by organized collection?
- Are there safety issues associated with truck traffic that can be reduced through organized collection?
- City Administration – Organized collection only provides benefits when the City is committed to actively managing the contracts. Is this something that the City is prepared to do?

As our study summarizes, many cities have concluded that organized collection is a sound local decision that leads to economic and environmental benefits. Thank you for discussing this issue with us. Please keep us informed with significant developments and feel free to contact me or my staff as the City discusses this issue.

Sincerely,

Tim Scherkenbach
Special Assistant to the Commissioner

RESOLUTION NO. _____

CITY OF MAPLEWOOD
COUNTY OF RAMSEY
STATE OF MINNESOTA

RESOLUTION OF INTENT TO ORGANIZE TRASH COLLECTION

WHEREAS, Maplewood has an open trash collection system with nine residential trash haulers licensed in the city in 2011.

WHEREAS, Minnesota Statute, Section 115A.94, Subdivision 4(a) requires a city adopt a resolution of intent to organize trash collection before implementing an ordinance, franchise, license, contract or other means of organizing collection.

WHEREAS, Minnesota Statute, Section 115A.94, Subdivision 4(b) requires a city to hold a public hearing prior to adopting the resolution of intent to organize trash collection.

WHEREAS, on March 28, 2011, the Maplewood City Council held a public hearing to take testimony from interested persons, including persons licensed to operate solid waste collection services in the city, prior to the adoption of a resolution of intent to organize trash collection.

NOW, THEREFORE, be it resolved that the Maplewood City Council hereby adopts a resolution of intent to organize trash collection for the following reasons:

1. To begin a planning process.
2. To initiate additional public participation.
3. To evaluate all trash collection system options, including evaluating the city's current open trash collection system for potential improvements.

Adopted this 28th day of March, 2011.

By: _____
Mayor

Attest: _____
City Clerk

Roseville Public Works, Environment and Transportation Commission

Agenda Item

Date: November 22, 2011 **Item No:** 8

Item Description: Look Ahead Agenda Items/ Next Meeting December 27, 2011

Suggested Items:

- Overhead Electric Undergrounding Policy Review
- Overview of Ramsey County 2012-2013 Projects (Rice St. and Co. Rd. B-2)
-

Recommended Action:

Set preliminary agenda items for the December 27, 2011 Public Works, Environment & Transportation Commission meeting and consider date change or defer items to January meeting.