STORMWATER
POLLUTION PREVENTION
PLAN

Hickman's Family Farms
Desert Pride-Tonopah Plant
41625 West Indian School Road
Tonopah, Arizona 85354

Prepared for:

Hickman's Family Farms
6515 South Jackrabbit Trail
Buckeye, Arizona 85326

Prepared by:

HUSTON
Environmental Services

16412 South 30th Avenue
Phoenix, Arizona 85045
HES Project Number HU14103-Update
Date: November 18, 2015

Novmeber 18, 2015

Hickman Family Farms
c/o Frank Ruiz
32425 West Salome Highway
Arlington, AZ 85322
Phone: (623) 764-3878
Email: fruiz@hickmanseggs.com

Re: Storm Water Pollution Prevention Plan (Revision)
Tonopah Plant - Hickman's Family Farms
41625 West Indian School Road
Maricopa County, Arizona 85354
HES Project No. HU14103-Update

Dear Mr. Ruiz:

Huston Environmental Services (HES) is pleased to submit the enclosed Storm Water Pollution Prevention Plan (SWPPP) for the above-referenced site. This SWPPP is a revision of the original plan that is titled *Stormwater Pollution Prevention Plan, Hickman's Desert Pride-Tonopah Plant, 41625 West Indian School Road, Tonopah, Arizona 85354* dated April 1, 2014. This Initial SWPPP was performed in accordance with your verbal authorization dated March 25, 2014.

We appreciate the opportunity to perform these services for you. Please contact us if you have questions at (480) 216-9291 regarding this plan or if we can provide additional services.

Sincerely,

Kellie R. Huston, CHMM
Principal Owner/Senior Manager

Richard F. Munck, CHMM
Senior Project Manager

TABLE OF CONTENTS

1.0 SWPPP CONTENTS 1

1.1 Certification Statement (Section 6.1(3)) 1

1.2 Identification of Operators (Section 6.3(1&2)) 2

1.3 Construction Activities (CGP2013 Section 6.3(3)) 2

2.0 SEQUENCE AND ESTIMATED DATES OF CONSTRUCTION 4

2.1 Installation of Stormwater Controls (CGP2013 Section 6.3(4)a) 4

2.2 Commencement/Duration of Construction Activities (CGP2013 Section 6.3(4)b) 4

2.3 Cessation of Construction Activities (CGP2013 Section 6.3(4)c) 4

2.4 Final and/or Temporary Stabilization (CGP2013 Section 6.3(4)d) 4

2.5 Removal of Temporary Stormwater Conveyances (CGP2013 Section 6.3(4)e) 4

2.6 Anticipated Sequences of Construction Activities (CGP2013 Section 6.3(4)) 5

3.0 SITE DESCRIPTION 6

3.1 Site Description (CGP2013 Sections 6.3(5)a through g) 6

3.1.1 Soils Description (CGP2013 Section 6.3(5)d) 7

3.1.2 Waters of the U.S. (CGP2013 Section 6.3(6)i) 7

3.1.3 Threatened and Endangered Species (CGP2013 Section 14) 8

3.2 Site Maps (CGP2013 Sections 6.3(6)a, 6.3(6)b and 6.3(6)c(i –v)) 8

4.0 STORMWATER CONTROL MEASURES 9

4.1 Erosion and Sediment Control Measures (CGP2013 Section 3.1.1 and 6.3(8)) 9

4.2 Non-Structural Control Measures (CGP2013 Section 3.1.1) 10

4.2.1 Preserving Natural Vegetation (CGP2013 Section 3.1.1.3(1)) 10

4.2.2 Phasing Construction Activities (CGP2013 Section 3.1.1.3(2)) 10

4.3 Structural Control Measures (CGP2013 Section 3.1.1) 10

4.3.1 Stabilized Construction Entrance/Egress (EC-5) 10

4.3.2 Dust Control (EC-7) 11

4.3.3 Drainage Dikes (EC-9) 11

4.3.4 Organic Filter Barrier (SPC-1) 11

4.3.5 Silt Fence (SPC-5) 11

4.3.6 Storm Drain Inlet Protection (SPC-7) 11

4.3.7 Temporary Sediment Basins (SPC-8) 12

4.3.8 Temporary Sediment Trap (SPC-9) 12

4.4 Site Stabilization (CGP2013 Section 3.1.2) 12

5.0 NON-STORMWATER CONTROL MEASURES 13

5.1 Allowable Non-Stormwater Discharges (CGSP Section 1.3.2(a)) 13

5.2 Possible On-Site Pollutants (CGP2013 Section 6.3(9)) 14

5.3. Good Housekeeping Practices (CGP2013 Section 3.1.3.3) 14

5.3.1 Chemical Management (GH-1)....15
5.3.2 Solid Waste Management (GH-2)....15
5.3.3 Designated Washdown Areas (GH-4)....15
5.3.4 Spill Containment Plan (GH-5)....15
5.3.5 Road Sweeping & Trackout Cleaning (GH-6)....16
5.4 Preventive Maintenance (CGP2013 Section 6.3(11)a(ii))....16
6.0 POLLUTION PREVENTION....17
6.1 Pollution Prevention Background (CGP2013 Section 3.1.3)....17
6.2 Pollution Prevention Team (CGP2013 Section 6.3(1))....17
6.3 Training....17
6.4 Inspection Responsibilities (CGP2103 Sections 4.1, 4.2, 4.3, 4.4 and 4.5)....18
7.0 INSPECTIONS AND MODIFICATIONS....19
7.1 Routine Inspections (CGP2013 Section 4.2.1)....19
7.2 Corrective Actions (CGP2013 Section 4.2.1)....20
7.3 Analytical Monitoring (CGP2013 Section 7.0, 7.1)....20
7.4 SWPPP Updates and Modifications (CGP2013 Section 6.5)....20
7.4.1 SWPPP Updates....21
7.4.2 SWPPP Modifications/Amendments....21

FIGURES

Figure 1: General Location Map
Figure 2: FEMA Firm Map
Figure 3: Phase I Site Plan
Figure 3: Stormwater Management Plan (SWMP) Map

APPENDICES

Appendix A AZPDES General Permit for Stormwater Discharges, Permit No. AZG2013-001
Appendix B Arizona Stormwater Construction General Permit (CGP2013) SWPPP Checklist
Appendix C Notice of Intent (NOI) / Blank Notice of Termination (NOT)
Appendix D Construction Timeline Tables
Appendix E U.S.D.A. NRCS Web Soil Survey Report
Appendix F Himes Consulting, LLC Memorandum and Threatened and Endangered Species List
Appendix G Engineering Drawing and BMPs from Drainage Design Manual
Appendix H Routine Inspection and Corrective Action Report Form
Appendix I SWPPP Modifications/Amendments
Appendix J Miscellaneous Information

1.0 SWPPP CONTENTS

1.1 Certification Statement (Section 6.1(3))

In accordance with Section 6.1(3) of the Arizona Pollution Discharge Elimination System (AZPDES) General Permit for Stormwater Discharges, Permit No. AZG2013-001, effective date June 3, 2013 (CGP2013), this Stormwater Pollution Prevention Plan (SWPPP) must be signed and certified by all owners, operator(s) and/or contractors on the Site. A copy of the AZPDES Permit is included in Appendix A for reference. The CGP2013 SWPPP Checklist is included in Appendix B. As required, the SWPPP must also meet the signatory requirements as stated in the Notice of Intent to Discharge included in Appendix C. Certification statements and signature blocks are presented below.

"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 the information, the information submitted is, to the best of my knowledge and believe, 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".

Owner:	**Hickman's Egg Ranch, Inc - Tonopah Plant**
Signature:	
Name:	Billy Hickman
Title:	Owner
Date:	

Operator:	**Hickman's Family Farms - Tonopah Plant**
Signature:	
Name:	Paul Yeatts
Title:	Project Direction/Manager
Date:	

Contractor:	
Signature:	
Name:	
Title:	
Date:	

1.2 Identification of Operators (Section 6.3(1&2))

In accordance with the CGP2013, the operator must submit a Notice of Intent (NOI) to the Arizona Department of Environmental Quality (ADEQ). On November 18, 2015, Hickman's Family Farms submitted the new NOI to ADEQ for approval. A copy of the NOI is included in Appendix C. The NOI contains site, owner/operator, and construction information. General Information regarding the Site and owner/operator is presented below.

