600 NE Grand Ave.
Portland, OR 97232-2736

Metro | *Agenda*

Meeting: **Metro Council Work Session**
Date: Thursday, October 22, 2015 **REVISED 10/19/15**
Time: 2:00 p.m.
Place: Metro Regional Center, Council Chamber

CALL TO ORDER AND ROLL CALL

2:00 PM	**1.**	**CHIEF OPERATING OFFICER COMMUNICATION**	
2:10 PM	**2.**	**DISASTER DEBRIS GAP ANALYSIS REPORT**	**Paul Slyman, Metro** **Daniel Nibouar, Metro**
3:00 PM	**3.**	**TITLE V CODE CHANGES (SOLID WASTE) UPDATE AND NEXT STEPS**	**Paul Slyman, Metro** **Roy Brower, Metro**
3:55 PM	**4.**	**COUNCILOR LIAISON UPDATES AND COUNCIL COMMUNICATION**	

ADJOURN

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ADJOURN

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ការគោរពសិទ្ធិពលរដ្ឋរបស់ ។ សំរាប់ព័ត៌មានអំពីកម្មវិធីសិទ្ធិពលរដ្ឋរបស់ Metro ឬដើម្បីទទួលពាក្យបណ្តឹងរើសអើងសូមចូលទស្សនាគេហទំព័រ www.oregonmetro.gov/civilrights។
បើលោកអ្នកត្រូវការអ្នកបកប្រែភាសានៅពេលអង្គប្រជុំសាធារណៈ សូមទូរស័ព្ទមកលេខ 503-797-1890 (ម៉ោង 8 ព្រឹកដល់ម៉ោង 5 ល្ងាច ថ្ងៃធ្វើការ) ប្រាំពីរថ្ងៃថ្ងៃធ្វើការ មុនថ្ងៃប្រជុំដើម្បីអាចឲ្យគេសម្រួលតាមសំណើរបស់លោកអ្នក ។

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Metro | *Making a great place*

November 2014

Agenda Item No. 2.0

DISASTER DEBRIS GAP ANALYSIS REPORT

Metro Council Work Session
Thursday, October 22, 2015
Metro Regional Center, Council Chamber

METRO COUNCIL

Work Session Worksheet

PRESENTATION DATE: October 22, 2015 **LENGTH:** 45 minutes

PRESENTATION TITLE: Disaster Debris Gap Analysis Report

DEPARTMENT: Property and Environmental Services

PRESENTER(S): Paul Slyman, Director PES, paul.slyman@oregonmetro.gov, x.1510
Daniel Nibouar, Disaster Debris Planner, daniel.nibouar@oregonmetro.gov, x1848

WORK SESSION PURPOSE & DESIRED OUTCOMES

- **Purpose:** To provide Council with an analysis of the current state of disaster debris planning in Metro and the region.
- **Outcome:** Council members are aware of gaps, and their root causes, that need to be addressed in order for Metro and the region to have a successful disaster debris management program.

TOPIC BACKGROUND & FRAMING THE WORK SESSION DISCUSSION

The Metro Charter authorizes Metro to coordinate the metropolitan aspects of natural disaster planning and response. Following that guidance, Metro has worked with local governments on disaster debris planning since approximately 1994. For Metro, this led to the inclusion of a disaster debris policy plan in the current Regional Solid Waste Management Plan (RSWMP), the development of a draft operational plan in 2007, support to the Regional Disaster Preparedness Organization's debris planning projects, and most recently the creation of a disaster debris planning staff position. Within the Metro region, all three counties and some cities are in various stages of completing disaster debris plans. While these all demonstrate progress in disaster debris planning, a gap analysis revealed that fundamental questions about regional debris management remain unanswered. Metro's unique mix of government services and sites makes it challenging to implement successful disaster debris operations.

The analysis reviewed RSWMP Appendix B – Regional Disaster Debris Management Plan, the draft Metro Disaster Debris Management Manual, the City of Portland's completed Disaster Debris Management Annex, Washington County's draft Debris Management Annex, and the RDPO's Disaster Debris Management Framework. These plans were compared to guidance from the Federal Emergency Management Agency (FEMA) and Environmental Protection Agency, Seattle's FEMA approved Disaster Debris Management Plan, along with disaster debris best practices and lessons learned from disasters around the globe. Additionally, informal discussions were held with Metro staff, as well as with public works and emergency management staff from our jurisdictional partners.

The report identifies ten gaps (termed "Observations"), most of which stem from a lack of consensus on how Metro and its partner jurisdictions will coordinate the functions of a debris operation. Roles and responsibilities must be established to ensure an efficient and effective operation following a disaster. After these have been determined, other regional issues to address to establish a disaster debris program based on best practices include:

- Developing better methodology to forecast debris before a disaster, and estimate debris after a disaster
- Identifying and assessing temporary debris management sites
- Determining how to contract with debris removal and monitoring contractors

- Increasing knowledge on the complicated FEMA public assistance process
- Researching material recovery and disposal strategies for disaster debris

During the analysis a few gaps were identified that offer Metro the opportunity to better serve the region in disaster debris management. These are specific to Metro, due to our unique suite of government services. Metro's jurisdictional partners have some type of federal or state mandated requirement for public safety and emergency response. This, combined with FEMA grant requirements mandating the adoption of the National Incident Management system, have given them experience and understanding of how to plan, prepare for and recover from a disaster. To help build a stronger foundation to support disaster debris, and any other potential emergency or continuity operations, Metro should consider developing a baseline emergency management program to create a framework for the agency to prepare for, respond to, and recover from a disaster. These topics are not the focus of this project, but some of them need to resolved both to ensure Metro's own effectiveness and also to support Metro's role in disaster debris management.

QUESTIONS FOR COUNCIL CONSIDERATION

- What, if any, questions does the Council have on disaster debris management?
- Does the Council have any questions on the status of this workplan?

PACKET MATERIALS

- Would legislation be required for Council action ☐ Yes ☑ No
- If yes, is draft legislation attached? ☐ Yes ☐ No
- What other materials are you presenting today? Disaster Debris Management Gap Analysis Report

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Disaster Debris Management Gap Analysis

August 2015

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Clean air and clean water do not stop at city limits or county lines. Neither does the need for jobs, a thriving economy, and sustainable transportation and living choices for people and businesses in the region. Voters have asked Metro to help with the challenges and opportunities that affect the 25 cities and three counties in the Portland metropolitan area.

A regional approach simply makes sense when it comes to providing services, operating venues and making decisions about how the region grows. Metro works with communities to support a resilient economy, keep nature close by and respond to a changing climate. Together we're making a great place, now and for generations to come.

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EXECUTIVE SUMMARY

The Metro Charter authorizes Metro to coordinate the metropolitan aspects of natural disaster planning and response. (Metro Charter, 2015) Following that guidance, Metro has worked with local governments on disaster debris planning since approximately 1994. For Metro, this led to the inclusion of a disaster debris policy plan in the current Regional Solid Waste Management Plan (RSWMP), the development of a draft operational plan in 2007, support to the Regional Disaster Preparedness Organization's (RDPO) debris management planning projects[1], and most recently the creation of a disaster debris planning staff position. Within the Metro region, all three counties and some cities are in various stages of completing disaster debris plans. While these all demonstrate progress in disaster debris planning, a gap analysis revealed that fundamental questions about regional debris management remain unanswered. Metro's unique mix of government services and sites makes it challenging to implement successful disaster debris operations.

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[1] The Regional Disaster Preparedness Organization (RDPO) is a partnership of government agencies, non-governmental organizations, and private-sector stakeholders in the Portland Metropolitan Region collaborating to increase the region's resiliency to disasters. The metropolitan region spans Clackamas, Columbia, Multnomah, and Washington Counties in Oregon and Clark County in Washington. Metro signed the RDPO's Intergovernmental Agreement formalizing the organization in January 2015 and sits on its Policy and Steering Committees and Regional Multi-Agency Coordination System Development Task Force. The Metro Disaster Debris Planner serves as Chair of the Regional Disaster Debris Task Force and is the project manager for a project that will continue advancing regional disaster debris management planning (funded in part by Metro and the Department of Homeland Security's Urban Areas Security Initiative (UASI) FY2015 grant through the RDPO).

adoption of the National Incident Management system, have given them experience and understanding of how to plan, prepare for and recover from a disaster. To help build a stronger foundation to support disaster debris, and any other potential emergency or continuity operations, Metro should consider developing a baseline emergency management program to create a framework for the agency to prepare for, respond to, and recover from a disaster. These topics are not the focus of this project, but some of them need to resolved both to ensure Metro's own effectiveness and also to support Metro's role in disaster debris management.

INTRODUCTION

All disasters generate debris, including building rubble, soil and sediments, green waste (e.g., trees and shrubs), personal property, ash, charred wood, appliance, hazardous waste and more. The volume and materials in the debris will depend on the type of the disaster, the area, and structures affected. In many cases, the debris is handled by municipal solid waste systems, requiring only an increase in operating times. In catastrophic disasters such as a Cascadia Subduction Zone earthquake, millions of cubic yards of debris can be generated in a matter of minutes. For example, the volume of debris generated in the coastal town of Ishinomaki, Japan following the earthquake and tsunami in March 2011 was equivalent to the amount of waste which the town would have generated over a period of103 years. (United Nations Environmental Programme, 2012) Hurricane Sandy left behind six million cubic yards of debris, enough to fill the Empire State building four times. (Federal Emergency Management Agency, 2013) This volume of waste easily overwhelms existing solid waste and recycling systems and capacities.

The clearance and removal of disaster debris is essential to all other response and recovery efforts. Effective management will open roads, prevent public health hazards, reduce environmental risks and expedite economic recovery. (Brown, Milke, & Seville, 2011) The beginning of debris management starts well before the disaster, with the *preparedness phase* of planning and training activities. The *response phase* begins immediately after the disaster occurs, and includes the clearance and removal of debris, along with coordination between jurisdictions and any debris removal and monitoring contractors. Finally the *recovery phase* determines on how the debris will be processed, and how costs may be recovered.

