

Recycling Hotline:

Re-examine role and increase efficiencies

September 2014

A Report by the Office of the Auditor

Suzanne Flynn

Metro Auditor

Angela Owens

Senior Management Auditor

Kathryn Nichols

Senior Management Auditor



Knighton Award for Auditing

Audit receives recognition

The Auditor's Office was the recipient of the Bronze Award for Small Shops by ALGA (Association of Local Government Auditors). The winning audit is entitled *"Tracking Transportation Project Outcomes: Light rail case studies suggest path to improved planning"*. Auditors were presented with the award at the ALGA conference in Tampa Bay, FL, in May 2014. Knighton Award winners are selected each year by a judging panel and awards presented at the annual conference.

Metro Ethics Line

The Metro Ethics Line gives employees and citizens an avenue to report misconduct, waste or misuse of resources in any Metro or Metro Exposition Recreation Commission (MERC) facility or department.

The ethics line is administered by the Metro Auditor's Office. All reports are taken seriously and responded to in a timely manner. The auditor contracts with a hotline vendor, EthicsPoint, to provide and maintain the reporting system. Your report will serve the public interest and assist Metro in meeting high standards of public accountability.

To make a report, choose either of the following methods:

Dial 888-299-5460 (toll free in the U.S. and Canada)

File an online report at www.metroethicsline.org



SUZANNE FLYNN

Metro Auditor

600 NE Grand Avenue

Portland, OR 97232-2736

Phone: (503)797-1892 Fax: (503)797-1831

MEMORANDUM

September 17, 2014

To: Tom Hughes, Council President
Shirley Craddick, Councilor, District 1
Carlotta Collette, Councilor, District 2
Craig Dirksen, Councilor, District 3
Kathryn Harrington, Councilor, District 4
Sam Chase, Councilor, District 5
Bob Stacey, Councilor, District 6

From: Suzanne Flynn, Metro Auditor 

Re: Audit of the Recycling Hotline

This report covers our audit of Metro's Recycling Hotline. Our objectives were to determine if the program could better meet waste prevention and recovery goals by broadening its reach and expanding the ways it communicates with the region's residents. We also wanted to determine if resources could be shifted to other activities in order to achieve efficiencies. This audit was included in our FY 2013-14 Audit Schedule.

Government has a responsibility to carefully manage public resources. To that end, programs should periodically be examined and considered for redesign. Our audit of the Recycling Hotline found evidence that continued expenditure of public resources may not be in the public's best interests in the long term.

Utilization of the hotline has dropped dramatically since 2002 as the public turns to different communication channels that are available on demand at any time. The hotline only reaches about 4% of the region's population. Most recipients of this service live in Multnomah County and are not representative of the residents who reside in the region. Although callers are very satisfied with the service, any actions taken to increase efficiency will have a marginal effect. We conclude that Metro should reassess its use of these resources.

We have discussed our findings and recommendations with Martha Bennett, COO; Scott Robinson, Deputy COO; Jim Desmond, Director, Sustainability Center; and Matt Korot, Program Director, Resource Conservation and Recycling. A formal follow-up to this audit will be scheduled within 2 years. We would like to acknowledge and thank all of the management and staff who assisted us in completing this audit.

Table of Contents

Summary	1
Background	3
Scope and methodology	5
Results	7
• Recycling environment has evolved	7
• Consumer preferences for information have changed	8
• Effectiveness reduced by limited reach	9
• Balanced focus on quality and efficiency needed	11
• RIC could better align personnel with workload	11
• Non-phone tasks could be handled more efficiently	13
Recommendations	15
Management response	19
Appendix	23

Summary

Metro's Resource Conservation and Recycling Division has operated a recycling telephone hotline that provided information and referral on recycling for over 30 years. This service was extended to an online tool in 2004 that also helped residents and businesses find places to recycle or dispose of unwanted items. This audit reviewed operations of Metro's Recycling Information Center (hotline and online tool) to determine if services could be provided more effectively and efficiently.

There have been two significant changes in the environment in which this program operates. These changes were first noted in an audit completed in 2008. That audit recommended a shift in resources within the larger Division to better reflect changing strategies in waste management. Increasingly, efforts have shifted to preventing waste rather than recycling. Another dramatic shift was the increased preference for online and mobile information. There have been steady increases in the number of internet users and from 2011 to 2013, the percent of adults using smart phones increased from 35% to 56%. While Metro adjusted some to this new climate, we found that there was more that the organization could do.

