

**ORANGE COUNTY STORMWATER
PROGRAM**

APPENDIX E5

**PORTABLE TOILET
OVERSIGHT PROGRAM**

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A cooperative project between the County of Orange, Orange County Flood Control
District and the incorporated cities of Orange County

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EXECUTIVE SUMMARY

An evaluation of practices and impacts associated with the use, maintenance, and oversight of portable toilets in Orange County was performed, in compliance with Section X1II.2 of the Santa Ana Region municipal storm sewer system National Pollutant Discharge Elimination System (NPDES) permit. The objectives of the evaluation were to: (1) determine the nature of existing operational practices and regulatory oversight structure; (2) assess the extent to which the present practices associated with their use and maintenance were adversely impacting surface water quality; and (3) recommend appropriate revisions to current operational practices or regulatory oversight as warranted.

Portable toilets are presently used at construction sites, parks and recreational areas, and temporary events in Orange County where sanitary sewer service is either unavailable or insufficient to handle short-term accessibility and capacity needs. Portable toilets are supplied and serviced by seven providers located within Orange County and 30 providers located outside the County.

Industry standard practices were identified and described through interviews with representatives of sanitation districts, health departments, planning and development departments, and water quality agencies, as well as with several private portable toilet service providers and users. Current practices related to siting, maintenance, transport, disposal, and storage are presented in the report.

A review of pollution incidents from the County of Orange Public Facilities & Resources Department and Health Care Agency spill response data bases, and anecdotal information derived from the above-referenced interviews served as the basis for assessment of water quality impacts associated with portable toilets. The review identified a small number of formal incidents over the past several years where an observed or potential direct impact to a drainage channel from a portable toilet occurred, probably through flooding or vandalism. It is likely that a number of additional unreported spills or leaks occurred, where the situation was corrected and the spill or leak quickly cleaned up with no discharge or impact to the drainage system or receiving waters.

Current standard industry practices for use, maintenance, transport and storage of portable toilets within Orange County are generally found to be sufficiently responsible to prevent impacts to receiving waters. However, these practices should be formalized and shared with suppliers and users within Orange County to ensure their consistent application, primarily through the inspection, education, and outreach activities presently being conducted under the Construction and Existing Development program elements of the County and local jurisdictions urban runoff Local Implementation Plans. Specific siting practices are incorporated into updated BMP Fact Sheets for consideration and incorporation into Stormwater Local Implementation Plans.

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LIST OF ACRONYMS

BMP	Best Management Practice
BOD	Biochemical Oxygen Demand
CEQA	California Environmental Quality Act
COD	Chemical Oxygen Demand
CWA	Clean Water Act
DAMP	Drainage Area Management Plan
EPA	Environmental Protection Agency
MEP	Maximum Extent Practicable
NPDES	National Pollutant Discharge Elimination System
OC	County of Orange
SCAG	Southern California Association of Governments
SWPPP	Stormwater Pollution Prevention Plan
SWRCB	State Water Resources Control Board
TKN	Total Kjeldahl Nitrogen
TMDL	Total Maximum Daily Load
TSS	Total Suspended Solids

1 INTRODUCTION

The County of Orange, the Orange County Flood Control District and incorporated cities (Orange County Permittees) received “early” municipal storm sewer system NPDES permits in July 1990, from the Santa Ana and San Diego Regional Water Quality Control Boards. These permits were subsequently renewed in 1996 (Second Term Permits) and again in 2002 (Third Term Permits). With each permit renewal the municipal program requirements were increased significantly.

On January 18, 2002, the Santa Ana Regional Water Quality Control Board issued a new 5 year Municipal NPDES permit (order no. R8-2002-0010) to the County and the incorporated cities within the Region 8 jurisdiction. The San Diego Regional Water Quality Control Board issued a new 5 year NPDES permit on February 13, 2002 (order no. R9-2002-0001) to Orange County and the incorporated cities within the Region 9 jurisdiction. Section XII.2 of the Santa Ana permit requires, by July 1, 2003, “the review of the current oversight program for portable toilets to determine the need for any revision.” The San Diego permit does not mention an oversight program for portable toilets but rather identifies portable toilet servicing as a high priority threat to water quality. The required review of portable toilet use reflects the uncertainty of the extent to which portable toilets might adversely impact receiving water quality in Orange County.

In compliance with the Santa Ana Permit, an evaluation of portable toilet use within Orange County has been performed. The objectives of the evaluation were to: (1) determine the nature of existing operational practices and regulatory oversight structure; (2) assess the extent to which the present practices associated with their use and maintenance were adversely impacting surface water quality; and (3) recommend appropriate revisions to current operational practices or regulatory oversight as warranted.

The objectives of the work program completed as part of this study included:

1. Review of portable toilet use and current oversight programs and BMPs – A subset of the Permittees and suppliers of portable toilets were contacted to develop information on current portable toilet industry practices and the extent of use and practices within Orange County.
2. Review of formal and anecdotal water quality incidents related to portable toilets –A qualitative assessment was performed of the extent to which existing conditions/practices might be affecting water quality.
3. Compare the Orange County portable toilet program and practices to those of selected municipalities and jurisdictions within California and other states to determine the current standard of care.
4. Recommend appropriate revisions to the current oversight program and management practices.