The purpose of this report is to identify gaps in these three phases of the region's disaster debris management plan – preparedness, response and recovery. Federal guidance, as well as best practices and lessons learned were reviewed to identify any disparities and possible solutions. A brief overview of disaster debris planning efforts is also included as an appendix to provide additional context**.**

METHODOLOGY

Metro recently hired a disaster debris planner to advance Metro's planning efforts. This staff represents Metro at local government debris planning meetings and helps coordinate regional debris planning efforts. A gap analysis was identified by the disaster debris planner as an initial step to help guide and prioritize the future work.

Work on the gap analysis began with informal discussions with Metro staff and locating reports and plans previously drafted by Metro. With the help of emergency management and public works staff at partner jurisdictions, the search was expanded to Clackamas, Multnomah and Washington counties, as well as selected larger cities, including Portland, Gresham, and Oregon City. Plans collected include the Regional Solid Waste Management Plan (RSWMP) Appendix B – Regional Disaster Debris Management Plan, the draft Metro Disaster Debris Management Manual, the City of Portland's completed Disaster Debris Management Annex, Washington County's draft Debris Management Annex, and the Regional Disaster Preparedness Organization's (RPDO) Disaster Debris Management Framework[2]. The discussions and plans provided information critical to understanding the state of debris planning throughout the Metro region.

Next, guidance from federal and state agencies were researched, including the Federal Emergency Management Agency's (FEMA) Debris Management and Debris Monitoring guides, the Environmental Protection Agency's (EPA) Planning for Natural Disaster Debris, and the State of Oregon Department of Environmental Quality's Managing and Permitting Disaster Debris. Additional research was conducted to obtain best practices and lessons learned from previous disasters, primarily the 2011 Japan earthquake and tsunami, the 2011 earthquake in Christchurch, New Zealand, and hurricanes Katrina and Sandy. Finally, the City of Seattle was kind enough to share its FEMA-approved Disaster Debris Management Plan.

The guidance, best practices and lessons learned, along with the approved plan were compared to the current state of debris planning at Metro and around the region to identify gaps. The results will be used to inform and develop the next steps of disaster debris planning at Metro, future projects for the Regional Disaster Preparedness Organization (RDPO) and will be useful for local governments throughout the region.

GAP ANALYSIS

Preparedness

Regional

Observation: The current and previous disaster debris planning has not established consensus on the roles and responsibilities between Metro and its partner jurisdictions.

- **Analysis:** Plans, and the planning process, serve as a foundation for a coordinated emergency response and faster disaster recovery. Jurisdictions that have a debris management plan are better able to restore public services and ensure the public health and safety. In Sendai, Japan, one year after the 2011 earthquake and tsunami, the city had collected almost all loose debris and moved it to temporary storage or final disposition locations. This progress put the city significantly further along in debris removal and disposal than comparably affected cities. A team of international experts from the United Nations attributed this progress in large measure to Sendai's debris plan. (United Nations Environmental Programme, 2012)

[2] Disaster Debris Management Framework was developed with the purpose of providing the RDPO and regional stakeholders with a proposed set of planning assumptions and operational concepts that could be applied during a debris-generating event that requires regional coordination.

An ideal disaster debris plan receives Federal Emergency Management Agency (FEMA) review and approval. Not only does this independent review help ensure that the plan is comprehensive, but also better positions jurisdictions to receive the full level of assistance available to them from FEMA and other participating entities on the next declared disaster. Currently, planning by jurisdictions across the Metro region is in various stages of development, from a completed City of Portland plan in 2014, to several jurisdictions working to start or finalize drafts of an initial plan; many smaller jurisdictions haven't the capacity or resources to develop a plan at all.

As planning progresses, the region needs to address the roles and responsibilities in disaster debris management. There is little consensus and understanding between the various agencies charged with disaster debris management, solid waste management and emergency management on what each will do during a disaster debris operation. While the extremes contend that Metro should be performing all tasks related to disaster debris or that Metro should only be serving in an advisory role, more commonly, the expectations are somewhere in the middle. In one plan, Metro is expected to take full responsibility for debris management sites (DMS), as well as mobilizing engineering, recycling, geographical information system (GIS) mapping, and public relations teams to coordinate debris efforts. Another plan states that Metro may be asked to identify DMSs, support joint information center efforts, provide guidance on legal compliance with regulations, organize and manage Household Hazardous Waste (HHW) events, and participate in regional coordination. Finally, a plan in development calls for variations of the above, but adds that Metro will lead a Regional Debris Public Inquiry Center.

There is one disaster debris role that the region does have consensus on, that is the role of Metro to manage HHW. All three counties in the Metro region identified that they depend on Metro's Hazardous Waste Program on an everyday basis to process HHW and will do so during a disaster. A lesson learned from the debris operation following the 2011 earthquake and tsunami in Japan was that it did not make economic or practical sense for neighboring municipalities to establish separate hazardous waste operations. The recommended solution was for the municipalities to set up a single operation and area for the safe disposal of hazardous waste. (United Nations Environmental Programme, 2012)

- **Recommendations:**

  1. Develop a regionally agreed upon list of roles and responsibilities for agencies in the region which have disaster debris management responsibilities. Include agencies from local to federal levels.
  2. Metro's Hazardous Waste Program has a Standard Operating Procedure (SOP) that addresses post-disaster HHW collection services. Integrate or reference this SOP into current local government disaster debris planning processes.

Observation: Accurate debris forecasting for various disaster types has not been completed.

- **Analysis:** Debris forecasting is critical in determining many steps of the disaster debris process. First, it will tell planners the areas which areas are likely to have the greatest amount of debris. This in turn; will then assist in the process of locating appropriately sized DMSs, and help to identify recycling, recovery, reduction and disposal strategies.

  Two forecasting models are used in the region's completed and draft debris plans. Both models are used to estimate debris from an earthquake, but neither of them addresses debris from

other hazards. It is important to ensure that planning efforts address all types of hazards that could affect the Portland region.

Additionally, the two models currently used do not offer complete data. The first model was developed by Portland State University in 1999, based on 1993 and 1996 building data. The earthquake scenarios used in this model may not accurately represent earthquake scenarios as we now know them. The study also only addresses debris from commercial and multi-family residential structures. It neither considers debris from other structures, nor other debris, such as vehicles, soil, mud, white goods (appliances), HHW, etc.

The second model was developed by the US Army Corp of Engineers specifically to forecast hurricane debris. While devastation following a hurricane and an earthquake may have some similarities, the hurricane model emphasizes debris generated primarily from residential structures and vegetation, regardless of the soil stability and building construction. Earthquake debris generation, however, depends on building height, material used in construction, and areas susceptible to liquefaction. Neither accounts for debris from landslides caused by the earthquake, which will generate significant amounts of mud and other mixed debris.

For these reasons, current forecasting is inadequate for detailed planning needs. While it is possible to create a framework plan, more accurate models and data will help create a more operational plan that considers DMS specifics and disposal methodology. It will also assist in getting more accurate pricing from debris removal contractors on pre-positioned contracts.

- **Recommendations:**

    1. Complete forecasting models for additional hazard types likely to cause debris besides earthquakes, such as severe windstorms and flooding.
    2. Research and case studies should be reviewed to find more accurate earthquake debris forecast models. At minimum, current models should be modified to include considerations more relevant to earthquakes.

Observation: An adequate inventory of Debris Management Sites has yet to be identified.

- **Analysis:** DMSs are a place to temporarily store, reduce, segregate and/or process debris, allowing for operational flexibility when landfill space is limited or not located near the debris removal area. They are established when debris cannot be taken directly from the collection point to the final disposition location, because of a disrupted transportation network, or when the debris needs to be processed before going to the final disposition location. DMSs will be invaluable, allowing for quicker removal of debris and maximizing recycling potential. Following the earthquake and tsunami in Japan, jurisdictions that setup DMSs and managed them well had significantly faster recovery than neighboring jurisdictions. (United Nations Environmental Programme, 2012) In New Zealand, the use of DMSs allowed for waste to be removed quickly and prevented it from overwhelming the waste system. (Brown, 2012)

    Smaller disasters, such as a severe winter storm or localized flood may not require their use, but DMSs will be crucial in larger disasters such as the Cascadia Subduction Zone earthquake. Considerable time and effort are required to complete environmental and historic preservation compliance reviews, as well as site planning, engineering studies and permitting. These steps need to be completed whether the process to identify sites happens before or after a disaster. The identification of DMSs prior to a disaster will ensure that sites can be opened sooner following a disaster, and is highly recommended by both FEMA and the Environmental

Protection Agency (EPA). (Federal Emergency Management Agency, 2007) (Environmental Protection Agency, 2008) (Brown, 2012)

While the jurisdictional debris management plans that have been completed or are in draft form all discuss the considerations for identifying a DMS, only the 2008 draft Metro operational plan actually identifies potential DMSs. Unfortunately, a majority of the identified sites are in liquefaction zones or floodplains, both of which put the sites at risk of being unsafe or potentially too damaged or unstable to use. In addition, no discussions with property owners, whether public or private) appear to have taken place to secure the potential use following a disaster.

- **Recommendations:**

  1. Metro should assess existing public and private solid waste operations to determine their role in disaster response. Each Metro authorization should be reviewed and potentially amended to describe roles, responsibilities and expectations in various debris generating scenarios.
  2. As roles and responsibilities of debris operations are determined, Metro and partner jurisdictions should establish whether site identification should be a jurisdictional or regional effort. Include the possibility and implications of sending debris from one county to another county's DMS.
  3. Identify and permit DMSs for eventual use, which should include establishing an agreement with the current owner for use after a disaster. The identification of these sites should follow FEMA and EPA guidance and be backed up by debris forecasting and hazard data.

Metro

Observation: Currently, Metro has neither ordinances nor policies to support emergency and disaster debris operations.

- **Analysis:** Many local jurisdictions have ordinances and policies that support emergency operations. The most common, an ordinance supporting the declaration of an emergency, helps to facilitate the parameters on which a declaration decision should be made, who is authorized to make the declaration, and suggested actions or authorities that may be included in the declaration. At this time, Metro does not have an emergency declaration ordinance. The federal public assistance process requires cities, counties and states to declare an emergency in order to be eligible for direct federal assistance or reimbursement during or after a disaster. (Federal Emergency Management Agency, 2007) It is unclear if this is applicable to Metro, as a regional government doesn't fit into the standard process as outlined in the Stafford Act, which dictates that jurisdictional disaster assistance requests and the associated federal support move from a city to a county to the State to FEMA and back. Metro may be eligible for public assistance as a special district, which does not need to declare an emergency to qualify.

