



**City of Tacoma
Environmental Services/Solid Waste Management
Tacoma Solid Waste Facility Master Site Plan
RFP Specification No. ES21-0480**

QUESTIONS and ANSWERS

All interested parties had the opportunity to submit questions in writing by email to Dawn DeJarlais by July 15, 2022. The answers to the questions received are provided below and posted to the City's website at www.TacomaPurchasing.org. Navigate to *Current Contracting Opportunities / Services / Supplies* and then click *Questions and Answers* for this Specification. This information IS NOT considered an addendum. Respondents should consider this information when submitting their proposals.

Question 1: Is there a do-not-exceed budget designated for the Solid Waste Facility Master Plan? Apologies if this information is in the solicitation document and I've missed it.

Answer 1: The draft scope is included in the RFP to be updated and revised as needed with the selected proposal. Once the final scope is negotiated the required budget will be prepared by the selected firm and further negotiated as necessary. We have not established an actual budget yet but we have a placeholder of funds set aside for this work. We need to truly understand the cost of said work from the selected proposal.

Question 2: In Section 1 – Background states the consultant firms are “to develop a Master Plan for the City’s Solid Waste Management facilities and operations. The Master Site Plan will include developing a process to guide decisions on the most suitable end use options for the existing facility and closed landfill through stakeholder engagement”. The scope of work seems to indicate the firms will actually execute a stakeholder process to select an facilities plan and end use plan. Does the City want the selected firm to develop a stakeholder process to be executed by the City after this contract. We understand the process will include the guidelines and features to be considered in planning and developing future end uses on the closed landfill. Also, the process will include involvement by stakeholders or Does the City expect the firm to execute a stakeholder process to actually prepare a specific plan for the end use of the closed landfill?

Answer 2: The RFP includes a number of stakeholders identified that will need to be considered as part of the consultant's work. The extent of the stakeholder engagement is outlined in Section 26 of the Scope of Work included in the RFP. The process of stakeholder engagement needs to be further developed with the selected firm.

Question 3: What is the city’s expectation for the Asset Management Plan? – Is it to develop a plan similar to a “Renewal and Replacement” schedule and financial plan or something more interactive for operators to access?

Answer 3: The City is not expecting to include Asset Management as part of this work except to the extent the selected firm should be aware of how assets should be managed to inform the development of the Master Site Plan.

Question 4: What is the City's expectation for the Emergency Management Plan? Is this a reference for a plan to allocate space to manage materials for disaster relief activities or other purposes?

Answer 4: The work will incorporate emergency response as suggested in the question. For reference attached is the Solid Waste Management Emergency Response Plan.

Question 5: What is current status of recovering landfill gas since the landfill has been closed for many years?

Answer 5: Attached is the most recent report submitted to the Agencies for the status of the landfill gas system.

Question 6: RFP says "Any subcontractor's proposed to be included in the proponent response shall supply the same information." Is this interpreted literally to mean 5 projects for each subconsultant?

Answer 6: Proposal response shall incorporate all subcontractor's and sub-consultant's information necessary for the City to evaluate the teams qualifications and approach to the Master Site Plan work. The overall team should include 5 projects.

Question 7: Will any aspects of the existing RTC need to be evaluated as part of the Master Plan or is it good as-is since it was built state-of-the-art in 2011?

Answer 7: The intent of the RFP and the scope of the work is to evaluate the site as a whole system inclusive of all the site activities. The RTC is the overarching term for the whole site. If needs or operations changes identified through the planning process dictate possible modifications to the Main Receiving Building that was built in 2011, then those will need to be evaluated.

Question 8: Where the RFP says "*Public consultation is not included in the scope of work and is planned for a future date*" does the public consultation refer to the broader general public other than the single and multi-family residences, neighboring properties, and others included in the stakeholder list? Would that include future recreation site users? Or does this just mean broader outreach through website updates, advertising, etc?

Answer 8: The City may carry out future public engagement to broadly include our whole community. The work of the consultant team will be to those stakeholders listed in the RFP.

Question 9: Will the questionnaire responses be the jumping-off point for potential recreation end uses of the site, or is there opportunity to add new suggestions?

Answer 9: The RFP is open to adding suggested work to be negotiated with the selected firm.

Question 10: The RFP states, "Master Plan Needs Assessment - The Consultant is to undertake a needs assessment for future use options. This work is high level only for citing considerations in the final plan. The work could reveal needs that may restrict location of use options for the site or significant

infrastructure needs that could impact the desirability of any end use. Current zoning and potential zoning changes will be considered.” Does this mean that end uses besides recreation could be identified? Are any other land uses even feasible (i.e. industrial, residential, etc.)?

Answer 10: The idea is to identify any and all potential end uses for the site with the focus on the operations of the facility as a Recovery and Transfer Center. No limit is being set on the available end use but feasibility is an issue with the environmental controls and the associated costs to protect them.

Question 11: Can the City please clarify if the content of the Work Plan elements (or proposed alternatives thereto) described in Section 26.5 of the RFP are expected as part of the bidders proposals? Page 31 of the RFP includes a Work Plan element for “The approximate hours and billing for each section”, so is the City expecting bidders to provide an anticipated project fee associated with the work as part of the proposal response? Is there a template for breakdown the City would like to use for comparison?

Answer 11: The RFP indicates to approximate the hours and billing for each section. A detailed scope and budget will be developed with the selected firm. The City has no template for breakdown.

Question 12: As the proposal allows for some flexibility and modifications in the work approach, does the City have an anticipated budget for this project?

Answer 12: See response to Question 1.



CITY OF TACOMA

Environmental Services

Solid Waste Management Emergency Response & Evacuation Plan

Contents

Introduction	1
Scope and Applicability	1
Scope.....	1
Applicability.....	1
Definitions and Acronyms.....	2
Purpose	2
Emergency Management Team.....	3
Roles and Responsibilities.....	3
Division Manager	3
Assistant Division Managers	4
Supervisors.....	4
Safety Office.....	5
Employees.....	5
Employees (Off-site)	5
Normal Working Hours:	6
Non-Working Hours:	6
Emergency Procedures	8
Emergency Communications Procedures	8
Earthquake/Explosion Preparation and Response Procedures	10
Fire/Smoke Procedures.....	13
Bomb Threat Procedures	17
Evacuation Procedures	21
Guidelines for Responding to Threats or Emergencies at Solid Waste Management.....	29
Shelter-in-Place/Lock-Down Procedures	31
Medical Emergencies	32
Threatening Customer / Employee.....	33
Responding to VMF CH ₄ (CNG) Gas Detection Alarms.....	34
Responding to VMF CO and NO ₂ Detection Alarms	34
Training and Drills	35
Appendices.....	37

Appendix A – Emergency Telephone Numbers 37

Appendix B – SWM Emergency Response Call Succession (Management & Site Contacts) 37

Appendix C – Employee Roster and Phone Tree (Manager/Supervisor Copy) 37

Appendix D – Evacuation Plans..... 37

Appendix E – SWM Exit Locations Map 37

Appendix F – Location of Automatic External Defibrillators (AED)..... 37

Appendix G – Bomb Threat Sheet..... 38

Appendix H – Evacuation Rally Points..... 38

Appendix I – Emergency Staffing Plan 38

Appendix J – HHW Facility for Fire Department 38

Record of Revisions

The Emergency Response and Evacuation Plan will be reviewed and updated annually. All revisions and updates to the Plan shall be tracked and recorded on the following table. This process will ensure that the most recent version of the Plan is distributed and implemented by personnel.

Revision Date	Revision Type	Content	Entered By
September 2017	Update		EE, PS
January 2018	Update		PS
June 2019	Update		EE, PS
August 2020	Update	Added guidelines for responding to threats	PS
October 2021	Update	Added VMF Gas Alarm Procedures	PS
May 17, 2022	Update	Added, project record drawings, added TOC, updated links	PS

Introduction

The City of Tacoma's Comprehensive Emergency Management Plan (CEMP) specifies that all incidents be handled at the lowest possible organizational and jurisdictional level. If an event or set of circumstances demands immediate action to preserve public health, protect life or public property, or reaches such a dimension or degree of destructiveness that it exceeds the resources of a jurisdiction to respond to the situation, a State of Emergency may be declared by the City Manager. During a declared State of Emergency, responsibilities and the completion of emergency support functions outlined in the CEMP may temporarily shift authorities and responsibilities outlined herein.

This Emergency Response and Evacuation Plan (Plan) provides guidelines for response to a major emergency or disaster at Solid Waste Management (SWM). Additionally, it describes the circumstances under which an evacuation of all personnel and visitors from SWM facilities may be considered, as well as providing a framework for the implementation of such an evacuation. The plan assumes a temporary evacuation, with employees returning to SWM within hours or days at the most. Continuity of operations associated with a long-term evacuation is addressed in the Solid Waste Management Continuity of Operations Plan (COOP).

There are a wide variety of natural or man-made events that could create an emergency situation that might require an evacuation and/or shelter-in-place scenario at Solid Waste Management. Examples of such events include:

- Earthquake or explosion
- Hazardous materials accident or spill
- Major fire
- Natural or methane gas leak
- Severe weather
- General Terrorist Threats

Scope and Applicability

Scope

This procedure covers emergency response and evacuation procedures for incidents at Solid Waste Management facilities.

Applicability

This plan provides guidance for emergency response and evacuation procedures to Solid Waste Management employees, Fleet employees, and other individuals visiting or operating out of the City of Tacoma Recovery and Transfer Center (RTC).

Definitions and Acronyms

Building Coordinator(s)	Individuals responsible for assisting employees and visitors in their assigned area(s) in the event of an emergency evacuation or other emergency response
Emergency Management Team	The Division Management Team, consisting of the Division Manager and Assistant Division Managers, shall direct SWM's emergency response activities.
Evacuation	An organized, phased, and supervised withdrawal, dispersal, or removal of people from dangerous or potentially dangerous areas and their reception and care in safe areas.
Incident Commander (IC)	Refers to the individual authorized to make decisions at the appropriate level. Incident Commander may be used to describe the senior government official in charge, a Division Manager, or a person designated by the Division Manager.
Shelter in Place/Lock Down	Taking emergency refuge within the nearest designated safe area until notification or determination that the situation has been resolved.

- AED – Automatic External Defibrillators
- CEMP – Comprehensive Emergency Management Plan
- CFR – Code of Federal Regulations
- DOE – Washington State Department of Ecology
- NIMS – National Incident Management System
- RCW – Revised Code of Washington
- RTC – Recovery and Transfer Center
- SWM – Solid Waste Management Division
- WAC – Washington Administrative Code

Purpose

The purpose of this plan is to provide SWM with guidelines for response to a major emergency. The plan identifies immediate steps SWM personnel must take to prepare for and respond to an

emergency. This plan provides guidelines for both shelter-in-place scenarios and those that call for an orderly and coordinated evacuation of SWM personnel, contractors, visitors and the public.

Evacuation and/or shelter-in-place procedures will be implemented only upon determination that such action is the most effective means available for protecting all persons present from the effects of an emergency. Ensuring personnel and visitors' safety and well-being before, during and after such an event is the goal of this plan.

Emergency Management Team

SWM's Division Management Team, for the purpose of this document, will consist of the Division Manager and the Assistant Division Managers.

Normal chain of command shall be used during emergencies. SWM's Division Management Team, under the direction of the Division Manager, shall serve as the Emergency Management Team and shall direct SWM's emergency response activities.

