

APPENDIX A – GLOSSARY

303(d) List is a list of water bodies that have a beneficial use but are impaired by one or more pollutants. The 303(d) list is required by Section 303(d) of the federal Clean Water Act (CWA). Water bodies included on this list are referred to as “impaired waters.” The state must take appropriate action to improve impaired water bodies, such as development of Total Maximum Daily Load (TMDLs).

Analytical monitoring refers to monitoring of waterbodies (streams, ponds, lakes, etc.) or of storm water, according to [40 CFR § 136](#) “Guidelines Establishing Test Procedures for the Analysis of Pollutants,” or to state- or federally-established protocols for biomonitoring or stream bioassessments.

Aquatic Resource Alteration Permit (ARAP) means a permit issued by the Tennessee Department of Environment and Conservation, Division of Water Pollution Control for the purpose of allowing temporary and conditional disturbance to a stream bank or stream bed.

Best Management Practices (BMPs) means schedules of activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce the pollution of waters of the state. BMPs also include treatment requirements, operating procedures, and practices to control runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage. BMPs may be structural or non-structural in form.

Buffer [See below under “[water quality buffer](#).”]

CPESC means a “Certified Professional in Erosion and Sediment Control” as certified by the International Erosion Control Association and the Soil and Water Conservation Society.

CWA or The Act means [Clean Water Act](#) (formerly referred to as the Federal Water Pollution Control Act or Federal Water Pollution Control Act Amendments of 1972) Pub.L.92-500, as amended Pub.L.95-217, Pub.L.95-576, Pub.L.96-483 and Pub.L.97-117, 33 U.S.C.1251 *et seq.*

Co-permittee means a permittee to an NPDES permit that is only responsible for permit conditions relating to the discharge for which it is operator.

CFR or Code of Federal Regulations are the environmental regulations found at Title 40 of the CFR, and the NPDES rules for storm water at [40 CFR § 122](#).

Construction Activity means any onsite activity which will result in the creation of a new storm water management system, including the building, assembling, expansion, modification, or alteration of the existing contours of the property, the erection of buildings or other structures, or land clearing.

Contractor means the party responsible for carrying out the contract per plans and specifications. The Standard Specifications and Special Provisions contain storm water protection requirements the contractor must address.

Control Measure refers to any Best Management Practice or other method used to prevent or reduce the discharge of pollutants to waters of the state.

De Minimus Discharge refers to non-storm water discharges that pose a limited or insignificant threat to water quality.

Discharge, when used without a qualifier, refers to “discharge of a pollutant “as defined at [40 CFR §122.2](#).

Discharge of a pollutant means the following: 1) Any addition of any “pollutant” or combination of pollutants to “waters of the United States” from any “point source,” or 2) Any addition of any pollutant or

combination of pollutants to the waters of the “contiguous zone” or the ocean from any point source other than a vessel or other floating craft which is being used as a means of transportation. This definition includes additions of pollutants into waters of the United States from: surface runoff which is collected or channeled by man; discharges through pipes, sewers, or other conveyances owned by a State, municipality, or other person which do not lead to a treatment works; and discharges through pipes, sewers, or other conveyances, leading into privately owned treatment works. This term does not include an addition of pollutants by any “indirect discharger.”(40 CFR §122.2)

Discharge-related activities are activities which cause, contribute to, or result in storm water point source pollutant discharges as well as measures to control storm water discharges, including the siting, construction and operation of BMPs to control, reduce or prevent storm water pollution.

Dredging and Filling refers to the excavation and removal, or exposing to view, of material by any means in waters of the State or the United State and to the subsequent deposition of material by any means in waters of the State or United States.

Encroachment means the occupancy of project right-of-way by non-project structures or objects of any kind or character; it also may refer to activities of other parties within the operating right-of-way.

Endangered Species Act (ESA) means the Federal Endangered Species Act of 1973 that provides for the conservation of endangered and threatened species of fish, wildlife, and plants.

Ephemeral Flow indicates surface water that has a channel that is above the water table at all times, that flows only in direct response to precipitation, and that does not support a self-sustaining fish population (AAC R18-11-101).

Erosion describes the wearing away of land surface, primarily by wind or water. Erosion occurs naturally as a result of weather or runoff, but may be intensified by clearing, grading, or excavation of the land surface.

Erosion Control means the stabilization of cut and fill slopes and other areas within a highway right-of-way.

EPSC is an acronym for “Erosion Prevention and Sediment Control”.

ESC is an acronym for “Erosion and Sediment Control”.

Facility or activity includes any NPDES point source or any other facility or activity (including land or appurtenances thereto) that is subject to regulation under the NPDES program (40 CFR §122.2).

General Permit refers to a permit written for an entire class of activities and/or permittees. While an individual permit is written specifically for a single discharger, the conditions of a general permit are the same, or are very similar, for all permittees subject to the permit. “Storm Water Multi-Sector General Permit for Industrial Activity” and “General Permits for storm water Discharges from Construction Activities” are common in the NPDES or SPDES programs.

Good Housekeeping refers to a common practice -- related to the storage, use, or cleanup of materials -- that is performed in a manner that minimizes the discharge of pollutants.

Herbicides are chemical compounds that are used to control weeds.

High Quality Waters are surface waters of the State that satisfy characteristics listed and issued by the State. Characteristics often include water designation as Outstanding National Resource Waters (ONRW): waters that provide habitat for ecologically significant populations of certain aquatic or semi-aquatic plants or animals; waters that provide specialized recreational opportunities; waters that possess

outstanding scenic or geologic values; or waters where existing conditions are better than water quality standards. High quality waters are sometimes referred to as Tier II or Tier III (ONRW) waters.

Hot spot means an area where land use or activities generate highly- contaminated runoff, with concentrations of pollutants in excess of those typically found in storm water. Examples might include operations producing concrete or asphalt, auto repair shops, auto supply shops, large commercial parking areas, restaurants, or maintenance yards.

Illicit Connection means any man-made conveyance connecting an illegal discharge directly to a municipal separate storm sewer.

Illicit Discharge is defined at [40 CFR §122.26\(b\)\(2\)](#) and refers to any discharge to a municipal separate storm sewer that is not entirely composed of storm water, except discharges authorized under an NPDES permit (other than the NPDES permit for discharges from the MS4) and discharges resulting from fire-fighting activities.

Impaired Water is a navigable water for which credible scientific data exists that satisfies the requirements of § 49-232 and that demonstrates that the water should be identified pursuant to [33 U.S Code §1313\(d\)](#) and the regulations implementing that statute.

Impaired Waters means any segment of surface waters that has been identified by the division as failing to support classified uses. The Division periodically compiles a list of such waters known as the “303(d) List”. The Division will notify applicants and permittees if there is discharge into, or if it is affecting, impaired waters.

Intermittent Flow is defined as surface water that flows only at certain times of the year, such as when receiving water from a seasonal spring or from some surface source such as melting snow.

Landward Extent is defined as areas such as floodplains and marshes which may extend landward of the primary waterbody.

Large municipal separate storm sewer systems include all municipal separate storm sewers that are either: 1) Located in an incorporated place with a population of 250,000 or more as determined by the latest Decennial Census by the Bureau of Census, or 2) Located in specific counties, except municipal separate storm sewers that are located in the incorporated places, townships or towns within such counties; or 3) Owned or operated by a municipality other than those described in 1) or 2) and that are designated as part of the large or medium municipal separate storm sewer system due to the inter-relationship between the discharges of the designated storm sewer and the discharges from municipal separate storm sewers. ([40 CFR §122.26\(b\)\(4\)](#))

Larger common plan of development is a contiguous area where multiple separate and distinct construction activities are occurring under one plan (e.g., the operator is building on three half-acre lots in a 6-acre development). “Plan” is broadly defined as any announcement or piece of documentation (including a sign, public notice or hearing, sales pitch, advertisement, drawing, permit application, zoning request, computer design, etc.) or physical demarcation (including boundary signs, lot stakes, surveyor markings, etc.) indicating that construction activities may occur on a specific plot.

Load Allocation (LA) refers to the portion of a receiving water’s loading capacity that is attributed either to one of its existing or future nonpoint sources of pollution or to natural background ([40 CFR §130.2\(g\)](#)).

Major municipal separate storm sewer outfall (or “major outfall”) is identified as a municipal separate storm sewer outfall that discharges from a single pipe with an inside diameter of 36 inches or more or its equivalent -- discharge from a single conveyance other than circular pipe which is associated with a

drainage area of more than 50 acres; or -- for municipal separate storm sewers that receive storm water from lands zoned for industrial activity (based on comprehensive zoning plans or the equivalent) -- an outfall that discharges from a single pipe with an inside diameter of 12 inches or more or from its equivalent, a discharge from other than a circular pipe associated with a drainage area of 2 acres or more ([40 CFR §122.26\(b\)\(5\)](#)).

Major outfall is a major municipal separate storm sewer outfall ([40 CFR §122.26\(b\)\(6\)](#)).

Margin of Safety (MOS) accounts for uncertainty in the loading calculation. The MOS may not be the same for different waterbodies due to differences in the data available for calculations and the strength of that data.

Mean High Water Line is the average height of high tides over a period of approximately 18.6 years.

Medium municipal separate storm sewer systems include all municipal separate storm sewers that are either: 1) Located in an incorporated place with a population of 100,000 or more, but less than 250,000, as determined by the latest Decennial Census by the Bureau of Census; or 2) Located in the counties listed in Appendix I, except municipal separate storm sewers that are located in the incorporated places, townships or towns within such counties; or 3) Owned or operated by a municipality other than those described in paragraph (b)(4) (I) or (ii) of this section and that are designated as part of the large or medium municipal separate storm sewer system due to the interrelationship between the discharges of the designated storm sewer and the discharges from municipal separate storm sewers. ([40 CFR §122.26\(b\)\(7\)](#))

Maintenance Activities describes routine activities such as clearing, grading, or excavation to maintain the original line and grade, hydraulic capacity, or original purpose of the facility.

Maintenance Facilities refers to facilities under Arizona Department of Transportation (ADOT) ownership or control that contain areas for fueling, waste storage, disposal, wash racks, equipment, vehicle storage, and materials storage.

MEP is an acronym for “Maximum Extent Practicable,” the technology-based discharge standard for Municipal Separate Storm Sewer Systems to reduce pollutants in storm water discharges that was established by CWA §402(p). A discussion of MEP as it applies to small MS4s is found at [40 CFR §122.34](#).

Measurable Goal is a quantitative measure of progress in implementing a component of a storm water management program.

Monitoring refers to the tracking and/or measuring of activities, processes, and results that relate to implementing a storm water quality management program. Monitoring may include both analytical methods that are scientific and specific or non-analytical means, such as visual inspection or by qualitative tools that give only comparative values or rough estimates. The information gathered in this way may then be used to revise or refine the storm water quality management program. The act of monitoring for pollutants may be as prescribed by [40 CFR §136](#), by ways other than state- or federally-established protocols (in the case of biological monitoring and assessments) or by more non-analytical processes as described above.

Multi-Sector General Permit is defined as an umbrella permit given to a state under which certain Standard Industrial Classification industries may be granted a permit to discharge storm water by notifying the EPA of their intent to do so, in compliance with the regulatory provisions of the General Permit.

MS4 is an acronym for “Municipal Separate Storm Sewer System” and is used to refer to either a Large, Medium, or Small Municipal Separate Storm Sewer System (*i.e.*, “the Dallas MS4”). The term is used to refer to either the system operated by a single entity or a group of systems within an area that are operated by multiple entities (*e.g.*, municipalities, counties, and a state DOT).

Municipal Separate Storm Sewer (MS4) is defined at [40 CFR §122.26\(b\)\(8\)](#) and means a conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels, or storm drains) that is owned or operated by a State, city, town, borough, county, parish, district, association, or other public body (created by or pursuant to State law) having jurisdiction over disposal of sewage, industrial wastes, storm water, or other wastes, including special districts under State law such as a sewer district, flood control district or drainage district, or similar entity, or a designated and approved management agency, under section 208 of the CWA, that discharges to waters of the state; is designed or used for collecting or conveying storm water; is not a combined sewer; and is not part of a Publicly Owned Treatment Works (POTW), as defined at [40 CFR §122.2](#).

National Environmental Policy Act (NEPA) (The National Environmental Policy Act of 1969) establishes policies and procedures to bring environmental considerations into the planning process for federal projects. NEPA requires all federal agencies to identify and assess reasonable alternatives to proposed actions that will restore and enhance the quality of the human environment and avoid or minimize adverse environmental impacts. The NEPA process is an overall framework for the environmental evaluation of federal actions.

NPDES is an acronym for the “National Pollutant Discharge Elimination System” which is a federal/state-administered permit program initially mandated by the Federal Clean Water Act of 1972.

Navigable Waters are defined as those waters that are subject to the ebb and flow of the tide landward to the mean high water line, and/or all waters which are presently used, or have been used in the past or may be susceptible to use to transport interstate or foreign commerce.

NOI is an acronym for “[Notice of Intent](#)” to be covered by this permit and is the mechanism used to “register” for coverage under a general permit.

Nonpoint Source is any source of pollutant(s) that is not a “point source” (a pollutant source with one clear origin). Examples of non-point source pollutants are sheet flow from pastures and runoff from paved areas.

Non-storm water discharges mean discharges not entirely composed of storm water. Unless specifically authorized under an NPDES permit, these discharges are illegal. Commonly authorized non-storm water discharges include:

- Water line flushing
- Landscape irrigation
- Diverted stream flows
- Rising ground waters
- Uncontaminated ground water infiltration; *i.e.*, through defective pipes, pipe joints, connections, or manholes.)
- Uncontaminated pumped ground water
- Discharges from potable water sources

- Foundation drains
- Air conditioning condensate
- Irrigation water
- Springs
- Water from crawl space pumps
- Footing drains
- Lawn watering
- Individual residential car washing
- Flows from riparian habitats and wetlands
- Dechlorinated swimming pool discharges
- Street wash water
- Discharges or flows from fire- fighting activities

Not Attaining refers to surface water that is not attaining its uses, but that does not need to have a TMDL completed because: 1) A TMDL has been approved and is being implemented, 2) Another action is occurring so that the surface water is expected to attain its uses before the next assessment, or 3) The impairment is due to pollution where a pollutant loading cannot be calculated (e.g., hydromodification).

Notice of Intent (NOI) is a form completed and signed by a construction site operator or an industrial facility operator notifying the EPA or ADEQ that the operator will comply with the applicable storm water general permits of both Arizona and/or the EPA.

Notice of Termination is a formal notice to EPA that a specific site permitted under the NPDES program is no longer discharging storm water.

Ordinary High Water Line indicates the point where the presence and action of the water are so common and usual as to leave a mark upon the soil.

Outfall is a point source, as defined by 40 CFR §122.2, where a municipal separate storm sewer discharges to waters of the United States and does not include open conveyances connecting two municipal separate storm sewers, or pipes, tunnels or other conveyances which connect segments of the same stream or other waters of the United States and are used to convey waters of the United States. (40 CFR §122.26(b)(9))

Owner or operator means the operator of any facility or activity subject to the regulation under the NPDES program. (40 CFR §122.2). With regard to NPDES requirements related to state roads and federal highways, the state DOT is the owner or operator.

Perennial Flow indicates surface water that flows continuously.

Permanent BMPs are BMPs (Best Management Practices) that are installed during construction and are designed to provide long-term storm water quality protection after a project's completion.

Permanent Soil Stabilization means soil stabilization controls that provide storm water quality management after construction is complete.

Pesticide is any material used to control pests, such as insecticides, herbicides, and rodenticides.

Phase I refers to EPA permit application requirements for Phase I storm water sources. The regulations, promulgated on November 16, 1990 (55 Federal Register 47990), require NPDES permits for discharges from two broad categories of storm water discharges: 1) MS4s serving populations of 100,000 or more, and 2) Discharges associated with industrial activity (including discharges from construction activities disturbing five (5) acres or greater of total land area).

The Phase II rule requires storm water discharges from small MS4s and small construction sites to be covered under a NPDES permit. Phase II covers “urbanized areas,” which are defined as land areas comprising one or more places (central places) and the adjacent densely-settled surrounding areas (urban fringe) that together have a residential population of at least 50,000 and an overall population density of at least 1,000 people per square mile. Phase II small construction sites designated by the rule are those that disturb between one (1) and five (5) acres of land. In addition, sites disturbing less than one (1) acre would be subject to regulation if they were part of a larger common plan of development or sale.

Pollutant includes dredged spoil, solid waste, incinerator residue, filter backwash, sewage, garbage, sewage sludge, munitions, chemical wastes, biological materials, radioactive materials (except those regulated under the Atomic Energy Act of 1954, as amended (42 U.S.C. 2011 et seq.)), heat, wrecked or discarded equipment, rock, sand, cellar dirt and industrial, municipal, and agricultural waste discharged into water. (40 CFR §122.2)

Point Source means any discernible, confined, and discrete conveyance, including but not limited to any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal-feeding operation, landfill leachate collection system, vessel or other floating craft from which pollutants are or may be discharged. This term does not include return flows from irrigated agriculture or agricultural storm water runoff.

Primacy means having the primary responsibility for administering and enforcing regulations.

Priority construction activity shall be defined by the MS4, but shall include, at a minimum, those construction activities discharging directly into, or immediately upstream of, waters the state recognizes as impaired (for siltation) or high quality waters.

Qualified personnel means a person knowledgeable in the principles and practice of erosion and sediment controls who possesses the skills to assess conditions at any construction site that could impact storm water quality and to assess the effectiveness of any sediment and erosion control measures selected to control the quality of storm water discharges from the construction activity.

Qualifying local program is a local, state, or Tribal municipal storm water management program that imposes, at a minimum, the relevant requirements associated with the minimum control measures for small municipal storm water programs [as detailed in 40 CFR §122.34(b)].

Regulated MS4 is any MS4 covered by the NPDES storm water program (regulated small, medium, or large MS4s).

Responsible corporate officer means 1) A chief administrative officer of an agency, or a president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or an other person who performs similar policy- or decision-making functions for the corporation, or 2) the manager of one or more manufacturing, production, or operating facilities, provided the manager is authorized to make management decisions which govern the operation of the regulated facility, including having the explicit or implicit duty of making major capital investment recommendations and initiating and directing other comprehensive measures to assure long term environmental compliance with environmental laws and regulations. The manager must also be able to ensure that the necessary systems are established or actions taken to gather complete and accurate information for permit application

requirements. Authority to sign documents has to have been assigned or delegated to the manager in accordance with corporate procedures. (40 CFR § 122.22)

Runoff is water originating from rainfall and other precipitation that is found in drainage facilities, rivers, streams, springs, seeps, ponds, lakes, and wetlands as well as shallow ground water.

Runoff coefficient is the fraction of total rainfall that will appear at a conveyance as runoff. (40 CFR 122.26(b)(11))

Sanitary Sewers are underground pipes that carry only domestic or industrial waste, not storm water.

Sediment is organic or inorganic material that is carried by or is suspended in water and that settles out to form deposits in the storm drain system or receiving waters.

Sediment Load are the sediment particles maintained in the water column by turbulence and carried with the flow of water.

Significant materials include, but are not limited to: raw materials; fuels; materials such as solvents, detergents, and plastic pellets; finished materials such as metallic products; raw materials used in food processing or production; hazardous substances designated under Section 101(14) of CERCLA; any chemical the facility is required to report pursuant to Section 313 of Title III of SARA; fertilizers; pesticides; and waste products such as ashes, slag and sludge that have the potential to be released with storm water discharges. (40 CFR § 122.26(b)(12))

Small Municipal Separate Storm Sewer System is defined at [40 CFR §122.26\(b\)\(16\)](#) and refers to all separate storm sewers that are owned or operated by the United States, a State, city, town, borough, county, parish, district, association, or other public body (created by or pursuant to State law) having jurisdiction over disposal of sewage, industrial wastes, storm water, or other wastes, including special districts under State law such as a sewer district, flood control district or drainage district, or similar entity, or a designated and approved management agency under Section 208 of the CWA that discharges to waters of the state, but is not defined as “large” or “medium” municipal separate storm sewer system. This term includes systems similar to separate storm sewer systems in municipalities, such as systems at military bases, large hospital or prison complexes, and highways and other thoroughfares. The term does not include separate storm sewers in very discrete areas, such as individual buildings.