  In addition, organizational policies are not developed to support debris management operations, which can leave Metro and/or its employees at risk. Personnel policies are a common example. A review of Metro's policies indicates that the agency has no policies that support debris management operations. Policies that identify which employees are essential workers who are required to respond as soon as safely possible, allow employees to work outside of their standard tasks, or establish an agreement with unions that allow individuals to

work across unions, which would prove beneficial during a disaster debris response. These policies would also support employees performing other emergency response and recovery tasks.

Finally, regulations and policies at the state, Metro and jurisdictional levels guide how the region handles solid waste on an everyday basis. Metro's jurisdictional partners have expressed interest in receiving guidance on how those regulations and policies would apply during disaster debris operations. For example, how do current regulations and policies that address the pickup of curbside municipal waste apply to a disaster debris removal contractor picking up debris from the right-of-way? What new or revised regulations and policies need to be developed to operate a debris management site?

- **Recommendations:**

  1. Metro should determine if an emergency declaration would affect or expedite potential federal reimbursement. However, even if it is determined that Metro's declaration status will not affect Metro's capability to receive Federal Public Assistance, Metro should consider the development of an ordinance to help facilitate decision criteria and delegation of authority.
  2. Review current internal policies to determine if they support emergency operations. This review should extend organization-wide, beyond the personnel policies referenced above.
  3. Current state, Metro and jurisdictional solid waste regulations and policies should be reviewed to determine their applicability to disaster debris operations.

Response

Regional

Observation: The Metro region does not have the capacity for large-scale debris removal, nor are there any pre-positioned contracts or pre-qualified contractors.

Analysis: Most disasters in the Metro region will generate an amount of debris that can be managed by local jurisdictions or existing private solid waste providers using current assets. However, less frequent, but higher impact disasters will generate a large quantity of mixed debris that will overwhelm local systems. Public Works departments and solid waste haulers do not have the number, type or size of vehicles required to clear and remove debris in a catastrophic disaster such as a Cascadia Subduction Zone earthquake. The expense and time required to maintain a fleet of vehicles to respond to that type of emergency is unrealistic.

In most catastrophic disasters, both debris removal and disaster debris monitoring operations are performed by contractors. While monitoring staff may come from jurisdictional staff, volunteers or temporary employees, the organization and training of those individuals, as well as the collection of documentation, is best done by experienced contractors.

Fortunately, in a Federally-declared disaster, FEMA will reimburse 75 to 100 percent of qualified response costs incurred by a jurisdiction. While the President determines the percentage of the maximum cost share, the due diligence of the applying jurisdiction's administrative, procurement, and financial procedures will determine if that full cost share will be received. From a procurement perspective, both the process used to select contractors and the contract type will be thoroughly reviewed by FEMA. Any concerns from FEMA will, at a minimum, delay or reduce the reimbursement and often result in an audit from FEMA years

after the disaster that requires a portion or all the funds to be returned. (Observations for the administrative and financial components are addressed in the Recovery section of this report.)

FEMA encourages jurisdictions to identify pre-qualified contractors or establish pre-positioned contracts before a disaster, using Federal, State and local contract guidelines. (Federal Emergency Management Agency, 2015) A pre-qualified list of contractors allows the jurisdiction to send a simplified bid sheet to contractors on the list after the disaster and select the contractor with the lowest pricing, thereby greatly reducing the length of the procurement process. A pre-positioned contract will already have determined the cost of debris removal before the disaster, and the jurisdiction only has to contact the contractor in order to activate the contract. Completing the procurement processes following all applicable guidelines in times of low stress can greatly minimize the potential for FEMA to identify discrepancies in the process.

There are several models across the U.S. that include pre-qualified contractors and/or pre-positioned contracts. Some states take the responsibility to establish a statewide list of pre-qualified contractors or pre-positioned contracts that can be used by any jurisdiction. In other states, individual jurisdictions establish their own contracts.

An important consideration is the location of contractors: Using local contractors can help support local businesses and economic recovery, as well as provide a quicker response. However while national contractors may have a slower response time, they usually have a greater capacity and are less likely to be affected by a disaster.

- **Recommendation:**

  1. As roles and responsibilities are determined, Metro and partner jurisdictions should agree on how to establish pre-qualified contractors or pre-positioned contracts, and at what level that procurement process should occur. This should be solidified with an intergovernmental agreement.

Observation: No regional procedures and methodology have been developed for estimating debris following a disaster.

- **Analysis:** Following a disaster, it is important to have disaster debris estimates that are as accurate as possible, to understand how much removal capability is needed, negotiate removal and monitoring contracts (if not already in place), inform a disaster declaration decision, and determine the size and locations of DMSs.

  There are several methodologies for estimation. In some cases, standard US Army Corps of Engineers' equations may provide an initial estimate; however, more accurate numbers will come information gathered directly in the field. This can be done with aerial surveys and/or in conjunction with damage assessment surveys, and this data should be acquired by the personnel performing the damage assessment. For example, some jurisdictions within the Metro region have a damage assessment plan and processes developed, but few collect debris estimates. Several use an online information sharing platform, WebEOC, to collect damage assessment information for buildings, roads and bridges, but that does not contain a component for estimating disaster debris.

  No matter the methodology used to get the information, a framework is needed to begin documenting estimates and tracking debris removal. The framework could be as simple as a

spreadsheet, but some integration into a GIS or other platform would help form a common operating picture for all the agencies managing disaster debris.

- **Recommendation:**

  1. Jurisdictions should work to determine how they will perform disaster debris estimation. Consider methodologies that allow for a quick initial estimate that will build into more accurate data.
  2. Metro and partner jurisdictions should determine the best platform to assemble a regional estimate of disaster debris.

Metro

Observation: Metro has no Continuity of Operations plan.

- **Analysis:** A Continuity of Operations (COOP) plan determines the essential functions of an organization and ensures that the organization is aware of the minimum amount of time, personnel, equipment, and facilities required to support those functions. This allows an organization to ensure that adequate substitute personnel are trained, reliable back-up equipment is purchased, and alternate facilities are available to perform essential functions within a designated period of time, if the primary resource fails or is unavailable. Without a COOP plan, Metro is at significant risk of being unable to simultaneously perform disaster debris operations, emergency operations and ongoing essential functions.

  While this observation applies to all of Metro, it particularly applies to Property and Environmental Services (PES). During a disaster, municipal solid waste (MSW) pickup may be able to be suspended for a short period of time, but for public health and safety as well as federal reimbursement requirements, pickup will need to be restored quickly. FEMA will not reimburse jurisdictions for disaster debris that is mixed with MSW, making it critical to separate these operations immediately following a disaster. As jurisdictions and private sector solid waste providers are restoring operations, they will be look at Metro for guidance on where to bring the MSW. For smaller disasters, not involving FEMA support, the separation of MSW and disaster debris may not be as important.

  Additionally, there is no requirement for Metro contractors, franchisees, licensees, etc. to ensure their capability to operate after a disaster. In the event of a disaster, Metro personnel could be forced to determine how to allocate limited staff resources to both MSW management and disaster debris operations.

- **Recommendations:**

  1. Develop a Metro COOP program that will create and maintain a COOP plan in order to ensure Metro's capability to perform emergency operations and essential functions. The COOP program will also regularly train and exercise staff.
  2. Update contracts and agreements with Metro contractors, franchisees and licensees to ensure they develop COOP plans relative to their operations and facilities.
  3. During the next revision of the RSWMP, work with stakeholders to ensure that guidance is incorporated for local governments on establishing regulations for private sector solid waste providers to develop COOP plans.

Observation: Metro staff has limited disaster response experience and little or no experience in disaster debris management operations.

- **Analysis:** A combination of factors, including the lack of natural disasters and having no direct public safety responsibilities, have resulted in Metro staff having limited experience responding to emergencies and disasters. Most incidents that have required an emergency response have been small, involving one or two departments (and often only a few employees) and limited (if any) coordination with responding agencies.

  During a disaster that requires Metro's involvement with debris, it will be critical for Metro to understand and coordinate with partner jurisdictions and regional response efforts. Metro's partner jurisdictions have direct public safety responsibilities and have conducted disaster responses. This, along with FEMA grants that mandate compliance, have led local governments to adopt and train to the National Incident Management System (NIMS) which outlines a standardized approach to incident response. NIMS was created to address two problems that arise in practically every disaster response, coordination and communication. Without an understanding of NIMS, communication and coordination issues are likely to arise between Metro and its partner jurisdictions.

  Disaster debris operations are immensely complex and a read-through of the over 300 pages of FEMA guidance does little to make it clear. U.S. Department of Homeland Security Office of Inspector General staff in 2011 interviewed local officials who had experience with FEMA and disaster debris operations. They expressed frustration over unclear and ambiguous regulations and guidance. The report also concluded that *"debris expertise is not always clearly evident in FEMA's early response teams."* (U.S. Department of Homeland Security, 2011) Metro and regional staff need to identify opportunities to gain experience in disaster debris management to ensure that operations stand a better chance of being managed appropriately in the event of a true disaster.

- **Recommendations:**

  1. To efficiently and effectively coordinate with our partners, Metro needs to adopt NIMS and then train and exercise to its standards.
  2. Work with jurisdictional partners to identify courses that will increase the region's understanding of disaster debris management. For example, FEMA conducts at least three classroom debris courses, and the US Army Corps of Engineers can provide an additional three.
  3. Following disasters in other areas of the country, look for opportunities to send staff to shadow or support affected jurisdictions.

Recovery

Observation: Experience with the FEMA Public Assistance process is limited within the Metro region.

