



SWPPP's...

# Pre-construction and Planning Phase

Presented by ... Kevin Stumpff



# Quick Show of Hands...

- How many of you have responsibilities that included Dust and SWPPP?
- How many of you are the "Go To" person in your company for compliance for SWPPP?
- How Many of you LOVE SWPPP compliance?



# What's Not to Love???

- Who doesn't like to spend Money?
- Paperwork!
- Time Consuming!
- Seems like a great program for a Desert, right?
- Fear!



# A Little About Me

- Kevin Stumpff - President - Co-Founder
- 15 Years experience in Enterprise Level Information Technology and 10 Years in C-Level Business Management and Business Culture Change
  - What??? Why is this guy talking about SWPPP???
- Entered the SWPPP Market in 2003
  - Early days of Phase II of the Clean Water Act
- Performed SWPPP Implementation and Installation as a subcontractor.
- Over the next seven years .....



# My Discovery Process

- Over the next Seven Years, through problems we identified in the sub-contracting of SWPPP, we identified many issues “Procedurally” with how SWPPP was handled.
- In March of 2010, we discontinued sub-contracting and founded Cloud Resources, LLC to focus on these issues specifically.



# A Little About Cloud Resources

- Cloud Resources works with Regional and National General Contractors as well as Owner/Developer Groups who are in the position of having to comply with Phase II of the Clean Water Act.
- We specialize in Enterprise Level Environmental Program Development.
- We have developed proprietary systems that help companies identify weaknesses, set courses for improvement, and continuously monitor their SWPPP program.
- How good is your Safety program? How do you know?
  - Measurements, Ratings, EMOD, Trainings, Etc....
- How good is your SWPPP program? How do you know?



# What's This Preso About???

- We do a lot of Assessments...The vast majority of projects we see, go something like this....
  - Owner/Developer has a desired goal or purpose for a project.
  - Architect designs the project to meet these goals while complying with P&Z and applicable building codes.
  - Somewhere along the way, the civil work is completed and usually a SWPPP Map Exhibit Sheet is created and attached to the civil designs.
  - In many cases, this is enough to suffice P&Z.



# More about the typical process...

- The project is now sent out for bid.
- Estimators calculate SWPPP quantities to either be performed internally or subcontracted.
- Contractors submit bids.
- Project is awarded.
- Project responsibilities are assigned internally for implementation.
- Onsite Construction Process Begins...etc.





So...The Big Question...

What part of this  
process is "Broken?"



...The Answer...

It's "Broken" All Over  
the Place!!!