It is also recommended that the program elements be reviewed every permit cycle to assess the effectiveness of the measures and determine if refinements to the program are required.

2 CURRENT PROGRAM AND PRACTICES

2.1 Overview

There are seven portable toilet suppliers located within Orange County and over 30 suppliers outside the county that service Orange County. Figure 2-1 shows the locations of the portable toilet suppliers within Orange County. There are various practices followed by suppliers and users, summarized below that minimize pollution from portable toilets though their application may not be consistent throughout the industry. Information regarding portable toilet use and potential impacts to water quality was obtained by contacting individuals who were users, suppliers and regulators of portable toilets. This list of sources can be found in Appendix E.

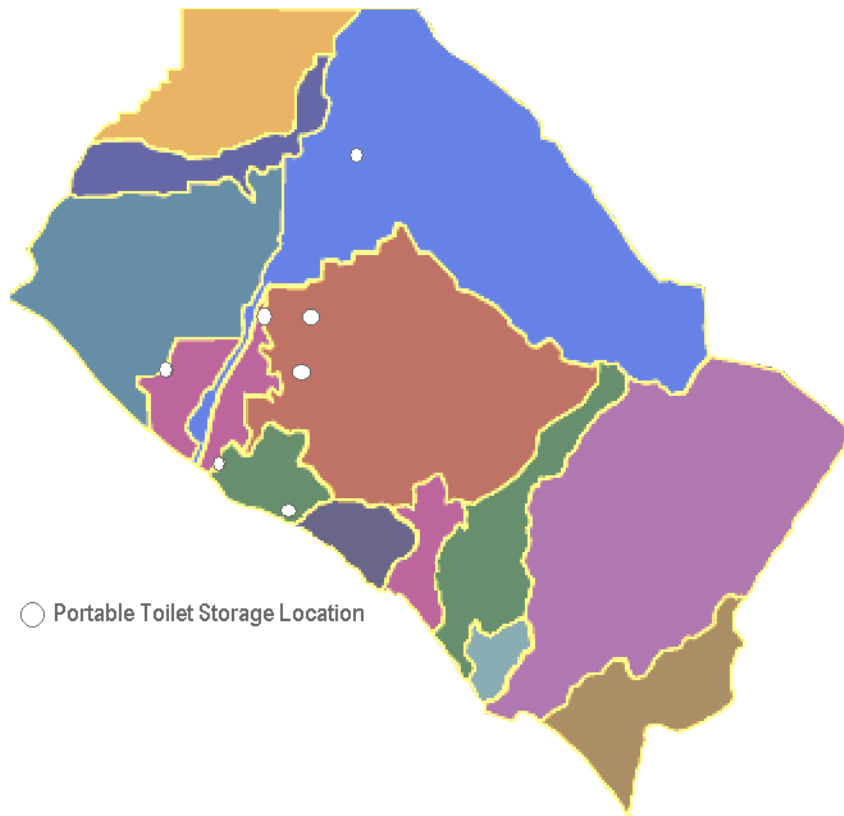


Figure 2-1 Portable Toilet Supplier Locations within Orange County

Portable toilets are primarily used on construction sites within Orange County. In addition to construction site use, they are also rented to parks and recreational areas where sewer-connected sanitation is not readily available. Portable toilets are also rented for temporary gatherings or large crowds, such as sporting events, concerts, weddings, and festivals.

Portable toilet service exists for two reasons. First, on construction sites as shown in Figure 2-2, significant labor savings are gained by minimizing lost labor time associated with leaving the site to use sanitary facilities. In addition to the dollar savings, clean portable toilets safeguard workers' health. Second, a portable toilet can provide sanitation facilities where sewer and

water are not conveniently available, such as at outdoor events shown in Figure 2-3. This enhances health and environmental factors associated with a project or event.



Figure 2-2 Portable Toilet Placement at a Construction Site



Figure 2-3 Portable Toilet Placement at an Event

2.2 Operational Practices

2.2.1 Siting Practices

In general, the construction superintendent or event coordinator determines portable toilet placement. At construction sites they are usually placed in convenient locations for construction worker use, away from any construction activity and heavy vehicle traffic. At event locations portable toilets are usually placed in convenient locations for event attendees to use, but away from main event activity. As a general practice, portable toilets are not sited near storm drains inlets. Construction site inspector and event coordinators are practical in their decisions for siting portable toilets that are easily accessible to users and to service vehicles yet out-of-the-way.

Portable toilets on construction and agricultural sites normally are serviced on a weekly basis. The servicing is scheduled for the service driver and his daily route schedule is arranged to minimize mileage between sites. A service person should be able to perform service on forty to fifty units per day.