- **Analysis:** The absence of frequent disasters in the region not only affects the level of response experience, but also the level of experience with disaster recovery, particularly the FEMA Public Assistance process. The Stafford Act and various supporting documents outline the process that jurisdictions and eligible organizations must take in order to qualify for FEMA Public Assistance funds. The process has numerous steps, and any mistakes will lead to delay, reduction or disqualification of funds. Even when meticulously adhered to, the steps will take years to complete, and the almost inevitable FEMA reviews will absorb even more time. It is imperative that jurisdictions in the region have staff who are trained in and very familiar with the process.

Several audits by the FEMA Office of the Investigator General found that public assistance guidelines are applied inconsistently by FEMA personnel, resulting in the loss of funds to disaster-affected jurisdictions. (U.S. Department of Homeland Security, 2011) Staff trained in the public assistance process are better prepared to effectively substantiate costs to FEMA, resulting in higher reimbursement.

Metro is faced with a unique situation within the public assistance process: Traditional public assistance project requests flow from a city to a county to the State to FEMA. Once approved, then FEMA funds flow in the opposite direction. Organizations that are eligible recipients of funds outside that process interact with a single city or county to process their reimbursement. Metro, as a regional government, will be outside that process. In a disaster debris operation following a catastrophic disaster, Metro will be working with three counties and up to 25 cities. FEMA could consider disaster debris operations in each jurisdiction as a separate project. Metro would then need to account for costs associated with debris for each of the 28 jurisdictions separately, even if it was all sent to and processed in a single DMS.

- **Recommendations:**

  1. Identify training for emergency management, financial and other applicable staff that addresses disaster cost recovery, in particular the processes associated with FEMA's Public Assistance. Hold regional trainings on a regular basis, with supporting exercises to ensure continued familiarity.
  2. Metro should conduct a workshop with partner jurisdictions, the State Office of Emergency Management, and FEMA to better understand the public assistance process and how Metro can best integrate into it.

Observation: Federal, State and local priorities regarding the handling and final disposition of disaster debris may differ.

- **Analysis:** As evidenced by FEMA's decisions in previous disasters and FEMA's Alternative Procedures Pilot Program Guide for Debris Removal, expedited debris removal will be monetarily incentivized. Currently FEMA will reimburse 75 percent of eligible debris removal costs (unless the president authorizes a higher percentage). In the Pilot Program, FEMA increases the minimum federal cost share of all debris removed within 30 days from 75 percent to 85 percent. All debris removed within 30 to 90 days will be reimbursed at 80 percent, and reimbursement for all debris removed between 90 and 180 days will remain at 75 percent. FEMA will not fund debris removal activities after 180 days without an extension request. At this point in time, the Alternative Procedures Pilot Program is optional, allowing jurisdictions to opt-in or opt-out. However, FEMA's priority of an accelerated removal is clear.

  It is important to understand that FEMA includes final disposition of debris within its definition of debris removal. In many cases, this means that jurisdictions decide to landfill all debris for the sake of expediency. If the time required to sort, recover and recycle or reuse the debris increases the duration of a disaster debris management to over the 30, 90 or 180-day thresholds, the jurisdiction could lose millions of dollars in reimbursement. For many jurisdictions, the financial decision will be clear.

  The residents of Oregon and, in particular, the Portland area highly value recovery, recycling and reuse of materials. While in smaller disasters disposal priorities may not be opposing, in a catastrophic disaster such as the Cascadia Subduction Zone earthquake, these interests will be in direct conflict.

In Christchurch, New Zealand, the decision to prioritize recovery, recycling and reuse was demonstrated in two ways. First, during the debris removal process, the Christchurch government clarified the importance of recovering heritage building materials and features. While this delayed the removal of debris from some locations (because cleanup work had to be done by hand or using small equipment rather than large machinery), it preserved material that could be reused and incorporated into new, more resilient buildings. (Ministry for Culture and Heritage, 2013) Secondly, the government restructured its solid waste system to expand the capabilities of current facilities, and created new operations and facilities. Of particular note is the Burwood Resource Recovery Park (BRRP), a former landfill located near Christchurch. The BRRP is a public/private joint venture designed to process disaster debris and material from the demolition of unsafe buildings. Mixed debris and demolition material is processed through a state-of-the-art resource recovery plant, achieving an impressive recovery goal of 50 percent. (Brown, 2012) (Burwood resource recovery 'damn impressive' , 2013)

- **Recommendations:**
    1. Hold conversations with both the region's residents and FEMA before a disaster, to better understand the options available to for handling disaster debris in a financially and environmentally responsible manner.
    2. Determine options for the Portland region, and perform case studies of debris management operations which focus on material recovery.

CONCLUSION

While this report addresses current gaps in the Metro region's disaster debris management planning efforts, it would be remiss if it neglected to mention the efforts of many individuals and organizations that have not only helped to make disaster debris management planning a regional priority, but have advanced it significantly from its beginnings in 1994. A large portion of these efforts have been coordinated though regional organizations, starting with the Regional Emergency Management Group which has now evolved into the Regional Disaster Preparedness Organization (RDPO). The component of the RDPO that addresses disaster debris efforts is the Regional Disaster Debris Task Force (RDDTF). The RDDTF, along with Metro and the Portland region jurisdictions, will help to discuss and fill the gaps contained in this report. It is incumbent on all public and private sector partners to support the RDDTF so that it can continue to increase the disaster debris management capabilities of the region.

As described throughout the report, the first task the RDDTF needs to address is a determination of roles and responsibilities in a disaster debris operation. This will help current plans move from being a framework, to an operational plan with details such as debris management site locations, debris estimation methodologies and material disposition strategies. It will be important that all stakeholders in debris management agree to these roles and responsibilities by including them in all applicable plans and documenting them in an intergovernmental agreement.

Metro's disaster debris program and planning efforts were a significant topic in this report. The agency's previous efforts and new commitment to disaster debris have advanced, and will continue to advance disaster debris planning both within Metro and the region. To build a stronger foundation for disaster debris planning, Metro should develop an emergency management program, which would create the framework for Metro to prepare for, respond to, and recover from a disaster. The

gaps that are focused on Metro exist in large part because of the absence of such a program. Metro's largest partner jurisdictions have emergency management programs that coordinate with the policy and legal staff to develop and adopt required ordinances and resolutions, build response experience through continuous training and exercise of applicable staff, and are responsible for the jurisdiction's continuity of operations program. For Metro to be successful in disaster debris and emergency operations for impending disasters, such as the Cascadia Subduction Zone earthquake, it will require dedicated efforts to prepare the organization.

APPENDIX A: PREVIOUS PLANNING SUMMARY

Regional disaster debris planning has been conducted in the Portland area since approximately 1994. The Regional Disaster Preparedness Organization (RDPO), previously known as the Regional Emergency Management Group (REMG), has coordinated these efforts through the Regional Emergency Management Technical Committee (REMTEC) and the Regional Disaster Debris Task Force. Metro has been involved since the beginning. (Klag, 2012)

In 1997, Metro adopted a policy plan that was updated in 2004 and incorporated into the current Regional Solid Waste Management Plan (RSWMP). This plan contains principles (e.g., ensure coordination, follow the waste management hierarchy) and objectives to guide the development of a regional debris management plan. However, the RSWMP debris policy plan does not describe any specific roles or responsibilities for either Metro or its partner jurisdictions. (Klag, 2012)

With support of a contractor, Metro developed a draft disaster debris management manual in 2008. The plan contains basic elements of a regional framework for disaster debris management, including expected debris quantities, suggested organizational structure, procedures for managing debris management sites (DMS) and a description of the documentation process. The draft plan contained a proposed role for Metro to set up and manage DMSs. (Klag, 2012) However, The draft plan was never finalized.

The next phase of work was the Portland Metropolitan Region Disaster Debris Management Planning Project that began in 2013 and was supported by a Federal grant secured by the RDPO. Through a series of stakeholder meetings, the project developed an overview of jurisdictional authorities related to disaster debris management, a planning framework to guide jurisdictions through the planning process, and a toolkit of templates. One outcome of the stakeholder meetings was a need to better define Metro's role in disaster debris management and a need for local governments to increase their knowledge of debris management. (Klag, 2012)

Currently, the RDPO is using grant funds to support a disaster debris workshop and tabletop exercise series. The workshops will be designed for participants to discuss and propose solutions to some of the unresolved issues in regional disaster debris planning. The culminating tabletop exercise will allow participants to test the validity of those solutions under a series of increasingly complex disaster scenarios.

Concurrent to regional planning efforts, several Portland area jurisdictions have completed or initiated planning processes of their own. The City of Portland completed a Disaster Debris Management Annex to their Basic Emergency Operations Plan (EOP) in 2014. Washington County has completed a draft of a Debris Management Annex to their EOP; it is currently open for comment and will be finalized later this year. Clackamas County is conducting a disaster debris management planning project with the goal of completing a Disaster Debris Management Plan by the end of the year. Multnomah County has secured grant funds to hire a consultant to support the development of a disaster debris plan starting in 2016. Metro has provided or is providing support to each of these processes.

APPENDIX B: ACRONYMS

BRRP	Burwood Resource Recovery Park
COOP	Continuity of Operations
DMS	Debris Management Site
EOP	Emergency Operations Plan
EPA	Environmental Protection Agency
FEMA	Federal Emergency Management Agency
HHW	Household Hazardous Waste
MSW	Municipal Solid Waste
NIMS	National Incident Management System
PES	Property and Environmental Services
RDDTF	Regional Disaster Debris Task Force
RDPO	Regional Disaster Preparedness Organization
REMG	Regional Emergency Management Group
REMTEC	Regional Emergency Management Technical Committee
RSWMP	Regional Solid Waste Management Plan
SOP	Standard Operating Procedure

APPENDIX C: BIBLIOGRAPHY

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Agenda Item No. 3.0

TITLE V CODE (SOLID WASTE) UPDATE AND NEXT STEPS

Metro Council Work Session
Thursday, October 22, 2015
Metro Regional Center, Council Chamber

METRO COUNCIL

Work Session Worksheet

PRESENTATION DATE: October 22, 2015 **LENGTH:** 45 minutes

PRESENTATION TITLE: Title V Code (Solid Waste) Update and Next Steps

DEPARTMENT: Property and Environmental Services

PRESENTER(S): Paul Slyman, x1510, paul.slyman@oregonmetro.gov
Roy Brower, x1657, roy.brower@oregonmetro.gov

WORK SESSION PURPOSE & DESIRED OUTCOMES
Staff will review general comments raised by the solid waste industry and other stakeholders in the proposal to change portions of Metro's Title V Code (solid waste) and recommend to Council a revised schedule and engagement plan for moving forward.

