

Storm Water Quality

Spills & Clean Up Methods

City of Oklahoma City



Be prepared before a spill occurs


- Spill response procedures should be developed to stop, contain, and clean up leaks and spills
- Have a plan for your facility's spill response, including:
 - Complete chemical inventory and storage locations
 - Spill cleanup supplies: inventory and location
 - Employee training on spill containment and cleanup procedures
 - Backup plan/contractor for larger spills, if needed
 - Procedure for notification of personnel
 - Procedure for implementation of the spill response plan
 - Include phone numbers for emergency response and required reporting – know reportable volumes for materials onsite!



**KEEP
CALM
AND
BE
PREPARED**

Be prepared before a spill occurs

- Maintain a list of personnel responsible for implementing your spill cleanup plan in the event of a spill. Include:
 - Name
 - Title
 - Phone Number
 - Additional Contact Information
- Designated employees should be trained in the proper use of spill response materials



"Before anything else, preparation is the key to success."

~ Alexander Graham Bell

Be prepared before a spill occurs

- Routinely inspect key areas:
 - Chemical storage areas
 - Look for leaks and spills
 - What potential hazards exist?
 - Dikes, berms, and other secondary containment devices
 - Replace or repair any damaged devices
 - Leak detection equipment
 - This must also be tested periodically, per manufacturer's specifications
 - Spill kit supplies inventory
- Document these inspections into your SWPP3 and/or other manuals!!!



Be prepared before a spill occurs

- If your facility is required to have an SPCC (Spill Prevention, Control and Countermeasures) Plan, make reference to the SPCC in your SWPPP
 - SPCC Plans are generally required for facilities with larger volumes of potentially hazardous materials
 - Ex: 1,500+ gallons of fuel onsite (10,000 pounds or more)
- Know where your outfalls lead to!
 - What is your receiving water body?
 - What will you do if the spill leaves your facility and heads toward a waterbody?
- Know what to do if you have a hazardous spill indoors that gets into the sanitary sewer.



Be prepared before a spill occurs

- What will you do if there's a major catastrophe?
 - Fire?
 - Tornado?
 - Earthquake?
 - Lightning strike?
- Keep a current copy of SDS (MSDS) sheets and your chemical inventory on a flash drive, in case you can't get to your office.



Stream Distance: 2.7 miles
Underground Distance: 1.0 mile
Above Ground Distance: 1.7 mile

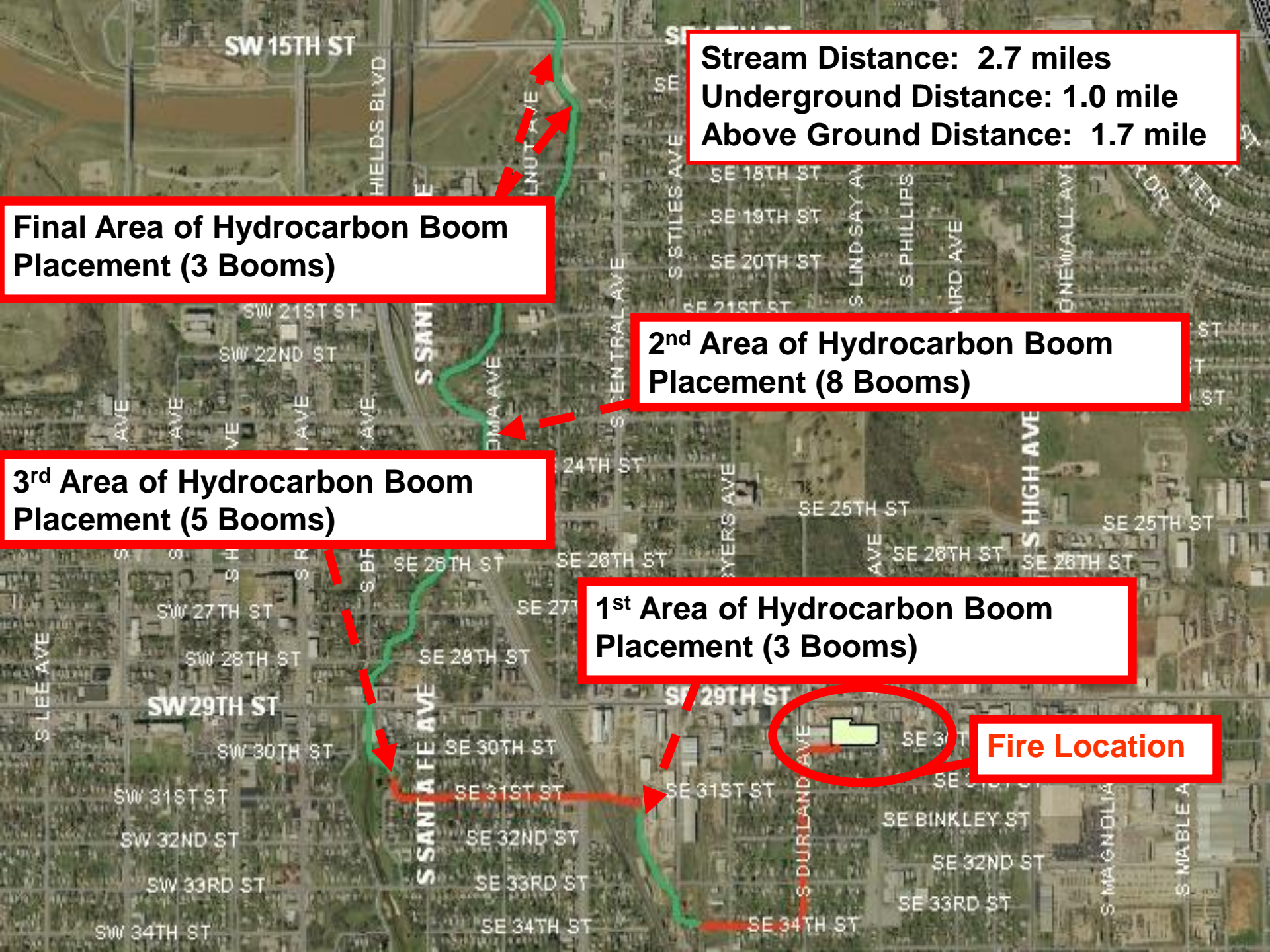
Final Area of Hydrocarbon Boom Placement (3 Booms)

