Chain of Events

- 2-3 Week Notification (PGEnv, ADEQ)
- Internal Meetings and Preparation
- 2 Day Audit / Informal Findings
- Formal Findings
- Response to Findings and Proposed Corrective Action
- Response to Corrective Action
Proposed Schedule for MS4 Program Evaluation of the City of Tempe, AZ
March 7-8, 2012

<table>
<thead>
<tr>
<th>Day</th>
<th>Time</th>
<th>Program Areas/Agenda Items</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wednesday</td>
<td>7:00 am</td>
<td>Kick-off Meeting &amp; Program Management Overview</td>
</tr>
<tr>
<td></td>
<td>9:00 am</td>
<td>Public Awareness and Public Involvement Activities</td>
</tr>
<tr>
<td></td>
<td>9:30 am</td>
<td>MDE and Industrial-Commercial</td>
</tr>
<tr>
<td></td>
<td>11:00 am</td>
<td>Specifically, industrial inspections, select infrastructure inspections, and industrial commercial facility inspections (Office)</td>
</tr>
<tr>
<td></td>
<td>12:00 pm</td>
<td>Lunch Break</td>
</tr>
<tr>
<td></td>
<td>1:00 pm</td>
<td>Team A - Municipal Facility, Retention, Common, Recreation, and Open Areas Programs, and Streets (Office)</td>
</tr>
<tr>
<td></td>
<td>2:00 pm</td>
<td>Team B - Industrial/Commercial Facility Inspections and Outfall Inspections (Field)</td>
</tr>
<tr>
<td></td>
<td>3:00 pm</td>
<td>Lunch Break</td>
</tr>
<tr>
<td></td>
<td>4:00 pm</td>
<td>Closing Conference</td>
</tr>
</tbody>
</table>

The City is encouraged to invite representatives from all applicable organizational divisions/departments.
Audit Emphasis

- General Program Evaluation (SWMP)
- Public Outreach
- IDDE
- Construction
- Post Construction
- Municipal Facilities
- Industrial Commercial Programs
City of Tempe, Arizona
STORMWATER MANAGEMENT PLAN

Prepared by the City of Tempe
Public Works Department, Water Utilities Division
Environmental Services Section

As prescribed by
AZPDES Permit No. AZ0000005-2010 Appendix C

January 2012
Updated December 2012
Program Findings

11 “Notable” Program Elements
- Effective program with management support
- Inspection program (pretreatment approach)
- Appropriate delegation of responsibilities
- Household Product Center
- Fats, oil, grease programs
- Program SOPs
- Etc.

4 Program Deficiencies
- Dry Weather Screening Triggers
- Municipal facilities ranking criteria
- Private construction BMP adequacy and appropriateness
- Municipal facilities pollution prevention
Dry Weather Screening
Dry Weather Screening

Dry Weather Screening Deficiency

- Disconnect between triggers and forms
- Lack of detailed SOPs

Corrective Action

- Development of IDDE Manual
  - Clear, concise, comprehensive, relevant.
- Training
### Dry Weather Screening

**Field Screening**

<table>
<thead>
<tr>
<th>Parameter/Analyte</th>
<th>Method*</th>
<th>Trigger*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Color</td>
<td>Visual</td>
<td>“Off-Color”</td>
</tr>
<tr>
<td>Odor</td>
<td>Olfactory</td>
<td>Chemical, gas, sulfur, etc.</td>
</tr>
<tr>
<td>Clarity</td>
<td>Visual or Field</td>
<td>Highly Turbid</td>
</tr>
<tr>
<td>Floatables/Oil</td>
<td>Visual</td>
<td>Presence of solid or liquid floatables or sheen</td>
</tr>
<tr>
<td>Stains/Deposits</td>
<td>Visual</td>
<td>Presence</td>
</tr>
<tr>
<td>Biological Growth</td>
<td>Visual</td>
<td>Excessive growth, death, etc.</td>
</tr>
<tr>
<td>Temperature</td>
<td>Field</td>
<td>Hot or cold compared to ambient</td>
</tr>
<tr>
<td>pH</td>
<td>Field</td>
<td>&lt; 6.5 or &gt;9 S.U.</td>
</tr>
<tr>
<td>Total Chlorine</td>
<td>Field</td>
<td>&gt;0.02 ppm, &gt;4 ppm, depending on SWQS</td>
</tr>
<tr>
<td>Copper</td>
<td>Field</td>
<td>Presence</td>
</tr>
<tr>
<td>Phenol</td>
<td>Field</td>
<td>Presence</td>
</tr>
<tr>
<td>Detergents</td>
<td>Field</td>
<td>Presence</td>
</tr>
</tbody>
</table>

*Methods and Triggers are detailed in Tempe program guidance documents.
## Construction

<table>
<thead>
<tr>
<th>Construction Program Deficiency</th>
<th>Corrective Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Inadequate, inappropriate, inconsistent use of BMPs</td>
<td>- Design Criteria Manual revised</td>
</tr>
<tr>
<td>- Lack of BMP Design Standards (erosion and sediment control)</td>
<td>- Reference to FCDMC Drainage Design Manual</td>
</tr>
<tr>
<td></td>
<td>- Training</td>
</tr>
<tr>
<td></td>
<td>- Internal drainage channels to maximize on-site retention</td>
</tr>
<tr>
<td></td>
<td>- Review SWPPP for consistency with Tempe controls</td>
</tr>
</tbody>
</table>
Construction
Municipal Facilities

- Lack of focus on:
  - material location
  - pollutant load from sediment
  - runoff from equipment storage or material
  - housekeeping

Corrective Action
- Updated program criteria
- Specific BMPs for like facilities (permanent and temp.)
- Increased inspections
- Significant facility upgrades
- Emphasis on housekeeping
- Training
Staining

BMPs
- Dedicated Equipment Storage
- Posted Spill Procedures
- Use of Oil Pans
- Immediate Spill Clean-Up
- Training
- Inspections
- Removal of Old Equipment
- Usable Spill Kits
- Vehicle / Equipment O&M

Waste Oil Funnel

Oil Pan
Washing Activities

Area for washing activities

Water from washing activities
Washing Activities

- Drainage to Sanitary Sewer
- Dedicated Washing Area
- Use of Non-Water Alternatives
- Eliminate Run-off
- Training

BMPs
Material Storage
Material Storage

BMPs

Use of Containment Berms    Routine Sweeping
Signage                    Immediate Cleanup of Spills
Dedicated Storage Bins      Training
Housekeeping

Grass clippings

Soil on sprinkler heads
Housekeeping

- Dedicated and Covered Storage
- Remove Waste Products and Old Equipment
- Sweeping
- Immediate Spill Clean-up
- Routine Facility Inspections
- Training
- Proper Chemical Storage
- Routine Facility Cleaning
Conclusion

- Work toward deficiency prevention
- Preparation
- Recognize resource needs (time, financial, and staffing)
- Internal (and external) dialogue and support required
- Work with ADEQ
  - Audit and subsequent correspondence with ADEQ provide value to Tempe’s program
  - Corrective action focus vs. enforcement
Questions?

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jeremy_mikus@tempe.gov