- Purpose: Overview public policy concerns raised in updating Title V.
- Outcome: Council direction on Code changes and next steps.

TOPIC BACKGROUND & FRAMING THE WORK SESSION DISCUSSION
The Metro Council considers updates to Title V of the Metro Code regarding solid waste on an annual basis. In August, staff published potential code changes as preliminary proposals on Metro's website and held a public workshop on September 3 to review the proposals with public stakeholders. The proposed changes were also shared with SWAAC, local government staff and industry stakeholders earlier. (See Attachment A for a summary of the proposed 2015 changes.) Out of this process, the following broad policy concerns were raised and are discussed below:

- Process and timing.
- Equity and fairness.
- Legal authority.

In general, stakeholders expressed concerns about the transparency of Metro's Code adoption process and not having adequate opportunity to provide meaningful input. Metro does not have a specific public engagement process for Code adoption other than the public testimony the Metro Council receives during its consideration of an ordinance. In response to stakeholder feedback, staff recommends an improved and more rigorous process for Metro's consideration of proposed changes to its solid waste code. (See Attachment B for a schematic of a proposed code adoption process.)

Process and timing: Some industry commenters expressed interest in Metro engaging stakeholders in a longer process that considers some of the issues more fully – especially concerns related to the regulation of facilities processing source separated recyclable materials, conversion technology facilities and current exemptions from payment of regional system fees and excise taxes. Some recommended that consideration of these items be moved into the 2018 RSWMP[1] process or referred to the SWAAC.[2]

Equity and fairness: Many of the comments raised by the proposals related to equity (treating all similarly situated operations the same) and fairness (everyone subject to the same set of rules).

[1] Regional Solid Waste Management Plan which is developed every ten years.
[2] Solid Waste Alternatives Advisory Committee which is charged with developing policy options for the Metro Council to consider.

While the proposals sought to remedy inequities, some industry players indicated other factors must be considered.

Legal authority: Some commenters stated their belief that Metro's legal authority was limited by the state's solid waste law (ORS 459) or by the way Metro had relied on its home rule charter authority. In both cases, Metro generally relies on its broad independent legal home rule authority in the development of its programs, projects and decision-making.

QUESTIONS FOR COUNCIL CONSIDERATION

There are three main questions for Council consideration. Council direction on these questions is critical to moving forward:

1. Does the Metro Council support continued consideration of substantive Title V code changes as charted out in Attachment B related to:
    a. Regulation of facilities that process source-separated recyclable material and waste conversion facilities?
    b. Fee and tax exemptions for solid waste that is disposed in landfills?

2. Does the Metro Council generally support using a more prescribed and rigorous process for adoption of potentially controversial code changes such as that proposed in Attachment B?

3. Would the Metro Council like staff to continue to bring forward Title V code changes that are believed to be non-controversial (see Attachment A)?

PACKET MATERIALS

- Would legislation be required for Council action X Yes ☐ No
- If yes, is draft legislation attached? ☐ Yes X No
- What other materials are you presenting today?
    - Attachment A: 2015/16 Metro Solid Waste Code Amendments and Ordinances
    - Attachment B: Solid Waste Code Adoption Process

Attachment A
Potential 2015/16 Metro Solid Waste Code Amendments

Topics for Examination in 2016:

Protect health and environment.

Evaluation of regulatory, and fee and tax exemptions is a necessary part of keeping Metro's Code update and relevant. It allows periodic examination to assure that similarly situated facilities are treated the same and that everyone plays by the same rules. Potential 2016 changes would provide the COO with authority to require licenses for some existing and new classes of solid waste facilities. Evaluation includes:

- Material recovery facilities (MRFs) processing source-separated recyclables and solid waste leaving the region for recovery of disposal.
- Waste conversion technology facilities.
- Fees and taxes (reduced rate and exemptions)
    - Waste disposed but also used in the operation of a landfill e.g. drainage layer and roads.
    - Alternative daily cover.
    - Auto shredder residue.
    - Dredge spoils.
    - Tire processing residue.

Proposed Code Changes in 2015 (Non-Controversial):

Protect health and environment.

The solid waste code exempts certain facilities, activities, and solid wastes. Metro should eliminate some of these exemptions to maintain adequate oversight and minimize risks to the public and the environment. The following are proposed to be included in 2015:

- Wood waste processing.
- Wet waste reloads.
- Electronic waste processing (shredding & outdoor storage).

Provide good value .

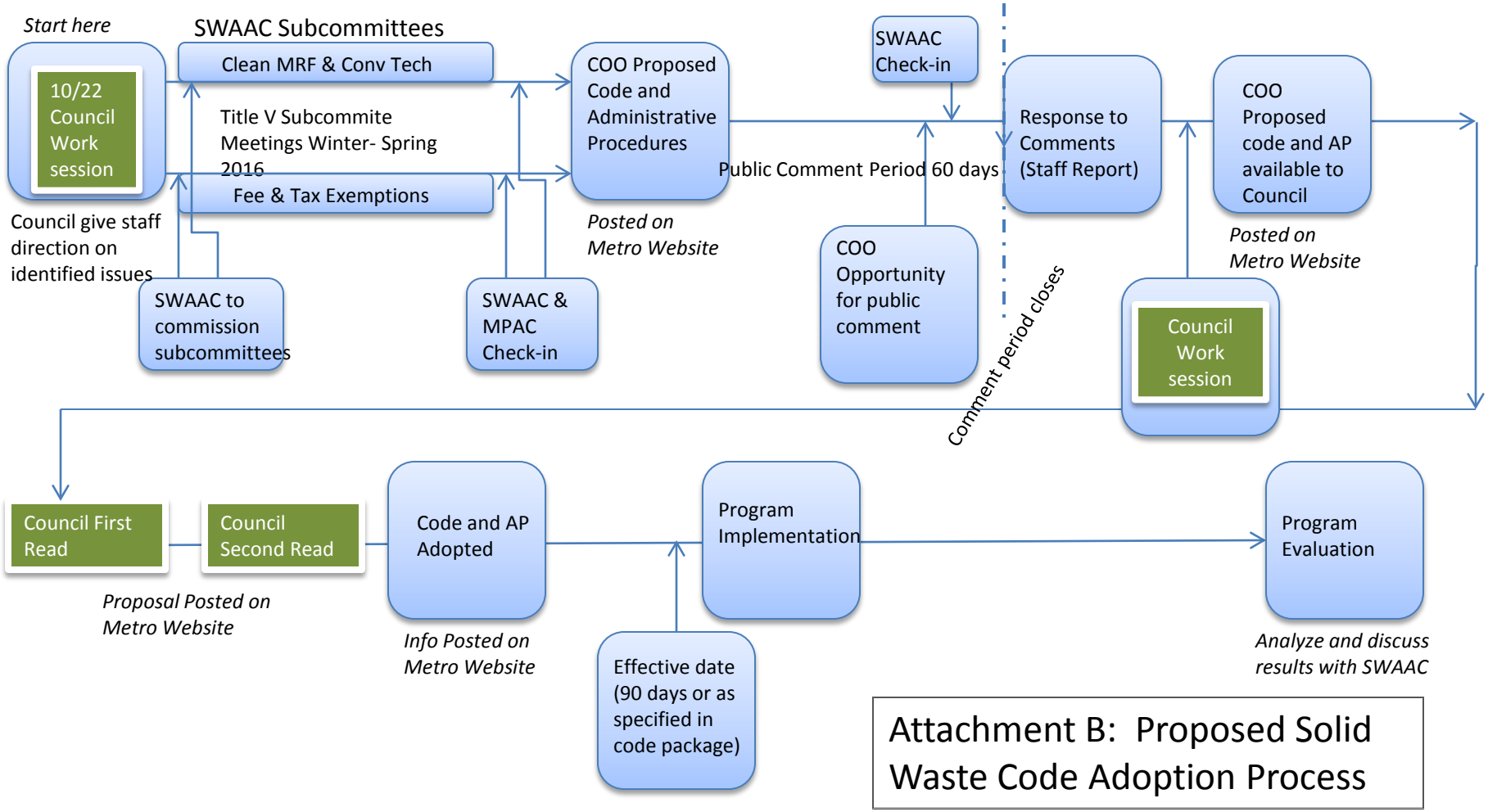
- Broaden types of contaminated soil media that qualify for reduced fees and taxes ($3.50/ton) to include cleanups, excavation, construction and demolition projects, catch basin soil, and street sweepings.

Adaptive and responsive.

Following are a few proposed changes that will ease and clarify the implementation of Title V.

- Definitions – update defined terms. Terms updated to align with Oregon defined terms.
- Enhanced dry waste recovery (EDWRP):
    - Reduce sampling from quarterly to annual event for facilities with good compliance history.
    - Add process for delisting material from residual sampling due to dire market disruption

    - Move EDWRP details to administrative procedures.
- Procedural improvements – including:
    - Shift approval of residential food waste licenses and NSLs from Council to COO.
    - Eliminate automatic issuance of authorization if 120 day deadline not met. Instead, if an applicant believes Metro is taking too long, code would provide a process to move the decision.
    - Provides general grant of authority to COO to provide limited extensions for authorizations based on unforeseen circumstances.
    - Eliminate 10-day call up of licenses by Council since Council always has ability to call up an item.
    - Eliminate financial assurance unless required by DEQ.
    - Eliminate approval of ownership changes but require notification.
    - Eliminate automatic granting of authorizations.
    - Align penalty authority with ORS (move from $1,000 to $500);
    - Move NSL fees from narrative into a table format
    - Require NSL holders to rely on scale weights;
    - Streamline compliance process for NSL violators and penalty calculation for fee and tax payments; and
    - Expands AP process for flow control chapter (5.05).



