Appendix XVI. Water Department Sample Storm Water Pollution Prevention Plan and Department Standard Operating Practice and Policy References

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	WATER OPERATIONS DIVISION **ISO 14001 and/or NON-ISO** **STANDARD OPERATIONS POLICY AND PROCEDURE**	**NUMBER:** **C.01** **EFFECTIVE:** **January 21, 2005**
	SUBJECT: BULK HANDLING OF OILS AND FUELS	**SUPERSEDES:**

1. PURPOSE

1.1. To establish standards, roles and responsibilities for staff responsible for bulk handling of oils and fuels to prevent spills during transport and to maintain safety while conducting maintenance and operations.

1.2. This policy is considered ISO 14001, Environmental Management Program, Level 3 documentation.

2. AUTHORITY

2.1. Deputy Director, Water Operations Division

2.2. Assistant Deputy Director, Water Operations Division

2.3. Construction Program Manager

2.4. Water Systems District Managers

2.5. Water Service Technical (WST) Supervisor

2.6. Environmental Coordinator

2.7. American Petroleum Institute regulations and manufacturers specifications

3. DEFINITION

The following definitions apply to bulk handling of oils and fuels operations and maintenance activities:

3.1. Bulk liquids: Petroleum or water products normally transported by pipeline or tank truck in quantities of 55-gallon metal drums.

3.2. Grounding: Electrically connecting single or bonded units to a ground rod so static potential is discharged into the earth.

3.3. Inventory: Bulk contents measured to current product level.

3.4. Operating level: Amount of material to sustain operations.

3.5. Storage capacity: Amount measured to maximum fill level.

3.6. Service control point: Location for initial placing of bulk liquids in yards for receiving, use of and storage of bulk liquids.

4. POLICY

4.1. Equipment and systems shall be operated and maintained in serviceable condition by qualified persons in a manner to reduce or eliminate spills, and to ensure safety for employees and equipment.

5. RESPONSIBILITIES

5.1. Personnel in the Construction Program of Operations Division shall establish operating step procedures in an operation plan for quality assurance in receiving, use and storage of bulk liquids.

6. PROCEDURES

6.1. A printed work order in an electronic tracking system is required for control of oil and fuel delivery with information on the identity of employees, equipment needed, date and time of operation. Provide location, operating level, storage capacity and service control point for bulk liquids. WST supervisors, check manufacturer specifications, including climate requirements.

6.2. Trained personnel shall operate equipment to transfer bulk material, perform grounding if required, placing absorbent barrier material, and other best management practices required by the Storm Water Engineer.

6.3. WST supervisors conduct periodic instructions and updates on control of oil and fuel deliveries.

Mark Stone, Deputy Director

Date

	WATER OPERATIONS DIVISION **ISO 14001 and/or NON-ISO** **STANDARD OPERATIONS POLICY AND PROCEDURE**	**NUMBER:** **C.02**
	WATER OPERATIONS DIVISION **OPERATIONS AND POLICY MANUAL**	**EFFECTIVE:** **February 24, 2005**
	SUBJECT: REUSE OF PIPES, FITTINGS, AND RECYCLING OF SCRAP METAL WASTE	**SUPERSEDES:**

1. PURPOSE

1.1 To establish standards, roles and responsibilities for employees responsible for the reuse of pipes, fittings, and recycling of scrap metal waste at Chollas salvage yard.

1.2 This policy is considered ISO 14001, Environmental Management Program, Level 3 documentation.

2. AUTHORITY

2.1 Deputy Director, Water Operations Division

2.2 Assistant Deputy Director, Water Operations Division

2.3 California Integrated Waste Management Board (CIWMB)

2.4 Construction Program Manager

2.5 Water Systems District Managers

2.6 City of San Diego Urban Runoff Management Plan, January 2002

2.7 U.S. National Pollutant Discharge Elimination System (NPDES) Storm Water Permit no. CAS0108758 (RWQCB Order No. 2001-01)

3. DEFINITION

The following definitions apply to activities for reusing pipes, fittings, and recycling scrap metal waste:

3.1 Fittings: The item itself or parts of a valve, curb stop, hydrant, meter, corp. stop, service tees, victaulic couplings, curb hoses, service hoses, etc.

3.2 Pipes: 2” schedule 80 PVC or 2” galvanized steel with victaulic grooved ends.

3.3 Scrap Metal Waste: Used metal pipe and fittings which are not suitable for reuse.

4. POLICY

4.1 The refurbishing of usable pipe, fittings and processing of scrap metal waste at Chollas yard will be done responsibly for efficient and profitable operation and to ensure safety of employees.

5. RESPONSIBILITIES

5.1 The District Manager or designated Water Systems Technician Supervisor shall establish the criteria to reuse pipes and fittings or recycle scrap metal, and identify the personnel, equipment and work conditions.

6. PROCEDURE

6.1 Water Systems Technician Supervisor will assign storage and removal processes per city contract with certified ISO waste management company or through City Central Stores by contracting the Stores Operations Supervisor. The goal for recycling metal materials is fifty-percent per California Integrated Waste Management Board (CIWMB)

6.2 Inspect, clean and refurbish all reusable material. Use this material before ordering new material.

6.3 Cast iron shall be kept separate from brass and copper material.

6.4 Maintain the process to keep high line piping, hose and fittings in good repair.

6.7 Operation practices and storage areas will include Best Management Practices of the urban runoff management plan and storm water regulations. Refer to the Authorities listed under number 2.

Mark Stone, Deputy Director

Date

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WATER OPERATIONS DIVISION
ISO 14001 and/or NON-ISO
STANDARD OPERATIONS POLICY AND PROCEDURE

C.03 Disinfection and Testing of New Water Mains

ATTACHMENT “A”

	WATER OPERATIONS DIVISION **ISO 14001 and/or NON-ISO** **STANDARD OPERATIONS POLICY AND PROCEDURE**	**NUMBER:** **C.04** **EFFECTIVE:** **January 21, 2005**
	SUBJECT: WATER MAIN REPAIRS – WATER MAIN CONNECTIONS WITH HIGH LINING PIPELINES	**SUPERSEDES:**

1. PURPOSE

1.1. To establish standards, roles and responsibilities when repairing water mains.

2. AUTHORITY

2.1. Deputy Director, Water Operations Division

2.2. American Water Works Association (AWWA) Standard C 651-92 Sections 5 and 10

2.3. State of California, Health and Safety Code, Title 22, Section 64630 (f)

3. DEFINITION

The following definitions apply to the repair of water mains:

3.1. American Water Works Association (AWWA): The water industry organization that provides official guidelines for policies, procedures, regulations and standards.

4. POLICY

4.1. An efficient water delivery system shall be maintained to ensure constant delivery of potable water to all consumers. All interruptions of service due to water main breaks and connections shall be quickly restored, minimizing the impacts on human and environmental health.

5. RESPONSIBILITIES

5.1. Refer to procedures below.

6. PROCEDURE

6.1. Investigation: Before crews are dispatched, all reported main breaks should be carefully investigated by the appropriate supervisor, or by a one-position emergency crew. Careful investigation assures repair crews and equipment will not be dispatched to handle minor repairs such as valve packing leaks or drainage from sources other than water mains. Also, if there are environmental or hazardous material issues the appropriate Water Department Personnel and/or consultants should be contacted in a timely fashion. Additionally, a determination is necessary to see if hi-lining should be performed to serve customers without water.

6.2. Notification of Consumers: Notification of consumers shall be done in accordance with SOPP D.20, Water Main Shutdown.

6.3. Repair of Main

6.3.1. Longitudinal breaks in cast iron mains, regardless of the length of the split shall be repaired by “cutting in” a length of ductile iron or plastic pipe at least three (3) feet long or long enough to completely remove the split.

6.3.2. Circumferential breaks in cast iron or asbestos cement mains may be repaired with stainless steel bands.

6.3.3. Mains will be repaired by using flex couplings, PVC pipe or other approved pipe materials. Repair saddles may be used where corporation stops have been pulled from the main as long as the main has not been damaged beyond the diameter of the tap hole. Repair bands must be stainless steel, properly plastic wrapped and taped, and used only for service pulls or other appropriate repairs. If the damage extends beyond the pulled corporation stop area (ie. circumferential breaks) repairs will be made by replacing the damaged area.

6.3.4. Steel cylinder pipe shall be replaced or patched as appropriate.

6.3.5. Use of Flexible Couplings

6.3.5.1. Each flexible coupling when used shall be completely wrapped and taped securely with six (6) millimeters thick plastic sheeting.

6.4. Water Main Connections

6.4.1. All water main connections will be performed with AWWA approved materials.

6.4.2. All tees, crosses, and off-sets will have flanged type fittings.

6.4.3. All fittings will be wrapped and taped securely with six mils thick plastic sheeting.

6.4.4. All straight-in connections will be joined by straight or high deflection PVC couplings.

6.4.5. Under no circumstances will repair bands be used to make connections.

6.4.6. All water main connections shall be performed by following AWWA policy C651-92, Disinfection Requirements as described in attachments A and B.

6.5. Hi-lining

6.5.1. All hi-lining will be installed with 2” PVC, or galvanized steel, and flexible curb hoses.

6.5.2. Scheduled hi-line installation will be chlorinated for 24 hours and flushed for two hours prior to transferring/connections.

6.5.3. Unscheduled/emergency hi-lining will be chlorinated and flushed for as long of a period as possible with consideration to priority needs.

6.5.4. Prior to flushing follow Storm Water Procedures.

6.5.5. Place sand/gravel bags at nearby storm drains.

6.5.6. Attach dechlorinator to the flushing point.

6.5.7. Upon completion clean up and remove sand/gravel bags and dechlorinator.

6.6. Storm Water Protection Measures

6.6.1. Begin after the water main is shut down or considered under control.

6.6.2. Place gravel bags around nearby storm drain inlets or filter cloth over the inlet opening held down by sand bags downstream of the work area in order to keep sediment from entering the storm drain.

6.6.3. Prior to attaching dechlorinators to hydrant(s), blowoff(s) and pumps, ensure that LPD chlor tablets are in the dechlorinators.

6.6.4. Test water with chlorine residual kit. If no chlorine is present begin procedures.

6.6.5. Spoil from trench digging should be either loaded on Water Department trucks or stockpiled on the street. Once loaded it gets transported by department trucks to operations station. If appropriate, place fiber roll around stockpile until it is removed.

6.7. Site (trench) Preparation and Disinfection

6.7.1. Site is prepared for work, pipe is exposed, problem is located and the trench is shored, if necessary.

6.7.2. Apply liberal quantities of hypochlorite to wet trench areas if there is a possibility of trench water getting back into the water main.

6.7.3. Remove the broken section of pipe from the trench.

6.7.4. The interior of all pipe and fittings used in making the repair (particularly couplings and sleeves) shall be swabbed or sprayed with a one (1%) hypochlorite solution before installation.

6.7.5. Pipe replacement: Lay in new pipe, clean debris from pipe, if any, and place an appropriate amount of chlorine in the new pipe and connect replacement pipe to existing pipe.

6.7.6. Attach dechlorinators to all affected hydrants or blow-offs.

6.7.7. Test water from hydrant or blow-off with chlorine residual test kit. (If chlorine residual is present dechlorinate and remove chlorine residual to a level of non-detection).

6.7.8. Begin flushing as soon as repairs are completed. Continue flushing until all discolored water is eliminated. Flush in both directions if possible.

6.7.9. When practical, the section of main where the break occurred shall be slug chlorinated (see Attachment B "Slug Chlorination").

6.7.10. Refer to Policy C.15 for sampling procedure.

6.7.11. Perform a water sample from nearest hose bib and send sample to the Water Department Laboratory for a bacteria test (Bacti).

6.7.12. The site (trench) is then back filled and compacted in levels with sand and usable existing soil (see 6.9 below).

6.7.13. Tools that can be cleaned with water are cleaned on site. Tools which require solvents are to be cleaned at the Water Operations yards in the designated tool cleaning area.

6.7.14. Site is cleaned up, swept and left in acceptable condition.

6.7.15. Remove water from all water wagons, ensure sand/gravel bags are in place, attach dechlorinator to water wagon and empty all water. Upon completion clean up and remove sand/gravel bags and dechlorinators.

6.8. Valve Operation

6.8.1. The Emergency Services unit performing the shut down will fill out the Emergency Shut Down Report showing exact locations of gate valves closed to isolate the main break. These reports will be given to the job site supervisor at the conclusion of the shutdown.

6.8.2. Repair crews will open <u>all</u> valves used to isolate the main repair at the conclusion of the repair.

6.8.3. The on-site supervisor will verify that all valves have been opened after repairs are made.

6.8.4. The Water Systems Technician Supervisor in charge of repair crews will also check the Emergency Shutdown Report for possible valves not opened and will take corrective action if necessary.

6.9. Backfill and Compaction

6.9.1. During excavation, broken pavement shall be kept separate from reusable spoil. Reusable spoil shall be used as backfill material.

6.9.2. Use Water Operation Division's standard operating policy and procedure (SOPP) C.05 "Backfill and Compaction".

Mark Stone, Deputy Director

Date

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WATER OPERATIONS DIVISION
ISO 14001 and/or NON-ISO
STANDARD OPERATIONS POLICY AND PROCEDURE

SUBJECT: Water Main Repairs-Water Main Connections with Hi-lining Pipelines

NUMBER: C.04

ATTACHMENT A

WATER OPERATIONS DIVISION

ISO 14001 and/or NON-ISO
STANDARD OPERATIONS POLICY AND PROCEDURE

SUBJECT: Water Main Repairs-Water Main Connections with Hi-lining Pipelines

NUMBER: C.04

ATTACHMENT B

	WATER OPERATIONS DIVISION **ISO 14001 and/or NON-ISO** **STANDARD OPERATIONS POLICY AND PROCEDURE**	**NUMBER:** **C.05** **EFFECTIVE:** **February 8, 2007**
	SUBJECT: BACK FILL, COMPACTION AND PAVING	**SUPERSEDES:** **January 21, 2005**

1. PURPOSE

1.1. To establish standards, and roles and responsibilities for back fill, compaction and paving.

1.2 . This policy is considered ISO 14001, Environmental Management Program, Level 3 documentation.

2. AUTHORITY

2.1. Deputy Director, Water Operations Division

2.2. City of San Diego Standard Drawing No. G-24, G-25, G-33

2.3. Standard Specifications for Public Works Construction (Green Book), 2003 or current edition

2.4. American Water Works Association (AWWA) Manual Standard C600-77

3. DEFINITION

The following definitions apply to back fill and compaction construction operations:

3.1. Backfill: Refill trench or hole with existing or new material after construction.

3.2. Concrete work: Pour concrete, rough finish cement, saw-cut asphalt or concrete or strip-out site.

3.3. Excavation: Manual or mechanical digging of an area for a new installation or at a repair site.

3.4. Haul fill sand: Bring load of sand to backfill site.

4. POLICY

4.1. All excavations shall be back filled and compacted to prevent sinking or failure of the asphalt or concrete patch. This is to insure public safety, reliability, and timely use of the road.

5. RESPONSIBILITIES

5.1. The Water System Technician Supervisor (WSTS) and Water System Technician IV (WST IV) will coordinate on-site planning, scheduling and equipment. The WST IV will inform his crew what work will be performed and what equipment will be needed before leaving the operations yard.

5.2. The WST IV will request additional crews and equipment when necessary. Work will be assigned and coordinated to meet site requirements in advance if possible.

5.2.1. Input a work order referral to request additional crew(s) to perform work on a Service Request (SR) or a Work Assignment Order (WAO) for routine jobs not requiring immediate action.

5.2.2. Input a request via Station 38 to perform work that is an emergency or high priority job.

6. PROCEDURES

6.1. Excavation

6.1.1. During excavation, broken pavement shall be kept separate from reusable fill. Reusable fill shall be used as backfill material.

6.1.2. Material within the first 18” above the top of the pipe shall be equivalent to fill sand #30 and be firmly tamped, taking care to protect the pipe or installation.

6.1.3. From 18” above the top of pipe to the subgrade of the pavement, material containing stones up to 6” at their greatest dimension may be used unless job specifications dictate otherwise.

6.1.4. From 18” above the top of the pipe to the subgrade of the pavement, material shall be compacted in 12” lifts.

6.1.5. Dumping backfill material into an excavation, leveling off at the surface, then wheelrolling or tamping the last 1 or 2 feet is <u>not</u> acceptable.

6.1.6. All backfill trenches must pass a compaction test to 90% or more before being patched or paved.

6.2 Compaction

6.2.1. Designed personnel from Engineering Department will pickup field crew work schedules at Chollas.

6.2.2. Random compaction tests will be taken and the results should be phoned in to the Water Systems Technician Supervisor in charge of street patching.

6.2.3. Backfilled excavations showing 90% or more compaction will be patched.

6.2.4. Backfilled excavations showing less than 90% compaction shall not be patched until they have been dug out again and compacted again by the responsible crew.

6.2.5. The Construction Program Manager will be notified at the same time the Water Systems Technician Supervisor in charge of patching is notified regarding failed compaction tests.

6.2.6. A weekly written report of compaction tests will be sent to the Construction Program Manager showing the name of the crew leader, location and percent of compaction.

6.3 Paving Repair

6.3.1 Resurface per Standard Drawing No., G-24, G-25 Type C or G-33 (see attached).

7. Reference

7.1 Crew Book

7.2 City of San Diego Standard Drawing Manual

7.3 Refer to Green Book and City of San Diego Standard Drawing Manual per above.

Alex Ruiz, Deputy Director

Date

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	WATER OPERATIONS DIVISION ISO 14001 and/or NON-ISO STANDARD OPERATIONS POLICY AND PROCEDURE	**NUMBER:** **C.06**
		EFFECTIVE: **January 27, 2005**
	SUBJECT: SALVAGE YARD OPERATIONS	**SUPERSEDES:** **None**

1. PURPOSE

1.1. To establish standards, roles and responsibilities for salvage yard operations at Chollas Water Operations Yard.

1.2. This policy is considered ISO 14001, Environmental Management Program, Level 3 documentation.

2. AUTHORITY

2.1. Deputy Director, Water Operations Division

2.2. Assistant Deputy Director, Water Operations Division

3. DEFINITION

3.1. Salvage: Saving of construction material for further use.

4. POLICY

4.1. Salvage yard operations shall be for the purpose of refurbishing useable pipe, fittings and sorting, repairing and stockpiling material.

5. RESPONSIBILITY

5.1. The Water Systems District Manager will direct the supervision of procedures and insure that conditions of this standard operations procedure are being met.

5.2. Employees bringing in material will place material in proper locations as designated by the Salvage Yard Supervisor.

6. PROCEDURE

6.1. Material

6.1.1. All material returned to Chollas Yard is to be identified as salvageable or reusable by the deliverer and the Yard supervisor. Place each material in the correct designated area.

6.1.2. The Yard Supervisor shall direct the inspection, cleaning, and refurbishing all reusable material.

6.1.3. Refurbished and reusable material shall be used whenever possible rather that purchasing new material.

6.1.4. Salvage material shall be sold to the highest bidder as arranged by the Purchasing Department.

6.1.4.1. Cast Iron shall be kept separate from brass and copper.

6.1.4.2. When about ten tons of salvage material are stored, notify the purchasing department to begin their procedure to remove the material from the yard.