General Information	
Project Name:	Hickman's Family Farms – Tonopah Plant
Project Address: (See Figure 1)	41625 West Indian School Road
	Tonopah, Maricopa County, Arizona
Township/Range/Section	Township 2 North, Range 7 West, Sections 23 26
GPS Coordinates	33º 29' 27" N. 112º 57' 056" W.
Owner/Operator Information	
Owner/Operator Name:	Hickman's Egg Ranch, Inc., a Public Entity
Address:	6516 South Jackrabbit Trail
	Buckeye, Maricopa County, Arizona 85326
Responsible Parties	Hickman's Egg Ranch, Inc. a Public Entity
Primary Corporate Contact	Billy Hickman
Contact Number	(623) 872-1120
Primary Site Contact	Paul Yeatts
Contact Number	(623) 694-5190

Mr. Paul Yeatts is the Project Director for Hickman's Family Farms and is responsible for oversight of the construction activities at the Tonopah facility. Mr. Yeatts has been employed with Hickman's Family Farms since January 2004 and has more than 11 years of construction experience. Mr. Yeatts will be in charge of all phases of construction at the Site.

1.3 Construction Activities (CGP2013 Section 6.3(3))

The Hickman's Family Farm Tonopah plant encompasses 400 acres of land (the Property). The following table provides a list of the Maricopa County Assessor's Office parcel numbers.

Maricopa County Assessor's Office Parcels		
506-34-039D	6,849,637 Sq. Ft.	157.2 Acres
506-34-007A	807,167 Sq. Ft.	18.53 Acres
506-34-007B	849,420 Sq. Ft.	19.50 Acres
506-34-045A	62,770 Sq. Ft.	1.44 Acres

506-34-045B	1,635,678 Sq. Ft.	37.55 Acres
506-34-046	1,742,400 Sq. Ft.	40.0 Acres
506-34-042	1,742,400 Sq. Ft.	40.0 Acres
506-34-039B	1,742,400 Sq. Ft.	40.0 Acres
506-34-040C	1,698,840	39.0 Acres
506-34-048	176,418	4.05 Acres
506-34-049	153,288	3.51 Acres
	Total Acres	**400.78 Acres**

The approximately 40 acres north of Indian School Road and the 160 acres encompassing the eastern portion of the Property will remain agriculture farm land. The western portion of the Property will be developed in four phases with the egg farm (the Site). The egg farm will be developed as Phase I through IV and is identified as the Maricopa County Assessor's Office Parcel No. 506-34-039D. The egg farm will include multiple buildings, staging areas, stockpiles, access and haul roads, parking and drive areas, and temporary storage yards to be developed in four phases of construction. In addition, the 39 acre parcel (No. 506-34040C) will be developed with a truck wash and the 4.05 and 3.51 acre parcels (Nos. 506-34-048 and 506-34-049) will be developed with a parking lot. The four phases of construction for the egg farm, the retention area, truck wash, and parking lot are depicted on Figure 1, General Location Map.

During this phase of construction, approximately 222.77 acres of land will be disturbed. An additional one acre includes the existing farm manager residence and a temporary staging area for the construction activities.

2.0 SEQUENCE AND ESTIMATED DATES OF CONSTRUCTION

2.1 Installation of Stormwater Controls (CGP2013 Section 6.3(4)a)

In accordance with the CGP2013, stormwater controls shall be installed and implemented as part of construction activities on the Site. Stormwater controls are discussed further in Section 4.0.

2.2 Commencement/Duration of Construction Activities (CGP2013 Section 6.3(4)b)

The estimated project start date for construction activities was April 3, 2014. The anticipated completion date for construction is estimated to be December 2018. These dates are subject to change based on project changes, delays, or advancements. This SWPPP will be amended as necessary for changes in the construction schedule.

2.3 Cessation of Construction Activities (CGP2013 Section 6.3(4)c)

Cessation of construction activities either temporary or permanent are not anticipated or known at this time. Cessation of construction activities, if any, will be noted in the SWPPP amendments.

2.4 Final and/or Temporary Stabilization (CGP2013 Section 6.3(4)d)

Clearing and grubbing activity will be scheduled throughout the duration of the project to allow existing vegetation to remain in place as long as possible. It is anticipated not more than 80 acres in any location will be exposed until temporary or permanent best management practices (BMPs) have been installed. Installation of permanent erosion control measures will be given priority over reliance on temporary measures. Permanent erosion control measures and drainage structures will be installed as soon as possible in the construction sequencing of the project, preferably concurrent with construction of the related subarea or drainage device. Erosion control measures will be installed no later than 14 calendar days after construction activity has temporarily or permanently ceased for the affected subarea. See the Intended Sequences of Construction Activities in Section 2.6 for information on soil stabilization activities on this project.

2.5 Removal of Temporary Stormwater Conveyances (CGP2013 Section 6.3(4)e)

Removal of construction equipment, vehicles, temporary stormwater channels, control measures, and/or conveyances, and pollution generating activities is anticipated to be performed in general accordance with the schedule provided in Section 2.6. Dependent upon construction phasing activities, stormwater controls (and removals) may likely change. Changes will be noted in the SWPPP amendments.

2.6 Anticipated Sequences of Construction Activities (CGP2013 Section 6.3(4))

The anticipated sequence of construction activities for Phase I of the construction is presented below.

Sequence of Construction Activities for 2015							
Activity	Estimated Dates	Phase I	Phase II	Phase III	Phase IV	Parking Lot	Truck Wash
Installation of Control Measures	Start						
	End						
Clear and Grubbing	Start						
	End						
Grading	Start						
	End						
Site Preparation	Start						
	End						
Underground Utilities	Start						
	End						
Infrastructure Installation	Start						
	End						
Final Grading	Start						
	End						
Removal of Equipment and Controls Measures	Start						
	End						
Final Stabilization	Start						
	End						
Other	Start						
	End						

Tables showing the anticipated sequence of construction activities for 2016, 2017, and 2018 are presented in Appendix D.

3.0 SITE DESCRIPTION

3.1 Site Description (CGP2013 Sections 6.3(5)a through g)

The Hickman's Property is approximately 400 acres in size and is a mixture of the egg farm development, active and fallow agricultural farm land, undeveloped desert land, and former residentially development property, located west of 411th Avenue and Indian School Road in Tonopah, Maricopa County, Arizona as shown in Figure 1 (CGP2013 Sections 6.3 (5)g(i & ii). The Property is located in Tonopah in the north and western portions of Section 26 and the southwest quarter of Section 23, Township 2 North, and Range 7 West.

The main Property is 356.02 acres in size and includes the majority of the Hickman's parcels with the exception of the Truck Wash and Parking lot parcels discussed below. The main property is bounded to the west by both irrigation ditches and/or an unnamed wash, to the east by irrigation ditches and/or unimproved roads, to the south by unimproved roads and an agricultural tail water pond and unimproved road, and to the north by West Indian School Road and unimproved roads. A 40 acre parcel on the northwest portion of the Site is located north of Indian School Road. This portion of the Property is bordered by native desert land and washes to the north, east, and west and Indian School Road to the south. The Property also contains some residential development on the east side and both planted and unplanted agricultural farm fields.

The western portion of the main Property will be developed with the Hickman's Family Farms egg farm (the Site). Currently, approximately 159 acres of the Site is being developed and is referred to as Phases I through IV of the development. An additional acre is developed with the farm manager residence and a temporary staging area. Construction activities will include multiple buildings, wastewater impoundments, and ancillary features (CGP2013 Sections 6.3(5)a and 6.3(5)b). Prior to the development activities, the Site was part of a larger agriculture farm field. Ancillary development included a dirt farm road and a concrete-lined irrigation ditch. Based on the estimated building size and intended roadway, approximately 70% of Site will be impervious after completion of construction activities (CGP2013 Section 6.3(5)c). With the exception of the Truck Wash and Parking Lot discussed below, the remainder of the main property will continue to be used for agricultural and related purposes.

The 39 acre truck wash portion of the Hickman's property (Truck Wash) is bounded to the west by an unimproved dirt road and agricultural farm fields, to the east by residential development and undeveloped desert land, to the south by unimproved roads, agricultural farm field, and undeveloped desert land, and to the north by West Indian School Road followed by undeveloped desert land. The Truck Wash portion of the Hickman's Property includes a mixture of former residential development, former agricultural farm fields, undeveloped desert land, and a portion of an unnamed wash.

The 7.5 acre portion of the Hickman's property to be developed with the parking area (Parking Lot) is bounded to the to the west by a commercial hot springs, to the east by commercial development, to the

south by residential development and undeveloped desert land, and to the north by West Indian School Road followed by commercial development. This Parking Lot portion of the Hickman's property includes a mixture former residential development and vacant land.