Consistently, those who used the telephone hotline were very satisfied with the service. But the reach was limited and the number of calls declined each year since 2002. Callers in 2013 represented about 4% of the region's population. These callers were not as diverse as the total population and resided for the most part in Multnomah County.

Further, the hotline continued to serve primarily residents seeking information on recycling. It had limited success in incorporating messages about waste prevention and reuse in its conversations with callers. To have a greater impact, businesses would have to seek the hotline's services.

After analyzing the hotline workload, we concluded that there were some efficiencies that could be gained. Staffing could be better matched to the rate of incoming calls potentially freeing up time to perform other tasks. Some of the off-phone tasks could also be redesigned.

We recommend that the hotline's role and function within the organization be examined and other strategies more in line with the current environment be implemented. To support new strategies, we also recommend that the Division address the inefficiencies that we noted.

Background

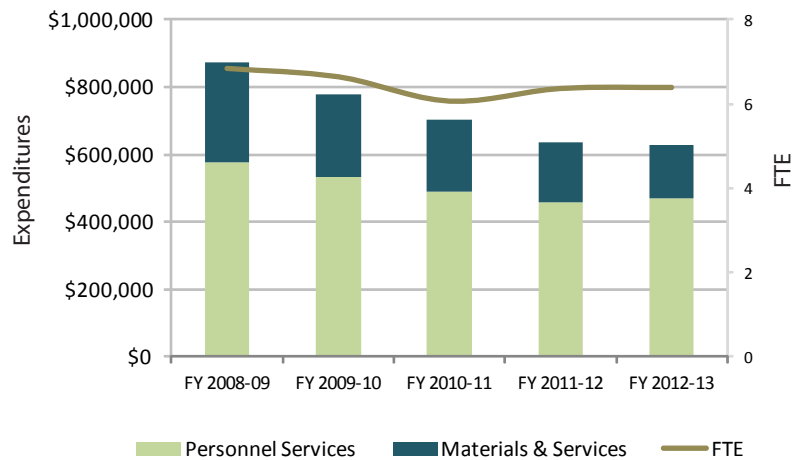
Metro's Recycling Information Center (RIC) operated continuously for over 30 years as a telephone hotline that provided information and referral on recycling. Since 2004, the RIC maintained an online Find-a-Recycler tool to help residents and businesses find places to recycle or dispose of unwanted items and materials. The hotline also served as the phone contact for Metro's disposal stations, hazardous waste facilities and the Metro Paint program. Additionally, the RIC had agreements with the Oregon Department of Environmental Quality to answer statewide calls about household hazardous waste collection events and electronics disposal.

Annual calls to the hotline were highest in 2002, and have declined since then. At the same time, use of the web-based Find-a-Recycler tool increased. Customers most frequently called to inquire about where to drop an item (50%) or for general recycling information (26%).

The RIC was part of Metro's Sustainability Center and operated out of the Resource Conservation and Recycling Division. A manager oversaw the program specialists and temporary employees who staffed the RIC, as well as two other school-based outreach workers.

The primary source of revenue for the RIC was Metro's Solid Waste Operating Fund. Expenditures for the RIC were about \$629,000 in FY 2012-13. Total program costs decreased by 28% over the last five years (Exhibit 1).

Exhibit 1
RIC expenditure and staffing
FY 2008-09 to FY 2012-13
(adjusted for inflation)



Source: Auditor's Office analysis of expenditure data in the accounting system. Coding of program expenditures may not be consistent across all years.

Scope and methodology

The purpose of this audit was to identify ways the RIC could provide services more effectively and efficiently. There were two objectives:

1. Determine whether the RIC could better meet waste prevention and recovery goals by broadening customer reach and expanding communications channels.
2. Determine if staff resources could be shifted to other activities to improve efficiencies.

The audit scope was generally focused on RIC program activities over the last five fiscal years. Our analysis of staffing and workload used calendar year data for 2013 because that was the most current data available from the new phone system. Because the RIC had a long history, some of our analyses also considered longer trends. We reviewed the RIC in light of the broader goals of the Resource Conservation and Recycling Division (Division). We did not audit other Division activities.

To accomplish our objectives, we reviewed waste and recovery goals in state and regional plans, including the Regional Solid Waste Management Plan (Regional Plan). We reviewed RIC program documents, Metro budgets and previous related audits. We conducted interviews with RIC managers and staff. We also interviewed staff in other Division programs and those in the Communications and Information Services departments who worked with the RIC program in the areas of outreach and technology.