2nd Area of Hydrocarbon Boom Placement (8 Booms)

3rd Area of Hydrocarbon Boom Placement (5 Booms)

1st Area of Hydrocarbon Boom Placement (3 Booms)

Fire Location





Spill Kits and Absorbents

Be certain that you have the supplies you need, when and where you need them. If they are stored in a secured area, who has the key? Are the materials going to be available if that person is sick or on vacation? Conduct exercises to practice the implementation of your emergency plan.

When a spill occurs...

You will know what to do if you're prepared!



Initial Assessment

- Where did the spill originate?
- What type of material was spilled?
 - Check container labels
 - Look for signs of Hazardous Materials
 - Fumes, noxious odors, other signs that it must be handled with extra caution
- Refer to MSDS (SDS) sheets
 - Cleanup guidelines
 - Disposal methods
 - PPE (Personal Protective Equipment) required
- How much material was spilled (approximately)?
 - Can one spill kit handle the volume spilled?
 - Does a cleanup contractor need to be called?
 - Reportable?
- Initiate Corrective Action Report



Reportable Quantities

CAUTION

- Whom do you report to?:
 - National Response Center 800-424-8802 [EPA-Federal]
 - Oklahoma Dept. of Environmental Quality 800-522-0206 [State]
 - Local Emergency Planning Committee (LEPC) [County]
 - Oklahoma County 405-713-1044
 - Canadian County 405-651-6600
 - Cleveland County 405-321-8600
 - Oklahoma City Storm Water Quality 405-297-1774 [Local]
 - 24-hour Emergency: 405-990-6833
- Releases of a hazardous substance as listed in 40 CFR 302.4
- Example: Fuel Spills – Gasoline, Diesel
 - Any amount into water must be reported
 - Spills onto concrete or asphalt that are completely contained do not need to be reported
 - Spills onto land of 25 gallons or more must be reported
- Spills to sanitary sewer must be reported to OKC Utilities –Wastewater Quality 405-297-3805 (297-0334 after 5pm M-F; 297-2255 weekends and holidays)

Containment

- Stop the material from spreading, if possible
 - Booms (socks)
 - Dirt dike
 - Absorbent Pads, etc.
- Protect Storm Drains and other outlets
 - Cover/seal the drains in the area
 - Divert material away from drains, etc.
- Stop the leak at the source (if possible and if safe to do so)
 - Close valves
 - Upright overturned containers
 - Drip pan or pop up pool
 - Rotate or patch punctured containers, etc.