6.2. Duties of the Salvage Yard Employees

6.2.1. Keep all areas in neat and orderly condition.

6.2.2. Direct crews who bring in material to deposit material at designated locations.

6.2.3. Keep high line pipe, hose, and fittings in good repair.

6.2.4. Sort barricades into good and damaged and repair those that qualify.

6.2.5. Load and unload material, pipe, and fittings, as required.

6.2.6. Keep a supply of wood blocking and wedges for repair crews.

6.2.7. Perform all related tasks as directed by the supervisor.

Mark Stone, Deputy Director

Date

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	WATER OPERATIONS DIVISION ISO 14001 and/or NON-ISO STANDARD OPERATIONS POLICY AND PROCEDURE	**NUMBER:** **C.09**
		EFFECTIVE: **January 27, 2005**
	SUBJECT: SPOIL WASTE MANAGEMENT	**SUPERSEDES:** **None**

1. PURPOSE

1.1. To establish standards, roles, and responsibilities for managing spoil waste caused by water operations activities.

1.2. To reduce the amount of useable native soils and used construction materials going into the landfill.

1.3. This policy is considered ISO 14001, Environmental Management Program, Level 3 documentation.

2. AUTHORITY

2.1. Deputy Director, Water Operations Division

2.2. Assistant Deputy Director, Water Operations Division

2.3. City of San Diego Design Manual

3. DEFINITION

3.1. Spoil Waste: Used construction material and dirt generated from water operations and construction of projects.

4. POLICY

4.1. Reduce the amount of useable native soils going into the landfill.

4.2. Utilize service contracts with recycling vendors who participate in coordinated and innovative processes.

5. RESPONSIBILITY

5.1. Crew training will periodically occur on spoil separation and identifying useable native soils.

6. PROCEDURE

6.1. In an effort to reduce spoil generation during construction activities, the following guidelines shall be followed.

6.1.1. Reduction of land disturbance

6.1.1.1. Maintain a separation process for recyclable concrete, asphalt, and native soils.

6.1.1.2. Use a bullet to shoot a water line for a new water service installation, when applicable, instead of conventional excavation.

6.1.1.3. Reduce the amount of water main breaks to prevent excessive wet, lost, and unusable soil.

6.2. Crews will return useable spoil to the Chollas Water Operations Yard for storage and reuse.

Mark Stone, Deputy Director

Date

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	WATER OPERATIONS DIVISION **ISO 14001 and/or NON-ISO** **STANDARD OPERATIONS POLICY AND PROCEDURE**	**NUMBER:** **C.11** **EFFECTIVE:** **February 24, 2005**
	SUBJECT: GENERAL HOUSEKEEPING FOR OPERATION YARDS	**SUPERSEDES:**

1. PURPOSE

1.1. To establish standards, roles and responsibilities for general housekeeping by crews at operation yards.

1.2. This policy is considered ISO 14001, Environmental Management Program, Level 3 documentation.

1.3. To establish good order for operation yard crews to work safely and efficiently.

2. AUTHORITY

2.1. Deputy Director, Water Operations Division

2.2. Assistant Deputy Director, Water Operations Division

2.3. Water Systems District Manager

2.4. National Pollutant Discharge Elimination System (NPDES) Storm Water Permit No. CAS0108758; Regional Water Quality Control Board (RWQCB) Order No. 2001-01

2.5. SDMC 43.03, Health and Sanitation, Storm Water Management and Discharge Control

2.6. City of San Diego, Urban Runoff Management Plan, January, 2002

2.7. California Storm Water Quality Association, Storm water Best Management Practice Handbook, January 2003

2.8. SDMC 43.0301, Storm Water Management and Discharge Control

3. DEFINITION

3.1 Best Management Practices (BMP): Schedules of activities, prohibitions of practices, general good housekeeping practices, pollution and educational practices, maintenance procedures, and other management practices to prevent or reduce to the maximum extent practicable the discharge of pollutants directly or indirectly to waters of the United States. Best Management Practices also include treatment requirements, operating procedures, and practices to control plant site runoff, spillage or leaks, sludge or water disposal, and drainage from raw materials storage.

3.2. Urban Runoff Management Plan (URMP): A total account of how the City plans to protect and improve the water quality of rivers, bays and the ocean in the region.

3.3. Storm Water Pollution Prevention Program (SWPPP): Provides technical expertise and guidance to all City departments to ensure implementation and compliance with the Municipal Permit.

3.4. Control, Contain and Capture (3 C's)

Control: Locate the nearest storm drain(s) and take measures to ensure nothing will enter or discharge into them. This may require sweeping-up and placing debris and sediment in the trash can.

Contain: Isolate potential flow or discharge from leaving the area.

Capture: If there is sediment, sweep it up. If there is liquid, absorb it or vacuum it up with a wet-vac.

4. POLICY

4.1. Adhere to and implement BMP's.

4.2. Adhere to the Storm Water Protection rules and regulations (MC43.03, MC142.0201).

4.3. All employees will receive job specific training in BMP's.

5. RESPONSIBILITIES

5.1. All Water Operations Division employees shall practice BMP's.

6. PROCEDURE

6.1. Designated Water Systems Technician IV will perform general housekeeping by conducting a daily inspection of the yard with the inspection form DD-F-036.0 attached.

6.2. Work to be done will be reported to Water Systems Technician Supervisor who will assign work duties to maintain the operation yard in order and to simplify work processes.

6.3. Chollas operation yard housekeeping shall be performed by the back yard crew, or other staff when called upon.

6.4. Shops housekeeping for welding, carpenter, tool room, machine shop and store 66, shall be performed by appropriate personnel assigned to the shops. A bi-weekly inspection of the shops shall be performed by the Construction Program Environmental Coordinator.

6.5. The Water Systems Technician IV shall follow the Storm Water Pollution Prevention Plan and obtain support from the Storm Water Engineer in the Watershed/Storm Water Protection Program of the Water Operations Division. Some current activities are the following:

6.5.1. Location of trash cans and recycle bins will be placed strategically in parking areas and regularly emptied.

6.5.2. Storm drain inlets within the parking lots will be labeled with permanent signs with the following text: "No Dumping – Drains to Ocean (Bay)"

6.5.3. Parking lot maintenance: Water Operations will check parking lot annually to determine parking lot needs; BMP's, remove debris, etc. (see URMP, 2.1.8).

6.5.4. Building maintenance: Conduct and document building inspection on a regular basis to determine potential pollutants that enter Storm Water conveyance system. Control pollution from pesticides, herbicides and fertilizers.

6.5.5. Interior Operations Building Maintenance (see URMP, 2.1.2.2).

6.5.6. Vehicle and yard maintenance and material storage (see URMP, 2.1.3).

6.5.7. BMP's will be done at the Spoil Bins including but not limited to the placement of fiber rolls, gravel bags and plastic sheeting as needed to contain, capture and control Storm Water from rain events.

6.6. Yard will be swept on a bi-weekly basis or as needed to sweep up dirt.

6.7. The Water System Technician Supervisor over yard maintenance will be contacted if there are any problems discovered.

Mark Stone, Deputy Director

Date

Attatched – Chollas Station Daily Security and Housekeeping Check

CHOLLAS STATION
DAILY SECURITY AND HOUSEKEEPING CHECK

DATE & TIME	COMMENTS
MONDAY DATE: START: FINISH:	
TUESDAY DATE: START: FINISH:	
WEDNESDAY DATE: START: FINISH:	
THURSDAY DATE: START: FINISH:	
FRIDAY DATE: START: FINISH:	

SIGNATURE: _____

	WATER OPERATIONS DIVISION **ISO 14001 and/or NON-ISO** **STANDARD OPERATIONS POLICY AND PROCEDURE**	**NUMBER:** **C.12** **EFFECTIVE:** **February 24, 2005**
	SUBJECT: WATER MAIN BREAK STANDARD OPERATING PROCEDURES FOR FIELD CREWS	**SUPERSEDES:**

1. PURPOSE

1.1 To provide Standard Operating Policy and Procedure for field crews within the Water Department. To identify processes and procedures for all aspects pertaining to water main breaks within the City of San Diego's water infrastructure.

2. AUTHORITY

2.1 Deputy Director, Water Operations Division

2.2 Assistant Deputy Director, Water Operations Division

2.3 Department Instruction 30.07

3. DEFINITION

None.

4. POLICY

4.1 The following procedures will be followed by all field operations crews and Emergency Services employees while responding to water main breaks within the City of San Diego's water infrastructure.

5. PROCEDURE

5.1 All Water Operations field crews, Equipment Operators, and Emergency Service crews will be responsible for responding to water main breaks in a timely manner.

A. Emergency Phones generates a service request and assigns it to Station 38

B. Station 38 notifies the area Emergency Services crew to investigate.

C. The Emergency Services crew acknowledges the page.

D. The Emergency Service crew confirms the water main break and requests their Water System Technician Supervisor or the standby Water System Technician Supervisor to be notified, and proceeds with the shutdown.

E. The Emergency Services crew determines if additional assistance will be necessary and requests via Station 38. The Emergency Services crew may also request a large valve crew and/or a Hydraulic Crew via Station 38 and their Water System Technician Supervisor if needed.

F. Upon completion of the shutdown, the Emergency Services crew, or the crew making the final shutdown will advise Station 38 to enter the time of the shutdown, location of the valves closed, location of fire hydrants, address of fire services that will be out of service, and the number of consumers who will be affected by the shutdown into SWIM.

G. The Emergency Service crew will notify SCADA, via Station 38, on a 16" or larger main break. SCADA will be notified when multiple main breaks occur within the same communities.

H. The Emergency Services crew, or the crew responsible for the shutdown, will complete the shutdown report.

I. The Emergency Services crew or the crew responsible for the shutdown determines if water wagons are necessary. The Emergency Services crew will deliver water wagons and advise Station 38 of their locations.

J. Crews are required to respond immediately. During standbys, the crew leaders are responsible for contacting their staff, or if they are unable to do so, request Station 38 to contact them. Employees are required to respond within 30 minutes to their designated workstation. The crew leader will ensure that his/her crew members have been contacted. If contacted by Station 38, crew members are required to confirm their page to Station 38 within 10 minutes. The crew leader will give instructions to the crew members when they are contacted and/or at the yard.

K. Upon the crew's arrival to the workstation, the employees (under the direction of their supervisor) will obtain all necessary parts, materials, safety supplies, storm water protection and traffic control devices for the repairs.

L. When the crew arrives at the job site, they will secure the area with traffic control devices, following all traffic control policies. If necessary road and/or bus stop closures are to occur, the supervisor will notify Station 38 of the duration and they will contact the appropriate agencies.

M. Prior to dewatering the trench, crews are to deploy all required Storm Water Pollution Protection Devices such as: de-chlorinator, gravel bags, slope guards, fiber rolls, and silt cloths.

N. All water main repairs will be in accordance with SOPP C.04 Water Main Repairs – Water Main Connection with High Lining Pipelines.

O. Asbestos Cement pipe shall be rolled and wrapped with six mils plastic prior to transporting to the designated roll–off dumpsters at Chollas.

P. Procedures for compaction will be followed as stated in SOPP C.05 Backfill, Compaction and Paving.

Q. Water restoration after main breaks will be followed in accordance with SOP C.04 Water Main Repairs - Water Main Connection with High Lining Pipelines.

R. The on-site crew leader will request via Station 38 for a bacteriological test to be taken at a given location. The crew leader will ask Station 38 to enter into SWIM the size and type of pipe and what repairs were performed.

S. The on-site crew leader will request for all water wagons to be picked up (when appropriate).

T. All water wagons will be picked up by the Emergency Services crew within 24 hours of notification.

U. The on-site crew leader will advise Station 38 of the location of all hydrants and address of fire services being put back into service, all road openings, and request the time to be noted into SWIM.

V. All main break sites are to be cleaned up with shovels and brooms. A street sweeper may be requested at the supervisor's discretion. All Storm Water Pollution Protection Devices are to be removed (when appropriate).

W. The on-site crew leader will be required to submit all paperwork and ensures data entry accuracy at the beginning of the next day working.

Mark Stone, Deputy Director

Date

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	WATER OPERATIONS DIVISION **ISO 14001 and/or NON-ISO** **STANDARD OPERATIONS POLICY AND PROCEDURE**	**NUMBER:** **C.13** **EFFECTIVE:** **December 22, 2006**
	SUBJECT: WATER MAIN BREAK AND SIGNIFICANT ISSUES PROCEDURE FOR WATER SYSTEMS DISTRICT MANAGERS (DM) AND WATER SYSTEMS TECHNICIAN SUPERVISOR (WSTS)	**SUPERSEDES:** **September 19, 2005**

1. PURPOSE

1.1 To provide Standard Operating Policy and Procedure for Water System Technician Supervisors (WSTS) and Water Systems District Managers within the Water Department. To identify processes and procedures for all aspects pertaining to water main breaks within the City of San Diego's water infrastructure.

1.2 This policy is considered ISO 14001, Environmental Management System, Level 3 documentation.

2. AUTHORITY

2.1 Deputy Director, Water Operations Division

2.2 Department Instruction 30.07

3. DEFINITION

3.1 Main Break: Physical failure of a pipe, valve, hydrant or other appurtenance which results in an abrupt loss of water.

3.2 Environmentally Sensitive Lands (ESL): Canyons, rivers, streams, lagoons, and open space.

3.3 Cultural Resources: Structures, buildings, and deposits over 50 years old.

4. POLICY

4.1 All water main breaks will be categorized as either Level 1, Level 2 or Level 3. They are to be determined by the area or standby Water Systems Technician Supervisor. For the most severe incidents the Water Department Emergency Operation Center would become activated, per the direction of the Deputy Director. Examples of Level 1,2 & 3 category main breaks are as follows:

A. Level 1

Large water main break (16” or greater).
Hospital out of water.
A treatment plant going out of service for a significant duration.
Environmentally sensitive lands or cultural resources are disturbed on site or off site.
A significant fire with high water demands.
Call out the Water Systems District Manager.

B. Level 2

Possible call out of the Water Systems District Manager (WSDM), by the area or standby Water Systems Technician Supervisor (WSTS).
Large water outage including: major hotel, restaurant, schools, public building and tourist facility.
Environmentally sensitive lands or cultural resources are disturbed on site or off site.

C. Level 3

Routine water main breaks with minimal impacts (2” – 12”).
Typically to Residential communities.
No impact to sensitive habitat or cultural resources.
The Water System Technician Supervisor would handle all contacts for routine water main breaks and occurrences during standbys.

5. PROCEDURE

5.1 The following procedures will be followed in the event of a Level 1 or Level 2 water main break.

A. Station 38 contacts the area or standby Water Systems Technician Supervisor.

B. The area or standby Water Systems Technician Supervisor dispatches a crew, Equipment Operator II and requests underground location.

C. The area or standby Water Systems Technician Supervisor investigates the call and notifies the area Water Systems District Manager.

D. The Water Systems District Manager responds to the call and notifies the Construction Program Manager.

E. Upon assessing the site, the area or standby Water Systems Technician and Water Systems District Manager will determine who will need to be contacted via the water distribution event notification list in section 5.1.R. The area Water Systems District Manager shall also be contacted.

F. For environmental impacts the on call Water Department Environmental Planner will be contacted by either the WSTS or WSDM and directed to contact agencies such as Cal Fish and Game, U.S. fish and Wildlife, Army Corps of Engineers and the Coastal Commission, via the Water Systems District Manager.

G. The WSTS or WSDM will contact the Water Department Safety Program who will then contact County Health with regards to hazardous materials related issues.

H. The Water Systems District Manager will be responsible to ensure that all contacts are made.

I. The Water Systems District Manager will prepare a Water Department Significant Issue Report. The report will be forwarded to the Public Information Officer within 24 hours.

J. The Water Systems District Manager will be the direct contact for upper management and provide updates when called upon. (Examples of updates include: when water is restored, streets opened, etc.)

K. The area Water Systems Technician Supervisor (WSTS) or standby Water Systems Technician Supervisor will oversee all operational repairs conducted by Water Operation crews and order additional equipment as needed.

L. Relief crews and operators are scheduled by the Water Systems Technician Supervisor.

M. Within 24 hours of repairs the area or standby Water Systems Technician Supervisor will ensure all rented equipment has been returned.

N. The area Water Systems Technician Supervisor (WSTS) or standby WSTS will submit all paperwork to refer permanent street repairs, to the Construction Planner/Scheduler within 24 hours.

O. The area Water Systems Technician Supervisor (WSTS) or standby WSTS will review all submitted paperwork, make copies and forward to data entry and Maps & Records within 24 hours.

P. The Water Systems District Manager will schedule an overview meeting to review all aspects of the water main break.

Q. UPGRADING LEVELS - The following are identified as factors that could upgrade the severity of a level. This will be determined by the area Water Systems Technician Supervisor or Water Systems District Manager.

1. An injury or fatality
2. Duration of water outages
3. An increase of water damage
4. Health related issues
5. Traffic related issues
6. An increase of an area for water outages
7. Environmental impacts
8. Media on site
9. Negative exposure
10. Fires, earthquakes or any other natural disaster

R. It is the responsibility of the Water Systems District Manager to contact the following personnel.

Notify one of the following in this order:

1. Construction Program Manager
   (O) 619-527-7434
   (C) 619-279-9299

2. Operation and Engineering Program Manager
   (O) 619-527-3156
   (C) 619-571-3497

3. Assistant Deputy Director
   (O) 619-527-7460
   (C) 619-279-9298

4. Deputy Director
   (O) 619-527-7431
   (C) 619-823-9799

5. Supv. Public Information Officer
   (O) 619-527-3121
   (C) 619-279-9304

6. Safety Manager
   (O) 619-527-7494
   (C) 619-279-9300

7. Emergency Management Coordinator
   (O) 619-527-7634
   (C) 619-778-8954

Alex Ruiz, Deputy Director

Date

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	WATER OPERATIONS DIVISION ISO 14001 and/or NON-ISO STANDARD OPERATIONS POLICY AND PROCEDURE	**NUMBER:** **C.14**
		EFFECTIVE: **January 27, 2005**
	SUBJECT: STORAGE AND DISPOSAL OF NON-HAZARDOUS WASTE AT CHOLLAS WATER OPERATIONS YARD	**SUPERSEDES:** **None**

1. PURPOSE

1.1. To establish a Standard Operating Procedure for the storage and disposal of unique non-hazardous material at the Chollas Water Operations Yard.

1.2. To establish Standard Operating Procedures for material other than those specifically addressed in other Standard Operating Procedures. Scrap metal, spoil waste, general housekeeping, salvage yard operations are in other Standard Operating Procedures.

1.3. This policy is considered ISO 14001, Environmental Management Program, Level 3 documentation.

2. AUTHORITY

2.1. Deputy Director, Water Operations Division

2.2. Assistant Deputy Director, Water Operations Division

3. DEFINITION

None

4. POLICY

4.1. Material not standardized in the written procedures shall not be delivered to the Chollas Water Operations Yard without the permission of the Yard Supervisor.

5. RESPONSIBILITY

5.1. The delivery person shall right away inform and notify the Yard Supervisor about the special material delivered.

5.2. The Yard Supervisor has the discretion to deny or accept the special material.

5.3. The Yard Supervisor shall direct the storage and disposal of the special material in accordance with the Water Operations Division Environmental Policy.

6. PROCEDURE

6.1. The Yard Supervisor shall keep an inventory of special material accepted by recording the information and forwarding the information to the District Manager.