When spills occur they are a usually result of improper placement of a portable toilet at a construction site or they are tipped over through accident or vandalism. Normally, municipal inspectors will request that units be moved if they are found to be too close to a storm drain inlet.

2.2.2 Maintenance Practices

Construction site personnel require the portable toilets on the site to be serviced regularly. Users typically will call for additional service if the unit is full, has been tipped, or is observed to be leaking.

The suppliers of the portable toilets also provide cleaning services for the units. The units are cleaned using a vacuum truck to remove all the contents within the holding tank. A biodegradable disinfectant is used to wipe down the unit and broom cleaning is done if needed. Three to four gallons of fresh water and biodegradable disinfectant are placed inside the holding tank to “charge” or “freshen” the unit. Currently suppliers of portable toilets carry bleach and absorbent on the delivery trucks to respond to any spills that occur.

Portable toilets used at temporary gatherings or events are typically serviced at the end of the event. For large gatherings, the holding tank is emptied in the field and the unit transported back either to the sanitation districts discharge location or to the storage yard for cleaning. For small gatherings where only a few units are needed, they are transported to the storage yard to be emptied and cleaned.

Portable toilets are typically maintained at the user site. At construction sites, agricultural fields and long-term events they are emptied and cleaned in the field. During temporary event and gatherings the portable toilets are emptied and cleaned as needed during the event. Potable water and deodorant with enzyme digestant are used to freshen the units. The floors and insides of the units are cleaned by wiping down with a disinfectant and broom cleaning as needed. Figure 2-4 shows how the units are typically cleaned.



Figure 2-4 Cleaning of Portable Toilet

The maintenance of the portable toilets has potential to introduce the pollutants listed in Table 2-1 to the environment. The maintenance practices for cleaning portable toilets should be sufficient to prevent the introduction of pollutants into the storm drain system, however sloppy maintenance practices would allow the introduction of these pollutants.

2.2.3 Disposal and Storage Practices

Portable toilets are transported from the place of use on flatbed trucks. They are loaded and unloaded from the trucks using hand dollies and power tail gates whenever possible. At the storage facilities the unit contents are pumped into a vacor truck to be transported to a wastewater treatment facility. The portable toilets are then washed down with water and a biodegradable deodorizer. All cleaning of portable toilets at the storage yard is done over a clarifier or wash rack. Toilets may also be washed down at the sanitation district disposal location; OCSD does not charge providers for this service. This is primarily done by suppliers of portable toilets who do not have storage facilities within Orange County.

At the end of each workday, the service person disposes of the effluent stored in the service truck at a wastewater treatment plant. Some suppliers located outside of the county also have septic tanks at their storage yard that are used to treat and dispose of waste. This is not the typical method of disposal; most suppliers haul the waste to a wastewater treatment facility.

The Orange County Sanitation Districts permits 32 waste haulers to discharge to their wastewater treatment plant at 10844 Ellis Avenue in Fountain Valley. This includes waste from portable toilets, septic tank cleanouts and other haulers. In 2000 there were 7,382 loads of waste hauled to the treatment plant, making up a total of 11.7 million gallons. All waste haulers who dispose of effluent at the Sanitation Districts facilities are required to obtain a permit. The cost

for disposal to the system is \$0.035/gallon . OCSD does not charge for general washdowns of the toilets at their discharge location.

Portable toilets are stored at the supplier's storage yards. The units are kept closed and upright. The storage practices for portable toilets units typically do not introduce pollutants into the storm drain system.

2.3 Regulatory Oversight

The current regulatory oversight program for portable toilets within Orange County is based on sanitation district requirements, the California Health and Safety Code, the Orange County Code of Ordinances, and the Construction/New Development and Existing Development Programs of the County Drainage Area Management Plan (DAMP), the model basis for the preparation of Local Implementation Plans by Orange County cities.

Portable toilet waste haulers must be permitted by the local sanitation district for disposal of waste. Permit conditions for Orange County Sanitation District (OCSD) include receipt of a manifest describing the source and volume of each disposal load, sampling of effluent for acceptable heavy metals concentrations and pH range, and that transport vehicles be registered and inspected by the County Health Care Agency. The enabling ordinance for OCSD provides the authority to inspect any facility which discharges to their system. In the past OCSD has conducted surveillance, citation, and penalty actions to enforce against illegal discharge of sewage at unauthorized locations within their collection system.

The County Health Care Agency, as authorized by California Health and Safety Code Section 117400-117450, registers and conducts annual inspections of wastewater transport vehicles for providers who discharge to sanitation facilities in the County. Inspections address spill and leak safety provisions such as condition of tires, hoses, tanks, and presence of disinfectants.

Orange County Code of Ordinances - Construction Site Sanitation Facilities (Title 4 Div 3 Art 1 Sec 4.3.5) states “. . . Chemical type sanitary facilities shall be completely pumped out at sufficiently frequent intervals to prevent odors and overflowing and shall be recharged with a fresh non-skin burning chemical.” Section 4.3.6 provides the authority for “the Building Inspector, the Health Department and all peace officers” to enforce this article.