Soil stockpiles will be generated from grading activities. Soil stockpiles will be located in various areas on the property as construction activities progress (CGP2013 Section 6.3(5)f). The soil stockpiles will be used during the construction activities to fill portions of the Property. Stockpiles will be sprayed with water to form a hard soil crust on the surface for dust control and to reduce the potential for erosion.

3.1.1 Soils Description (CGP2013 Section 6.3(5)d)

According to the *Soil Survey of Mariopca County Arizona, Central Part Version 7,* issued December 12, 2013, the Property, including the Site, contains multiple loamy type soils which are well drained with slopes from approximately 0 to 3 percent. (CGP2013 Section 6.3(5)d). A copy of the U.S.D.A. Natural Resources Conservation Service (NRCS) online Web Soil Survey is presented in Appendix E.

3.1.2 Waters of the U.S. (CGP2013 Section 6.3(6)i)

Surface waters on the Property include an unnamed wash on the western border and the tail water pond on the southwest portion. In addition, a second unnamed wash is located on the eastern section of the Truck Wash portion of the Property. A 50 foot buffer between the area of disturbance and the unnamed washes will be maintained during and after development of the Site. The buffer area may include but is not limited to chain link security fences, irrigation canal, dirt farm roads, and/or natural vegetation. Figure 2 includes a copy of the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM) map for the Site and vicinity. The FEMA Firm map depicts flood zones including areas that may be considered Waters of the U.S. According to the ADEQ's website, no impaired waters or Outstanding Arizona Waters (OAWs) are located within 0.25 miles of the Site.

The tail water pond on the southeast corner of the Property discharges to downstream waters. Himes Consulting, LLC was retained to conduct a preliminary evaluation of waters of the U.S. within areas under construction at the time. This was limited to the Site and the tail water pond on the property. This assessment did not include, the Parking Lot or Truck Wash areas. The results of that assessment were presented in a Technical Memorandum, dated April 5, 2014. Based on that evaluation, no impacts to waters of the U.S. were observed. No further work or investigation was proposed to make a final determination of the status of the tail water pond, unless construction or alterations (such as modifications to inflows or outflows, dredging, grading or filing) are planned in that area. Therefore, as construction extends on the property or into the Parking Lot and/or Truck Wash, construction activities will need to be further evaluated. A copy of the Himes Consulting, LLC letter is included in Appendix F.

3.1.3 Threatened and Endangered Species (CGP2013 Section 14)

As part of the SWPPP, we performed a review of Critical Habitats in the area of the property using the Arizona Game and Fish Department (AGFD) Heritage Data Management Systems (HDMS) On-line Environmental Review Tool. Based on our review, the Property does not include Critical Habitats. A copy of the AGFD map is included in Appendix F.

We also reviewed the U.S. Fish and Wildlife Service (USFWS) Information, Planning, and Conservation System (IPac) for special status species. The IPac report is used for initial project scoping to determine whether any threatened and endangered species, designated critical habitat, or other natural resources of concern may be affected by the proposed project. The report includes species currently listed as threatened or endangered under the Endangered Species Act of 1973 as well as species considered candidates for listing. Listing in this report does not indicate the species have been identified on or near the Property. A copy of the IPac report is included in Appendix F.

No species of concern were observed during the site visit performed by Hickman's Family Farms, Huston Environmental Services, and Himes Consulting personnel on the initial Site visit on April 5, 2014.

3.2 Site Maps (CGP2013 Sections 6.3(6)a, 6.3(6)b and 6.3(6)c(i –v)).

In accordance with the General Construction Permit the following maps are included in the Section identified as Figures before the Appendices.

FIGURES		
Figure 1:	General Location Map	Depicts Site and vicinity stormwater flow directions
Figure 2:	FEMA Firm Map	Depicts flood zones including waters of the U.S.
Figure 3:	Site Plans	Depicts on-site features
Figure 4:	Stormwater Management Plan	Depicts SWPPP BMPS, topography, and flows

4.0 STORMWATER CONTROL MEASURES

4.1 Erosion and Sediment Control Measures (CGP2013 Section 3.1.1 and 6.3(8))

Stormwater controls may consist of structural and non-structural control practices. Structural controls will be installed in accordance with manufacturer's specifications and good engineering practices. Stormwater control measures include erosion and sediment controls. Erosion and sediment control is a phase commonly used to describe a variety of measures (Best Management Practices [BMPs]) that deal with excessive losses of soil through stormwater runoff. Erosion and sediment control are two different processes and have distinct BMPs associated with each.

Erosion control is preventative in nature. Although simple in concept, erosion control is often difficult to implement due to the varied activities and schedules at a construction site. Erosion Control consists of source control measures designed to prevent soil particles from detaching and being transported in stormwater. Erosion Control measures provide a proactive approach from preventing and/or reducing erosion. Erosion Control measures includes temporary and permanent stabilization practices.

Sediment controls are structural measures that are intended to complement and enhance soil stabilization measures and reduce sediment discharges from construction sites. Sediment control measures are designed to intercept and settle out soil particles that have become detached and transported by the force of water. The following measures will be implemented to the maximum extent practicable to control sediment in disturbed areas, with special attention to areas with a high potential for significant erosion.

In order to reduce the potential for erosion on the Site and control sediment from flowing on and/or off the Site, various control measures will be implemented during the project sequence of construction activities for stormwater (CGP2013 Section 6.3(8) and for non-stormwater discharges (CGP2013 Section 3.1.4). These control measures will be implemented by the contractor and inspected by the operator (or its duly authorized representative) to reduce the volume, velocity, and total discharges of stormwater, reduce exposed soils, disturbance on steep slopes, sediment discharges, maintain natural on-site buffers, and minimize the soil compaction, as shown on Figure 4.

Construction activities on the property may include but is not limited to the installation of security fencing, construction entrance/ingress and egress, dust control water storage pond, designated concrete washdown areas, secured materials storage areas and signage. As the construction activities progress, stormwater control measures will be installed including diversion dike, silt fencing, organic filter barriers, storm drain inlet protection; and temporary sediment traps and basin.

4.2 Non-Structural Control Measures (CGP2013 Section 3.1.1)

Non-structural stormwater control measures minimize the amount of soil exposed. The following non-structural control measures identified below will be used during construction activities.

4.2.1 Preserving Natural Vegetation (CGP2013 Section 3.1.1.3(1))

The primary non-structural erosion and sediment control measure that will be used during each Phase of construction at the Site is preserving natural vegetation. Preserving natural vegetation will provide soil stabilization through maintaining the existing agricultural crops for duration of the growing season. During times when the agricultural fields are fallow, soil stabilization will be maintained though vegetative roots and/or soil crusting.

4.2.2 Phasing Construction Activities (CGP2013 Section 3.1.1.3(2))

Phasing construction activities is considered an erosion control measure. For this project, the Site development is proposed into multiple separate and distinct Phases and/or developments. The proposed phases and developments are shown in Figure 1.

4.3 Structural Control Measures (CGP2013 Section 3.1.1)

The following structural control measures will be installed and maintained during construction activities. The control measures (i.e. BMPs) were obtained from the guidance documents in the *Drainage Design Manual for Maricopa County, prepared by Maricopa County Flood Control District, dated August 15, 2013.* The manual was used for selection and design of stormwater control measures. Copies of the BMP guidance documents, along with the Stormwater Management Plan (SWMP) engineering drawings prepared by Four Peaks Design Group, are included in Appendix G.

4.3.1 Stabilized Construction Entrance/Egress (EC-5)

The operator shall implement effective control measures to limit sediment, debris, and other materials from entering/leaving the Site on vehicles and other equipment. Gravel pads will be used at all construction entrance/exit locations to prevent the on/off-site transport of sediment to/from adjacent roadways. The gravel pads will be at least 50 feet long, a minimum of 30 feet wide, flared at the end closest to the paved road, and will consist of a six-inch-thick layer of crushed stone (1 to 3 inches in diameter).

The exits will be inspected weekly. The exits will be maintained in a condition that will prevent tracking or flowing of sediment onto the adjacent roadways. This could require adding additional crushed stone to the exit. All sediment tracked, spilled, dropped, or washed onto the roadways will be swept up immediately and hauled off-site for disposal in a landfill. If excess sediment has clogged the pad, the exit will be top dressed with new crushed stone. Replacement of the entire pad might be necessary if the pad becomes completely filled with transported sediment. The Stabilized Construction Entrance/Egress guidance document from the Drainage Design Manual for Maricopa County is provided in Appendix G.

