StormWater Pros, LLC

THE CALM BEFORE THE STORM



StormWater Pros, LLC

Storm water professionals combining years of storm water engineering with practical inspection and maintenance experience. We provide municipalities, owners, property managers, and developers a source for all storm water compliance and maintenance needs.



StormWater Pros, LLC

Our staff has experience on hundreds projects ranging commercial, industrial, and residential.

Our skill sets assist clients in their efforts, providing them with efficiencies, industry expertise, and professionalism.

PROFESSIONAL STAFF:

- Brig Christensen, President – E.I.T., Studying for CPSWQ
- Glen Millett, Arizona P.E.
- Amaron Merrill, CESSWI
- Cindy Johnson, Office Manager

National Storm Water Regulations:



- 1948 – CWA (Clean Water Act). Maintain integrity of US Waters. Controlled by the EPA.

- CWA requires MS4 or NPDES permit from municipalities. 1999 Phase I (Phoenix/Mesa), 2003 Phase II (All Others)

- SWMP (Storm Water Management Program).

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Storm Water Management Programs:



- CWA - two areas of focus:
  1. Construction Sites
  2. Post Construction Mgt.

- SWMP- Six areas of requirements:
  1. Public Education
  2. Public Participation
  3. Illicit Discharge Elimination
  4. Construction Site Runoff
  5. Post-Construction Runoff control
  6. Pollution Prevention

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NPDES Requirements For Facilities:

Facilites Under Rule:

- Industrial properties determined by SIC code. (ADEQ creating list)

- Facilities storing hazardous materials



Rule Requirements:

- MSGP (Multi-Sector General Permit)

- NOI (Notice of Intent with ADEQ)

- SWPPP (Storm Water Polution Provention Plan) if required in NOI

- SWMP (Storm Water Management Plan)

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Multi Sector General Permit:

- Submission of NOI to the ADEQ
- Determination if SWPPP is required
- If SWPPP is required, create SWPPP plan
- Create SWMP including employee training, spill prevention plan, quarterly inspection report, rain event inspections, sampling plan (if required)



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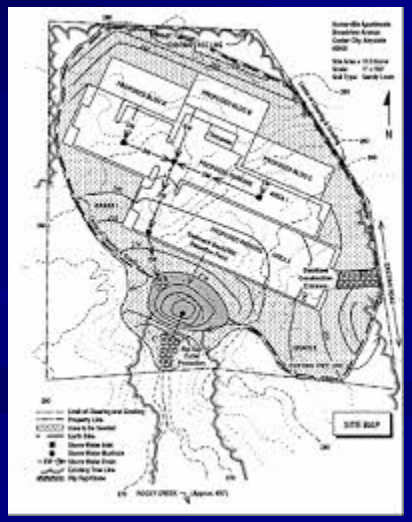
NPDES/MSGP ON SITE NEEDS:





<u>On Site SWMP Book/Binder:</u>

- Copy of NOI with ADEQ
- SWMP with site drainage plan
- Records of quarterly inspections
- Records of employee training
- MSGP requirements
- SWPPP (if required)

Those Responsible For:
ENFORCEMENT

- EPA has all federal jurisdiction and holds State DEQ's accountable (Air Quality Example)
- ADEQ is responsible for Statewide enforcement and oversees City/Town accountability
- ADEQ also enforces regulations directly with private sector
- Local City/Towns ensure contractor, facility, and owner compliance

Arizona Drainage Regulations:



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- 1978 – All storm water retained on site.
- All retention basins must drain storm water within 36 hours.
- Eliminate standing water, which allows mosquitoes to breed.
- Mosquitoes in Arizona can be infected with West Nile Virus.
- Need for site drainage plans and infrastructure maintenance.

The Need For Maintenance:



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- Prevent or minimize water quality impact
- Ensure the adequate long-term operation and maintenance (O&M) of BMP structures…**"PROTECTING THE OWNERS INVESTMENT"**
- Prevent landscape damage which leads to expensive repair
- Avoid non-compliance fines
- Prevent health and safety issues

SURPRISE
ARIZONA

EXAMPLE REGULATIONS POST-CONSTRUCTION INSPECTION & MAINT.