Soil Stabilization is the erosion control measures used to minimize erosion.

Sovereign Lands include all lands beneath navigable waters, extending to the mean high water line or ordinary high water mark for which title has not been validly transferred. Sovereign lands encompass beaches between mean high water and mean low water lines, islands within navigable waters, lands beneath lakes and rivers, and the lands beneath the Gulf of Mexico, both the Atlantic and Pacific Oceans, and the Great Lakes.

SPCC Plan is an acronym for “Spill Prevention Control and Countermeasure Plan” which is required for certain facilities that store or use oil in accordance with [40 CFR § 112.3](#).

Statewide Storm Water Management Plan (SSMP) is the *comprehensive plan for implementation of NPDES permit requirements*.

Store means the specification has been reviewed and approved by FHWA, and is available for implementation on a statewide basis wherever applicable.

Storm Event is defined per the NPDES storm water sampling guidance document, which states that a storm event must have specific criteria in order to be sampled:

- The depth of the storm must be greater than 0.1 inch accumulation

- The storm must be preceded by at least 72 hours of dry weather
- Where feasible, the depth of rain and duration of the event should not vary by more than 50 percent from the average depth and duration

Storm water is defined at [40 CFR §122.26\(b\)\(13\)](#) and means storm water runoff, snow melt runoff, and surface runoff and drainage.

Storm Water Advisory Team (SWAT) are ADOT teams with responsibility for evaluating new or modified storm water BMPs (i.e., Construction SWAT, Maintenance SWAT, Materials SWAT, Design SWAT, MS4 SWAT, Statewide Monitoring Plan SWAT, Encroachment Permits, SWAT, Information Management SWAT, Public Education/Involvement SWAT, and Training SWAT).

Storm Water Management includes those functions associated with planning, design, construction, maintaining, financing, and regulating the facilities (constructed and natural) that collect, store, and/or convey storm water.

Storm Water Management Plan is a comprehensive plan for the implementation of the AZPDES (Arizona Pollutant Discharge Elimination System) permit requirements for MS4s.

SWMP is an acronym for “Storm Water Management Program.”

Storm Water Management Program (SWMP) refers to a comprehensive program to manage the quality of storm water discharged from the municipal separate storm sewer system. One element of the Storm Water Management Program required in a MS4 Permit is the “State-Wide Storm Water Management Plan” (the Plan). The Plan is specific to DOT construction activity.

Storm Water Management System (SWMS) denotes a system which is designed and constructed or implemented to control discharges which are necessitated by rainfall events, incorporating methods to collect, store, absorb, inhibit, treat, use or reuse water to prevent or reduce flooding, over drainage, environmental degradation, and water pollution or otherwise affect the quantity and quality of discharges from the system. Storm water management systems include dams, impoundments, reservoirs, works, appurtenant works, and dredge and fill areas.

SWPP Plan is an acronym for “Storm Water Pollution Prevention Plan”.

Storm Water Pollution Prevention Plan (SWPPP) is a plan to describe a process whereby a facility thoroughly evaluates potential pollutant sources at a site and selects and implements appropriate measures designed to prevent or control the discharge of pollutants in storm water runoff.

Surface Runoff describes precipitation, snow-melt, or irrigation water in excess of what can infiltrate the soil surface and be stored in small surface depressions.

Temporary Construction Site BMP are BMPs that address a short-term storm water contamination threat. Temporary BMPs are removed at the conclusion of a construction project.

Temporary Soil Stabilization are soil stabilization controls that provide storm water quality management during construction.

[TMDL \(Total Maximum Daily Load\)](#) refers to a study that: 1) Quantifies the amount of a pollutant in a stream; 2) Identifies the sources of the pollutant; and 3) Recommends regulatory or other actions that may need to be taken in order for the stream to no longer be polluted.

Total Maximum Daily Load (TMDL)—A TMDL is a written, quantitative plan and analysis to determine the maximum loading on a pollutant basis that a surface water can assimilate and still attain and maintain a specific water quality standard during all conditions. The TMDL allocates the loading capacity of the

surface water to point sources and nonpoint sources identified in the watershed, accounting for natural background levels and seasonal variation, with an allocation set aside as a margin of safety. TMDL development is not considered appropriate for all bodies of water: if enforcement has already been taken, and a compliance schedule has been developed, or if best management practices have already been installed for non-regulated activities, the TMDL is considered not applicable. TMDLs can be described by the following equation: $TMDL = \text{sum of non-point sources (LA)} + \text{sum of point sources (WLA)} + \text{margin of safety}$. Following a TMDL, it might be necessary to lower the amount of pollutants being discharged under NPDES permits or to require the installation of other control measures, if necessary, to insure that standards will be met.

Urbanized area is a land area comprising one or more places (“central place(s)”) and the adjacent densely settled surrounding area (“urban fringe”) that together have a residential population of at least 50,000 and an overall population density of at least 1,000 people per square mile.

Unique Water refers to a surface water classified as an outstanding state resource water under AAC R18-11-112.

Wasteload Allocation (WLA) refers to the portion of a receiving water’s loading capacity that is allocated to one of its existing or future point sources of pollution. WLAs constitute the type of water quality-based effluent limitation. ([40 CFR §130.2\(h\)](#)).

Waters of the United States (WUS) are all waters that are currently used, were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters subject to the ebb and flow of the tide. WUS includes, but is not limited to, all interstate waters and intrastate lakes, rivers, streams (including intermittent streams), mudflats, sand flats, wetlands, sloughs, prairie potholes, wet meadows, play lakes, natural ponds, pools, wetlands, marshes, and springs to the ordinary high water line or landward extent; tidal waters to the mean high water line or landward extent; or, underground waters. In Florida, Waters of the State are defined by indicators such as a predominance of wetland-dependent vegetation in conjunction with hydric soils, or hydrologic evidence of regular or periodic inundation or saturation. Those bodies of water confined to and retained within the limits of private property in single ownership which do not combine to effect a junction with natural surface or underground waters are excepted.

Water quality buffer means undisturbed vegetation, including trees, shrubs and herbaceous vegetation; enhanced or restored vegetation; or the re-establishment of vegetation bordering streams, ponds, wetlands, reservoirs or lakes, when this vegetation exists or is established to protect those waterbodies.

Water quality-limited segments are those water segments that do not or are not expected to meet applicable water quality standards even after the application of technology-based effluent limitations required by sections 301(b) and 306 of the Act. ([40 CFR §130.2\(j\)](#)) Technology-based controls include, but are not limited to, best practicable control technology currently available (BPT) and secondary treatment.

Wet weather conveyances are man-made or natural watercourses, including natural watercourses that have been modified by channelization, that flow only in direct response to precipitation runoff in their immediate locality and whose channels are above the groundwater table, do not support fish and aquatic life and are not suitable for drinking water supplies. 1200-4-3-.04(4)

Wetlands are those areas that are inundated or saturated by surface water or ground water at a frequency and a duration sufficient to support (and under normal circumstances do support) a prevalence of vegetation typically adapted for life in saturated soils such as swamps, marshes, bayheads, bogs, cypress domes and strands, sloughs, wet prairies, riverine swamps and marshes, hydric seepage slopes, tidal marshes, mangrove swamps, and other similar areas.

Works include all artificial structures, including but not limited to, ditches, canals, conduits, channels, culverts, pipes, and other construction that connects to, draws water from, drains water into, or is placed in or across waters of the State.(See 40 CFR §122.2 for the complete definition.)

APPENDIX B - SAMPLE SURVEY

**NATIONAL COOPERATIVE HIGHWAY RESEARCH PROGRAM (NCHRP) 25-25 (16)
SHARING DOT STRATEGIES & APPROACHES TO COMPLYING WITH NPDES PHASE II**

Thank you for participating in this survey and DOT information exchange effort. The data from each state will be compiled into a report reviewing different strategies DOTs are using to comply with NPDES Phase II requirements. Please submit all responses by October 30, 2005.

GENERAL DOT INFORMATION

State: _____

Name of Agency: _____

Miles of Roadway under Control of DOT: _____

No. of DOT Districts: _____

Contact Name: _____

Contact Title: _____

Contact Phone: _____

Contact E-mail: _____

DOT STORM WATER PROGRAM INFORMATION

1. Is your DOT regulated as a Phase II MS4? Yes or No
2. Is your DOT automatically designated by NPDES permitting authority? Yes or No
3. Did a NPDES storm water program exist prior to required Phase II implementation? Yes or No
4. Year program established? _____
5. Does your DOT have a Storm Water Management Plan (SWMP)? Yes or No
6. Does the SWMP outline compliance with the 6 minimum control measures? Yes or No
7. When was your first DOT SWMP completed? _____
8. What is the date of your last SWMP update? _____
9. Is your SWMP provided on-line? Yes or No If so, please provide the internet address.

10. Does your state DOT provide any guidance for the following people. If so, please provide a link to on-line site or send attachments.
General Public? _____
Engineers & Developers? _____

**NATIONAL COOPERATIVE HIGHWAY RESEARCH PROGRAM (NCHRP) 25-25 (16)
SHARING DOT STRATEGIES & APPROACHES TO COMPLYING WITH NPDES PHASE II**

Maintenance Staff? _____

Construction Companies? _____

11. Which division in your agency has primary responsibility for the NPDES program?

12. How have you used existing staff in meeting the goals of your NPDES program?

13. How are the stormwater responsibilities shared within your state DOT? How are other divisions or functional units involved and what are they doing?

13.A How has NPDES Phase II compliance affected their workloads?

13.B What adjustments were made to resources, responsibilities, level of involvement, and communication to address NPDES?

13.C How were program employees selected and trained? As program demands increase, how does the DOT fill required positions?

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14. How did you document the need for additional positions? Were you were able to gain such positions?

15. What tools are in use within your DOT to support and manage the NPDES program and the positions involved?

16. What guidance, procedures, plan/program, or training resources has your DOT developed, that could be shared with other states?

17. What do your NPDES program reporting requirements consist of and how do you handle those?

18. What parts of your stormwater management program are being handled within the context of an Environmental Management System, either wholly or in part?

****Please send copies of forms, procedures, documentation, or any tools/resources with your survey****

19. What future challenges do you anticipate with your NPDES program? How is your agency preparing to deal with those challenges?

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20. Please describe the extent to which NPDES Phase II compliance has been attained and your agency's particular accomplishments to date.

DOT STORM WATER BUDGETS

Please provide your state DOT's annual stormwater compliance budget information. The table below contains information for the total state budget and a breakdown into several categories. The table includes both annual cost and percent of total budget. Because program budgets vary by state, please fill in the annual cost per component and/or estimate the percent of the total SWM budget spent on the item. Please fill out all of the individual budget components that apply to your program. If you need to add program categories, add them in the table below.

Annual Budget for Stormwater Compliance		
	Annual Cost (\$)	Percent of Total Budget (%)
Total Stormwater Budget (includes all expenditures)		100
=		
Individual Budget Components		
General Program/Plan Development & Management		
- BMP Design & Construction Costs		
- Policy Development		
- Staffing		
- Training		
Permitting		
- Fee Collection		
- Permit Reviews		
- Policy Development		
Compliance (Reporting & Inspection)		
Erosion & Sediment Control (Design, Implementation & Monitoring)		
GIS Development & Implementation		
BMP Evaluation		
SWM Maintenance		
Illicit Discharge Detection/Elimination Programs		
Public Education		
Other (Please list below):		

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21. Does your DOT have a long term business plan? If so, how has it been integrated into the organization?

REPORTING

22. Is an annual stormwater report prepared? Yes or No

Please send a copy of or link to your last submitted report from year _____

23. Who typically prepares the annual report? _____

24. How are significant changes/improvements to your storm water program and BMPs identified and implemented? _____

COMPLIANCE WITH MINIMUM CONTROL MEASURES

Please indicate your use of the following programs or practices to comply with the six Minimum Control Measures for Phase II MS4s. Please indicate the following:

- 1) Division responsible for overseeing the program
- 2) Check whether each program element is currently being implemented by DOT
- 3) Check whether program is planned as part of the DOT storm water management plan

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	Minimum Control Measures	Potential BMPs for DOTs to meet MCM requirement	√ if currently implemented	√ if planned w/in next 2 yrs	DOT Unit responsible for oversight?
Public Education & Participation					
1.	Implement public education program to distribute educational materials or other outreach about the impacts of storm water discharges on water bodies. Inform public of steps that the public can take to reduce pollutants in storm water runoff.	<p>General Public</p> <ul style="list-style-type: none"> ▪ Does your DOT collaborate with state public health agencies on public outreach programs? ▪ Do your state public health agencies implement public education programs for stormwater pollution prevention with financial assistance of the DOT? ▪ Has your DOT implemented Adopt A Stream Program or similar programs designed to get the community involved in water way cleanup? ▪ Has your DOT implemented Adopt A Highway Program or similar programs designed to get the community involved in litter clean up ▪ Does your DOT perform storm drain stenciling in critical watersheds? ▪ Are there Roadway & Rest Area signs to inform public of environmentally sensitive areas in your state? ▪ Does your DOT air TV public service announcements? ▪ Does your DOT air radio public service announcements? ▪ Does your DOT use billboards to display public service announcements? ▪ Does the DOT provide public outreach information on stormwater management impacts and programs available on internet? ▪ Does the DOT provide education materials for elementary/middle school age children on the importance of water quality? ▪ Does the DOT provide education materials for high school age children on the importance of water quality? ▪ Does the DOT have multi-cultural / foreign language pollution prevention programs? ▪ Does the DOT participate in local watershed festivals or environmental education days? ▪ Are informational posters, brochures, fact sheets distributed to public? ▪ Are public surveys conducted at State Fairs or other large public events? ▪ Are there other outreach efforts to the motoring public, contractors, vendors, and state police? ▪ Is a spill clean up guide available for travelers at rest areas and on the internet? 			

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	Minimum Control Measures	Potential BMPs for DOTs to meet MCM requirement	√ if currently implemented	√ if planned w/in next 2 yrs	DOT Unit responsible for oversight?
		<ul style="list-style-type: none"> ▪ Does the DOT publish SWM articles in local trade publications? ▪ Does the DOT have any partnering programs with contractors? ▪ Does the DOT have an established program to address the disposal of animals killed along the highway? ▪ ▪ ▪ 			
		<p>State Employees</p> <ul style="list-style-type: none"> ▪ Does the DOT offer internal, employee training? ▪ Does the DOT offer training for municipalities & consultants? ▪ Does the DOT publish articles on improving water quality in employee newsletters? ▪ Are informational posters, brochures, fact sheets distributed to employees? ▪ Is there an established storm water coordinator for each DOT functional unit? ▪ Does the DOT partner with other agencies? If so, please list below. ▪ ▪ ▪ 			
2.	Comply with public notice requirements, allow public review, and receive and respond to public comments.	<ul style="list-style-type: none"> ▪ Does the DOT provide public notification and review of program elements? ▪ Does the DOT hold public hearings and open houses? ▪ Does the DOT have community/stakeholder task forces in place to address stormwater issues? ▪ Does the DOT provide storm water program informational brochures and briefings for public officials (DOT management, politicians)? ▪ Does the DOT provide litter and/or pollution hot lines (direct telephone or internet access to report litter, spills, etc.) for public reporting? ▪ Does the DOT coordinate with Highway Patrol / State Police regarding public complaints or notification by patrol of stormwater issues? ▪ DOT employee watch groups for pollutant identification ▪ ▪ 			

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	Minimum Control Measures	Potential BMPs for DOTs to meet MCM requirement	√ if currently implemented	√ if planned w/in next 2 yrs	DOT Unit responsible for oversight?
		▪			
Illicit Discharge Detection/Elimination					
1.	Develop a storm sewer map showing the location of all outfalls and the names and locations of all waters of the U.S. that receive discharges from those outfalls.	<ul style="list-style-type: none"> ▪ Hard copy mapping in-place? ▪ GIS / electronic mapping in place? If so, what format is used? ▪ Does DOT map its entire drainage system? ▪ Have as-builts / existing drainage plans been reviewed? ▪ Does a database of storm drain outfalls exist? ▪ Has a field survey been conducted to verify inlet and outfall locations? ▪ Does DOT have outfall screening protocols? ▪ During field survey's, do inspectors look for structures in need of repair or retrofit? ▪ Are these repair and retrofits incorporated into the overall SWM budget? ▪ Are all drainage and GIS maps up to date? How frequently are maps updated? ▪ Are outfalls that drain to sensitive watersheds tracked differently? ▪ Does your agency partner with other MS4s with NPDES storm drain mapping requirements? (Please describe on the back of this sheet) ▪ Does the DOT have an inspection program in place to regularly assess outfall and drainage system conditions? 			
		▪			
		▪			
		▪			
2.	Prohibit non-storm water discharges through the adoption of DOT policy and enforcement procedures.	<ul style="list-style-type: none"> ▪ Does the DOT have authority in place to establish and/or enforce state regulatory mechanisms prohibiting illicit discharges? ▪ Does the state have any regulations in place prohibiting non-stormwater discharges? ▪ Does the DOT adopt ordinances / codes established by applicable local jurisdictions? 			
		▪			
		▪			
		▪			

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	Minimum Control Measures	Potential BMPs for DOTs to meet MCM requirement	√ if currently implemented	√ if planned w/in next 2 yrs	DOT Unit responsible for oversight?	
3.	Prohibit illicit discharges from entering DOT drainage facilities and right of way without proper permits.	▪ Does the DOT have an encroachment permitting process?				
		▪ Are protocols in place to address illicit discharges in a timely manner after they are discovered?				
		▪ Are encroachment permits and violations tracked in a GIS or database system?				
		▪ Are education programs in place to inform public employees, businesses and the general public about the hazards associated with illicit discharges and improper disposal of waste?				
		▪				
4.	Develop, implement, and enforce a plan to detect and eliminate illicit discharges and address non-storm water discharges including illegal dumping.	▪ Does the DOT have an illicit discharge detection and elimination plan?				
		▪ Does the plan promote and facilitate identification of illicit discharges by citizen complaints?				
		▪ Does the plan identify illicit discharges through a formal program that regularly investigates and identifies suspected sources of illicit connections and improper disposal?				
		▪ Does the DOT have a plan to remove/correct illicit connections?				
		▪ Are the corrective actions documented in a database or annual reports?				
		▪ Does the plan including training for DOT staff in identification of illicit discharges and reporting/documentation procedures?				
		▪ Does the DOT have established partnerships with local storm water agencies?				
		▪				
		▪				
		▪				
		Methods used for source identification				
		▪ Public complaints				
		▪ Visual screening / inspection				
▪ Dry weather sampling						
▪ Wet weather sampling						
▪ Infrared and thermal photography						

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	Minimum Control Measures	Potential BMPs for DOTs to meet MCM requirement	√ if currently implemented	√ if planned w/in next 2 yrs	DOT Unit responsible for oversight?
		<ul style="list-style-type: none"> ▪ Video, dye testing ▪ ▪ ▪ 			
5.	Inform public employees/businesses/general public of hazards associated with illegal discharges and the improper disposal of waste.	<ul style="list-style-type: none"> ▪ Does DOT conduct employee education /training regarding illegal discharges? ▪ Does the DOT partner with other agencies to educate the public about stormwater? ▪ Does the DOT use stormwater educational materials developed by others? ▪ Are public service announcements aired on local TV stations? ▪ Are public service announcements aired on local radio stations? ▪ Is information readily available on the Internet and/or via public email? ▪ Does the DOT provide multi-cultural / foreign language educational programs? ▪ Does the DOT include articles on citizen methods for improving water quality in employee newsletters or on office bulletin boards? ▪ Are informational posters, brochures, fact sheets distributed to the public? ▪ ▪ ▪ 			
6.	Address categories of authorized non-storm water discharges that are identified as significant contributors to pollutants in the MS4.	<ul style="list-style-type: none"> ▪ Has the DOT identified at list of pollutants of concern for DOT activities? ▪ Does the DOT regularly inspect DOT owned facilities for the presence of illicit discharges? ▪ ▪ ▪ 			
Construction Site Storm Water Control. Develop, implement, and enforces a program to prevent/minimize water quality impacts from storm water runoff from construction sites. Applies to all construction projects that disturb greater than/equal to one acre and that discharge into the MS4.					
1.	Establish regulatory mechanisms or policies requiring the implementation of proper erosion and sediment controls,	<ul style="list-style-type: none"> ▪ Are there DOT Standard Construction Specifications for Storm Water, Erosion Control and Grading? ▪ Are there DOT Standard Specs/Special Conditions for specific BMPs? ▪ Is there a DOT approved Construction BMP Manual? 			