4.3.2 Dust Control (EC-7)

Dust control measures will be used to minimize the generation of fugitive dust from construction sites which may later be redeposited into public storm sewer systems, washes, and other natural drainage ways. A water truck will be utilized during each Phase of construction to reduce dust. A groundwater well located on the northern portion of the Property, north of Indian School Road, will supply water to the Site through use of the adjacent irrigation canal that extends north-to-south along the western border of the Site. The irrigation canal water will be diverted to discharge into a temporary dust control water pond located on the southern portion of Phase I. The Dust Control guidance document from the Drainage Design Manual for Maricopa County is provided in Appendix G.

4.3.3 Drainage Dikes (EC-9)

A drainage dike (EC-9) will be constructed on the north side of the construction area in Phase I. to prevent run-on of stormwater (CGSP2013 3.1.1.1(1)). The drainage dike will extend east to west between the ingress and egress roads. The drainage dike will separate the agriculture farm field from the developed portion of the Site. The Drainage Dike guidance document from the Drainage Design Manual for Maricopa County is provided in Appendix G.

4.3.4 Organic Filter Barrier (SPC-1)

Organic filter barriers allow sediment to settle from runoff before water leaves a construction site. A combination of straw bale barriers and straw wattles will be used along the eastern border of the Site as shown on the guidance documents in Figure 4 and Appendix G. Throughout the course of the project, additional organic filter barriers may also be used in selected locations of the Truck Wash and Parking Lot.

4.3.5 Silt Fence (SPC-5)

A silt fence is a geotextile fabric with the lower portion secured by soil and held in place with wooden and/or metal posts. Silt fences are typically located downstream of disturbed areas to intercept sheet flow runoff. A silt fence will be installed along the eastern border of the Site and will be used in conjunction with an organic filter barrier to slow sheet flow runoff and to minimized sediment discharge as shown in the guidance documents in Figure 4 and Appendix G. Throughout the course of the project, additional silt fences may also be used in selected locations of the Truck Wash and Parking Lot.

4.3.6 Storm Drain Inlet Protection (SPC-7)

In order to intercept sediment at low points on the Site, storm drain inlet will be installed between the buildings and on the west side of the Site. Additional storm drain inlets may be installed as additional buildings are constructed. These protective controls consist of wrapping the inlet grate with a geotextile filter fabric followed by covering the grate with a pea stone filter material. The area around the grate is sloped to maintain the water in place while the sediment is filtered out. The Storm Drain Inlet Protection guidance document from the Drainage Design Manual for Maricopa County is provided in Appendix G.

4.3.7 Temporary Sediment Basins (SPC-8)

Sediment basins are used to collect stormwater and trap sediment from the construction site runoff. These basins are to be placed outside of the influence of surface water and natural buffers. The temporary retention basins are designed for the 100 year, 2 hour event and will be contained within the treatment ponds for Phases III and IV of the Site. Once construction begins on these phases a new permanent basin will be constructed. Since the basins maintain and store sediment, the operator shall monitor the sediment and remove the accumulated sediment when the design capacity has been reduced by 50%. Additional sediments basins may be installed in the Truck Wash and Parking Lot. The Temporary Sediment Basins guidance document from the Drainage Design Manual for Maricopa County is provided in Appendix G.

4.3.8 Temporary Sediment Trap (SPC-9)

A temporary sediment trap will be installed adjacent to the drainage dike to collect stormwater runoff from the undisturbed agriculture farm field on the northern portion of Phase I. The sediment trap will slow concentrated runoff velocity and catch sediment. Additional sediment traps may be installed in the Truck Wash and Parking Lot. The Temporary Sediment Trap guidance document from the Drainage Design Manual for Maricopa County is provided in Appendix G.

4.4 Site Stabilization (CGP2013 Section 3.1.2)

The natural grade of the property is from the northwest to the southeast; therefore, stormwater will naturally flow to the southeast. The approximately 20 acres of land on the northernmost portion of Phase I is and will remain an agricultural farm field. During the course of construction, the Site including all four Phases is slated for development with the egg ranch infrastructure. Since the northern portion of Phase I will remain agricultural, erosion will be controlled through soil stabilization and runoff velocity reduction as previously discussed. In addition, a drainage dike will be installed to redirect stormwater flow from this area from entering the Site.

For areas of disturbance, the operator must provide either temporary or final stabilization. Temporary stabilization must be performed within 14 calendar of the most recent land disturbance. This method is typically used when construction activities have been temporarily suspended (CGP2013 Section 3.1.2.1). Temporary stabilization includes the installation of a diversion dike, silt fences, organic filter barriers, and a sediment basin.

Final stabilization will need to be performed within 14 calendar days once all soil disturbance and/or construction activities have permanently ceased (CGP2013 Section 3.1.2.2). Final stabilization will include impermeable surfaces, gravel and paved parking and driveways, diversion dike, storm drain inlets, and permanent retention basins.

5.0 NON-STORMWATER CONTROL MEASURES

5.1 Allowable Non-Stormwater Discharges (CGSP Section 1.3.2(a))

The following are the only non-stormwater discharges allowed under this permit. These discharges are allowed provided they are reduced or eliminated to the extent practicable. When allowable non-stormwater discharges cannot be practicably eliminated, the operator shall install appropriate control measures to reduce or eliminate pollutants in the discharge to assure compliance with Part 3 Effluent Limitations of the CGP2013.

Allowable Non-Storm Water Discharge	Location	BMPs
i) Discharges from emergency fire-fighting activities	--	--
II) Water used to control dust, provided reclaimed water or other wastewaters are not used	Across entire site	Avoid overwatering leading to runoff or areas of standing water.
iii) Routine external building wash down where detergents are not used	Areas adjacent to buildings	Use high pressure washers to reduce the amount of water generated.
iv) Water used to rinse vehicles and equipment, provided that reclaimed water or other wastewater is not used and no soaps, solvents, detergents, oils, grease or fuel are present in the rinsate.	Not Applicable	--
v) Pavement wash waters where spills or leaks of toxic or hazardous materials have not occurred (unless all spilled material has been removed) and where detergents are not used	Paved areas and parking lots.	Use dry wash techniques whenever possible or sweeping machines equipped with vacuums to collect used wash water.
vi) Uncontaminated air conditioning or compressor condensate	Near air conditioners for construction trailers	Do not allow condensate to run across parking lots or other paved surfaces where it may contact pollutants
vii) Uncontaminated groundwater or spring water	Across the Site.	Allow flows to discharge to temporary retention basin and/or outfall.
viii)Foundation or footing drains where flows are not contaminated with process materials	Across the Site	Allow flows to discharge to temporary retention basin and/or outfall.
ix) Fire hydrant flushing, potable water line or well flushing where the receiving waters are ephemeral	Across the Site	Use hoses to discharge directly to storm drain inlets to avoid entraining sediment or pollutants
x) Discharges related to installation and maintenance of potable water supply systems, including disinfection and flushing activities.	Across the Site	Charge to stormwater flow direction into retention basin or outfall.

Allowable Non-Storm Water Discharge	Location	BMPs
xi) Hydrostatic testing of new pipes, tanks or vessels using potable water, surface water, or uncontaminated groundwater	Across the Site	Allow flows to discharge to temporary retention basin and/or outfall.
xii) Water used for compacting soil, provided reclaimed water or other wastewaters are not used	Across the Site	Avoid overwatering leading to runoff or areas of standing water.
xiii)Water used for drilling and coring	None Required	--
xiv)Uncontaminated water from dewatering operations	None Required	--

5.2 Possible On-Site Pollutants (CGP2013 Section 6.3(9))

On Site Pollutants		
Possible Pollutants	**On-site**	**Comments**
Fuels	Yes	Used by all vehicles on Site – Secondary containment will be provided as necessary for fuel tanks to contain leaks. Vehicle maintenance will be performed off-Site.
Oils	Yes	Used by vehicles, construction equipment, and transformers – Secondary containment will be provided as necessary to contain leaks. No maintenance will be performed on the Site.
Sediment	Yes	Caused by erosion and soil stockpiles – All sediments and erosion control BMPs are included in this SWPPP.
Trash	Yes	Trash will be contained and removed from the Site as necessary.
Concrete Washout	Yes	Contained on Site in washout areas.
Paints	Yes	Paints may be used in various locations.
Asphalt	Yes	Asphalt may be used in various locations.

5.3. Good Housekeeping Practices (CGP2013 Section 3.1.3.3)

Good housekeeping measures ensure a clean and orderly site to reduce the potential for pollutants entering stormwater discharges. The good housekeeping measures for this project will include the following practices: chemical, concrete, solid, and septic waste management and close monitoring of fueling operations and equipment maintenance.