We reviewed the literature on call centers to identify the elements of well-managed centers. We also contacted other recycling hotlines, call centers and governments to identify best practices for use of online channels and social media by public sector organizations. We documented trends in consumer preferences for communicating with government based on surveys conducted in the region and nationally. We reviewed work plans and reports to assess Metro's marketing and outreach efforts to broaden the reach of the RIC.

We analyzed program expenditure and staffing data compiled from Metro's accounting and timekeeping systems using Erlang statistical models. We assessed the customers served by the RIC based on program data on calls and online traffic, as well as customer surveys. We developed estimates of staff needed to meet current workload and performance levels based on methods used widely by other call centers. We observed daily operations at the RIC. We also reviewed the results of a time study and monthly calendars to estimate the workload requirements of non-phone tasks. During fieldwork, we identified the potential for a conflict of interest within the RIC. We addressed this issue through a letter to management.

This audit was included in the FY 2013-14 audit schedule. We conducted this performance audit in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

Results

The Recycling Information Center (RIC) was one of the many ways the Resource Conservation and Recycling Division (Division) carried out its goals. Examples of other activities were:

- working with local governments on their waste prevention and recycling efforts;
- developing policies that impact legislation related to how items are packaged;
- implementing internal sustainability practices; and
- providing education and technical assistance to the building industry.

A previous Auditor's report on Waste Reduction and Outreach recommended the Division shift more of its resources to waste prevention. A subsequent follow-up showed that all but one of the recommendations were in process or implemented. The subject of this current audit, the RIC, presents another opportunity for the Division to shift its resources and focus more on waste prevention.

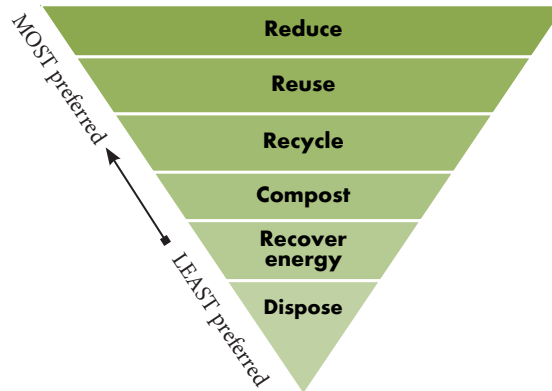
Two significant changes in the recycling environment suggested that it is time to reassess the hotline's role. One was the need to reduce the overall amount of waste the region generates. The goals for managing waste have shifted to preventing and reducing the generation of waste. The other change was an increasing consumer preference for getting information online. Over the years, calls to the hotline have declined and callers made up a small percentage of the region's population. Hotline personnel and workload could be better aligned to increase efficiencies. This would create opportunities to shift resources to other program activities.

Recycling environment has evolved

The recycling environment has evolved since the RIC began providing services 30 years ago. Recycling programs were established and the percentage of waste diverted from landfills (recovery rate) increased 33% between 1997 and 2012. A 2012 Metro survey found that 95% of residents in the region always or often recycled at home.

In more recent years, state and regional waste management goals have focused on preventing and reducing waste before it was generated rather than after consumption and at the end of use. Metro's 2008 Regional Plan used a waste management hierarchy to guide solid waste practices (Exhibit 2). It ranked waste prevention and reuse efforts above recycling. In 2012, the DEQ adopted a new framework for the management of materials that emphasized waste prevention through the full life cycle of materials and products.

Exhibit 2
Waste management hierarchy



Source: Oregon Revised Statutes 459.015; Oregon DEQ; RSWMP 2008-18, 2008.

Hotline specialists attempted to incorporate messages of education, waste prevention and reuse in their conversations with callers. Additionally, the RIC’s online Find-a-Recycler tool provided options for reuse and donation. The hotline had limited success in shifting its focus away from recycling. In 2013, about 2% of calls were classified as related to reuse, waste reduction or toxic reduction.