SWM supervisors under the general direction of the Emergency Management Team shall be responsible for the safe and complete evacuation or relocation of SWM personnel and visitors during an emergency.

Roles and Responsibilities

When an emergency declaration is made, the CEMP designates responsibilities and priorities related to authorities and any Emergency Support Functions assigned to SWM.

In an emergency (other than a Declared State of Emergency), the basic responsibilities of SWM personnel and employees remain unchanged.

Specific responsibilities related to an emergency include the following:

Division Manager

- Provide overall direction for the operation of SWM personnel and facilities.
- Keep the Environmental Services Director informed of events and developments.
- Provide immediate direction and control over SWM emergency response activities.
- Determine when evacuation of SWM is required.
- If a State Emergency is declared and participation is requested, provide SWM representative to and liaison with, the City of Tacoma or Department of Environmental Services' Emergency Operations Centers (See SWM COOP for further clarification).

Assistant Division Managers

- Provide for the essential operations of their respective operational group(s).
- Facilitate administration of personnel policies and procedures in effect during the emergency.
- Determine the number of employees available to work and requirements for additional personnel or the availability of personnel for other assignments.
- Maintain Emergency Operating and Staffing Plans that can be implemented, if required. Ensure SWM personnel understand their responsibilities regarding these plans.
- Keep the Division Manager informed of events and developments.

Supervisors

- Coordinate with Safety Office to ensure direct reports receive training in the Plan prior to an emergency, if there are any changes to the plan and at least annually thereafter.
- Ensure work area(s) are stocked with first aid supplies and that supplies are maintained.
- Determine if there are individuals requiring mobility assistance in facilities of responsibility and arrange for such assistance to be given in any emergency.
- Oversee facility evacuation efforts. If necessary and safely accomplished, post personnel or visual barricades in front of facility entrance(s) to ensure no one re-enters an evacuated space.
- Ensure that safe work practices are followed during evacuation and restoration operations.
- Compile head count of personnel and any visitors present in your facilities following an evacuation. If any personnel are unaccounted for, inform emergency responders of the person's absence and last known location as soon as possible.
- Implement emergency management decisions for assigned facility(s).
- Keep the Emergency Management Team informed of developments and assist with other communication by whatever means available (telephone, radio, Nextel, messenger, etc.).
- Observe and assist at scene; maintain crowd control until emergency services personnel arrive and take over.
- Determine and make personnel assignments as needed and make necessary arrangements for additional personnel and equipment if needed (see [Appendix C Employee Roster and Phone Tree](#)).

- Ensure that facilities are safe for re-entry before the all-clear signal is given.
- Maintain a log of incidents, events and communications during an extended emergency.

In addition to on-site emergency response actions, Supervisors are responsible for communicating with their employees operating off-site.

- Communicate to off-site staff any local evacuation or emergency event that affects SWM facilities and may require off-site staging.
- Notify off-site staff via radio or cell phone when it is safe to return to SWM.
- If an event impedes returning to SWM, compile head count and determine the location(s) and condition of employees operating off-site.

Safety Office

- Facilitate training of all SWM personnel in the emergency response guidelines outlined in this plan and the emergency response procedures specific to their assigned work group(s).
- Coordinate training drills and exercises in assigned facilities to test the Plan.

Employees

- Be trained in the Emergency Response and Evacuation Plan procedures.
- Obtain National Incident Management System (NIMS) training required of position.
- Be personally prepared for an emergency and ensure that family members know what to do.
- Make every effort to remain at work or report to work following an emergency.
- During building evacuation, work to with fellow employees to ensure ALL evacuate safely.

Employees (Off-site)

- Off-site employees should not attempt to return to SWM unless it is safe to do so.
- Employees shall convene at the designated rally point closest to their location, and await further instructions from supervisor or lead. Off-site (and on-site) rally points are provided in [Appendix H](#).
- Lead employee at each rally point should compile a head count and roster of those present and their condition and report information via radio or cell phone to supervisor.

- If employee is unable to get to a designated rally point, they should report via radio or cell phone to their supervisor or lead to inform them of their current position and condition

Normal Working Hours:

Person(s) first on the scene of any emergency or potential emergency must do their best to protect life and limb. It is also imperative that the facility supervisor be notified of the situation immediately. If unable to contact the facility supervisor, make sure that another supervisor or manager is aware of the situation (see [Appendix B SWM Emergency Response Call Succession](#)).

When an emergency occurs during normal working hours, employees shall:

- Have knowledge of emergency procedures which relate to specific events in assigned facilities including emergency notification responsibilities, evacuation and shelter-in-place procedures, the location of exits, evacuation assembly areas or off-site rally points and the location of first aid supplies and fire extinguishers.
- Follow emergency procedures, including building evacuation and/or shelter-in-place, if required.
- Monitor Landfill channel for instructions and information and avoid engaging in all but essential communications.
- Follow directions provided by the Emergency Management Team, supervisors or their designees.
- Remain in assigned facility, shelter-in-place, evacuation assembly area, or off-site rally point and await further instructions. Do not leave the facility or area until authorized to do so by an assigned supervisor.
- Refrain from attempting to contact family and friends until emergency communications can be coordinated.

If the IC issues the order to evacuate, follow the procedures outlined in the EVACUATION section of this Plan

Non-Working Hours:

When an emergency occurs during non-working hours employees shall:

- Stay tuned to emergency radio broadcast channels for information on local conditions and special instructions.

- Follow SWM Emergency Staffing Plan instructions provided in [Appendix I](#).
- Essential personnel identified in the Emergency Staffing Plan shall report for work as soon as possible; all other employees shall report as soon as practicable considering the nature and extent of the emergency.
- Be prepared to assume critical job functions, other than your normal duties, that may be assigned.
- If conditions warrant, essential personnel shall report for work prepared for an extended stay with the following:
 - ✓ One day's supply of drinking water
 - ✓ One day's supply of food
 - ✓ Warm clothing/change of clothes
 - ✓ Personal medication
 - ✓ Toiletries and a blanket

Emergency Procedures

Emergency Communications Procedures

Communication is one of the most important resources in any emergency and in a large scale emergency is often one of the first resources lost. Under normal circumstances, SWM relies mainly on hard-wired and mobile telephones, Nextel “push-to-talk” and radio communications.

During *most* emergencies, normal communications systems will be used as much as possible (see bomb threat exception below). **It is imperative in an emergency that use of all communication systems be limited to emergency purposes only!**

During an emergency, all radios will be immediately tuned to the Landfill channel. Information and updates on emergency response efforts and conditions will be broadcast via the radio and an effort will be made to ensure, as much as possible, that personnel are kept informed of developing situations.

911 Call Procedure (Crisis Alert)

The City’s Crisis Alert Phone feature provides an audible alert (noticeable long beeping) as well as a visual alert (display phones will identify the extension and caller name associated with the extension) to designated Crisis Alert Monitors on site when any 911 call is made. The Crisis Alert system has been set-up/programed to allow only the phones at our facility to be included in the notifications.

All Employees

The Crisis Alert feature on our phone system will acknowledge an emergency call dialed with 9-911 or 911.

If personnel need to make an emergency 911 call for an on-site emergency, Management strongly encourages personnel to direct full attention to the emergency. Calmly inform the 911 dispatcher of the nature of the emergency and answer all questions asked. Do not hang up until the operator tells you to. Once off the phone, recruit those nearby to assist with the emergency and notify Supervisor, if possible. When emergency response personnel arrive at your location, please inform them of the situation.

For off-site emergency calls, employees should contact 911 and report pertinent details as requested by the dispatcher. Upon termination of the call, please notify a supervisor of the situation. The supervisor will determine if further emergency response actions are required.

If you need to contact the Tacoma Police Department for any non-emergency situations please dial (253) 798-4721. For non-emergency calls requiring Tacoma Fire Department assistance please call (253) 591-5737.

Crisis Alert Monitors

When a Crisis Alert message is received, the Crisis Alert monitor should immediately verify whether the call originated from their building. If so, the Crisis Alert monitor should:

- Immediately proceed to the location from which the call was made, if safe to do so.
NOTE: Be alert for signs of danger as you approach.
- Try to determine what triggered the call as you approach.
- Render first aid, if needed and if you or others near-by are trained to do so.
- Ensure supervisor is notified of event.
- Obtain additional information to provide to supervisor and/or emergency first responders.
- Take additional action as directed by supervisors or emergency first responders.

If the call was not made from your building, Crisis Alert monitors should:

- Notify supervisor(s).
- Take additional action as directed by supervisor(s) or emergency first responders.
- If possible, remain by your phone until the incident is resolved and be prepared to receive additional instructions.

If possible and necessary, use other employees to aid with the actions described above.

Earthquake/Explosion Preparation and Response Procedures

This chapter describes procedures for responding to earthquake and explosions at SWM facilities.

Preparedness

Take the following actions in your work area to reduce the risk of damage or injury in the event of an earthquake or explosion.

- **Windows or Glass** - If your workstation is near windows or glass partitions, decide where you will take cover to avoid being injured by flying glass.
- **Heavy Objects** - If your workstation is near a temporary wall or partition, or if you have bookshelves and filing cabinets, make sure they are anchored.
- **Loose Objects** - If you have materials stored on top of cabinets or shelves, secure or move these items below head height.
- **Escape Route** - Determine in advance the nearest exit from your work location and the route you will follow to reach that exit in the event an evacuation is necessary. Do not use the elevator. Also establish an alternate route to be used in the event your first route is blocked or unsafe to use.

During an Earthquake/Explosion

During an Earthquake/Explosion – if you are indoors:

- **Remain calm** - Do not panic, and do not attempt to go outside. Protect yourself.
- **Act Quickly** - Move away from windows, temporary walls or partitions and/or free standing objects such as files, cabinets, shelves and hanging objects.
- **Drop and cover** - Drop down to the floor. Take cover under a sturdy desk, table or other furniture. If that is not possible, seek cover against an interior wall and protect your head and neck with your arms.
- **Hold** - If you take cover under a sturdy piece of furniture, hold on to it and be prepared to move with it.
- **Stay put** - Hold this position until the ground and/or building stops shaking and it is safe to move. Stay inside; do not attempt to exit the building during the shaking.

During an Earthquake/Explosion – If you are outdoors:

- Stay outdoors and move to an open area. Get close to the ground to avoid falling.
- Move away from structures, power poles, lampposts or retaining walls that could fall and avoid fallen electrical lines even if they appear de-energized.

After an Earthquake/Explosion

If there appears to be some damage (moved or fallen heavy objects, broken glass or other fallen debris), do the following:

- Conduct a head count of personnel and any visitors present in your facility. If anyone is unaccounted for, immediately inform your supervisor.
- Check for injured persons – render or find someone who can render first aid to any injured personnel. Do not move injured persons unless absolutely necessary!
- Check for damage – carefully inspect your area for damage and potentially dangerous situations and plan for aftershocks.
- Monitor radios for information – Immediately tune to Landfill channel! Radios should be continuously monitored for information. Once radio communication has been established, provide location and status of yourself and others present. Refrain from all but essential communication. If radio towers are affected and Landfill Channel does not work, tune radio to 9-ES TA solid (talk around) and radios can be used locally.
- Limit telephone use – Leave telephone lines clear for emergency communications only. Check all telephones and make sure the receivers are back on the hook. Your supervisor will keep you informed of what has happened and what you should do. Texting uses less bandwidth and is the preferred option to allow cell bandwidth for emergency communications.
- Alert Supervisors to anything needing their attention.