Soil stockpiles will be generated during grading activities and will likely be located at several locations on the property throughout the course of the project. The soil stockpiles will be used during the construction activities to fill portions of the Site. Stockpiles will be placed outside of washes and other surface waters or conveyances. During active use, soil stockpiles will be sprayed with water multiple times in order to form a hard soil crust on the surface as dust control and to reduce the potential for erosion. During inactive construction activities, silt fences or other effective sediment control measures will be placed around the soil stockpiles.

5.3.1 Chemical Management (GH-1)

As part of the SWPPP, a chemical management program has been implemented and will be followed throughout the duration of the construction project. The purpose of the program is to provide guidance and insure the proper labeling, handling, storage, and/or disposal of chemical products and septic waste on the Site. The chemical management plan is designed to reduce or eliminate stormwater runoff from being polluted through spills, and/or improper use, handling, or disposal of these on-site chemicals and wastes. On-site practices include keeping the materials covered, within secondary containments, and away from traffic areas. Chemicals that may be used on Site during construction activities are primarily associated with the finished buildings including paints, caulking, sealants, and other similar common building materials. The Chemical Management guidance document from the Drainage Design Manual for Maricopa County is provided in Appendix G.

5.3.2 Solid Waste Management (GH-2)

In addition to the chemical management program, a solid waste management program has also been implemented on the Site. The purpose of the program is to reduce or eliminate trash and debris on the Site from entering or impacting storm drains, control measures, or waters of the U.S. The program provides proper disposal methods for trash and debris and in turn reduces post construction cleanup and improved stormwater quality on the Site. Practices include placing all trash and debris in dumpsters with flip top lids which eliminate wind displacement of trash and the entry of stormwater from rainfall. In order to following good housekeeping practices, the dumpsters are emptied on a regular basis and repaired when necessary. The Solid Waste Management guidance document from the Drainage Design Manual for Maricopa County is provided in Appendix G.

5.3.3 Designated Washdown Areas (GH-4)

Designated concrete washdown areas are designed to minimize or eliminated the discharge of concrete washout and waste materials from entering storm drains, drainage dikes, stormwater inlets, or sediment basins. In order to control concrete washout during construction, multiple concrete washdown areas will be designated on the Site. Information regarding the current concrete washdowns is presented as shown on Figure 4 and Appendix G. The washdown areas are a minimum of 10 feet by 10 feet in size and contain bermed above grade soil walls. The washdown areas are uniformly lined with plastic sheeting that does not contain holes, tears, cuts, or other defects that would compromise the impermeability of the material. A Designated Washdown Area guidance document from the Drainage Design Manual for Maricopa County is provided in Appendix G.

5.3.4 Spill Containment Plan (GH-5)

Spill Control and Response procedures and practices will be implemented at the Site. These procedures and practices are meant to prevent and control spills in a manner that minimizes discharges of spilled materials to the drainage system are required for all construction activities. Spill control procedures will be implemented anytime chemicals and/or hazardous substances are stored and will include all spills will be reported immediately after discovery to the Stormwater Pollution Prevention Team (Section 6.2) and

cleaned up promptly. The source of the spill will be immediately located and stopped as soon as it is safe to do so. The spilled substance will be contained immediately or as soon as it is safe to do so to minimize the impact of the spill. Contaminated materials, including soil, spilled materials, protective equipment, absorbent materials, and cleanup supplies will be properly handled and disposed accordingly.

During the response and/or cleanup process, all impacted materials will be placed in leak tight containers, appropriately labeled with relevant information (type of material, date and location of spill, contact information, and regulatory agency information), situated outside of traffic areas, and placed in secondary containment, if necessary (CGP2013 Section 6.3(11),a(i-iv)). Following sampling characterization, the materials will be transported and disposed at an appropriate landfill (CGP2013 Section 6.3(11)b).

5.3.5 Road Sweeping & Trackout Cleaning (GH-6)

In addition to maintaining and inspecting the Construction Site Egress, a regular inspection and/or road sweeping/trackout cleaning will be performed. The purpose of the sweeping/cleaning is reduce or eliminate on-site sediments from trackout from entering storm drains or waters of the U.S. The full inspection for the egress and trackout areas will be performed at a minimum of every seven days; however, the areas will be observed daily for trackout and swept/cleaned as necessary. These operations will be performed and in compliance with Maricopa County Dust Control Rules for trackout control and all trackout materials will be removed and disposed off site. A road sweeping and trackout cleaning guidance document from the Drainage Design Manual for Maricopa County is provided in Appendix G.

5.4 Preventive Maintenance (CGP2013 Section 6.3(11)a(ii)).

The effectiveness of the control practices and other BMPs described in this SWPPP depends on proper maintenance. Preventive maintenance includes removal of sediments from traps, basins, and washdowns and other controls prior to failure, frequent cleaning of trash bins, port-a-john cleaning, daily cleaning of fueling areas, frequent equipment cleaning and mechanical inspections, and other janitorial services.

6.0 POLLUTION PREVENTION

6.1 Pollution Prevention Background (CGP2013 Section 3.1.3)

The operator shall design, install, operate, and maintain effective pollution prevention measures to minimize the discharge of pollutants off-site, to municipal separate storm sewer systems, waters of the US, impaired waters, or surface waters. Pollution prevention can be performed using various appropriate means including, sediment controls, controlling spills and leaks, good housekeeping measures, proper employee training, and regular inspections.

Although the project is located near two unnamed washes that are considered to be Water of the US, no disturbance will take place within 50 feet of the washes and no stormwater will be discharged to the wash channels. No existing vegetation in this area will be removed or disturbed during construction activities; therefore, no 404 permit is required for the Site. This will be reevaluated prior to initiation of the additional Phases of the development and/or if changes to construction activities occurs (CGP2013 Section 6.4(10)).

6.2 Pollution Prevention Team (CGP2013 Section 6.3(1)).

During the course of the project, a Stormwater Pollution Prevention team will be responsible for assisting with the development of the facility's SWPPP, implementing and maintaining storm water control measures, taking corrective action where necessary, improving the performance of control measures, and for modifying the SWPPP to reflect changes made to the control measures. The Stormwater Pollution Prevention team includes the Environmental Manager and the primary project contact. Additional members of the Pollution Prevention Team may be identified and/or utilized on an as-needed basis. The proposed Stormwater Pollution Prevention team is presented below.

Storm Water Pollution Prevention Team	
Environmental Manager	Frank Ruiz
Contact Number	(623) 764-3878
Primary Project Contact	Paul Yeatts
Contact Number	(602) 694-5190
*Note: Additional members if necessary will be identified on inspection and monitoring forms.	

6.3 Training

Effective management of stormwater pollution requires contractors and employees to be alert to those conditions that may cause pollutants to enter stormwater. Proper design, use, and maintenance of BMPs by all contractors and employees are essential to the SWPPP. The contractor and the Engineer are responsible for ensuring that all staff members responsible for SWPPP implementation understand the components of the SWPPP, how it will be implemented, and their individual role in contributing to the

effectiveness of the SWPPP. Training will address control measures identified in this plan, good housekeeping, materials management, spill response, maintenance of controls, and inspections. Training can be formal or informal. Informal training will include partnering meetings, weekly briefing meetings, and/or "tail-gate" meetings. Formal training will include classroom training, videos, and/or printed materials. On-site pollution prevention training will be conducted on an ongoing basis during project construction.

6.4 Inspection Responsibilities (CGP2103 Sections 4.1, 4.2, 4.3, 4.4 and 4.5)

The Stormwater Pollution Prevention Team is responsible for maintaining this SWPPP and for the regular inspection, maintenance, and corrective action of BMPs as described in Section 7.1 of this SWPPP. Inspection frequency will be in accordance with the CGP2013 requirements.

7.0 INSPECTIONS AND MODIFICATIONS

In order to evaluate the effectiveness of the SWPPP, the following monitoring activities will be conducted on the storm water discharges at the Site. Monitoring results will be used to regularly reassess the impact of pollutant sources and the need for improved or additional control measures or BMPs. The SWPPP will be updated and improved through the term of the permit and these updates will be documented on the appropriate forms.

A copy of this SWPPP will be kept onsite during all construction activities and will be available for review by any agency during normal working hours. Records of all Inspections, Inspectors Names (Title and Qualifications), compliance certification, and non-compliance reporting will be retained with the SWPPP for review (CGP2103 6.8(1) and 6.8(5)). Records shall also be kept when major grading and stabilization activities occur, when BMPs are maintained and when the SWPPP is modified. In accordance with the CGP2013, the appropriate information and permit authorization number will be posted near the main entrance of the Site.