**Consumer preferences
for information have
changed**

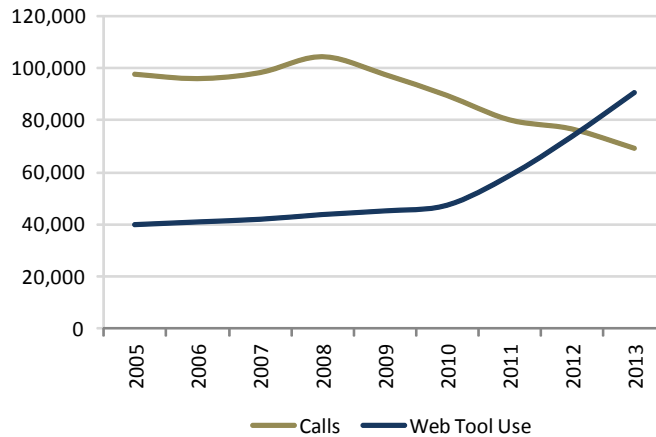
A 2013 national survey by the Pew Research Center found steady increases in the number of internet users and those belonging to a social network over the past several years. Between 2011 and 2013, the percentage of adults using smart phones increased from 35% to 56%.

Governments and businesses are expanding the use of online channels to communicate with the public, generate interest, enhance engagement and promote certain behaviors. For example, GPS technology can be used to find the nearest service location. Social media can be used to encourage behaviors such as recycling, or to potentially increase reach to underserved populations. Self-service applications provide users with information similar to what they would be able to get by making a phone call. Online channels also allow consumers to access information in the format they prefer and at any time.

Results from a 2012 Metro survey found that the majority of respondents in the region (73%) were most likely to use the internet to get information about recycling. About 40% said they would contact the RIC hotline. Customer satisfaction surveys of callers also showed increased preferences for and increased use of online channels. From 2004 to 2014, the percentage of callers who had ever looked for recycling or disposal information on the Metro website increased from 18% to 58%.

RIC expenditures were reduced to reflect the downward trend in calls, but may have to be adjusted more in the future as hotline calls continue to decrease and people increasingly get their information online. Call volume was highest in 2002 and has dropped about 33% over the past five years, according to the RIC’s reports. Use of the web tool increased over the same time period (Exhibit 3).

Exhibit 3
Hotline calls and use of web tool
2005-2013



Source: Auditor’s Office analysis of RIC program reports. Web hits for 2012 and 2013 based on web visits to the Find-a-Recycler tool from Google Analytics and may not be consistent with measurement in previous years.

The RIC added some new technologies to its phone services. In December 2012, the RIC began to use an automated phone system and callers had the option to hear hours of operation or facility location without speaking to a specialist. The RIC also implemented an online Find-a-Recycler search tool in 2004. This tool provided the public with the same information the RIC specialists used during calls to advise customers where to take their items. Providing this information online allowed consumers to access information about recycling and reuse at any time.

The RIC could do more to use its technologies to full capacity. For example, the RIC’s automated messages could better direct callers to the Find-a-Recycler online tool. The RIC could also improve how it uses information about who uses the online tool. These tracking capabilities were lost in 2011, but according to management were restored recently.

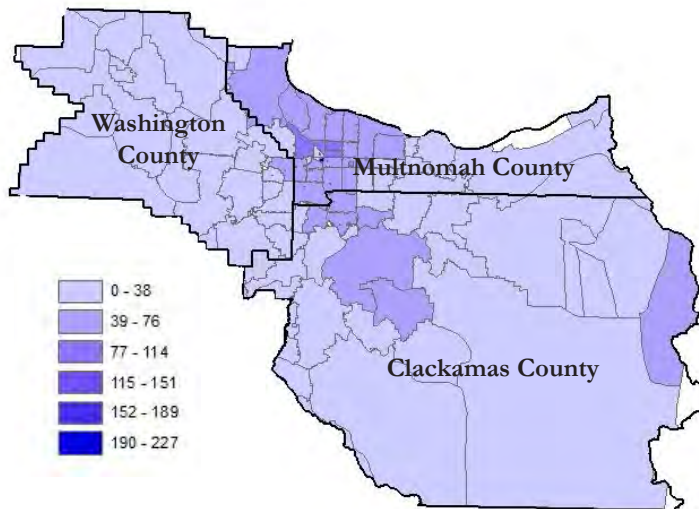
Effectiveness reduced by limited reach

The hotline served a small percentage of the region’s population and those it served were not representative of the region as a whole. Given this limited reach, it would be difficult for the hotline to impact segments of the population that have the largest potential to contribute to waste prevention goals.

We estimated that in 2013, the ratio of RIC callers to the region's adult population was about 4%. Customer surveys showed that between 2001 and 2013, the percentage of those identifying as repeat callers increased steadily from 40% to 67%. This, coupled with declines in calls overall, suggested that the RIC was serving fewer new customers.

According to the RIC's customer surveys, the population using the hotline lacked diversity and was not representative of the region. Controlling for population, the majority of calls in 2013 were made from Multnomah County (Exhibit 4). Surveys going back many years showed consistently that most respondents were older, white, college educated, higher-income and long-time residents.