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	Minimum Control Measures	Potential BMPs for DOTs to meet MCM requirement	√ if currently implemented	√ if planned w/in next 2 yrs	DOT Unit responsible for oversight?
	and controls for other wastes, on applicable construction sites.	<ul style="list-style-type: none"> ▪ Is there a DOT approved Erosion & Sediment Control Manual? ▪ Are DOT BMP & Erosion Sediment Control Manuals approved by local environmental regulatory agencies? ▪ Are regular Storm Water training programs in place for DOT employees, consultants and contractors working on DOT projects? ▪ ▪ ▪ 			
2.	Review of construction site plans for potential water quality impacts.	<ul style="list-style-type: none"> ▪ Are Site Plan reviews for construction storm water compliance conducted as part of the plan review process? Who conducts the plan reviews? ▪ Is there a state compliance database / tracking system? <ul style="list-style-type: none"> ▪ Does the database track active permitted projects? ▪ Does the database track completed projects? ▪ Does the database track area of disturbance and impervious area created? ▪ Are SWPPP reviews conducted during construction to ensure plan conformance? ▪ Does DOT administer construction NPDES program for projects in DOT right of way? ▪ Are there standardized SWPPP templates for typical DOT projects? ▪ ▪ ▪ 			
3.	Site inspection and enforcement of control measures.	<ul style="list-style-type: none"> ▪ Are there established NPDES compliance inspectors? ▪ Do you train design staff (engineers, landscape architects) in the construction methods for BMPs? ▪ Do you train DOT field engineers to perform NPDES compliance inspections? ▪ Do you provide regular contractor training and outreach? ▪ Does DOT manage and prioritize ESC inspections? ▪ Is there a certification process to ensure BMPs are constructed according to design requirements? 			

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	Minimum Control Measures	Potential BMPs for DOTs to meet MCM requirement	√ if currently implemented	√ if planned w/in next 2 yrs	DOT Unit responsible for oversight?
		<ul style="list-style-type: none"> ▪ Are contractors required to be pre-certified to perform design or construction of BMPs? ▪ Does DOT provide construction oversight during BMPs construction? ▪ Are there QA/QC programs in place to ensure that the BMP is designed according to plans/specs and that it is functioning as intended? ▪ ▪ ▪ 			
4.	Sanctions in place to ensure compliance (established in the DOT policy or other regulatory mechanism)	<ul style="list-style-type: none"> ▪ Is there an established Code or Policy? ▪ Are there established Standard Construction Specifications for Storm Water, Erosion Control, or Grading? ▪ Can compliance inspectors issue stop work orders? ▪ Can compliance inspectors issue fines for non-compliance with SWPPP? ▪ Can civil and criminal penalties be passed along to Contractor for non-compliance? ▪ Does the DOT issue sanctions for non-compliance with erosion and sediment control practices during construction? ▪ ▪ 			
5.	Establish procedures for the receipt and consideration of information submitted by the public.	<ul style="list-style-type: none"> ▪ Is there a storm water hotline or other mechanism to receive public / state patrol complaints regarding construction violations? ▪ Is there a complaint tracking system? ▪ ▪ ▪ 			
Post-Construction Storm Water Management					
1.	Develop, implement, and enforce a program to address storm water runoff from new development and redevelopment projects that disturb at least one	<ul style="list-style-type: none"> ▪ Does your DOT have a research and testing program for permanent BMPs? ▪ Are there established policies and procedures for implementing permanent BMPs? ▪ Are there established design guidelines for permanent BMPs? ▪ Are there monitoring requirements (BMP performance and effectiveness) for newly constructed BMPs? 			

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	Minimum Control Measures	Potential BMPs for DOTs to meet MCM requirement	√ if currently implemented	√ if planned w/in next 2 yrs	DOT Unit responsible for oversight?
	acre by ensuring that controls are in place that would prevent or minimize water quality impacts.	<ul style="list-style-type: none"> ▪ Is regulatory coordination required for BMP implementation? ▪ Does the DOT employ a stormwater crediting, trading or banking system? ▪ ▪ 			
2.	Develop and implement strategies, which include a combination of structural and non-structural BMPs.	<ul style="list-style-type: none"> ▪ Are permanent BMPs incorporated into the project design and review process? ▪ Does the DOT provide guidelines and tools to in-house and consulting engineers to assist in selecting BMPs? ▪ ▪ 			
3.	Use state regulatory mechanisms to address post-construction runoff from new development and redevelopment projects.	<ul style="list-style-type: none"> ▪ Are requirements established in SWMP? ▪ Is the design of permanent BMPs included in the contract requirements for outside design services? ▪ ▪ 			
4.	Ensure adequate long-term operation and maintenance of BMPs.	<ul style="list-style-type: none"> ▪ Are there established maintenance guidelines for permanent BMPs? ▪ Is there DOT training for maintenance of permanent BMPs? ▪ Is there a capital budget allocation for long-term maintenance? ▪ ▪ 			
Pollution Prevention/Good Housekeeping					
1.	Develop and implement an operation and maintenance program that includes a training component that has the ultimate goal of reducing pollutant runoff from municipal operations.	<ul style="list-style-type: none"> ▪ Does the DOT evaluate activities to assess storm water impacts including maintenance activities (roadway maintenance, vehicle maintenance, etc.)? ▪ Does the DOT specifically identify maintenance activities that occur within sensitive or impaired water bodies? ▪ Are there specific requirements for maintenance activities that occur within a sensitive or impaired water body? ▪ Has the DOT developed a priority list of maintenance operations that minimize stormwater impacts? ▪ Has the DOT developed a DOT Maintenance BMP Manual? 			

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	Minimum Control Measures	Potential BMPs for DOTs to meet MCM requirement	√ if currently implemented	√ if planned w/in next 2 yrs	DOT Unit responsible for oversight?
		<ul style="list-style-type: none"> ▪ Is the manual consistent with local municipalities and county government guidelines? ▪ Does the DOT install and maintain structural BMPs at maintenance facilities? ▪ Does the DOT Install and maintain source control BMPs at maintenance facilities? ▪ ▪ 			
2.	Develop and implement employee training to prevent and reduce storm water pollution from activities such as maintenance of outdoor areas, building maintenance, new construction and land disturbances, and storm water system maintenance.	<ul style="list-style-type: none"> ▪ Is there an established storm water representative for each DOT functional unit (for maintenance related activities, etc.)? ▪ Does the DOT have an established training plan to prioritize and implement training? ▪ Does the DOT conduct regular training? ▪ ▪ 			
3.	Develop and implement maintenance programs for municipal operations to prevent and reduce pollutants from being discharged to downstream resources.	<p>Several maintenance practices that may require training and specified procedures to reduce pollutants in stormwater runoff are listed below. Please check off which practices have required training and procedures.</p> <ul style="list-style-type: none"> ▪ Snow removal and deicing practices ▪ Salt pile storage ▪ Street sweeping ▪ Spill prevention and response plan ▪ Herbicide application ▪ Landscaping and lawn care ▪ Vehicle maintenance ▪ ▪ 			

APPENDIX C – DOT NPDES RESOURCES BY STATE

DOT Resources for NPDES Compliance:

When asked what guidance, procedures, plan/program, or training resources their DOT has developed that could be shared with other states, DOTs identified the following:

AL	<p>Annual training for ALDOT and contractors- QCI (qualified construction inspectors)</p> <p>Watershed educational outreach, MS4 co-applicants</p> <p>Wet screening, dry screening, composite sampling</p> <p>Report elicits to ADEM (state regulatory agency)</p> <p>Conducted by storm water coordinator</p> <p>Wetland banking</p>
AR	<p>PowerPoint training for AHTD inspectors in NPDES construction compliance</p>
AZ	<p>Overview Training and AGC Erosion Control Coordinator Training</p> <p>DOT inspector Checklist Training</p> <p>Other training, currently in development</p> <p>ADOT Construction Storm water Pollution Prevention Plan Template http://www.dot.state.az.us/adot_and/storm_water/Docs/construction_swppp_template_january_2006.dot</p> <p>Impaired, Unique and Not Attaining Waters State Map interactive web page</p> <p>ADOT Receiving Waters interactive web page</p> <p>Transmittal Letter to ADEQ (Adobe PDF - file size: 390 KB)</p> <p>Maintenance and Facilities Best Management Practices (BMP) Manual web page</p> <p>Impaired, Unique and Not Attaining Waters State Map and Programmed Projects (Adobe PDF - file size: 642 KB)</p> <p>Phase I & II Storm Water Systems Maps web page</p> <p>ADOT's Roadside Development Section home page.</p> <p>Erosion and Pollution Control Manual web page</p> <p>Sediment Control and Water Quality Protection BMP Details web page</p> <p>ADOT Methodology for Determining Final Stabilization (Adobe PDF- file size: 138 KB)</p> <p>Transmittal Letter to ADEQ (Adobe PDF - file size: 390 KB)</p> <p>Maintenance and Facilities Best Management Practices (BMP) Manual web page</p> <p>Storm Water Monitoring Guidance Manuals for Construction Activities (Adobe PDF - file size: 7.33 MB)</p> <p>Storm Water Monitoring Guidance Manuals for MS4 Activities (Adobe PDF - file size: 3.73 MB)</p> <p>Storm Water Monitoring Guidance Manual for Industrial Activities (Adobe PDF - file size: 1.43 MB)</p> <p>MS4 Permit 2005 Annual Report (Adobe PDF - file size: 18.7 MB)</p> <p>MS4 Boundary Areas web page</p> <p>Arizona Department of Environmental Quality (AZDEQ)</p> <p>Storm Water Permits</p> <p>Arizona Department of Transportation (ADOT)</p> <p>2007-2011 Five Year Transportation Facilities Construction Program</p> <p>Roadside Development Section</p> <p>Communication and Community Partnerships</p> <p>Environmental Planning Group</p> <p>Highways/Intermodal Transportation Division</p> <p>Natural Resources</p>

	<p>New and updated manuals have been completed. Protocols have and are being developed. The Storm water Management Plan has been provided to ADEQ.</p>
CA	<p>Resources available at http://www.dot.ca.gov/hq/env/stormwater/</p> <p>Caltrans is currently constructing Gross Solids Removal Devices (GSRD) in the LA area in order to meet the Trash TMDL, which requires storm water trash to be completely removed from storm water. The 100 percent control goal means that sweeping, prevention, and similar source control efforts will not result in compliance with the TMDL. Source control alone is unlikely to adequately control pollutants such as copper, zinc, bacteria, and dioxin either, especially if compliance must be achieved “end-of-pipe.” Infiltration prevents pollutants from discharging to surface waters but may be difficult to implement on a large scale due to inappropriate soils, high water tables, plus concerns over groundwater contamination and seismic risk (liquefaction from elevated groundwater table).</p> <p>Permanent Treatment controls – During the fiscal year, DOT constructed 462 permanent treatment BMPs, most of which were vegetated strips and swales. To comply with the Trash Total Maximum Daily Loads for the LA River and Ballona Creek, District 7 constructed 51 Gross Solids Removal Devices, which are litter-control devices developed by DOT. Caltrans also completed 43 detention basins throughout the state.</p> <p>Construction BMPs – The Department added nine new BMPs to its “tool chest” of controls available for construction projects, ranging from stream bank stabilization to controls for concrete curing and finishing. See: http://www.dot.ca.gov/hq/construc/stormwater/stormwater1.</p> <p>Maintenance program – Maintenance staff inspected over 32,000 drains inlets and cleaned those with accumulated sediment. The maintenance program also developed guidance and maintenance protocols for the new treatment BMPs.</p> <p>Inspections and compliance assessments – The Department’s compliance efforts included inspection of 131 maintenance facilities. The construction program completed 484 non-rainy season and 523 rainy season inspections by outside contractors. Facilities and construction sites are graded and re-inspected as necessary to bring them into compliance.</p> <p>Training – Department participants in training classes included 389 in Planning & Design, 1,003 in Construction, and 3100+ in Maintenance.</p> <p>Public outreach – The “Don’t Trash California” campaign included signs, highway billboards, gas station toppers, cinema notices, and public service announcements on TV and radio. Other efforts include storm water-related websites, local municipality partnerships, the Adopt-a-Highway program, and public education events. The Department also held informational outreach sessions for construction contractors.</p> <p>Monitoring and research – The Department continued its research and monitoring efforts.</p> <p>We have an extensive history and background in storm water. We are quite well known for many of our efforts in storm water, especially in monitoring and research. Please visit our website to obtain an overview of our efforts</p>
CO	<p>Several guidebooks and brochures, runoff control plans, developing EMS, various program documents</p>
DE	<p>Web site, brochures, 3 DVD’s on</p> <ul style="list-style-type: none"> • Storm water contamination and spill prevention • Vegetative control and pollution prevention • Facility and vehicle maintenance <p>Delaware has produced and had approved by their state environmental control agency:</p> <ul style="list-style-type: none"> • Statewide vehicle wash water practices for DelDOT maintenance yards–Manual

	<ul style="list-style-type: none"> • Pollution Prevention Plans for all maintenance yards • Spill prevention control and countermeasures for all maintenance yards. • Pre-approval process for independent Erosion and Sedimentation control monitors, from which contractors can hire. This process is coordinated with the Delaware Dept. of Environmental Services. <p>As of spring 2006, DelDOT will have a contract to transport, treat or remediate and dispose or recycle potentially contaminated street sweeper wastes in lieu of hauling to the landfill. DelDOT expects to save approximately \$25-30 per ton</p>
GA	Worksite Erosion Control Supervisor certification program. Preparing an E&S training course for designers.
HI	Construction activities, post construction BMPs provided to consultants and designers
IA	DESIGN GUIDE AND CONSTRUCTION SPECIFICATIONS FOR NPDES SITE RUNOFF, July 2006 http://www.operationsresearch.dot.state.ia.us/reports/reports_pdf/hr_and_tr/reports/tr508f.pdf
ID	Developed training program for inspection and construction.
IN	Sediment, erosion control and storm management manuals, adopt a highway, standard maintenance procedures Aggressive capital construction program to store, load, and handle salt totally under roof. Also have a very aggressive expansion of brine making sites that utilize any run-off from salt area and reuse of truck wash water as brine in pre-wetting operation
KY	Environmental handbook for maintenance personnel, the design memoranda and specifications are general public documents. http://www.kytc.state.ky.us/EnvAnalysis/Stormwaterquality/link_resource.htm Contractor and designer links. http://www.kytc.state.ky.us/EnvAnalysis/Stormwaterquality/con_design.htm Detailed information regarding MS4 workgroup and extensive community partnering. http://www.kytc.state.ky.us/EnvAnalysis/Stormwaterquality/new.htm
LA	New plan review procedures on erosion control and practices included in manual, brochures at rest areas
MA	SWMP manual Source control (e.g., reduction of winter sanding, good housekeeping at maintenance facilities)
MD	procedural documents for asset management and data collection MDSHA Environmental Guidelines for Maintenance Activities (November 2003) MDSHA Environmental Guidelines for Construction (2004?) Collected storm drain and SWM infrastructure data along 2,254 miles of SHA roadway in 7 Counties Continues to research highway runoff and innovative SWM technologies and practices to improve water quality Maintains a comprehensive SWM Program to inventory, inspect, maintain and manage storm water management BMPs Completed significant watershed enhancement projects that included stream restoration, SWM facility retrofits and watershed studies Inspects and maintains storm drain outfalls and investigates possible illicit discharges Coordinates with various municipalities to assist with local watershed restoration efforts Conducts training to educate SHA personnel about SWM

	<p>Erosion and Sediment Control Program - SHA continues Responsible Personnel "Green Card" Training and has implemented a Quality Assurance Program / Training to insure proper construction operations</p> <p>Obtained NPDES permits for 38 maintenance facilities and created and implemented Storm water Pollution Prevention Plans (SWPPP) and Spill Prevention Control and Countermeasures Plans (SPCC) for each maintenance facility</p> <p>Conducts periodic pollution prevention training for all maintenance facility personnel</p> <p>Maintains a infrastructure improvement and maintenance program to improve pollution prevention infrastructure and insure water quality improvement</p>
ME	<p>Environmental and Safety Policies and Procedures for the Bureau of Maintenance and Operations, with procedures for audit program and developing new procedures. It also defines objective, applicability, target audience, responsible parties, requirements of each policy and procedure, and training requirements.</p> <p>http://www.resourcesaver.com/file/toolmanager/CustomO73C230F53824.pdf</p>
MN	<p>Numerous handbooks, course workbooks etc. We are updating our existing handbook and also creating a Design CD ROM</p> <p>http://www.dot.state.mn.us/metro/waterresources/permit.html#bmp</p> <p>http://www.dot.state.mn.us/metro/waterresources/pdf/ms4_permitapplication2003.pdf</p> <p>http://www.dot.state.mn.us/metro/waterresources/pdf/2004%20Final%20Draft%20MS4%20Annual%20Report.pdfMn/DOT Metro Area 2004 Final NPDES MS4 Permit Report</p>
MO	<p>Courses modified yearly as needed</p>
MS	<p>SWMP training manual, standard drawings for BMPs</p>
MT	<p>MDT Erosion & Sediment Control Best Management Practices Manual :</p> <p>http://www.mdt.mt.gov/research/projects/env/erosion.shtml</p>
NC	<p>Public Handouts, SPPP Template, Host of Erosion and Sedimentation Control Manuals</p>
ND	<p>ND DOT http://www.dot.nd.gov/manuals/escm/escmfinal.pdf</p> <p>National Pollutant Discharge Elimination System (NPDES)</p>
NE	<p>Approved Products List for BMPs. We are in the process of developing our NPDES program and trying to determine our training needs.</p> <p>Newer, more rural states are beginning to "identify projects requiring SWPPPs both in construction and in design phases. We are educating our project managers on SWPPP requirements and inspections. All projects now have SWPPPs and Project Managers are trained on SWPPP execution."</p>
NH	<p>DOT has organized a coalition of 37 municipalities to meet regularly to discuss storm water issues. DOT is the only conduit to encourage regular meetings.</p>
NJ	<p>New Jersey DOT has completed/implemented: 1- Outfall mapping, illicit connection detection/elimination and repair/scouring identification; 2- Storm water system cleaning and inspection; 3- Maintenance facility "Good Housekeeping" practices; 4- Sweeping; 5- Public education; 6- Roadside erosion control; 7- Deicing materials storage; Litter pickup; 6- inlet labeling</p>
NM	<p>Online NPDES manual, training done as needed</p>
NY	<p>Environmental Procedures Manual, Highway Design Manual, The Memorandum of Understanding Between the Department of Transportation and the Department of Environmental Conservation Regarding the SPDES General Permit for Storm water Discharges from Construction Activity, GP-02-01 -</p> <p>http://www.dot.state.ny.us/eab/water/spdes_mou_2003.pdf.</p> <p>Latest MS4 Annual Report - http://www.dot.state.ny.us/eab/water/final_spdes_annual_report_2005.pdf.</p>