7.1 Routine Inspections (CGP2013 Section 4.0)

Routine inspections will be performed every seven (7) calendar days as required by the permit (CGP2013 Section 4.2). For each inspection, the operator shall complete an *Inspection and Corrective Action Report* Form which provides information that is equivalent to the sample form presented in the CGP2013 and provided in Appendix H of this SWPPP (CGP2013 Section 4.4.6 and 4.4.8(4)). Within 24 hours of completing the inspection, the corresponding inspection report shall be placed (in chronological order) with the previous reports in the SWPPP. The operator shall retain records of all stormwater inspections, amendments, NOIs, NOTs, and other reports with the SWPPP for a period of at least three years from the date the NOT was submitted to the ADEQ

The inspection will include but is not limited to the following:

- Examine all in-place structural controls to ensure they are present, functioning correctly, and repair, replace, or maintain as necessary (CGP2013 Section 6.4(7)).
- Evaluate the effectiveness of non-structural controls.
- Examine entrance/ingress and egress locations for evidence of sediment, debris, or pollutants entering or leaving the Site.
- Evaluate staging or storage areas for conditions that could or have caused leaks, spills, or accumulations of pollutants.
- Examine discharge points to evaluate the effectiveness of stormwater control measures.

7.2 Corrective Actions (CGP2013 Section 4.2.1)

If during an inspection, if a corrective action measure is identified, the corrective action shall be appropriately identified on the Inspection and Corrective Action Report form and the following shall occur:

1) BMPs requiring maintenance identified during the inspection will be repaired within seven (7) calendar days or before the next rain event, whichever is sooner, as required by the CGP2013.

2) BMP maintenance will be recorded on the Corrective Action form (Appendix F) and kept with the SWPPP as required by the CGP2013 (CGP2013 Section 5.3(2)(a)).

3) The Corrective Action Log portion of the Inspection Report will include the name of the inspector, date of discovery, recorded date of corrective action completion, and other relevant information.

4) If the inspections identify problems to be addressed by modifications to the SWPPP, these changes will be completed within 7 days and implemented before the next rain event, whenever practicable (CGP2013 Sections 5.1, 5.2, and 6.4(9)).

7.3 Analytical Monitoring (CGP2013 Section 7.0, 7.1)

Analytical monitoring is required when a project is located within 0.25 miles of an impaired or outstanding Arizona waters (OAU). According to the ADEQ's website, no impaired waters or Outstanding Arizona Waters (OAWs) are located within 0.25 miles of the Site.

7.4 SWPPP Updates and Modifications (CGP2013 Section 6.5)

The objective of the SWPPP is to provide a basis for conformance of erosion devices and de-siltation controls with Federal, State, and/or local requirements. Certain conditions exist when the SWPPP requires updating and/or Revisions. This includes changes in construction schedule, sequencing of activities, changes in Phasing, and other construction changes that will change the certification requirements and/or the effectiveness of the SWPPP. Amendments to the plan are documented on the SWPPP Modifications/Amendments Form in Appendix I.

The operator needs to complete revisions to the SWPPP within seven (7) calendar days following the inspection. If control measures (i.e. best management practices [BMPs]) need to be modified or if additional control measures or BMPs are necessary, implementation must be completed within seven (7) days following discovery, or before the next measurable storm event, whichever is sooner. If necessary changes cannot be implemented within the specified timeframe(s), the permittee shall document with the SWPPP the reasons for the delay, a schedule for completing the necessary changes, date completed and any back-up control measures in place to ensure compliance should a runoff event occur while a control measure is off-line (either in part or in whole).

7.4.1 SWPPP Updates

The SWPPP needs to be updated within seven (7) calendar days when one of the following conditions exists:

1) There is a change in design, construction, operation, or maintenance at the construction site that may have a significant effect on the discharge of pollutants to the waters of the U.S. that has not been previously addressed in the SWPPP;

2) During inspections or investigations by the operator or by ADEQ or USEPA, it is determined the discharges are causing or contributing to water quality exceedances of the SWPPP is ineffective in eliminating or significantly minimizing pollutants in stormwater discharges from the construction site; or

3) There is a change to the stormwater team.

7.4.2 SWPPP Modifications/Amendments

The SWPPP needs to be modified (i.e. amended) within seven (7) calendar days in response to any of the following conditions:

1) New operators become active, construction plans are altered they may affect the SWPPP effectiveness or are no longer accurately reflected in the SWPPP.

2) When areas where operational control have changed.

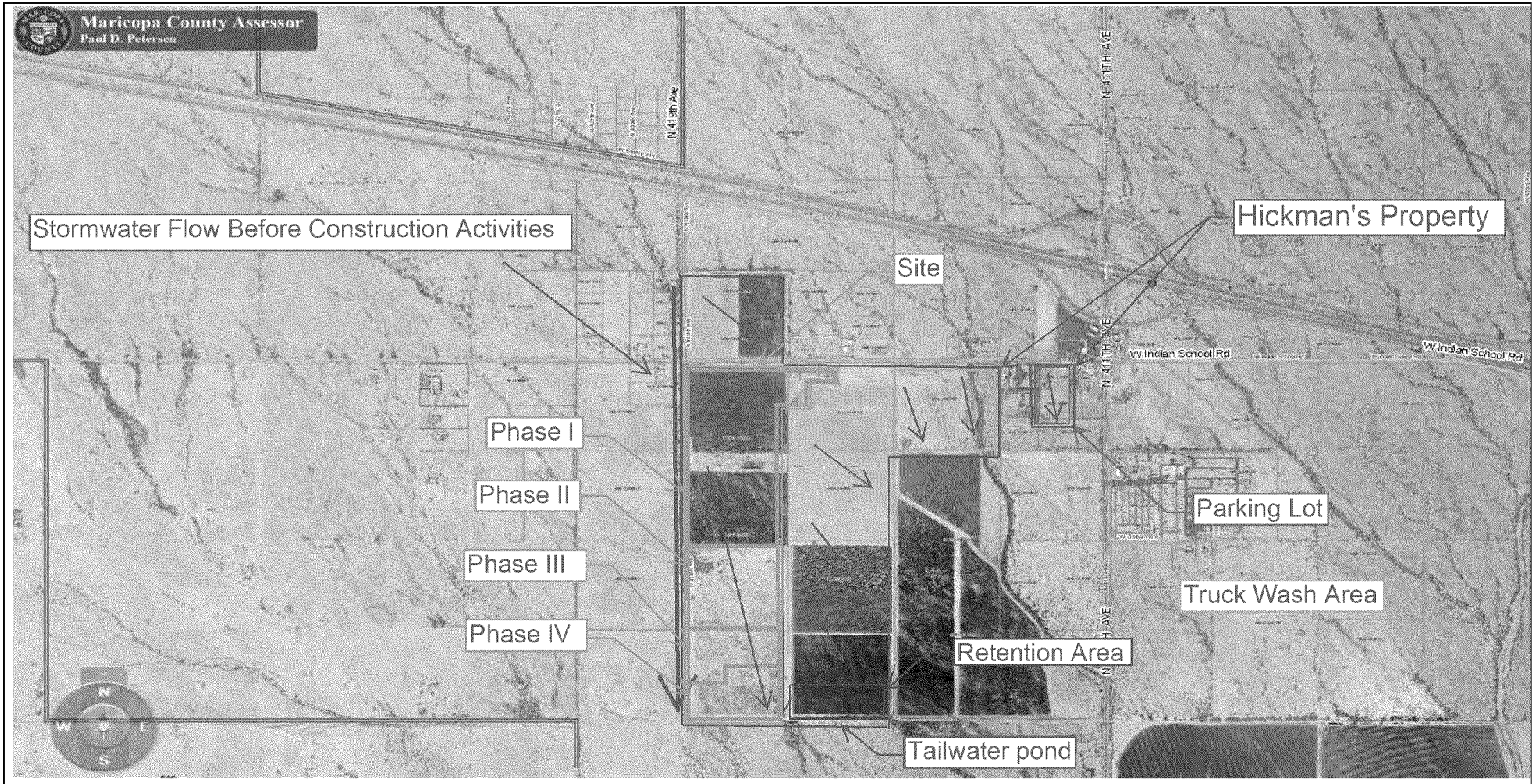
3) When modifications are necessary for compliance.

4) When additional requirements are requested by ADEQ.

5) When control measures are revised by state, federal, tribal, or local agencies.

In accordance with the CGP2013, operators are required to maintain records of any changes to the SWPPP. This information should include the date, summary of changes, and the authorizing person. All SWPPP modifications must be performed by personnel in accordance with the CGP2013, a copy of which is included in Appendix A. In addition, when modifications to the SWPPP are necessary, any operators whom may be impacted shall be notified at the address listed in the SWPPP.