Attachment B: Proposed Solid Waste Code Adoption Process

Notes for Title V work:

Draft for discussion purposes only; Not all process steps depicted here.
Read chronologically from left to right.
Times/dates not indicated.
SWAAC Subcommittees meet several times over winter/spring 2016; reports to SWAAC.

Staff Activities

Council Actions

Materials following this page were distributed at the meeting.

Disaster Debris Gap Analysis Report

Paul Slyman
Daniel Nibouar

October 22, 2015

Questions for Consideration

What, if any, questions does the Council have on disaster debris management?

Does the Council have any questions on the status of this workplan?

Agenda

Disaster Debris Introduction

Impact to Metro

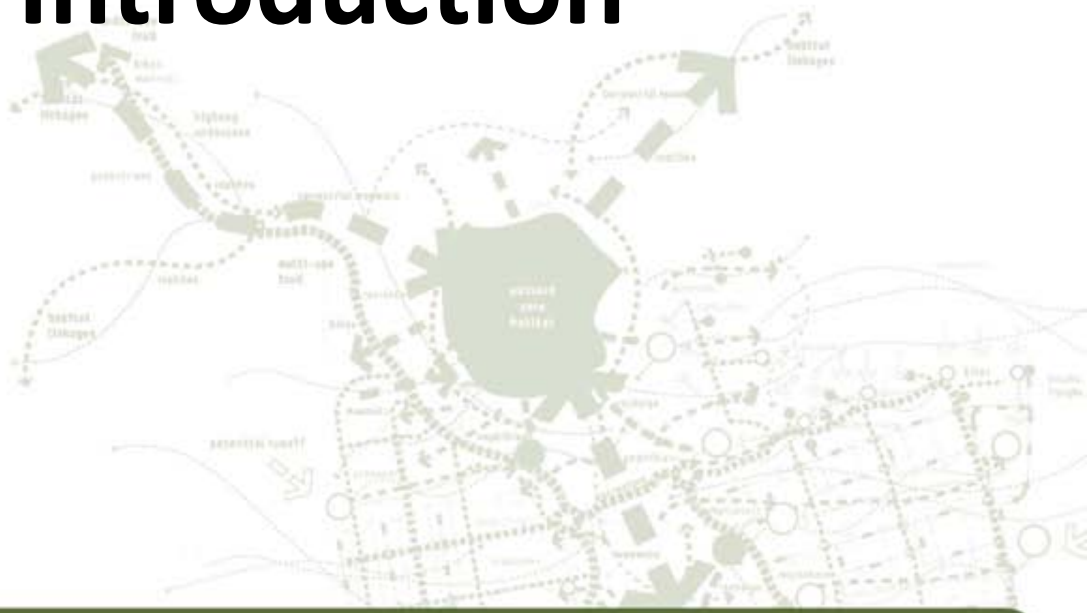
Previous Planning Efforts

Analysis Methodology

Gap Analysis Observations

Conclusion

Debris Introduction



What is Debris Management?

Clearance of Public Right of Ways

Removal from Public Right of Ways and Property

Temporary Storage, Segregation and Reduction

Final Disposal

All Hazards Create Debris

Metro Region Hazards

- Severe Storm

Metro Region Hazards

- Wildfires

Metro Region Hazards

- Volcanic Eruptions/Ash

Metro Region Hazards

- Landslides

Metro Region Hazards

- Flooding

Metro Region Hazards

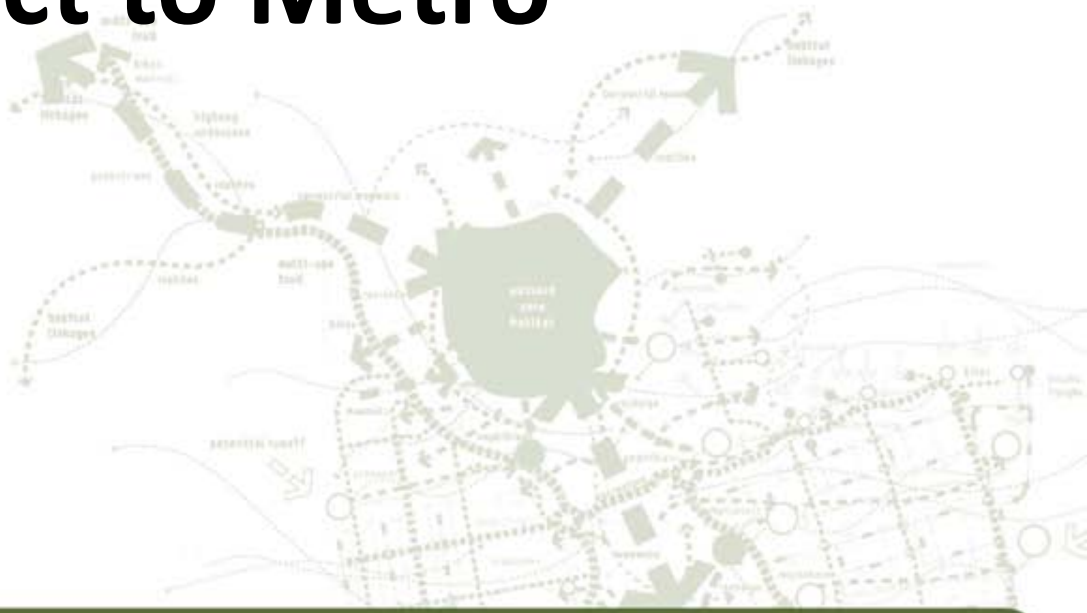
- Earthquake

Disaster Debris Volumes

Disaster	Volume (cubic yards)	Costs
Hurricane Andrew (1992)	43 million CY	$585 million
Northridge Earthquake (1994)	7 million CY	
Marmara, Turkey Earthquake (1999)	40 million CY	
Hurricane Katrina (2005)	100 million CY	$4.6 billion
Haiti Earthquake (2011)	75 million CY	$1 billion
Christchurch Earthquake (2011)	8 million CY	$50 million
Japan Earthquake and Tsunami (2011)	70 - 180 million CY	$5 - 10 billion
Oso Landslide (2014)	200,000 CY	$6 million

Represents approximately 27% of the total cost of a disaster.

Impact to Metro



Metro's Desired Outcomes

1. People live, work and play in **vibrant communities** where their everyday needs are easily accessible.
2. Current and future residents benefit from the region's **sustained economic competitiveness and prosperity**.
3. People have **safe and reliable transportation choices** that enhance their quality of life.
4. The region is a **leader on climate change**, on minimizing contributions to global warming.
5. Current and future generations enjoy **clean air, clean water and healthy ecosystems**.
6. **Equity** exists relative to the benefits and burdens of growth and change to the region's communities.

Metro's Desired Outcomes

1. People live, work and play in **vibrant communities** where their everyday needs are easily accessible.

3. People have **safe and reliable transportation choices** that enhance their quality of life.

5. Current and future generations enjoy **clean air, clean water and healthy ecosystems**.
6. **Equity** exists relative to the benefits and burdens of growth and change to the region's communities.

Debris Effects

- Community

Debris Effects

- Transportation

Debris Effects

- Environmental

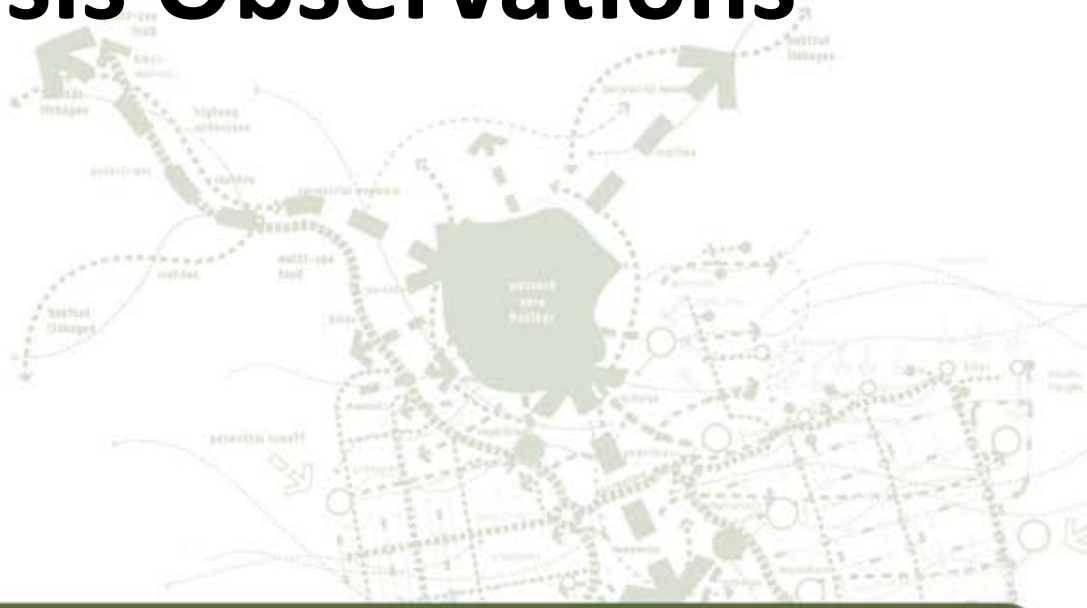
Debris Effects

- Equity

The Debris Problem

The Metro region needs an effective, operational disaster debris management plan.

Gap Analysis Observations



Previous Planning Efforts

- Regional start approximately 1994
- Inclusion of policy plan in current RSWMP
- Draft Metro debris management manual
- Regional planning framework in 2014

Methodology

- Metro and local government plan review
- Federal/state guidance
- Best practices/lessons learned
- Informal discussions

Format

Debris Phases

- Preparedness
- Response
- Recovery

Observations

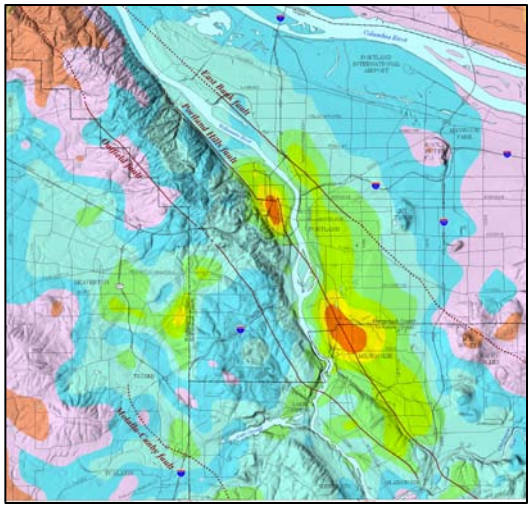
- Regional
- Metro

Preparedness: Regional

Observation: Little consensus on disaster debris management roles and responsibilities between Metro and its partner jurisdictions.