	<p>Research projects - http://www.dot.state.ny.us/eab/res_main.html</p> <p>Training presentations - http://www.dot.state.ny.us/eab/slides.html</p> <p>Current Erosion and Sediment Control specifications - http://www.dot.state.ny.us/cmb/consult/eib/files/ei02037.pdf</p> <p>Current Erosion and Sediment Control details - http://www.dot.state.ny.us/caddinfo/design/stdsheets/stdsht.html#S209</p>
OH	<p>ODOT's SWMP web site (www.dot.state.oh.us/stormwater) contains SWMP Annual Reports, our MS4 Storm Water Outfall Inventory Manual, public involvement/education materials, training presentations, and other information.</p> <p>Ohio DOT Outfall Inventory Manual</p> <p>ODOT NPDES Construction Permit Implementation Flowchart: http://www.dot.state.oh.us/se/hy/NPDES/NPDESFlowchart%2004-24-06.pdf</p> <p>Changed standard design of catch basin grates so that "Dump No Waste-Drains To Waterway" is stamped into all new grates. Many of our BMPs are existing practices or minor changes to existing practices, which made them easier and more cost effective to implement</p>
OR	Erosion control and field manuals
RI	<p>Materials available in early 2007, check web site</p> <p>Partnering with URI Cooperative Extension for Storm water education, Public Participation, and Public Involvement.</p>
SC	Developed a Phase I MS4 permit application that has already been shared with neighboring states, water quality field manual, approved products list, erosion and sediment control specifications
SD	<p>Erosion & Sediment Control Training/Certification Program</p> <p>We have initiated a Storm Water Outreach Alliance composed of regulated MS4s in SD. The overall purpose of this group is to develop a storm water education and information media campaign that will reach the citizens of the state with one, consistent message</p>
TN	No courses currently available, but plan to develop many courses aimed at our EPSC Inspectors, Contractors, and Maintenance personnel.
TX	Storm Water Guidance Manual, draft phase II storm water management plans guidance memos. All on web page: http://www.dot.state.tx.us/env/Resources/res-nrm.htm
UT	Environmental Control Supervisor (ECS) Training Program for construction and maintenance staff.
VA	Establishment of the Technical Team and Policy Team to oversee implementation, at this time.
VT	<p>Complying with regulatory requirements prior to the regulation being implemented by the resource agency. This has allowed VTrans to pilot, test, and prepare for compliance without the concern of fines or enforcement. This also allows for training and education without the pressure and urgency of looming near deadlines.</p> <p>http://www.aot.state.vt.us/TechServices/EnvPermit/erosionpreventionandsedimentcontrol.htm, http://www.smartwaterways.org/, http://www.aot.state.vt.us/TechServices/EnvPermit/Stormwater04.htm, http://www.aot.state.vt.us/TechServices/EnvPermit/stormwatermappingprogram.htm</p>
WV	Design Directives, Specifications, Erosion & sediment control manual, Environmental Issues Guidebook, brochure

APPENDIX D - SAMPLE STATE ACTIVITIES

CALTRANS Construction Inspection Program

Arizona's Storm Water Action Team (SWAT) Program

Maryland State Highway Administration EMS

CALTRANS CONSTRUCTION INSPECTION PROGRAM

Contractor inspections

Caltrans requires contractors, through contract provisions, to conduct regular site inspections which are generally weekly during the rainy season and biweekly outside the rainy season. Contractors are also required to inspect the construction site before, during and after rain events. An inspection checklist (contained within the [SWPPP/WPCP Preparation Manual](#)) is required to be completed for each inspection and submitted to the Resident Engineer (RE) within 24 hours.

Resident engineer inspections

The RE is required to conduct inspections at the same frequency as the contractor. Results of the inspections are forwarded to the contractor for correction. The RE may designate a SWPPP inspector to conduct the inspections for the RE, but this person should be trained on SWPPPs and have inspection experience.

Consultant compliance inspections

Caltrans contracts with a team of stormwater consultant compliance inspectors that review DOT construction projects statewide for compliance with NPDES permits. These inspections by the third-party contractors, also called the Stormwater Task Force, provide an independent evaluation of construction site compliance statewide in all Districts. An initial filter of priority projects is performed, taking into account risk factors such as amount of disturbed soil (the engineer's estimate for disturbed surface area), environmental sensitivity of the area, and risk as assessed through referrals from District Construction Stormwater Coordinators (CSWCs), REs and other District representatives. Once a project has been selected for inspection, the project is assigned a priority status between 1 and 3, determined by such factors as size of soil disturbance, potential for polluting receiving waters, SWPPP/WPCP status, prior inspection ratings, and Rainfall Area designation. For example, Priority 1 projects consist of projects with a high potential for discharge into a receiving water or any potential for stormwater discharge into a receiving water that is on the EPA 303(d) list as an impaired water body. In general, these criteria encompass projects with greater than 1 acres of soil disturbance, projects that are located within 1/4 mile of a water body, all projects within certain environmentally sensitive regions, and projects located in areas particularly vulnerable to rainfall. This priority status establishes the inspection team size and frequency of inspection.

During an inspection, the consultant inspector documents the compliance status of the project in each of the BMP categories on the checklist and summarizes the inspection results on the first page. The summary identifies deficient and/or efficient use of BMPs on the project, and critical areas needing attention. The project SWPPP/WPCP and project documentation related to water pollution control are also examined. A rating is assigned to the project based on inspection results. Since water pollution control requirements vary by season different checklists are used for the rainy season and the non-rainy season in most Rainfall Areas. The checklists include BMPs from six categories:

- Soil stabilization
- Sediment control
- Wind erosion control
- Tracking control
- Non-stormwater management
- Waste management & materials pollution control

Rating System

Consultant inspectors use an alpha-numeric rating system to provide the most accurate assessment of the project's overall compliance with stormwater pollution prevention requirements, while maintaining a regulatory compliance approach. The inspector assigns a numeric designation of 0 to 4 for compliance at

the site, with 0 indicating the site is substantially in compliance and 4 indicating the site has critical deficiencies:¹

- 1 Rating: There are no significant deficiencies that require correction. Criteria meeting this rating include:
 - The approved SWPPP appropriately addresses all categories of BMPs and is applicable to the current project operations and season.
 - Appropriate treatment control provided for dewatering operations.
 - Non-stormwater and waste management BMPs properly implemented.
 - Sediment tracking is minimal to non-existent.
 - No evidence of wind erosion.
 - All temporary soil stabilization BMPs implemented in accordance with the project's SWPPP requirements.
 - Sediment controls are implemented in accordance with the approved SWPPP.
- 2 Rating: The project has minor deficiencies. The inspector will list each of the minor deficiencies and can include corrective actions to be taken prior to the next scheduled inspection. Minor deficiencies include the following:
 - Site inspections by project staff are not being conducted in accordance with expected frequencies.
 - Approved SWPPP does not reflect current operations and an amendment is recommended.
 - Any non-stormwater or waste management BMPs improperly maintained.
 - Soil stabilization or sediment controls are not properly maintained.
 - Evidence of active wind erosion on unstabilized slopes/stock piles.
 - Minor tracking less than approximately 50 feet from project entrance or exit points.
- 3 Rating: Excessive minor deficiencies and/or major deficiencies are encountered. This rating will be applied if either a total of six or more minor deficiencies requiring correction are observed and/or Major deficiencies exist on the project. Major deficiencies are defined as follows:
 - Approved SWPPP does not reflect current operations and amending of the document is past due or needed ASAP.
 - Hazardous materials or waste is stored within the project without implementation of BMPs.
 - Any discharge of sediment or deleterious substances resulting from dewatering operations conducted without implementation of required BMPs for dewatering.
 - Sediment tracking from the project construction equipment or vehicles approximately 50 feet from project entrances or exits.
 - Expansion of the active disturbed soil area limit without RE written approval.
 - Soil stabilization and sediment controls are not installed in accordance with applicable construction site best management practices (BMPs) manual.
 - Dust from construction visibly blowing off the site and into drainage conveyances or adjacent water bodies.

- 4 Rating: There are critical deficiencies that would likely result in a violation of the permit if a stormwater runoff event were to occur. The inspector will note the deficiencies and make recommendations for corrective action. Critical deficiencies are defined as follows:
 - No approved SWPPP
 - Any observed discharge of stormwater or non-stormwater from the project that, in the judgment of the inspector, is generated by the construction activity, and is uncontrolled.
 - Absence of linear barriers and/or perimeter controls required by the applicable BMP implementation manual.
 - There are identified stormwater inlets or receiving waters within or adjacent to the project site in close proximity to DSAs without control measures in place that pose an immediate threat of untreated stormwater discharges.
 - Working in an active stream channel or other water body without proper implementation of required BMPs.
 - No corrective action taken for potential hazardous materials/waste deficiencies noted in (3) above.
 - Sampling and analysis plan (SAP) requirements have not been properly implemented.

For sites with major deficiencies, District management and Headquarters personnel are immediately notified. Caltrans' inspection log summarizes the inspection history of each project reviewed during the reporting period, usually over a thousand annually. Projects are revisited during the year based on their priority status and/or inspection history.

Appeals Process

Following a review, the on-site project team has the opportunity to appeal the compliance rating assigned by the compliance inspector before the rating is finalized. At Caltrans, the appeals process is conducted as follows:

- The inspector provides the Resident Engineer or the Resident Engineer's onsite representative a copy of the inspection report immediately following a project site review.
- The RE notifies the District Construction Stormwater Coordinator (CSWC) of any disputed unfavorable rating and submits supporting documentation/photos, etc.
- The District CSWC investigates the disputed rating, and, if appropriate, completes an appeal of the inspection form and submits this form (by fax or email) along with a copy of the original inspection summary sheet and supporting documentation to the HQ Division of Environmental Analysis (DEA) Construction Stormwater (CSW) Coordinator. All appeal requests and supporting documentation must be submitted to the DEA-CSW Coordinator within 5 working days of the initial site inspection. Once a timely appeal request is submitted, the initial rating will be suspended until the appeals process is completed and the inspection rating is resolved.
- The DEA-CSW Coordinator receives and distributes all appeal information, including any photo documentation requested of the inspector, to an Appeal Panel that will determine whether the initial rating is justified. The panel reviews all of the available information and determines whether there is substantial reason to modify the initial inspection rating. The decision to change a rating is by majority vote of the panel. The panel may consult with various Departmental personnel to assign a final rating. The Appeal Panel consists of one representative from each of the following: 1) HQ-DEA, Office of Stormwater Policy, Permitting and Planning; 2) HQ-Division of Construction,

Office of Construction Practices; 3) District NPDES Coordinator or his/her designated representative who is either identified in the District's Regional Work Plan or is supervised by the District or Regional NPDES Coordinator. The District CSWC cannot participate as a member of the Appeal Panel.

- The DEA-CSW Coordinator will notify the R.E. and District CSWC of the panel's findings. If the appeal process results in a final rating that is still unacceptable to the R.E., the R.E. shall notify the District Construction Chief for the project within two working days of notification.
- The DEA Chief for Stormwater Policy, Permitting & Planning shall review and make the final decision regarding any contested rating rendered as a result of an appeal inspection, at the request of the project's (District) Construction Chief.

Summary tables of appeal reviews conducted during each season are presented in the annual report.

Results Reporting

For the period from October 2002 to April 2003, of the 255 projects inspected by the third-party teams, 86 percent had zero or minor deficiencies and 14 percent had major or critical deficiencies. That trend has continued through the March 2006 report, also indicating 86 percent with zero or minor deficiencies.²

Caltrans annual performance report on the construction program includes:³

- Description of the project selection criteria and rating system used by the consultant to conduct compliance inspections during the reporting period.
- Summary of inspection ratings from the current reporting period compared with ratings from previous years.
- Discussion of appealed ratings.
- Discussion of stormwater issues encountered during the current reporting year compared with issues observed during previous years.
- Most Common Deficiencies.
- Quantitative analysis of BMP implementation rates and BMP effectiveness by BMP category.
- Qualitative analysis of BMP implementation trends, improvements, and challenges.

Ratings are presented for each inspection on each individual project and summary information is presented for total projects visited by region, with percentages of minor deficiencies (1 or 2 rating), major deficiencies (3 rating), and critical deficiencies (4 rating).

Trend Identification and Continual Learning/Improvement

Observations are made from analysis of performance ratings. For example, for over 1000 inspections at Caltrans in 2005:⁴

- The most commonly used BMPs tend to be tracking controls, concrete waste management, spill prevention and control, and material storage and handling. At Caltrans in 2005, deficiencies involving tracking controls were the most common deficiency observed.
- Incomplete documentation was cited 48 times. This typically includes missing inspection reports from both construction and contractor staff.
- There were 2 observations of a project working without an approved SWPPP.

- There were 4 observations of the DSA limit exceeding the project special provisions without R.E. approval. A high percentage of projects are keeping the amount of active DSAs at or below the limits set forth in the project Special Provisions. This allows the contractor enough time to deploy soil stabilization BMPs on those limited areas, rather than trying to stabilize large open area prior to a rain event.
- There were 40 observations of the project SWPPP/WPCP not reflecting current field conditions.

Deficiency Noted on Inspection Report, with No. of Instances

Improper tracking controls 94	Improper temporary stream crossing 2
Improper Concrete Waste Management 88	Working without an approved WPCP 1
Missing spill & drip protection/prevention/clean-up 77	Illegal dumping observed 1
Improper material storage/handling 65	Improper implementation of SAP 1
Improper maintenance of sediment controls 59	Improper wind erosion controls 1
Improper Stockpile Management 53	Improper contaminated soil management 1
Improper Solid Waste Management 52	Improper material and equipment use over water 1
Incomplete Documentation 48	Improper maintenance of sediment basin/pond 1
Missing Sediment Controls 47	
SWPPP does not reflect current field conditions 40	
Improper installation of sediment controls 35	
Missing Soil Stabilization 29	
Improper storage of hazardous materials 28	
Improper hazardous waste management 22	
Improper implementation of E&S Controls 19	
Improper drainage conveyances 11	
Improper paving and grinding operation 11	
Improper installation of soil stabilization BMPs 10	
Improper Sanitary/Septic Waste Management 10	
Improper water conservation practices 8	
Improper Dewatering 8	
Improper concrete finishing 7	
Improper vehicle maintenance 6	
Improper clear water diversion 6	
Improper vehicle fueling 4	
DSA limit exceeded without approval from RE 4	
Improper vehicle cleaning 3	
Improper maintenance of soil stabilization 3	
Working without an approved SWPPP 2	
Improper liquid waste management 2	

Caltrans found that lack of maintenance and incorrect installation were the primary reasons for failure or potential failure of BMPs in every BMP category.

- 76 percent of active and non-active DSAs had soil stabilization measures properly implemented; 24 percent were not properly implemented.
- Soil stabilization deficiencies are not among the top five most common deficiencies noted in inspection reports for projects given unfavorable ratings.
- For observations of soil stabilization BMPs, 95 percent were of effective BMPs, a significant increase over the previous year (76 percent). Ineffective BMPs due to incorrect installation were 2 percent of the observations, and 3 percent were not effective due to lack of maintenance.
- 68 percent of linear sediment barriers were properly implemented on DSAs, 37 percent were not properly implemented, an improvement over the previous fiscal year, where the percentages were 63 percent and 37 percent respectively.
- For observations of sediment control BMPs, 93 percent were of effective BMPs, a significant increase over the previous year (80 percent). Ineffective BMPs due to incorrect installation were 4 percent of the observations, and 3 percent were not effective due to lack of maintenance.
- 96 percent of wind erosion controls were properly implemented, 4 percent were not. For observations of wind erosion control BMPs, 97 percent were of effective BMPs.
- 62 percent of sediment tracking control BMPs were properly implemented, 38 percent were not. The most common deficiency noted on projects rated 3 and 4 was improper tracking controls. For observations of sediment tracking controls BMPs, 81 percent were of effective BMPs. Ineffective BMPs due to incorrect installation were 14 percent of the observations, and 4 percent were not effective due to lack of maintenance.
- 75 percent of non-stormwater/waste management control BMPs were properly implemented, 25 percent were not.
- For observations of non-stormwater/waste management control BMPs, 89 percent were of effective BMPs. Ineffective BMPs due to incorrect installation were 3 percent of the observations, 6 percent were not effective due to lack of maintenance, and 2 percent were not effective due to wrong location/application.
- For all BMP categories, 74 percent of the BMPs were properly implemented, 26 percent were not. For observations of all BMP categories, 92 percent were of effective BMPs, an increase from last year (77 percent). Ineffective BMPs due to incorrect installation comprised 4 percent of the observations. 4 percent were not effective due to lack of maintenance.

ARIZONA'S STORM WATER ACTION TEAM (SWAT) PROGRAM

- **Construction SWAT** includes personnel from ADOT Districts, Contracts and Specifications Section, Construction Group, the Operations Program, and a consultant. The Construction SWAT is reviewing all activities associated with the design, installation, maintenance, and enforcement of construction BMPs, as well as modification of contract specifications for contractor erosion and sediment control requirements. This SWAT uses the ADOT Erosion and Pollution Control Manual for guidance and is responsible for updates to the manual. The Construction SWAT is also working on project compliance checklists and has implemented AZPDES training for employees and contractors.
- **Maintenance SWAT** includes personnel from the various Engineering Districts, Central Maintenance, Natural Resources, Transportation Services Group, Physical Plant Operations, Traffic Operations Sign Factory, and a consultant. This SWAT is also coordinating with the Maintenance Servant Leadership Team (MSLT). This SWAT is using the ADOT PeCoS (Permit Compliance) system for categorization and description of maintenance activities as a basis for selecting appropriate maintenance activities BMPs, implementing the BMPs, and providing training to maintenance personnel. This SWAT also includes facility maintenance activities and will include selection and implementation of appropriate facility BMPs.
- **Materials SWAT** includes personnel from the Materials Group, Geotech, Districts, and a consultant, and is tasked with determining which ADOT material sources should be included in the stormwater program.
- **Design SWAT** includes personnel from Drainage Design, Roadway Design, Roadside Development Section, Environmental & Enhancement Group, Right-of-Way Group, Bridge Group, Operations, and Statewide Project Management Group. This SWAT is examining a methodology for selecting projects that require post-construction water quality controls, selecting and implementing appropriate permanent BMPs, and researching changes in BMP design over time. The Design SWAT will use the ADOT Roadway Design Guidelines as they pertain to environmental considerations and the development of post-construction site runoff controls for the basis of its guidance.
- **MS4 SWAT** is guided by the state NPDES coordinator and the Highway Maintenance Section and includes personnel from the Maintenance Group, Phoenix Maintenance District, Safety, and Project Maintenance. This SWAT oversees all requirements of the Phase I MS4 permit, including preparing and implementing SWPPPs for all ADOT maintenance yards within the Phoenix and Tucson large MS4s, mapping all outfalls and stormwater management structures, and developing an illicit-discharge monitoring program. In addition, this SWAT is responsible for implementing the Phase II MS4 program.
- **Statewide Monitoring Plan SWAT** is guided by the Roadside Development Section and includes personnel from ADOT Districts, Maintenance Group, Operations Program, Roadway Design, and consultants. This SWAT is tasked with developing a three-phase statewide monitoring plan that can be used throughout ADOT operations. A monitoring plan will be developed for construction, MS4s, and industrial facilities.
- **Encroachment Permits SWAT** includes personnel from the ADOT Districts and Central Permits. This SWAT is involved in rewriting the encroachment permit language. Future tasks include a model joint project agreement for stormwater projects with adjoining local jurisdictions and model encroachment permit language developed in conjunction with the Design SWAT for those entities wishing to discharge to ADOT stormwater structures.