Mark Stone, Deputy Director

Date

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	WATER OPERATIONS DIVISION **ISO 14001 and/or NON-ISO** **STANDARD OPERATIONS POLICY AND PROCEDURE**	**NUMBER:** **C.15** **EFFECTIVE:** **November 21, 2005**
	SUBJECT: HANDLING OF HAZARDOUS MATERIALS AT CHOLLAS OPERATIONS YARD	**SUPERSEDES:** **November 15, 2005**

1. PURPOSE

1.1 To establish a standard operating procedure for the handling of hazardous materials at the Chollas Operations Yard.

1.2 This policy is considered ISO 14001, Environmental Management System, Level 3 documentation.

2. AUTHORITY

2.1 Deputy Director, Water Operations Division

2.2 Assistant Deputy Director, Water Operations Division

3. DEFINITION

3.1 Hazardous Material: Any substance or combination of substances which, because of its characteristics, can cause harm to humans, animals and/or the environment.

3.2 New Hazardous Material: A hazardous material not previously purchased or currently used.

4. POLICY

4.1 All hazardous materials purchased must have a Material Safety Data Sheet (MSDS) supplied by a vendor before delivery can be received.

4.2 When a new hazardous material is purchased it shall be approved by the Environmental Programs Division of the City's Environmental Services Department.

4.3 Storage of hazardous material shall be in compliance with all laws, rules, and regulations mandated by government agencies and the Department's Environmental Management System (EMS).

4.4 A proper placard must be displayed on all facilities housing hazardous material and the placard will display the correct rating under the Hazardous Materials Identification System (HMIS) rating system.

4.5 The Hazardous Waste Management Guide (Chapter 4) shall be used to determine proper storage of Hazardous Waste Material.

4.5.1. An example of correct hazardous waste storage is the labeling of all containers which contain hazardous waste.

4.6 Water System Technician series employees of the Water Department Operations Division shall be required to take a Hazardous Material/Waste class each year.

4.7 The WST Supervisor responsible for the Chollas Yard and his/her assigned WST IV along with an Environmental Coordinator from the Construction Section shall perform a weekly inspection of hazardous material and waste and report the findings on a City of San Diego Water Department Hazardous Materials/Wastes Weekly Inspection Checklist (A copy of this form is attached to this document).

5. PROCEDURE

5.1 Separate liquids from solids for proper storage. Do not contaminate liquids by mixing with solids.

6. REFERENCE

6.1 Hazardous Waste Management Guide (Chapter 4)

_____ _____

Mark Stone, Deputy Director Date

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	WATER OPERATIONS DIVISION ISO 14001 and/or NON-ISO STANDARD OPERATIONS POLICY AND PROCEDURE	**NUMBER:** **C.16**
	SUBJECT: CHOLLAS SHOPS OPERATIONS AND MAINTENANCE INVOLVING HAZARDOUS LIQUIDS, GASES AND SOLIDS	**EFFECTIVE:** **February 24, 2005**
		SUPERSEDES:

1. PURPOSE

1.1 To establish a standard operating procedure for the handling of hazardous materials at the Chollas Yard.

1.2 This policy is considered ISO 14001, Environmental Management Program, Level 3 documentation.

2. AUTHORITY

2.1 Deputy Director, Water Operations Division

2.2 Assistant Deputy Director, Water Operations Division

2.3 Water Service Technical (WST) Supervisor

2.4 Construction Program Manager

2.5 District Managers

2.6 Environmental Coordinator

3. DEFINITION

3.1 Hazardous material: Any substance or combination of substances which, because of its characteristics, can cause harm to humans, animals and/or the environment.

3.2 New hazardous material: A hazardous material not previously purchased or currently used.

3.3 Material Safety Data Sheet (MSDS): This informational document is designed to provide both workers and emergency personnel with the proper procedures for handling or working with a particular substance. MSDS's include information such as physical data (melting point, boiling point, flash point, etc.), toxicity, health effects, first aid, reactivity, storage, disposal, protective equipment and spill/leak procedures. These are of particular use if a spill or other accident occurs.

4. POLICY

4.1 All hazardous materials purchased must have a MSDS supplied by a vendor at or before delivery can be received.

4.2 When a new hazardous material is purchased it shall be approved by the Environmental Section.

4.3 Storage of hazardous material shall be in compliance with all laws, rules, and regulations mandated by government agencies and ISO 14001.

4.4 A proper placard must be displayed on all facilities housing hazardous material and the placard will display the correct rating under the HMIS rating system. The Hazardous Waste Management Guide (Chapter 4) shall be used to determine proper storage of Hazardous Waste Material. An example of correct hazardous waste storage would be to properly label all containers when store hazardous waste.

4.5 Every employee of the Water Department Operations Division shall be required to take a Hazardous Material/Waste class each year.

4.6 The WST Supervisor, the WST IV and the Environmental Coordinator shall perform a weekly inspection of hazardous material and waste (see attached DD-F-014.0 form).

4.7 Keep MSDS binder; updated can retain obsolete files as long as they are marked as, “Obsolete.”

5. PROCEDURE

5.1 Separate liquids from solids for proper storage. Do not contaminate liquids by mixing with solids.

Mark Stone, Deputy Director

Date

Attatched – Chemical Inventory Form

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	CITY OF SAN DIEGO **WATER DEPARTMENT**	**NUMBER:** **C.17**
	WATER OPERATIONS DIVISION **OPERATIONS AND POLICY MANUAL**	**EFFECTIVE:** **July 18, 2005**
	SUBJECT: WATER WAGON **EMERGENCY DRINKING WATER**	**SUPERSEDES:** **O&P C11 dated 02/04/02**

1. PURPOSE

1.1 To establish a policy for efficient use of the water wagon.

2. AUTHORITY

2.1 Water Director

2.2 Deputy Director, Water Operations Division

3. POLICY

3.1 A sufficient number of water wagons, and the water tanker truck used exclusively for carrying and providing emergency drinking water shall be maintained ready for use.

3.2 The capacity of each water wagon shall be a minimum of 350 gallons.

3.3 The Water Systems Technician Supervisor in charge of Emergency/First Response (Leak) crews shall ensure that each water wagon shall be sanitized and flushed out every two weeks. Use one (1) cup full of household bleach per tank. The mixed solution must set in the tanks a minimum of one hour before flushing. All flushing shall be completed at yard facility wash rack areas. All steps shall be taken to ensure that storm water protection procedures are performed. In addition, every two weeks the spigots, chock block, lights and other accessories are maintained by the Emergency/First Response Section.

3.4 Records stating the dates of the procedures in 3.3 (above) shall be maintained by the Water Systems Technician Supervisor in charge of Emergency/First Response.

3.5 Only vehicles equipped with electric brakes are permitted to tow water wagons.

3.6 Water Wagon Tank will be kept locked at all times.

4. PROCEDURE

4.1 Emergency/First Response personnel shall investigate and decide if and where water wagon is needed unless otherwise directed by a supervisor.

4.2 Pick up water wagon after checking brakes, tires, chain and tow bar.

4.3 Tow water wagon to job site empty and fill at nearest "in-service" fire hydrant.

4.4 Place sand/gravel bags around nearby storm drains.

4.5 Attach dechlorinator to fire hydrant.

4.6 Flush hydrant until water runs clear, test water with chlorine residual test kit.

4.7 Remove the dechlorinator.

4.8 Make sure all valves/spigots are open on wagon, flush water through wagon until clear. Close all valves/spigots and fill wagon.

4.9 Make sure water wagon is placed in an area that is well lit or in the most lighted area where water wagon is needed.

4.10 Notify Station 38 of location of water wagon. Water wagon should not be relocated by repair crews.

4.11 If conditions permit, a spigot may be temporarily installed on an "in-service" fire hydrant in addition to the use of a water wagon.

4.12 After the job has been completed, ensure that the water has been drained by the repair crew. The repair crew leader notifies radio operator to have Emergency/First Response personnel (Leak crew) pick up water wagon and return it to assigned location.

_____ _____

Mark Stone, Deputy Director Date

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	WATER OPERATIONS DIVISION **ISO 14001 and/or NON-ISO** **STANDARD OPERATIONS POLICY AND PROCEDURE**	**NUMBER:** **C.22** **Effective Date:** **April 11, 2007**
	SUBJECT: DUTIES OF ONE-PERSON EMERGENCY CREWS (LEAK TRUCKS)	**SUPERSEDES:** **January 23, 2006**

1. PURPOSE

1.1 To define the duties of one-person emergency crews.

1.2 This policy is considered ISO 14001, Environmental Management Program, Level 3 documentation.

2. AUTHORITY

2.1 Deputy Director, Water Operations Division

3. POLICY

3.1 The primary function of the one-person emergency crews (leak crews) is to provide quick response to water emergencies, to investigate complaints and to attempt to handle difficult customer related problems. When assistance is needed contact the Water Systems Technician Supervisor immediately.

4. RESPONSIBILITY

4.1 It is the responsibility of the Water System District Manager in charge of this activity to see that the policy and duties in this directive are carried out.

5. PROCEDURES

5.1 The following duties are to be handled by the one-person emergency crews:

A. Investigate within (1) one-hour of call out, shutdown water main breaks and Fire Hydrant knock over's and, when needed, deliver a water wagon or place a spigot on a nearby fire hydrant and advise field supervisor of its location.

B. Respond to service leaks, investigate and make proper referral within 2 days.

C. Respond to meter leaks, investigate, and make repair or proper referral within 2 days.

D. Make repairs to all hi-line hoses ¾" – 2".

E. Prepare valve shutdown report and give to repair crew.

F. Upon shutting down Water Main Breaks and Fire Hydrant Knock-Over's: Investigate the flow of the water, which was released, and determine if the water reached or created environmental impacts. Report impacts immediately to the WSTS or Standby WSTS. Implementation of SOPP I.01: Unplanned Water Discharges shall be used in conjunction with this SOPP.

G. Completion of Shutdown Report.

H. Investigate all consumer complaints**

1. House floods – water and/or sewer (If found to be sewer have Station 38 refer to Wastewater Collections Emergency Services).

2. No water.

3. Street leaks.

4. Broken City side shutoff valve (refer to the city side valve repair crew if unable to make 10-8).

5. Property leaks.

6. Meter leaks.

7. Fire hydrant leaks.

8. Investigate dirty water complaint (flush mains).

I. Miscellaneous Functions:

Set or reset barricades and/or other traffic controls in emergency situations.

1. Barricade and/or protect all sidewalk areas where meter boxes and lids are missing.

2. Replace water meter gaskets ¾" – 2".

3. Change all meter 5/8" – 1" or hookup a "stiff", notify meter shop supervisor when changing meters or hooking up "stiffs" to 1½" – 2".

4. Make emergency and non-emergency domestic service restoration or shutdown upon request.

5. All shifts are required to replace meter lids and inserts.

6. Take water samples.

7. Repair or refer unreported leaks. Make sure that all leaks are fully evaluated before referring on to other crews. Meters and meter gaskets are within our scope of responsibility.

8. Pick up all barricades, flashers and delineators that are not in use.

9. When unable to handle any of the above duties alone, ask for assistance from another unit or call the Water Systems Technician Supervisor.

10. Create appropriate service request and submit information to the Water Systems Technician Supervisor any work which is beyond the scope of the leak crew to handle.

11. Flush and disinfect water wagon in accordance with Standard Operations Policy and Procedure #C.11 dated July 18, 2005.

J. City Side Valve Repair/Replacement Crew

1. Repair or replace all City side valves referred within 5 working days.

2. Assist with the meter box replacement program as directed by the Water Systems Technician Supervisor.

3. Assist leak investigation crews with work load as directed by the Water Systems Technician Supervisor.

****Note: Hospital, Schools, Restaurants and Hotels are to be handled with high priority.**

_____ _____

Alex Ruiz, Deputy Director Date

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	WATER OPERATIONS DIVISION **ISO 14001 and/or NON-ISO** **STANDARD OPERATIONS POLICY AND PROCEDURE**	**NUMBER:** **D.01** **EFFECTIVE:** **December 13, 2005**
	SUBJECT: FIRE HYDRANT PREVENTIVE MAINTENANCE	**SUPERSEDES:** **January 21, 2005**

1. PURPOSE

1.1 To establish standards, roles and responsibilities for preventive maintenance of fire hydrants.

1.2 This policy is considered ISO 14001, Environmental Management Program, Level 3 documentation.

2. AUTHORITY

2.1 Deputy Director, Water Operations Division

2.2 Assistant Deputy Director, Water Operations Division

2.3 California Regional Water Quality Control Board

3. DEFINITION

3.1 Not applicable

4. POLICY

4.1 All fire hydrants in the water distribution system shall receive preventive maintenance at regular intervals.

4.2 The maximum interval allowed for maintenance of each fire hydrant in the system shall be five years.

5. RESPONSIBILITIES

5.1 The Deputy Director shall determine the frequency of maintenance based on budgetary and personnel considerations.

6. PROCEDURE

6.1 Water Operations Division's Facility Information Management System (FIMS)

6.1.1 Information regarding additions, deletions and changes to fire hydrants installed in the system is received from the following sources:

6.1.1.1 Field Copies of Plans

6.1.1.2 Operational Checks

6.1.1.3 Service Request/Work Assignment Order (WAO)

6.1.1.4 Individual Sketches

6.1.2. FIMS assign addresses to all new fire hydrants. All changes are entered into the computer on the appropriate SWIM CMMS and GIS SPLASH screens.

6.2 Fire Hydrant Maintenance

6.2.1 The crew receives a computer print-out and a copy of the field book page of the area that work is to be done. Procedures to be used for preventive maintenance on each public hydrant are as follows:

6.2.2 Set up traffic pattern and perform safety measures before beginning work.

6.2.3 Confirm location of hydrant as shown on field book page.

6.2.4 Clean weeds and debris around hydrant; clearance should be a minimum two foot radius around hydrant.

6.2.5 Make a visual inspection of the hydrant; check bolts, caps, chains and replace as needed.

6.2.6 Place sand/gravel bags around nearby storm drains

6.2.7 Attach de-chlorinator to fire hydrant.

6.2.8 Operate gate valve; check for full flow and flush hydrant.

6.2.9 Check ports for leakage and damaged threads; replace as needed

6.2.10 Check ports, seats, blata valves and replace as needed.

6.2.11 Lubricate and operate stems; re-pack stems if needed.

6.2.12 Measure PSI; check size, make, style and port codes; record these along with the day, month, year and time of servicing on the print-out. (See Water Work Order, "Attachment A, Side 1" and Facility Information Sheet, "Attachment A, Side 2").

6.2.13 Detach the de-chlorinator and remove sand bags from around the storm drains.

6.2.14 Sweep up and remove debris from site.

6.2.15 Prepare service request order for any necessary work beyond the scope of normal maintenance such as: broken gate valve, sunken trench, etc.

6.2.16 Using the field book page as a reference, add all new hydrants not listed on the PM print-outs by filling in a blank form.

6.2.17 Paint hydrant as needed.

Mark Stone, Deputy Director

Date

	WATER OPERATIONS DIVISION ISO 14001 and/or NON-ISO STANDARD OPERATIONS POLICY AND PROCEDURE	NUMBER: D.02
		EFFECTIVE: February 13, 2006
	SUBJECT: FIRE HYDRANTS IN AND OUT OF SERVICE	SUPERSEDES: January 21, 2005

1. PURPOSE

1.1. To establish standards, roles and responsibilities for reporting fire hydrants in and out of service

1.2. This policy is considered ISO 14001, Environmental Management Program, Level 3 documentation

2. AUTHORITY

2.1. Deputy Director, Water Operations Division

2.2. Assistant Deputy Director, Water Operations Division

3. DEFINITION

3.1. LPD de-chlorinator: Mechanical device utilized to diffuse and de-chlorinate flow of water from fire hydrant.

3.2. Station 38: 24 hour Dispatch Center

3.3. 10-7: Station 38 radio code: Out of Service

3.4. 10-8: Station 38 radio code: In Service

4. POLICY

The following conditions will relate to fire hydrant operation reporting procedures:

4.1. Fire hydrant out-of-service (10-7) is one to which the water has been shutoff for any reason.

4.2. Fire hydrant in-service (10-8) is one to which normal pressure has been restored.

4.3. Fire hydrants with reduced pressure are those, which are temporarily being supplied from a 3” or less high lining pipe, or from existing mains or other sources, which have reduced or restricted flow.

4.4. It is imperative that the Fire Department knows the status of all fire hydrants at all times.

5. RESPONSIBILITIES

5.1. See procedure below

6. PROCEDURE

6.1. Reporting Fire Hydrants (10-7) Out-Of-Service

6.1.1. Field Procedure

6.1.1.1. All fire hydrants placed out-of-service shall be red tagged with a fluorescent red or orange disc.

6.1.1.2. All fire hydrants to be out-of-service on a planned shutdown shall be reported to Station 38 before the shutdown. The report must state the location of all hydrants and the time the shutdown begins.

6.1.1.3. All fire hydrants to be placed on reduced pressure on a planned shutdown shall be reported to Station 38 before the change is made.

6.1.1.4. Fire hydrants placed out-of-service because of an emergency shutdown shall be reported to Station 38 and referred to Unit 1911.

6.1.1.5. On the next working day, the Emergency Services Crew making the shutdown must make a referral to the assigned area for repair through the Service Request process. No red tag will be needed unless the fire hydrant is still standing.

6.1.2. Office Procedure

6.1.2.1. Station 38 shall fill out Form GS-211 for each fire hydrant placed out-of-service, or on reduced flow, and notify the Fire Department.

6.1.2.2. Each Thursday morning, a clerk from Water Operations Division will pick up copies of form GS-211, and compile and update list.

6.1.2.3. The Water Operations Division clerk handling this activity will give copies of updated fire hydrant lists to Station 38 and to the appropriate supervisor and management staff. The updated list will be forwarded to the Fire Department.

6.2. Reporting Fire Hydrants Back-In-Service (10-8)

6.2.1. Field Procedure

6.2.1.1. Fire hydrants placed back in service shall be reported to Station 38 who at that time will fill out Form GS-211.

6.2.1.2. Red or orange discs shall be removed from fire hydrants placed back in service.

6.2.2. Office Procedure

6.2.2.1. Station 38 will advise the Fire Department of all fire hydrants placed in-service (10-8).

6.2.2.2. The Water Operations Division clerk will pick up GS Forms each Thursday morning and remove all fire hydrants reported 10-8 from the list.

6.3. Checking Fire Hydrants Out-Of-Service (10-7)

6.3.1. The supervisor in charge of Fire Hydrant maintenance shall perform a monthly check of all fire hydrants listed as out-of-service (10-7). Exception: Fire hydrants out-of-service (10-7) because of group jobs or reduced pressure due to cut and plug work.

6.4. Handling of Discs

6.4.1. The Construction Yard Crew WST IV will maintain a revolving stock of fluorescent discs for issue to field crews.

6.5 Installation of all new or replacement of existing hydrants shall have breakaway flange and bolts.

6.6. Storm Water Compliance Measures

6.6.1 In the event of a discharge the following procedures must be implemented.

6.6.1. Place gravel bags around the storm drain inlet(s) or filter cloth over the inlet held down by sand bags downstream of the work area in order to keep sediment from entering the storm drain.