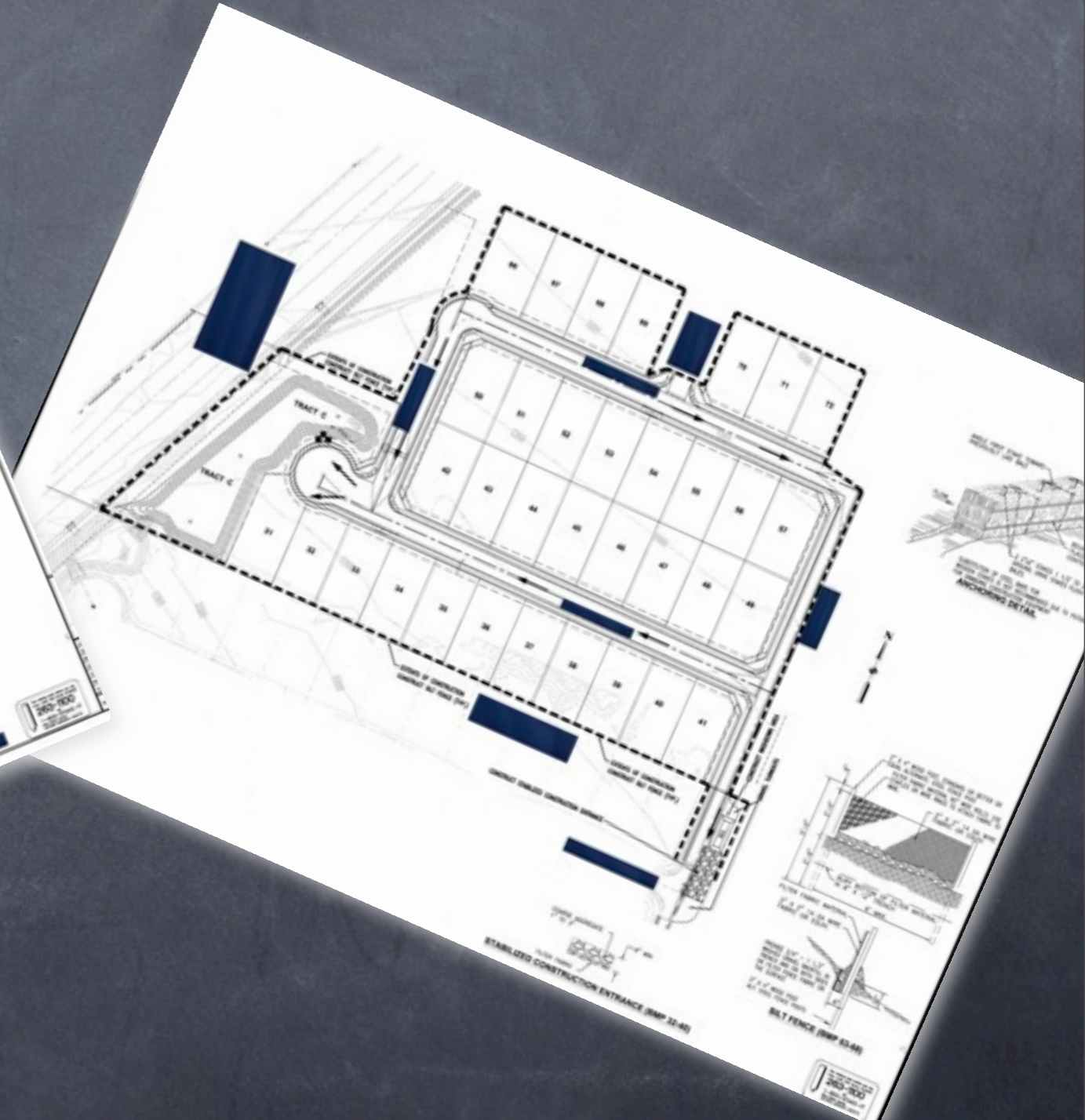