- **Information Management SWAT**, led by the Transportation Planning Division, includes personnel from Operations, GIS, and a consultant. This SWAT is tasked with developing a system that will allow ADOT easy access to stormwater information on projects and permits by coordinating with each SWAT on the types of data being produced and creating a central repository for that information.
- **Public Education/Involvement SWAT**, led by the Community Relations Director and Public Information Officer. This SWAT will create outreach activities to inform a broad cross section of the public about stormwater, ADOT's role in stormwater management, and what the public can do to assist. The SWAT will also solicit public involvement and input into the ADOT stormwater program.
- **Training SWAT**, led by LTAP, includes personnel from Roadside Development Section, Drainage Design, Roadway, Maintenance Group, Physical Plant Operations, Training, and Operations Program. This SWAT is developing an overall coordinated stormwater training program to ensure that every ADOT employee involved in stormwater management is aware of the stormwater requirements and regulations.
- **Stormwater Management Committee**. In addition to the SWATs, another committee was formed for input into the ADOT stormwater program from an outside perspective. The purpose of the Stormwater Management Committee is to provide ADOT with additional viewpoints on the potential impacts of the ADOT stormwater program on other partners and to maintain open lines of communications on stormwater issues. This committee is composed of representatives from industry Association of General Contractors (AGC), FHWA, and ADOT.
- **Specification 104 Subcommittee**. This is a subcommittee of the Stormwater Management Committee that is composed of representatives from industry (AGC and a contractor), FHWA, and ADOT. The purpose of this subcommittee is to discuss ADOT modifications to the 104 Standard Specifications and the role of the contractor's Erosion Control Coordinator.

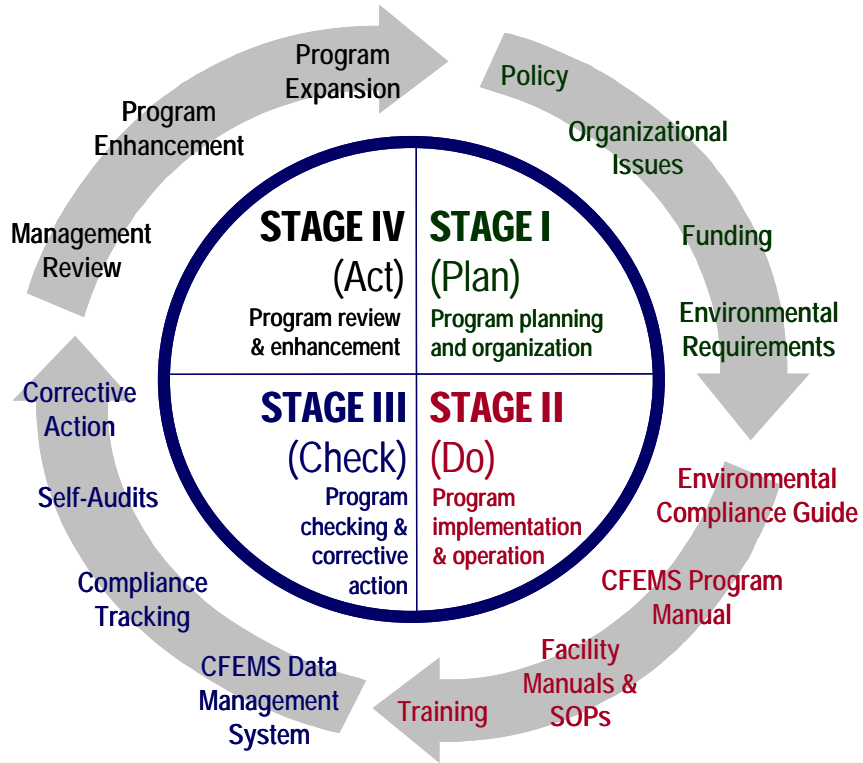
MARYLAND STATE HIGHWAY ADMINISTRATION EMS – STARTING WITH FACILITIES AND OPERATIONS

The Maryland State Highway Administration (SHA) has begun development and implementation of a Compliance Focused Environmental Management System (CFEMS) in a structured, phased approach to support ongoing environmental compliance activities at SHA facilities and operations. SHA is developing the system in accordance with the standard Plan, Do, Check, Act (PDCA) model and in accordance with identified program elements from the EPA CFEMS Guidance. This document presents an outline of the program development plan, the phased approach developed by SHA, a brief overview of the program elements and tools, and an overall schedule for program development and implementation.

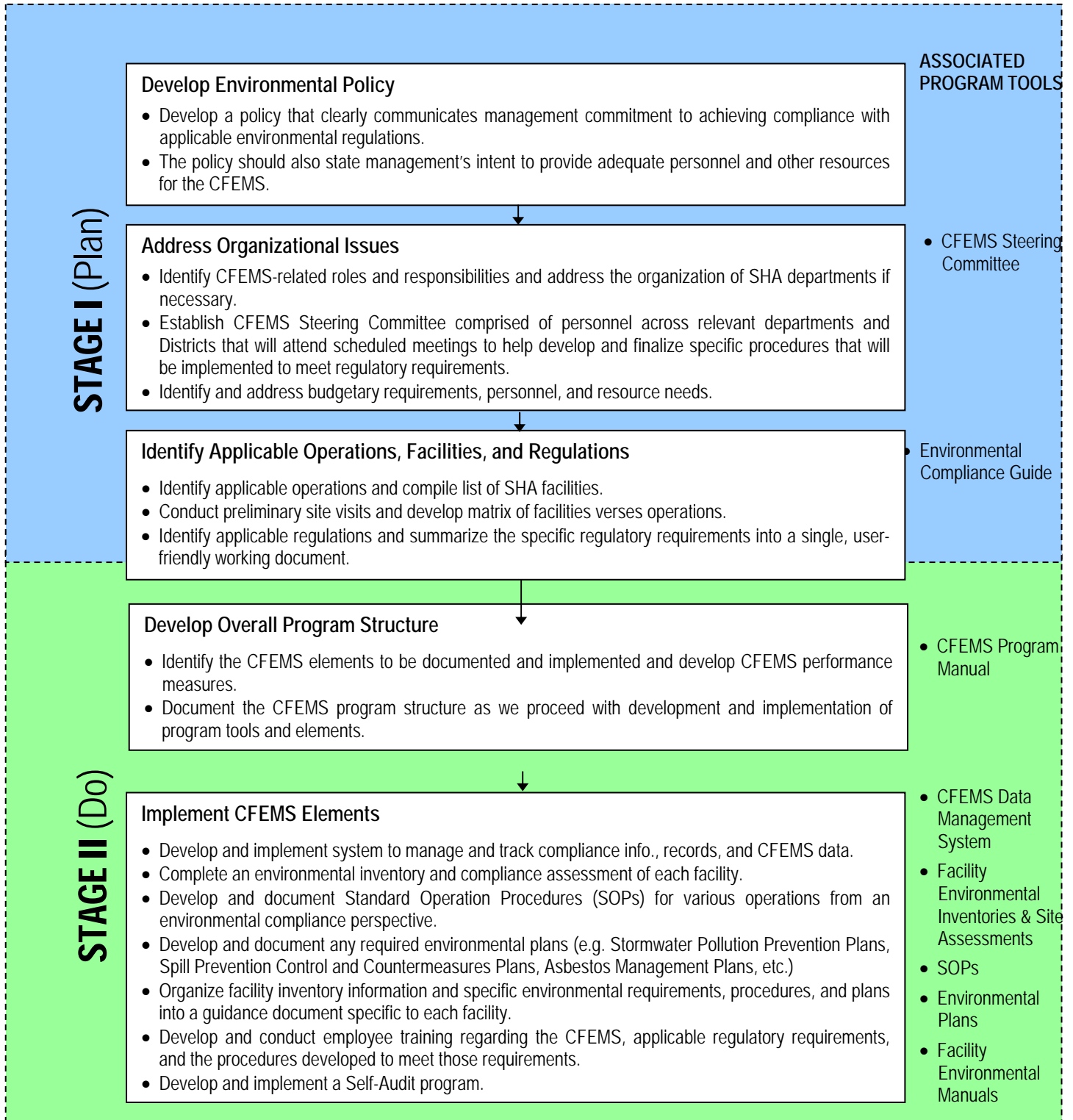
Program Development Plan

SHA has initiated a phased approach focused on development and implementation of a CFEMS for Primary Maintenance Shops during an initial Phase, refinement of the program elements, and then expansion of the program in subsequent Phases to incorporate remaining facility types in a systematic manner. The strategy involves two concurrent elements: (A) CFEMS development/ implementation and (B) Compliance Actions (addressing any noncompliance issues identified during CFEMS implementation as part of Systematic Discovery). Implementation of both elements concurrently is critical to ensuring both short and long-term compliance. The overall goal of this phased strategy is to identify and correct compliance issues concurrently with developing and implementing the CFEMS to ensure continued, long-term compliance of SHA facilities and operations. The phased approach is summarized as follows:

- **PHASE ONE (Year 1 – Year 3):** Development and Implementation of CFEMS for Primary Maintenance Facilities—Involves establishment of CFEMS programmatic elements and implementation of the system following the PDCA model for the twenty-eight (28) primary SHA Vehicle Maintenance Facilities. Pertinent operations at these targeted facilities include fueling, vehicle maintenance, vehicle washing, vehicle painting, storage of petroleum products, waste, and other liquid chemicals in aboveground and underground storage tanks, stockpiling of salt and other dry materials, hazmat storage, and animal carcass disposal.
- **PHASE TWO (Year 3 – Year 4):** Expansion of the CFEMS to Incorporate Satellite Maintenance Shops; Stockpile/Salt Storage Facilities; Welcome/Rest Centers; Weigh Stations; Draw Bridges; and Communication Facilities—Following implementation of program elements as part of Phase One, SHA will expand the CFEMS using the same PDCA model to cover Satellite Maintenance Shops (17); Stockpile/Salt Storage Facilities (42); Weigh Stations (11); Draw Bridges (19); Welcome/Rest Centers (11); and Communication Facilities.
- **PHASE THREE (Year 4 – Year 5):** Expansion of the CFEMS to Incorporate SHA Laboratories—Following implementation of Phase Two program elements, SHA will expand the CFEMS using the PDCA model to cover SHA Laboratory Facilities (4).
- **FUTURE PHASES:** Expansion of the CFEMS for to Incorporate Other Operations—After Phase III has been implemented, SHA will begin to incorporate operations beyond facilities into the CFEMS. SHA has targeted roadside maintenance and winter operations as the initial activities to be incorporated.



SHA will be implementing a compliance self-audit program within the CFEMS. These audits will be performed in accordance with each phase, and SHA is scheduled to be completely self-audited through Phase Three by the end of Year 5. An outline of the program development elements (Stages I and II) is provided in the next figure.



Program Tools

Steering Committee—A steering committee of various SHA departments, Districts, and facilities will take an active role in the planning and development of the program and ensuring linkage between the developed program procedures and the operations, practices, resources, and structure already in place at SHA facilities. This Committee will meet on a scheduled basis to review recommended CFEMS procedures and program elements, guide the CFEMS development efforts, and monitor implementation.

Environmental Compliance Guide (ECG)—SHA facilities and operations are subject to a number of federal and State of Maryland environmental regulations covering various environmental media. This guide will assemble the regulatory requirements into a user-friendly tabular format in a single document, organized by environmental media. It will identify the applicable compliance requirements and describe management and operational procedures that will be put in place to ensure and maintain compliance. The information in the ECG will be currently organized into the following sections:

- Hazardous Materials / Waste
- Solid Waste
- Drinking Water / Water Supply
- Wastewater
- Stormwater
- Asbestos
- Lead-Based Paint
- Air Quality
- Underground and Above Ground Storage Tanks (UST/AST)

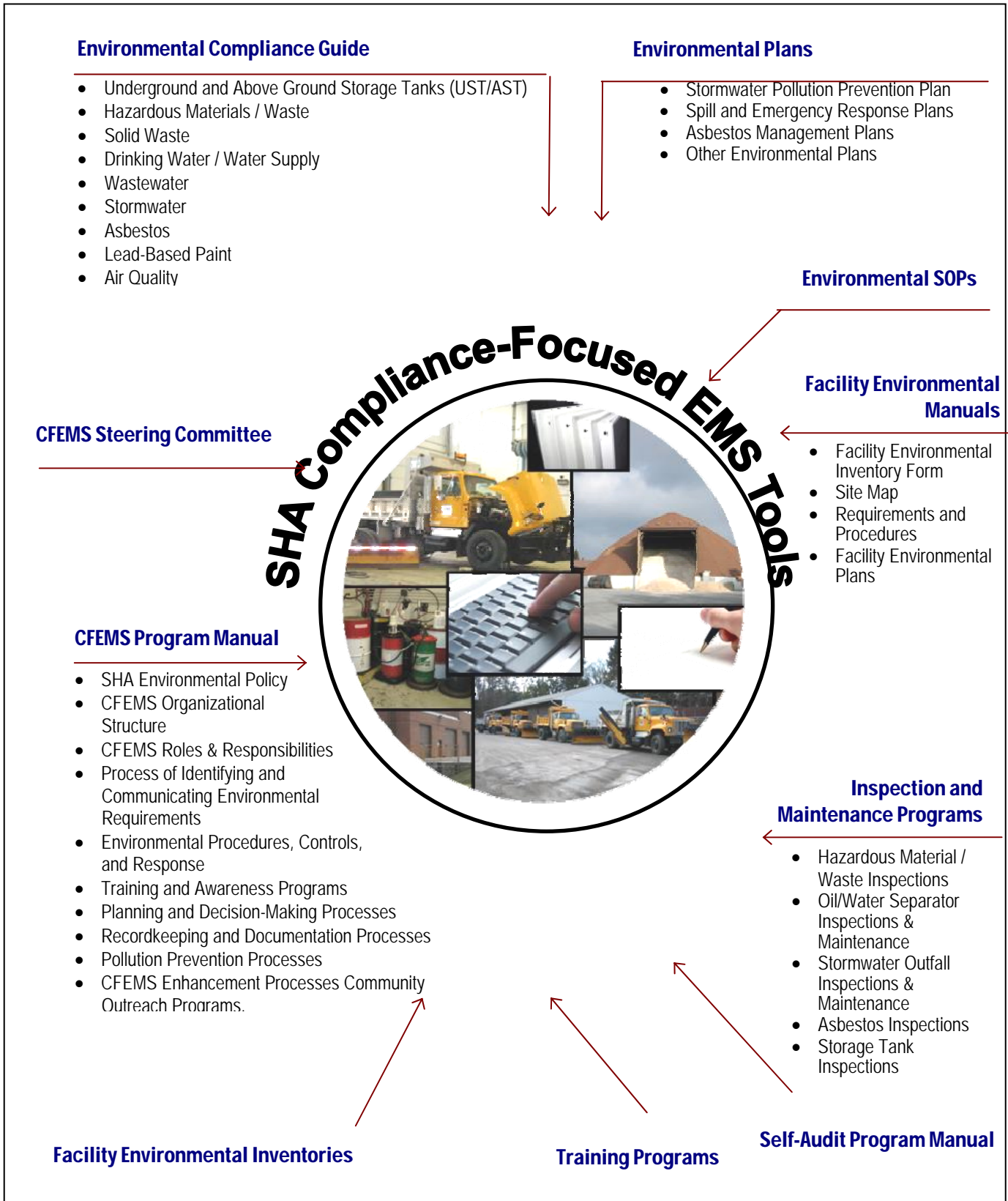
Each Section will contain general information regarding the media, a list of applicable regulations and best management practices (BMPs), and then a table which lists the actual regulatory requirements that need to be met along with the procedures in place to meet each requirement.

CFEMS Program Manual—The systems that will be put in place as part of the CFEMS will be documented in a CFEMS Program Manual. The manual will document SHA's environmental policy; the CFEMS organizational structure; CFEMS roles and responsibilities; process of identifying and communicating environmental requirements; environmental procedures, controls, and response; training and awareness programs; planning and decision-making processes; recordkeeping and documentation processes; pollution prevention processes; program enhancement processes; and community outreach programs. The manual will not provide specific details regarding how individual environmental requirements will be met, but rather the management procedures, processes, and tools for ensuring compliance. For example, rather than restate the information in the ECG, the section of the CFEMS Program Manual regarding environmental requirements will discuss and refer to the guide and present the system in place for updating the information and identifying new regulatory requirements.

CFEMS Data Management System—SHA intends to develop and implement a web-based system to integrate the program tools and serve as the central management utility for the CFEMS. The password-protected site will contain a number of functions to facilitate data management and reporting, document management, communications, and tracking of facility compliance status all accessible via a standard web browser and internet connection.

Facility Environmental Inventories & Site Assessments—A team of environmental professionals will visit each of the facilities pertaining to each Phase of the CFEMS development plan. These visits will be conducted to collect information regarding the inventory of items and operations onsite that have an environmental and/or regulatory impact. Information to be collected within each Environmental

Inventory will include facility identification information; facility contacts; site maps; storage tank information and locations; hazardous material/waste information and locations; environmental infrastructure information (e.g. existing and location of oil/water separators, stormwater management ponds, outfalls, etc.); location of any environmentally sensitive areas (e.g. wetlands); and other information that may be subject to environmental regulation. The site teams will also conduct assessments of compliance status and identify any non-compliance issues to be addressed.



Environmental Standard Operating Procedures (SOPs)—SHA will develop a number of SOPs to inform, remind, and document the proper procedures for various operations that have environmental. These Standard Operating Procedures (SOPs) may cover a number of areas ranging from accumulation, storage, and labeling of hazardous waste to inspection of accumulation areas and reporting and recordkeeping requirements as well as specific procedures regarding drum management, paint waste management, used oil, and aboveground storage tanks. The SOPs will be intended to serve as a reference for operational and management personnel. The documents are not intended to be static in nature but to be active resources for documenting and communicating the proper procedures. As new requirements or processes are identified, additional SOPs will be added as well as updates to existing procedures as needed to continually enhance the program.

Environmental Plans—There are a number of environmental plans required to be developed and implemented in response to specific environmental regulations. These plans include specific procedures for ongoing environmental management and response activities. Examples of these plans include Spill Response and Contingency Plans, Pollution Prevention Plans, Asbestos Management Plans, and other media-specific documents required by regulation.

Facility Environmental Manuals—SHA will develop facility-specific environmental manuals for each site. The primary purpose of the manuals will be to serve as a reference tool for facility personnel in maintaining environmental compliance at the facility. It will provide basic information on how to conduct facility activities in an environmentally sensitive manner and in keeping with applicable environmental laws, regulations, and policies. They will include the facility environmental inventory forms and maps from the site assessments and incorporate the environmental requirements tables from the ECG as well as the environmental SOPs and any facility-specific environmental plans as appendices. The manuals will also provide personnel with specific instructions for responding to a regulatory audit. These manuals will be a key element of the CFEMS from a functional perspective as they are intended to be the primary resource for personnel at each facility regarding the applicable environmental requirements the procedures that they will be responsible for.

Inspection and Maintenance Programs—SHA has already implemented and will continue to implement a number of on-going inspection programs to support program goals and data collection requirements in compliance with specific regulations. Such inspection programs may include storage tank inspections; hazardous waste inspections; oil/water separator inspections & maintenance; stormwater outfall inspections & maintenance; and asbestos inspections.

Training Programs—SHA will implement a number of personnel training programs to ensure effective communication of environmental requirements and management procedures implemented as part of the CFEMS. These training programs will involve training specific to the regulatory requirements across various environmental media as well as awareness training regarding the overall CFEMS program.