The Construction/New Development Program of the County DAMP provides recommended siting and disposal practices to be used at all construction sites within Orange County. The Existing Facilities Program of the DAMP reflects conditions of the San Diego Region MS4 NPDES permit, which require that portable toilet storage facilities be classified as high priority for inspection and education. However, there are currently no portable toilet storage facilities located in south Orange County.

2.4 Assessment of Portable Toilet Impacts to Receiving Water Quality

Potential pollutants that are generated by portable toilet use and their typical concentrations are listed in Table 2-1. These potential pollutants are generally only a concern if a unit leaks or otherwise spills effluent from the holding tank. Typical uses of the units do not introduce these pollutants into the storm drain system because the storage tanks in portable toilets are kept covered and contained.

Table 2-1 Constituents and Indicators in Portable Toilet Holding Tanks and Typical Values

Constituent	Concentration
TSS	7,000 mg/L
BOD ₅	9,700 mg/L
COD	33,000 mg/L
Total Coliform	83,000 MPN/100mL
Fecal Coliform	81,000 MPN/100mL
pH	7.7 – 8.2
TKN	160,000 mg/L
Total Phosphorus	4,500 mg/L
Copper	230 mg/L
Lead	31 mg/L
Zinc	410 mg/L*

* Results from zinc based disinfectant used.

Source: "Portable Sanitation Industry Certification Program"

Pollutants from portable toilets could be introduced into the storm drain system should a unit tip over either by accident or by vandalism or wind and other weather conditions. Tipped portable toilets are often promptly up-righted and the supplier is called for cleanup of area and portable toilet. A full portable toilet holds 40 gallons. If a portable toilet is tipped over with the door closed, the contents of the toilet would escape through the 4-inch vent pipe. A maximum of 20-25 gallons would escape before the vent pipe would become clogged with solids.

Approximately 50% of spills from portable toilets are solid waste that can easily be swept or shoveled up. The liquid portion of the portable toilet waste typically only travels 4-5 feet from the portable toilet, based on statements made by various suppliers and users of portable toilets.

A query of the County Public Facilities & Resources Department 's pollutant spill response database revealed that since 1996 only three incidents where portable toilets were referenced in a complaint. Of these, one incident included a peripheral reference to a toilet in the description, and involved not portable toilet waste but rather plant material. The other two complaints were due to vandals tipping over portable toilets and high winds blowing one into the local river.

An informal query of PFRD inspectors identified three additional incidents over this same period, which were either unreported or reported without reference to toilets. These consisted

of a point-of-use leak, a toilet spill from a transport vehicle, and a toilet observed floating in a drainage channel during a storm event.

The County Health Care Agency maintains a similar public health incident response program. A query of their data base over the last three years and interview with environmental health staff indicated that complaints related to portable toilet use were very infrequent and were related to odor and aesthetics as much as leakage. For example, there were three incidents reported in 2001, related to odor, a leak, and a perceived 'orphaned' toilet. The two complaints reported in 2002 were related to purported leaking units, and upon response were determined to be without merit.

In addition to formal incident reports, anecdotal information from the sources interviewed for this report indicate that it is likely that numerous additional unreported localized spills, tips or leaks do occur. However, for the large majority of these instances, the spill or leak does not extend beyond the immediate location of the unit, the situation is soon corrected, and the spill or leak is cleaned up with no discharge or impact to the drainage system or receiving waters. The industry practice of prominently displaying owner identification and contact information on the units likely contributes to prompt notification and correction of problems that occur.

Available information suggests that portable toilet use in Orange County does not constitute a significant source of pollution to drainage or receiving water quality, and that the general practices presently recognized by the industry are sufficiently responsible in the prevention of such pollution.

3 OTHER OVERSIGHT PROGRAMS

The oversight programs of various agencies were investigated to determine what other counties, regions and states have implemented. Most of the agencies contacted did not have any formal program for portable toilet oversight.

3.1 Other Southern California Programs

The City of San Diego was contacted to assess their portable toilet oversight program. There is currently no program for oversight within the City of San Diego, but waste haulers require a permit for the disposal of portable toilet effluent. There is no program currently under development, nor is one anticipated for the future.

The County of San Diego has model program guidance that includes recommended BMPs for portable toilets. These are provided in Appendix C and include the following:

- Locating portable toilets away from high traffic vehicular areas;
- Securing portable toilets to prevent tipping;
- Maintaining all hoses, couplings, tanks in good conditions to prevent leaks or spills; and
- Post sign for reporting portable toilets in need of cleaning or repair.

The City of Los Angeles has a mention of portable toilets in their Stormwater Best Management Practices (BMPs) General Construction & Site Supervision. They require contractors to frequently inspect portable toilets for leaks and spills. This BMP handout is provided in Appendix C.

