

EPA's Audit of SLCO's Phase 1 Stormwater Program and Lessons Learned

Background:

- Salt Lake County is a Co-permittee with 14 other Cities authorized to discharge municipal stormwater under the Jordan Valley Municipalities Permit No. UTS000001
- Salt Lake County is a Phase 1 MS4 (population greater than 100,000); additional monitoring and high-risk industrial programs; 1st permit was issued in 1995
- MS4 Jurisdiction covers un-incorporated areas of Salt Lake County and County-wide Flood Control facilities
- Next permit cycles were in 2001, 2006, 2013 (current expires in Sept 2018)
- County was audited by State DWQ in 2007 (12 findings)
- The EPA conducted a Compliance Evaluation Inspection (CEI) "Audit" on March 5-9, 2012



UPDES Permit Minimum Control Measures- Phase 1 MS4- Programs Audited:

- Illicit Discharge Detection and Elimination
- Construction site run-off control
- Post Construction run-off control
- Good Housekeeping / Pollution Prevention
- Industrial Program
- Stormwater monitoring and sampling

Not Audited:

- Public Education and Outreach described as “robust”
- Public Involvement

No. of Findings per Control Measure:

Minimum Control Measures	No. of findings
Program Management	5
Stormwater Monitoring and Sampling	11
Illicit Discharge Detection and Elimination	7
Construction Site Run-off Control	8
Industrial Program	6
Post Construction Run-off Control	6
Good Housekeeping / Pollution Prevention	5
Total Findings	48
Repeat Findings from 2007 State Audit	7
Corrective Actions	44
Recommendations	18

Finding Type Summary:

Finding Type	No. of findings
Lack of procedures and/or documentation	17
Lack of enforcement and/or inspections	7
Lack of pollution prevention bmps and maintenance	6
Failure to implement or enforce ordinance	5
Lack of adequate staff training	5
Failure to implement plans as written (i.e. SWMP, DWS, Sampling Plans)	4
Other (i.e. lack of resources, monitoring locations)	4
Total Findings	48

Program Management – Coordinating the Stormwater Management Plan (SWMP) Roles and Responsibilities:

2014 Stormwater Management Plan

August 2014

Revised November 2015



Submitted to: Utah Division of Water Quality
Submitted by: Salt Lake County
Prepared by: Stantec Consulting Services Inc.

Sample Task Chart –
One for each MCM

Table 7 Long-term Stormwater Management Program Goals and Assessment

Year	Task	Goal/Frequency	Assessment	Responsibility
1/14 - 12/18	Ordinance	• Implement Title 17.22	Document activities relating to implementation of the ordinance	Engineering & FC Dan Drumiler Rich Judson Township Services
3/3/15 - 12/18		• Develop & implement enforcement strategy	Document development & implementation of enforcement strategy	Greg Baptist Ben Sorensen Operations Kevyn Smeltzer Fleet Management Greg Nuzman Parks & Rec Wayne Johnson Landfill & Recycling John Ioannou Facilities Rory Payne Library Services Lynn Andrew
3/3/15 - 12/18	Long-term Stormwater BMPs	• Require non-structural BMPs	Document implementation of BMPs	Engineering & FC Dan Drumiler Township Services
4/16 - 12/18		• Encourage use of LID methods	Document implementation of LID methods	Andrea Pullos Madeline Francisco-Galang
4/16 - 12/18		• Develop retrofit plan	Document development & implementation of plan	Greg Baptist
4/16 - 12/18		• Establish hydrologic method for BMP sizing	Document development of hydrologic sizing method	

Measurable Goals are incorporated (i.e. annual inspection frequency)



Agreements, Letters of Understanding, SOPs, Training Manual:



April 2, 2015

**Re: Letter of Understanding
Implementation of Salt Lake County Stormwater Management Plan**

WHEREAS, Salt Lake County is a co-permittee under the Utah Pollutant Discharge Elimination System Stormwater Discharge Permit issued to the Jordan Valley Municipalities on September 5, 2013 (the "UPDES Permit");

WHEREAS, the UPDES Permit requires the County to manage the discharge of storm water from: a) the municipal storm drain system servicing unincorporated Salt Lake County, and b) all Salt Lake County-owned and -operated storm drainage facilities;