Earthquake Evacuation

Do not evacuate unless told to do so or danger is imminent! You are always safer inside unless the building is on fire or severely damaged.

- Follow instructions given by supervisors and emergency personnel.
- Check any doors you open for heat before opening.
- Following procedures outlined in the [EVACUATION](#) section of this Plan

Once outside, it is imperative that everyone move away from the building and any structures and gather in their designated evacuation areas for a head count!

In the case of an explosion in another area or building:

- Ensure that 911 has been called and a manager or supervisor is aware of the situation.
- If you have a radio, immediately tune to the Landfill channel. Monitor radio for information and any changes or instructions. Refrain from all but essential radio and cell phone communication.
- Conduct a head count of personnel and visitors in your area(s) and communicate to your Supervisor immediately if anyone is unaccounted for.
- Remain in your assigned area unless directed to do otherwise by supervisor or emergency personnel.
- Do not approach the affected area.

Fire/Smoke Procedures

This chapter describes response actions to fire and smoke emergencies at SWM facilities.

Fire/Smoke Emergencies

Upon Discovering a Smoke, Fire or Hearing a Fire Alarm:

- Remove anyone in immediate danger.
- Confine the fire by closing doors and/or windows, if safe to do so.
- Call 911 if you are by a phone. If radio communication is used, alert the Scalehouse of the situation and ask that 911 be called. Use the **Landfill channel** to communicate via radio. Refrain from all but essential communications.
- If possible and if you are trained to do so, you may try to extinguish a beginning stage or small fire, but not at the risk of injury to yourself or others.
- Evacuate all affected facilities, **following procedures outlined in the [EVACUATIONS](#) section of this Plan**

If you discover a fire and have no means of communication, immediately move to an area of safety and notify other personnel of the situation as quickly as possible by the most expedient means available.

Upon Being Alerted of a Fire in Your Area or Building, immediately evacuate the building following procedures outlined in the [EVACUATIONS](#) section of this Plan.

Upon Being Alerted of a Fire in Another Area or Building:

- Ensure that 911 has been called and a manager or supervisor is aware of the situation.
- Immediately tune to the **Landfill channel** and monitor radio for information and any changes or instructions. Refrain from any unnecessary communication.
- Remain in your assigned area unless directed to do otherwise by a manager or supervisor. Do not approach the affected area.

Vehicle Fire/Explosion Procedures:

In the event of an engine fire/explosion, follow these steps:

- Park the vehicle/equipment in a paved area away from any storm drains or traffic, other vehicles, pedestrians, buildings and dry grasses, bushes or vegetation that could ignite.

- If available, activate engine fire suppression devices.
- Place transmission in neutral, set the parking brake and turn off engine and all electrical power.
- Direct any passengers or crew out of and away from the vehicle. Keep bystanders out of the area.
- Exit the cab quickly but carefully, taking the fire extinguisher with you, if safe to do so.
- If the vehicle is a CNG vehicle, close the vehicle's manual shut-off valve, if the vehicle is so equipped and this can be safely accomplished.

Call or have someone call 911 and report the fire and your location

Engine Fire:

- If operation can be performed safely, discharge fire extinguisher into the engine compartment by aiming at the base of the fire.
- If possible, extinguish the fire before opening the hood. If you open it, be aware that the hood may be hot and that the fire may flare up when the hood is opened. Use insulated or other protective gloves to protect your hands.
- Report the event in the most expedient manner possible to your Supervisor or another available SWM supervisor.
- Remain on the scene at a safe distance until instructed by a Supervisor or Emergency Responders to do otherwise.
- Make sure no co-workers or bystanders approach the area of the fire

Fires While Fueling:

- Turn off the engine, set the parking brake and exit the vehicle/equipment quickly but carefully taking the fire extinguisher if this can be accomplished safely. Ensure all passengers and crew exit the vehicle with you.
 - Activate emergency shut off valves if safe to do so.
- Note:** Any CNG emergency shut off in the SWM CNG fueling system, if activated, will shut down the entire system. It is not necessary to activate the emergency shut off closest to the fire.
- Move to an area of safety and have all nearby personnel move with you.
 - Make sure no co-workers or bystanders approach the area of the fire.
 - Call 911 and report the fire.
 - Report the event in the most expedient manner possible to your Supervisor or another available SWM Supervisor.

- If the fire is in its incipient stage and the task can be performed safely, attempt to extinguish the fire with any available fire extinguisher.
- Remain on the scene at a safe distance until instructed by a Supervisor or Emergency Responders to do otherwise.

Tire Fires:

- Watch for signs of an impending tire fire (i.e. smoking, one tire hotter than the others, flattening, etc.)
- If this occurs, reduce speed or stop to allow tires to cool.
- If safe to do so, re-inflate tire to proper pressure.
- Report underinflated or leaking tires immediately. If less than 80% inflation, tire must be remounted in accordance with OSHA rules.
- If flames are present, call 911 and report the fire and your location.
- If the task can be performed safely, use a properly rated fire extinguisher (ABC / All purpose) to extinguish the fire.
- Report the event in the most expedient manner possible to your Supervisor or another available SWM Supervisor.
- Remain on the scene at a safe distance until instructed by a Supervisor or Emergency Responders to do otherwise.
- Make sure no co-workers or bystanders approach the area of the fire.

Vehicle Load Fire:

- Activate fire suppression devices, if available and safe to do so.
- Find an open, paved area near a fire station or fire alarm, if possible
- Ensure that the vehicle/equipment is away from:
 - Dry grass or bushes or other vegetation
 - Bystanders and pedestrians
 - Other vehicles
 - Buildings
 - Property
 - Storm drains
- Direct any passengers or crew out of and away from the vehicle/equipment.
- Call 911 and report the fire and your location.
- Report the event in the most expedient manner possible to your Supervisor or another available SWM supervisor.

- Take precaution and look out for falling debris and flare-up when opening trailer doors.
- If able to do so without endangering yourself or others:
 - Eject or dump the load and move the vehicle away from the burning load (for DOB and transfer load fires, drop box/unhook trailers, and pull vehicle away)
 - If the vehicle is a CNG vehicle, close the vehicle's manual shut-off valve, if the vehicle is so equipped and this can be safely accomplished
 - Attempt to extinguish any fire remaining in the body using appropriate fire extinguishers. **DO NOT** use water fire extinguishers on electrical fires or any fire involving a flammable liquid.
- Keep all crew and bystanders away from the burning load and the vehicle/equipment.
- Remain on the scene at a safe distance until instructed by a Supervisor or Emergency Responders to do otherwise.

Bomb Threat Procedures

All bomb threats will be taken seriously. If SWM personnel should receive a **Phoned Threat**:

- **Remain calm and DO NOT HANG OUT**
- If possible, signal other staff members to listen and notify authorities and Supervisor
- If the phone has a display, copy the number and/or letters on the window display
- Write down the exact wording of the threat
- Keep the caller on the line for as long as possible and use the Bomb Threat Checklist to gather as much information as you can
- Record, if possible
- Fill out the [Bomb Threat Checklist](#) immediately
- Be available for interviews with the building's emergency response team and law enforcement

For Verbal Threat:

- If the perpetrator leaves, note which direction they went
- Call 911 and notify Supervisor
- Write down the threat exactly as it was communicated
- Note the description of the person who made the threat:
 - Name (if known)
 - Gender
 - Body Size (height/weight)
 - Distinguishing features
 - Race
 - Type/color of clothing
 - Hair and eye color
 - Voice (loud, deep, accent, etc.)

For Written Threat:

- Call 911 and notify Supervisor
- Handle the document as little as possible
- Rewrite the threat exactly as is on another sheet of paper and note the following:
 - Date/time/location document was found
 - Any situations or conditions surrounding the discovery/delivery
 - Full names of any personnel who saw the threat
 - Secure the original threat; DO NOT alter the item in any way
 - If small/removable, place in a bag or envelope
 - If large/stationary, secure the location

For Emailed Threat:

- Leave the message open on the computer
- Call 911 and notify Supervisor
- Print, photograph, or copy the message and subject line; note the date and time
- DO NOT delete the message

Signs of a suspicious package:

- | | |
|-----------------------|----------------------|
| ▪ No return address | ▪ Poorly handwritten |
| ▪ Excess postage | ▪ Misspelled words |
| ▪ Stains | ▪ Incorrect titles |
| ▪ Strange odor | ▪ Foreign postage |
| ▪ Strange sounds | ▪ Restrictive notes |
| ▪ Unexpected delivery | |

DO NOT:

- Use two-way radios or cellular phone; radio signals have the potential to detonate a bomb
- Evacuate the building until police arrive to evaluate the threat
- Activate the fire alarm
- Touch or move a suspicious package

The Division Manager or his/her/their designee, in consultation with the Tacoma Police Department and emergency responders, will evaluate the threat, consider the following options and make a decision to:

- Search without evacuation
- Initiate partial evacuation
- Conduct a complete evacuation and search
- Take no further action

Factors to be considered in making an evacuation decision are:

- Have similar threats been received without consequence?
- Was the caller specific about the location of the bomb, time of detonation, etc.?
- How was the threat received?
- Did the caller demonstrate knowledge of our facilities?
- What other information about the call or caller contributes to the credibility (or lack thereof) of the threat?

If the facility is affected:

The Division Manager or his/her/their designee will contact the Supervisor of the affected area to assist in a search and/or evacuation procedures. Individual operations and areas will be systematically contacted and advised of the situation.

A quick visual search is advisable and should be accomplished by those familiar with the area.

Search should be conducted in the following manner:

- Work from the walls to the center of the room and the floor to the ceiling
- LOOK and LISTEN
- If lights are found off, LEAVE THEM OFF
- DO NOT key radios or walkie-talkies in the building or affected area

The Division Manager or his/her/their designee may use the following announcement if an evacuation is warranted; however, message must be delivered face-to-face.

“May I have your attention please? This is an official emergency announcement. We have just received a bomb threat. Please evacuate the (name specific facility affected)

and rally at your assembly areas. As you leave, be on the lookout for any unusual or out-of-place objects in your work area. Do not crowd or run. Keep the doors open. Do not use your cell phones, radios or Nextel. Do not turn any electrical devices, such as lights, on or off. Do not re-enter the building until given the all-clear by the persons in charge of the search.”

If the Incident Commander (IC) issues the order to evacuate, follow the procedures outlined in the [EVACUATIONS](#) section of this Plan

Evacuation Procedures

Evacuation is one method of protecting employees and equipment from the effects of a hazard by moving them away from the hazard. This plan is designed to ensure that the process takes place in an orderly manner, as quickly and safely as possible, while keeping track of where personnel and equipment are located.

SWM personnel must be prepared to conduct evacuations of themselves, visitors, and equipment at all times of the day in the event of an emergency.

The situation that created the potential need for evacuation should be continually monitored. Any change in circumstances that would affect the hazard level to SWM personnel, visitors or equipment should be considered in the decision to evacuate or return personnel and equipment to the facility.

Implementation

The decision to evacuate SWM will be based on the situation and availability of resources. This section describes possible criteria for deciding to evacuate and outline the process for implementing an evacuation of the facility.