Self-Audit Program Manual—As part of the CFEMS, SHA will be performing self-audits of facility compliance and reporting the findings to applicable regulators under a self-disclosure program. A Self-Audit Program Manual will be developed to assist SHA self-auditors in self-identifying and correcting environmental compliance issues SHA facilities. The Manual will document the audit procedures, environmental requirements, and regulatory reference materials. Pre-audit, audit, and post-audit procedures will be documented as well as a copy of a Self-Audit Checklist.

CFEMS Development and Implementation Schedule

The timeline for development and implementation of the SHA CFEMS in accordance with the EPA CFEMS Guidance and SHA's Phased approach is presented in the attached schedule.

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APPENDIX E – SAMPLE SWPPP CERTIFICATION & FORMS

SAMPLE SWPPP CERTIFICATION

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.

Project Name:

ADEQ Construction SWPPP Checklist

Construction SWPPP Checklist

Permit Citation	Description	OK?	Location in SWPPP and Notes
Part IV.C.1.	Identify all operators for the project and the areas over which each operator has control		Section 1.1
Project Description			
Part IV.C.2.	Describe the nature of the construction activity		Section 2.1
Part IV.C.2.a.	Describe the project and its intended use after NOT is filed		Section 2.1
Part IV.C.2.b.	Describe the intended sequence of disturbance activities		Section 2.1.2
Part IV.C.2.c.	Indicate the total area of site and estimate of total area expected to be disturbed (include off-site borrow and fill areas)		Section 2.1.3
Part IV.C.2.d.	Estimate the preconstruction and postconstruction runoff coefficient and provide soil data and any existent data on the quality of the discharge		Section 2.1.4, Appendix B-1
Part IV.C.2.e.	Include a general location map (e.g., USGS quadrangle, portion of a city or county map) showing 1 mile radius around site		Section 2.1
Site Map			
Part IV.C.3.	Include a legible site map, complete-to-scale, of the entire site. Try to include the following on a single map, but use multiple maps, to the same scale, if needed		Section 2.2
Part IV.C.3.a.	Identify on the map drainage patterns and estimated slopes after grading		Section 2.2
Part IV.C.3.b.	Identify on the map areas of soil disturbance		Section 2.2
	Identify on the map areas not to be disturbed		Section 2.2
Part IV.C.3.c.	Identify on the map locations of structural and nonstructural controls identified in the SWPPP		Section 2.2
Part IV.C.3.d.	Identify on the map locations where stabilization practices are expected to occur		Section 2.2
Part IV.C.3.e.	Identify on the map locations of off-site material, waste, borrow areas, or equipment storage		Section 2.2
Part IV.C.3.f.	Identify on the map locations of all surface water bodies (including wetlands; if no wetlands, state so on the map)		Section 2.2

Construction SWPPP Checklist

Permit Citation	Description	OK?	Location in SWPPP and Notes
Part IV.C.3.g.	Identify on the map locations where stormwater is discharged to a surface water (e.g., ephemeral waters or dry washes) and to MS4s		Section 2.2
Part IV.C.3.h.	Identify on the map locations and registration numbers of on-site dry wells if none, state so on the map)		Section 2.2
Part IV.C.3.i.	Identify on the map areas where final stabilization has been accomplished and no further construction phase permit requirements apply (if none, state so on the map)		Section 2.2
Part IV.C.4.	Identify on the map or in a narrative, the nearest receiving water(s), including ephemeral and intermittent streams, dry sloughs, and arroyos; if applicable, identify the aerial extent and describe any wetlands near the site that could be disturbed or potentially receive runoff from disturbed areas		Section 2.2
Part IV.C.5.	Identify on the map the location and describe stormwater or non-stormwater discharges at the site associated with nonconstruction activity and other pollutant sources such as fueling operations, asphalt plants, and concrete plants		Section 2.2
Part IV.C.6.	Identify on the map and address off-site material storage areas or borrow areas used solely for the project		Section 2.2
Erosion and Sediment Controls			
Part IV.D.1.	Describe all pollution control measures (BMPs)		Section 3
Part IV.D.1.	For each major activity, describe the BMP, the general sequence for implementing BMPs, and which operator is responsible for each BMP; include BMPs used at off-site material storage areas if the storage areas are used solely by the permittee for this project		Section 3.1
Part IV.D.2.a.	Describe the erosion and sediment controls designed to retain sediment on-site to the extent practicable		Section 3.1.1
Part IV.D.2.b.	Describe the selection, installation and maintenance of BMPs per manufacturers' specifications and good engineering practices, including procedures for modifying or replacing BMPs if one is found to be ineffective or installed incorrectly		Section 3.1
Part IV.D.2.c.	Describe the practice and schedule to routinely remove off-site accumulation of sediment		Section 3.1.3
Part IV.D.3.	Describe good housekeeping procedures to be used (prevent litter, debris and chemicals from being exposed to stormwater)		Section 3.3.1
Stabilization Efforts			
Part IV.D.4.a.	Describe and identify interim and permanent stabilization practices for the site. Document where existing vegetation will be preserved		Section 3.1.1
Part IV.D.4.b.	Describe when the operator will initiate stabilization procedures in the time frame provided in the permit and what stabilization efforts will occur		Section 3.1.1
Part IV.D.4.c.	Describe recordkeeping efforts, include forms and checklists used for keeping the required data		Section 3.1.2
Part IV.D.4.c.i.	Maintain records of the dates when major grading activities occurred		Section 3.1.2, Section 5, Appendix D
Part IV.D.4.c.ii.	Maintain records of when construction activities cease (temporarily or permanently)		Section 3.1.2, Section 5, Appendix D

Construction SWPPP Checklist

Permit Citation	Description	OK?	Location in SWPPP and Notes
Part IV.D.4.c.iii.	Maintain records of when stabilization is initiated and completed and any reason for delays		Section 3.1.2, Section 5, Appendix D
Part IV.D.5.	Describe structural practices used to divert flows from exposed soils, store flows, and limit runoff and the discharge of pollutants from exposed areas to degree attainable (combination of sediment and erosion controls must be used)		Section 3.1.3
	If any structural controls are used in the floodplain, the SWPPP should document why effective controls could not alternatively be placed outside the floodplain		Section 3.1.5
Part IV.D.5.a.i	Describe the location, size, and retention capacity of the drainage basin(s) and the areas that drain into them		Section 3.1.3
	For a drainage area of greater than 10 disturbed acres, describe how and where a basin with storage for a 2-year, 24-hour storm per disturbed acre drained will be used OR		Section 3.1.3
	Describe how and where a basin with 3,600 cubic feet of storage per disturbed acre drained will be used OR		Section 3.1.3
	If a sediment basin is not attainable, provide an explanation within the SWPPP		Section 3.1.3
	If basins are not used due to public safety concerns, describe the concerns and the alternative sediment controls to be used		Section 3.1.3
Part IV.D.5.a.ii.	For a drainage area greater than 10 disturbed acres that can't meet the size specified in Part IV.D.5.a.i, describe the smaller sediment basins and/or sediment traps to be used		Section 3.1.3
	For a drainage area of greater than 10 disturbed acres where sediment basin isn't attainable, describe how and where silt fences, vegetative buffer strips, or alternatives will be used on all side slope boundaries		Section 3.1.3
Part IV.D.5.a.iii.	For a drainage area of less than 10 disturbed acres, describe how and where smaller sediment basins or sediment traps are used along with silt fences, vegetative buffer strips, or alternatives on all side slope boundaries OR		Section 3.1.3
	Describe how and where a sediment basin with storage for a 2-year, 24-hour storm per disturbed acre drained will be used OR		Section 3.1.3
	Describe how and where a sediment basin with 3,600 cubic feet of storage per disturbed acre drained will be used		Section 3.1.3
Part IV.D.5.b	Describe where and what type of velocity dissipation devices will be used at discharge locations and along outfall channel		Section 3.1.4
Part IV.D.6.	Describe postconstruction stormwater management measures, if applicable		Section 3.1.4
	Describe where and what structural measures were placed in upland soils to the degree attainable		Section 3.1.4
	Confirm in the narrative whether structural measures comply with local or state stormwater management requirements		Section 3.1.4
Part IV.D.7.	Identify all allowable sources of non-stormwater discharges except for flows from firefighting activities		Section 2.3.2
	Describe how all non-stormwater discharges will be eliminated or reduced to the extent feasible		Section 3.2
	Describe how BMPs will be implemented for non-stormwater discharges		Section 3.2

Construction SWPPP Checklist

Permit Citation	Description	OK?	Location in SWPPP and Notes
	If superchlorinated wastewaters will be generated, describe how they will be dechlorinated or held on-site until chlorine levels have dissipated, unless used for firefighting (if none, state so in the SWPPP)		Section 3.2
Part IV.D.8.a.	Describe measures to be used to prevent discharge of solid materials to waters of the US		Section 3.2
Part IV.D.8.b.	Describe measures to be used to minimize off-site vehicle tracking of sediments and the generation of on-site dust		Section 3.1.3
Part IV.D.8.c.	Describe the location and type of all construction and waste materials stored on-site (update SWPPP as necessary)		Section 2.4
Part IV.D.8.c.	Describe controls to be used to reduce pollutants from construction and waste materials stored on-site (including storage practices, and spill prevention and response practices)		Section 3.2, Section 3.3
Part IV.D.8.d.	Describe pollutant sources from areas other than construction, including stormwater discharges from dedicated asphalt plants and concrete plants		Section 3.2
	Describe controls and measures to be used to minimize the discharge of pollutants from those sources		Section 3.2
Part IV.D.8.e.	Describe measures to be used to sufficiently stabilize soil at culvert locations		Section 3.1.1
Maintenance of Controls			
Part IV.E.1.	Describe procedure and activities to be used to maintain all erosion and sediment controls and other protective measures in effective operating condition		Section 3.3.4, Section 4
	Describe procedures and activities to be used to maintain BMPs as soon as possible, if site inspections identify BMPs are not operating effectively		Section 4
Part IV.E.2.	Describe procedures and activities to be used to modify or add BMPs before the next storm event, if necessary, or as soon as practicable		Section 4
Part IV.E.3.	Describe procedures and activities to be used to remove sediment from traps or ponds when design capacity is reduced by 1/3 full		Section 4
AZPDES Permit and Other Soil and Erosion Control Requirements			
Part IV.F.	Include a copy of AZPDES permit (AZG2003-001), NOI, and ADEQ authorization as part of the SWPPP		Section 7.1, Appendix J
	Include other agreements with any state, local, or federal agencies that affect the provisions or implementation of the SWPPP		Section 7.2
Part IV.G.	Describe whether SWPPP is consistent with federal, state, or local soil and erosion control or stormwater management requirements		Section 7.2
Inspections			
Part IV.H.1.	Describe routine inspection schedule and procedures to ensure BMPs are functional and SWPPP is being implemented		Section 5.1
	Indicate if the inspection frequency is to be at least once every 7 calendar days OR		Section 5.1
	Indicate if the inspection frequency is to be at least once every 14 days and within 24 hours of the end of each storm event of greater than 0.5 inch		Section 5.1
Part IV.H.2.	If the site is eligible for reduced inspection frequency, indicate why it is eligible and how it will be inspected once each month AND anytime rain is predicted AND within 24 hours of the end of a storm event of greater than 0.5 inch		Section 5.1
Part IV.H.3.	Indicate who the qualified personnel will be to perform inspections and describe the persons' qualifications		Section 5.1 and Section 1.1

Construction SWPPP Checklist

Permit Citation	Description	OK?	Location in SWPPP and Notes
Part IV.H.4.	Describe all areas to be inspected, including all disturbed areas of the site and areas used to store materials exposed to precipitation		Section 5.1 and Appendix F
	Describe inspection procedures how inspectors will look for evidence of, or potential for, pollutants entering drainage system		Section 5.1
	Describe in inspection procedures how inspectors will observe sedimentation and erosion control measures		Section 5.1
	Describe inspection procedures how inspectors will look at accessible discharge points and ascertain whether erosion control measures are effective		Section 5.1
	Describe in inspection procedures how inspectors will look at nearby stream downstream locations when discharge points are inaccessible		Section 5.1
	Describe in inspection procedures how inspectors will look for sediment tracking at entrances and exits		Section 5.1
	Describe how inspectors will document all findings and what the inspection form will look like		Section 5.1 and Appendix F
Part IV.H.5.	Describe how inspectors will complete an inspection report for each inspection that includes inspection date, name, title, and qualifications of each qualified person making the inspection; weather information for the period since the last inspection; location of discharges of sediment or other pollutants; list of BMPs that need to be maintained, failed to operate, or prove inadequate; list of additional needed BMPs; corrective actions required; sources of all non-stormwater and control measures; and materials storage areas with evidence of pollutant discharge		Section 5.1 and Appendix F
Part IV.H.6.	Describe how and where the inspection records will be maintained for at least three years, how the report will document noncompliance or certify full compliance, and indicate who will be authorized to sign the report		Section 5.2
Part IV.H.7.	Describe how the SWPPP will be modified when needed, within 7 calendar days of inspection; BMPs must be modified or added before the next storm event or as soon as practicable		Section 5.2
Modifications to the SWPPP			
Part IV.I.1.	Describe how the SWPPP will be modified within 15 business days after change in design, construction, operation, or maintenance at the site that has a significant effect on discharge or was not previously addressed in the SWPPP		Section 6.1
Part IV.I.2.	Describe how the SWPPP will be modified within 15 business days if it is determined that discharge is causing or contributing to water quality exceedances OR the SWPPP is ineffective		Section 6.1
Signatures and Notice of SWPPP			
Part IV.J.1.	The Operator must sign the SWPPP		Section 9
	Describe how and where a copy of the SWPPP will be retained on-site. A copy is to be submitted to ADEQ with the NOI if the site is within ¼ mile of unique or impaired waters.		Section 6.2
Part IV.J.2.	Describe how and where the operator will post a sign at the main entrance to the site containing the AZPDES authorization number (or copy of NOI authorization), construction site contact name and telephone number, brief project description, and location of the SWPPP if the site is inactive or does not have an on-site storage location		Section 6.2

Grading and Stabilization Record

To be completed with every inspection (every 7 days and within 24 hours of a rainfall event of 0.5 inch or more)

Inspector: _____ **Date:** _____

Amount of last rainfall: _____ inches **Duration of last rainfall:** _____ min/hrs/days (Circle Applicable Units)

Area Description	Date Since Last Disturbed	Date of Disturbance ("active" areas under construction)	Next for under	Stabilized (Yes/No)	Temporary or Permanent?	Stabilized With	Condition (good, fair, poor)	Stabilization Required On/Before Date
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Referred for Stabilization:

Area: _____ **Responsible Party:** _____ **Date Completed:** _____

Area: _____ **Responsible Party:** _____ **Date Completed:** _____

Area: _____ **Responsible Party:** _____ **Date Completed:** _____

SAMPLE SPILL REPORT

1. Date: _____ Location: _____

Type of Material: _____

Quantity of Material: _____

Source of Spill: _____

Reason for Spill: _____

Amount of Material Recovered: _____

Material Still Exposed to Stormwater? _____

Preventive Measures Taken: _____

Signature: _____

2. Date: _____ Location: _____

Type of Material: _____

Quantity of Material: _____

Source of Spill: _____

Reason for Spill: _____

Amount of Material Recovered: _____

Material Still Exposed to Stormwater? _____

Preventive Measures Taken: _____

Signature: _____

Compliance Evaluation Report General Information				
Project Name				
Complete TRACS No.				
Inspection Subarea				
Contractor				
Inspector's Name				
Inspector's Title				
Signature				
Date of Inspection				
Inspection Type (Check Applicable)	<input type="checkbox"/> 14-Day Inspection		<input type="checkbox"/> Weekly Inspection	
	<input type="checkbox"/> Rainfall Event Inspection <input type="checkbox"/> Prior to forecast rain <input type="checkbox"/> 24-hr intervals during extended rain <input type="checkbox"/> After a rain event		<input type="checkbox"/> Other _____	
Season (Check Applicable)	<input type="checkbox"/> Rainy (July 1 st through September 30 th and perhaps, December 1 st through February 28 th)		<input type="checkbox"/> Non-Rainy (October 1 st through June 30 th)	
Storm ¹ Data	Storm Start Date & Time:		Storm Duration (hrs):	
	Time elapsed since last storm (Circle Applicable Units)	Min. Hr. Days	Approximate Rainfall Amount (mm)	

¹ Storm water monitoring will be conducted a maximum of four times per calendar month and will allow a minimum of 72 hours between rain events and monitoring.

Project Area Summary and Disturbed Soil Size Limits			
Total Project Area			Acres
Field Estimate of Inactive Disturbed Soil Limits			Acres
Field Estimate of Active Disturbed Soil Limits			Acres
Field Estimate of Area with Temporary Stabilization			Acres
Field Estimate of Area Meeting Final Stabilization Requirements			Acres

SAMPLE SITE INSPECTION FORM

Site Inspection					
Requirement		NA	Yes	No	Location/Improvements Recommended
1.0	General				
1.1	Is there a functional rain gauge accurate to 0.10 inch of rainfall installed for this project? [104.09 Stored Specifications]				
1.2	Are there adequate supplies of erosion and sediment control materials on-site to allow for timely BMP repair and installation? [Oregon DOT]				
2.0	Site Perimeter Control				
2.1	Have all upslope diversions of run-on water (crown ditches, berms, etc.) been installed prior to site disturbance? [E&PCM] ²				
2.2	Are discharge points, discharge flows and/or downstream locations free from noticeable pollutants? [Part IV.H.4-AZCGP]				
2.3	Are discharge points and/or downstream locations free of any significant erosion or sediment transport? [Part IV.H.4-AZCGP]				
3.0	Preservation of Existing Vegetation				
3.1	Is temporary fencing or barricade provided to preserve vegetation or mark sensitive areas where no construction activity is planned? [E&PCM 5.1.2]				
3.2	Has the contractor exposed more than 750,000 square feet at any one location without installing BMPs that have been accepted by the Engineer? [104.09 Stored Specifications]				
4.0	Soil Stabilization				
4.1	Did stabilization occur within 14 days in the portion of the site where construction activities have temporarily or permanently ceased? [104.09 Stored Specifications]				

² E&PCM is the ADOT *Erosion and Pollution Control Manual*.