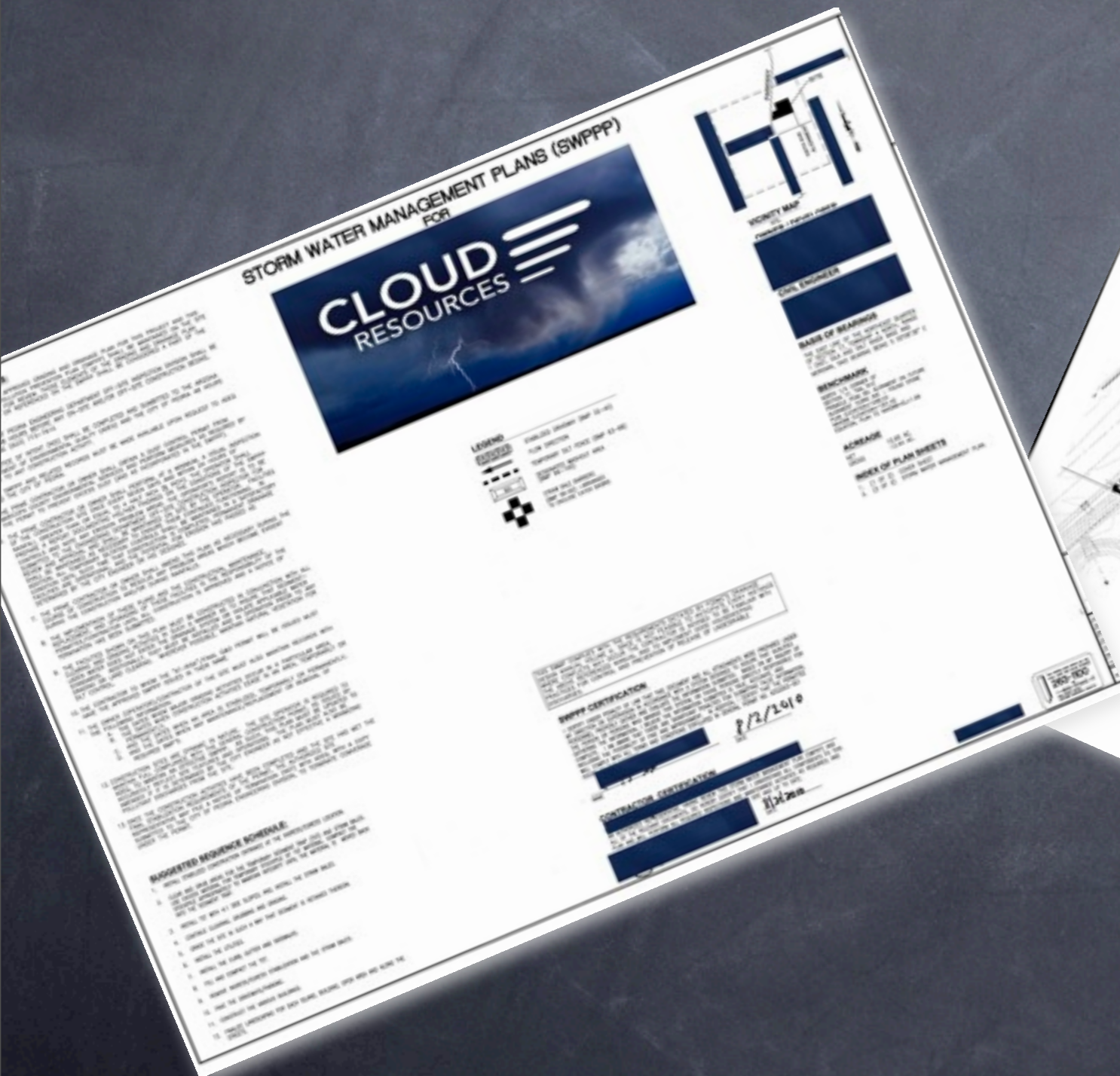