Preparedness: Regional

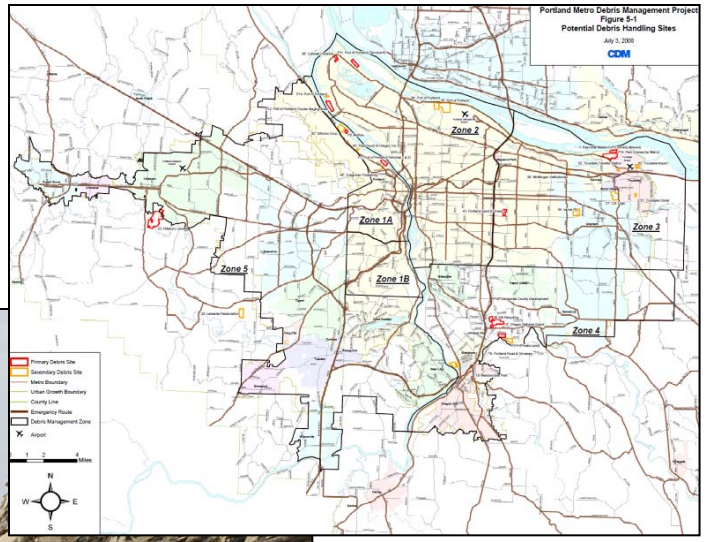
Observation: Accurate debris forecasting for various disaster types has not been completed.



Material	Amount
Construction and Demolition (CY)	41,752,800
Asbestos containing (CY)	2,474,700
Putrescible (CY)	221,180
Furnishings (CY)	5,494,470
Other (CY)	15,393,180
White Goods (ea)	666,110
Hazardous Materials (lbs)	2,430,630
e-Waste (lbs)	4,861,280
Total (approx CY)	63,547,100

Preparedness: Regional

Observation: An adequate inventory of Debris Management Sites has yet to be identified.



Response: Regional

Observation: The Metro region does not have the capacity for large scale debris removal, no are there any pre-positioned contracts or pre-qualified contractors.

Response: Regional

Observation: No regional procedures and methodology have been developed for estimating debris following a disaster.

Recovery: Regional

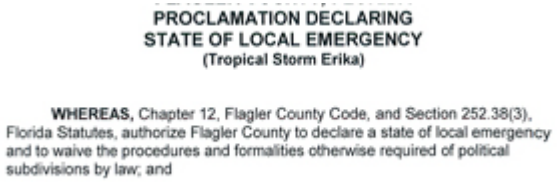
Observation: Experience with the FEMA Public Assistance process is limited within the Metro region.

Recovery: regional

Observation: Federal, State and local priorities regarding the handling material recovery and final disposition of disaster debris may differ.

Metro Opportunities

Observation: Metro has limited ordinances nor policies to support disaster debris operations.



PROCLAMATION DECLARING
STATE OF LOCAL EMERGENCY
(Tropical Storm Erika)

WHEREAS, Chapter 12, Flagler County Code, and Section 252.38(3), Florida Statutes, authorize Flagler County to declare a state of local emergency and to waive the procedures and formalities otherwise required of political subdivisions by law; and

Observation: Metro has no Continuity of Operations plan.

Observation: Metro staff has limited disaster response experience.

Summary of Observations

Preparedness:

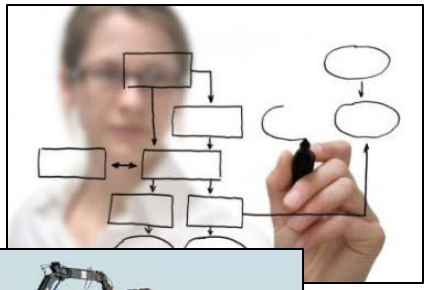
- Roles and Responsibilities
- Debris Forecasting
- Debris Management Sites
- Supporting Ordinances and Policies

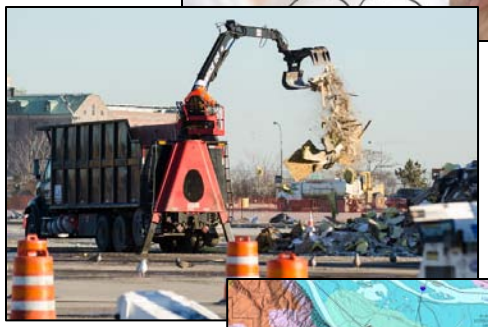
Response:

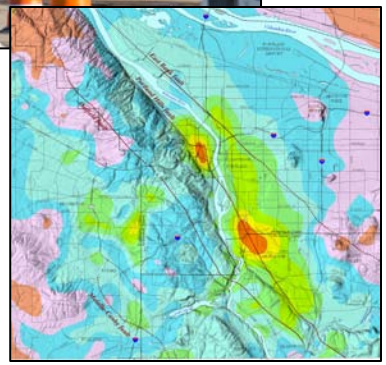
- Large Scale Debris Removal
- Debris Estimation
- Continuity of Operations
- Debris Response Experience

Recovery:

- FEMA Public Assistance Experience
- Disposal Priorities







Conclusions

Roles and Responsibilities

Questions for Consideration

Does the Council have any questions on disaster debris management?

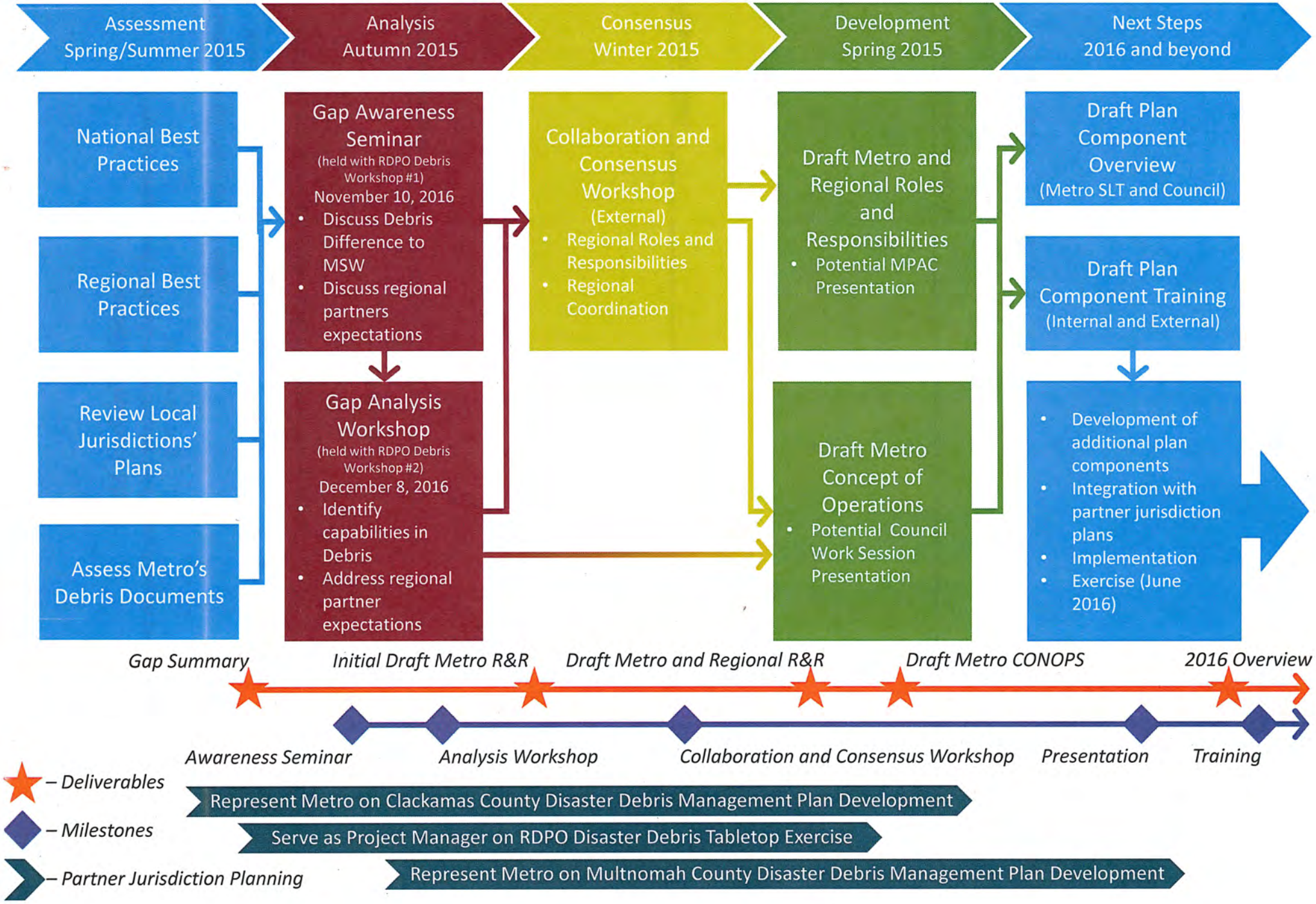
Does the Council have any questions on the status of this workplan?

Disaster Debris Gap Analysis Report

Paul Slyman
Daniel Nibouar

October 22, 2015

Disaster Debris Planning Overview



Councilor Feedback Sheet

to capture thoughts and feedback on the Disaster Debris Gap Analysis presentation

October 22, 2015

Questions for the Metro Council today:

1. What, if any, questions does the Council have on disaster debris management?
2. Does the Council have any questions on the status of this workplan?