Site Inspection					
	Requirement	NA	Yes	No	Location/Improvements Recommended
4.2	Does the applied temporary soil stabilization provide 100% coverage for the required areas? [Special Provision 805]				
4.3	Is there any evidence of erosion on cut or fill slopes or in roadside ditches? [E&PCM AZPDES Checklist]				
4.4	Are there any non-vegetated areas that may require temporary soil stabilization? [104.09 Stored Specifications and AZCGP]				
4.5	Is the area where temporary soil stabilization required free from visible erosion? [104.09 Stored Specifications and AZCGP]				
4.6	Are erosion control blankets overlapped a minimum of 6 inches with the upstream end on top? [E&PCM 5.1.8]				
4.7	Are erosion control blankets products using wheat straw certified to be free of noxious weeds by the Arizona Crop Improvements Association or the North American Weed Management Association? [E&PCM 5.1.8]				
4.8	Has tillage on slopes constructed steeper than 3:1 taken place prior to permanent re-vegetation? [Special Provision 805]				
4.9	Was compost/mulch applied in accordance with the seeding specifications? [E&PCM 5.1.4, 5.1.7 and 5.1.9]				
4.10	Was the tackifier applied in accordance with the seeding specifications? [Special Provision 805]				
4.11	Are there any BMPs called for on the SWPPP that are either not installed or installed improperly? [AZCGP]				
4.12	Do any seeded or landscaped areas require maintenance, irrigation, fertilization, or mulching? [Special Provision 805]				
4.13	When site inspections identify BMPs and other protection measures that are not functioning properly, they are field adjusted to fit site conditions within 4 calendar days or by the next anticipated storm event. [104.09 (F) (2) Stored Specifications]				
5.0	Grading/Slopes				
5.1	Is the grading plan being followed? [802 Stored Specifications]				

Site Inspection					
Requirement		NA	Yes	No	Location/Improvements Recommended
5.2	Are steeper slopes being prioritized for early stabilization (refer to Appendix B-1 and the site map)?				
5.3	Is fill free of any large rocks or vegetation? [Standard Specifications 203 and 803]				
5.4	Have downdrains been installed properly? [E&PCM 5.2.5]				
5.5	Have check dams been installed properly? [E&PCM 5.3.4]				
5.6	Is erosion rilling present? Is sediment from erosion being captured? [AZCGP, Part IV.D.5; combination of sediment and erosion control measures is required]				
5.7	Are the slopes being left roughened (mini-benching, etc.) after final tillage with fertilizer and compost incorporated before seeding? [E&PCM 5.1.3]				
5.8	Are the slopes being permanently finished and seeded from the top down? [E&PCM 5.1.3 and plan details]				
5.9	Are waste piles protected from run-on, run-off from adjacent areas and from winds? [E&PCM 5.7.5]				
6.0	Sediment Control (Cut and Fill Transition Areas)				
6.1	Are silt fences properly installed with the geotextile at the bottom of the fence and buried a minimum of 6 inches into the ground and a minimum of 20 linear inches? [E&PCM 5.3.2]				
6.2	Is the built-up sediment less than one-third the height of the silt fence barrier? [E&PCM 5.3.2]				
6.3	Are sediment logs installed per the plan details and secured with 1 inch x 1 inch x 46 inches hardwood stakes driven to specific depth, placed on typical 2 foot centers? [E&PCM 5.3.6]				
6.4	Are sediment logs installed in drainage channel bottoms perpendicular to the flow of water, continuing up the channel side slope a minimum 2 feet above the high water flow line? [810-3.06 (A) Stored Specifications]				
6.5	Rock mulch (gradation C) tamped against both sides of sediment logs to assure that water is forced through the log rather than under it? [810-3.06 (A) Stored Specifications]				

Site Inspection					
Requirement		NA	Yes	No	Location/Improvements Recommended
6.6	Are sediment wattles installed along parallel contours (level) across the slope secured with wooden stakes driven 12 inches into undisturbed soil? [E&PCM 5.3.5]				
6.7	Are fiber rolls, when used, installed and maintained in accordance with manufacturer's instructions, or as directed by the Engineer? [810-3.06(C) Stored Specifications]				
6.8	Are sediment control berms properly constructed (height and compaction) at specific locations? [E&PCM 5.3.1]				
6.9	Is rock riprap/rock mulch for cut and fill transitions within the recovery/clear zone, 4 inches or larger, embedded into the finished grade so that any portion of the rock above grade will be less than 4 inches in height? [E&PCM 5.2.2]				
7.0	Desilting Basins/Sediment Traps [E&PCM 5.3.3]				
7.1	Are basins and traps constructed according to plan for the designed capacity?				
7.2	Are basin controls (inlets, outlets, diversions, weirs, spillways, and racks) installed and in working order?				
7.3	Is sediment accumulated in traps, check dams, or sedimentation basins removed when design capacity has been reduced by one-third?				
8.0	Stockpiles [E&PCM 5.7.3]				
8.1	Are all locations of temporary stockpiles, including soil, hazardous waste, and construction materials in approved areas?				
8.2	Are stockpiles protected from run-on, run-off from adjacent areas and from winds?				
8.3	Are stockpiles located away from concentrated flows of stormwater, drainage courses, and inlets?				
8.4	Are required covers and/or perimeter controls in place?				
9.0	Concentrated Flows/Structures				
9.1	Are concentrated flow paths free of visible erosion? [E&PCM 5.2]				

Site Inspection					
	Requirement	NA	Yes	No	Location/Improvements Recommended
9.2	Are storm drain inlets and outlets internal to the project properly protected and maintained? [E&PCM 5.2.4]				
9.3	Is rock riprap/rock mulch material angular in shape for pipe inlet and outlet protection, headwall, and wing wall treatment and check dams? [810-2.03 Stored Specifications]				
9.4	Are sand bags adjacent to curbs and catch basins 2 inches below the top of the curb to allow for drainage into the catch basin? [Plan details and 810-3.04 Stored Specifications]				
9.5	Are slope down drains properly maintained with no obstructions? [E&PCM 5.2.5]				
9.6	Has all stored material been removed from washes prior to the rainy season? [104.09 Stored Specifications]				
9.7	Have temporary conveyances been designed to accommodate the 10 year storm event if to remain in place for up to a 1-year period? [104.09 (E) Stored Specifications]				
9.8	Has any direct discharge of sediment into a water course been corrected by the end of the same day or work shift in which the inflow is observed. [104.09(F)(2) Stored Specifications]				
10.0	Tracking Control [E&PCM 5.5.1 and 5.5.2]				
10.1	Are points of ingress/egress to public/private roads inspected, swept, and/or vacuumed daily?				
10.2	Are all paved areas free of visible sediment tracking or other particulate matter?				
10.3	Are on-site and off-site tracking control devices used and maintained in addition to sweeping all entrances/exits to paved roadways related to hauling activities? [104.09 (E) Stored Specifications]				
10.4	Is geotextile placed between aggregate and base material?				
11.0	Wind Erosion Control				
11.1	Is dust control implemented in conformance with Section 207-1 of the Stored Specifications? [E&PCM 5.4.1]				

Site Inspection					
Requirement		NA	Yes	No	Location/Improvements Recommended
12.0	Non-Stormwater Discharges				
12.1	Is dewatering effluent either contained on-site or handled in conformance with the De Minimus General permit issued by ADEQ? [E&PCM 5.6.2]				
12.2	Is treatment provided for dewatering effluent in accordance with BMP 5.6.2 of the E&PCM?				
12.3	Is there any evidence of illicit discharges or illegal dumping on the project site? [104.09 (E) Stored Specifications – Good Housekeeping]				
12.4	If yes, has the Engineer been notified?				
12.5	If there has been an unauthorized or non-stormwater discharge, has it been immediately contained, cleaned up and documented in the SWPPP? [AZCGP]				
13.0	Vehicle & Equipment Fueling, Cleaning, and Maintenance				
13.1	Are vehicle and equipment fueling, cleaning and maintenance areas reasonably clean and free of spills, leaks, or any other deleterious material? [E&PCM 5.6.6, 5.6.7, and 5.6.8]				
13.2	Are vehicle and equipment fueling, cleaning and maintenance activities performed on an impermeable surface in dedicated areas? [E&PCM 5.6.6, 5.6.7, and 5.6.8]				
13.3	If no, are drip pans used? [E&PCM 5.6.7, and 5.6.8]				
13.4	Are dedicated fueling, cleaning, and maintenance areas located at least 50 feet away from downstream drainage facilities and watercourses, and protected from run-on and run-off? [E&PCM 5.6.6, 5.6.7, and 5.6.8]				
13.5	Is wash water contained for infiltration/evaporation? [E&PCM 5.7.9]				
13.6	Is on-site cleaning limited to washing with water (no soap, soaps substitutes, solvents, or steam)? [E&PCM 5.6.6]				
13.7	On each day of use, are vehicles and equipment inspected for leaks and if necessary, repaired? [E&PM 5.6.8]				
13.8	Are repairs and parts storage confined to protected locations. [E&PCM – AZPDES Checklist]				

Site Inspection					
Requirement		NA	Yes	No	Location/Improvements Recommended
14.0	Waste Management & Materials Pollution Control				
14.1	Are material storage areas and washout areas protected from run-on and run-off, and located at least 50 feet from concentrated flows and downstream drainage facilities? [E&PCM 5.7.1]				
14.2	Are all material handling and storage areas clean; organized; free of spills, leaks, or any other deleterious material; and stocked with appropriate clean-up supplies? [E&PCM 5.7.1]				
14.3	Are liquid materials, hazardous materials, and hazardous wastes stored in temporary containment facilities? [E&PCM 5.7.1]				
14.4	Are bagged and boxed materials stored on pallets? [E&PCM 5.7.1]				
14.5	Are hazardous materials and wastes stored in appropriate, labeled containers? [E&PCM 5.7.1]				
14.6	Are temporary containment facilities free of spills and rainwater? [E&PCM 5.7.1]				
14.7	Are temporary containment facilities and bagged/boxed materials covered? [E&PCM 5.7.1]				
14.8	Are temporary concrete washout facilities designated and being used? [E&PCM 5.7.8]				
14.9	Are temporary concrete washout facilities functional for receiving and containing concrete waste and are concrete residues prevented from entering the drainage system? [E&PCM 5.7.8]				
14.10	Do temporary concrete washout facilities provide sufficient volume and freeboard for planned concrete operations? [E&PCM 5.7.8]				
14.11	Are the concrete clean out areas contained in conformance with the SWPPP? [E&PCM 5.7.8]				
14.12	Are concrete wastes, including residues from cutting and grinding, contained and disposed of off-site or in concrete washout facilities? [E&PCM 5.7.8]				
14.13	Are spills from mobile equipment fueling and maintenance properly contained and cleaned up? [E&PCM 5.6.7]				

Site Inspection					
Requirement		NA	Yes	No	Location/Improvements Recommended
14.14	Is the site free of litter? [E&PCM 5.7.5 and 104.09 (E) Stored Specifications]				
14.15	Are trash receptacles provided in the Contractor's yard, field trailer areas, and at locations where workers congregate for lunch and break periods? [E&PCM 5.7.5]				
14.16	Is litter from work areas within the construction limits of the project site collected and placed in watertight dumpsters? [E&PCM 5.7.5]				
14.17	Are waste management receptacles free of leaks? [E&PCM 5.7.5]				
14.18	Are the contents of waste management receptacles properly protected from contact with stormwater or from being dislodged by winds? [E&PCM 5.7.5]				
14.19	Are waste management receptacles filled at or beyond capacity? [E&PCM 5.7.5]				
14.20	Are waste materials and debris dumped or stored in any wash channel or ditch? [E&PCM 5.7.5]				
15.0	Spill Control and Response				
15.1	Are there proper spill clean-up materials, and posted spill-reporting procedures for hazardous materials and wastes in open, conspicuous and accessible locations adjacent to storage areas? [E&PCM 5.7.4]				
15.1	Was ADEQ contacted within 24 hours of a spill of hazardous substance(s)? [E&PCM 5.7.4]				
15.2	Temporary Water Body Crossing or Encroachment [E&PCM 5.6.4]				
15.3	Does the project conform to the requirements of the 404 permit and/or 401 Certification? [E&PCM 1.2]				
15.4	Are areas within 100 feet of water features or sensitive areas stabilized within seven days of exposure? [Oregon DOT Recommendation]				
15.5	Are channels, streams, lakes, and reservoirs cleared of all falsework, piling, debris, or other obstructions resulting from the contractor's activities within 24 hours from the time it is discovered? [104.09 Stored Specifications]				
15.6	Is mechanical equipment operating in running streams? [104.09 (E) Stored Specifications]				

Site Inspection					
Requirement		NA	Yes	No	Location/Improvements Recommended
15.7	Are there any other potential non-stormwater pollution control concerns at the site? [AZCGP, Parts I.C and IV.D.7]				
16.0	SWPPP Update				
16.1	Do the SWPPP, Project Schedule/Water Pollution Control Schedule adequately reflect the current site conditions and contractor operations? [104.09 (B) Stored Specifications]				
16.2	Are all BMPs shown on the plans installed in the proper location(s) and according to the details for the plan? [E&PCM, AZPDES Checklist and AZCGP IV.H.4]				
16.3	Is the Stormwater Pollution Plan located on-site where it is accessible to others? [E&PCM 3.4]				
16.4	Are both the contractors and ADOTs NOIs posted on the bulletin board? [E&PCM 3.4]				
16.5	Are the compliance Evaluation Reports current, complete, and included in the project SWPPP? [AZCGP]				
16.6	When site inspections identify problems that require additions or modifications to BMPs are revisions made to the SWPPP within seven (7) calendar days? [104.09(B) Stored Specifications]				
16.7	Whenever it is determined that the SWPPP is ineffective in eliminating or significantly minimizing pollutant discharge in stormwater or contributing to water quality exceedences, is the SWPPP amended within seven (7) calendar days. [104.09(B) Stored Specifications]				
16.8	Whenever any conditions are identified that significantly effect the discharge of pollutants to the waters of the United States that have not been previously addressed, are the SWPPP amended within seven (7) calendar days? [104.09(B) Stored Specifications]				

SAMPLE STORMWATER MONITORING LOG

Stormwater Monitoring (Required only if Monitoring Plan is included in SWPPP)				
Requirement	NA	Yes	No	Location/Improvements Recommended
Does stormwater discharge directly to a water body listed as impaired for sediment/sedimentation or turbidity by ADEQ?				
If yes, were samples for sediment/sedimentation or turbidity collected pursuant to the beginning of construction? [SWMGM 3.1] ³				
Pre-construction baseline monitoring is conducted at each monitoring point every two weeks during daylight hours. [SWMGM 2.3]				
The monitoring points have been properly field located by flagging and/or the use of Global Positioning System (GPS). [SWMGM 2.3]				
In-stream monitoring points are located upstream and downstream of any water quality impacts from the construction site. [SWMGM 2.3]				
“Before” photographs are taken at the first visit to the construction site to establish permanent reference points. [SWMGM 10.4]				
Any applicable Total Maximum Daily Loads (TMDLs) have been identified, verified and provided (parameters to be monitored as identified in the contract documents). [SWMGM 1.4.5]				
Prior to and after each monitoring event, all equipment has been calibrated, maintained and/or tested, and properly documented. [SWMGM 8.1.4 and 9.1]				
Turbidity meters have been calibrated quarterly with the United States Environmental Protection Agency (USEPA) approved calibration standards. [SWMGM 8.1.4]				
Samples which require laboratory analysis are collected using proper containers and “clean sampling techniques”. [SWMGM 5.2.3]				
Manual grab sampling is properly performed to prevent contamination, or dilution of additives such as acids or preservatives. [SWMGM 5.2.3]				

³ SWMGM is the ADOT *Storm Water Guidance Manual for Construction Activities*.

Stormwater Monitoring (Required only if Monitoring Plan is included in SWPPP)				
Requirement	NA	Yes	No	Location/Improvements Recommended
Samples which require laboratory analysis are kept in the shade on ice or refrigerated to 4 degrees Celsius from the time of sampling until delivery to the laboratory. [SWMGM 5.2.3]				
Duplicate water quality samples (separate bottles) are taken in the field every tenth sample. [SWMGM 6.2]				
A minimum of one field split sample is taken on every project. When problems are suspected, or a new laboratory is used, an additional field split sample is taken. [SWMGM 6.2]				
Chain-of-Custody (COC) forms are completed by monitoring personnel and contain sample, date, location, analysis requested and any special instructions, for all samples submitted for analytical laboratory testing. [SWMGM 5.2.3]				
Dry weather non-stormwater discharge visual monitoring is conducted at each monitoring point once a month from October 1 through June 30. [SWMGM 3.2]				
Wet weather stormwater sampling is conducted July 1 through September 30 and/or December 1 through February 28, at each monitoring point a maximum of four times per month during daylight hours. [SWMGM 3.3]				
Wet weather stormwater monitoring is conducted at each monitoring site during the first hour of a stormwater discharge from the construction site to the surface receiving water. [SWMGM 3.3]				
A minimum of seventy-two hours was allowed between sampled rain events. [SWMGM 3.3]				
Visual characteristics and turbidity measurements are properly documented and recorded on a Construction Monitoring Report (CMR). [SWMGM 4.1.1]				
Photographs are taken with each CMR or Discharge Monitoring Report (DMR) recorded to supplement the written observations. [SWMGM 10.2]				
All photographs are printed, labeled, attached to the CMR or DMR and immediately filed in the respective file, upon return to the office. [SWMGM 9.6]				
All photographs are labeled with the monitoring point ID, date the photo was taken, description and notes, and filed in an 8-1/2" x 11" vinyl chloride slide sleeve. [SWMGM 11.2]				

Stormwater Monitoring (Required only if Monitoring Plan is included in SWPPP)				
Requirement	NA	Yes	No	Location/Improvements Recommended
DMRs are jointly reviewed by the Engineer and contractor's representative, prior to submittal to ADEQ on a monthly basis. [SWMGM 9.5]				
Copies of the monitoring plan, CMRs and DMRs are kept on site at all times. [SWMGM 7.0 and 9.3]				
When data indicates that there is a potential impact to the receiving water from a construction site stormwater discharge, an immediate inspection is conducted to identify the problem source and implement corrective measures. [SWMGM 12.1]				
When the need for corrective measures has been determined, implementation of measures is taken within four working days or before the next storm event. [SWMGM 12.0]				

SAMPLE COMPLIANCE EVALUATION REPORT

General Permit for Construction Activities

Operator's Compliance Evaluation Report

The general permit requires inspection of stormwater pollution controls on a choice of frequency described in Part IV. H. Attach sheets if more space is needed.

Project: _____ **Date:** _____

Storm Start Date & Time: _____ **Storm Duration (hrs):** _____

Time elapsed since last storm (Min. Hr. Days): _____

Approximate Rainfall Amount (mm): _____

Name & Title of Inspector: _____, **Project Manager**

Qualifications of Inspector: **Attached or** **In Section** _____ **of the SWPPP.**

Resume was attached with previous Compliance Report

1. Periodic inspection or Rain event inspection; relevant weather information:

2. Location(s) of discharge from the site: None or Description:

3. Location(s) of and identification of BMPs that need to be maintained; failed to operate or proved to be inadequate: None or Description:

4. Locations where additional BMPs are needed: None or Description:

5. Corrective actions required including changes and target dates: None or Description:

6. Identify all sources of non-stormwater and the associated pollution control measures:
 None or Description:

7. Identify material storage areas and evidence of, or potential for pollutant discharge from these areas:
 None or Description:

8. Identify any other apparent incidents of non-compliance: None or Description:

9. Have deficiencies been referred for corrective actions? Yes or No

If not, provide projected date of referral. _____

Certification

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 assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering 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.

Certifying Signature: _____ Date: _____

Printed Name: _____

BMP MAINTENANCE AND REPAIR DOCUMENTATION

BMP Maintenance and Repair Documentation

BMP Description	Location	Request Maintenance/ Repair Date*	for	Nature Maintenance/Repair	of	Date Maintenance/ Repair Completed/ Initials
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* May include the date of inspection, routine maintenance date, or date capacity limit is reached if filled to more than one-third capacity.

