Appendix F

Overflow Emergency Response Plan

ADMINISTRATIVE REGULATION

Office of the City Administrator

Number	808
Sections	1-7
Effective Date	8/1/07
Responsible Department	**Public Works**
Review Date	**8/1/12**

SUBJECT: Sanitary Sewer Overflow and Subsurface Sewer Leak Response Procedures

1. Purpose: To minimize the impact of an accidental discharge from the City's wastewater collection system.

2. Authority: Section 401 of the Huntington Beach City Charter

3. Application: This regulation applies to all officers and employees of the City of Huntington Beach.

4. Definitions:
   - 4.1. An above-ground release of untreated sewage from the City's wastewater collection and/or pumping system.
   - 4.2. Subsurface Sewer Leak: A release of untreated sewage through collection system pipe and/or pumping system defects below the ground.

5. Responsibilities:
   - 5.1. All discharges of sewage, whether a sanitary sewer overflow or a subsurface sewer leak, shall be reported to the Public Works Utilities Division.
   - 5.2. The Public Works Utilities Division, Wastewater Section Supervisor or his designee, will be responsible for reporting all discharges of sewage immediately to applicable Federal, State, regional and local agencies.
   - 5.3. Any discharge caused by defects in the system that cannot be corrected by the Public Works Utilities Division through normal maintenance efforts will be referred to the Engineering Division for assessment and recommended action.
   - 5.4. The Director of Public Works shall be notified of all discharges of sewage.
   - 5.5. Records of discharges shall be kept for a period of not less than five years, subject to the latest adopted version of the City's records retention policy.

6. Procedures:
   - 6.1. A representative of the Fire Department, Public Works Department, or both, will respond to all reported discharges to identify the responsible party.
   - 6.2. Discharges that are determined to be caused by activities on private property will be directed to the Public Works Department Wastewater Section for enforcement of cleanup, billing and agency notifications.
   - 6.3. Discharges that are determined to be caused by activities on City property, or which responsibility cannot be established, will be directed to the Public Works.
   - 6.4. Department Wastewater Section for cleanup and agency notifications. Actions to alleviate discharges will be performed in the following order:

6.4.1. Contain and/or minimize the discharge.
6.4.2. Identify and notify the responsible party.
6.4.3. Collect information, estimate discharge volumes and capture photo documentation.
6.4.4. Begin cleanup of the discharge (concurrently with 7.4.3.)
6.4.5. Notify all applicable Federal, State, regional and local agencies.
6.4.6. Notify Public Works management up through the Director of Public Works.
6.4.7. Inform the Public Works Department, Engineering Division for an assessment and recommended course of action if the problem cannot be corrected through normal maintenance efforts.

6.5. Private property owners will be billed for all City costs, including overhead, associated with the response or cleanup of a spill caused as a result of activities on their property.

7. Attachments

Attachment A:	Detailed Sanitary Sewer Overflow Response Procedures
Attachment B:	Detailed Subsurface Sewer Leak Response Procedures
Attachment C:	Sanitary Sewer Overflow Report Form
Attachment D:	Calculation of Sanitary Sewer Overflow Volumes

Penelope Culbreth-Graft, DPA, City Administrator

ATTACHMENT A:

Detailed Sanitary Sewer Overflow Response Procedures

Detailed Sanitary Sewer Overflow Response Procedures

Notification:

Notification of a sewage spill on public or private property typically will be received by telephone, either through Police Dispatch (9-1-1) or through the Public Works Department Utilities Operations Division. A call received via 9-1-1 will result in Fire Department response. Calls received by the Public Works Department will initiate dispatch of trained response crews to the site where the spill will be evaluated and other, appropriate City departments will be notified as necessary.

Incident Response:

Fire Department and/or Public Works Department will respond to all reported sewage spills to identify the responsible party and provide clean-up protocol procedures for sewage that has been discharged into the environment on public or private property.

Assessment Process:

The Fire Department/Public Works Department Incident Commander will investigate the incident and determine if the sanitary sewer overflow is on public or private property.