3.2 Other Programs within California

The Bay Area Stormwater Management Agencies was contacted to assess the portable toilet oversight programs within the Bay Area. There is currently no oversight program for the suppliers or users of portable toilets in the Bay Area. The only requirement known for the area is the POTW permit for waste haulers to discharge to the treatment facility. The California Stormwater Quality Association has a fact sheet on Sanitary and Septic Waste Management as part of the new California BMP Handbook for Construction.

3.3 Other Programs Nationally / Internationally

The only portable toilet program found was for the County of Salt Lake in Utah, which specifies recommended BMPs for portable toilets. The BMP fact sheet is located in Appendix C and includes the following:

- Locate portable toilets in convenient locations throughout the site;
- Prepare level, gravel surface and provide clear access to the toilets for servicing and for on-site personnel;
- Construct an earthen berm perimeter for control of spills and protection from leaks;
- Portable toilets should be maintained in good working order by a licensed service with daily observation for leak detection;
- Regular waste collection should be arranged with a licensed service; and
- All waste should be deposited in sanitary sewer system for treatment with appropriate agency approval.

4 RECOMMENDED PORTABLE TOILET POLLUTION PREVENTION PROGRAM

4.1 Introduction

The current practices for use, maintenance and storage of portable toilets within Orange County are generally sufficient to prevent impacts to storm water. There are few formal or anecdotal reports of water quality impacts based on the application of such practices. However, these practices should be formalized and shared with suppliers and users within Orange County to ensure their consistent application.

4.2 Portable Toilet BMPs

The following list describes the recommended BMP's for portable toilets located within Orange County:

Transport of portable toilets (Industrial Activity)

- Portable toilets should be emptied prior to transport.
- Portable toilets should be securely fastened to the transport truck.
- Use hand trucks, dollies, and power tail gates whenever possible.

Placement of portable toilets (Construction Site Activity)

- Portable toilets should be placed 20 feet away from the nearest downslope storm drain inlet and 11 feet (one and a half times the height of a unit, 88 inches) from the curb and gutter, not within a paved street or other impervious area.
- If portable toilet cannot be placed at a safe distance from the downslope storm drain inlet or curb, the construction of an earthen or sand bag berm should be considered around the portable toilet unit for spill and leak containment.
- If unit placement is for longer than one week, and vulnerable to tipping from wind exposure or vandalism, portable toilets should be secured through staking or cabling.
- Prepare a level ground surface with clear access to the units.
- Display owner identification and contact information in a prominent place on each unit.

Maintenance of portable toilets (Site Activity – Industrial and Construction)

- Inspect portable toilets frequently (daily during work week) for leaks and have the units serviced and sanitized at time intervals that will maintain sanitary conditions of each toilet (typically weekly).
- A licensed waste collector should service all portable toilets;
- Suppliers should carry bleach for disinfection in the event of a spill or leak.
- Properly store (cover) and handle chemical materials.
- Train employees on these BMPs, storm water discharge prohibitions, and wastewater discharge requirements.

Storage of portable toilets (Industrial Activity)

- Clean the portable toilets preferably at sanitation district facilities, alternatively at the storage facilities.
- Remove paper trash before washing.
- Drain wash water to the sanitary sewer or to a holding tank.
- Maintain wash area pavement in good condition and sloped to a grated floor drain.
- Keep spill containment materials readily available at headquarters and on transport trucks.

4.3 Municipality Implementation

The County and local jurisdictions should perform educational and outreach activities to increase the willingness of providers and users to implement portable toilet BMPs. These activities would be incorporated into the industrial and new development/construction components of the stormwater programs which are presently being implemented by the County and local jurisdictions. Portable toilet usage at construction sites would require oversight by the construction site inspection personnel. Portable toilet storage facilities are included in the industrial pollution prevention programs and should be prioritized and inspected as a part of the industrial stormwater program component.

4.3.1 Outreach and Education

Outreach and education are important keys to the success of a storm water program. The BMPs recommended in section 4.2 should be incorporated into the referenced fact sheets and brochures that support the Municipal Activities (Sections A-5) New Development (Section A-8), and Existing Development (Section A-9) pollutant source control programs under the Local Implementation Plans. Proposed revised Fact Sheets are presented in Appendix C.

Business Outreach - Outreach targeting of suppliers can be an effective way to educate them in the proper implementation of best management practices. Outreach may include distribution of fact sheets that provide technical information on implementing pollution prevention.

Brochures and Posters - An important component of an outreach program is the development and distribution of brochures, fact sheets, etc. These materials are usually business specific and provide short and concise summaries of the issues, BMPs requirements, and follow up information. They can range from multi-color glossy brochures to black and white summary sheets.

4.3.2 Inspection

BMP information should be provided prior to and during facility and construction site inspection. The model DAMP recommends that each facility be inspected a minimum of once per permit term and additional inspections should be performed as warranted.

4.3.3 Enforcement Plan

City inspectors with enforcement authority will issue enforcement actions to industrial facility owners and operators determined to be out of compliance. The inspectors will document each observed violation. Depending on the severity of the violation, enforcement actions can range from a verbal warning to civil or criminal court actions with monetary fines.