WHEREAS, the UPDES Permit also requires the County to develop and implement an operations and maintenance program for all County-owned or -operated facilities, operations and structural storm water controls;

WHEREAS, the County has created a Stormwater Management Plan, which describes the County's storm water management practices, control techniques, system design and engineering methods, an educational component and other provisions to control pollutants and comply with the terms of the UPDES Permit;

WHEREAS, the terms of the UPDES Permit can only be met through an organized and cooperative effort between each of the undersigned County agencies; and

WHEREAS, the County Mayor's Office has designated the Office of Township Services through its Engineering Services as the lead agency to manage the UPDES Permit and



**SALT LAKE COUNTY
DEPARTMENT OF ADMINISTRATIVE SERVICES**

By: Sarah Bruneau
Name: Michael Breen
Title: Director
Date: 4/27/15

FACILITIES MANAGEMENT

By: Wayne Mazion
Name: Wayne Mazion
Title: Director
Date: 4/27/15

FLEET MANAGEMENT

By: Greg Nuzeman
Name: Greg Nuzeman
Title: Director
Date: 4/3/2015

NOW THEREFORE, the undersigned agencies of Salt Lake County acknowledge their respective roles under the UPDES Permit and the Stormwater Management Plan and hereby commit to implement the plan under the direction of the Office of Township Services, Engineering Section.



Other Important Compliance Agreements & Documents Include:

- Salt Lake County SOP Manual – 51 SOPs
- Salt Lake County Training Manual
- Post-construction BMP Maintenance Agreement with Private Owners
- Agreement (Letters of Intent) with Salt Lake County Agencies for maintenance of stormwater controls



Audit Photos Corrective Actions Good BMP Examples

Photo Number 1177
Inspection Date 3/7/2012
Photographer A. Clark
Description Inlet at monitoring location JOR-1 (same inlet as photo 1174). Note inlet is blocked and pipe is half submerged with sediment.



Finding 1MN – Inadequate Wet Weather Monitoring Locations and Maintenance Issues

Corrective Action – Site was decommissioned

3 new sites were installed to be more representative of County MS4

Construction Oversight Photos

Photo Number 1152
Inspection Date 3/6/2012
Photographer A. Clark
Description Storm inlet catch basin with torn dandy bag at the Millcreek Community Center.



Torn Dandy Bag

Sediment

1157
3/6/2012
A. Clark
Unstabilized construction entrance to Evergreen Ave. at the Millcreek Community Center.



1158
3/6/2012
A. Clark
Sediment along curb of Evergreen Ave. at the Millcreek Community Center.



No Stabilized Track-out Pad for Construction site access

1143
3/6/2012
A. Clark
Natural drainageway
to Parley's Creek.
This was also the
conveyance water
from the accidental
potable water
discharge at the
Terminal Reservoir
site.



1150
3/6/2012
A. Clark
Fuel tank and fuel
pump at the
Terminal Reservoir
site.



Terminal Reservoir Construction Site
BMPs not noted on SWPPP; concrete washout not lined; spill kit
near fuel tank/spill containment?

1161
3/6/2012
A. Clark

Close-up of storm drain in photo 1160 at the Arcadia site. Note fabric filter is full of sediment.



1166
3/6/2012
A. Clark
No BMPs along curb of lot being built north of Fallon Rd. at the Arcadia site.



No perimeter control BMPs along curb

Inlet Protection BMPs not properly maintained

1171
3/6/2012
A. Clark

Storm drain inlet with broken/torn BMPs at Reliance Homes site (North Meadows Subdivision).



Concrete waste

Examples of good BMPs from County Inspections



TRACK-OUT
PAD WITH
RUMBLE
STRIP

CONCRETE
WASHOUT
BIN

INLET
PROTECTION



SL
SALT LAKE
COUNTY

Examples of good BMPs from County Inspections

Properly installed silt
fence for perimeter
control



SWPPP sign with required
information – Permit #,
Emergency Contact

Municipal Operations Photos

Finding 1ID: Other Good Housekeeping Issues

Photo Number 29
Inspection Date 3/6/2012
Photographer D. Gwisdalla
Description Parks and Recreation EMF. Materials management area; note the movement of the pool of liquid (reportedly gasoline and kerosene) flowing to the storm-drain).