If the overflow is on City property, or has the potential of reaching City property, the Public Works Department Wastewater Section will respond. Notification schedule: Utilities Yard 7:00 a.m. – 4:00 p.m. (714) 536-5921 or Wastewater Section after hours callout at (714) 296-9295. The Public Works Department Utilities Division Wastewater Section Supervisor or his/her designee shall be responsible for immediately notifying applicable Federal, State, regional and local agencies noted in Attachment C by phone, Internet–based reporting to the State Water Resources Control Board, facsimile and certified mail/return receipt.
If the overflow is on private property, the Fire Department Incident Commander and/or Public Works Department Utilities Division Wastewater Section Supervisor or his designee will contact the responsible party for proper removal of the sewage. The responsible party shall be advised that the substance must be removed immediately under the applicable Federal, State, regional and local codes and regulations.

The Fire Department and/or Public Works Department Wastewater Section Supervisor or his designee shall immediately notify applicable Federal, State, regional and local agencies by phone, Internet–based reporting to the State Water Resources Control Board, facsimile and certified mail/return receipt. In addition, the State Water Resources Control Board also shall be notified by and Internet-based reporting system established for such purpose. The City may initiate cleanup if deemed appropriate to protect the public health, safety and welfare.

Incident Action Plan:

Action taken at the scene by Public Works Department or private contractor pertaining to sewage spills on public or private properties:

1. Contain and/or minimize the discharge.
2. Identify and notify the responsible party.
3. Collect information, estimate overflow volumes and capture photo documentation.
4. Begin cleanup of the overflow (concurrently with step 3).
5. Notify all applicable Federal, State, regional and local agencies by phone, facsimile and certified mail/return receipt.
6. Notify management up through the Director of Public Works.
7. Inform the Engineering Division for an assessment and recommended course of action if the problem cannot be corrected through normal maintenance efforts.
8. Send billing information to Administrative Services Department to invoice responsible private property owners for any City costs associated with the responses/clean-up of the overflow caused as a result of activities on private property.

ATTACHMENT B:

Detailed Subsurface Sewer Leak Response Procedures

Detailed Subsurface Sewer Leak Response Procedures

Notification:

Notification of a subsurface sewer leak is typically made during routine cleaning or robotic camera inspection by Public Works Department crews but may also be received from the public via calls to Fire or Police. All notifications shall be referred to the Public Works Utilities Division 7:00 a.m. – 4:00 p.m. at (714) 536-5921 or Wastewater Section after-hours callout at 714-206-9295.

Incident Procedure:

The Public Works Department, Wastewater Section crews shall respond to all suspected subsurface sewer leaks that are within the public right-of-way and will take appropriate action as determined by an assessment process. If the suspected subsurface leak is in a service lateral to a privately-owned building, regardless if said lateral is in the public right-of-way, it is the responsibility of the building owner and said owner will be notified to repair the line immediately.

Assessment Process:

The Public Works Wastewater Supervisor, or his/her designee, shall investigate all reported subsurface sewer leaks within the public right-of-way.

If the Supervisor determines that a crack or leak could be in violation of applicable water quality and/or health care regulations, he/she shall immediately report the incident to the County of Orange Health Care Agency, the California Regional Water Quality Control Board, Santa Ana Region, and the Public Works Street/Wastewater Supervisor[1]. Outside agency notifications shall be made by phone, facsimile and certified mail/return receipt.

The Public Works Wastewater Supervisor shall immediately notify the Utilities Manager and submit an Incident Report to the Public Works Department, City Engineer.

The Utilities Manager, via the Director of Public Works, shall immediately notify the City Administrator.

Upon receipt of an Incident Report, the City Engineer shall immediately cause the leak to be assessed and, if deemed appropriate, develop a Corrective Action Plan, which may include excavation and repair/replacement, slip lining or other appropriate techniques.

Incident Action Plan:

Continuous communication shall be established with the Santa Ana Regional Water Quality Control Board with regard to all findings, decisions and timetables pertaining to repair and/or monitoring of possible subsurface leaks. Subsurface leaks, at the determination of the Public Works Street/Wastewater Supervisor, may require the immediate diversion of sewage until the repair of the damaged infrastructure may be affected by the City Engineer; however the Street/Wastewater Supervisor, in consultation with the City Engineer, may determine that the extent of the damage is not susceptible to immediate violations of applicable laws and repair may be deferred, or deemed unnecessary, but subject to a specific monitoring schedule to be determined at that time.