# It's Not Your Fault!

- Because there are actual materials, labor, etc. for SWPPP, it has fallen into the standard contracting system.
- Now that you know, we can target your internal processes to ensure you have a compliant SWPPP prior to construction.



# False Sense of Compliance....





# Thanks ADEQ!

Permit Citation	Description
<b>OPERATOR RESPONSIBILITIES</b>	
Part 6.B.1.a	Identify who is responsible for on-site SWPPP implementation
Part 6.B.1.b	Identify or show the areas of the project where the operator has control over project specifications, including the ability to make changes in specifications
Part 6.B.1.c	Provide name(s) of the person(s) who have day-to-day control over construction plans and specifications
Part 6.B.1.d	Identify who is responsible for installing, implementing, and maintaining the BMPs in the plan
Part 6.B.1.e	Identify or show the areas of the project where each operator has control over day-to-day activities
Part 6.B.1.f	Provide name(s) of the person(s) having control over project specifications, including the ability to make changes in specifications
Part 6.B.1.g	Provide the name and contact information for all operators and indicate the areas of the project each operator controls
<b>PROJECT DESCRIPTION</b>	
Part 6.C.1	Identify all potential sources of pollutants/pollution from construction activities that could possibly contact stormwater
Part 6.C.2	Describe the construction activity (what is being built, what is being disturbed, how long it is expected to take, etc.)
Part 6.C.3	Describe the project and what it will be used for when completed (other than for Termination (NOT) in final)
Part 6.C.3.a	Describe the planned clearing or disturbing of land disturbance activities. The amount of open/disturbed dirt left open at one time should be minimized where possible
Part 6.C.3.b	Indicate the total acres of the site and number of acres that will be disturbed (include off-site borrow and fill area, staging and equipment storage areas)
Part 6.C.3.c	Indicate the percentage of the site that is impervious (e.g., paved, roofed, etc.)
Part 6.C.3.d	Describe the soil (e.g., sand, clay, etc.) at the site and its potential for erosion (reference the soil survey covering the project site prepared by the U.S. Department of Agriculture, Natural Resources Conservation Service for soil information)
Part 6.C.3.e	Include a map showing the project location (e.g., U.S.E.C. quadrangle, portion of a city or county map). The map must also show any washes or other waterbodies within 1 mile of the site
Part 6.C.3.f	Identify the nearest receiving water(s). A receiving water is natural watercourse into which stormwater would flow in a storm event and includes dry washes, streams, tributaries, and other waters of the U.S. (such as designated canals). Man-made structures such as retention basins, storm sewer systems, or city storm drains are not receiving waters.
Part 6.C.4	Identify the areas where soils may be disturbed and show any washes near the site that could receive dirt or run-off from the construction activity
Part 6.C.4	Identify the areas where dirt is moving (e.g., dedicated concrete and asphalt plants, fueling operations, material or waste storage etc.) that are associated with the construction project. Identify where these sources are or will occur on site
Part 6.C.5	<b>NOTE MAP (note multiple maps may be used) All the</b>
Part 6.C.5	Include a site map completed to scale
Part 6.C.5.a	Use arrows to show the direction(s) where stormwater will flow for all areas within the project limits (200' x 200') for the period during construction, not final contours. Flow direction may change as project grading progresses, when this occurs, maps are to be updated.
Part 6.C.5.b	Show areas of soil disturbance
Part 6.C.5.c	Show all structural BMPs identified in the SWPPP
Part 6.C.5.d	Show locations where stabilization BMPs are expected to occur
Part 6.C.5.e	Show locations of on-site material storage, waste storage or recycling, borrow areas, equipment storage or other supporting activities
Part 6.C.5.f	Identify any water bodies (including dry washes and wetlands) on the site. If there are no water bodies, indicate this on the map
Part 6.C.5.g	Show municipal storm sewer systems (MS4s) (use an "X" to indicate discharge locations). Where surface waters and/or MS4s receiving stormwater do not fit on the map, use arrows to show the direction and indicate the approximate distance to the surface water and/or MS4
Part 6.C.5.h	Show the location and registration number of all open dry wells and dry wells located on adjacent properties (national source stormwater do not fit on the map)
Part 6.C.5.i	Show the location and registration number of all open dry wells and dry wells located on adjacent properties (national source stormwater do not fit on the map)
Part 6.C.5.j	Show the location and registration number of all open dry wells and dry wells located on adjacent properties (national source stormwater do not fit on the map)
Part 6.C.5.k	Identify any areas of the site where final stabilization has been achieved
Part 6.C.5.l	Identify any areas of the site where final stabilization has been achieved
Part 6.C.5.m	Identify any areas of the site where final stabilization has been achieved
<b>BMP (Best Management Practices) REQUIREMENTS</b>	
Part 6.C.5.n	Identify BMPs selected for the site and describe how each will reduce pollutants to downstream
Part 6.C.5.o	Describe how BMPs will be added, modified, or replaced for each phase or sequence of construction activities. Also, identify which operator is responsible for the implementation of BMPs.
Part 6.C.5.p	Provide drawings and/or specifications of structural BMPs that include design or installation details