If a City inspector observes a significant and/or immediate threat to water quality, action will be taken to require the facility owner and/or operator to immediately cease the discharge.

The enforcement mechanisms available to inspectors are as follows (in increasing order of severity):

- Notice of Non-compliance
- Administrative compliance orders
- Cease and desist orders
- Infractions and misdemeanors

While these measures typically escalate in enforcement action, they are not required to be issued in the exact order presented here.

5 REFERENCES

American National Standard Institute, Inc. , 1995. *American National Standard for Sanitation Nonsewered Waste-Disposal Systems - Minimum Requirements*. 1995 American National Standard Institute, Inc.

King County [Washington] 1995. *Stormwater Pollution Control Manual. Best Management Practices for Businesses*.

King County Surface Water Management. July. (<http://dnr.metrokc.gov/wlr/dss/spcm.htm>)

Personal communication with Danny Hamberian at Waste Management, Irvine, CA.

Personal communication with Jim and Lydia Aguirre at Newport Sanitation, Costa Mesa, CA.

Portable Sanitation Association International, 2003. *Portable Sanitation Industry Certification Program 1993*. Portable Sanitation Association International.

Salt Lake County 1999. *Stormwater Discharge Management from Construction Activities*, Salt Lake County Engineering Division.

San Diego Stormwater Co-permittees Jurisdictional Urban Runoff Management Program (URMP)) 2000. "Existing Commercial Facilities Model Program Guidance," San Diego County November 13, 2001. (<http://www.projectcleanwater.org>)

The Stormwater Managers Resource Center (<http://www.stormwatercenter.net/>)

GLOSSARY

- **Best Management Practice (BMP)**

Best practical and economically achievable measures to control the addition of pollutants to the waters of the United States through the application of pollution control practices, technologies, processes, siting criteria, operating methods, or other alternatives.

- **Clean Water Act and Amendments**

The Federal Pollution Control Act (Public Law 92-500), as amended (33 U.S.C. 1251 et seq.). Federal regulation mandating a National Pollutant Discharge Elimination System permit for discharges into the Waters of the United States. The goals of the act are to restore and maintain the chemical, physical and biological integrity of the nation's waters.

- **Domestic Septage**

Liquid or solid material removed from a septic tank, cesspool, portable toilet, Type III marine sanitation device, or a similar system that receives only domestic, non-commercial, non-industrial sewage.

- **Grey Water**

Grey water is wastewater from culinary activities, bathing and washing facilities and clothes washing facilities.

- **Maximum Extent Practicable**

To the maximum extent possible, taking into account equitable consideration of synergistic, additive and competing factors; including, but not limited to, gravity of the problem, fiscal feasibility, public health risks, societal concerns and social benefits.

- **National Pollutant Discharge Elimination System (NPDES) Municipal Stormwater Permit**

A provision of the CWA, section 402, that identifies municipal stormwater as a point source subject to regulation under the NPDES Permits.

- **Nonflush Toilet Facility**

A nonflush toilet facility is one wherein the waste is deposited directly into a container or receptacle without flushing.

- **NPDES Stormwater Program**

The program designed by the Orange County Permittees for compliance with the NPDES permits.

- **Permittees**

The cities of Anaheim, Brea, Buena Park, Costa Mesa, Cypress, Dana Point, Fountain Valley, Fullerton, Garden Grove, Huntington Beach, Irvine, Laguna Beach, Laguna Hills,

Laguna Niguel, Laguna Woods, La Habra, La Palma, Lake Forest, Los Alamitos, Mission Viejo, Newport Beach, Orange, Placentia, Rancho Santa Margarita, San Clemente, San Juan Capistrano, Santa Ana, Seal Beach, Stanton, Tustin, Villa Park, Westminster, and Yorba Linda; the County of Orange; and the Orange County Flood Control District and any subsequently incorporated cities that become subject to the NPDES permit. Each Permittee is individually responsible for the implementation of the program elements within its jurisdiction.

- **Portable**

The term “portable” means readily or easily relocatable.

- **Principal Permittee**

The County of Orange is the Permittee designated with the responsibility to manage the NPDES Municipal Stormwater Program on behalf of the Permittees.

- **Regional Water Quality Control Boards**

The Santa Ana and San Diego Regional Water Quality Control Boards are agencies that implement and enforce Clean Water Act Section 402(p) NPDES permit requirements, and are issuers and administrators of these permits on behalf of EPA within Orange County.

- **Santa Ana Board**

The Regional Board that issues the NPDES Municipal Stormwater Permit for Orange County from the northern Los Angeles County border down to approximately El Toro Road. Its jurisdiction includes the cities of Anaheim, Brea, Buena Park, Costa Mesa, Cypress, Fountain Valley, Fullerton, Garden Grove, Huntington Beach, Irvine, La Habra, La Palma, Lake Forest, Los Alamitos, Newport Beach, Orange, Placentia, Santa Ana, Seal Beach, Stanton, Tustin, Villa Park, Westminster, and Yorba Linda.