Feedback

Debris Introduction

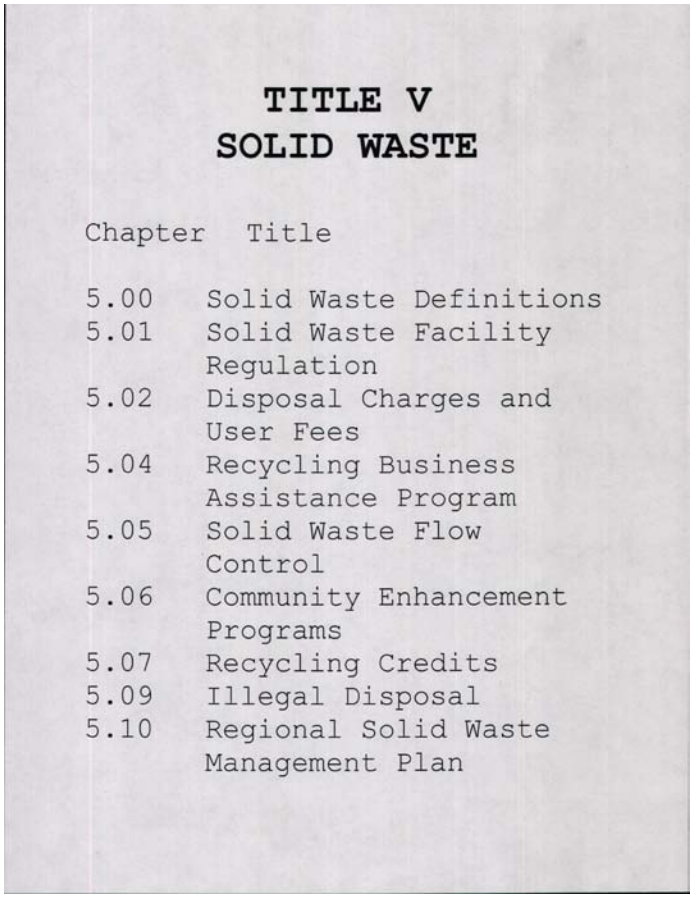
Impact to Metro

Gap Analysis Observations

2015-16
Metro Solid Waste Code Improvements (Title V)

October 22, 2015

Title V Code (Solid Waste) Update and Next Steps



TITLE V
SOLID WASTE

Chapter	Title
5.00	Solid Waste Definitions
5.01	Solid Waste Facility Regulation
5.02	Disposal Charges and User Fees
5.04	Recycling Business Assistance Program
5.05	Solid Waste Flow Control
5.06	Community Enhancement Programs
5.07	Recycling Credits
5.09	Illegal Disposal
5.10	Regional Solid Waste Management Plan

Purpose of Work Session

- Overview public policy concerns raised by Title V.

- Seek Council direction on Code changes and next steps.

Broad policy concerns

Process and timing

Equity and fairness

Legal authority

Specific concerns about proposal

Regulation of facilities processing source-separated recyclable material.

Specific concerns about proposal

Regulation of waste conversion technology facilities.

METRO

Specific concerns about proposal

Current fee and tax exemptions and reduced fee and tax rates.

Three Key Questions for Council

1. Does Council support continued examination of substantive policy changes raised by Title V?:
   - Facilities processing source-separated recyclable materials?
   - Waste conversion technology facilities?
   - Fee and tax exemptions?

2. Does Council support using a more prescribed and rigorous process for adoption of potentially controversial code changes?

3. Would Council like staff to move forward with Title V code changes believed to be non-controversial?

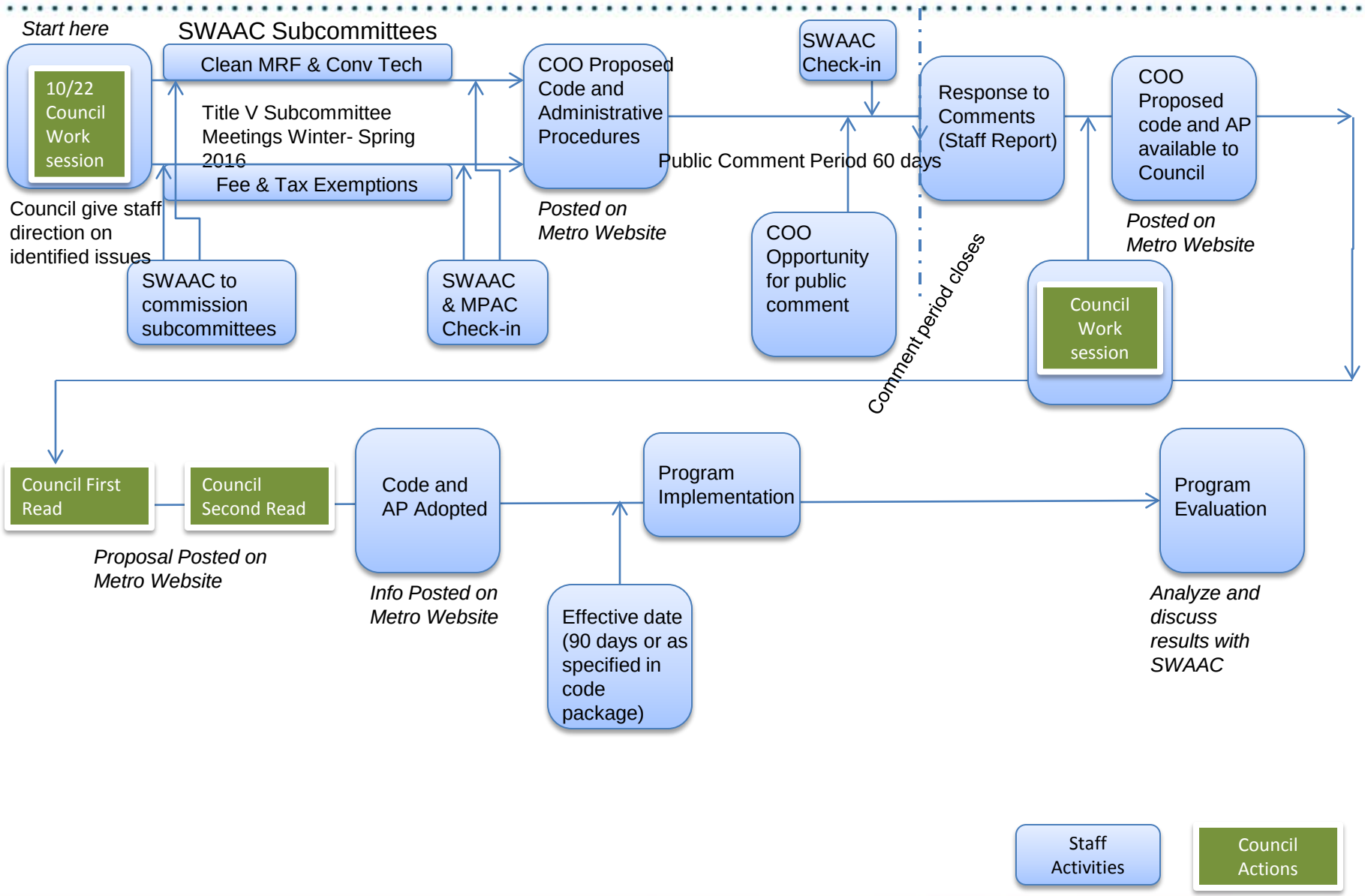
Key Questions for Council

1. Does Council support continued consideration of substantive policy changes raised by Title V?:

   - Regulation of facilities processing source-separated recyclable materials?
   - Regulation of waste conversion technology facilities?
   - Fee and tax exemptions?

Key Questions for Council

2. Does Council support using a more prescribed and rigorous process for adoption of potentially controversial code changes?


Start here
SWAAC Subcommittees
10/22 Council Work session
Clean MRF & Conv Tech
Title V Subcommittee Meetings Winter- Spring 2016
Fee & Tax Exemptions
Council give staff direction on identified issues
SWAAC to commission subcommittees
SWAAC & MPAC Check-in
COO Proposed Code and Administrative Procedures
Posted on Metro Website
SWAAC Check-in
Public Comment Period 60 days
COO Opportunity for public comment
Comment period closes
Response to Comments (Staff Report)
COO Proposed code and AP available to Council
Posted on Metro Website
Council Work session
Council First Read
Council Second Read
Proposal Posted on Metro Website
Code and AP Adopted
Info Posted on Metro Website
Effective date (90 days or as specified in code package)
Program Implementation
Program Evaluation
Analyze and discuss results with SWAAC
Staff Activities
Council Actions

Key Questions for Council

3. Would Council like staff to move forward with Title V code changes believed to be non-controversial?

For example:

- Align definitions with DEQ
- Modification to EDWRP
- Procedural improvements/housekeeping

Next Steps

Potential Procedural Code Changes:

November – Propose procedural code changes to Title V

December/January – *Metro Council: 1st Read/Public Hearing*

December/January – *Metro Council: 2nd Read/Decision*

Substantive Policy Examination:

November 19 – SWAAC commissions subcommittees

December – Initiate 1st meeting of SWAAC Subcommittees

January – May 2016 – Subcommittees meet

Summer 2016 – Initiate public code adoptions process

Councilor Feedback Sheet

to capture thoughts and feedback on Title V (Solid Waste) Code Update presentation

October 22, 2015

Questions for the Metro Council today:

1. Does Council support continued examination of substantive policy changes raised by Title V?
   - Facilities processing source-separated recyclable materials ("clean MRFs")?
   - Waste conversion technology facilities?
   - Current fee and tax exemptions?

2. Does Council support using a more prescribed and rigorous process for adoption of potentially controversial solid waste code changes?

3. Would Council like staff to move forward with Title V code changes believed to be non-controversial?

Feedback

Broad policy concerns

Specific concerns about proposal

Key Questions (see above)

Code adoption process

LET'S TALK TRASH

Metro

THE OREGON HISTORICAL SOCIETY
FOUNDED 1898

What our trash says when we're gone

A historical look at what is left behind and what it means for our future.

What are our options for the future? How can we learn from the lessons of the past?

Please join Metro and Oregon Historical Society for this fun and engaging discussion.

Wednesday, November 4, 7 to 8:30 p.m.
Oregon Historical Society,
1200 SW Park Avenue, Portland

oregonmetro.gov/letstalktrash

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