Figures



)LJXUH L ¶ L *HQHUDO L /RFDWLRQ L 0DS L

Source: Maricopa County Assessor,2010: http:/maricopa.gov/assessor

Hickman's Family Farms
:Hst of Indian School Road & 41¶ th Avenue
Tonopah, Maricopa County, Arizona 85354

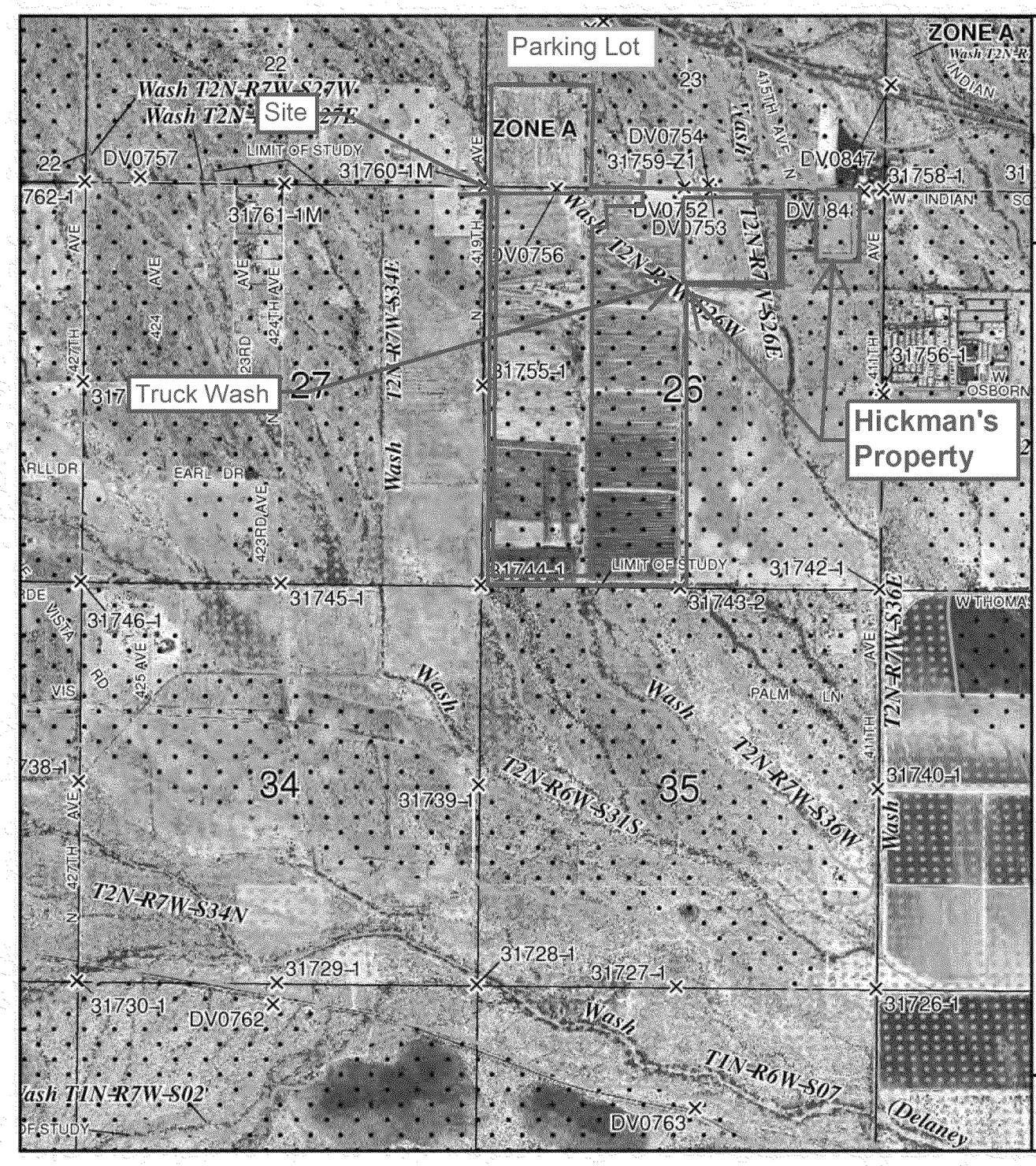
Project No. HU14103

HUSTON
Environmental Services

Huston Environmental Services, LLC
16412 South 30th Avenue
Phoenix, Arizona 85045

L 1 L

L L L L L L L L L ⊥ ‼ ¶ ┤ L *,6 L 0DSV L
0DULFRSD L &RXQW L $VVHVVRU∂V L 2IILFH L



MAP SCALE 1" = 2000'

000 0 2000 4000 FEET

METE

NFIP

PANEL 2050L

NATIONAL FLOOD INSURANCE PROGRAM

FIRM

FLOOD INSURANCE RATE MAP

MARICOPA COUNTY, ARIZONA

AND INCORPORATED AREAS

PANEL 2050 OF 4425

(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
MARICOPA COUNTY	040037	2050	L

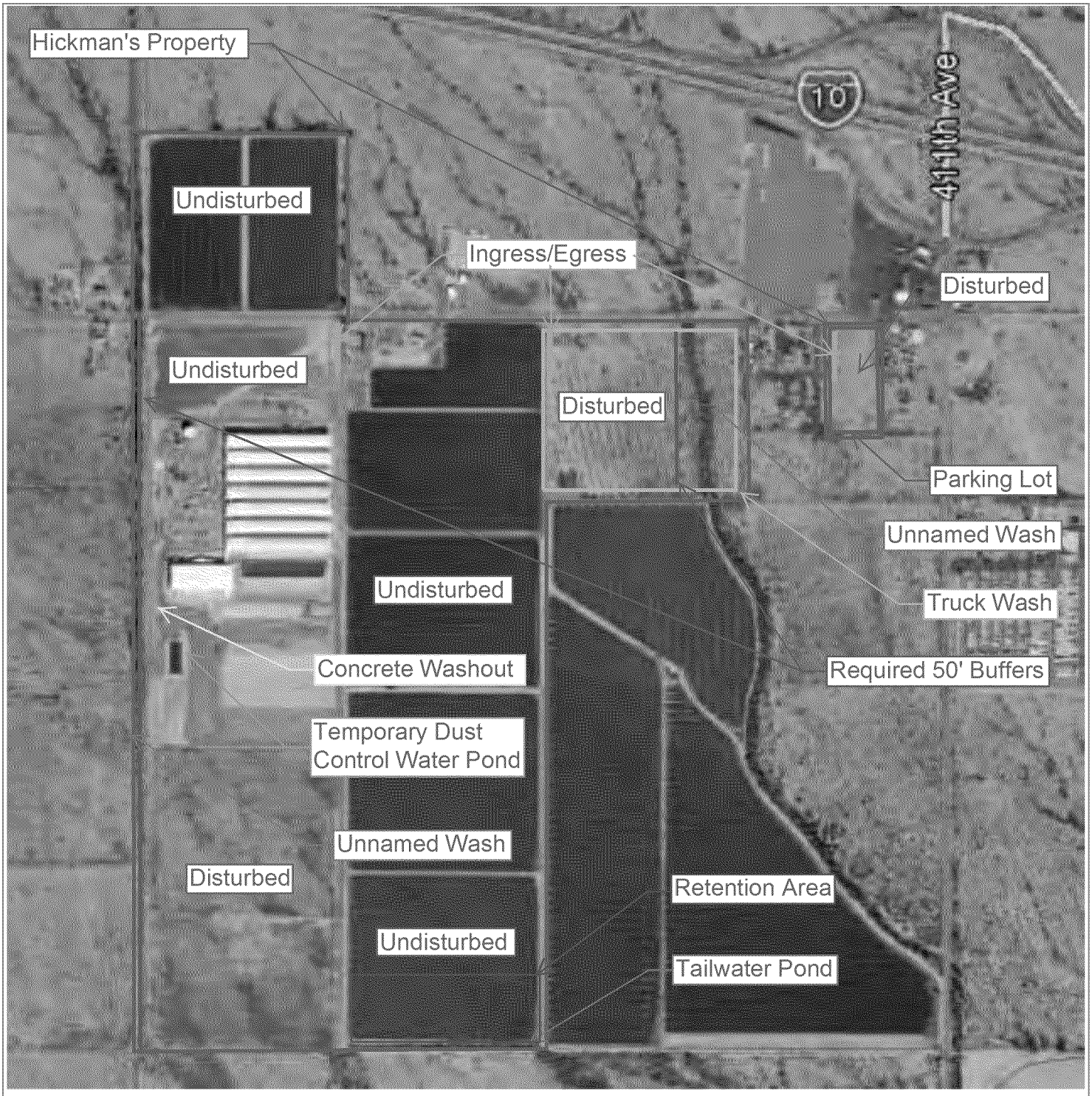
Notice to User: The **Map Number** shown below should be used when placing map orders; the **Community Number** shown above should be used on insurance applications for the subject community.