- **San Diego Board**

The Regional Board that issues the NPDES Municipal Stormwater Permit for Orange County from approximately El Toro Road down south to the San Diego County border. Its jurisdiction includes the cities of Dana Point, Laguna Beach, Laguna Hills, Laguna Niguel, Laguna Woods, Mission Viejo, Rancho Santa Margarita, San Clemente and San Juan Capistrano.

- **State Water Resources Control Board**

State agency that sets statewide policy for the nine Regional Water Quality Control Boards.

- **Total Maximum Daily Loads (TMDL)**

A written, quantitative plan and analysis for attaining and maintaining water quality standards in all seasons for a specific waterbody and pollutant.

APPENDIX A

Storm Water Permit Sections Relating to Portable Toilets

XI. SEPTIC SYSTEM FAILURES AND PORTABLE TOILET DISCHARGES

1. By July 1, 2003, the permittees, whose jurisdictions have 50 or more septic tank or sub-surface disposal systems in use, shall identify with the appropriate governing agency, a mechanism to determine the effect of septic system failures on storm water quality and a mechanism to address such failures.

2. By July 1, 2003, the principal permittee shall review the permittees' current oversight programs for portable toilets to determine the need for any revision.

APPENDIX B
Public Education Material

Industry Portable Toilet BMPs

Portable toilets may contribute pollutants to the MS4 because poor cleaning procedures, spills, leaks, and vandalism. Potential pollutants include bacteria, organic matter, disinfectant and suspended solids. During rain events the pollutants may be carried into the MS4. BMPs for portable toilet suppliers include the following:

Designated Storage Yard BMPs

- Clean the portable toilets preferably at the sanitation districts, or alternatively at the storage facilities.
- Remove paper trash before washing.
- Drain wash water to the sanitary sewer or to a holding tank.
- Maintain wash area pavement in good condition and sloped to a grated floor drain.
- Keep spill containment materials readily available at headquarters and on transport trucks.

Designated On-Site BMPs

- Locate portable toilets away from high-traffic vehicular areas.
- Portable toilets should be placed 20 feet away from the downslope storm drain inlet and 11 feet from the curb and gutter.
- If portable toilet cannot be placed at a safe distance from the downslope inlet or curb, construction of an earthen or sand bag berm should be considered around the portable toilet for spill and leak containment.
- If unit placement is for longer than one week, and vulnerable to tipping from wind exposure or vandalism, portable toilets should be secured through staking or cabling.
- Prepare a level ground surface with clear access to the units.
- Maintain all hoses, couplings, tanks, etc, in good condition to prevent leaks or spills.
- Inspect the portable toilets frequently (daily during work week) for leaks and have the units serviced and sanitized at time intervals that will maintain sanitary conditions of each toilet (typically weekly).
- Display owner identification and contact information in a prominent location on each unit.
- A licensed waste collector should service all portable toilets;
- Suppliers should carry bleach for disinfection in the event of a spill or leak.
- Properly store and handle chemical materials.
- Train employees on these BMPs, storm water discharge prohibitions, and wastewater discharge requirements.

Event Location

Portable Toilet BMPs

Portable toilets may contribute pollutants to the MS4 because of poor cleaning procedures, spills, leaks, and vandalism. Potential pollutants include bacteria, organic matter, disinfectant and suspended solids. During rain events the pollutants may be carried into the MS4. BMPs for portable toilet use at events include the following:

Designated On-Site BMPs

- Locate portable toilets away from high-traffic vehicular areas.
- Portable toilets should be placed 20 feet away from the downslope storm drain inlet and 11 feet from the curb and gutter.
- If portable toilet cannot be placed at a safe distance from the downslope inlet or curb, construction of an earthen or sand bag berm should be considered around the portable toilet for spill and leak containment.
- If unit placement is for longer than one week, and vulnerable to tipping from wind exposure or vandalism, portable toilets should be secured through staking or cabling.
- Prepare a level ground surface with clear access to the units
- Maintain all hoses, couplings, tanks, etc, in good condition to prevent leaks or spills.
- Inspect the portable toilets frequently (daily during work week) for leaks and have the units serviced and sanitized at time intervals that will maintain sanitary conditions of each toilet (typically weekly)
- Display owner identification and contact information in a prominent location on each unit.
- A licensed waste collector should service all portable toilets;
- Suppliers should carry bleach for disinfection in the event of a spill or leak.
- Properly store and handle chemical materials.
- Train employees on these BMPs, storm water discharge prohibitions, and wastewater discharge requirements.