The Water Services Department is currently working on a post-construction runoff ordinance. The current ordinance, available in the City of Surprise Municipal Code Title 20, Chapter 15.20, requires that retention basins drain within a 36-hour period and that owners of drywells submit operation and maintenance (O&M) reports annually. Additional post-construction site ordinance development may include any or all of the following:

- Require storm water management plans….and maintenance programs, identifying responsible parties for the O&M program
- Expand the existing reporting requirements to include other storm water structures
- Assess penalties to owners of storm water structures who fail to properly maintain them in proper operational condition

Storm Water Annual Report

July 1, 2010- June 30, 2011

Please Submit to : City of Peoria

Public Works- Utilities, Wastewater Environmental Division
8401 W. Monroe St. Peoria, AZ 85345

Business Name: _____ Phone: _____

Facility Address: _____
(City) (Zip)

Name of Property Owner: _____ Phone: _____

Type of Business: _____

Please answer questions for the time period of July 1, 2010- June 30, 2011

1. Please indicate what types of storm water structures are located on your property.

Please check all that apply:

☐ Storm Water Basin ☐ Dry Well ☐ Subsurface Storage ☐ Drainage Ditch ☐ Drainage Pipe

☐ Drainage Grate ☐ Drainage Culvert ☐ Other: _____

2. Please indicate how often you inspect these structures.

☐ Weekly ☐ Monthly ☐ Quarterly ☐ Anually ☐ After a Rain Event

3. Please list most recent inspection date for any dry wells:

Last Inspection Date: _____

4. What type of maintenance have you performed in the last year?

Check all that apply: ☐ Trash Removal ☐ Sediment Removal ☐ Erosion Repair ☐ Re-vegetation

☐ Other: _____

	Y	N
5. Has there been any settling, cracking, or instability on slopes or bermed areas? Please list any maintenance activities performed:	☐	☐
6. Have any non-stormwater discharges occured in or near your storm water basin, drainage ditch, drainage pipe, drainage grate, drywell, etc.? Examples: pool drainage discharge, commercial carpet cleaning discharge, oil/grease, etc.	☐	☐
7. Is landscape near storm water structures preserved to minimize erosion? Please list any maintenance activities performed:	☐	☐

Our equipment and professional staff will provide you with desired results leaving you with a peace of mind.