Exhibit 4
RIC calls per 1,000 residents
2013



Source: Auditor's Office analysis of RIC call data and geographic data from the Metro Regional Land Information System.

The ability of the hotline to impact waste reduction in the region would likely be limited. Call data showed that the RIC answered calls from predominantly residential callers. For example, in 2013 over 91% of the hotline's customers were residential. The 2008 Regional Plan estimated that this sector would have a much smaller impact than business and construction sectors on potential recovery.

Outreach and marketing efforts to raise awareness of Metro services may not have had a large impact on the number of calls the hotline received. These efforts included Hispanic outreach, Recycle More Recycle Less and Ask Metro. Recent Hispanic outreach efforts were intended to increase awareness and use of Metro's services, with the broader goal of promoting sustainable living and recycling in the Hispanic community. According to the RIC manager, outreach efforts have had more of an impact on website activity than on calls, and the impact on hotline calls has been incremental.

The Recycle More Recycle Less and Ask Metro campaigns were intended to encourage better recycling and waste reduction behaviors, and raise awareness. The Recycle More Recycle Less strategy anticipated, among other things, that the RIC would be one resource for shifting focus from disposal and recycling to reusing and reducing. The pilot for this campaign showed little immediate impact on RIC calls about reuse and waste reduction between May and July 2013.

The Ask Metro campaign was intended to build awareness of Metro and directed questions about a broad range of topics to the hotline and Metro's website. Call data showed no increase in calls during the first month of the campaign compared to calls from the same time the year before. However, it was too soon to judge the impact on calls given the limited timeframe for review.

Balanced focus on quality and efficiency needed

Effective call centers strive to maintain high levels of service quality while monitoring efficiency and costs. While there will always be trade-offs between quality and efficiency, managers have a responsibility to take a balanced view when public resources are involved. The hotline focused on customer service and conducted regular surveys which showed consistently high levels of satisfaction among those who called. Metro management viewed the RIC as a long-standing program with a strong reputation in the community. As discussed previously, these positive results were limited to a small subset of the region's population.

We were unable to identify that the RIC hotline used many of the management tools used by other call centers to monitor program efficiency. A 2011 survey of federal call centers found that 68% had adopted a service level performance standard. Another local government hotline we looked at with workload and staffing levels similar to the RIC used performance standards to monitor efficiency. The RIC tracked current year costs, but did not track expenditures over time. Data for monitoring many call metrics were available through the RIC's automated phone system, but this capacity was not fully utilized. The program has not set goals or monitored performance standards related to efficiencies.

RIC could better align personnel with workload

Based on a workload model commonly used by call centers we determined that the RIC was overstaffed by about .9 FTE in 2013. This model predicts the minimum number of call takers needed for each shift based on:

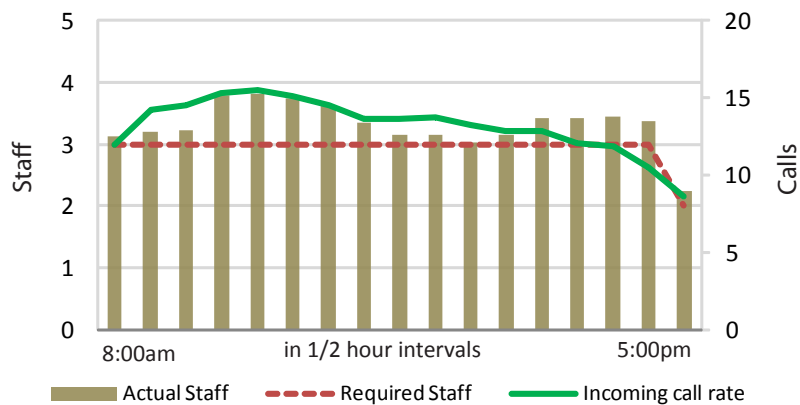
- the number of calls.
- the average duration of each call.
- response times.

The ideal staffing level insures that call goals are met with the fewest number of personnel. Changes in any one of these metrics would increase or decrease the call takers required. For example, decreases in calls received would require fewer personnel. Spending more time with each caller would increase personnel requirements. If performance goals are reduced so that caller wait times are longer, staff requirements would also be reduced.