INDEPENDENT QUALITY ASSURANCE EROSION AND SEDIMENT CONTROL FIELD INVESTIGATION REPORT

DISTRICT: ___ COUNTY: _____ CONTRACT NO: _____ DATE OF INSPECTION: _____

PROJECT DESCRIPTION: _____ TIME: _____

CONTRACTOR: _____

S.H.A. PROJECT REPRESENTATIVE: _____

QUALITY ASSURANCE INSPECTOR: _____

SITE STATUS: CURRENTLY ACTIVE CURRENTLY INACTIVE

SITE CONDITION: COMPLIANCE NEEDS CORRECTIONS NON-COMPLIANCE

REASON FOR INSPECTION: ROUTINE INVESTIGATION CITIZEN COMPLAINT M.D.E. COMPLAINT
 OTHER

***RECOMMENDED ACTION:** NOTIFY CONTRACTOR FOLLOW UP INSPECTION NOTIFY M.D.E.
 **SHUT DOWN GRADING OPERATIONS **SHUT DOWN ENTIRE PROJECT
 REFER TO NOTES ON ATTACHED SHEET(S) NO GRADE

GRADE

Section	Number of Points Awarded	Number of Points Available
1		
2		
3		
4		
5		5
Total =	x	y
Numerical Grade = (X/Y) x 100 =		
6	Bonus Area Number of Points Awarded	
TOTAL		

RATING: A B C D F

(A = 100 – 90, B = 80-89.9, C = 70-79.9, D = 60-69.9, F = < 60)

QUALITY ASSURANCE INSPECTOR: _____ DATE: _____

CONTRACTOR: _____ DATE: _____

** Immediately notify District Engineer / ADE RECEIVED BY: _____

Construction, RCE, and Director / Deputy Director (SHA REPRESENTATIVE) Office of Construction (SIGNATURE IMPLIES RECEIPT OF THIS REPORT ONLY)

ORIGINAL: Project Engineer

cc: Director-Office of Construction
 District Engineer

Regional Construction Engineer
 Quality Assurance Inspector

Construction Inspection Div.
 Contractor

Point Value	1. IS PROJECT IN SCOPE? * If No, Project is automatically Rated an "F".	Y	N	Pts. Awarded	N/A	Pts. Excluded
*	1.1. Have all permits and approvals been obtained (SHA/MDE)?	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	
*	1.2. Are specified LOD, wetlands, buffers, floodplains and/or tree protection, areas demarcated (active work areas)?	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	
*	1.3. Is project in sequence according to plan?	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	
2	1.3.1. Are sediment controls in place prior to disturbing areas of intended control?	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	
2	1.3.2. Are controls removed with MDE approval?	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	
3	1.4. Have changes been approved?	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	
3	1.4.1. Have stream crossings been requested and approved?	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	
3	1.4.2. Have stream diversions been requested and approved?	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	
1	1.5. Have changes been implemented?	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	
1	1.6. Is contractor's E & S report completed and submitted daily?	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	
1	1.7. Are stockpiles/staging areas approved?	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	
1	1.8. Is ESCM available on-site?	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	
3	1.9. Are disturbed areas contained within the LOD?	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	
2	1.10. Is grading limited to maximum grading unit?	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	
22	= Total Possible Points	Subtotal =				*

Total Points Available = 22 - ____* = ____

2. ARE CONTROLS PROPERLY INSTALLED?						3. ARE CONTROLS PROPERLY MAINTAINED?								
Y	N	Pts.	N/A	Pts.	2.1	Pts.	Water handling	Pts.	3.1	Y	N	Pts.	N/A	Pts.
<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>		2.1.1.	1	Earth Dikes	1	3.1.1.	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	
<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>		2.1.2.	1	Temporary Swales	1	3.1.2.	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	
<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>		2.1.3.	1	Perimeter Dike/Swales	1	3.1.3.	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	
<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>		2.1.4.	1	Diversion Fence	1	3.1.4.	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	
					2.2.	Grade Stabilization Structures			3.2.					
<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>		2.2.1.	2	Pipe Slope Drains	2	3.2.1.	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	
<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>		2.2.2.	1	Rip-rap Inflow Protection	1	3.2.2.	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	
<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>		2.2.3.	1	Gabion Inflow Protection	1	3.2.3.	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	
<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>		2.2.4.	2	Stone Check Dams	2	3.2.4.	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	
					2.3.	Sediment Trapping Devices			3.3.					

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2.3.1.	3	Sediment Traps	3	3.3.1.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2.3.2.	3	Sediment Basins	3	3.3.2.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2.3.3.	2	Stone Outlet Structures	2	3.3.3.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
			2.4.	Dewatering Practices			3.4.			
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2.4.1.	2	Removable Pumping Station	2	3.4.1.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2.4.2.	2	Sump Pits	2	3.4.2.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2.4.3.	2	Portable Sediment Tanks	2	3.4.3.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2.4.4.	2	Dewatering Bags	2	3.4.4.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
			2.5.	Filtering Practices			3.5.			
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2.5.1.	2	Silt Fence	2	3.5.1.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2.5.2.	3	Super Silt Fence	3	3.5.2.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2.5.3.	1	Inlet Protection	1	3.5.3.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2.5.4.	1	Straw Bale Dike	1	3.5.4.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
			2.6.	Land Grading and Structural Stabilization			3.6.			
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2.6.1.	1	Stabilized Construction Entrance	1	3.6.1.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2.6.2.	1	Rock Outlet Protection	1	3.6.2.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
			2.7.	Miscellaneous Practices			3.7.			
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2.7.1.	3	Temporary Access Waterway Crossing	1	3.7.1.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2.7.2.	1	Dust Control	1	3.7.2.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
			2.8.	Special Features			3.8.			
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2.8.1.	1		1	3.8.1.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2.8.2.	1		1	3.8.2.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2.8.3.	1		1	3.8.3.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Subtotal =			*	42	= Total Possible Points =	40	Subtotal =		*	

Total Points Available = 42 - ____* = ____

Total Points Available = 40 - ____* = ____

Point Value	4. IS STABILIZATION PROVIDED IN ACCORDANCE WITH THE CONTRACT DOCUMENTS?	Y	N	Pts. Awarded	N/A	Pts. Excluded
4.1. Is stabilization provided as specified?						
1	4.1.1. Temporary seed	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	
1	4.1.2. Permanent seed	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	

3	4.1.3. Stabilization matting	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	
1	4.1.4. Sod	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	
1	4.1.5. Stone	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	
1	4.1.6. Other	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	
4.2. Is stabilization provided in the specified time frame?						
2	4.2.1. Same day stabilization	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	
2	4.2.2. 24 hour stabilization	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	
2	4.2.3. 72 hours stabilization	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	
2	4.2.4. 7-14 day stabilization	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	
1	4.3. Is incremental stabilization provided during construction?	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	
1	4.4. Is the stabilization performing as specified?	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	
2	4.5. Is vegetation being established as specified?	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	
20	= Total Possible Points	Subtotal =				*

Total Points Available = 20 - ____* = ____

Point Value	5. IS CORRECTIVE ACTION TIMELY?	Select one
5	5.1. No corrective action needed.	<input type="checkbox"/>
4	5.2. Action completed < 24 hours.	<input type="checkbox"/>
3	5.3. Action completed within 24 < 48 hours.	<input type="checkbox"/>
2	5.4. Action completed within 48 < 72 hours.	<input type="checkbox"/>
1	5.5. Action completed > 72 hours.	<input type="checkbox"/>
0	5.6. Action not completed.	<input type="checkbox"/>
5	= Total Possible Points	Total Points Awarded =

Point Value	6. IS THE CONTRACTOR PROACTIVE?	Y	N	Pts. Awarded
1	6.1. Is sole duty of ESCM E&S activities?	<input type="checkbox"/>	<input type="checkbox"/>	
1	6.2. Recognizes and requests changes in a timely manner as warranted by any Changes or Modifications.	<input type="checkbox"/>	<input type="checkbox"/>	
1	6.3. ESCM conducts daily joint inspection with SHA staff.	<input type="checkbox"/>	<input type="checkbox"/>	
1	6.4. Contractor initiates corrective action.	<input type="checkbox"/>	<input type="checkbox"/>	
1	6.5. Contractor practices Environmental Awareness/Stewardship by training employees.	<input type="checkbox"/>	<input type="checkbox"/>	
5	= Total Possible Points	Total Awarded		

APPENDIX F – SAMPLE DOT ROLES AND RESPONSIBILITIES

General Distribution of Responsibilities – Small DOT or Program

This distribution of responsibilities is from North Dakota DOT, a small DOT MS4 program:

Design:

- Coordinate all MS4 activities
- Submit Annual Report to NDDOH
- Design project site plan for Erosion Control Measures (ECM).
- Develop a partnership with the five MS4 permittees to address common issues.
- Develop ECM's for pre and post construction runoff water quality control.
- Develop and review construction standards for onsite erosion and sediment control.
- Develop educational material and train personnel on the review of stormwater management plans and inspection procedures.
- Develop penalties for contractors failing to comply with the stormwater management plan.

Construction

- Pre-construction staking of ECM's
- Weekly and Storm Event Runoff (>.50in. /24hrs.) inspection of ECM's during construction.
- Enforcement of ECM's.
- Maintain inspections until final inspection and acceptance.
- Develop penalties for contractors failing to comply with the stormwater management plan.

Maintenance/Districts

- Responsible for overseeing compliance for insuring MS4 compliance on all NDDOT projects within MS4 municipalities and properties (State Owned Gravel Pits and maintenance yards), and submitting reports to the Design Division.
- Following final inspection and acceptance the Maintenance/Districts will be responsible for maintaining and removing all ECM's until 70% coverage on disturbed areas is established.

Statewide Project Management Group

The Statewide Project Management Group provides quality project management services and management support information for the timely and cost-effective implementation of the DOT construction program and local governments' federal-aid transportation programs. The group is responsible for selection of drainage design elements.

Right-of-Way Group

The Right-of-Way Group supports transportation development through the acquisition and clearance of private and public lands needed for the construction or improvement of the state highway system, in accordance with applicable laws, regulations, and rules. The Right-of Way Group is involved in stormwater encroachment permits, third-party agreements, and acquisition of land for structural stormwater controls.

Engineering Technical Group

The Engineering Technical Group provides technical and administrative support for the development of the DOT's design, construction, and engineering services programs. The Engineering Technical Group is often composed of three Sections: Contracts and Specifications Section, Utility and Railroad Engineering

Section, and Engineering Survey Section. Only the Contracts and Specifications Section is affected by stormwater.

Contract and Specifications Section

The Contract and Specifications Section is responsible for revising and updating the DOT Standard Specifications for Road and Bridge Construction and for including the standard specifications in project contract documents. With input from Districts, Roadside Development Section, the Construction Group, and the Erosion Control Coordinators, the DOT Contracts and Specifications Section updates and modifies specifications, including those for erosion control and seeding. Increasingly, EPA and regulatory agencies are asking that updated specs that address regulations “ensure that the DOT is informing the contractor, in a contractually binding format, that it will comply” with erosion and sedimentation control and MS4 requirements.

Design/Roadway Engineering Group

The Roadway Engineering Group consists of four functional Sections: Roadway Predesign, which provides standards and guidelines for the content and format of project scoping documents and prepares the same; Drainage Design, which provides hydrologic and hydraulic design criteria for DOT drainage structures, evaluations and reports; the Roadside Development Section, which establishes design criteria and provides designs and plans for roadside improvements, as well as assistance on project SWPPPs; and Roadway Design, which establishes design criteria, drafting standards, and standard drawings, and provides plans, reports, specifications, and estimates for highway construction contracts.

The Contracts and Specifications Section works within the Roadside Development Section to translate design documents and guidelines into standard specifications, create special provisions for specific projects, and prepare project contracts for bid advertisement. DOT surface water hydrology, drainage design guidelines, and drainage management policy are contained in manuals developed by the DOT, particular to roadway or highway design and drainage design or hydrology. FHWA also has guidance manuals, such as Evaluation and Management of Highway Runoff Water Quality (1996) and Urban Drainage Design Manual (2001), which are typically used as references.

These Design guidelines have been revised in many cases to address changes in the construction stormwater regulatory program and to address the development of post-construction site runoff controls. These may include an overview of the environmental considerations that must be assessed during the design phase, including permanent and temporary stormwater pollution controls. In some cases a 60 percent complete review point has been added for project plans, for District Resident Engineers, highway designers, and erosion control specialists (Roadside Development Section) to work together on temporary and permanent erosion control design measures. If needed, a conceptual erosion control plan is prepared, included in the Stage IV (95 percent complete) design, and reviewed by all three parties. This process varies by the DOT. DOT Erosion and Pollution control manuals (reviewed in Section 4.4 of this report) provide the guidance necessary for selection of BMPs, preparation of the SWPPP, and submittal of the Notice of Intent (NOI). Such manuals help DOT personnel and contractors reduce erosion potential, reduce off-site sedimentation, and prevent contamination by construction materials as well as provide BMPs for permanent concentrated flow conveyances such as rock outlet protection for cross-culverts.

A number of DOTs have retained consultants to assist in development of project selection methodologies and to research and recommend appropriate post-construction BMPs. Thereafter the DOT or the consultant develops design guidelines to update the DOT Project Development Process Manual, Erosion and Pollution Control Manual, Roadway Design Guidelines, Highway Drainage Design Manual, and/or targeted construction and maintenance manuals.

Design staff may also develop a process for stormwater control feedback (field tests) and program improvement suggestions for BMPs, research and develop alternative methods for handling stormwater

for BMPs, and draft new special provisions to address changes in stormwater regulations and incorporate those into DOT contracts. Design may also review current joint project agreements (JPAs) and research policies from other jurisdictions, and draft DOT guidelines and model JPA. Design staff review current encroachment permits and research policies and permits from other jurisdictions and DOTs and develop a model encroachment permit for the DOT. In some cases, predesign guidelines are being updated to include determination of project's location within ¼ mile of unique, impaired, or not attaining waters.

In conjunction with environmental and construction staff, Design may develop and implement performance evaluation and field monitoring plans (when applicable) for pollutants of concern for existing BMPs. Design may also request feedback from DOT Erosion Control Coordinators during project close-out, on the effectiveness of BMPs used. They evaluate BMP performance and field monitoring results and incorporate results into appropriate DOT manuals, when they are updated. In some cases, Design has a policy of conducting a literature search for BMPs every five years to incorporate results into appropriate DOT manuals, where warranted.

Roadway Pre-Design

Roadway Pre-Design provides project scoping documents. Stormwater management issues, such as proximity to unique, impaired, or not attaining waters, can be key issues addressed by the initial design concept reports.

Drainage Design

Drainage Design is responsible for creating and implementing the DOT drainage policy. Guidance is also provided on design of all stormwater management structures for individual projects.

Roadside Development Section

The Roadside Development Section provides designs and plans for roadside improvements, including rest areas. The Roadside Development Section is responsible for development of the conceptual erosion and sediment control plans for projects requiring SWPPPs.

Roadway Design

Roadway Design provides plans, specifications, and estimates for highway construction contracts. Roadway Design is responsible for inclusion of post-construction permanent stormwater management structures with input from Drainage Design.

Central/Headquarters Environmental Office

Headquarters environmental staff are responsible for the technical analysis and preparation of environmental studies and supporting technical reports for new development and significant redevelopment. The headquarters environmental office typically contains an NPDES program manager or team that helps manage and report on the state's NPDES program and evolving requirements.

Headquarters environmental staff are also responsible for managing environmental scoping and public involvement process by preparing and distributing public input letters, providing forums for public comment, and hearings, and responding to public concerns with the assistance of the project manager. To ensure that stormwater impacts are adequately addressed in the environmental clearance process, Headquarters environmental staff may incorporate, as needed, new protocols and procedures in the technical review of stormwater impacts to biological resources, historical sites, and wetlands.

Headquarters environmental staff prepare environmental documents that have a twofold purpose: (1) to help fulfill the requirements of the National Environmental Policy Act (NEPA) of 1969 and related environmental legislation and (2) to provide sound documentation that enables decisionmakers within the DOT and local governments to make the best project decisions. Headquarters environmental staff oversee

CWA Section 404 permitting activities. They also initially evaluate the applicability of Section 402 stormwater permits for projects. Environmental mitigation and/or special provisions may be designed to avoid, minimize, or compensate for impacts to unique, impaired, and not attaining waters, as well as for wetlands.

The process culminates in the preparation of an environmental clearance memo that summarizes environmental concerns and supplies special provisions language to be included in the project bid package by the Contracts and Specifications Section (see Construction section).

Headquarters environmental staff biologists develop revisions as needed for biological resource assessment protocols to incorporate evaluation of the impacts of stormwater discharge quality and quantity on federally listed endangered species to meet the requirements of the federal CGP on tribal land.

Bridge Group

The Bridge Group is responsible for the effective use of modern technology and resources for furnishing bridge design, bridge construction assistance, and bridge management necessary to provide and maintain safe and functional bridges and drainage facilities on the state's highways.

Operations Program

DOTs typically have five to twelve engineering districts or regions located around the state. The primary objective of the District Operations Group is to provide efficient and effective use of state resources for the statewide road system, conforming to the highest possible level of professionalism and standards of maintenance and construction.

Construction Group

The Construction Group is responsible for administering all contractor payments, construction contract administration, programs, and quality control of construction activities. All policies, procedures, and specifications related to construction activities are developed and/or approved in coordination with this group. The Construction Group is responsible for monitoring compliance with the stormwater regulations.

DOT Districts (Construction, Maintenance, and Permits)

The Engineering Districts are tasked with ensuring SSWMP compliance during construction and post-construction. Each district is represented by a District Engineer. Districts are involved in the initial identification of state highway needs and are responsible for construction as well as operation and maintenance of the state highway facilities within their jurisdiction. As projects move through the design stages, District input is sought. Districts also initiate some smaller projects called District minor projects.

Maintenance Group

The DOT Maintenance Group is responsible for maintaining the statewide network of highways in Arizona.

Statewide Maintenance Planning

Statewide Maintenance Planning includes the Phase I MS4 and Phase II MS4 NPDES compliance programs as well as management of the Maintenance Management System, performance control system, or other such system for tracking maintenance work.

Roadside Management

Some DOTs have environmental support staff in Maintenance that assist in compliance with water quality and other requirements. Such a section may be responsible for or provide environmental assistance to

staff conducting vegetation management, herbicide and pesticide applications, and environmental practices for winter storm management (deicing and anti-icing activities).

Materials Group

The Materials Group has statewide responsibility for conducting geotechnical investigations, performing materials testing and evaluation, implementing a materials quality assurance program, operating a pavement management system, developing pavement design strategies for new and old pavements, and furnishing materials design reports and specifications to support construction and maintenance of the state highway system. The Materials Group may also oversee the environmental planning and permitting associated with management of DOT material sources.

Transportation Services

Budget and financial management, information technology, human resource assistance, corporate training, safety, and health services all fall under the responsibility of Transportation Services. Services are provided to all divisions, management, and staff. This group all must ensure proper business practices in hiring and training of personnel, provide safe and secure working environments for employees, and ensure that employees are equipped with current communication and technological support.

Physical Plant Operations

Equipment Services

Equipment Services is a part of Physical Plant Operations Section and operates shops statewide for maintenance and repair of a fleet of state owned vehicles used by DOT. Equipment Services may also provide contract maintenance and repair services to other state clients. Additionally, this section often operates and maintains fuel depots statewide.

General Operations

General Operations provides support to the agency through the design, construction, maintenance and repair of the buildings and facilities the DOT uses in carrying out its mission. General Operations also provides mail and printing services, and engineering records administration.

Safety and Health

Safety and Health administers federal Occupational Safety and Health Administration guidelines for the DOT. They process on-the-job injury complaints and investigate the events, respond to hazardous materials spills on state highways to oversee containment and clean-up, and work closely with the National Safety Council to promote safety in the workplace as well as on roads and highways. Community education is a major focus of this office.

Transportation Planning Division

Information Technology

The DOT Geographic Information Systems (GIS) for Transportation Section maintains the statewide street centerline GIS database and coordinates GIS issues for the DOT. The GIS database is the foundation for planning studies and programs.

Increasingly DOTs are using their GIS systems for early coordination and enhancement opportunity identification. The latter may include wetland and water quality enhancement projects, such as stream buffers or restoration. Almost a third of responding DOTs either have or are initiating “stormwater trading” programs. Such programs involve a degree of watershed planning and needs assessment, to determine if better, eligible sites exist for restoration and/or stormwater investments. This work may be conducted by planning staff.

Communication and Community Partnerships

DOTs often have a communications office, which sometimes extends to community partnership coordination. This office supports the Director's Office and DOT Divisions by providing communication services to build positive relationships with communities and stakeholders. The DOT's education and community outreach may be coordinated by this office. The DOT Community Relations, Government Relations, and Partnering offices all deliver the DOT's message and mission to demonstrate respect for the state's environment and quality of life.

The Partnering Office focuses on development of productive relationships within the DOT and between the agency, the public, and contractors. They support and reinforce the use of problem-solving and issue-resolution processes to achieve effective communication among the many teams.