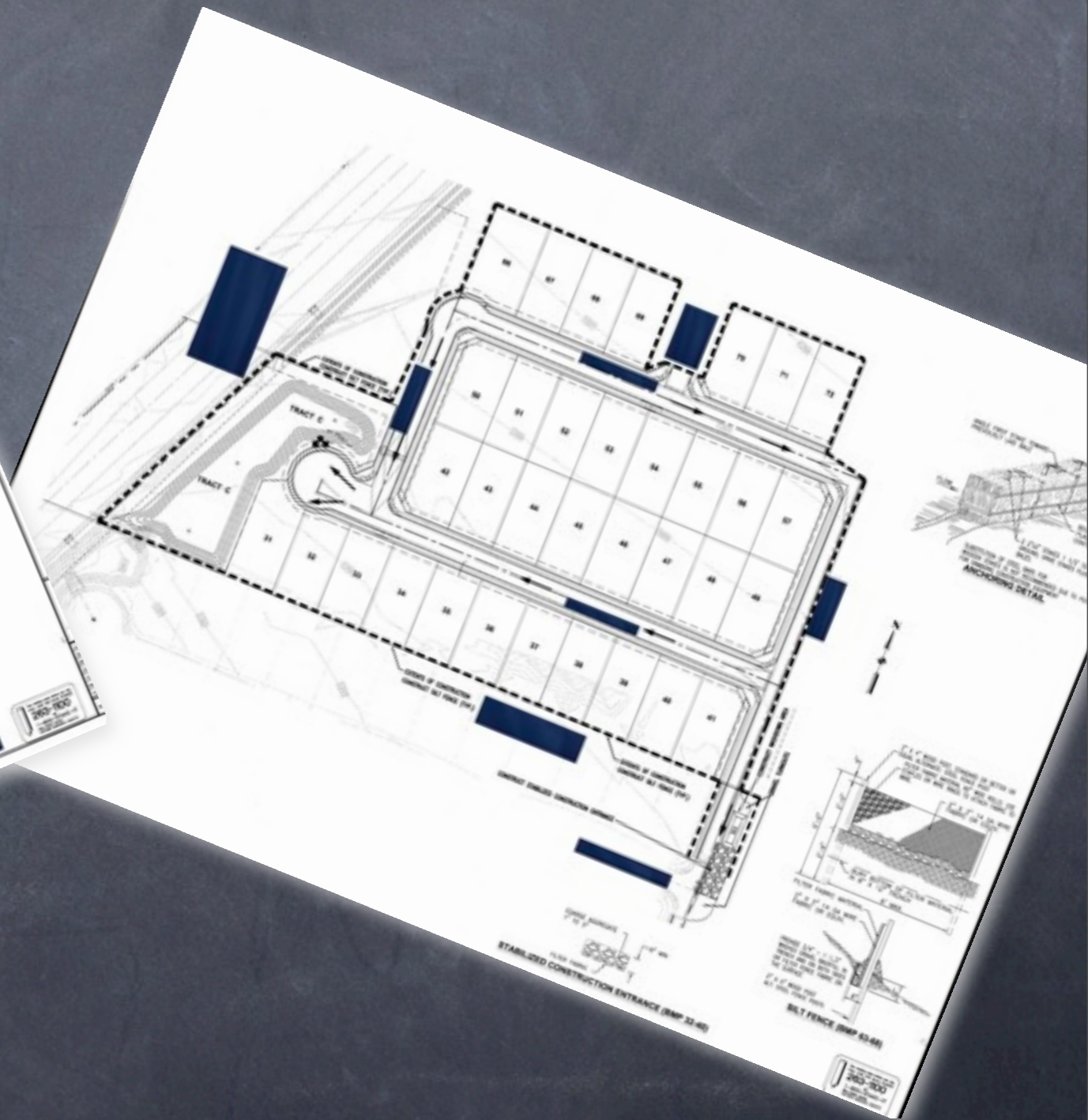
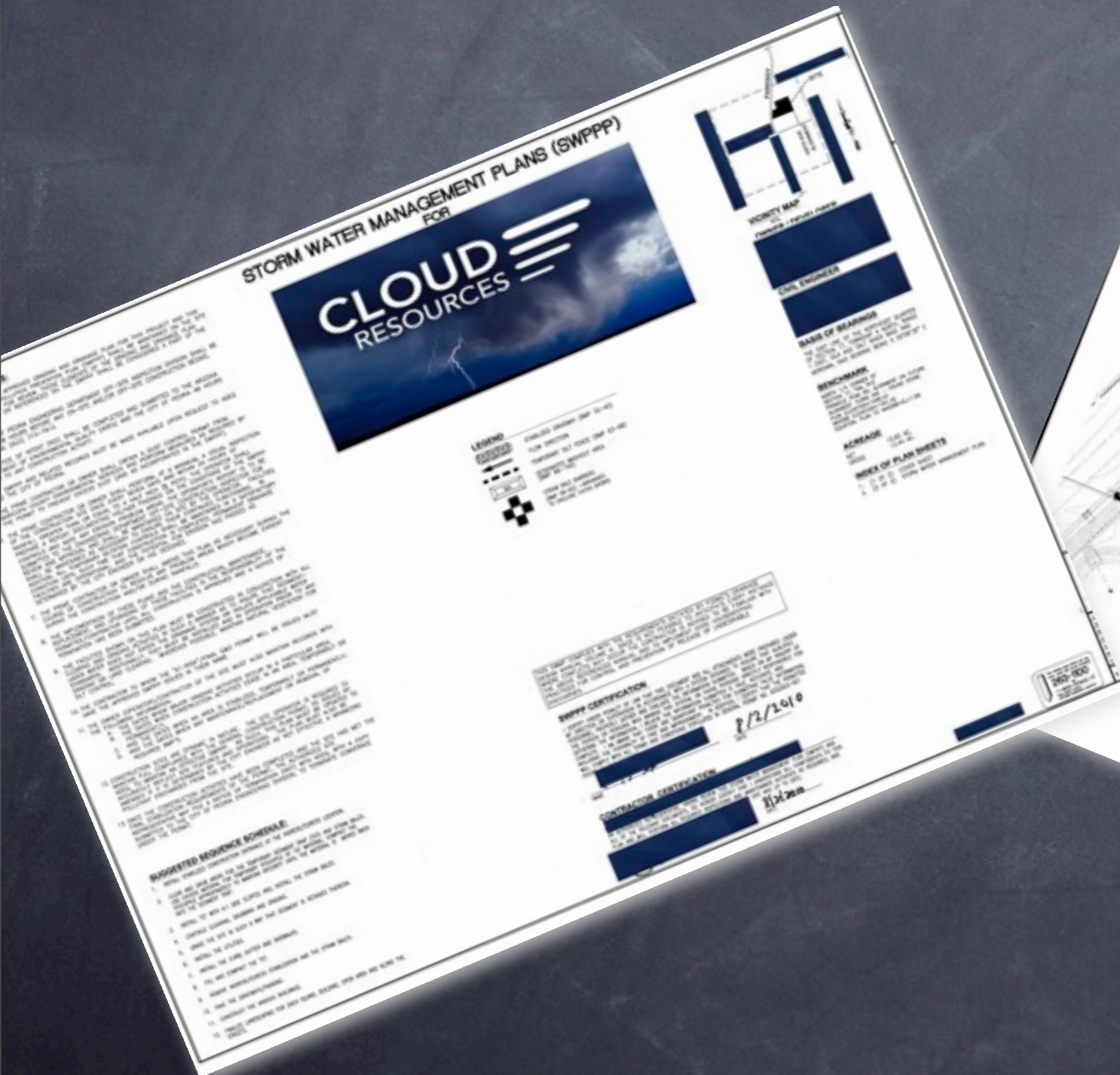
Part 6.B.1.a	Describe where natural/existing vegetation will be preserved. Locations of trees and boundaries of environmentally sensitive areas and buffer zones to be preserved are also to be on the SWPPP site map
Part 6.B.1.b	If using seed to revegetate, provide the mixture and application specifications. (These may be obtained from product provider)
Part 6.B.1.c	If culverts are present on-site, describe measures that will be used to remove erosion at and around the culvert(s)
Part 6.B.1.d	Describe how off-site stormwater that has run onto the project site will be diverted or otherwise managed with on-site engineering controls, containment, or BMPs
Part 6.B.1.e	Identify how records of dates when major grading
Part 6.B.1.f	Identify how records of when construction activities temporarily or permanently cease on all portions of the site will be kept
Part 6.B.1.g	Identify how records of when stabilization measures are initiated and completed and reasons for delay will be kept
Part 6.C.3	Provide flow criteria and show calculations for sediment basins and indicate whether basins will be temporary or permanent (i.e., post construction)
Part 6.C.3	Provide reports or rationale why a sediment basin was determined to
Part 6.C.3	Describe the location(s) and how materials will be stored or staged both on-site and off-site, including overburden, soil, dewatering, and borrow areas
Part 6.C.3	Identify and provide the location(s) of all non-stormwater discharges allowed by this permit expected to be associated with the project and describe BMPs used to minimize discharge of pollutants