Photo Number 32
Inspection Date 3/6/2012
Photographer D. Gwisdalla
Description Upon the EPA's request, the facility personnel used absorbent material to address the oil and fuel. The storm-drain shown in the bottom left was reportedly connected to separator. It was unclear to staff if the drain was connected to storm or sanitary.



Corrective Actions:
Wash Bay was discontinued and replaced by wash bay that drained to Sanitary Sewer System.

Drain to OWS to SD



Photo Number 35
Inspection Date 3/6/2012
Photographer D. Gwisdalla
Description Parks and Recreation EMF equipment and vehicle wash pad flowing to the same storm-drain used to dispose of the oil. The photos is of a vehicle being washed with a Hotsy power-washer. The dry absorbent was not cleaned up prior to cleaning the vehicle.



Finding 1ID –
Illicit Discharge
from Municipal
Facility
Operations

Photo Number 36
Inspection Date 3/6/2012
Photographer D. Gwisdalla
Description Parks and Recreation EMF. Fuel can behind another maintenance garage; note the top is off the container.



Open Fuel Can

113

3/8/2012

D. Gwisdalla

Parks and Recreation EMF.
Interior of storm drain shown in photo 52. It was initially believed that the oil-water separator discharge went to this storm drain inlet; that was found to be incorrect. Note the sediment, debris, and paint inside the inlet.



Parks Operations

Follow up- OWS was dye tested and found connected to SD



SD Manhole not cleaned/maintained

Oil water Separator



- \$40,000 Wash bay was installed and connected to sanitary sewer
- Existing wash area removed



44

3/6/2012

D. Gwisdalla

Parks and Recreation EMF.
Salt storage pile runoff flow path as shown by salt staining on the soil. Location is on the rear of the property on the northeast side.



Salt Pile



- Salt Pile was removed and discontinued until covered salt storage shed was built

8

3/6/2012

D. Gwisdalla

Welby MSA Salt
storage pile with
runoff flowing to
Pond 1.



Salt run-off

Public Works
Operations Salt Shed

If salt pile is not
covered,
Must have adequate
run-off storage and
containment





Old decanting area –
waste from vector
truck and sweeper
now taken to covered
decanting area



55 gallon drums containing oil/hydraulic fluids were relocated inside-no exposure

Photo Number 31
Inspection Date 3/6/2012
Photographer D. Gwisdalla
Description Parks and Recreation EMF. Close-up of the material on top of the red drum. The black drum to the rear also had liquid on it. Note the staining on the ground in front of the storage area.



Staining

Trash and other bins must be closed and plugged

49
3/6/2012
D. Gwisdalla
Parks and Recreation EMF.
Dumpster located at the site, note the dumpster lid was open during the inspection.



50
3/6/2012
D. Gwisdalla
Parks and Recreation EMF.
Dumpster located at the site shown in photo 49, note what appears to be oil staining inside the dumpster. The outlet is shown in the photo in the center just above the balloon patterned waste.



51
3/6/2012
D. Gwisdalla
Parks and Recreation EMF.
Dumpster located at the site the outlet shown in photo 50 is shown on the outside of the dumpster.



No Plug





3/6/2012
D. Gwisdalla
Parks and
Recreation EMF.
Dumpster located at
the site, note the
dumpster lid was
open during the
inspection.



3/6/2012
D. Gwisdalla
Parks and
Recreation EMF.
Dumpster located at
the site the outlet
shown in photo 50 is
shown on the outside
of the dumpster.



3/6/2012
D. Gwisdalla
Parks and
Recreation EMF.
Dumpster located at
the site shown in
photo 49, note what
appears to be oil
staining inside the
dumpster. The outlet
is shown in the photo
in the center just
above the balloon
patterned waste.



SALT LAKE COUNTY

52

3/6/2012

D. Gwisdalla

Parks and Recreation EMF.
Fueling facility; note the storm drain serving the fueling area.



A spill kit was placed and spills were cleaned



53

3/6/2012

D. Gwisdalla

Parks and Recreation EMF.
Fuel spillage at the fueling station. No spill containment or response equipment was noted at the site. The spill was not addressed during the EPA's inspection by site personnel.