6.6.2. Attach de-chlorinator to fire hydrant. Ensure the LPD de-chlorination tablets are in the de-chlorinator.

6.6.3 Monitor storm drain inlets to ensure that sediment is not entering storm drain inlets.

6.6.4 Upon completion of work, detach the de-chlorinator and remove sand/gravel bags from around storm drains.

6.6.5 Sweep up and remove debris from site.

Mark Stone, Deputy Director

Date

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	WATER OPERATIONS DIVISION **ISO 14001 and/or NON-ISO** **STANDARD OPERATIONS POLICY AND PROCEDURE**	**NUMBER:** **D.03**
	WATER OPERATIONS DIVISION **OPERATIONS AND POLICY MANUAL**	**EFFECTIVE:** **February 24, 2005**
	SUBJECT: DISPOSAL OF WASTE FROM THE WEDA CLEANING SYSTEM	**SUPERSEDES:**

1. PURPOSE

1.1 To ensure the sediment, debris, and other waste discharged from the WEDA cleaning apparatus is disposed of properly by incorporating water quality protection practices that comply with NPDES Permit requirements.

1.2 This policy is considered ISO 14001, Environmental Management Program, Level 3 documentation.

2. AUTHORITY

2.1 Deputy Director, Water Operations Division

2.2 Assistant Deputy Director, Water Operations Division

2.3 NPDES Permit CAS0108758 (RWQCB Order No. 2001-01)

2.4 City of San Diego Municipal Code §43.03

3. DEFINITION

3.1 NPDES: *National Pollutant Discharge System*, the 1972 Clean Water Act established the NPDES Program to regulate the discharge of pollutants to the waters of the United States.

3.2 BMPs: *Best Management Practices*, A technique, measure, or structural control used to prevent, manage and/or improve the quality of storm water runoff that flows into the stormwater conveyance systems (storm drain), drainage basins, or receiving waters.

3.3 WEDA cleaning system: a mechanical system that allows the cleaning of a distribution reservoir while it is in service. Use of this system eliminates the need to isolate and dewater the reservoir.

4. POLICY

4.1 Allowing waste discharge from the WEDA system to flow directly into a sensitive environment (natural canyon, receiving water, protected habitat, etc.) is strictly prohibited.

5. PROCEDURE

5.1 After completing the initial setup of the WEDA cleaning system, waste discharge efforts should be carefully planned. Release the discharge in a manner that appropriately protects the local environment while considering the following options:

5.1.1 Direct the discharge hose to a grassy or landscaped area that is not considered a sensitive environment. Attach the defuser/dechlorinator and insert dechlorinating tablets. Construct a discharge containment structure using gravel bags and other BMPs. Place the hose inside it, this will allow the sediment and debris to settle out as the water is discharged.

5.1.2 Use a de-watering bag (White Cap product # 262-SCDW1010 or similar) to collect sediment and debris whenever a release to the surroundings could cause an impact to the environment.

5.1.3 When in doubt, call the Watershed/Storm Water Section at 619-527-7405 or 619-527-3185 for assistance.

5.2 After reservoir cleaning is completed, remove containment structure and all BMPs. Store reusable materials properly, dispose of waste, debris, and used BMPs properly. Waste and debris can be dumped at Chollas spoil bin or at a landfill.

Name Title	Date

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	WATER OPERATIONS DIVISION **ISO 14001 and/or NON-ISO** **STANDARD OPERATIONS POLICY AND PROCEDURE**	**NUMBER:** **D.08** **EFFECTIVE:** **December 13, 2005**
	SUBJECT: WATER MAIN SHUTDOWN	**SUPERSEDES:** **January 21, 2005**

1. PURPOSE

1.1. To establish standards, roles and responsibilities for shutting down water mains.

1.2. This policy is considered ISO 14001, Environmental Management Program, Level 3 documentation

2. AUTHORITY

2.1. Deputy Director, Water Operations Division

2.2. Assistant Deputy Director, Water Operations Division

3. DEFINITION

3.1. Non-emergency shutdown: The need to shutdown a water main or appurtenance for routine maintenance or because of an apparent failure, but there is not immediate danger to public or private property.

3.2. Emergency shutdown: The need to shutdown a water main or appurtenance because of a failure where there is an immediate danger to public or private property.

3.3. LPD Chlor Tablets: Line Purge Dechlorinator which is used for line flushing dechlorination.

4. POLICY

4.1. Water main shutdowns will be coordinated for scheduled, emergency and non-emergency conditions.

5. RESPONSIBILITIES

5.1. Planning for a scheduled shutdown must be done by the Water Systems Technician Supervisor and subordinates far enough in advance to allow sufficient attention to detail.

5.2. The Water Systems Technician Supervisor, whose crew is doing the work, is responsible for coordinating all phases of the work such as initiating the planning, valve closing and openings, coordinating with Hydraulic Control regarding pressure zones, notifying Fire Department of all fire hydrants out of service and other related items necessary to rapid conclusion of the project.

6. PROCEDURE

6.1. Planning procedures

6.1.1. The resources of the Maps and Records Section, such as the 400 scale book, pertinent plans and drawings are to be used to define the area to be isolated, taking into account adjacent areas that may be affected.

6.1.2. A part of the planning process shall be a visual on-site field investigation of the shutdown area. At that time, the types of buildings, structures and establishments will be noted. The adjacent area will be checked for water outage. The planning package shall consist of: 1) "notification of planned water shutdown" (sent by clerical to all needed parties, by way of an established distribution list); 2) A "shutdown and overtime assignment" form; and; 3) a copy of the water book page (or computer drawing following conversion of gatebook to computer) with highlighting of the area of the shutdown. The request for an "equipment clearance" may be needed if it meets the criteria under SOPP D.06

6.1.3. When the planning package is complete it must be submitted at least seven days in advance to the District Manager and the Program Manager for approval Sufficient time shall be allowed to give consumers approximately 72 hours notice.

6.1.4. Where practical, public buildings, hospitals and establishments that have a critical need for water must be high lined. If high lining is not practical, the shutdown and the work must be accomplished within a timeframe favorable to most parties.

6.1.5. During notification of consumers, responsible people in each building, i.e. management of large complexes or residences are to be contacted and advised of the planned shutdown. If no one can be contacted, a printed notice of "Water Interruption" showing date and time of shutdown (form UW 1020) will be left on the doorknob or where it will be easily seen.

6.2. Scheduled Shutdown

6.2.1. During regular work hours Station 38/SCADA will be notified when actual shutdown takes place either by radio or by phone. If a scheduled shutdown is canceled, the Chollas office must be notified immediately. After work hours Station 38/SCADA must still be notified immediately.

6.2.2. Under normal conditions a test or trial shutdown should be made. This will determine if the valves are operating and if not, how far back City crews will have to go to effect a good shutdown.

6.2.3. Test or trial shutdowns should not be made without prior notification to consumers.

6.2.4. Other personnel making a shutdown should notify the appropriate construction supervisor of the area.

6.2.5. Ensure that storm water protection procedures (BMP's) are performed.

6.3. Emergency Shutdowns

6.3.1. When apparent rupture of a water main is reported, the Emergency Crew making the initial investigation shall determine if an immediate shutdown is needed. This need will be evident if private property is being damaged or if there is an imminent potential for such damage; or if the public right-of-way is becoming dangerous to vehicular or pedestrian traffic.

6.3.2. If 6.3.1 above applies, the Emergency Crew, after notifying Station 38, must begin an immediate shutdown, asking the radio operator for assistance if necessary and following proper procedure for hydrant notification according to SOPP D.02 for fire hydrants in and out of service.

6.3.3. The crew that closes the valve will fill out a Water Shutdown Report (UW-15523), attached, showing the location of all valves used to isolate the break. This Emergency Shutdown Report will be turned over to the on-site supervisor by the crew at the conclusion of the shutdown. At the end of a shift, it is the responsibility of the person making the shutdown to arrange for delivery of the Emergency Shutdown Report to the on-site supervisor.

6.3.4. Repair crews will open <u>all</u> valves used to isolate the main break at the conclusion of the repair unless they are 16" or larger or the shutdown had a regulator within it. If the valves are 16" or larger, a Large Valve Crew will be called to charge and open the valves. If a regulator is involved, a hydraulics crew will assist the emergency crew to charge the main. The Emergency Shutdown Report received from the emergency crews shall be used by the on-site supervisor to verify that all closed valves are opened and will initial the Emergency Shutdown Report. The Water Systems Technician Supervisor in charge of repair crews will review the Emergency Shutdown Report for possible valves not opened and take action as necessary to correct.

6.4. Non-Emergency Shutdowns

6.4.1. Under conditions defined in 3.1 above, the crew making the repair shuts down the water main. Therefore, time should be taken to notify consumers.

6.4.2. When the approximate location of the break has been determined, consumers are to be notified of the approximate duration of the shutdown.

6.5. Storm Water Compliance Measures:

In the event of a discharge please follow the listed procedures.

6.5.1. Place gravel bags around the storm drain inlet(s) or filter cloth over the inlet held down by sand bags downstream of the work

6.5.2. Clean up or make sure the path is clear of debris from the job site to the storm drain.

6.5.3. Set out extra filter protection close to the job site.

6.5.4. Attach dechlorinator to the fire hydrant and any pumps used. Ensure the LPD chlor tablets are in the dechlorinator.

6.5.5. Monitor storm drain inlets to ensure that sediment is not entering storm drain inlets.

6.5.6. Upon completion of work, detach the dechlorinator and remove sand/gravel bags from around storm drains.

6.5.7. Sweep up and remove debris from site.

6.5.8. Keep area in order to keep sediment from entering the storm drain.

Mark Stone, Deputy Director

Date

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	WATER OPERATIONS DIVISION **ISO 14001 and/or NON-ISO** **STANDARD OPERATIONS POLICY AND PROCEDURE**	**NUMBER:** **E.01** **EFFECTIVE:** **November 16, 2005**
	SUBJECT: MAJOR PIPELINE MAINTENANCE AND INSPECTION	**SUPERSEDES:** **June 1, 1995**

1. PURPOSE

1.1 To establish a standard procedure for routine maintenance and inspection of all major pipelines and appurtenances.

1.2 To prevent the need for major repairs by prompt handling of minor problems as they occur.

1.3 This policy is considered ISO 14001, Environmental Management Program, Level 3 documentation.

2. AUTHORITY

2.1 Deputy Director, Water Operations Division

2.2 Assistant Deputy Director, Water Operations Division

3. DEFINITION

N/A

4. POLICY

4.1 Each crew will be issued a work order covering the appropriate facilities within a field book page and grid with a copy of the field gate book page to be maintained. Each Facility will be issued a single work order. Crews will maintain all facilities in sequential order within the field book page and grid to minimize travel time. Each appurtenance maintained and found to be in good condition will be indicated on the completed work order form.

4.2 Any appurtenance found to be in need of repair will be repaired immediately if possible. The work order form will be completed explaining what was done and what material was used.

4.3 If repair work cannot be done immediately, because a shutdown of the pipeline is required, the work order will be completed referring the repairs to the Water Systems Technician Supervisor and inspection within the field book page continued. This will enable all needed repairs within the shutdown area to be done at the same time. As with any shutdown, it must be done in accordance with departmental procedures.

4.4 All shutdowns require notification to the Optimization Program prior to the shutdown being initiated.

4.5 All inspections to be performed on pipelines and public right of ways must be completed in accordance with all traffic control and confined space entry regulations.

5. PROCEDURE

5.1 Gate Valves

A. Locate, inspect, and raise all valve casings a minimum of four inches above the ground surface in unpaved areas. Vandal proof and paint the exposed casing and cap.

B. Locate and inspect all valve casings in paved areas. Valves caps shall be exposed and level with street surfaces.

C. Where practical, side outlet valves 12” and smaller will be operated to 25% of closed position. In Line Valves 16” and larger will not be operated to the closed position at all from May through November. (This is because of heavy demand made on the system.) In-Line valves will only be turned routinely 15 turns to check that they are operational and to check for open or closed positioning. Note: Some valves may operate to the left for fully closed position. Refer to field book and work order for valve position direction. Check indicator arrows on valves if available.

D. All valve extensions must be kept in good condition and sitting firmly on the operating nut. Refer work order to replace worn out or missing extensions.

5.2 Blowoffs

A. All blowoffs will be located and raised at least four inches above ground surface in unpaved areas; exposed portions to be painted.

B. Locate and inspect all blowoff valve casings in paved areas. Valves caps shall be exposed and level with street surfaces.

C. If major pipeline is in an urban area, place sand/gravel bags around storm drain. Then attach dechlorinator to blowoff valve, (if major pipeline is a potable pipeline) then flush blowoff. If major pipeline is in a rural area, place gravel bags around blowoff valve to capture the discharge in a confined area. (This will reduce or eliminate sediment which could result from discharge.) Then flush blowoff. Monitor discharge to prevent erosion damage.

D. Flush blow-off to check for easy operation.

E. Clean and grease threads on cap and riser.

F. Remove dechlorinator and gravel bags from site.

G. In urban area, sweep up and remove debris from site.

H. In rural area, repair any erosion damage.

5.3 Air Valves

A. Check all air valves and chambers; inspect for corrosion and deterioration on all fittings.

B. Close off and drop all air valves to inspect for proper operation. Replace when needed.

C. Paint all exposed metal on air valves; paint canisters or remove graffiti as needed.

D. Refer on the work order to Water Systems Technician supervisor all air valves that do not meet current specifications. Air valves must be raised above ground to meet Department of Health Services Regulations for cross connection control. See City of San Diego Standard drawing W 14.

5.4 Exposed Areas of Pipeline

A. Check for excessive soil erosion; refer as needed on Work Order.

B. Replace protective coating loss with wax tape or paint with epoxy coating safety blue.

C. Protect site and coordinate repair with Streets Division, Drains Section.

5.5 Encroachments

A. Inspect right of way markings, gates, and access roads. Ensure locks are secured.

B. Check for excessive soil erosion on unpaved roadways referred on work order to Water Systems Technician Supervisor.

C. Refer on work order any unusual activities within pipeline easement to Water Systems Technician Supervisor.

5.6 Vaults/Manholes

A. Check all vaults and manholes to be free of debris and standing water.

B. Check vault and manhole covers to be in place in good operational condition.

C. Paint all access vaults and manhole covers.

D. Inspect vaults and manholes for deteriorating or spalling concrete. Make repairs immediately if possible or refer on work order to Water Systems Technician Supervisor.

E. Manhole covers should be exposed and level with the street surface.

_____ _____

Mark Stone, Deputy Director Date

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	WATER OPERATIONS DIVISION **ISO 14001 and/or NON-ISO** **STANDARD OPERATIONS POLICY AND PROCEDURE**	**NUMBER:** **E.02** **EFFECTIVE:** **March 11, 2005**
	SUBJECT: PLUG VALVE MAINTANANCE	**SUPERSEDES:**

1. PURPOSE

1.1 To establish standards, roles and responsibilities for maintenance of plug valves ten inches and larger in diameter.

1.2 This policy is considered ISO 14001, Environmental Management Program, Level 3 documentation.

2. AUTHORITY

2.1 Deputy Director, Water Operations Division

2.2 Assistant Deputy Director, Water Operations Division

3. DEFINITION

None

4. POLICY

4.1 To ensure coordination of periodic planning and maintenance of large raw water pipeline plug valves.

5. RESPONSIBILITIES

5.1 The Water Systems Technician Supervisor is responsible for ensuring their valve crews complete the procedures below.

6. PROCEDURE

6.1 An inventory of the total number of all plug valves will be maintained and kept current on the Service Request System.

6.2 The manufacturer's manuals for all makes of plug valves will be kept available for reference in the Central Maintenance Section of Systems Operations and eventually made available electronically online.

6.3 Plug valves are to be greased, lifted and operated twice per year. These are to be greased <u>only</u> with a high pressure grease gun designed for plug valve maintenance.

6.4 To conserve time and energy during annual maintenance, the valve location will be listed on the PM program in SWIM.

6.5 Preventive Maintenance (PM) sheets will be filled out for each separate plug valve and turned into the Data Entry Clerk via the Water Systems Technician Supervisor.

Mark Stone, Deputy Director

Date

	WATER OPERATIONS DIVISION ISO 14001 and/or NON-ISO STANDARD OPERATIONS POLICY AND PROCEDURE	NUMBER: E.08
		EFFECTIVE: January 30, 2006
	SUBJECT: LAND USE PERMITS	SUPERSEDES: N/A

1. PURPOSE

1.1 To provide guidance for obtaining land use permits from various regulatory agencies for Capital Improvement Projects, routine maintenance projects and emergency repair projects in environmentally-sensitive lands or in cultural resource site.

1.2 This policy is considered ISO 14001, Environmental Management System, Level 3 documentation.

2. AUTHORITY

2.1 Deputy Director, Water Operations Division

2.2 Assistant Deputy Director, Water Operations Division

2.3 Department Instruction 30.07, Water Utilities Department Significant Issues Report (WUDSIR), effective 3/20/90.

2.4 California Public Resource Code, Division 13 (CEQA), Division 20 (CCC)

2.5 California Department of Fish & Game Code, Division 2, Chapter 6

2.6 California Water Code, Division 7, Chapter 4 (SDQCB)

2.7 San Diego Municipal Code, Section 67.01, Environmental Quality Ordinance of the City of San Diego

2.8 San Diego Municipal Code, Section 111.0101 (Chapters 11, 12, 13, & 14)

2.9 San Diego Municipal Code, Section 113.0101, Land Development Procedures, Definitions

2.10 San Diego Municipal Code, Section 128.0101, California Environmental Quality Act Guidelines.

2.11 San Diego Municipal Code, Sections 143.02013, Historic Regulations

2.12 San Diego Municipal Code, Section 143.0101, Environmentally Sensitive Lands Regulations

2.13 San Diego Municipal Code, Chapters 4 & 4: Brush Management Regulations

2.14 California Coastal Commission, ACOE, USF&W and RWQCB Regulations.

3. DEFINITION

3.1 Environmentally-sensitive lands (ESL): Canyons, rivers, streams, lagoons and open space.

3.2 Cultural resources: Structures, buildings, and subsurface deposits over 50 years old.

3.3 Resource agencies: Those agencies that have discretionary permit authority or regulatory authority for projects that impact ESL, listed species, and cultural resources such as the City's Development Services Department, California Coastal Commission, California Department of Fish & Game, California Regional Water Quality Control Board, U.S. Army Corps of Engineers, U.S. Fish & Wildlife Service.

3.4 NEPA: National Environmental Policy Act

3.5 Land Use Permits: Permits from those agencies described in Section 3.3 such as but not limited to a Site Development Permit, Coastal Development Permit (City Development Services Department); Right-of-Entry Permit (City Park & Recreation Department) Coastal Development Permit from the California Coastal Commission; a Streambed Alteration Permit from the California Department of Fish & Game; a 401 Certification from the California Regional Water Quality Control Board; a Section 404 Permit from the U.S. Army Corps of Engineers, or a Biological Opinion from the U.S. Fish & Wildlife Service. If work occurs outside the jurisdiction of the City of San Diego, land use permits from those other agencies may also be needed.

4. POLICY

4.1 All employees working in and adjacent to environmentally-sensitive lands or known cultural resource areas shall obtain permits or other authorizations in advance of work, or in the case of an emergency, after emergency repair work has been completed.

5. RESPONSIBILITIES AND PROCEDURES

The following procedures or protocols will be followed by all Project Managers (PM), District Managers (DM) and their staff.