The workload model estimated that three call takers were needed for most shifts, but it did not consider leave, hours of operation or time spent on off-phone activities. Taking all of these factors into account, we determined that the RIC needed a total of 5.2 FTE to cover each shift given actual call volume and average response times in 2013. The RIC's actual staffing level of 6.1 FTE included 5.0 FTE in regular staff and the equivalent of 1.1 FTE of temporary staff. These calculations indicated the RIC had .9 more staff than required. Calculations for the staffing factor and requirements are detailed in the Appendix. Historical workload and staffing trends also indicated potential overstaffing.

Call patterns varied by time of day, day of the week and seasonally. The workload model indicated that in 2013 the RIC had more personnel than needed to handle calls in the afternoons, especially during the winter months when call volumes were relatively low. This presented an opportunity for staff resources to be shifted to other areas of the program. However, we also found understaffing on Saturdays and on the days following holiday weekends. The exhibit below illustrates how hotline calls fluctuated throughout the day.

Exhibit 5
Actual and required staffing
by time of day
CY 2013



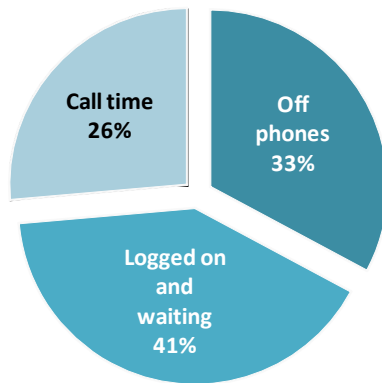
Source: Auditor's office analysis of RIC phone data.

The RIC has not adopted the best practice of using call data to schedule staff based on workload. Work schedules were generally the same throughout the year and for most days of the week. Program staff worked in an open setting which allowed regular communication. They used informal systems to determine who was logged on and ready to take calls, and when to take breaks during the day.

**Non-phone tasks
could be handled more
efficiently**

In 2013, the RIC specialists handled an average of about 7 calls per hour and on average calls lasted about two minutes. Staff spent about 26% of their work time handling calls and 41% logged onto the phones and waiting for calls (Exhibit 6). About 33% of staff work time was spent off the phones, on breaks and at meetings and trainings.

Exhibit 6
Staff time by activity
2013



Source: Auditor's Office analysis of automated phone report.

Call centers can use an agent occupancy rate to measure the efficiency of staff at answering calls. This rate is calculated as the time spent handling calls as a percentage of time logged on to the phones (answering and waiting for calls). The RIC's occupancy rate for 2013 was 39%. The recommended standard in large call centers is 85%-88%, but the literature notes that small centers will have difficulty maintaining this level. We found references to average occupancy rates of 75%, much higher than the RIC's rate.

The primary reason for the low occupancy rate at the RIC was that specialists performed a number of other tasks while remaining logged in to the phones. These tasks included:

- responding to emails and after-hours phone messages.
- running data reports.
- distributing and maintaining an inventory of publications on recycling.
- scheduling temporary staff.
- keeping the referral database up to date and accurate.

We observed that phone specialists were knowledgeable, worked hard and kept busy, but some had difficulty getting tasks completed in a timely fashion because of ongoing phone interruptions. Some staff expressed frustration during interviews about the challenge of sustaining focus when doing non-phone work.

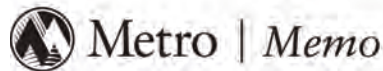
The process used to conduct annual updates of the referral database could also be more efficient. The RIC's annual update process was manual, paper-based and labor intensive. It required phone calls to over 500 different recycling organizations about location, phone contact, hours of operations, materials accepted and pricing. It involved multiple steps by many different RIC staff. We found delays during this year's update process, which could result in inaccurate referrals into the summer months when call activity is typically highest. Because this database was used both by online users and the specialists who assist hotline callers, it was important to insure that it was accurate and up to date.

Recommendations

1. To more effectively meet current regional waste prevention and reduction goals and shifting consumer preferences for information, Metro should:
 - a. Reassess the hotline's role within the organization.
 - b. Identify and implement other strategies to broaden reach.

2. In order to operate more efficiently and effectively, the RIC hotline should:
 - a. Schedule staff to align with workload.
 - b. Redesign off-phone tasks to increase efficiency.
 - c. Shift resources to match current waste reduction goals.