61

3/6/2012

D. Gwisdalla

Salt Lake Waste
Transfer Station.
Dumpster being
brought into the
facility discharging
liquid.



63

3/6/2012

D. Gwisdalla

Salt Lake Waste
Transfer Station.
Note the trash
outside the facility.



County Transfer Station

Trash not contained,
liquid leaking from
dumpster



Reference EPA Photo Number 63
SLCo Photo 7/20/12

Windblown litter picked up on grassy hillside.
Litter is picked up daily by the supervised
"trustee" crew from the County jail.



Transfer Station Response

Trash is properly contained and
picked-up, no leaking from dumpster



Reference EPA Photo Number 65
SLCo Photo 8/8/12

Picture shows tarping on "trustee" container to
control windblown litter and it has been positioned
to minimize windblown litter.





Weekly Visual Inspection Form

Facility: Midvale Public Works Complex

Date and Time: 10/14/2016, 3:30pm

Stormwater Issues/Notes	Corrective Action Taken
Dumpster lids have been left open around the facility.	Closed lids during inspection. When not in use, dumpsters should be kept closed to prevent stormwater from mixing with the contents.
The waste storage area has been filled with a large amount of trash and debris.	The waste in the storage area should be removed and brought to the landfill on a regular basis to minimize the possibility of pollutants mixing with stormwater.
A small amount of spillage was observed by the containers outside of the carpentry shop. The floor dry needs to be cleaned up around the area as well.	Drip pans need to be placed on the ground anytime these materials are used. If any spills occur, they need to be cleaned up completely as soon as possible.

Inspector Name and Title: Josh Mikel, SLCO Stormwater Program Supervisor

Signature: Josh Mikel

Salt Lake County

Flood Control Engineering and Township Engineering Services

Weekly Visual Inspection Form

Weekly Visual Inspections of High-Priority Facilities are conducted, ensures good housekeeping measures and bmps are being properly maintained

Stormwater Pollution Prevention Plans (SWPPPs) are also implemented for High-Priority County Operations Facilities



Industrial Oversight Photos

103

3/7/2012

S. Gleck

Harper/Kilgore Pit 16 - Second view of the I-80 underpass from the south side. A straw waddle and storm drain inlet are on the bottom left. Note the sediment along the left side of the road.



This gravel pit is a high priority industrial site that is inspected annually

105

3/7/2012

S. Gleck

Harper/Kilgore Pit 16 - Second close-up view of the storm drain inlet and straw waddle in photo 103. Note the sediment on top of and around the storm drain.



Industrial Inspection Forms



Salt Lake County
2001 South State St. #N3-600
Salt Lake City, UT 84190
385-468-6700

INDUSTRIAL INSPECTION FORM

In compliance with Salt Lake County Ordinance 17.22 and Salt Lake County M54 UPDES Permit No. UT5000001

General Information			
Inspection Date	April 24, 2015	Inspector Name	Austin Jasper & Greg Baptist
UPDES ID Number	UTR260253	Telephone	(385) 468-6700
ALT ID Permit Number	53747	Entry Time	1:00 PM
Facility Type	Sand and Gravel	Exit Time	2:30 PM
Last Inspection Date	April 24, 2015	Type of Inspection	Mid-cycle
Last Inspected By			
Did the Previous Inspection Identify Areas in which the Facility was to Address? No			
Brief Description of what was identified? Our first inspection of this facility			
Where these areas addressed? Choose an item.			
if NO please explain Our first inspection of this facility			

Facility Information			
Facility Name Kilgore Parleys Canyon			
Site Address		Mailing Address (Property Owner)	
4551 E I-EIGHTEAST FWY		Kilgore Companies 7057 W 2100 S Salt Lake City, Utah 84128	
Salt Lake City, UT 84109			
GPS Coordinates	Latitude 40° 7'26.101"	Longitude	111° 7'26.58"
Receiving Water(s)	Parleys Creek		
M54	Salt Lake County / City name		

Contact Information			
	Name	Permittee	Telephone
Property Owner	Rulen Harper	<input type="checkbox"/>	
Facility Operator	Kilgore Companies	<input checked="" type="checkbox"/>	801-250-0132
Co-Permittee			
Authorized Official(s)	Chance Densley		801-250-0132