5.1 All routine maintenance and repair project will be reviewed by the PM and DM or designee to determine if work will occur in an ESL or cultural resource site. This determination will be based on review of SPLASH and consultation with the environmental planner.

5.1.1 If work is not in an ESL or cultural resource site, no land use permits are needed.

5.1.2 If work does occur in an ESL or cultural resource site, a land use permit may be needed depending upon the particular type of work, time of year, access, etc. A complete project description is needed (responsibility of the PM) and coordination with the environmental planner is necessary. Obtaining land use permits can take 3-4 months, or longer depending upon the level of environmental impact and agency permit(s) needed.

5.2 Emergency "after-the-fact" permits: See SOPP's C.13-Water Main Break and Significant Issues Procedure for Water Systems District Managers (DM) and Water Systems Technician Supervisor (WSTS) and E.03-Policy for Resource Protection During Access Activity. If emergency repair occurs in an ESL or cultural resource site, an after-the-fact permit(s) may be required depending upon the extent and location of impact(s). In addition, revegetation of the site may also be required. The emergency repair supervisor will contact the Construction Program Manger and Operation and Engineering Program Manager.

5.3 The PM will be responsible for designing the repair project that avoids or minimizes further environmental impacts.

5.4 Obtaining the after-the-fact permit(s) and revegetation will be a collaborative effort between the PM and environmental planner. To some cases, the environmental planner may work in collaboration with an as-needed consultant to obtain the after-the-fact permits and implementation of any mitigation measures such as revegetation.

6. REFERENCE

6.1 Refer to SOPP E.03 for guidance regarding "Resource Protection During Access Activity" for routine operations maintenance and repair of the water distribution system in environmentally-sensitive lands or in cultural resource sites.

_____ _____

Mark Stone, Deputy Director Date

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1. PURPOSE

1.1. To establish a procedure for Cleaning and Maintaining Diversion Channels that complies with NPDES Permit CAS018758 RWQCB Order No. 2001-01.

1.2. This policy is considered ISO 14001, Environmental Management Program, Level 3 documentation.

1.3. To incorporate water quality protection practices in all operations and maintenance activities while complying with NPDES Permit requirements.

2. AUTHORITY

2.1. Deputy Director, Water Operations Division

2.2. Assistant Deputy Director, Water Operations Division

2.3. NPDES Permit CAS0108758 (RWQCB Order No.l 2001-01)

2.4. City of San Diego Municipal code § 43.03

2.5. City of San Diego, *Urban Runoff Management Plan*, January 2002

2.6. California Storm Water Quality Association, *Storm Water Best Management Practice Handbook*, January 2003

3. DEFINITION

3.1. Diversion Ditch: A channel formed around an impoundment reservoir created to divert low flow run off from entering primary reservoirs. The water is directed by the channel downstream of the reservoir's dam structure. The ditch is designed to allow flow to the impoundment reservoir after a major increase in flow has occurred. This design allows low flows that are contaminated with street oils, herbicides, and pesticides to be diverted from the impoundment reservoir.

3.2. NPDES: *National Pollutant Discharge System*, the 1972 Clean Water Act established the NPDES Program to regulate the discharge of pollutants to the waters of the United States.

3.3. URMP: The *Urban Runoff Management Plan*, produced by the City's Storm Water Pollution Prevention Program, is an account of how the City plans to protect and improve the water quality of rivers, bays, and the ocean in the region. The plan which was adopted by the City Council on January 28, 2002, explains how the City intends to comply with Order No. 2001-01.

3.4. BMP (Best Management Practices): A technique, measure, or structural controls used to prevent, manage, and/or improve the quality of storm water runoff that flows into the water conveyance system (storm drain), drainage basins, or receiving waters….

4. POLICY

4.1. Inspect and maintain diversion channel bi-weekly and after each rain event above 0.5-inch per 24 hours.

4.2. Conduct extensive vegetation removal one time per year, dispose of material properly.

5. PROCEDURE

5.1. Operations construction staff:

A Maintain and repair diversion channel.

B Spray/apply "Rodeo" herbicide per label instructions.

5.2. Lakes Recreation Staff:

A Inspect diversion channel bi-weekly and report any maintenance or repair issues to lakes construction staff.

B Inspect diversion channel daily during rain events.

_____ _____

Mark Stone, Deputy Director Date

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1. PURPOSE

1.1. To establish a procedure for Cleaning of Dam Galleries and Outlet Towers.

1.2. This policy is considered ISO 14001, Environmental Management Program, Level 3 documentation.

1.3. To incorporate water quality protection practices in all operations and maintenance activities while complying with NPDES permit requirements.

2. AUTHORITY

2.1. Deputy Director, Water Operations Division

2.2. Assistant Deputy Director, Water Operations Division

2.3. City of San Diego Municipal Code § 43.03

2.4. City of San Diego, *Urban Runoff Management Plan*, January 2002

2.5. California Storm Water Quality Association, *Storm Water Best Management Practice Handbook*, January 2003

3. DEFINITION

3.1. Dam Galleries: Areas inside the City dams such as walkways and stairs.

3.2. NPDES: *National Pollutant Discharge System*, the 1972 Clean Water Act established the NPDES Program to regulate the discharge of pollutants to the waters of the United States.

3.3. URMP: The *Urban Runoff Management Plan*, produced by the City's Storm Water Pollution Prevention Program, is an account of how the City plans to protect and improve the water quality of rivers, bays, and the ocean in the region, and explains how the City intends to comply with Order No. 2001-01. It was adopted by the City Council on January 28, 2002.

3.4. BMP (Best Management Practices): A technique, measure, or structural controls used to prevent, manage, and/or improve the quality of storm water runoff that flows into the water conveyance system (storm drain), drainage basins, or receiving waters.

4. **POLICY**

4.1. All outlet towers shall receive preventive maintenance annually.

4.2. Inspect outlet facilities weekly.

4.3. Clean galleries every six months.

4.4. Clean outlet tower floor and walls monthly.

4.5. A maximum interval of 12 months shall be allowed for maintenance.

4.6. During maintenance work, contain, gather, and properly dispose of cleaning materials, paints, and grease.

5. PROCEDURE

5.1. Operations construction staff:

a Pressure wash or sweep galleries. Use raw water or remove chlorine from the water if potable water is used. Properly dispose of all materials.

b Provide containment and/or filter media to capture debris from wash water at designated areas.

c Inspect all tower appurtenances and operated winch systems/lights to ensure they are in good working order.

d Dry sweep and/or vacuum tower floors of all debris and animal waste. Properly dispose of all materials.

5.2. Lakes Recreation Staff:

a Dry sweep and/or vacuum tower floors, removing all debris and animal waste. Properly dispose of all materials.

b Use appropriate BMPs during regular maintenance work and repairs to contain potential contaminants.

_____ _____

Mark Stone, Deputy Director Date

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1. PURPOSE

1.1. To establish a procedure for Cleaning and Maintaining City buildings at the City Reservoirs.

1.2. This policy is considered ISO 14001, Environmental Management Program, Level 3 documentation.

1.3. To incorporate water quality protection practices in all operations and maintenance activities while complying with NPDES Permit requirements.

2. AUTHORITY

2.1. Deputy Director, Water Operations Division

2.2. Assistant Deputy Director, Water Operations Division

2.3. NPDES Permit CAS0108758 (RWQCB Order No. 2001-01).

2.4. City of San Diego Municipal Code § 43.03

2.5. City of San Diego, *Urban Runoff Management Plan*, January 2002

2.6. California Storm Water Quality Association, *Storm Water Best Management Practice Handbook*, January 2003

3. DEFINITION

3.1. NPDES: *National Pollutant Discharge System*, the 1972 Clean Water Act established the NPDES Program to regulate the discharge of pollutants to the waters of the United States.

3.2. BMP (Best Management Practices): A technique, measure, or structural controls used to prevent, manage, and/or improve the quality of storm water runoff that flows into the water conveyance system (storm drain), drainage basins, or receiving waters.

3.3. URMP: The *Urban Runoff Management Plan*, produced by the City's Storm Water Pollution Prevention Program, is an account of how the City plans to protect and improve the water quality of rivers, bays, and the ocean in the region, and explains how the City intends to comply with Order No. 2001-01. It was adopted by the City Council on January 28, 2002.

4. **POLICY**

4.1. All buildings with asphalt shingles will be inspected and have the gutters and drains cleaned, repaired, and/or replaced in October of each year and monthly during the rainy season.

4.2. Ensure that all buildings with asphalt shingles have gutters and drains with proper filters to prevent oils and pollutants from leaving the property.

5. PROCEDURE

5.1. Lakes Recreation staff, tenants, and concessionaires:

a Inspect and maintain gutters and drains as scheduled.

b Maintain landscaping as necessary.

c Pick up and dispose of trash daily.

d No dumping of bait tank water into the reservoir unless the water is properly filtered.

e Wash down toilets, urinals, sinks, and floors daily when open to the public (drain to holding tanks or sewer system).

5.2. Operations Construction Staff:

a Install gutters and drains with proper filters on all lakes buildings that have asphalt shingles.

_____ _____

Mark Stone, Deputy Director Date

N:\WaterOperations\Administration\ISO 14001\SOPP\F-Reservoir Mgmt Lake & Recreation Dams\Final ISO SOPPs - Reservoir Mgmt Lake & Recreation Dams\F.03-Lake Buildings Houses Rev1.doc

	WATER OPERATIONS DIVISION ISO 14001 and/or NON-ISO STANDARD OPERATIONS POLICY AND PROCEDURE	**NUMBER: F.04**
		EFFECTIVE: October 29, 2004
	SUBJECT: LANDSCAPE AND VEGETATION CONTROL	**SUPERSEDES:**

1. PURPOSE

1.1. To establish a procedure for Vegetation Control around facilities such as dams, diversion ditches, weather stations, and roads.

1.2. To establish a procedure for landscape maintenance at City Reservoir facilities.

1.3. This policy is considered ISO 14001, Environmental Management Program, Level 3 documentation.

2. AUTHORITY

2.1. Deputy Director, Water Operations Division

2.2. Assistant Deputy Director, Water Operations Division

2.3. City of San Diego Municipal Code § 43.03

2.4. City of San Diego, *Urban Runoff Management Plan*, January 2002

2.5. California Storm Water Quality Association, *Storm Water Best Management Practice Handbook*, January 2003.

3. DEFINITION

3.1. Weather Stations: Each City Reservoir has a fenced, enclosed area with telemetry equipment that constantly monitors real time weather readings. This weather station sends data on demand to a computer system that allows for off-site persons to confirm rainfall, temperature, wind, and dew factors/evaporation rate on a constant basis.

3.2. NPDES: *National Pollutant Discharge System*, the 1972 Clean Water Act established the NPDES Program to regulate the discharge of pollutants to the waters of the United States

3.3. URMP: The *Urban Runoff Management Plan*, produced by the City's Storm Water Pollution Prevention Program, is an account of how the City plans to protect and improve the water quality of rivers, bays, and the ocean in the region, and explains how the City intends to comply with Order No. 2001-01. It was adopted by the City Council on January 28, 2002.

3.4. BMP (Best Management Practices): A technique, measure, or structural controls used to prevent, manage, and/or improve the quality of storm water runoff that flows into the water conveyance system (storm drain), drainage basins, or receiving waters.

4. POLICY

4.1. Watering of landscape to be controlled and timed to prevent occurrence of runoff which could carry chemical contaminants into the reservoir.

4.2. Vegetation control to be performed as needed. When manually removed, debris will be disposed of properly.

4.3. When herbicide is used, follow the label instructions.

5. PROCEDURE

5.1. Lakes Recreation staff:

a Apply "Rodeo" herbicide per label instructions.

b Inspect and maintain irrigation system monthly to prevent runoff.

c Apply fertilizer only per manufacturer's recommendations.

d Apply herbicide under designated person's Applicator Certificate.

5.2. Lakes Construction Staff:

a Remove vegetation if there is any potential for migration to a stream, creek, or lake, or if within ten feet of a stream, creek, or lake.

_____ _____

Mark Stone, Deputy Director Date

1. PURPOSE

1.1. To establish a procedure for cleaning of Paved Surfaces.

1.2. To incorporate water quality protection practices in all operations and maintenance activities while complying with NPDES Permit requirements.

1.3. This policy is considered ISO 14001, Environmental Management Program, Level 3 documentation.

2. AUTHORITY

2.1. Deputy Director, Water Operations Division

2.2. Assistant Deputy Director, Water Operations Division

2.3. NPDES Permit CAS0108758 (RWQCB Order No. 2001-01).

2.4. City of San Diego Municipal Code § 43.03

2.5. City of San Diego, *Urban Runoff Management Plan*, January 2002

2.6. California Storm Water Quality Association, *Storm Water Best Management Practice Handbook*, January 2003

3. DEFINITION

3.1. NPDES: *National Pollutant Discharge System*, the 1972 Clean Water Act established the NPDES Program to regulate the discharge of pollutants to the waters of the United States.

3.2. URMP: The *Urban Runoff Management Plan*, produced by the City's Storm Water Pollution Prevention Program, is an account of how the City plans to protect and improve the water quality of rivers, bays, and the ocean in the region, and explains how the City intends to comply with Order No. 2001-01. It was adopted by the City Council on January 28, 2002.

3.3. BMP (Best Management Practices): A technique, measure, or structural controls used to prevent, manage, and/or improve the quality of storm water runoff that flows into the water conveyance system (storm drain), drainage basins, or receiving waters.

4. **POLICY**

4.1. All paved surfaces shall be cleaned annually.

4.2. All existing catch basins shall be maintained per manufacturer's recommendations to efficiently remove contaminants.

4.3. Catch basins or vegetation strips will be installed to remove contaminants as needed.

5. PROCEDURE

5.1. Lakes Recreation staff:

a Street sweeping service (sweeper truck):

1 Sweep paved surfaces annually in October and as needed.

2 Schedule sweeping operations more frequently as necessary during the wet season.

b For areas that cannot be swept with a sweeper, hand sweep the area and dispose of the sweepings properly.

c Inspect, maintain, and repair catch basin filters per manufacturer's recommendations.

d Inspect paved areas for sediment and debris build-up.

e Pick up trash weekly or more frequently, as needed.

5.2. Operations Construction Staff:

a Inspect and repair culverts and catch basins before the beginning of the rainy season. Increase maintenance and inspections during the rainy season.

_____ _____

Mark Stone, Deputy Director Date

N:\WaterOperations\Administration\ISO 14001\SOPP\F-Reservoir Mgmt Lake & Recreation Dams\Final ISO SOPPs - Reservoir Mgmt Lake & Recreation Dams\F.05-Paved Surfaces-Reservoirs Rev1.doc

1. PURPOSE

1.1. To establish a procedure for cleaning of Dirt Parking Lots and Dirt Roads.

1.2. This policy is considered ISO 14001, Environmental Management Program, Level 3 documentation.

1.3. To incorporate water quality protection practices in all operations and maintenance activities while complying with NPDES Permit requirements.

2. AUTHORITY

2.1. Deputy Director, Water Operations Division

2.2. Assistant Deputy Director, Water Operations Division

2.3. NPDES Permit CAS0108758 (RWQCB Order No. 2001-01).

2.4. City of San Diego Municipal Code § 43.03

2.5. City of San Diego, *Urban Runoff Management Plan*, January 2002

2.6. California Storm Water Quality Association, *Storm Water Best Management Practice Handbook*, January 2003.

3. DEFINITION

3.1. NPDES: *National Pollutant Discharge System*, the 1972 Clean Water Act established the NPDES Program to regulate the discharge of pollutants to the waters of the United States.

3.2. URMP: The *Urban Runoff Management Plan*, produced by the City's Storm Water Pollution Prevention Program, is an account of how the City plans to protect and improve the water quality of rivers, bays, and the ocean in the region, and explains how the City intends to comply with Order No. 2001-01. It was adopted by the City Council on January 28, 2002.

3.3. BMP (Best Management Practices): A technique, measure, or structural controls used to prevent, manage, and/or improve the quality of storm water runoff that flows into the water conveyance system (storm drain), drainage basins, or receiving waters.

4. **POLICY**

4.1. All dirt parking areas shall be cleaned of trash and debris daily.

4.2. To minimize erosion, roads and parking areas shall be graded to drain to appropriate sediment removal features.

4.3. Surfaces that have significant erosion problems or the potential for erosion shall be paved or landscaped. Slope stabilization methods (tactifier, fiber blanket, etc.) will be applied if necessary.

4.4. Sediment removal features shall be inspected, maintained, and repaired per manufacturer's suggestions, or as needed, depending on the feature.

5. PROCEDURE

5.1. Lakes Recreation Staff:

a Staff shall clear dirt areas of trash and debris daily.

b Inspect lots and roads prior to the rainy season and at regular intervals (monthly) during the rainy season.

5.2. Lakes Construction Staff:

a Inspect, maintain, and repair sediment control features, catch basins, and culverts per manufacturer's recommendations and as needed.

b Grade roads to direct drainage to appropriate culverts and catch basins.

c Pave or landscape surfaces that have significant erosion problems or the potential for erosion. Apply slope stabilization methods (tactifier, fiber blanket, etc.) if necessary.

_____ _____

Mark Stone, Deputy Director Date

N:\WaterOperations\Administration\ISO 14001\SOPP\F-Reservoir Mgmt Lake & Recreation Dams\Final ISO SOPPs - Reservoir Mgmt Lake & Recreation Dams\F.06-Dirt Parking Lots and Roads-Reservoirs Rev1.doc

	WATER OPERATIONS DIVISION ISO 14001 and/or NON-ISO STANDARD OPERATIONS POLICY AND PROCEDURE	NUMBER: F.07
		EFFECTIVE: October 29, 2004
	SUBJECT: COMFORT STATIONS - RESERVOIRS	SUPERSEDES:

1. PURPOSE

1.1. To establish a procedure for cleaning and maintaining comfort stations and all sewage holding tanks on reservoir property.

1.2. This policy is considered ISO 14001, Environmental Management Program, Level 3 documentation.

1.3. To incorporate water quality protection practices in all operations and maintenance activities while complying with NPDES Permit requirements.

2. AUTHORITY

2.1. Deputy Director, Water Operations Division

2.2. Assistant Deputy Director, Water Operations Division

2.3. NPDES Permit CAS0108758 (RWQCB Order No. 2001-01)

2.4. City of San Diego Municipal Code § 43.03

2.5. City of San Diego, *Urban Runoff Management Plan*, January 2002

2.6. California Storm Water Quality Association, *Storm Water Best Management Practice Handbook*, January 2003

3. DEFINITION

3.1. Comfort Stations: Structures that contains flushing toilets. They normally contain a 20,000 gallon sewer holding tank. This holding tank has a alarm system advising when the tank has reached a certain level. While most reservoirs have a comfort station, each restroom has a different configuration as to the number of toilets and total sewerage holding capacity.

3.2. NPDES: *National Pollutant Discharge System*, the 1972 Clean Water Act established the NPDES Program to regulate the discharge of pollutants to the waters of the United States.

3.3. URMP: The *Urban Runoff Management Plan*, produced by the City's Storm Water Pollution Prevention Program, is an account of how the City plans to protect and improve the water quality of rivers, bays, and the ocean in the region, and explains how the City intends to comply with Order No. 2001-01. It was adopted by the City Council on January 28, 2002.