Assumption

The evacuation information in this chapter is based upon the following assumptions:

- This is a temporary evacuation, with employees, visitors and equipment returning to SWM within hours or days at the most.
- This evacuation plan applies to the emergencies described previously in this document, but may also be implemented for other emergencies.
- At the time of evacuation, employees may be dispersed within the City or around the facility in such a way that requires additional steps in planning and execution.
- Some City equipment may require pre-evacuation and/or staging prior to an actual evacuation.
- Most employees will have personal vehicles parked at SWM. They will wish to protect these from the effects of the emergency, requiring potential pre-evacuation of personal vehicles as well as City equipment.
- Once personal vehicles have been evacuated, employees will be completely reliant on City transportation or movement by foot in order to evacuate the facility.
- Communications may be sporadic or unavailable with some employees.

- The need to evacuate may become evident during the day or night, and there may be little control over the evacuation start time.
- Public panic, stress, and movement could interrupt or degrade our evacuation plan and routes.
- While some emergency situations are slow to develop, others occur without warning. Hence, there may be time for a deliberate evacuation, or the evacuation may have to be conducted with minimal preparation time. In the case of short notice evacuations, there may be little time to move personal vehicles or City equipment.
- **In all cases, personnel safety will be given the highest priority.**

Evacuation Criteria

The decision to evacuate SWM is the responsibility of the Incident Commander (IC), who will determine the need based on criteria that may include the following:

- What areas of the facility are at risk and should be evacuated?
- What do evacuees need to take with them?
- What travel routes should be used?
- What traffic control is needed?
- How will evacuated areas be secured?
- What resources will be needed to conduct the evacuation?

Pre-Evacuation

If provided adequate warning, the IC may direct the pre-evacuation of employee vehicles and designated City equipment to a safe location prior to any actual, or expected evacuation. This will preserve City resources and protect personal property allowing employees to continue to work without concern for their belongings. This will also enable the IC to better manage personnel and resources once the order to evacuate is given. The pre-evacuation will follow the designated route to the evacuation locations described later in this chapter.

Evacuation

When the IC issues an order to evacuate SWM facilities, employees should do the following:

- Remain calm! Quickly gather any easily accessible personal items (i.e. car keys, coats, purses, backpacks).

- Take any available telephones, radios and first aid supplies during the evacuation if it can be done safely.
- Walk, do not run. Keep noise to a minimum, do not push or crowd. **Keep doors open. Do not turn any electrical devices, such as lights, on or off. Do not use cell phones, radios or Nextel devices! Do not use the elevator.**
- Follow the designated evacuation route and assemble in the designated rally points unless otherwise instructed. Evacuation routes are provided in [Appendix D](#). Rally points shown in [Appendix H](#).
- Assist any persons in need of assistance.
- If visitors are present during the evacuation, they should evacuate with SWM personnel. Communicate to the visitors the SWM's evacuation procedures and assist them as needed.
- While exiting, pay attention! Scan area(s) for any unusual or suspicious item that may be visible.
- Follow instructions given by supervisors and emergency personnel.
- Once at the evacuation assembly point, compile a head count of personnel and any visitors present. If anyone is unaccounted for, inform a supervisor of the person's absence and last known location.
- If relocated away from the facility, never re-enter until notified that it is safe to do so.

Upon notice of evacuation, ensure to take a "to-go kit" and immediately proceed to the closest rally point to begin taking a head count as personnel arrive. Notify a supervisor if there are personnel missing.

SWM Employees who are off-site when the evacuation occurs will go to the designated Field Rally Points or continue their work as directed. Refer to [Appendix H](#) for list of Field Rally Points.

Transportation

Personnel, equipment, and material resources will be evacuated from the site as required, using the following:

Privately Owned Vehicles (POV)	POVs and other essential employee-owned property should be moved during the pre-evacuation phase. City vehicles will be used to ferry employees back to their work once they have moved their vehicles to the evacuation site. During a sudden emergency evacuation, employees may use their personal vehicles or City vehicles as appropriate to depart SWM as quickly as possible.
---------------------------------------	--

City Vehicles and Large Equipment	City vehicles and equipment not required for evacuation use should be moved to the evacuation site, if safe to do so. DMs need to ensure there are adequate vehicles remaining at SWM to accommodate all employees during an actual evacuation.
Vital Records, Computers and Personal Equipment	DMs should determine what records and equipment will be moved and assign individuals this responsibility. It may be advisable to move some of these items during a pre-evacuation. During the evacuation, employees should be able to quickly access and move these records or equipment quickly.
Employees	Accountability for each employee is paramount during any evacuation. If time permits, employees should gather at their assigned rally point for accountability and evacuation. In a catastrophic event, there may not be time to gather. In this case employees should evacuate as quickly as possible through use of the most feasible means, vehicle, or foot. Accountability for individuals and equipment should take place immediately upon arrival at the alternate site.
Special Needs Individuals	Supervisors must identify individuals with special needs in their pre-emergency planning. Once identified, a procedure must be implemented to provide these individuals the required aid during emergency and evacuation.
Visitors (including Contractors)	During periods of potential or actual emergency, visitors should be kept to a minimum and limited to essential personnel at SWM. In most cases, these individuals will have their own vehicles and be able to self-evacuate. Hosts should ensure the visitors are familiar with the evacuation process, evacuation route(s), and are notified in the event of an emergency. Employees must account for visitors who are at the facility

Warning and Information

The Incident Commander or appropriate DM will normally determine whether a pre-evacuation or evacuation is required. A warning will then be issued to the affected employees/sections/facility using suitable methods.

Advance Notice of Possible Pre-Evacuation/Evacuation

For slow developing emergency situations, it may be advisable to pre-evacuate vehicles, equipment, records, or personnel. Advance warning should be given to affected employees as soon as it is clear pre-evacuation or evacuation is imminent. This will alleviate panic and allow each section compete control over the pre-evacuation/evacuation process.

Access Control and Security

Security in evacuated areas is extremely important. Buildings and equipment left at the site should be locked and secured.

Facility gates should also be secured once it is confirmed that no employees are still at the site.

Demobilization and Re-entry

Employees and equipment returning to SWM or evacuated areas require the same consideration, coordination, and control as the original evacuation. The IC remains for this phase. In the event of major catastrophe or damage, the facility must be fully evaluated and deemed safe before reoccupation.

The following conditions should be met in the evacuated area before the majority of employees are authorized to return:

- The threat prompting the evacuation has been resolved or subsided.
- Sufficient debris has been removed to permit safe travel.
- Downed power lines have been removed; ruptured gas, and water lines have been repaired; and other significant safety hazards have been eliminated. However, utility services may not be fully restored.
- Structures have been inspected and deemed safe for occupancy.
- Notwithstanding the above, emergency crews may be tasked with entering the facility to perform tasks prior to all the steps in this section being performed.

Returning employees should address such issues as:

- Documenting damage for insurance purposes
- Caution in re-activating utilities and damaged appliances
- Cleanup instructions and responsibilities
- Methods of removal and disposal of debris

Readiness Levels

This section identifies the readiness levels for an evacuation and describes the actions to be taken at each level.

Level 4 – Normal Conditions

No impending threat or hazard that would necessitate consideration of an evacuation. No action needs to be taken.

Level 3 – Increased Readiness

Potential impending threat or hazard that would necessitate consideration of an evacuation. No action needs to be taken.

- Review information on potential evacuation areas, facilities at risk, and evacuation routes.
- Monitor the situation.
- Inform first responders and City Manager of the situation.
- Check the status of potential evacuation routes and alternate facilities.

Level 2 – High Readiness

Impending risk of a hazard that might necessitate an evacuation such as a significant storm event:

- Monitor the situation.
- Alert SWM personnel (both at the site and elsewhere in the City) of possible evacuation operations.
- Make final coordination with the Asphalt Plant and other potential alternated locations for equipment and personnel.
- Check the status of resources and enhance short-term readiness if possible. Monitor the availability of personnel, equipment, and transportation assets.

Level 1 – Maximum Readiness

Significant possibility that an evacuation operation may have to be conducted. Level 1 readiness actions may include:

- Update the status of resources.
- Check the status of evacuation routes and pre-position any necessary traffic control devices.
- Implement pre-evacuation activities.

Administration and Support

This section describes actions needed to develop and maintain readiness for an evacuation, as well as those associated with documenting evacuation activities.

Plan Development and Maintenance

The Safety Officer is responsible for facilitating maintenance of the SWM Emergency Response & Evacuation Plan and appropriate evacuation procedures. These procedures will be reviewed annually and revised as needed to reflect changes in SWM structure, personnel or policies that affect the procedures. Recommended changes should be forwarded to the Safety Officer for implementation as needs become apparent.

SWM Collections and On-Site Operations workgroups and the associated sections assigned responsibilities in the evacuation procedures are responsible for developing and maintaining SOPs covering those responsibilities.

Reporting

Any evacuation should be reported immediately up through appropriate channels and to the City's Emergency Operations Center (EOC) if open and operational. Periodic Situation Reports, if appropriate, will be prepared and disseminated throughout the duration of the evacuation or event.

Records

Records should be kept of all activities and costs associated with an evacuation.

Activity Logs

The IC should maintain accurate logs recording evacuation decisions, significant evacuation activities, and the commitment of resources to support evacuation operations.

Documentation of Costs

Expenses incurred in carrying out evacuations and related activities should be recorded for possible reimbursement and future planning consideration. Documentation shall include time sheets.

After Action Review (AAR)

For evacuations or emergency activities that require implementation of this plan, Environmental Services or appropriate division(s) shall organize and conduct a review of emergency operations by those tasked with this plan. The purpose of this review is to identify needed improvements in the plan, procedures, facilities, and equipment. Any such needed improvements will be communicated to those affected.

Exercises

Local drills, tabletop exercises, functional exercises, and full-scale exercises shall periodically include an evacuation scenario based on the potential hazards faced by SWM. After Action Reviews (AAR) of exercises will be conducted within the participating sections/divisions.

Emergency Evacuation Procedure for Contractors and Visitors

During an emergency evacuation: customers, visitors, delivery drivers and any other persons present in SWM facilities will be evacuated with SWM personnel. SWM personnel will assist others in a speedy and orderly evacuation to the designated assembly area(s) and follow evacuation procedures outlined in this plan.

Contractors with temporary on-site facilities at SWM will have a Site Health and Safety Plan (HASP) on file with the City of Tacoma's Project Manager. Prior to job start-up, the Project Manager will submit contractor's HASP to SWM Management team and the Safety Office. SWM will ensure that the Contractor's on-site supervisor is included in the notification process used during an emergency evacuation.

Contractors are responsible for ensuring their workforces are trained in evacuation procedures and emergency evacuation assembly areas. Pre-planning, communication and workforce training will aid in the orderly and coordinated evacuation of contractor personnel from any potentially affected areas.

SWM will require the Contractor's Health and Safety Plan to include, at a minimum, the following information:

- On-Site Supervisor's Contact Information
- Emergency Numbers
- Emergency Evacuation Rally Site

During any evacuation, it is important that evacuation is accomplished quickly. Once at a rally site, a head count must be performed. If anyone is unaccounted for, do not return to the evacuated facility. Inform the SWM Supervisor in charge of the operation or Emergency Services Personnel that someone is missing and the approximate location where they were last seen.

Once evacuated, personnel must not return to the affected facility until the all-clear signal is given by SWM's Management.

Guidelines for Responding to Threats or Emergencies at Solid Waste Management

This applies to potential threats or emergencies that may pose a danger to Solid Waste Management (SWM) employees in the field or at the Tacoma Recovery & Transfer Center.