Clean Up Begins

- Has the spill migrated offsite? Inspect:
 - Storm water drains (Reportable!)
 - Storm water drainage ditches (Reportable!)
 - Receiving waters (Reportable!)
- Has the spill gotten into the sanitary sewer? (Reportable!)
- Use the “buddy system”
 - Never clean up a spill without notifying someone



Clean Up Procedures

- Use dry cleanup methods
 - **Never hose down a spill into a drain or offsite!**
 - Sweep up dry spilled materials
 - Absorbent materials should be applied from the outer edges, in toward the center of the spill
 - Apply absorbent materials until no more wet material is visible on the surface of the absorbent
 - Granular materials only need to sit for 5 minutes
 - Properly dispose of all absorbent materials used



Mitigation

- Hydrocarbon Mitigation Agents can be used to clean oil and grease spills
 - Check with manufacturer to determine product compatibility
 - Hydrocarbons (fuels, oils)
 - Food grease



- Mitigation agents should be:
 - Properly diluted (3%-6% for standard application),
 - Scrubbed in with a broom, and
 - Runoff should be collected for proper disposal.

Soil Remediation

- Identify chemicals of concern
- Consider human health, ecological concerns, land use, and groundwater protection
- May need to remove and replace soil
 - Proper disposal of contaminated soil
- Or remediate soil on-site depending on contaminants involved and level of contamination
 - See hand out on CD (DEQ folder)
- May require DEQ involvement
 - Land Protection Division
- Work with your inspector to determine what needs to be done



Disposal of Absorbent Materials

- Absorbent material takes on the same characteristics as the materials it was used to absorb.
 - May be considered a hazardous waste.
- Used absorbent material should be properly disposed of:
 - Notify your local landfill to see if they can accept the material
 - Contact a clean up contractor
 - Must be licensed to be able to remove the material
 - Oily rags can be cleaned by an industrial cleaning company
 - Dispose according to federal, state, and local regulations



After the Cleanup



- Decontaminate and restock supplies for Spill Kits
 - Clean all tools and reusable materials properly before reuse
 - Restock spill supplies to ensure materials are available for the next incident
 - Absorbent materials
 - Safety Equipment (PPE)
 - Mitigation agents, etc.
- Review spill plans, procedures, SPCC, SWP3
 - What worked? What didn't work?
 - Emergency numbers correct?
 - BMPs effective?
 - Document any required/needed changes
 - Finalize reporting to all required entities
 - Properly document the incident
- Corrective Action Report completion



OKR05

- Additional guidance from DEQ, included in the 2017 OKR05.



Oklahoma Department of Environmental Quality Checklist for Spill Prevention and Response Procedures

The spill prevention and response procedures should clearly identify ways to reduce the chance of spills, stop the source of spills, contain and clean up spills, dispose of materials contaminated by spills, and train personnel responsible for spill prevention and response.

The procedures should include at least the following components:

- ✓ Personnel responsible for implementing the plan in the event of a spill. This should include at least one member of the *Stormwater Pollution Prevention Team*.
 - Include names, titles, and contact information (phone numbers)
- ✓ A complete chemical inventory of the site/facility
- ✓ A description of existing or planned spill prevention equipment (e.g. leak detection devices) and structures (e.g. dikes) appropriate to the substances identified in the inventory.
- ✓ A procedure for notification of appropriate facility personnel, emergency response agencies, and regulatory agencies
 - Identify the specific personnel, emergency responders, and regulatory agencies to be notified. Include phone numbers. This should include local authorities and the DEQ. The EPA and the National Spill Response Center should be included, if appropriate. Include contact information for the emergency response/remediation company or contractor to be utilized in the event of a spill. Identify the person or persons responsible for making the notifications.
- ✓ A procedure for the immediate containment and cleanup of spills and the proper disposal of each type of waste identified in the site inventory.
 - Identify the personnel responsible for containment and cleanup activities. Identify the waste disposal company or site that will be used for any controlled waste that must be disposed of. (A mere statement that all state and federal rules will be followed is not acceptable.)
- ✓ A list of all types of equipment to be used to adequately contain and clean up each type of spill, including spill containment and cleanup kits. Identify the location where the equipment will be kept and the personnel who have direct access to it. For example, if it's in a locked building, identify the person who has the key.
- ✓ An outline of the training program for employees and subcontractors that addresses procedures to deal with spills and leaks at the site.

Note: If your facility/site is subject to 40 CFR Part 112 regulations that require Spill Prevention, Control, and Countermeasures (SPCC) plans for their aboveground and underground storage tanks, your SWP3 should refer to the SPCC plan.



Questions?

For additional information:

www.okc.gov/SWQ

<http://www.deq.state.ok.us/wqdnew/stormwater/industrialsw/index.html>