3.4. BMP (Best Management Practices): A technique, measure, or structural controls used to prevent, manage, and/or improve the quality of storm water runoff that flows into the water conveyance system (storm drain), drainage basins, or receiving waters.

4. POLICY

4.1. Comfort stations shall be cleaned and inspected daily when open to the public, and monthly during closed periods.

5. PROCEDURE

5.1. Lakes Recreation Staff:

a Pick up trash daily around comfort stations.

b Empty trash containers daily or as needed.

c Wash down toilets, urinals, sinks, and floors daily (drain to holding tanks or sewer system).

d Sweep and pick up trash daily and as needed around comfort station perimeter.

e Test holding tank alarm system weekly.

f Confirm pump out schedule/weekly status.

g On closed days and during the night time, the water supply to the comfort stations will be shut off to protect against a stuck toilet which could cause overflow of the holding tanks.

_____ _____

Mark Stone, Deputy Director Date

N:\WaterOperations\Administration\ISO 14001\SOPP\F-Reservoir Mgmt Lake & Recreation Dams\Final ISO SOPPs - Reservoir Mgmt Lake & Recreation Dams\F.07-Comfort Stations-Reservoirs Rev1.doc

	WATER OPERATIONS DIVISION ISO 14001 and/or NON-ISO STANDARD OPERATIONS POLICY AND PROCEDURE	NUMBER: F.08
		EFFECTIVE: October 29, 2004
	SUBJECT: PICNIC AREAS - RESERVOIRS	SUPERSEDES:

1. PURPOSE

1.1. To establish a procedure for Cleaning of Public Picnic Areas located at reservoirs.

1.2. This policy is considered ISO 14001, Environmental Management Program, Level 3 documentation.

1.3. To incorporate water quality protection practices in all operations and maintenance activities while complying with NPDES permit requirements.

2. AUTHORITY

2.1. Deputy Director, Water Operations Division

2.2. Assistant Deputy Director, Water Operations Division

2.3. NPDES Permit CAS0108758 (RWQCB Order No. 2001-01).

3. DEFINITION

3.1. NPDES: *National Pollutant Discharge System*, the 1972 Clean Water Act established the NPDES Program to regulate the discharge of pollutants to the waters of the United States.

3.2. URMP: The *Urban Runoff Management Plan*, produced by the City's Storm Water Pollution Prevention Program, is an account of how the City plans to protect and improve the water quality of rivers, bays, and the ocean in the region, and explains how the City intends to comply with Order No. 2001-01. It was adopted by the City Council on January 28, 2002.

3.3. BMP (Best Management Practices): A technique, measure, or structural controls used to prevent, manage, and/or improve the quality of storm water runoff that flows into the water conveyance system (storm drain), drainage basins, or receiving waters.

4. POLICY

4.1. Place a trash can at each picnic table. Place trash cans liberally around the picnic area.

4.2. Picnic tables shall be washed weekly and as needed with water and brush (no chemicals).

4.3. Barbecues shall be cleaned out daily with a wire brush and materials disposed of properly.

4.4. Graffiti removal shall be performed using proper chemical handling procedures.

5. PROCEDURE

5.1. Lakes Recreation staff:

a Check trash cans daily when the reservoir is open, empty if three-quarters full or more.

b Pick up trash daily during days the reservoir is open to the public.

c Dry sweep sidewalks and table pads weekly when reservoir is open to the public.

d Wash picnic tables with water and brush (no chemicals) weekly and as needed.

e Clean out barbecues daily with a wire brush. Dispose of materials properly.

f Use proper chemical handling procedures when performing graffiti removal.

_____ _____

Mark Stone, Deputy Director Date

	WATER OPERATIONS DIVISION ISO 14001 and/or NON-ISO STANDARD OPERATIONS POLICY AND PROCEDURE	**NUMBER:** **F.09**
		EFFECTIVE: **October 29, 2004**
	SUBJECT:BOAT CLEANING – RENTAL - RESERVOIRS	**SUPERSEDES:**

1. PURPOSE

1.1. To establish a procedure for cleaning of Rental Boats at City Reservoirs.

1.2. This policy is considered ISO 14001, Environmental Management Program, Level 3 documentation.

1.3. To incorporate water quality protection practices in all operations and maintenance activities while complying with NPDES Permit requirements.

2. AUTHORITY

2.1. Deputy Director, Water Operations Division

2.2. Assistant Deputy Director, Water Operations Division

2.3. NPDES Permit CAS0108758 (RWQCB Order No. 2001-01).

2.4. City of San Diego Municipal Code § 43.03

2.5. City of San Diego, *Urban Runoff Management Plan*, January 2002

2.6. California Storm Water Quality Association, *Storm Water Best Management Practice Handbook*, January 2003

3. DEFINITION

3.1. NPDES: *National Pollutant Discharge System*, the 1972 Clean Water Act established the NPDES Program to regulate the discharge of pollutants to the waters of the United States.

3.2. URMP: The *Urban Runoff Management Plan*, produced by the City's Storm Water Pollution Prevention Program, is an account of how the City plans to protect and improve the water quality of rivers, bays, and the ocean in the region, and explains how the City intends to comply with Order No. 2001-01. It was adopted by the City Council on January 28, 2002.

3.3. BMP (Best Management Practices): A technique, measure, or structural controls used to prevent, manage, and/or improve the quality of storm water runoff that flows into the water conveyance system (storm drain), drainage basins, or receiving waters.

4. **POLICY**

4.1. All rental boats shall be cleaned while secured to the public dock unless they have an oil or other related substance spill within their bilge.

4.2. An area at each facility will be designated for a drain-plug removal and bilge draining if the craft have hazardous material spills within their bilge.

5. PROCEDURE

5.1. Lakes Recreation staff:

a Ensure rental boats are moved to designated cleaning/washdown area when this task becomes necessary because of hazardous material containment.

b Inspect, maintain, and repair catch basin filters per manufacturer's recommendations.

c Hand sweep and collect all debris and dispose of properly.

d No chemicals shall be used to clean boats.

e Boats may be washed with water following hand cleaning.

_____ _____

Mark Stone, Deputy Director Date

1. PURPOSE

1.1. To establish a procedure for cleaning of Private Boats leaving City Reservoirs.

1.2. This policy is considered ISO 14001, Environmental Management Program, Level 3 documentation.

1.3. To incorporate water quality protection practices in all operations and maintenance activities while complying with NPDES Permit requirements.

2. AUTHORITY

2.1. Deputy Director, Water Operations Division

2.2. Assistant Deputy Director, Water Operations Division

2.3. NPDES Permit CAS0108758 (RWQCB Order No. 2001-01).

2.4. City of San Diego Municipal Code § 43.03

2.5. City of San Diego, *Urban Runoff Management Plan*, January 2002

2.6. California Storm Water Quality Association, *Storm Water Best Management Practice Handbook*, January 2003

3. DEFINITION

3.1. NPDES: National Pollutant Discharge System, the Clean Water Act established the NPDES Program to regulate the discharge of pollutants to the waters of the United States.

3.2. URMP: The *Urban Runoff Management Plan*, produced by the City's Storm Water Pollution Prevention Program, is an account of how the City plans to protect and improve the water quality of rivers, bays, and the ocean in the region, and explains how the City intends to comply with Order No. 2001-01. It was adopted by the City Council on January 28, 2002.

3.3. BMP (Best Management Practices): A technique, measure, or structural controls used to prevent, manage, and/or improve the quality of storm water runoff that flows into the water conveyance system (storm drain), drainage basins, or receiving waters..

4. **POLICY**

4.1. All private boats shall be cleaned off-site.

4.2. When funding for filter systems allows, construct a designated area at each facility for drain-plug removal and bilge draining.

4.3. Drain-plug removal and bilge draining is NOT permitted on the launch ramp.

4.4. Catch basin filter shall be inspected, maintained, and repaired per manufacturer's recommendations.

5. PROCEDURE

5.1. Lakes Recreation staff:

a Ensure private boats are not cleaned on reservoir property.

b Inspect, maintain, and repair catch basin filters per manufacturer's recommendations.

_____ _____

Mark Stone, Deputy Director Date

1. PURPOSE

1.1. To establish a procedure for cleaning Boat Docks.

1.2. This policy is considered ISO 14001, Environmental Management Program, Level 3 documentation.

1.3. To incorporate water quality protection practices in all operations and maintenance activities while complying with NPDES Permit requirements.

2. AUTHORITY

2.1. Deputy Director, Water Operations Division

2.2. Assistant Deputy Director, Water Operations Division

2.3. NPDES Permit CAS0108758 (RWQCB Order No. 2001-01).

2.4. City of San Diego Municipal Code § 43.03.

2.5. City of San Diego, *Urban Runoff Management Plan*, January 2002.

2.6. California Storm Water Quality Association, *Storm Water Best Management Practice Handbook*, January 2003.

3. DEFINITION

3.1. NPDES: *National Pollutant Discharge System*, the 1972 Clean Water Act established the NPDES Program to regulate the discharge of pollutants to the waters of the United States.

3.2. URMP: The *Urban Runoff Management Plan*, produced by the City's Storm Water Pollution Prevention Program, is an account of how the City plans to protect and improve the water quality of rivers, bays, and the ocean in the region, and explains how the City intends to comply with Order No. 2001-01. It was adopted by the City Council on January 28, 2002.

3.3. BMP (Best Management Practices): A technique, measure, or structural controls used to prevent, manage, and/or improve the quality of storm water runoff that flows into the water conveyance system (storm drain), drainage basins, or receiving waters .

4. **POLICY**

4.1. All boat docks shall be cleaned monthly during non-use periods and weekly on open days.

5. PROCEDURE

5.1. Lakes Recreation Staff:

a Dry sweep boat dock and collect debris by hand or vacuum and dispose of properly.

b Hard, built-up material shall be loosened by hand prior to sweeping.

c No material shall be swept into the lake.

d No chemicals shall be used to clean the docks.

e Following a dry sweep and vacuum, the dock may be washed down with water.

_____ _____

Mark Stone, Deputy Director Date

1. PURPOSE

1.1. To establish a procedure for Boat Fueling.

1.2. This policy is considered ISO 14001, Environmental Management Program, Level 3 documentation.

1.3. To incorporate water quality protection practices in all operations and maintenance activities while complying with NPDES Permit requirements.

2. AUTHORITY

2.1. Deputy Director, Water Operations Division

2.2. Assistant Deputy Director, Water Operations Division

2.3. NPDES Permit CAS0108758 (RWQCB Order No. 2001-01).

2.4. City of San Diego Municipal Code § 43.03

2.5. City of San Diego, *Urban Runoff Management Plan*, January 2002

2.6. California Storm Water Quality Association, *Storm Water Best Management Practice Handbook*, January 2003

3. DEFINITION

3.1. NPDES: National Pollutant Discharge System, the Clean Water Act established the NPDES Program to regulate the discharge of pollutants to the waters of the United States.

3.2. URMP: The *Urban Runoff Management Plan*, produced by the City's Storm Water Pollution Prevention Program, is an account of how the City plans to protect and improve the water quality of rivers, bays, and the ocean in the region, and explains how the City intends to comply with Order No. 2001-01. It was adopted by the City Council on January 28, 2002.

3.3. BMP (Best Management Practices): A technique, measure, or structural controls used to prevent, manage, and/or improve the quality of storm water runoff that flows into the water conveyance system (storm drain), drainage basins, or receiving waters.

4. **POLICY**

4.1. Establish designated fueling locations for all vessels, with appropriate booms, etc., to capture and contain spills. These locations are to be supervised by lake staff.

4.2. Provide City contractor to respond to major spills (spills larger than 50 gallons).

4.3. Set administrative controls with enforcement guidelines.

4.4. For personal watercraft refueling, designate a fueling area as per Policy 3.1.

4.5. Designate area with containment feature on each dock to refuel concessionaire and City boats.

5. PROCEDURE

5.1. Lakes Recreation staff:

A. Maintain appropriate designated area for refueling by maintaining and replacing booms, absorbent rolls, and sawdust per marine recommendations.

B. Rangers are to patrol at regularly defined intervals to ensure compliance with policy guidelines. Rangers have the authority to issue citations to violators.

_____ _____

Mark Stone, Deputy Director Date

1. PURPOSE

1.1. To establish a procedure for containment and collection of Sewage.

1.2. This policy is considered ISO 14001, Environmental Management Program, Level 3 documentation.

1.3. To incorporate water quality protection practices in all operations and maintenance activities while complying with NPDES Permit requirements.

2. AUTHORITY

2.1. Deputy Director, Water Operations Division

2.2. Assistant Deputy Director, Water Operations Division

2.3. NPDES Permit CAS0108758 (RWQCB Order No. 2001-01)

2.4. City of San Diego Municipal Code § 43.03

2.5. City of San Diego, *Urban Runoff Management Plan*, January 2002

2.6. California Storm Water Quality Association, *Storm Water Best Management Practice Handbook*, January 2003.

3. DEFINITION

3.1. NPDES: *National Pollutant Discharge System*, the 1972 Clean Water Act established the NPDES Program to regulate the discharge of pollutants to the waters of the United States.

3.2. URMP: The *Urban Runoff Management Plan*, produced by the City's Storm Water Pollution Prevention Program, is an account of how the City plans to protect and improve the water quality of rivers, bays, and the ocean in the region, and explains how the City intends to comply with Order No. 2001-01. It was adopted by the City Council on January 28, 2002.

3.3. BMP (Best Management Practices): A technique, measure, or structural controls used to prevent, manage, and/or improve the quality of storm water runoff that flows into the water conveyance system (storm drain), drainage basins, or receiving waters .

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4. POLICY

4.1. Place portable toilets a minimum of 50 feet from the water's edge and place at pre-designated, easily accessible locations.

4.2. Install plastic holding tanks on all portable toilets.

4.3. Lake Recreation Staff shall provide spill containment areas for pumping trucks.

4.4. A sewage pumping hose inspection schedule is included in the contract.

4.5. Absorbent booms shall be available for deployment as required for an event.

4.6. Floating toilets shall be towed to a single designated area for pumping. When pumping is completed they will be redeployed using a three point anchor system..

5. PROCEDURE

5.1. Lakes Recreation Staff:

a Inspect and empty plastic holding tanks weekly during open periods.

b Staff to maintain portable toilets a minimum distance of 50 feet from the water's edge and moved from shoreline areas subject to inundation when pending storm events are predicted (near any area where storm water flows enter the impoundment reservoir).

_____ _____

Mark Stone, Deputy Director Date

	WATER OPERATIONS DIVISION **ISO 14001 and/or NON-ISO** **STANDARD OPERATIONS POLICY AND PROCEDURE**	**NUMBER:** **F.14** **EFFECTIVE:** **January 21, 2005**
	SUBJECT: PRESSURE WASHING OF EQUIPMENT AND VEHICLES	**SUPERSEDES:**

1. PURPOSE

1.1. To establish a policy for pressure washing of equipment and vehicles which incorporates water quality protection practices in all operations and maintenance activities while complying with NPDES Permit requirements.

1.2. This policy is considered ISO 14001, Environmental Management Program, Level 3 documentation.

2. AUTHORITY

2.1. Deputy Director, Water Operations Division

2.2. Assistant Deputy Director, Water Operations Division

2.3. NPDES Permit CAS0108758 (RWQCB Order No. 2001-01)

2.4. City of San Diego Municipal Code §43.03

2.5. City of San Diego, *Urban Runoff Management Plan*, January 2002

2.6. California Storm Water Quality Association, *Stormwater Best Management Practice Handbook*, January 2003.

3. DEFINITION

3.1. NPDES: *National Pollutant Discharge System*, the 1972 Clean Water Act established the NPDES Program to regulate the discharge of pollutants to the waters of the United States.

3.2. BMPs: *Best Management Practices*, A technique, measure, or structural control used to prevent, manage and/or improve the quality of storm water runoff that flows into the stormwater conveyance systems (storm drain), drainage basins, or receiving waters.

3.3. URMP: The *Urban Runoff Management Plan*, Produced by the City's Storm Water Pollution Prevention Program, is an account of how the City plans to protect and improve the water quality of rivers, bays and ocean in the region and explains how the City intends to comply with Order No. 2001-01. It was adopted by the City Council on January 28, 2002.

3.4. Sanitary Sewer: The municipal wastewater pipe system that conveys sewage to the wastewater treatment plant or septic system. It is separate from the storm drain system.

3.5. Leach field: A buried pipe system that accepts wastewater effluent flow and disperses it into the surrounding soil to begin the natural biological treatment process. Also known as drain field.

3.6. Containment Sump: A concrete containment vessel or box that serves as a temporary wastewater storage area. Its contents are pumped out periodically and transported to a landfill.

4. POLICY

4.1. Pressure washing water will be diverted from entering the storm drain system.

4.2. Pressure washing activities: Wash water may be returned to the reservoir or lake without any form of treatment if raw (lake) water is used during cleaning.

4.3. Whenever possible, alternative cleaning methods will be used that will generate fewer pollutants when compared to pressure washing. Dry clean-up methods such as brooms, mops, or absorbent material should be used for surface cleaning whenever possible.

4.4. Pressure washing activities will be performed in a designated area that captures or collects the wash water and:

4.4.1. Allows it to percolate into the soil, or

4.4.2. Directs it to the sanitary sewer, or

4.4.3. Directs it to a containment sump or leach field.

4.5. Whenever possible, use of degreasers and other toxic detergents will be avoided. Only phosphate free cleaners shall be used.

4.6. All washing operations shall be performed in a way that best prevents storm water contamination.

5. PROCEDURE

5.1. If the vehicle or equipment to be washed is soiled with dirt but not oil or grease, perform the washing indoors in a building or shed that has a floor drain connected to the sanitary sewer.

5.2. When pressure washing boats, docks, work floats, etc. at the lakes and reservoirs for the purpose of removing barnacles, algae, and other naturally occurring debris, the wash water may be returned to the reservoir or lake without any form of treatment if raw (lake) water is used during cleaning.

5.3. Wear all appropriate personal protective equipment (eye protection, boots).

5.4. After the job is complete, clean up the work area and remove any debris.

6. REFERENCE

6.1. NPDES Permit CAS0108758 (RWQCB Order No. 2001-01)

City of San Diego Municipal Code §43.03

City of San Diego, *Urban Runoff Management Plan*, January 2002

California Storm Water Quality Association, *Stormwater Best Management Practice Handbook*, January 2003.

Mark Stone, Deputy Director

Date

	WATER OPERATIONS DIVISION **ISO 14001 and/or NON-ISO** **STANDARD OPERATIONS POLICY AND PROCEDURE**	**NUMBER:** **F.15** **EFFECTIVE:** **January 21, 2005**
	SUBJECT: PRESSURE WASHING OF BUILDING FACADES & PAVEMENT	**SUPERSEDES:**

1. PURPOSE

1.1. To establish a policy for Pressure Washing of building facades, roof tops, and pavement or other impervious surfaces.

1.2. To incorporate water quality protection practices in all operations and maintenance activities while complying with NPDES Permit requirements.

1.3. This policy is considered ISO 14001, Environmental Management Program, Level 3 documentation.

2. AUTHORITY

2.1. Water Department Director

2.2. Deputy Director, Water Operations Division

2.3. NPDES Permit CAS0108758 (RWQCB Order No. 2001-01)

2.4. City of San Diego Municipal Code §43.03

2.5. City of San Diego, *Urban Runoff Management Plan*, January 2002

2.6. California Storm Water Quality Association, *Storm Water Best Management Practice Handbook*, January 2003.

3. DEFINITIONS

3.1. BMPs: *Best Management Practices*, A technique, measure, or structural control used to prevent, manage and/or improve the quality of storm water runoff that flows into the stormwater conveyance systems (storm drain), drainage basins, or receiving waters.