Salt Lake County
2001 South State St. #N3-600
Salt Lake City, UT 84190
385-468-6700

INDUSTRIAL INSPECTION FORM

In compliance with Salt Lake County Ordinance 17.22 and Salt Lake County M54 UPDES Permit No. UT5000001

General	Yes	No	Notes/Action Items	
Does the SWPPP list members of the Pollution Prevention Team?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Choose an item.	
Is there a Certification Statement?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Choose an item.	
Is the Certification Statement signed by authorized personnel?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Choose an item.	
Site Map	Yes	No	Notes/Action Items	
Is there a Site Map?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Choose an item.	
Date Prepared/Updated:	April 24, 2015			
Does the site map show drainage areas/patterns/outfalls?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Choose an item.	
Identify types of pollutants likely to be discharged from each drainage area?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Choose an item.	
Show locations of major structural controls used to reduce pollutants in runoff?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Choose an item.	
Name of receiving water(s) or MS4's listed?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Choose an item.	
Is receiving water a tributary to waters of the U.S. (if "yes" list)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Choose an item.	
Location of significant materials exposed to stormwater?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Choose an item.	
Locations of major spills occurring within 3 years from date of NOI?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Choose an item.	
Location of fueling, maintenance, loading and unloading, material storage, waste disposal?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Choose an item.	





- Photos from County Industrial Inspections – examples of good housekeeping
- Material Safety Data Sheets (MSDS)

Photos from County Industrial Inspections

55 gallon drums
properly labeled
With contents


HAZARDOUS WASTE

FEDERAL LAW PROHIBITS IMPROPER DISPOSAL
IF FOUND CONTACT THE NEAREST POLICE OR PUBLIC SAFETY
AUTHORITY OR THE U.S. ENVIRONMENTAL PROTECTION AGENCY.

GENERATOR INFORMATION LUSID TECH. INC. 5195 WEST 4700 SOUTH KEARNS, UT 84118	EPA ID NO. UTR000005892 MANIFEST DOC NO. 009467450FLE
CONTAMINATED RAGS	PROFILE NO : 16010019
PHONE : 801-966-5300 ACCUMULATION START DATE :	EPA WASTE NO : F003 F005

DOT PROPER SHIPPING NAME
NA3077, Hazardous waste, solid, n.o.s. (RAGS
CONTAMINATED WITH ACETONE, TOLUENE, XYLENE), 9, PG III.
(ERG#=171)

HANDLE WITH CARE!
PRINTED BY: G C LABEL / 1-800-997-5966 / PRINTED IN U.S.A. / ITEM# HWL155 TYVEK



Post Construction Photos

Poor Maintenance of stormwater bmps

1182

3/8/2012

S. Gieck

I-9 detention pond -
Close up of the outlet
grate. Note the
sediment has built up
around the edges of
the grate such that
grass is starting to
grow on the grate.



1190

3/8/2012

S. Gieck

Oaker Shadows
pond - Close up view
of the outlet
structure. Note the
grass built up on the
inside and outside of
the grates.



Municipal and privately owned stormwater controls must be maintained and inspected

1185

3/8/2012

S. Gieck

R.C. Automotive -
View of the area
near the northeast
corner of the building
where a baysaver
and orifice plate
were noted on the
plans. There are no
manholes indicating
these are present.



1191

3/8/2012

S. Gieck

Arbor Development
shopping center -
View of the drainage
inlets along the north
side of the parking
lot that flow to the
detention pond.
Note the sediment
and debris built up
around the pipes.
The pipe on the left
is almost completely
covered.



Stormwater Controls must be maintained as per plan, Annual Inspections



Examples of good stormwater control maintenance – Regional Detention basins



8595 W 3183 S – Rec Center



I-9 Detention Basin 1450 E 4500 S



Detention Basin – 5585 W 6630 S
Discovery



Skyview Detention Basin Kearns



Examples of good stormwater control maintenance



Outlet structures are clean and free of trash and debris; properly maintained



Inspection Form and Maintenance Agreement for Post-construction Stormwater Controls