Management response



Date: September 10, 2014

To: Suzanne Flynn, Metro Auditor

From: Martha Bennett, Chief Operating Officer
Scott Robinson, Deputy Chief Operating Officer
Jim Desmond, Sustainability Center Director
Matt Korot, Resource Conservation & Recycling Program Director
Vicki Kolberg, Resource Conservation & Recycling Manager

Subject: Management response to Recycling Hotline audit

Thank you for the opportunity to respond to your recent audit on the operations of the Recycling Information Center (RIC), which had a specific focus on the “Hotline,” the telephone based service of the RIC. We appreciate the time and effort that you and your staff expended. The audit report provides useful findings and recommendations that can help us to continue to improve our work.

In this memorandum we provide our responses to your recommendations. These responses also address some of the findings reported in the *Results* section of the report.

Recommendation 1: To more effectively meet current regional waste prevention and reduction goals and shifting consumer preferences for information, Metro should:

- a. Reassess the hotline’s role within the organization.
- b. Identify and implement other strategies to broaden reach.

Response:

- a. In regard to current regional waste prevention and reduction goals, we do not believe that a reassessment of the hotline’s role is necessary. The work of the Sustainability Center’s Resource Conservation and Recycling division (RCR), of which the hotline is a part, is guided by two principal documents:
 - Chapter IV of the Regional Solid Waste Management Plan (RSWMP), which delineates the waste reduction efforts that Metro and its partner local governments will implement in the region. This chapter fulfills Metro’s statutory requirement to have a waste reduction plan.
 - The RCR’s Strategic Action Plan, which builds on the RSWMP to identify, in additional detail, specific actions that the RCR will take in implementing elements of the RSWMP waste reduction plan. This strategic action plan utilizes a product lifecycle (also referred to as “materials management”) perspective that is not fully fleshed out in the RSWMP.

The relevance of these two documents to this audit is that they provide context for the role of the hotline in Metro’s waste reduction work. The RIC as a whole, and the hotline function specifically, is one tactic within one strategy (consumer education) employed by the RCR to carry out this work. As such, we expect the hotline to operate consistent with Metro’s overall waste reduction objectives, but it is not a primary means of driving behavioral or structural change related to waste prevention. That said, one of the elements that is

characteristic of both the integration of the RIC into the RCR's broader work and the excellent work of the hotline itself, is that the specialists actively look for opportunities to move conversations with callers from how to get rid of something to how to reuse or prevent in the first place.

In terms of the hotline's role, it's also important to note that the hotline does not exist solely to help implement the waste reduction plan. Its responsibilities include providing information about the services provided by Metro's transfer stations, household hazardous program and MetroPaint. In fiscal year 2013-14, 47% of the calls received by the RIC related to these services.

Regarding shifting consumer preferences for information, we agree with you that this needs to be front and center if the RIC is going to stay relevant. We believe we have already taken significant steps in this direction, with others on the horizon. Metro has provided the Find A Recycler database on its website as an alternative and supplement to the hotline since 2004. Staff in Metro's Information Services department have noted that this effective tool is one of the most comprehensive such databases they have seen, with a vast amount of location-based data that is dynamic and mobile device-friendly. Find A Recycler has expanded our reach, with 66% of the 93,000 visits during fiscal year 2013-14 being new users of the site. The remaining 34% of users are indicative of the brand loyalty that the tool has engendered, similar to that developed with callers to the hotline. RIC staff is responsible for populating and keeping current the content of Find A Recycler.

In addition, RCR, Communications and Information Services staff are jointly developing a pilot project to test an online "chat" or social media-based service to provide another option to customers for getting information. Implementation of this pilot is not planned until after the new Metro web site has been in operation for six months and Communications and Information Services have assessed its overall functionality and user satisfaction, since those factors will, at least in part, shape the demand for and effectiveness of a new function.

All of these actions, including our continuing use of the hotline, reflect a commitment to provide our region's citizens with options for how they get information.

- b. We agree with you that the reach of the hotline is not broad and we need to continue to identify, implement and assess additional or alternative approaches for driving a more geographically and demographically diverse set of customers to information that Metro provides, whether it's the hotline, Find A Recycler or other sources. At the same time, it would be unrealistic to expect that we will achieve a completely demographically balanced customer base, since, as the report notes, customer preferences for how they receive information are changing. For example, the report correctly points out that hotline users are older than the general population. Given differences in generational preferences for how to receive information, we may not move that needle much, so we need to meet younger customers' needs through our online services. However, there certainly seems to be potential to attract more geographically and racially diverse callers to our hotline and we are committed to continuing to work in this area.

Recommendation 2: In order to operate more efficiently and effectively, the RIC hotline should:

- a. Schedule staff to align with workload.
- b. Redesign off-phone tasks to increase efficiency.
- c. Shift resources to match current waste reduction goals.