3.2. NPDES: *National Pollutant Discharge System*, the 1972 Clean Water Act established the NPDES Program to regulate the discharge of pollutants to the waters of the United States.

3.3. URMP: The *Urban Runoff Management Plan*, Produced by the City's Storm Water Pollution Prevention Program, is an account of how the City plans to protect and improve the water quality of rivers, bays and ocean in the region and explains how the City intends to comply with Order No. 2001-01. It was adopted by the City Council on January 28, 2002.

4. POLICY

4.1. Pressure washing activities: Allowing the wash water to enter the storm drain is prohibited by law.

4.2. Whenever possible, use of degreasers and other toxic detergents will be avoided. Only phosphate free cleaners shall be used.

4.3. All washing operations shall be performed in a way that best prevents storm water contamination.

5. PROCEDURE

5.1. Inspect the work area before beginning. If a storm drain inlet is near the work area, use a wet-vac to collect the wash water. Do not allow the wash water to enter the storm drain. Dispose of collected wash water properly.

5.2. Whenever possible, use alternative cleaning methods that will generate less pollutants when compared to pressure washing. Consider dry clean-up methods such as brooms, mops, or absorbent material for surface cleaning whenever possible.

5.3. Place safety cones and/or wet floor signs in the area to be pressure washed.

5.4. Wear all appropriate personal protective equipment (eye protection, boots).

5.5. On paved surfaces, use a shop broom to push the wash water to a landscaped area. Do not push the water into a floor drain unless you are certain it is connected to the sanitary sewer.

5.6. After the job is complete, clean up the work area and remove any debris.

6. REFERENCE

6.1. NPDES Permit CAS0108758 (RWQCB Order No. 2001-01)

City of San Diego Municipal Code §43.03

City of San Diego, *Urban Runoff Management Plan*, January 2002

California Storm Water Quality Association, *Stormwater Best Management Practice Handbook*, January 2003.

Mark Stone, Deputy Director

Date

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	WATER OPERATIONS DIVISION ISO 14001 and/or NON-ISO STANDARD OPERATIONS POLICY AND PROCEDURE	NUMBER: H.01
		EFFECTIVE: February 3, 2006
	SUBJECT: WATER QUALITY LABORATORY OPERATIONS AND MAINTENANCE	SUPERSEDES: January 27, 2005

1. PURPOSE

1.1. The purpose of this document is to link Water Quality Laboratory's (WQL's) documentation and document control system to the Water Operations Division EMS.

1.2. All standard operating procedures (SOPs) and manuals used in the WQL are controlled according to the procedure described in the current *GEN-10 Document Control* SOP.

1.3. For the purpose of this document, the WQL means analytical services, chemical inventory and storekeeping, and laboratory building maintenance.

1.4. This policy is considered ISO 14001, Environmental Management Program, Level 3 documentation.

2. AUTHORITY

2.1. Deputy Director, Water Operations Division

2.2. Assistant Deputy Director, Water Operations Division

2.3. California Department of Health Services

2.4. Federal Safe Drinking Water Act and related laws

2.5. California Occupational Safety and Health Act (CAL-OSHA)

2.6. California Health & Safety Codes

3. DEFINITIONS

(Not Applicable)

4. POLICY

4.1 All regulatory analytical testing shall be performed in accordance with the current *Quality Assurance Manual* (QA Manual), the method-specific SOPs and other related laboratory procedures.

4.2 Chemical inventory and storekeeping shall be performed in accordance with the current *MISC-03 Chemical Inventory and Storekeeping* SOP.

4.3 Laboratory building maintenance shall be performed in accordance with the current *MISC-02 Laboratory Building Maintenance Manual* SOP.

5. RESPONSIBILITIES

5.1. Responsibilities of the WQL management and analytical staff are described in the current *QA Manual*.

5.2. Responsibilities of the storekeeper are described in the current *MISC-03 Chemical Inventory and Storekeeping* SOP.

5.3. Responsibilities of the building services supervisor and the contracted maintenance staff are described in the current *MISC-02 Laboratory Building Maintenance Manual* SOP.

6. PROCEDURES

6.1 Analytical, building maintenance, and storekeeping procedures are described in the appropriate SOPs and manuals.

6.2 General laboratory policies, principles, and procedures pertaining to analytical testing are outlined in the current *QA Manual*.

6.3 All SOPs and manuals referenced in this SOPP are controlled as described in the current *GEN-10 Document Control* SOP.

6.4 All SOPs and manuals referenced in this SOPP may be accessed by the WQL staff in the: J:\Quality Assurance\SOPs\CURRENT.

_____ _____

Mark Stone, Deputy Director Date

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	WATER OPERATIONS DIVISION ISO 14001 and/or NON-ISO STANDARD OPERATIONS POLICY AND PROCEDURE	NUMBER: I.01
		EFFECTIVE: March 9, 2007
	SUBJECT: UNPLANNED WATER DISCHARGES	SUPERSEDES: January 21, 2005

1. PURPOSE

1.1 To establish the policies and procedures used by the Operations Division for responding to unplanned (emergency) water discharges.

1.2 To incorporate storm water pollution prevention practices into all maintenance and operations activities to protect water quality and meet or exceed all NPDES Permit requirements.

1.3 This policy is considered ISO 14001, Environmental Management Program, Level 3 documentation.

2. AUTHORITY

2.1 Deputy Director, Water Operations Division

2.2 Assistant Deputy Director, Water Operations Division

3. DEFINITION

3.1 Storm water discharges: any surface discharge of water resulting from rainfall, snow or other form of precipitation. Storm water discharges include runoff water from permeable areas (e.g., lawns, fields, dirt lots) and impervious areas (roofs, gutter, driveways, asphalt/concrete paving of roads, parking lots, and other hard surfaces).

3.2 Best Management Practices (BMPs): a technique, measure, or structural control used to prevent, manage and/or improve the quality of storm water runoff that flows into the storm water conveyance systems (storm drain), drainage basins, or receiving waters.

3.3 Regional Water Quality Control Board (RWQCB): the California state agency that enforces the federal NPDES General Storm Water Permit.

3.4 National Pollution Discharge Elimination System (NPDES): the federal 1972 Clean Water Act established the NPDES Program to regulate the discharge of pollutants to the waters of the United States.

3.5 Water Systems Technician Supervisor (WSTS): the primary contact person in Water Operations Division who is key to implementing this standard operations policy and procedure (SOPP).

4. PROCEDURE

4.1 All unplanned discharges will follow the procedures of SOPP C.13: Water Main Break Procedures for District Managers and Water System Technical Supervisors.

4.2 The WSTSs will report any **significant** unplanned discharges to the Operations storm water contact persons listed in sections 4.2.6 through 4.2.8.2 as soon as possible. A significant unplanned discharge is generally a main break, system malfunction, or emergency discharge that produces any of the following:

4.2.1 A release of water at high volume, high velocity, and/or creates a traffic or public nuisance; or,

4.2.2 A discharge of water that carries sediment in amounts significant to enter the storm drain system at the nearest storm inlet; or,

4.2.2 Is within an area known or suspected to contain contaminated or polluted subsurface soil that is disturbed or released as a result of the water discharge; or,

4.2.3 Any release or discharge that threatens the water quality of receiving waters; or,

4.2.4 Any discharge that is released into environmentally sensitive lands (which includes canyons, rivers, stream, lagoons, and open space areas.).

4.2.5 The Department of Environmental Health (DEH) shall be notified by Water Operations of any potable water discharge/release/spill of 100,000 gallons or more within ¼ mile (1320 feet) of the ocean or bay coastline. DEH will determine if a water contact advisory should be issued for any public beaches based upon the incident and site specific information provided by Operations.

To do the report, the WSTS shall inform and provide the following information by phone or email to the contact persons listed below: a) location of the break, b) size of pipe, c) estimated discharge volume, and d) an assessment of the potential threat to the local environment. The WSTS will submit the follow up written water break/leak discharge report to the Maps & Records (FIMS) Section for issuing a copy immediately to the Operations storm water engineer.

During office hours:

4.2.6 Operations storm water engineer in Production Engineering Section.

4.2.7 Operations biologist in Distribution Engineering Section.

During non office hours:

4.2.8 Operations drafting/engineering aide in Maps & Records (FIMS) Section who will inform by email the following:

4.2.8.1 both Operations storm water engineer and Operations biologist for during office hours.

4.2.8.2 the Regional Water Quality Control Board (Regional Board) by e-mail and/or facsimile within 24 hours.

If the unplanned discharge is deemed a significant main break event, the Operations storm water engineer will provide a follow-up report to the Regional Board. The report shall be delivered by both e-mail and/or fax within five (5) days of the break event, which is a requirement of the NPDES Permit.

4.3 A severe break event that causes a danger to health and human welfare, environmentally sensitive lands, or excessive sediment flows will be assessed by Operations storm water engineer to determine if mitigation is necessary. The WSTS should consult with Operations biologist when assessing impacts to environmentally sensitive lands along with assistance for identifying the corresponding mitigation.

4.4 If Storm Water contact persons are unavailable, coordinate with Operations biologist to perform site assessment. For after hours emergency events contact the standby environmental planner listed on the on-call environmental emergency responder roster.

4.5 A summary statement listing all 5-day follow-up reports shall be combined with a summary statement of significant planned discharges (discharges of 500,000 gallons or more in a 24-hour period). This summary statement will be produced each quarter and presented to the Regional Board per Permit requirements.

5. REFERENCES

SOPP C.13: Water Main Break Procedures for DMs & WSTSs

NPDES Permit CAS0108758 (RWQCB Order No. 2001-01)

City of San Diego Municipal Code §43.03

City of San Diego Municipal Code §143.0101 et seq.

RWQCB Order No. 2001-01 and 2002-0020

City of San Diego, *Urban Runoff Management Plan*, January 2002

Storm Water Pollution Prevention Plans (SWPPP): Alvarado Water Treatment Plant (WTP), Miramar WTP, Otay WTP, Chollas OperationYard and San Vicente Operation Yard

California Storm Water Quality Association, *Storm Water Best Management Practice Handbook*, January 2003.

_____ _____

Alex Ruiz, Deputy Director Date

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1. PURPOSE

1.1. To establish a policy for storm water management and control at all Water Department facilities.

1.2. To incorporate storm water pollution prevention practices into all maintenance and operations activities and meet or exceed all NPDES Permit requirements.

1.3. This policy is considered ISO 14001, Environmental Management Program, Level 3 documentation.

2. AUTHORITY

2.1. Deputy Director, Water Operations Division

2.2. Assistant Deputy Director, Water Operations Division

3. DEFINITION

3.1. Storm water discharges: any surface discharge of water resulting from rainfall, snow or other form of precipitation. Storm water discharges include runoff water from permeable areas (e.g., lawns, fields, dirt lots) and impervious areas (roofs, gutters, driveways, asphaltic/concrete paving of roads, parking lots and other hard surfaces.)

3.2. Best Management Practices (BMPs): a technique, measure, or structural control used to prevent, manage, and/or improve the quality of storm water runoff that flows into the storm water conveyance system (storm drain), drainage basins, or receiving waters.

3.3. Regional Water Quality Control Board (RWQCB): the California state agency that enforces the federal NPDES General Storm Water Permit.

3.4. National Pollutant Discharge System (NPDES): the federal 1972 Clean Water Act established the NPDES Program to regulate the discharge of pollutants to the waters of the United States.

3.5. Water Systems Technician Supervisor (WSTS): the primary contact person in Water Operations Division who is key to implementing this standard operations policy and procedure (SOPP).

4. **POLICY**

4.1. The Water Operations Division will comply with all applicable storm water standards, orders, or requirements including: Municipal Storm Water Permit (RWQCB Order No. 2001-01); Discharges of Hydrostatic Test Water and Potable Water (RWQCB Order No. 2002-0020); and San Diego Municipal Code §43.03 (Storm Water Ordinance).

4.2. Before engaging in any work or maintenance activity, a review of said activity should be performed to identify tasks that may generate water pollutants. BMPs and other protection shall be implemented to minimize potential water quality impacts.

4.3. Any acts that result in a non-compliance situation shall be reported immediately to Operations storm water engineer at phone no. (619) 527-8065.

4.4. All Water Operations personnel and staff must attend a basic storm water pollution prevention training session to be offered annually. District Managers, WSTSs, and all field crews are required to attend refresher training sessions (included in the Spring Training offerings) on an annual basis.

4.5. Water quality protection practices shall be followed at all Water Department facilities. Refer to SOPPs I.01 and D.05.

5. RESPONSIBILITIES

5.1. A Storm Water Pollution Prevention Program (SWPPP) document shall be prepared for each major facility as outlined in the City of San Diego 2002 Urban Runoff Management Program Manual. The SWPPP shall be revised and updated every two years or as necessary. A copy of the SWPPP will be kept onsite at its respective facility and made available upon request of a representative of the Regional Water Quality Control Board (RWQCB) or the City's Storm Water Program.

5.2. Field supervisors responsible for managing activities that generate or could generate storm water pollutants will:

5.2.1. Work with District Managers, WSTSs, Operations staff biologist and Operations storm water engineer in Production Engineering Section to identify all water quality issues and regulatory requirements within their area of responsibility and ensure that the requirements are met.

5.2.2. Ensure compliance with this SOPP and all local requirements for those activities performed under their supervision.

5.3. The WSTS will report any significant unplanned discharges to the Operations storm water engineer as soon as possible. A significant unplanned discharge is generally a main break, system malfunction, or emergency discharge that produces any of the following:

5.3.1. A release of water at high volume, high velocity, and/or creates a traffic or public nuisance; or,

5.3.2. A discharge of water that carries sediment in amounts significant to enter the storm drain system at the nearest storm inlet; or,

5.3.3. Is within an area known or suspected to contain contaminated or polluted subsurface soil that is disturbed or released as a result of the water discharge; or,

5.3.4. Any release or discharge that threatens the water quality of receiving waters; or,

5.3.5. Any discharge that is released into an area identified as containing environmentally sensitive lands; or

5.3.6. Any potable or reclaimed water discharge that is released within 1,000 feet of receiving waters (stream, river, lake or the ocean).

5.4. The District Manager shall provide the following information to the Operations storm water engineer on an annual basis:

5.4.1. A report for each project, proposed over the next 12-month period, that is expected to result in a discharge of 500,000 gallons per day (GPD) or greater. The report must be in a specified format; contact the Operations storm water engineer for forms and instructions.

5.4.2. A report for each project, proposed over the next 12-month period, that is expected to result in a discharge of less than 500,000 GPD and does not meet any of the following:

- The discharge is sent directly into an MS4 storm drain that is more than 1,000 feet from receiving water; or,

- The discharge does not contain pollutants in excess of the levels specified in RWQCB Order No. 2002-0020; or,
- BMPs are implemented before, during, and after the discharge.

6. PROCEDURE

6.1. For planned discharges less than 500,000 GPD: Whenever possible, the WSTS shall plan each discharge event to keep the release of water to less than 500,000 GPD. Following this practice will ensure that the Water Quality Lab is not overburdened with discharge monitoring tasks.

6.2. For planned discharges more than 500,000 GPD: Those discharges that are expected to be near or more than 500,000 GPD must be reported to the Operations storm water engineer a minimum of two weeks in advance of the discharge event. Also, the WSTS will fill out the following: **a**) a Planned Water Discharge Report, see attachment #1 (Form DD-F-034.0 on computer N drive for Operations Division, which can be located as follows: N:\WaterOperations\Administration\ISO 14001\4.4.5 Control of Documents\Current DDF forms\DD-F-0.34.0 Planned Water Discharge Report Rev2); and **b**) a Water Planned Discharge Report for after the event and submit it to Maps and Records (FIMS) Section for issuing a copy immediately to the Operations storm water engineer.

6.3. For planned discharges of any volumes, any and all discharge must:

6.3.1. Be considered, whenever practical, for methods of water conservation and/or reuse.

6.3.2. Be de-chlorinated to a non-detectable level.

6.3.3. Implement BMP's to the maximum extent practicable to minimize turbidity, siltation, and erosion at the point of discharge.

6.3.4. Survey the predicted flow path and remove any debris or obstructions, place BMPs as necessary.

6.3.5. Be conducted in a manner that is least damaging to environmentally sensitive lands.

6.3.6. Inform County Vector Control if ponding of water is expected.

6.4. All discharges must be monitored as follows:

6.4.1. Must have a Planned Water Discharge Report (Form DD-F-034.0) submitted to the Operations storm water engineer at least two (2) weeks prior to discharging.

6.4.2. Must not contain pollutants in excess of levels specified in RWQCB Order R9-2002-0020.

6.4.3. Must maintain a pH between 6 and 9.

6.4.4. Must be de-chlorinated to a non-detectable level.

6.4.5. Must provide visual observation for erosion and sedimentation in accordance with RWQCB Order No. 2002-0020.

6.4.6. Monitoring is currently not conducted by the Water Quality Lab.

6.4.7. The Operations storm water engineer may determine the flow path of the discharge to the point of entry into a natural canyon or receiving water; create or infer from a map illustrating the discharge flow path using the city SPLASH computer application.

6.4.8. Use the flow path information to determine that discharge is not directed to sensitive biological resources. The WSTSs should consult with the Operations staff biologist regarding this determination.

6.4.9. Priority should be on limiting impacts to stream banks, channels, and surrounding slopes.

6.4.10. Survey the expected flow path and remove any debris or obstructions, place BMPs as necessary.

6.4.11. Must send a completed Notice of Termination (NOT) see attachment #2 (Form DD-F-035.0) to the Operations storm water engineer upon completion of discharge.

6.5. Facility Inspections:

6.5.1. Water treatment plants and operations yards shall be inspected monthly by Water Quality Superintendent.

6.5.2. Raw water reservoirs and concession areas shall be inspected monthly by Lakes Program Manager.

6.5.3. Potable water reservoirs and pump stations shall be inspected monthly by Senior Water Production Engineer.

6.5.4. Inspection forms/reports will be returned to the Operations storm water engineer via e-mail or interoffice mail to Operations storm water engineer/Production Engineering Section at MS 43.

7. REFERENCES

NPDES Permit CAS0108758 (RWQCB Order No. 2001-01)

City of San Diego Municipal Code §43.03.

City of San Diego Municipal Code §143.0101 et seq.

RWQCB Order No. 2002-0020.

City of San Diego, *Urban Runoff Management Plan*, January 2002

SWPPP for major facilities – Alvarado Water Treatment Plant (WTP), Miramar WTP, Otay WTP, Chollas Operation Yard, and San Vicente Operation Yard

California Storm Water Quality Association, *Storm Water Best Management Practice Handbook*, January 2003.

Alex Ruiz, Deputy Director

Date

Attachments in Operations Division computer N drive:
Attachment 1 - Form DD-F-034.0 Planned Water Discharge Report Rev2
Attachment 2 - Form DD-F-035.0 Notice of Termination of Discharge Rev2

Note:

This electronic file contains the body of the SWPPP and none of the graphics and photo attachments found in the printed copy. Refer to the printed (hard copy) version for the complete, officially signed, document.