SMP OPERATION AND MAINTENANCE INSPECTION REPORT POST CONSTRUCTION PRIVATE STORMWATER BMP MAINTENANCE

Site Name:		Date of Evaluation:	
Site Address:			
Facility Contact Information			
NAME and MAILING ADDRESS		Phone	E-MAIL ADDRESS
SITE CONTACT:			
INSPECTOR CONTACT:			
BUSINESS TYPE:	INSTITUTIONAL	COMMERCIAL	INDUSTRIAL
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
			OTHER: _____
Are SOP's for Storm water Post Construction Inspections implemented and available for review? YES <input type="checkbox"/> NO <input type="checkbox"/>			
Drift Required for site	YES <input type="checkbox"/> NO <input type="checkbox"/>	Drift Size:	Hooded outlet cover (creek) Required for site: YES <input type="checkbox"/> NO <input type="checkbox"/>
Items Inspected	Checked	Maintenance Req'd?	Is there excessive accumulation of debris or sediment?
	Yes No	Yes No	Yes No
1. Dumping Evidence			
2. Spill Evidence			
3. General Site Exposure			
4. Other Pollution Sources			
5. Stormwater Storage condition and capacity (detention/retention ponds)			
6. Inlets and catch basins			
7. Conveyance System			
8. Manholes			
9. Parking			
10. Waste Collection			
11. Landscaping			
12. Pre-Treatment devices			
13. Sumps			
14. Flow Control devices			
15. Site Specific SOP Items			
16. Other			
Notes:			
Print Name:		Date:	
Signature:		Title or Position:	



When recorded, mail to:

Salt Lake County Township Services
Stormwater Construction Supervisor
2001 South State Street N3-600
Salt Lake City, Utah 84190-4050

Affects Parcel No(s): _____

STORMWATER MAINTENANCE AGREEMENT

Standard Form Contract D.A. No. 16-15416, Approved for Division Use from 01-June-16 through 31-Dec-16

This Storm water Maintenance Agreement (this "Agreement") is made and entered into this _____ day of _____, 2016, by and between Salt Lake County, a body corporate and politic of the State of Utah (the "County"); and _____ (the "Owner").

RECITALS

WHEREAS, the County is authorized and required to regulate and control the disposition of storm and surface waters within the unincorporated County, as set forth in the Salt Lake County Stormwater Ordinance, as amended ("Ordinance"), adopted pursuant to the Utah Water Quality Act, as set forth in UTAH CODE ANN. §§ 19-5-101, *et seq.*, as amended (the "Act"); and

WHEREAS, the Owner hereby represents and acknowledges that it is the owner in fee simple of certain real property more particularly described in Exhibit "A," attached hereto and incorporated herein by this reference (the "Property"); and

WHEREAS, the Owner desires to build or develop the Property and/or to conduct certain regulated construction activities on the Property which will alter existing storm and surface water conditions on the Property and/or adjacent lands; and

WHEREAS, in order to facilitate these anticipated changes, the Owner desires to build and maintain, at Owner's expense, storm and surface water management facilities, including structures, improvements, and/or vegetation to control the quantity and quality of the storm water (the "Stormwater Facilities"); and

WHEREAS, the Stormwater Facilities are shown in the final site plan or subdivision map for the Property, in any related engineering drawings, and in any amendments thereto, which plans and drawings are on file in the office of the County's Planning and Development Division and are hereby incorporated herein by this reference (the "Development Plan"); and



Moving Forward

Consent Decree Summary:

Effective Date April 6th, 2016 – In effect for three years

Civil Penalty \$280,000 – Paid 50% to EPA and 50% to State of Utah

Effective 3 years – expires April 6th, 2019

Compliance Requirements (27):

- Fully implemented SWPPP
- SOPs/SWPPPs
- Training Program
- Letters of Intent with County Agencies for maintenance of stormwater bmp controls
- Wet weather monitoring sites
- 9 FTEs

Ongoing Compliance Requirements:

- Training Requirements – Employee Lists
- Updated Inventories of Outfalls, Post-construction bmps, Industries
- Semi-Annual Reports