(1) *Subsurface sewage leaks of less than 1,000 gallons per day are not subject to immediate repair and reporting to regulatory agencies unless there is a potential for contamination of Waters of the State. Nonetheless, documentation and any necessary repair of the damaged line shall be affected pursuant to the City Engineer's Corrective Action Plan and included in the sewer system audit and routine reports to the Regional Water Quality Control Board.*

ATTACHMENT C:

Sanitary Sewer Overflow report Form
(Delivery by Facsimile and Certified Mail/Return Receipt)

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SANTA ANA REGION

SANITARY SEWER OVERFLOW REPORT FORM

ALL ITEMS ARE REQUIRED TO BE ADDRESSED.

1. THIS REPORT IS (CHECK ONE): ☐ PRELIMINARY ☐ FINAL ☐ REVISED FINAL
2. SANITARY SEWER OVERFLOW SEQUENTIAL TRACKING NUMBER:
3. NAME OF CITY EMPLOYEE REPORTING SPILL TO REGIONAL BOARD:
4. PHONE NUMBER OF CITY EMPLOYEE REPORTING SPILL TO REGIONAL BOARD:
5. REPORTED TO: DATE OF CALL: TIME OF CALL:
   (NAME OF REGIONAL BOARD STAFF)
6. DATE THE SPILL WAS REPORTED TO THE CITY: _____(MM/DD/YY)

   TIME THE SPILL WAS REPORTED TO THE CITY: _____ (MILITARY OR 24 HOUR TIME)
7. WHO REPORTED THE SPILL TO THE CITY: _____ (___) ___-____
   (NAME OR AGENCY)
8. RESPONSIBLE PARTY OR SEWER AGENCY:
9. OVERFLOW START: DATE: ____(MM/DD/YY)

   TIME: ____(MILITARY OR 24 HOUR TIME)
10. OVERFLOW END: DATE: ____(MM/DD/YY)

    TIME: ____(MILITARY OR 24 HOUR TIME)
11. ESTIMATED OVERFLOW FLOW RATE: __(GALLONS PER MINUTE)
12. TOTAL OVERFLOW VOLUME: __(GALLONS)
13. DESCRIPTION OF HOW VOLUME WAS DETERMINED/CALCULATED, ATTACH PHOTOGRAPH (S)/DIAGRAM (S):
14. OVERFLOW VOLUME RECOVERED: __(GALLONS)
15. OVERFLOW VOLUME RELEASED TO ENVIRONMENT: __(GALLONS)
16. CONTAINMENT METHOD OR INFORMATION:
17. WASH WATER USED: __(GALLONS) RECOVERED: __(GALLONS) LOST: __(GALLONS)
18. WASH WATER DISPOSAL METHOD:

SANITARY SEWER OVERFLOW LOCATION AND DESCRIPTION:

19. ADDRESS OR LOCATION OF SANITARY SEWER OVERFLOW:

20. ADDRESS OR LOCATION OF BLOCKAGE OR PROBLEM POINT:

CITY: City of Huntington Beach ZIP CODE:

21. COUNTY: OR (SB, RV, OR)

22. SANITARY SEWER OVERFLOW STRUCTURE I.D.:

23. DESCRIPTION OF COMPONENT FROM WHICH THE OVERFLOW OCCURRED:

24. NUMBER OF OVERFLOWS WITHIN 1000FT. OF THIS LOCATION IN PAST 12 MONTHS:

25. DATES OF OVERFLOWS WITHIN 1000FT. OF THIS LOCATION IN PAST 12 MONTHS:

26. OVERFLOW CAUSE – SHORT DESCRIPTION – CHECK ALL THAT APPLY:

☐ ROOTS	☐ GREASE	☐ LINE BREAK	☐ INFILTRATION
☐ ROCKS	☐ BLOCKAGE	☐ POWER FAILURE	☐ PUMP STATION FAILURE
☐ DEBRIS	☐ VANDALISM	☐ FLOOD DAMAGE	☐ MANHOLE FAILURE
☐ OTHER	☐ UNKNOWN	☐ CONSTRUCTION	☐ PRIVATE PROPERTY

27. OVERFLOW CAUSE – DETAILED DESCRIPTION OF CAUSE:

_____

_____

28. SANITARY SEWER OVERFLOW CORRECTION – DESCRIPTION OF ALL PREVENTATIVE AND CORRECTIVE MEASURES TAKEN OR PLANNED:

_____

_____

29. WAS THERE MEASURABLE PRECIPITATION DURING 72-HOUR PERIOD PRIOR TO THE OVERFLOW?

(Y OR N)