Part 6.B.3	Describe measures for preventing and responding to spills, including spill notification requirements
<b>POST</b>	
Part 6.C.2	Identify post-construction stormwater BMPs (e.g., porous pavement, open space preservation, etc.) that will be installed as part of this project. Note: temporary BMPs (e.g., clean walkways, etc.) must be removed prior to submitting your Notice of Termination
<b>INSPECTIONS</b>	
Part 6.A.4	Identify the minimum inspection frequency as well as goals for more frequent inspections
Part 6.A.4	Provide name, title, and qualifications of person(s) who will be conducting inspections
Part 6.A.4	Describe how inspection of the following items will be conducted:
Part 6.A.4	Good housekeeping BMPs (e.g., solid waste storage and pickup, chemical storage use, and cleanup, fueling, etc.)
Part 6.A.4	Erosion and sediment control BMPs
Part 6.A.4	Construction site entrance and egress location(s) including loading for evidence of sediment, debris, and other pollutants tracked offsite onto paved surfaces (e.g., streets, sidewalks, parking lots, etc.)
Part 6.A.4	Municipal storm sewer systems, including streets, inlets, etc. which can be observed at ground level. Should focus on discharge point potential for discharge and accumulation of sediment, trash, and other pollutants
Part 6.A.4	Observation and assessment of accessible discharge locations to determine if erosion control BMPs are adequate and effective in reducing discharge of sediment
Part 6.A.4	For discharge points that are inaccessible, inspection of downstream locations should occur, where practicable
Part 6.A.4	Describe how inspections will be documented (note: inspection reports must be added to the SWPPP in chronological order, Permit Part 6.A.4)