Response:

- a. Your analysis of call volumes and off-phone work as they related to staffing levels is helpful. The conclusion that the RIC is overstaffed by 0.9 FTE relative to call center industry norms may not be as straightforward as it seems, because the work of the RIC is part of the RCR's overall work plan and excess capacity above what is required to make the hotline function is used to support other priority projects within the RCR. However, for longer term planning, we can use the data on hourly and daily call volume trends to better calibrate base staffing levels for the hotline function. Over time, this can inform decisions on both staffing for the RIC and allocation of duties for non-RIC work.
- b. The findings regarding redesigning off-phone tasks to increase efficiency are also helpful. We will investigate options for doing this in order to be more effective at our work, support the desire of RIC staff to be as efficient as possible, and to allow us to better calibrate base staffing levels.
- c. As noted in our response to Recommendation 1a, we do not believe that an overall shift in resources allocated to the hotline is necessary to align with current waste reduction goals. Instead, some shifting may become feasible if the RCR identifies available capacity as a result of more closely determining base staffing levels for call services and finding efficiencies from better design of off-phone tasks.

Appendix

Calculation of Staffing Factor and Staffing Requirements

Given call volume, the average duration of each call, and the average time it took staff to answer calls, we determined that 3.0 FTE were needed for each shift. However, because of several other factors that reduce the amount of time staff are available to answer calls, we calculated the total amount of program staff needed.

The calculation begins with a total of 2080 work hours per year per full-time equivalent staff. See table below. Each adjustment then subtracts out the average time staff will not be available to provide phone coverage due to leave, breaks and off-phone work. All of these adjustments are captured in the Leave Factor (the ratio of staff needed above 1.0 FTE to actually have 1.0 FTE available). Two additional factors are then applied to adjust for the RIC's work hours and the fact that the hotline must be staffed six days a week. Each of these factors is then multiplied together to calculate the final staffing factor. This staffing factor is then multiplied by the number of call takers required per shift to calculate the total FTE requirement for the program.

Calculation of Staffing Factor		Data source and calculation details
Total Hours per FTE	2080	Annual work hours per FTE
LEAVE Hours	-288	Auditor analysis of Kronos timekeeping data for RIC staff in 2013. Leave includes holidays, vacation and all other absences. Average accounts for the fact that temporary employees are not eligible for leave.
Work Hours less LEAVE	1792	Average leave hours subtracted from total hours.
BREAK Hours	-112	Factor calculated as $.5 / 8 = .0625$ to capture the fact that RIC specialists are eligible for .5 hour of off-phone break time per 8 hour work day: two 15-minute breaks. This ratio was applied to Work Hours less Leave to calculate average annual break hours.
Work Hours less LEAVE + BREAKS	1680	Average break hours subtracted from Work Hours less Leave.
OFF-PHONE Hours	-153	Average off-phone hours to attend meetings, trainings and do other administrative tasks. Calculated based on RIC Time study and calendars for March and May of 2014. Average also includes 1.5 hours of off-phone time per week for regular staff.
Estimated Hours Available	1527	Off phone hours subtracted from Work Hours less Leave and Breaks.
LEAVE FACTOR	1.36	Leave factor captures time not available due to leave, breaks, and off phone work. Calculated as Total Paid Hours / Estimated Hours Available.
RIC HOURS FACTOR	1.06	The RIC was staffed from 8:30 am to 5:00 pm which is 8.5 hours, but specialists work an 8 hour day. Factor is calculated as $8.5 / 8$.
RIC WORK WEEK FACTOR	1.20	Adjustment factor is calculated at 6/5 to capture the fact that the RIC must be staffed 6 days a week, but staff work a 5 day work week.
STAFFING FACTOR	1.74	Final Staffing Factor calculated as LEAVE FACTOR * HOURS FACTOR * WORK WEEK FACTOR.
CALL TAKERS REQUIRED PER SHIFT	3	As estimated by the Erlang staffing model based on call volume, call duration, and response times.
CALCULATED FTE REQUIREMENT	5.2	CALL TAKERS REQUIRED * STAFFING FACTOR
ACTUAL FTE	6.1	Includes FTE of specialists and temporary staff.
Difference between Actual and Required FTE	0.9	Calculated FTE Required based on Staffing Factor subtracted from actual FTE.



METRO

Office of the Metro Auditor
600 NE Grand Avenue
Portland, Oregon 97232
503-797-1892
www.oregonmetro.gov