INITIAL AND SECONDARY RECEIVING WATERS:

30. DID THE SANITARY SEWER OVERFLOW ENTER A STORM DRAIN? (Y OR N)

IF YES, AT WHAT LOCATION OR ADDRESS DID THE SANITARY SEWER OVERFLOW ENTER THE STORM DRAIN SYSTEM? _____

31. DID THE SANITARY SEWER OVERFLOW REACH SURFACE WATERS OTHER THAN A STORM DRAIN?

(Y OR N)

32. NAME OR DESCRIPTION OF INITIAL RECEIVING WATERS: (IF NONE, TYPE NONE)

33. NAME OR DESCRIPTION OF SECONDARY RECEIVING WATERS: (IF NONE, TYPE NONE)

34. IF THE SANITARY SEWER OVERFLOW DID NOT REACH SURFACE WATERS, DESCRIBE THE FINAL DESTINATION OF SEWAGE.

NOTIFICATION:

35. WAS THE LOCAL HEALTH SERVICES AGENCY NOTIFIED? Y (Y OR N)

County of Orange, Health Care Agency (714) 433-6000
After Hours (714) 628-7008, FAX (714) 433-6481
Date of Call: _____ Time of Call: _____
Reported To: _____
Date Faxed: _____

36. WAS THE OFFICE OF EMERGENCY SERVICES (OES) NOTIFIED? Y (Y OR N)

California Emergency Management Agency (800) 852-7550 Date of Call: _____ Time of Call: __:__
Reported To: _____
Control #: _____

ADDITIONAL NOTIFICATIONS:

Regional Water Quality Control Board (951) 782-4130
After Hours (951) 782-4130 (Voice mail)
After Hours (O.E.S) (800) 852-7550
FAX (951) 781-6288
Date of Call: __/__/__ Time of Call: __:__
Reported To: _____
Date Faxed: __/__/__

Public Facilities & Resources Department (714) 567-6363
(If the spill enters a county channel)
Date of Call: __/__/__ Time of Call: __:__
Reported To: _____

Howard Johnson (714) 536-5503
Date of Call: __/__/__Time of Call: __:__

Travis Hopkins (714) 374-5348
Date of Call: __/__/__Time of Call: __:__

AFFECTED AREA POSTING:

37. WERE SIGNS POSTED TO WARN OF CONTAMINATION? ___ (Y OR N)

38. LOCATION OF POSTING (IF POSTED): _____

39. HOW MANY DAYS WERE THE WARNING SIGNS POSTED? _____

40. WERE SAMPLES OBTAINED OF CONTAMINATED WATER? ___ (Y OR N, IF YES ATTACH RESULTS)

41. OTHER REMARKS:

_____

_____

I swear under penalty of perjury that the information submitted in this document is true and correct. I certify under penalty of perjury that I have personnaly examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

SIGNATURE: _____ NAME: _____

DATE: _____ TITLE: _____

ATTACHMENT D:

Calculation of Sanitary Sewer Overflow Volumes
(Excerpt from Irvine Ranch Water District Operations Manual)

CALCULATING SPILLS

The purpose of this report is to take the mystery out of calculating spills. Almost all spills can be calculated using the two examples discussed in this section.

You can use the orifice equation when trying to figure out the volume of a spill. Understanding the orifice equation is not as complex as it may sound. If you know the diameter of the hole (i.e., pick hole or annual space between the ring and cover) and the height at which the fluid is coming out of the hole, then you can figure the flow out of that hole.

The equation is $Q = Ca\sqrt{2gh}$.

Where:

Q	=	flow of fluid from the hole,
C	=	coefficient of discharge,
a	=	area of the hole (measured in feet),
g	=	gravity (32.2 ft/sec), and
h	=	height of the fluid above the cover (measured in feet).

The coefficient of discharge (C) is the product of the coefficient of velocity (Cv) multiplied by the coefficient of contraction (Cc). The values for Cv have been found to vary from 0.954 for ¾-inch orifices to 0.991 for 2.5 inch orifices. The values for Cc have been found to vary from 0.67 for ¾ inch orifices to 0.614 for 2.5 inch orifices.