Employees encountering a threat or emergency will utilize the following list of options to help make decisions appropriate to the situation. This list is intended to be a guideline so that any response can be adapted to a specific situation.

Potential Actions to Take When Responding to a Threat

- Leave unsafe areas immediately
- For immediate threats or emergencies:
 - Call or have someone call 911
 - Concurrently get or have someone get a Manager or Supervisor
- For non-immediate threats or non-emergencies:
 - Call Non-emergency 253-798-4721
 - Concurrently get or have someone get a Manager or Supervisor
- Communicate situation to other employees that could be impacted as appropriate:
 - **SWM Employees**
 - Collections
 - Recycle Center
 - Household Hazardous Waste
 - White Goods Building
 - ScaleHouse
 - Main Receiving Building
 - South Compactor
 - Administration
 - **Other Onsite City of Tacoma Employees**
 - EnviroHouse (573-2426)
 - Shop 4 (593-7706)
 - Signal Shop (591-5287)
 - Fire Garage (591-5396)
 - **Other Onsite Entities**
 - Metro Parks Greenhouse (307-1822 or 305-1035 on-call manager)
 - Urban Forestry Nursery (993-0962 or 720-6422 or 742-9687)
 - Goodwill Drop Off Station (279-4355)
 - Alpine Tire Staff (425-508-1712 or 425-508-0418)
 - **Onsite Customers, Visitors & Contractors**
 - **Environmental Services Leadership**
 - Director and Assistant Director
- Monitor situation, make adjustments as necessary, & communicate any changes to SWM employees by appropriate means, including:
 - Radio
 - Phone
 - E-mail

- Intercom announcement
 - Face-to-face
- Implement emergency responses such as:
 - Lock down building
 - Lock entrance gates
 - Shelter-in-place
 - Evacuate
 - Follow the [Shelter-In-Place/Lock-Down Procedures](#)
- Advise employees not actively involved to stay clear until it is safe
- Communicate with all if threat is no longer active or has been refuted
- Debrief immediately upon resolution of the threat
- Perform After Action review within 10 days
- Distribute After Action Report to all employees

NOTES: Threats can come in all kinds of forms, including but not limited to:

Unconfirmed:

Information received informally via social media post, friend, co-worker, word-of-mouth, or e-mail about a potential threat or a current, unfolding situation that may pose danger to SWM Division employees.

Confirmed:

Information received from a verified, reliable source about a threat that is confirmed but not immediately dangerous to SWM Division employees.

Confirmed and Strong:

Confirmed threat involving or witnessed by an employee or Information received officially from a verified, reliable source such as another City Agency that potentially poses an immediate danger to SWM Division employees.

There is a draft SOP for Collection employees when they encounter a threatening customer.

Shelter-in-Place/Lock-Down Procedures

In the event that there are personnel or visitors who are unable to evacuate in an emergency or it is unsafe to do so, it may become necessary to “shelter-in-place” or implement a “lock-down.”

Shelter-in-place means you may be advised to “shelter-in-place” rather than evacuate your building during emergency situations such as a large hazardous material release or severe weather emergencies. The recommendation to shelter-in-place will be conveyed through official SWM notification process. If you are told to shelter-in-place, follow the following instructions:

- Stay inside the building or go indoors quickly as possible if you are working outside.
- Close windows if applicable to provide tighter seal against chemical vapors, smoke and/or flames.
- Locate supplies you may need such as food, medication, water, if you have them.
- In the event of a hazardous material release, turn off fans, air conditioning or ventilation systems, if you have control of these systems.
- Monitor official City of Tacoma/Solid Waste emergency notification systems for further instructions.

A **Lock-down** may be instructed during situations such as the presences of a hostile or armed intruder inside a building. A lock-down requires locking doors, windows, and barricading oneself to block entry to a building, a conference room, or to an office suite.

- Lock or barricade conference room and office doors.
- Close windows and window treatments. Turn off the lights.
- Instruct everyone to remain silent and not to go into hallways.
- Crouch down in areas out of sight from doors and windows to conceal yourself as much as possible.
- If you are in hallways during the emergency, seek shelter immediately in the nearest office or conference room.
- Monitor official SWM emergency systems for further information or an “all clear signal.”
- Do not approach emergency response personnel during a lockdown, let them come to you.
- Follow instructions from police at all times to avoid harm and ensure the best possible response.

NOTE: During a police rescue, try to get down on the floor immediately. If possible, cover your head with your hands and arms. Do not make any movement either towards the suspect or the officer(s).

Medical Emergencies

All SWM Supervisors and many SWM personnel are trained in basic first aid and have access to first aid kits for treatment of minor medical emergencies.

There are five Automated External Defibrillators (AED) stationed at various locations at SWM (see [Appendix F](#) for location of AEDs).

For medical emergencies:

- Dial 911 and provide the following information.
 - Nature and urgency of the emergency
 - Patient's condition
 - Location of the patient (specific area or building)
 - Call back number
- Administer first aid as appropriate.
- Alert others of the situation. If possible, send someone to the front gate to guide emergency service to the injured person's location as quickly as possible.
- Stay with the patient until help arrives.

Threatening Customer / Employee

If a threatening customer or employee is anywhere on the SWM facility, an audible/verbal challenge/warning should be made to alert employees and take whatever steps are necessary to control the situation (i.e., Call 911). If the threatening person enters a building or moves or travels to another area, an alert should be made to the facility occupants using the building paging system, radio, telephone or whatever other means are available and effective.

SWM's Division Management Team and supervisors should assess the threat and determine the need to evacuate or lock-down or any additional steps that may be taken to ensure the safety of all present.

Responding to VMF CH4 (CNG) Gas Detection Alarms



RequestFile.php?id
=60095

Responding to VMF CO and NO2 Detection Alarms



RequestFile.php?id
=60504

Training and Drills

To have an effective and safe emergency response, it is necessary that comprehensive training be given to everyone. A minimum of one emergency response drill will be performed in every facility of SWM (MRB, Recycle/HHW, Admin/Shop, White Goods, Off-site) annually.

The purpose of training is to ensure all personnel know their roles and responsibilities during an emergency. The purpose of drills is to allow all personnel to practice the correct procedures to ensure safety of life in any emergency event. Drills should never be taken lightly. Employees must evacuate or participate to the extent they are able, as instructed.

Due to the nature of the operations at SWM and a need to provide continuous customer service, emergency response drills may be conducted at different times in different facilities of SWM. During the drills, all personnel and others present must physically relocate to their assembly areas. Drills will not usually be announced ahead of time in order to simulate, as closely as possible, actual emergency conditions.

The Division Manager or his/her/their designated representative will conduct, document and critique all emergency response drills. After Action Reviews will be communicated to all SWM personnel following the drills.

Documentation of all emergency response drills shall be maintained by the Safety Office.

Before any drill that may involve the use/testing of fire protection systems or equipment, Facilities Maintenance shall notify the Fire Department at 253-591-5737.

Important Check Points of an Emergency Response Drill:

Employee Response

1. Quick response and removal of all personnel from immediate danger
2. Total evacuation or relocation of all affected facilities and personnel accomplished in an orderly and speedy process
3. Doors to searched and evacuated rooms left closed (fire) or open (bomb threat) depending on the scenario
4. Orderly assembly in designated areas with a head count taken of all personnel present and reported to Supervisor, along with information of any unaccounted-for persons and their last known whereabouts
5. No re-entry into the facility until the all-clear signal is received

Facilities Maintenance

1. Knowledge and use of evacuation alarms, intercom systems and radio operation

2. Personnel dispatched to meet Fire Department, when responding, to direct them to the fire or emergency
3. HVAC system shut down
4. All-clear notification from the Fire Department and re-enter message communicated to all personnel

Appendices

Appendix A – Emergency Telephone Numbers



Appx A-Emer
Numbers.docx

Appendix B – SWM Emergency Response Call Succession (Management & Site Contacts)



Appx B-SWM Emer
Resp Call Successior

Appendix C – Employee Roster and Phone Tree (Manager/Supervisor Copy)



Appx C - SWM
Phone Tree.docx

Appendix D – Evacuation Plans



Public
Receiving.docx



Recycling
Center.docx



MRB.docx



SWM Admin.docx

Appendix E – SWM Exit Locations Map



Appx
E-Entrance-Exit Map

Appendix F – Location of Automatic External Defibrillators (AED)



Appx F-AED
Locations.docx

Appendix G – Bomb Threat Sheet



Appx G-Bomb
Threat Sheet.docx

Appendix H – Evacuation Rally Points



Appx I - ES
EMERGENCY STAFF I

Appendix I – Emergency Staffing Plan



Appx I - ES
EMERGENCY STAFF I

Appendix J – HHW Facility for Fire Department



Appendix J - HHW
Facility for Fire Depa

Certification Statement:

The designated representative or alternate designated representative must sign (i.e., agree to) this certification statement. If you are an agent and you click on "SUBMIT", you are not agreeing to the certification statement, but are submitting the certification statement on behalf of the designated representative or alternate designated representative who is agreeing to the certification statement. An agent is only authorized to make the electronic submission on behalf of the designated representative, not to sign (i.e., agree to) the certification statement.

Facility Name:TACOMA CITY SOLID WASTE FAC**Facility Identifier:**527434**Facility Reporting Year:**2021**Facility Location:**

Address: 3510 SOUTH MULLEN

City: TACOMA

State: WA

Postal Code: 98409

Facility Site Details:**CO2 equivalent emissions from facility subparts C-II, SS, and TT (metric tons):**10,377.8**CO2 equivalent emissions from supplier subparts LL-QQ (metric tons):**0**Biogenic CO2 emissions from facility subparts C-II, SS, and TT (metric tons):**0**Cogeneration Unit Emissions Indicator:**N**GHG Report Start Date:**2021-01-01**GHG Report End Date:**2021-12-31**Description of Changes to Calculation Methodology:****Plant Code Indicator:**N**Primary NAICS Code:**562212**Second Primary NAICS Code:****Parent Company Details:****Parent Company Name:**CITY OF TACOMA**Address:**747 Market Street, Tacoma, WA 98402**Percent Ownership Interest:**100

Subpart HH: Municipal Solid Waste Landfills

Gas Information Details

Gas Name	Methane
Gas Quantity	415.11 (Metric Tons)
Own Result?	