Construction Site Portable Toilet BMPs

Portable toilets may contribute pollutants to the MS4 because poor cleaning procedures, spills, leaks, and vandalism. Potential pollutants include bacteria, organic matter, disinfectant and suspended solids. During rain events the pollutants may be carried into the MS4. BMPs for portable toilet use on construction sites include the following:

Designated On-Site BMPs

- Locate portable toilets away from high-traffic vehicular areas.
- Portable toilets should be placed 20 feet away from the downslope storm drain inlet and 11 feet from the curb and gutter.
- If portable toilet cannot be placed at a safe distance from the inlet or curb, construction of an earthen or sand bag berm should be considered around the portable toilet for spill and leak containment.
- If unit placement is for longer than one week, and vulnerable to tipping from wind exposure or vandalism, portable toilets should be secured through staking or cabling.
- Secure portable toilets with a stake driven into the ground or cable to prevent tipping of the unit by accident, weather or vandalism.
- Prepare a level ground surface with clear access to the units.
- Maintain all hoses, couplings, tanks, etc, in good condition to prevent leaks or spills.
- Inspect the portable toilets frequently (daily during work week) for leaks and have the units serviced and sanitized at time intervals that will maintain sanitary conditions of each toilet (typically weekly).
- Display owner identification and contact information in a prominent location on each unit.
- A licensed waste collector should service all portable toilets;
- Suppliers should carry bleach for disinfection in the event of a spill or leak.
- Properly store and handle chemical materials.
- Train employees on these BMPs, storm water discharge prohibitions, and wastewater discharge requirements.

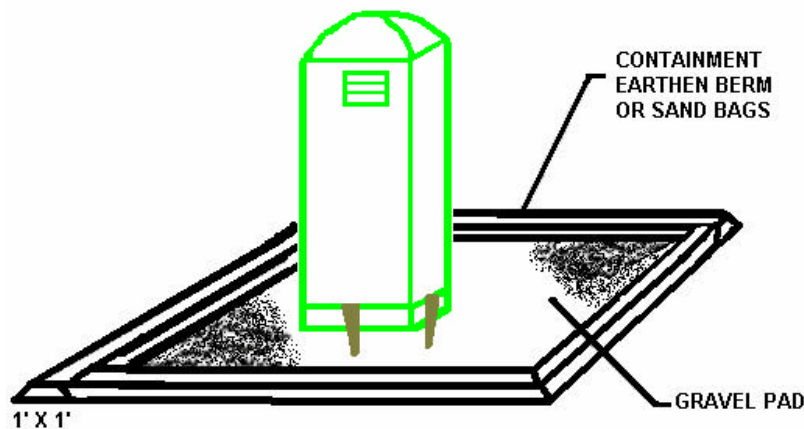


Figure 1
Containment for Portable Toilet

APPENDIX C

BMP Fact Sheets from Other Agencies

APPENDIX D

Contacts

Date	Contact Name	Agency	Phone
16-Sep	Karen Henry	City of San Diego	619-525-8644
16-Sep	Jim	Newport Sanitation (Portable Toilet Supplier)	949-646-2700
16-Sep	Stan Vandermay	OC Construction	714-567-7832
16-Sep	Mahine Talebi	OC Sanitation Districts	714-962-2411
17-Sep	Jeff Warren	OC Health Care Agency	714-834-4722
8-Oct	Brian Roberts	Water Resource Consultants Fairfax, Va	202-452-1700
8-Oct	Cid Tesoro	County of San Diego	858-694-3672
8-Oct	Geoff Brosseau	Bay Area Stormwater Management Agencies Association	650-365-8620
8-Oct	Jill Bicknell	Santa Clara Valley Urban Runoff Pollution Prevention Program	408-720-8811
9-Oct	Rich Slusinger	City of Mission Viejo	949-470-3095
9-Oct	Cathy Dickey	City of Lake Forest	949-461-3453
9-Oct	Gene Janbne	City of Laguna Niguel	949-362-4337
9-Oct	Rudy Emani / Keith Linker	City of Anaheim	714-765-5176
9-Oct	Vince	City of Laguna Hills	949-707-2600
9-Oct	Jaraldyn Lucas	City of Huntington Beach	714-536-5432
14-Oct	Suzi	Dipper Dan (Portable Toilet Supplier)	714-554-5125
15-Nov	Lydia Aguirre	Newport Sanitation (Portable Toilet Supplier)	949-646-2700
22-Nov	Danny Hamberian	Waste Management (Portable Toilet Supplier)	949-451-2600
29-Mar	Larry Honeybourne	OC Health Care Agency	714-667-3751
10-June	Susan Dewar	OC Health Care Agency	714-667-3630

APPENDIX E

Portable Toilet Suppliers

PORTABLE TOILET SUPPLIERS

Cammack Co
18831 Gothard St.
Huntington Beach, Ca 92648

Cammack Co
1718 Plaza del Norte
Newport Beach, Ca 92661

Dipper Dan
418 N. Sullivan St
Santa Ana 92703

Newport Sanitation
848 W. 18th Street
Costa Mesa, Ca 92627

Park Rental
15631 E. Lincoln Ave
Orange, Ca 92865

Three Stars
1624 S. Parton St
Santa Ana, Ca 92707

Waste Management of Orange County
16122 Construction Circle East
Irvine, Ca 92714