Example 1

You receive a report of a spill occurring at 12 noon. Your crews respond to the spill and relieve the spill at 2:30 p.m. In addition, they inform you that the flow was coming from two ¾ inch pick holes in the manhole cover, and when they arrived on the scene, the flow appeared to be coming out of the holes approximately 4 inches above the lid. What is the total flow that you are to report to the Regional Board?

Assumptions for Example 1 spill:

1. Flow started at noon and was stopped at 2:30 p.m. Total time of spill was 2.5 hours (150 minutes).

2. Flow was coming from two ¾ inch pick holes. The area of each ¾ inch hole is 0.44179 in. (see Table 1-2). To convert in^2 to ft^2 multiply by 0.006944.

   Therefore, a = 0.44179 $inch^2$ x 0.006944 = 0.0031 ft^2 for each hole.

3. Flow was coming out of each hole at a height of 4 inches.

   To convert inches to feet, multiply by $\frac{1\ foot}{12\ inches}$

   Therefore, H= 4 inches x $\frac{1\ foot}{12\ inches}$ = 0.33 ft

4. The coefficient of discharge, C = Cv x Cc. For a ¾ inch hole, Cv = 0.954, Cc = 0.67.

   Therefore, C = 0.954 x 0.67 = 0.639

5. Using the orifice equation $Qh = Ca\sqrt{2gh}$ the flow from each hole is:

   $Qh = 0.639\ ((.0031\ ft^2)\ \sqrt{2(32.2\ ft/sec^2)(0.33\ ft)}$

6. Total flow, Qt = Qh x number of holes x length of spill (minutes)

   Qt = 4.099 gpm/hole x 2 holes x 150 minutes = 1,230 gallons.

Example 2

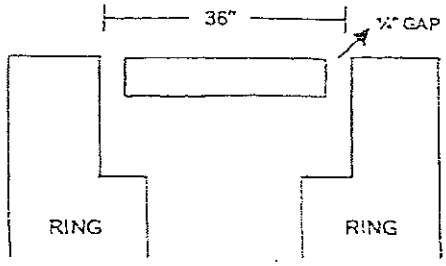
In this next Example, the facts are similar to Example 1, except in addition to the flow coming out of the two pick holes, it is also coming out of the ¼ inch gap between the ring and cover at a height of 4 inches.

7. In addition to steps 1 through 6 in Example 1, you also need to figure the total area where the flow is coming out between the ring and cover.

   We know that the relationship between the ring and cover probably looks like this:

FIGURE 1.14.2

SEWER SPILL CALCULATION EXAMPLE



This problem is made simple if you take the ID of the ring (shown here to be 36 inches), figure out its area and subtract it from the area of the cover (shown here to be 36" – ½" = 35.5 inches). Since both of these areas are circles, we know that the formula is $A = \prod(D/2)^2$. Therefore:

$$A = A_{ring} - A_{Cover}$$

$$= [\prod(36/2)^2] - [\prod(35.5/2^2] \qquad \prod = 3.1416$$

$$= [3.1416\ (324)] - [3.1416(315.1)]$$

$$= 1017.9 - 989.8$$

$$= 28.1\ in^2 \times 0.006944 = 0.195\ ft^2$$

8. From Example 1; H = 0.33 ft, g = 32.2 ft/sec, C = 0.639

9. Using orifice equation $Q = Ca\sqrt{2gh}$

$$Q = 0.639\ \{(0.195\ ft^2)\ \sqrt{2(32.2\ ft/sec^2\ (0.33\ ft)}$$

$$= 0.574\ CFS = 257.82\ gpm$$

$$= 257.82\ gpm \times 150\ min = 38{,}673\ gallons$$

10. In this example, flow was coming from two pick holes and the space between the ring and cover. So in this example we must add the flow calculated in Step 6 above to the flow calculated in Step 9 above – making the total flow of the spill in this example:

$$Qt = 1230\ gallons + 38{,}673\ gallons$$
$$= 39{,}903\ gallons$$

WASTEWATER SPILL CALCULATOR

How high in inches was the water coming out of the pick hole?	1	inches
How many pick holes (there are two per manhole)?	2	pick holes
How many minutes was the water running?	15	minutes

Complete the following if water was also coming out around the manhole lid.
(Leave these fields blank if the above condition does not apply)

How high was the water coming out around the manhole lid?		inches
How many manhole lids?		manholes

The spill rate is:	7.28 gallons per minute
The amount spilled is:	109 gallons