STORM WATER
POLLUTION PREVENTION PLAN

Chollas Municipal Operations Yard

Water Department
City of San Diego
March 2004

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Attachments

A	Amendment Log
B	Facility Location Maps, Parking Lots Map
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Statement of Certification

The below listed certification is provided in accordance with the signatory requirements of the State Water Resources Control Board, NPDES General Permit Number CAS000002. This certification applies to the SWPPP attached herein.

> *I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to ensure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.*

_____

_____

Date

In addition, the preparer shall also review and sign the following certification, as it applies to the SWPPP attached herein.

> *I certify under penalty of law that I understand the terms and conditions of the General National Pollutant Discharge Elimination System (NPDES) Permit, as authorized by the Clean Water Act (CWA), as amended, which regulates the storm water discharges associated with construction activities identified as part of this certification. I also understand that the CWA provides statutory authority for the U.S. Environmental Protection Agency, state implementing agencies and individual citizens to enforce the provisions of the act and will hereby be held responsible any individual who willingly, knowingly or negligently violates the CWA as part of my contract.*

_____

_____

Date

Chapter One - Introduction

1.1 INTRODUCTION

In response to the Clean Water Act, the RWQCB has granted a Municipal Storm Water Permit to the City of San Diego. The Municipal Permit, approved in February 2001, contains several provisions that entail substantial effort on the local level to achieve compliance. The Municipal Permit prohibits discharges to the municipal separate storm sewer system (MS4) that cause pollution, specifically any release that exceeds receiving water quality objectives. Each co-permittee is required to enforce the permit through local ordinance. Enforcement options include non-monetary penalties, fines, bonding requirements, and permit denials for non-compliance. According to the Municipal Permit, each co-permitee is required to prepare and implement a Jurisdictional Urban Runoff Management Program. "The purpose of the Urban Runoff Management Program is for the City to take appropriate actions to reduce discharges of pollutants and runoff flow during each of the planning, construction and early development phases of urban development."

This document was developed to address all applicable requirements of the SCWRCB general permit. The Municipal Permit requires that discharges containing pollutants be reduced to the maximum extent practicable (MEP). The Water Department has categorized its facilities by priority (high, medium, low), based on threat to water quality. Beginning in 2002, a Storm Water Pollution Prevention Plan (SWPPP) will be prepared for each water treatment and municipal operations facility.

This SWPPP addresses storm water pollution and management strategies for non-construction activities at the Chollas Operation Station. Areas of new or ongoing construction are not considered in this site evaluation document.

1.2 PLAN IMPLEMENTATION

This SWPPP identifies potential contributory sources to storm water and non-storm water pollution at the Chollas Operation Station (hereinafter Chollas Yard). The SWPPP also identifies best management practices to be implemented to minimize the potential for pollution from the identified sources.

1.3 REQUIRED CHANGES (AMENDMENTS)

All amendments should be dated and directly attached to the SWPPP. The amendments are listed in the Amendment Log in **Attachment A**. The following represents instances when the SWPPP must be amended:

- Whenever there is a change in construction or operations which may affect the discharge of pollutants to surface waters, ground waters, or a municipal separate storm sewer system (MS4).

- If the RWQCB determines a violation of this General Permit the SWPPP shall be amended and implemented in a timely manner, but in no case more than fourteen (14) calendar days after notification by the RWQCB.

1.4 POLLUTION PREVENTION TEAM

The City of San Diego Water Department has assembled a storm water pollution prevention team for assessing storm water discharge compliance at Chollas Yard. Key members of the pollution prevention team are presented below:

Storm Water Pollution Prevention Team
Chollas Yard

Position	Responsibility	Assigned Staff
Compliance Supervisor	Responsible for directing SWPPP; responsible for correspondence and reports to Regional Board	Bob Collins, Water Department Storm Water Program Manager
Site Compliance Coordinator	Responsible for site operations; directing performance of site inspections; directions implementation of management practices	Gabriel Shipley Senior Water Utility Supervisor
Inspections	Perform annual facility-wide and quarterly Non-Storm Water Discharge Visual Inspections; prepare written reports	Claud Hood Water Utilities

Chapter Two – Site Description

2.1 FACILITY OVERVIEW

Chollas Yard is a field operations and equipment yard located at 2797 Caminito Chollas Drive. The Water Department's Water Operations Division shares the 67-acre with several divisions of the City of San Diego workforce including Environmental Services and Transportation Division. This site also has a service station, body shop, and car wash. Water Department and Transportation Division administration buildings were constructed on this former landfill in 1961. An assembly hall and purchasing storeroom were also constructed that year. Other buildings have been added over the years as each facility expands in response to a growing city (See **Attachment B**).

The Water Department's main offices are located in downtown San Diego. Water Operations is a division of the Department that maintains the facilities and infrastructure. Most of this division is stationed at Chollas Yard; a small work force is stationed at San Vicente Yard located near the San Vicente Reservoir. No Water Operations work forces remain at the Rose Canyon facility; the crews were moved to Chollas Yard in January. This SWPPP will review only that portion of Chollas Yard that is occupied by Water Operations Division, an area of 11 acres located west of the main entrance. See **Attachment C**.

Most of the surface area at the Water Operations Division site is either paved in asphalt or occupied by an office or storage structure (See **Attachment C)**. Un-paved areas have some form of decorative landscaping with automatic sprinkler irrigation. The asphalt-paved portion can be divided into five areas: Entry Parking lot, Vehicle Lot 1, Vehicle Lot 2, the Heavy Equipment Parking Lot, the Pipe Storage Lot, and the Exit Parking Lot (see **Attachment B**). These areas will be described further in Section 2.3.

2.2 DESCRIPTION OF STORM DRAIN SYSTEM

General Site Topography

Chollas Yard, as a whole, tends to slope to the west. Along the eastern side the elevation is about 430-feet above mean sea level. Elevations drop to 410-feet along the paved portion of the western side. Elevations drop abruptly in the natural drainage channel that occupies the western-most areas of Chollas Yard. The entire channel is within the Chollas Yard boundary fence. Elevations in this area are from 400-feet at the edge of the paved yard, down to 330-feet at the north-west end where accumulated runoff enters the existing municipal storm system.

Site Drainage Characteristics

There are three storm water collection structures within the area occupied by the Water Operations. These catch basin structures are located along the north side fence. They do capture some runoff from the adjacent parking lots, but their primary function is to collect runoff from the landscaped areas along the southern length of College Grove Drive. All three drainage structures discharge their inflow into Chollas Creek Canyon, located on the other side of College Grove Drive.

Illustrations of the surrounding topography and surface runoff flow paths are shown in **Attachment D**. A graphic showing the locations of the storm drain structures is found in **Attachment E**. A description of each is given below:

Storm Drain No. 1: This 24" x 24" catch basin is located in a depression next to the north-east exit gate. This structure collects runoff from Vehicle Lot 2 and the ball field on the other side of the property fence. This flow is then conveyed to Storm structure No. 2. This area has a tendency to accumulate sediment and debris and the structure needs to be protected using appropriate BMPs.

Storm Drain No. 2: This 12" x 24" catch basin is located across from Structure No. 1; it also captures runoff from Vehicle Lot 2. Runoff from the surrounding landscape will also be captured here. It should be protected from sediment accumulation using appropriate BMPs. The inflow is conveyed via an 18" RCP to the center of College Grove Drive where it intercepts a curb inlet at the median. The flow continues along an 18" RCP across the roadway to end in a headwall/cutoff wall combination at Chollas Creek Canyon.

Storm Drain No. 3: This type 'F' catch basin is located behind the Capital Improvement Projects building. It gathers runoff from the surrounding landscape. Flow from the Exit Parking Lot will also be captured here during large storm events.

Storm Drain No. 4: This 24" x 24" catch basin is located about 30 feet beyond the boundary fence at the Entry Parking Lot. It collects flow from Vehicle Lot 1, the Entry Parking Lot, and paved areas behind the Transportation Division building. A 24" wide concrete swale directs the flow from Vehicle Lot 1 to the catch basin. This drainage structure collects the most runoff.

Storm Drain No. 5: This inlet structure was removed and the conveyance pipe was abandoned when College Grove Drive was widened in 1989. It was located behind the construction materials/debris bins.

While most areas of the Water Operations Yard are paved, some runoff is directed to areas that are unpaved and without vegetation. Runoff from the south side of the Pipe Storage Lot flows into an adjacent dirt lot that has no drainage outlet. The Heavy Equipment Parking Lot is mostly flat and runoff tends to flow off the south-west corner.

The area beyond the lot at the south-west end is unpaved and has no drainage outlet. In both cases, the direction that the runoff flows was unintentional (the asphalt paving merely follows the contour of the land), but this produces areas of water accumulation and puddles at the edge of the pavement or beyond the Water Operations boundary fence into unpaved lots.

2.3 REVIEW OF DRAINAGE CAPABILITY

The Heavy Equipment Parking Lot east of the office trailers was not well planned. The asphalt surface is unevenly paved and depressions and ruts have formed, probably from the weight of the heavy vehicles parked here. Puddles typically form after rainfall, while in other areas of the lot, the slope directs the runoff into areas that are unpaved and without vegetation, resulting in soil erosion and sediment transport. Fiber rolls and gravel bags should be placed at points where the runoff leaves the paved lot. It should be noted that the Heavy Equipment and Pipe Storage Lots were built on a former landfill. This area is settling unevenly and this condition contributes to the inadequate surface drainage that exists here.

The employee parking lot between the main building and the office trailers offers adequate drainage but there is a problem with the concrete swale at the west end of the lot. Either the asphalt around the swale has settled or the soil beneath the swale has expanded. In either case, the result is that the swale is now higher than the surrounding pavement. Only a significant flow would find its way into the swale channel after accumulating at this spot, leaving a puddle around it long after the rain has stopped. See **Attachment F**.

Chapter Three – Potential Sources of Pollution

3.1 POTENTIAL POLLUTANTS

The statewide general permit requires that dischargers develop pollution prevention management practices. Dischargers are required to address management controls for:

- Preventive maintenance
- Good housekeeping
- Spill prevention and response
- Storm water management practices
- Employee training, and
- Inspections

Potential Pollutant	Source
Nutrients	Leached from onsite soils, residue from dust control or irrigation water.
Lubricating oils	Leakage from onsite vehicles; leakage from pumps, valves, or mechanical equipment; washing of pumps, valves, or mechanical equipment; maintenance of pumps, valves, or mechanical equipment.
Antifreeze and other automotive fluids	Leakage from onsite vehicles
Paints (latex and combustible)	Accidental spills

3.2 POTENTIAL FOR NON-STORM WATER DISCHARGE

Storm water runoff will be the only form of discharge to reach any onsite storm drain. While some activities offer the potential for non-storm discharges, these limited activities will be (a) Cleaned up immediately, or (b) left undisturbed until the water component has evaporated and what remains will be cleaned up.

These activities include washing down the beds of work trucks, and washing down dirty tools, equipment, and work boots.

BMPs placed at each storm drain will also limit non-storm water inflow by capturing solid and particulate pollutants before they enter the storm drain system.

Onsite activities which offer the potential for non-storm discharge include:

- Dust control
- Onsite landscape irrigation
- Exterior facilities washing or rinsing

Existing and recommended best management practices for minimizing the potential for storm runoff impacts or non-storm discharges are detailed in Chapter 4.

3.3 HAZARDOUS CHEMICAL AND PARTS & MATERIALS STORAGE.

Hazardous chemicals are found in various locations among the storage areas surrounding Vehicle Lot 2 (See **Attachment G**). Most of these chemicals are held in small amounts and are typical of those used in facility and equipment maintenance practices: cleaning solvents, oil based paint, lubricants, herbicides, etc. Oil and hydraulic fluid are kept in larger quantities (50-gallon drums) and are stored on spill containment platforms. Consolidating the chemical storage areas into a single storeroom was a consideration, but work crews preferred keeping separate storage areas for the individual hydraulic, construction, and emergency response crews.

The Pipe Storage Lot is mostly uncovered, leaving parts and equipment exposed to the elements. All items have been placed on palettes to avoid direct contact with surface runoff and work crews are expected to keep this area in a neat and orderly condition when removing or returning equipment and parts. See **Attachment G.**

3.4 REVIEW OF SOIL STABILITY

Some unpaved sections of the Water Operations area have little or no vegetation and show evidence of soil erosion. A few areas have bare, exposed soil; other areas were landscaped in the past, but have been neglected. Without proper protection from wind erosion or rainfall impact, the loose soil will become sediment suspended in the runoff flow. Sedimentation in the storm drain system is a form of contamination and can lead to the obstruction of flow passages. A walk-thru of the site should be conducted to determine which forms of permanent soil stabilization processes and BMPs should be applied to unprotected areas.

4.1 OVERVIEW OF BEST MANAGEMENT PRACTICES

Storm water best management practices (BMPs) refers to methods and procedures used to prevent or reduce contamination in the storm water conveyance system. Structural and non-structural methods are used. **Attachment H** illustrates several BMPs approved for use by the City of San Diego. **Attachment I** gives examples of plant inspection, maintenance, and storm water reports.

Summary of Best Management Practices (BMPs) for Minimizing Storm Runoff Pollution

BMP	Status	Responsible Party	Implementation Date
Disposal of waste oils and lubricants into recycling containers	Current BMP		
Limit onsite irrigation to prevent non-storm runoff from the site	Current BMP		
Clean up of spills in accordance with Business Plan.	Current BMP		
Perform onsite dust control water applications to prevent non-storm runoff from site.			
Sweep/clean maintenance Shop floor	Current BMP		
Maintain spill cleanup onsite	Current BMP		
Prevent or reduce the discharge of pollutants to storm water from building repair, remodeling, and construction by using soil erosion controls, enclosing or covering building storage areas.	Current BMP		
Periodic cleaning of onsite streets and parking	Current BMP		
Keep tops on trash cans, keep trash receptacles covered.			

Wash work vehicles regularly	Current BMP		
Employee training	Current BMP		

4.2 SPILL PREVENTION AND RESPONSE

Maintenance personnel will have detailed training on proper materials handling procedures, good housekeeping and maintenance practices, in addition to existing spill prevention and response training. Follow-up training will be given periodically.

The Hazardous Materials Business Plan, filed with the County Department of Environmental Health, details the safety procedures established by the Water Operations Division, the types of chemicals stored on-site, their quantities, and locations on the property. The Business Plan contains emergency response procedures to follow in the event of an accidental chemical release. It should be updated and resubmitted after the completion of any site improvements.

In the event of a release or threatened release of a hazardous material, immediate notification will be made to the Hazardous Materials Management Division at (619) 338-2222 (or 911 Emergency Response after working hours).

4.3 EMPLOYEE TRAINING

All Water Department employees are now required to attend a general storm water training session. Activity-specific training will be given to maintenance personnel with special training for those who will be conducting periodic inspections. As part of this training, employees will be informed of proper maintenance and good housekeeping practices which can minimize the potential for non-storm water discharges or contamination of storm runoff. Spring Training, a two-week training refresher given yearly in March, has a 3-hour session devoted to storm water pollution prevention. Employee training procedures for handling hazardous materials and spills have been developed by safety program management. This response plan deals with use of emergency response equipment and materials, coordinating with emergency response agencies, and general plan implementation.

4.4 FACILITY INSPECTION

The Water Department will conduct an annual inspection of the corporate yard areas and activities in preparation for the Urban Runoff Management Program annual report. This inspection is performed in the month of September in preparation for the seasonal wet period that begins October 1 and ends April 30 as defined by the State.

Chapter Five – Site Improvement Plan

5.1 Site Improvement Suggestions

As mentioned previously, some paved areas have a slope that directs the runoff to the edge of the pavement and into areas that have no vegetative cover. The resulting scour and sediment transport could be reduced or eliminated if grass swales and/or fiber rolls were installed along the edge of pavement perpendicular to runoff flow. Fiber rolls should be installed at the Pipe Storage Lot along south fence. This would reduce the runoff flow velocity as it leaves the lot and capture any floating debris.

Installation of a catch basin located between the Exit Parking Lot and Employee Parking Lot 1 should be considered. This would lessen the amount of runoff flowing into Storm Drain No. 4 and would be discharged to the existing storm conveyance at College Grove Drive.

Installing a storm drain system that gathers runoff from Vehicle Parking Lot 2 and the Heavy Equipment Parking Lot should be strongly considered. Some storage areas become inaccessible to fork lifts during significant rainfall because of the flooding that occurs at areas along the eastern boundary fence. Inflow from a drain placed at the northeast corner of the Heavy Equipment Lot could be conveyed to another drain at Vehicle Lot 2, which would convey its flow to the Storm Drain No. 1. The top of Storm Drain No. 1 is more than a foot lower than the surface of Employee Parking Lot 2, providing the necessary gradient for drainage flow. The gradient between the two parking lot drains will have to be examined to determine adequacy.
This suggestion has been considered by facility management but was deemed too costly; the lots lie on a former landfill and trenching to lay drainage pipe would require an environmental study and a special dig permit.

5.2 Materials Storage Bins –Weather Triggered Action Plan

On October 30, 2003, following a site inspection conducted by the Regional Water Quality Control Board, the Water Operations Division received a Notice of Violation (No. R9-2003-0389), noting poor drainage conditions at the construction materials storage bins: During wet weather, runoff from an adjacent parking lot flows past the materials storage bins accumulating oil, sediment, and debris as it travels to the storm drain inlet near the Transportation Division Building (Storm Drain #4). Direct rainfall on the asphalt and debris stockpile produces most of the contaminants found in the runoff coming from this area.
In response, a permanent roof cover will be constructed to prevent direct rainfall on the asphalt and spoils portions of the materials storage bins. This will greatly reduce the amount of oil, sediment and debris that migrates into the runoff flow path. Presently, a contractor has been chosen to construct a heavy-gauge steel and aluminum canopy.

Construction should be completed by May, 2004; in the interim, a Weather Triggered Action Plan (WTAP) has been developed. The WTAP will be performed whenever a 40% or greater chance of rain is predicted and elements of this plan will continue to be practice after the roof has been constructed.

The WTAP procedure to be performed by the maintenance crew is as follows:

1. The sweeper truck will clean the front of the bins every day after finishing its normal sweeping routine (during the wet season Oct. 1 through Mar. 31).

2. Cover the asphalt and spoils stockpiles with tarps.

3. Place a fiber roll at the west end of the bins across the runoff flow path to capture any loose sediment. Use gravel bags to hold it in place and replace as necessary.

4. Lay gravel bags end-to-end across the front of the asphalt and spoils bins. Remove when dry.

5. Keep a push broom and wheel barrow at the bins at all times. Sweep up as needed, after a load is taken or delivered, and immediately after the rain stops.

6. Inspect the gravel bags and fiber roll, replace as necessary.

REFERENCES

San Diego, City of, *Storm Pollution Prevention Plan –Construction,* Alvarado Water Filtration Plant, Phase 1, January 2000.

San Diego Metropolitan Waste Water Department, September 1999. *Storm Water Pollution Prevention Plan for the North City Water Reclamation Plant*

City of San Diego Standard Drawings, *Regional Standard Drawings*, 2000.

California Stormwater Quality Association, *Stormwater Best Management Practice Handbook*, January 2003.

State of California, Dept. of Transportation (Caltrans), *Storm Water Quality Handbook – Project Planning and Design Guide*, May 2000.