Vactor Services

StormWater Pros, LLC



Video/Camera Inspections

VACTOR TRUCK CLEANING VIDEO



CCTV PIPELINE VIDEO



Storm Water Structures –

Design with Maintenance in Mind

Retention Basins



Headwalls



Street Scuppers



Drywells



Storm Water Structures-Cont'd

Culverts



Subsurface Storage

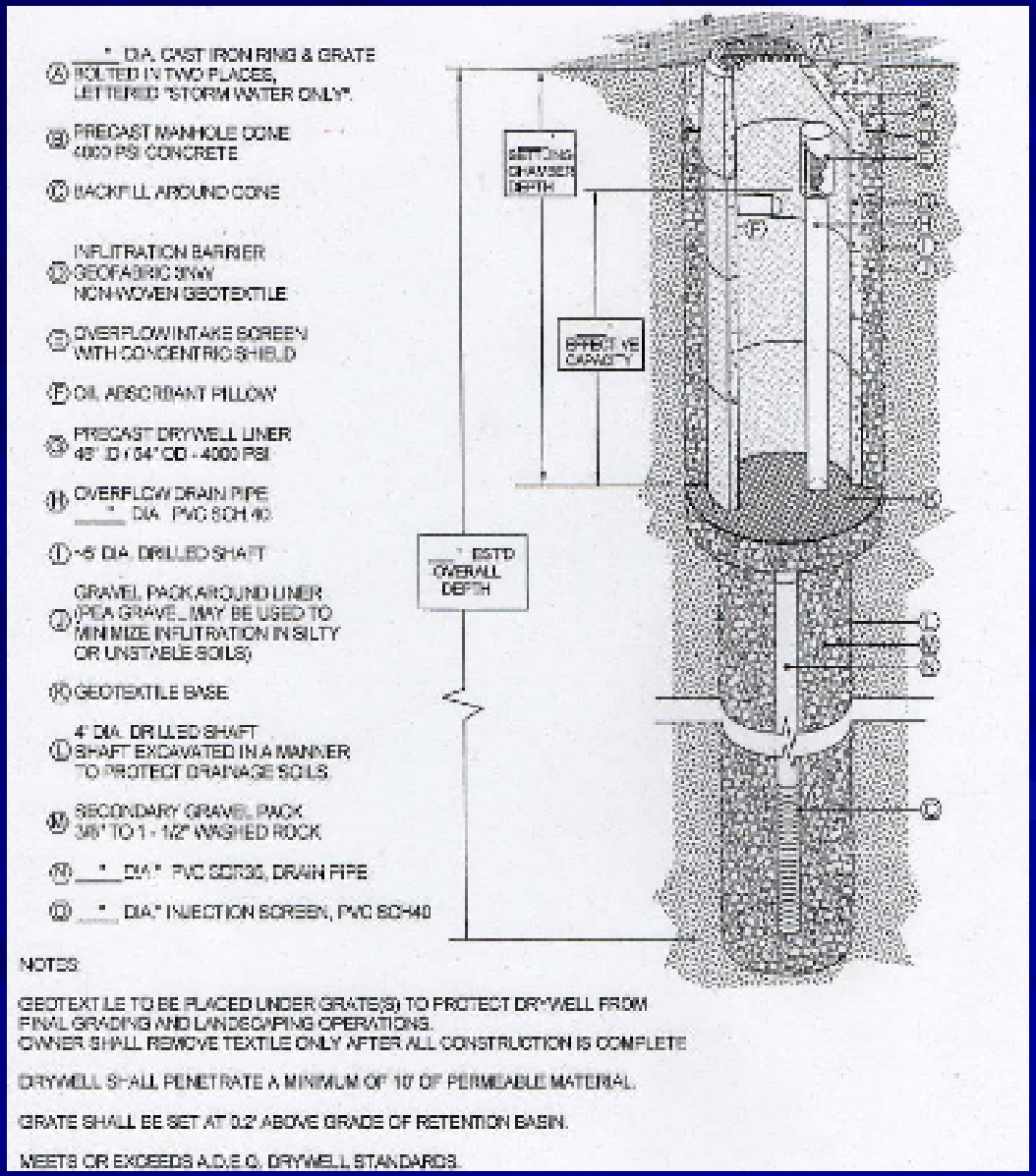


Catch Basins





Drywells-Single Chamber



NOTES:

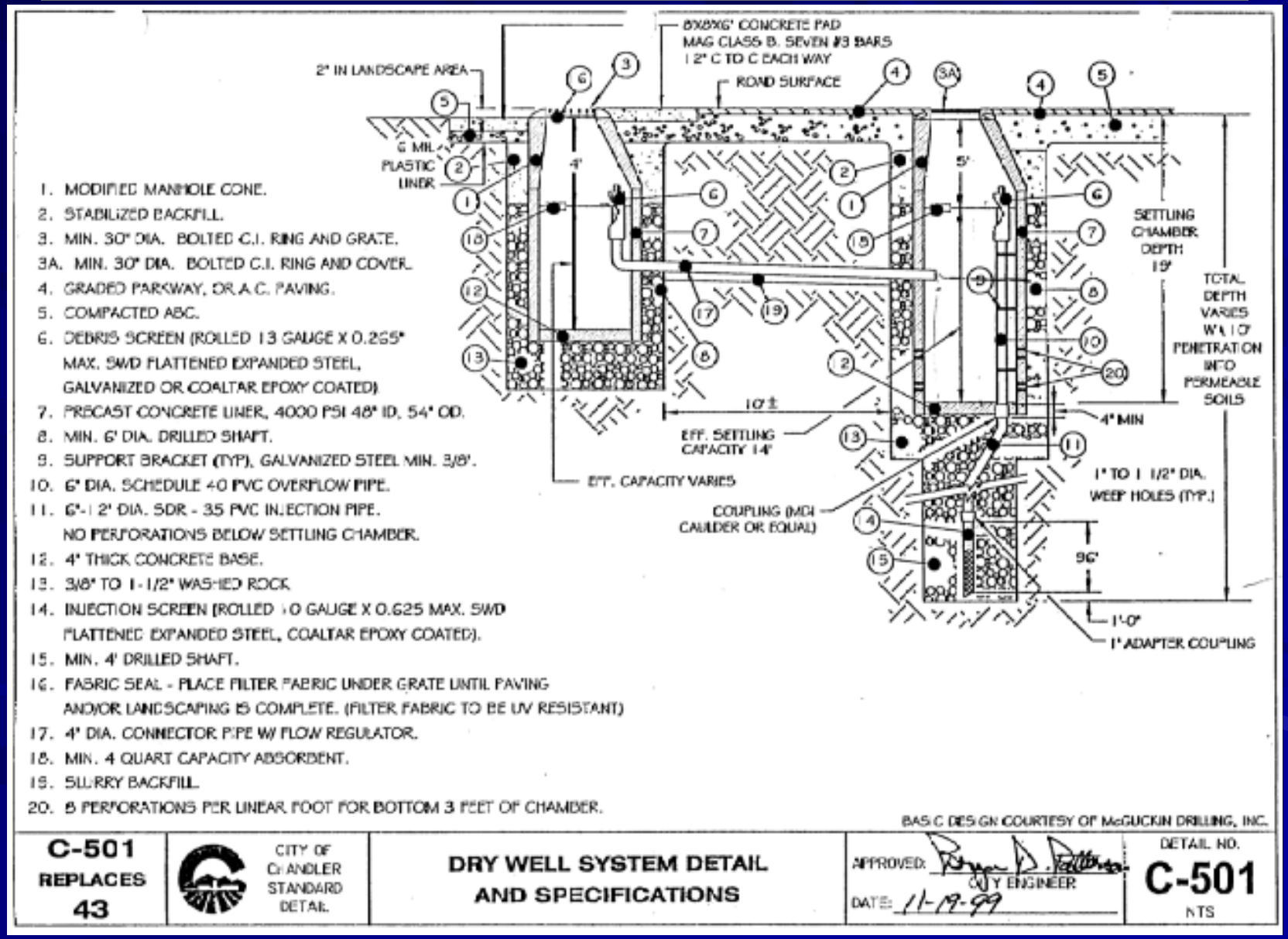
GEOTEXTILE TO BE PLACED UNDER GRATE(S) TO PROTECT DRYWELL FROM FINAL GRADING AND LANDSCAPING OPERATIONS.
OWNER SHALL REMOVE TEXTILE ONLY AFTER ALL CONSTRUCTION IS COMPLETE

DRYWELL SHALL PENETRATE A MINIMUM OF 10' OF PERMEABLE MATERIAL.

GRATE SHALL BE SET AT 0.2' ABOVE GRADE OF RETENTION BASIN.

MEETS OR EXCEEDS A.D.E.Q. DRYWELL STANDARDS.