Lessons Learned



**KEEP
CALM
AND
DOCUMENT
EVERYTHING**

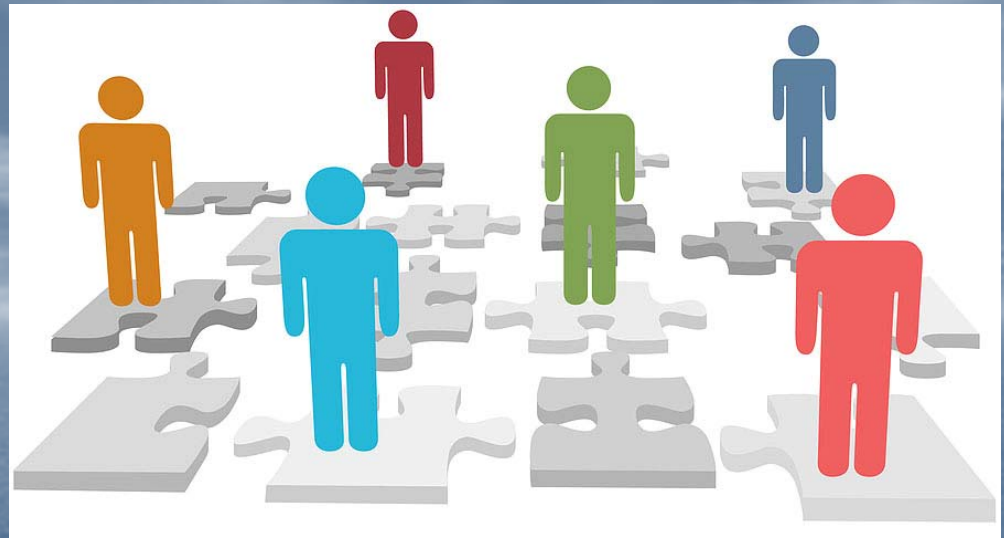
QA/QC DOCUMENTATION
TO ENSURE ACCURACY

- * Some findings pointed to contradictory, incomplete or inaccurate data/documentation

Adequate MS4 Resources

Pre-Audit 2.6 FTEs

Post-Audit 9 FTEs



9 FTE's include:

- Stormwater Program Manager
- Two Stormwater Program Supervisors
- MS4 Compliance Inspector
- Stormwater Program Construction Manager
- SWPPP Inspector
- Industrial/Commercial Business Inspector
- Post Construction/LID Planner
- Business License Specialist, Industrial Program

Coordinate often with City/County Agencies:

- Public Works Operations
 - Parks and Recreation
 - Planning & Development Services
 - Facilities Management
 - Fleet Management
 - Health Department
 - Library Services
 - Aging Services
 - Youth Services
 - County Contractors (Facilities, Operations)
 - Flood Control & Engineering
 - Solid Waste Management
 - Center of the Arts
 - Equestrian Center
- Request a designated Stormwater Program Point of Contact from each Department/Division Director (upper management)
 - Hold Monthly coordination meetings or as needed to ensure SWMP is being implemented and other compliance activities are being conducted and documented.

Other Lessons Learned:

- Document, Document, Document
- Support is needed from County/City Councils for additional resources
- Support from upper management is needed
 - Send out reminders for tasks to be completed- elevate to upper management if no response is being received.
- Pay now or pay later
- Don't take it personal – the audit identifies ways to improve your program
- Training stormwater personnel is critical
- A Compliance Dashboard is helpful (tracks inspections, trainings, etc.)
- Need for a stormwater compliance program/database (currently use County server/hard drive, Utilisync, beginning transition to VueWorks)
- Conduct Internal Audits
- Communicate often with Regulatory Agencies

Current Status of Program:

w/ additional resources

- UPDES Permit and Consent Decree Requirements are being met
- SWMP/SWPPPs/SOPs/other Agreements being implemented
- Stormwater Quality Ordinance 17.22 being implemented
 - Compliance Activities are on/ahead of schedule
 - Inspections/Enforcement
 - Trainings – developing on-line program
 - Stormwater Control Operation and Maintenance Activities
 - Documentation present
 - Updating Inventories as required
- The County Stormwater Program is currently encouraging Low Impact Development (LID) strategies for new developments (rain harvesting, infiltration, evapotranspiration) and is preparing for future UPDES/Post Construction LID requirements.

Questions?

Dan Drumiler, P.E.
Stormwater Program
Manager

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385-468-6640

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Stormwater Program
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385-468-6645

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