Part 6.A.4	Describe procedures for repairing, replacing, and/or supplementing nonfunctional and underperforming BMPs (see Permit Part 6.A.4)
<b>INSPECTION REPORT</b>	
Part 6.A.4	Provide a copy of the inspection report form to be used to document site inspections. At a minimum, the report form must include the following information (note, an example form is provided in the permit and may be used to satisfy this permit requirement):
Part 6.A.4	Date of inspection
Part 6.A.4	Name and title of person(s) conducting the inspection
Part 6.A.4	Information about weather conditions since the last inspection, including: best estimate of the beginning and end of each rain event, time elapsed since last rain event, and approximate amount of rainfall for each event (in inches)
Part 6.A.4	Locations where sediment and other pollutants are or were discharged from the site
Part 6.A.4	For inspections conducted while stormwater can be observed discharging from the site, provide a description of the physical characteristics (e.g., presence of suspended sediment, turbid water, discoloration, oil sheen, etc.)
Part 6.A.4	Location and identification of BMPs that need to be maintained, failed to operate, or proved inadequate
Part 6.A.4	Location(s) where additional BMPs are needed that did not exist at the time of inspection
Part 6.A.4	Identification of all sources of non-stormwater and the associated pollution prevention control BMPs
Part 6.A.4	Identification of material storage areas and evidence of or potential for pollutant discharge from such areas
Part 6.A.4	Corrective actions required, including any changes to SWPPP necessary, and implementation dates (of corrective actions/maintenance, and SWPPP changes)