Landfill Details

Is the landfill open?	N
Ending Year for Accepting Waste	2010
Starting Year for Accepting Waste	1960
First year of emissions reporting	2010
Leachate recirculation was used during the reporting year	N
Typical frequency of use for leachate recirculation system	Not used for the past 10 years
Scales are present at the landfill in the reporting year	N
Does the landfill have a landfill gas collection system?	Y
Passive vents and/or flares are present	N
Landfill Capacity	5455524 (Metric Tons)
Total surface area of the landfill containing waste	704153 (Square Meters)
Covertypes Details	Other soil mixture

Aeration Details

Aeration Blower Capacity	()
Landfill Fraction Affected by Aeration	()
Aeration Blower Operations Hours	()
Other MCF Factors	
Additional Description	

Current Waste Disposal Quantity Determination Details**First Year to Current Year Annual Waste Quantity Method**

Reporting Year	2010
Total Annual Waste Disposal Quantity	65977 (Metric Tons)
Method Used to Determine Quantity	Used scales to weigh loads before off-loading and either used scales to weigh individual loads after off-loading or used representative tare vehicle/container weights
Annual Waste Disposal Quantity	65977 (Metric Tons)

Waste Type Details

Year Waste Disposed	2010					
Missing data procedure used?	N					
Number of Times Substituted						
Waste Type Details	Option	Waste Type	Percent by Weight	Degradable Organic Carbon Value	Fraction Of DOC Dissimilated	Decay Rate
	Bulk Waste	Bulk waste	1	0.2	0.5	0.038

Historical Waste Disposal Quantity Estimation Details**Method used to determine the annual waste quantity for any prior years**

Were scales used to determine the annual waste quantity	Y
Start Year	1977
End Year	2009

Prior Year Annual Waste Quantity Method

Reporting Year	2009
Total Annual Waste Disposal Quantity	0 (Metric Tons)
Method Used to Determine Quantity	Used scales to weigh loads before off-loading and either used scales to weigh individual loads after off-loading or used representative tare vehicle/container weights
Annual Waste Disposal Quantity	0 (Metric Tons)
Reporting Year	2008
Total Annual Waste Disposal Quantity	0 (Metric Tons)
Method Used to Determine Quantity	Used scales to weigh loads before off-loading and either used scales to weigh individual loads after off-loading or used representative tare vehicle/container weights
Annual Waste Disposal Quantity	0 (Metric Tons)

Reporting Year	2007
Total Annual Waste Disposal Quantity	0 (Metric Tons)
Method Used to Determine Quantity	Used scales to weigh loads before off-loading and either used scales to weigh individual loads after off-loading or used representative tare vehicle/container weights
Annual Waste Disposal Quantity	0 (Metric Tons)
Reporting Year	2006
Total Annual Waste Disposal Quantity	0 (Metric Tons)
Method Used to Determine Quantity	Used scales to weigh loads before off-loading and either used scales to weigh individual loads after off-loading or used representative tare vehicle/container weights
Annual Waste Disposal Quantity	0 (Metric Tons)
Reporting Year	2005
Total Annual Waste Disposal Quantity	0 (Metric Tons)
Method Used to Determine Quantity	Used scales to weigh loads before off-loading and either used scales to weigh individual loads after off-loading or used representative tare vehicle/container weights
Annual Waste Disposal Quantity	0 (Metric Tons)
Reporting Year	2004
Total Annual Waste Disposal Quantity	0 (Metric Tons)
Method Used to Determine Quantity	Used scales to weigh loads before off-loading and either used scales to weigh individual loads after off-loading or used representative tare vehicle/container weights
Annual Waste Disposal Quantity	0 (Metric Tons)
Reporting Year	2003
Total Annual Waste Disposal Quantity	0 (Metric Tons)
Method Used to Determine Quantity	Used scales to weigh loads before off-loading and either used scales to weigh individual loads after off-loading or used representative tare vehicle/container weights
Annual Waste Disposal Quantity	0 (Metric Tons)
Reporting Year	2002
Total Annual Waste Disposal Quantity	0 (Metric Tons)
Method Used to Determine Quantity	Used scales to weigh loads before off-loading and either used scales to weigh individual loads after off-loading or used representative tare vehicle/container weights
Annual Waste Disposal Quantity	0 (Metric Tons)
Reporting Year	2001
Total Annual Waste Disposal Quantity	44562 (Metric Tons)
Method Used to Determine Quantity	Used scales to weigh loads before off-loading and either used scales to weigh individual loads after off-loading or used representative tare vehicle/container weights
Annual Waste Disposal Quantity	44562 (Metric Tons)
Reporting Year	2000
Total Annual Waste Disposal Quantity	44071 (Metric Tons)
Method Used to Determine Quantity	Used scales to weigh loads before off-loading and either used scales to weigh individual loads after off-loading or used representative tare vehicle/container weights
Annual Waste	

Disposal Quantity	44071 (Metric Tons)
Reporting Year	1999
Total Annual Waste Disposal Quantity	29598 (Metric Tons)
Method Used to Determine Quantity	Used scales to weigh loads before off-loading and either used scales to weigh individual loads after off-loading or used representative tare vehicle/container weights
Annual Waste Disposal Quantity	29598 (Metric Tons)
Reporting Year	1998
Total Annual Waste Disposal Quantity	19172 (Metric Tons)
Method Used to Determine Quantity	Used scales to weigh loads before off-loading and either used scales to weigh individual loads after off-loading or used representative tare vehicle/container weights
Annual Waste Disposal Quantity	19172 (Metric Tons)
Reporting Year	1997
Total Annual Waste Disposal Quantity	29834 (Metric Tons)
Method Used to Determine Quantity	Used scales to weigh loads before off-loading and either used scales to weigh individual loads after off-loading or used representative tare vehicle/container weights
Annual Waste Disposal Quantity	29834 (Metric Tons)
Reporting Year	1996
Total Annual Waste Disposal Quantity	36287 (Metric Tons)
Method Used to Determine Quantity	Used scales to weigh loads before off-loading and either used scales to weigh individual loads after off-loading or used representative tare vehicle/container weights
Annual Waste Disposal Quantity	36287 (Metric Tons)
Reporting Year	1995
Total Annual Waste Disposal Quantity	37793 (Metric Tons)
Method Used to Determine Quantity	Used scales to weigh loads before off-loading and either used scales to weigh individual loads after off-loading or used representative tare vehicle/container weights
Annual Waste Disposal Quantity	37793 (Metric Tons)
Reporting Year	1994
Total Annual Waste Disposal Quantity	21052 (Metric Tons)
Method Used to Determine Quantity	Used scales to weigh loads before off-loading and either used scales to weigh individual loads after off-loading or used representative tare vehicle/container weights
Annual Waste Disposal Quantity	21052 (Metric Tons)
Reporting Year	1993
Total Annual Waste Disposal Quantity	31497 (Metric Tons)
Method Used to Determine Quantity	Used scales to weigh loads before off-loading and either used scales to weigh individual loads after off-loading or used representative tare vehicle/container weights
Annual Waste Disposal Quantity	31497 (Metric Tons)
Reporting Year	1992
Total Annual Waste Disposal Quantity	88859 (Metric Tons)
Method Used to	Used scales to weigh loads before off-loading and either used scales to weigh individual

Determine Quantity	loads after off-loading or used representative tare vehicle/container weights
Annual Waste Disposal Quantity	88859 (Metric Tons)
Reporting Year	1991
Total Annual Waste Disposal Quantity	102013 (Metric Tons)
Method Used to Determine Quantity	Used scales to weigh loads before off-loading and either used scales to weigh individual loads after off-loading or used representative tare vehicle/container weights
Annual Waste Disposal Quantity	102013 (Metric Tons)
Reporting Year	1990
Total Annual Waste Disposal Quantity	153864 (Metric Tons)
Method Used to Determine Quantity	Used scales to weigh loads before off-loading and either used scales to weigh individual loads after off-loading or used representative tare vehicle/container weights
Annual Waste Disposal Quantity	153864 (Metric Tons)
Reporting Year	1989
Total Annual Waste Disposal Quantity	154052 (Metric Tons)
Method Used to Determine Quantity	Used scales to weigh loads before off-loading and either used scales to weigh individual loads after off-loading or used representative tare vehicle/container weights
Annual Waste Disposal Quantity	154052 (Metric Tons)
Reporting Year	1988
Total Annual Waste Disposal Quantity	185362 (Metric Tons)
Method Used to Determine Quantity	Used scales to weigh loads before off-loading and either used scales to weigh individual loads after off-loading or used representative tare vehicle/container weights
Annual Waste Disposal Quantity	185362 (Metric Tons)
Reporting Year	1987
Total Annual Waste Disposal Quantity	191196 (Metric Tons)
Method Used to Determine Quantity	Used scales to weigh loads before off-loading and either used scales to weigh individual loads after off-loading or used representative tare vehicle/container weights
Annual Waste Disposal Quantity	191196 (Metric Tons)
Reporting Year	1986
Total Annual Waste Disposal Quantity	181610 (Metric Tons)
Method Used to Determine Quantity	Used scales to weigh loads before off-loading and either used scales to weigh individual loads after off-loading or used representative tare vehicle/container weights
Annual Waste Disposal Quantity	181610 (Metric Tons)
Reporting Year	1985
Total Annual Waste Disposal Quantity	169786 (Metric Tons)
Method Used to Determine Quantity	Used scales to weigh loads before off-loading and either used scales to weigh individual loads after off-loading or used representative tare vehicle/container weights
Annual Waste Disposal Quantity	169786 (Metric Tons)
Reporting Year	1984
Total Annual Waste Disposal Quantity	166089 (Metric Tons)

Method Used to Determine Quantity	Used scales to weigh loads before off-loading and either used scales to weigh individual loads after off-loading or used representative tare vehicle/container weights
Annual Waste Disposal Quantity	166089 (Metric Tons)
Reporting Year	1983
Total Annual Waste Disposal Quantity	155084 (Metric Tons)
Method Used to Determine Quantity	Used scales to weigh loads before off-loading and either used scales to weigh individual loads after off-loading or used representative tare vehicle/container weights
Annual Waste Disposal Quantity	155084 (Metric Tons)
Reporting Year	1982
Total Annual Waste Disposal Quantity	156751 (Metric Tons)
Method Used to Determine Quantity	Used scales to weigh loads before off-loading and either used scales to weigh individual loads after off-loading or used representative tare vehicle/container weights
Annual Waste Disposal Quantity	156751 (Metric Tons)
Reporting Year	1981
Total Annual Waste Disposal Quantity	157138 (Metric Tons)
Method Used to Determine Quantity	Used scales to weigh loads before off-loading and either used scales to weigh individual loads after off-loading or used representative tare vehicle/container weights
Annual Waste Disposal Quantity	157138 (Metric Tons)
Reporting Year	1980
Total Annual Waste Disposal Quantity	150606 (Metric Tons)
Method Used to Determine Quantity	Used scales to weigh loads before off-loading and either used scales to weigh individual loads after off-loading or used representative tare vehicle/container weights
Annual Waste Disposal Quantity	150606 (Metric Tons)
Reporting Year	1979
Total Annual Waste Disposal Quantity	154633 (Metric Tons)
Method Used to Determine Quantity	Used scales to weigh loads before off-loading and either used scales to weigh individual loads after off-loading or used representative tare vehicle/container weights
Annual Waste Disposal Quantity	154633 (Metric Tons)
Reporting Year	1978
Total Annual Waste Disposal Quantity	153555 (Metric Tons)
Method Used to Determine Quantity	Used scales to weigh loads before off-loading and either used scales to weigh individual loads after off-loading or used representative tare vehicle/container weights
Annual Waste Disposal Quantity	153555 (Metric Tons)
Reporting Year	1977
Total Annual Waste Disposal Quantity	140470 (Metric Tons)
Method Used to Determine Quantity	Used scales to weigh loads before off-loading and either used scales to weigh individual loads after off-loading or used representative tare vehicle/container weights
Annual Waste Disposal Quantity	140470 (Metric Tons)
Reporting Year	1976