Drywells-Dual Chamber



1. MODIFIED MANHOLE CONE.
2. STABILIZED BACKFILL.
3. MIN. 30" DIA. BOLTED C.I. RING AND GRATE.
3A. MIN. 30" DIA. BOLTED C.I. RING AND COVER.
4. GRADED PARKWAY, OR A.C. PAVING.
5. COMPACTED ABC.
6. DEBRIS SCREEN (ROLLED 13 GAUGE X 0.255" MAX. SWD FLATTENED EXPANDED STEEL, GALVANIZED OR COALTAR EPOXY COATED)
7. PRECAST CONCRETE LINER, 4000 PSI 48" ID, 54" OD.
8. MIN. 6' DIA. DRILLED SHAFT.
9. SUPPORT BRACKET (TYP), GALVANIZED STEEL MIN. 3/8".
10. 6" DIA. SCHEDULE 40 PVC OVERFLOW PIPE.
11. 6"-12" DIA. SDR - 35 PVC INJECTION PIPE. NO PERFORATIONS BELOW SETTLING CHAMBER.
12. 4" THICK CONCRETE BASE.
13. 3/8" TO 1-1/2" WASHED ROCK
14. INJECTION SCREEN (ROLLED 10 GAUGE X 0.625 MAX. SWD FLATTENED EXPANDED STEEL, COALTAR EPOXY COATED).
15. MIN. 4' DRILLED SHAFT.
16. FABRIC SEAL - PLACE FILTER FABRIC UNDER GRATE UNTIL PAVING AND/OR LANDSCAPING IS COMPLETE. (FILTER FABRIC TO BE UV RESISTANT)
17. 4" DIA. CONNECTOR PIPE W/ FLOW REGULATOR.
18. MIN. 4 QUART CAPACITY ABSORBENT.
19. SLURRY BACKFILL.
20. 8 PERFORATIONS PER LINEAR FOOT FOR BOTTOM 3 FEET OF CHAMBER.

BASIC DESIGN COURTESY OF McGUCKIN DRILLING, INC.

C-501 REPLACES 43	CITY OF CHANDLER STANDARD DETAIL	DRY WELL SYSTEM DETAIL AND SPECIFICATIONS	APPROVED: CITY ENGINEER DATE: 11-19-99	DETAIL NO. C-501 NTS

Maintenance Pictures

Before



After



Before



After



RIP RAP CLEANING VIDEO



Maintenance Pictures – Cont'd

Before



After



Before



After





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Site Engineering Help!!!

Ponding may be caused by clogged systems or design issues. StormWater Pros can provide engineering services that get your property draining correctly.

SITE ENGINGEERING & RETROFIT: DRAINAGE CONTRACING





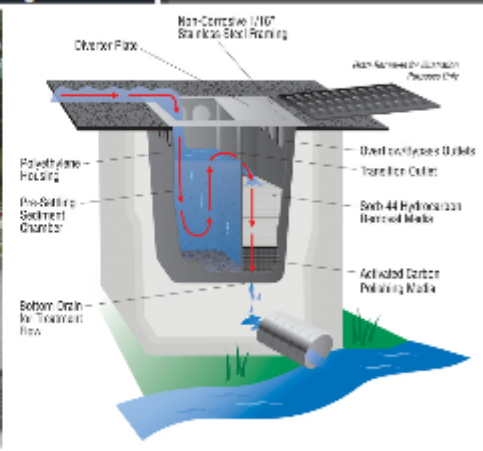


- Site Drainage Evaluations
- Engineering including City Coordination
- Drainage System Installs Including Drywells
- Drywell Rehabilitation
- Retention Basin Grading And Much More

Stormwater Management & Construction Products

Ultra-HydroKleen





Part# 9470 - 9475, 9478

Ultra-Filter Sock



Part# 9453 - 9456

Ultra-Drain Guard



Part# 9217 & 9256

StormWater Pros, LLC

UltraTech International, Inc.

Also Available

Spill Containment Products



UltraTech International, Inc.

StormWater Pros, LLC

StormWater Pros, LLC
Brig Christensen
(480) 620-2517
brig@stormwaterprosllc.com
www.StormWaterProsLLC.com

Additional Services:

StormWater Pros, LLC

Dust Control





Erosion Control



Private Sewer Cleaning

Eco-Smart™

Let Us Answer Your ??? Questions ???







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