Permit Citation	Description
<b>ADMINISTRATIVE</b>	
Part 6.A.3	Ensure the SWPPP is signed by a person meeting the certification requirements of Permit Part 6.A.3
Part 6.A.3	Include a copy of the completed SWPPP form that was submitted to ADEQ
Part 6.A.3	Include a copy of the authorization certificate received from ADEQ
Part 6.A.3	Identify any city or county which retained a copy of the authorization certificate
Part 6.A.3	Include copies of other agreements with any state, local or federal agencies that would affect the provisions or implementation of the SWPPP, if applicable (e.g., permits, etc.)

16 correct out of 57 = about 30% compliant



16 out of 57  
28.07% Compliant





# Jurisdictional Issues...

Federal Regulations / EPA



State Regulations



County Requirements



City and town Requirements



Owners, developers, contractors



# Real Life Example...

Developers, General Contractors and Home Builders must navigate through layers of storm water (26 jurisdictions).

## Federal Regulations / EPA

Regions: 9, 10, 4

## State Regulations

Arizona Department of Environmental Quality, California Water Board Regions (3,5,7,8), Florida Department of Environmental Protection, Washington Department of Ecology

## County Requirements

Pinal, Maricopa, King, Thurston, Riverside, San Luis Obispo, Volusia, Solano, Contra

## City and Town Requirements

Deland, Queen Creek, Redmond, Lacey, Rio Vista, Brentwood, Nipomo, Glen Ivy, La Quinta, Peoria



# SWPPP Policy





# So Now What???

## From 30,000 Ft...

- It's time to change the mindset from Project Based to Program Based.
- Employ either full time employees or consultants who not only understand SWPPP compliance, but also enterprise culture change and program implementation.



# Set Enterprise Compliance Goals...

- Set Quantifiable Compliance Goals which means you need a way to measure compliance.
- Implement technology and eliminate "Data Silos"
- Engage agents of your company (employees, subcontractors, etc.) in classroom and onsite training.
- These steps, although challenging, will allow you to measure and continually improve your compliance. (Reduced Risk, Cost Savings, Etc)



# From a Project Perspective...

- Ensure that you are provided with a SWPPP Book not simply SWPPP Exhibits!!!
  - Identify all potential sources of pollution
  - Identify, describe and ensure the implementation of appropriate BMPs
  - Assure compliance with the terms and conditions of the AZPDES Permit.
  - Identify the responsible party for on-site SWPPP implementation.
  - Complete Scale and Legible SWPPP Exhibits that meet AZPDES requirements.



# We're gonna need some signatures?

- All Operators must sign and certify the SWPPP.
- Sub-Contractors are encouraged to sign the SWPPP
- Designate and note the person responsible for implementation of the SWPPP
- Designate and Note the person responsible for routine inspections.
- COMPLETE and SUBMIT the NOI





# Who Signs?

- Corporations – A responsible corporate officer (president, vice president, etc.) someone in charge of a principal business function of the corporation ... Or
- Manager of the facility, branch or operation (authorized to make major capital investment recommendations)
- Partnerships or sole proprietorships – A general partner or owner
- Municipalities – Principal officer, elected official or executive officers





You need to Plan for  
Both Erosion and  
Sediment Control.

# Erosion Control

- Erosion occurs when soil particles are displaced by raindrops, moving water, or wind.
- Erosion Controls either minimize, protect, or prevent the soil particles from detaching and begin moving.





# Sediment Control

- Once the soil particles enter water or wind systems, sediment controls are used to control the amount of sediment is transported.







# Erosion Control BMPS

- Phasing Construction Activities
- Preservation of Vegetative Buffers and Protecting Sensitive Areas
- ECMs and TRMs
- Temporary mulching / soil stabilizers
- Temporary / Permanent Seeding and Landscaping





# Sediment Control BMPs

- Stabilized Construction Exit
- Perimeter Sediment Control BMPs (one line)
- Storm drain inlets protection BMPs
- On-site dry well inlet protection BMPs
- Concrete, Paint, Stucco Washouts





# Velocity Control

- Rip Rap
- Swales
- Check Dams





# Structural vs. Non-Structural BMPS



# Non-Structural BMPS

- Routine Inspections and Maintenance
- Good Housekeeping
- Training
- Project Phasing
- Etc.



# Other Important Issues...

- Section 404 Waterways - "Navigable" waterways of the US. Includes ephemeral washes and tributaries of US Waterways.
- Section 303 - Impaired Waterways - Special Regulations Apply
- Section 401 - Unique Waterways - Special Regulations Apply
- Endangered Species - Special Regulations Apply



# Questions?

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