Total Annual Waste Disposal Quantity	139834 (Metric Tons)
Method Used to Determine Quantity	other
Annual Waste Disposal Quantity	139834 (Metric Tons)
Reporting Year	1975
Total Annual Waste Disposal Quantity	139796 (Metric Tons)
Method Used to Determine Quantity	other
Annual Waste Disposal Quantity	139796 (Metric Tons)
Reporting Year	1974
Total Annual Waste Disposal Quantity	136078 (Metric Tons)
Method Used to Determine Quantity	other
Annual Waste Disposal Quantity	136078 (Metric Tons)
Reporting Year	1973
Total Annual Waste Disposal Quantity	136078 (Metric Tons)
Method Used to Determine Quantity	other
Annual Waste Disposal Quantity	136078 (Metric Tons)
Reporting Year	1972
Total Annual Waste Disposal Quantity	136078 (Metric Tons)
Method Used to Determine Quantity	other
Annual Waste Disposal Quantity	136078 (Metric Tons)
Reporting Year	1971
Total Annual Waste Disposal Quantity	136078 (Metric Tons)
Method Used to Determine Quantity	other
Annual Waste Disposal Quantity	136078 (Metric Tons)
Reporting Year	1970
Total Annual Waste Disposal Quantity	136078 (Metric Tons)
Method Used to Determine Quantity	other
Annual Waste Disposal Quantity	136078 (Metric Tons)
Reporting Year	1969
Total Annual Waste Disposal Quantity	136078 (Metric Tons)
Method Used to Determine Quantity	other
Annual Waste Disposal Quantity	136078 (Metric Tons)

Reporting Year	1968
Total Annual Waste Disposal Quantity	136078 (Metric Tons)
Method Used to Determine Quantity	other
Annual Waste Disposal Quantity	136078 (Metric Tons)
Reporting Year	1967
Total Annual Waste Disposal Quantity	127006 (Metric Tons)
Method Used to Determine Quantity	other
Annual Waste Disposal Quantity	127006 (Metric Tons)
Reporting Year	1966
Total Annual Waste Disposal Quantity	127006 (Metric Tons)
Method Used to Determine Quantity	other
Annual Waste Disposal Quantity	127006 (Metric Tons)
Reporting Year	1965
Total Annual Waste Disposal Quantity	127006 (Metric Tons)
Method Used to Determine Quantity	other
Annual Waste Disposal Quantity	127006 (Metric Tons)
Reporting Year	1964
Total Annual Waste Disposal Quantity	127006 (Metric Tons)
Method Used to Determine Quantity	other
Annual Waste Disposal Quantity	127006 (Metric Tons)
Reporting Year	1963
Total Annual Waste Disposal Quantity	127006 (Metric Tons)
Method Used to Determine Quantity	other
Annual Waste Disposal Quantity	127006 (Metric Tons)
Reporting Year	1962
Total Annual Waste Disposal Quantity	127006 (Metric Tons)
Method Used to Determine Quantity	other
Annual Waste Disposal Quantity	127006 (Metric Tons)
Reporting Year	1961
Total Annual Waste Disposal Quantity	127006 (Metric Tons)
Method Used to Determine Quantity	other
Annual Waste	

Disposal Quantity	127006 (Metric Tons)
Reporting Year	1960
Total Annual Waste Disposal Quantity	127006 (Metric Tons)
Method Used to Determine Quantity	other
Annual Waste Disposal Quantity	127006 (Metric Tons)

Waste Type Details

Year Waste Disposed	2009					
Missing data procedure used?	N					
Number of Times Substituted						
Waste Type Details	Option	Waste Type	Percent by Weight	Degradable Organic Carbon Value	Fraction Of DOC Dissimilated	Decay Rate
	Bulk Waste	Bulk waste	1	0.2	0.5	0.038
Year Waste Disposed	2008					
Missing data procedure used?	N					
Number of Times Substituted						
Waste Type Details	Option	Waste Type	Percent by Weight	Degradable Organic Carbon Value	Fraction Of DOC Dissimilated	Decay Rate
	Bulk Waste	Bulk waste	1	0.2	0.5	0.038
Year Waste Disposed	2007					
Missing data procedure used?	N					
Number of Times Substituted						
Waste Type Details	Option	Waste Type	Percent by Weight	Degradable Organic Carbon Value	Fraction Of DOC Dissimilated	Decay Rate
	Bulk Waste	Bulk waste	1	0.2	0.5	0.038
Year Waste Disposed	2006					
Missing data procedure used?	N					
Number of Times Substituted						
Waste Type Details	Option	Waste Type	Percent by Weight	Degradable Organic Carbon Value	Fraction Of DOC Dissimilated	Decay Rate
	Bulk Waste	Bulk waste	1	0.2	0.5	0.038
Year Waste Disposed	2005					
Missing data procedure used?	N					

Number of Times Substituted						
Waste Type Details	Option	Waste Type	Percent by Weight	Degradable Organic Carbon Value	Fraction Of DOC Dissimilated	Decay Rate
	Bulk Waste	Bulk waste	1	0.2	0.5	0.038
Year Waste Disposed	2004					
Missing data procedure used?	N					
Number of Times Substituted						
Waste Type Details	Option	Waste Type	Percent by Weight	Degradable Organic Carbon Value	Fraction Of DOC Dissimilated	Decay Rate
	Bulk Waste	Bulk waste	1	0.2	0.5	0.038
Year Waste Disposed	2003					
Missing data procedure used?	N					
Number of Times Substituted						
Waste Type Details	Option	Waste Type	Percent by Weight	Degradable Organic Carbon Value	Fraction Of DOC Dissimilated	Decay Rate
	Bulk Waste	Bulk waste	1	0.2	0.5	0.038
Year Waste Disposed	2002					
Missing data procedure used?	N					
Number of Times Substituted						
Waste Type Details	Option	Waste Type	Percent by Weight	Degradable Organic Carbon Value	Fraction Of DOC Dissimilated	Decay Rate
	Bulk Waste	Bulk waste	1	0.2	0.5	0.038
Year Waste Disposed	2001					
Missing data procedure used?	N					
Number of Times Substituted						
Waste Type Details	Option	Waste Type	Percent by Weight	Degradable Organic Carbon Value	Fraction Of DOC Dissimilated	Decay Rate
	Bulk Waste	Bulk waste	1	0.2	0.5	0.038
Year Waste Disposed	2000					
Missing data procedure used?	N					
Number of Times Substituted						
Waste Type Details	Option	Waste Type	Percent by Weight	Degradable Organic Carbon Value	Fraction Of DOC Dissimilated	Decay Rate
	Bulk Waste	Bulk waste	1	0.2	0.5	0.038

	Bulk Waste	Bulk waste	1	0.2	0.5	0.038
Year Waste Disposed	1999					
Missing data procedure used?	N					
Number of Times Substituted						
Waste Type Details	Option	Waste Type	Percent by Weight	Degradable Organic Carbon Value	Fraction Of DOC Dissimilated	Decay Rate
	Bulk Waste	Bulk waste	1	0.2	0.5	0.038
Year Waste Disposed	1998					
Missing data procedure used?	N					
Number of Times Substituted						
Waste Type Details	Option	Waste Type	Percent by Weight	Degradable Organic Carbon Value	Fraction Of DOC Dissimilated	Decay Rate
	Bulk Waste	Bulk waste	1	0.2	0.5	0.038
Year Waste Disposed	1997					
Missing data procedure used?	N					
Number of Times Substituted						
Waste Type Details	Option	Waste Type	Percent by Weight	Degradable Organic Carbon Value	Fraction Of DOC Dissimilated	Decay Rate
	Bulk Waste	Bulk waste	1	0.2	0.5	0.038
Year Waste Disposed	1996					
Missing data procedure used?	N					
Number of Times Substituted						
Waste Type Details	Option	Waste Type	Percent by Weight	Degradable Organic Carbon Value	Fraction Of DOC Dissimilated	Decay Rate
	Bulk Waste	Bulk waste	1	0.2	0.5	0.038
Year Waste Disposed	1995					
Missing data procedure used?	N					
Number of Times Substituted						
Waste Type Details	Option	Waste Type	Percent by Weight	Degradable Organic Carbon Value	Fraction Of DOC Dissimilated	Decay Rate
	Bulk Waste	Bulk waste	1	0.2	0.5	0.038
Year Waste Disposed	1994					

Missing data procedure used?	N					
Number of Times Substituted						
Waste Type Details	Option	Waste Type	Percent by Weight	Degradable Organic Carbon Value	Fraction Of DOC Dissimilated	Decay Rate
	Bulk Waste	Bulk waste	1	0.2	0.5	0.038
Year Waste Disposed	1993					
Missing data procedure used?	N					
Number of Times Substituted						
Waste Type Details	Option	Waste Type	Percent by Weight	Degradable Organic Carbon Value	Fraction Of DOC Dissimilated	Decay Rate
	Bulk Waste	Bulk waste	1	0.2	0.5	0.038
Year Waste Disposed	1992					
Missing data procedure used?	N					
Number of Times Substituted						
Waste Type Details	Option	Waste Type	Percent by Weight	Degradable Organic Carbon Value	Fraction Of DOC Dissimilated	Decay Rate
	Bulk Waste	Bulk waste	1	0.2	0.5	0.038
Year Waste Disposed	1991					
Missing data procedure used?	N					
Number of Times Substituted						
Waste Type Details	Option	Waste Type	Percent by Weight	Degradable Organic Carbon Value	Fraction Of DOC Dissimilated	Decay Rate
	Bulk Waste	Bulk waste	1	0.2	0.5	0.038
Year Waste Disposed	1990					
Missing data procedure used?	N					
Number of Times Substituted						
Waste Type Details	Option	Waste Type	Percent by Weight	Degradable Organic Carbon Value	Fraction Of DOC Dissimilated	Decay Rate
	Bulk Waste	Bulk waste	1	0.2	0.5	0.038
Year Waste Disposed	1989					
Missing data procedure used?	N					
Number of Times Substituted						

Waste Type Details	Option	Waste Type	Percent by Weight	Degradable Organic Carbon Value	Fraction Of DOC Dissimilated	Decay Rate
	Bulk Waste	Bulk waste	1	0.2	0.5	0.038
Year Waste Disposed	1988					
Missing data procedure used?	N					
Number of Times Substituted						
Waste Type Details	Option	Waste Type	Percent by Weight	Degradable Organic Carbon Value	Fraction Of DOC Dissimilated	Decay Rate
	Bulk Waste	Bulk waste	1	0.2	0.5	0.038
Year Waste Disposed	1987					
Missing data procedure used?	N					
Number of Times Substituted						
Waste Type Details	Option	Waste Type	Percent by Weight	Degradable Organic Carbon Value	Fraction Of DOC Dissimilated	Decay Rate
	Bulk Waste	Bulk waste	1	0.2	0.5	0.038
Year Waste Disposed	1986					
Missing data procedure used?	N					
Number of Times Substituted						
Waste Type Details	Option	Waste Type	Percent by Weight	Degradable Organic Carbon Value	Fraction Of DOC Dissimilated	Decay Rate
	Bulk Waste	Bulk waste	1	0.2	0.5	0.038
Year Waste Disposed	1985					
Missing data procedure used?	N					
Number of Times Substituted						
Waste Type Details	Option	Waste Type	Percent by Weight	Degradable Organic Carbon Value	Fraction Of DOC Dissimilated	Decay Rate
	Bulk Waste	Bulk waste	1	0.2	0.5	0.038
Year Waste Disposed	1984					
Missing data procedure used?	N					
Number of Times Substituted						
Waste Type Details	Option	Waste Type	Percent by Weight	Degradable Organic Carbon Value	Fraction Of DOC Dissimilated	Decay Rate
	Bulk Waste	Bulk waste	1	0.2	0.5	0.038

Year Waste Disposed	1983					
Missing data procedure used?	N					
Number of Times Substituted						
Waste Type Details	Option	Waste Type	Percent by Weight	Degradable Organic Carbon Value	Fraction Of DOC Dissimilated	Decay Rate
	Bulk Waste	Bulk waste	1	0.2	0.5	0.038
Year Waste Disposed	1982					
Missing data procedure used?	N					
Number of Times Substituted						
Waste Type Details	Option	Waste Type	Percent by Weight	Degradable Organic Carbon Value	Fraction Of DOC Dissimilated	Decay Rate
	Bulk Waste	Bulk waste	1	0.2	0.5	0.038
Year Waste Disposed	1981					
Missing data procedure used?	N					
Number of Times Substituted						
Waste Type Details	Option	Waste Type	Percent by Weight	Degradable Organic Carbon Value	Fraction Of DOC Dissimilated	Decay Rate
	Bulk Waste	Bulk waste	1	0.2	0.5	0.038
Year Waste Disposed	1980					
Missing data procedure used?	N					
Number of Times Substituted						
Waste Type Details	Option	Waste Type	Percent by Weight	Degradable Organic Carbon Value	Fraction Of DOC Dissimilated	Decay Rate
	Bulk Waste	Bulk waste	1	0.2	0.5	0.038
Year Waste Disposed	1979					
Missing data procedure used?	N					
Number of Times Substituted						
Waste Type Details	Option	Waste Type	Percent by Weight	Degradable Organic Carbon Value	Fraction Of DOC Dissimilated	Decay Rate
	Bulk Waste	Bulk waste	1	0.2	0.5	0.038
Year Waste Disposed	1978					
Missing data procedure used?	N					

Number of Times Substituted						
Waste Type Details	Option	Waste Type	Percent by Weight	Degradable Organic Carbon Value	Fraction Of DOC Dissimilated	Decay Rate
	Bulk Waste	Bulk waste	1	0.2	0.5	0.038
Year Waste Disposed	1977					
Missing data procedure used?	N					
Number of Times Substituted						
Waste Type Details	Option	Waste Type	Percent by Weight	Degradable Organic Carbon Value	Fraction Of DOC Dissimilated	Decay Rate
	Bulk Waste	Bulk waste	1	0.2	0.5	0.038
Year Waste Disposed	1976					
Missing data procedure used?	N					
Number of Times Substituted						
Waste Type Details	Option	Waste Type	Percent by Weight	Degradable Organic Carbon Value	Fraction Of DOC Dissimilated	Decay Rate
	Bulk Waste	Bulk waste	1	0.2	0.5	0.038
Year Waste Disposed	1975					
Missing data procedure used?	N					
Number of Times Substituted						
Waste Type Details	Option	Waste Type	Percent by Weight	Degradable Organic Carbon Value	Fraction Of DOC Dissimilated	Decay Rate
	Bulk Waste	Bulk waste	1	0.2	0.5	0.038
Year Waste Disposed	1974					
Missing data procedure used?	N					
Number of Times Substituted						
Waste Type Details	Option	Waste Type	Percent by Weight	Degradable Organic Carbon Value	Fraction Of DOC Dissimilated	Decay Rate
	Bulk Waste	Bulk waste	1	0.2	0.5	0.038
Year Waste Disposed	1973					
Missing data procedure used?	N					
Number of Times Substituted						
Waste Type Details	Option	Waste Type	Percent by Weight	Degradable Organic Carbon Value	Fraction Of DOC Dissimilated	Decay Rate

	Bulk Waste	Bulk waste	1	0.2	0.5	0.038
Year Waste Disposed	1972					
Missing data procedure used?	N					
Number of Times Substituted						
Waste Type Details	Option	Waste Type	Percent by Weight	Degradable Organic Carbon Value	Fraction Of DOC Dissimilated	Decay Rate
	Bulk Waste	Bulk waste	1	0.2	0.5	0.038
Year Waste Disposed	1971					
Missing data procedure used?	N					
Number of Times Substituted						
Waste Type Details	Option	Waste Type	Percent by Weight	Degradable Organic Carbon Value	Fraction Of DOC Dissimilated	Decay Rate
	Bulk Waste	Bulk waste	1	0.2	0.5	0.038
Year Waste Disposed	1970					
Missing data procedure used?	N					
Number of Times Substituted						
Waste Type Details	Option	Waste Type	Percent by Weight	Degradable Organic Carbon Value	Fraction Of DOC Dissimilated	Decay Rate
	Bulk Waste	Bulk waste	1	0.2	0.5	0.038
Year Waste Disposed	1969					
Missing data procedure used?	N					
Number of Times Substituted						
Waste Type Details	Option	Waste Type	Percent by Weight	Degradable Organic Carbon Value	Fraction Of DOC Dissimilated	Decay Rate
	Bulk Waste	Bulk waste	1	0.2	0.5	0.038
Year Waste Disposed	1968					
Missing data procedure used?	N					
Number of Times Substituted						
Waste Type Details	Option	Waste Type	Percent by Weight	Degradable Organic Carbon Value	Fraction Of DOC Dissimilated	Decay Rate
	Bulk Waste	Bulk waste	1	0.2	0.5	0.038
Year Waste Disposed	1967					

Missing data procedure used?	N					
Number of Times Substituted						
Waste Type Details	Option	Waste Type	Percent by Weight	Degradable Organic Carbon Value	Fraction Of DOC Dissimilated	Decay Rate
	Bulk Waste	Bulk waste	1	0.2	0.5	0.038
Year Waste Disposed	1966					
Missing data procedure used?	N					
Number of Times Substituted						
Waste Type Details	Option	Waste Type	Percent by Weight	Degradable Organic Carbon Value	Fraction Of DOC Dissimilated	Decay Rate
	Bulk Waste	Bulk waste	1	0.2	0.5	0.038
Year Waste Disposed	1965					
Missing data procedure used?	N					
Number of Times Substituted						
Waste Type Details	Option	Waste Type	Percent by Weight	Degradable Organic Carbon Value	Fraction Of DOC Dissimilated	Decay Rate
	Bulk Waste	Bulk waste	1	0.2	0.5	0.038
Year Waste Disposed	1964					
Missing data procedure used?	N					
Number of Times Substituted						
Waste Type Details	Option	Waste Type	Percent by Weight	Degradable Organic Carbon Value	Fraction Of DOC Dissimilated	Decay Rate
	Bulk Waste	Bulk waste	1	0.2	0.5	0.038
Year Waste Disposed	1963					
Missing data procedure used?	N					
Number of Times Substituted						
Waste Type Details	Option	Waste Type	Percent by Weight	Degradable Organic Carbon Value	Fraction Of DOC Dissimilated	Decay Rate
	Bulk Waste	Bulk waste	1	0.2	0.5	0.038
Year Waste Disposed	1962					
Missing data procedure used?	N					
Number of Times Substituted						

Waste Type Details	Option	Waste Type	Percent by Weight	Degradable Organic Carbon Value	Fraction Of DOC Dissimilated	Decay Rate
	Bulk Waste	Bulk waste	1	0.2	0.5	0.038
Year Waste Disposed	1961					
Missing data procedure used?	N					
Number of Times Substituted						
Waste Type Details	Option	Waste Type	Percent by Weight	Degradable Organic Carbon Value	Fraction Of DOC Dissimilated	Decay Rate
	Bulk Waste	Bulk waste	1	0.2	0.5	0.038
Year Waste Disposed	1960					
Missing data procedure used?	N					
Number of Times Substituted						
Waste Type Details	Option	Waste Type	Percent by Weight	Degradable Organic Carbon Value	Fraction Of DOC Dissimilated	Decay Rate
	Bulk Waste	Bulk waste	1	0.2	0.5	0.038

Working Capacity Details

Were working capacities used to determine waste disposal quantities	N
---	---

Tipping Receipt Details

Were tipping receipts or company records used to determine waste disposal quantities	N
--	---

Method used for estimating all annual waste quantities that are not determined with the methods above

Method	Method #1: Assume all prior year's waste disposal quantities are the same as the waste quantity in the first year for which waste quantities are available.
--------	---

Method Start Year	1960
Method End Year	1976

Historical Estimation Population Details

Historical landfill Capacity	
Reason	Data not available for years prior to 1977. Consultant hired by the City reviewed gas generation data and adjusted waste disposal quantity estimates based on the gas curve.

Methane Generation and Emissions for Landfills with LFG Collection Systems

Gas Collection System Information

System Manufacturer	Various contractors hired by the City of Tacoma over several projects. System existing before 2010 used Hauck blowers and Perennial and Sur-Lite Flares. The new flare installed in 2010 uses John Zink Flare.
System Capacity	3340 (acfm)
Number of	164

Wells	
-------	--

Methane Oxidation Fractions

Methane Oxidation Fraction HH-5	0.10
Methane Oxidation Fraction HH-6	0.10
Methane Oxidation Fraction HH-7	0.10
Methane Oxidation Fraction HH-8	0.10

Measurement Locations

Name	Primary Landfill Gas Flare		
Description	John Zink Flare installed 2010		
Annual Operating Hours	8736 (Hours)		
Quantity of Recovered Methane	1425.7191 (Metric Tons)		
Destruction Devices	Name	Annual Operating Hours	Destruction Efficiency
	Landfill Gas Flare	8736 (Hours)	0.99 (fraction (number between 0 and 1))

Methane Generation and Emissions values

Estimated Gas Collection Efficiency HH3	0.95 (decimal fraction)
Is Override Indicator?	N
Methane Generation Equation HH5	1518.77 (Metric Tons)
Is Override Indicator?	N
Methane Emissions Equation HH6	415.11 (Metric Tons)
Is Override Indicator?	Y
Methane Generation Equation HH7	1354.39 (Metric Tons)
Is Override Indicator?	N
Basis for Input Methane Generation Value	Equation HH-1
Methane Emission from Equation HH8	85.50 (Metric Tons)
Is Override Indicator?	N

Gas Collection Systems details

Annual Volume FGCollected Gas Volumetric Flow	Measured Value	238729179.6943 (scf)
	Is Substituted Indicator?	N
	Number of Times Substituted	
Annual Average Methane Concentration	Measured Value	31 (Number (between 0 and 100))
	Is Substituted Indicator?	N
	Number of Days Substituted	
	Number of Weeks Substituted	
	Number of Months Substituted	
	Number of Times Substituted	
Temperature Incorporated Indicator	Y	
Pressure Incorporated Indicator	Y	
LFG Flow Wet Basis Indicator	Y	
Methane Concentration Wet Basis Indicator	Y	
Site Destruction Location	On-site	

Annual Quantity Of Recovered MethaneHH4	1425.72 (Metric Tons)
---	-------------------------

Waste Depth Details

Area Type	Waste Depth	Surface Area
A1	0 (Meters)	0 (Square Meters)
A2	0 (Meters)	0 (Square Meters)
A3	0 (Meters)	0 (Square Meters)
A4	0 (Meters)	0 (Square Meters)
A5	23.39 (Meters)	704153 (Square Meters)

Equation HH-1 Details:

The fraction of CH ₄ in landfill gas (F), is it based on a measured value or default value	measured
Fraction by volume of CH ₄ in landfill gas	0.3
An MCF value other than the default of 1 was used	N
Annual MCF Value	1.0

Annual Modeled Methane Generation	1687.52 (Metric Tons)
Annual Modeled Methane Generation User Overrided value?	N