MAP NUMBER
04013C2050L

MAP REVISED
OCTOBER 16, 2013

Federal Emergency Management Agency

This is an official copy of a portion of the above referenced flood map. It was extracted using F-MIT On-Line. This map does not reflect changes or amendments which may have been made subsequent to the date on the title block. For the latest product information about National Flood Insurance Program flood maps check the FEMA Flood Map Store at www.msc.fema.gov



Site Locations are Approximate

└),*85(└ ┬SITE PLAN

+LFNPDQ∂V└)DPLO\└)DUPV└
:HWV└ RI└ ,QGLDQ└ 6FKRRO└ 5RDG└ $YHQXH¶
7RQRSDK☼└ 0DULFRSD└ &RXQW\☼└ $UL]RQD└ ← ↑ ┬ ↑ ┤ └

3URMHFW└ 1R◄└ +8¶ ┤ ¶ ‼ ┬└

HUSTON
Environmental Services

+XWWRQ└ (QYLURQPHQWDO└ 6HUYLFHV☼└
¶ ├ ┤ ¶ ┴└ 6RXWK$YHQXH└
3KRHQL[☼└ $UL]RQD└ ← ↑ ‼ ┤ ↑ └

POLLUTION PREVENTION NOTES

1. A COPY OF THE GRADING AND DRAINAGE PLAN FOR THIS PROJECT, TOGETHER WITH A COPY OF THE NOTICE OF INTENT (N.O.I.) AND THE STORM WATER POLLUTION PREVENTION PLAN (SWPPP), SHALL BE MAINTAINED ON THE SITE AND AVAILABLE FOR REVIEW. THOSE ELEMENTS OF THE GRADING AND DRAINAGE PLAN PERTINENT TO OR REFERENCED ON THE SWPPP SHALL BE CONSIDERED A PART OF THE SWPP.
2. THE OPERATOR SHALL OBTAIN A DUST CONTROL PERMIT FROM MARICOPA COUNTY AND PERFORM MEASURES AS REQUIRED BY THE PERMIT TO PREVENT EXCESS DUST.
3. THE OPERATOR SHALL PERFORM AT A MINIMUM A VISUAL INSPECTION OF THE CONSTRUCTION SITE ONCE EVERY MONTH AND WITHIN 24 HOURS OF RAINFALL GREATER THAN OR EQUAL TO HALF OF AN INCH OR MORE. THE OPERATOR'S REPORT IS TO BE SUBMITTED TO THE CONSTRUCTION ENGINEERING DEPARTMENT INSPECTOR FOR REVIEW. FACILITIES SHALL BE MAINTAINED AS NECESSARY TO ENSURE THEIR CONTINUED FUNCTIONING. IN ADDITION, ALL TEMPORARY STATION CONTROLS SHALL BE MAINTAINED IN A SATISFACTORY CONDITION UNTIL SUCH TIME THAT CLEARING AND/OR CONSTRUCTION IS COMPLETED, PERMANENT DRAINAGE FACILITIES ARE OPERATIONAL, AND THE POTENTIAL FOR EROSION HAS PASSED.
4. THE OPERATOR SHALL AMEND THIS PLAN AS NECESSARY DURING THE COURSE OF CONSTRUCTION TO RESOLVE ANY PROBLEM AREAS, WHICH BECOME EVIDENT DURING THE CONSTRUCTION AND / OR RAINFALLS.
5. THE PERMITEE SHALL FILE A NOTICE OF TERMINATION (N.O.T.) AFTER COMPLETION OF CONSTRUCTION AND PLACEMENT OF FINAL LANDSCAPE MATERIALS. THE N.O.T. IS TO BE SUBMITTED TO THE PLANNING AND DEVELOPMENT DEPARTMENT CIVIL/SITE INSPECTOR TO THE FINAL SWPP PERMIT.
6. THE PERMITEE SHALL SAVE ALL RECORDS, INCLUDING THE N.O.I., SWPPP, N.O.T., AND INSPECTION REPORTS, ON FILE FOR MINIMUM OF THREE YEARS FROM THE DATE OF FILING THE NOT.
7. THE IMPLEMENTATION OF THESE PLANS AND THE CONSTRUCTION, MAINTENANCE, REPLACEMENT, AND UPGRADING OF THESE FACILITIES IS THE RESPONSIBILITY OF THE PERMIT UNTIL ALL CONSTRUCTION IS APPROVED AND THE N.O.T. IS SUBMITTED TO THE PLANNING AND DEVELOPMENT DEPARTMENT CIVIL / SITE INSPECTOR.
8. THE FACILITIES SHOWN ON THIS PLAN MUST BE CONSTRUCTED IN CONJUNCTION WITH ALL CLEARING AND GRADING ACTIVITIES IN SUCH A MANNER AS TO ENSURE THAT SEDIMENT WATER DOES NOT ENTER THE DRAINAGE SYSTEM OR VIOLATE APPLICABLE WATER STANDARDS. THE FACILITIES MUST BE INSTALLED AND IN OPERATION PRIOR TO ANY GRADING OR LAND CLEARING. WHENEVER POSSIBLE, MAINTAIN NATURAL VEGETATION FOR SILT CONTROL.
9. PLAN APPROVAL IS VALID FOR 180 DAYS. PRIOR TO PLAN APPROVAL EXPIRATION, ALL ASSOCIATED PERMITS SHALL BE PURCHASED OR THE PLANS SHALL BE RESUBMITTED FOR EXTENSION OF PLAN APPROVAL. THE EXPIRATION, EXTENSION, AND REINSTATES OF CIVIL ENGINEERING PLANS AND PERMITS SHALL FOLLOW THE SAME GUIDELINES AS THOSE INDICATED IN THE PHOENIX BUILDING CONSTRUCTION CODE ADMINISTRATION PROVISIONS SECTION 105.3 FOR BUILDING PERMITS.

ENGINEER'S GENERAL NOTES

1. THE LOCATION OF ALL EXISTING UNDERGROUND UTILITIES IS BASED ON INFORMATION PROVIDED TO THE ENGINEER BY THE UTILITY COMPANIES AND THE CITY. IT IS THE CONTRACTOR'S RESPONSIBILITY TO LOCATE ALL EXISTING UNDERGROUND UTILITIES, TELEPHONE AND ELECTRIC CONDUITS AND STRUCTURES IN ADVANCE OF ANY CONSTRUCTION AND TO OBSERVE ALL POSSIBLE PRECAUTIONS TO AVOID ANY DAMAGE TO SUCH. THE ENGINEER AND/OR OWNER CANNOT GUARANTEE ANY LOCATIONS SHOWN ON THESE PLANS OR THOSE OMITTED FROM SAME.
2. "BLUE STAKE" LOCATES ONLY UTILITIES WITHIN THE PUBLIC RIGHT OF WAY. THE CONTRACTOR SHALL PROVIDE OTHER MEANS OF ON-SITE UTILITY LOCATION.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY ESTIMATES, BIDS, CONSTRUCTION, OR OTHER ACTIONS OR DECISIONS MADE WHICH HAVE BEEN BASED ON PRELIMINARY OR UNAPPROVED PLANS.
4. IT IS THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE, VERIFY, AND ACCEPT ALL CONSTRUCTION STAKES PRIOR TO STARTING ANY CONSTRUCTION.
5. ALL ON-SITE CONSTRUCTION SHALL CONFORM TO THE LATEST APPLICABLE MARICOPA ASSOCIATION OF GOVERNMENT (M.A.G.) UNIFORM STANDARD SPECIFICATIONS & DETAILS AND THE LATEST CITY SUPPLEMENTALS TO THE M.A.G. UNIFORM STANDARD SPECIFICATIONS & DETAILS, UNLESS OTHERWISE NOTED ON THE PLANS OR IN THE SPECIFICATIONS. THE CONTRACTOR SHALL COMPLY WITH A.D.A. REQUIREMENTS RELATING TO CONSTRUCTION AT ALL TIMES.
6. ANY ALTERATIONS OR ADDITIONS TO THESE PLANS MUST BE APPROVED BY THE UNDERSIGNED REGISTERED PROFESSIONAL ENGINEER.
7. CONTRACTOR SHALL OBTAIN A DUST CONTROL PERMIT AND PROVIDE DUST CONTROL FOR ALL UNPAVED AREAS DURING CONSTRUCTION. OWNER IS RESPONSIBLE FOR PROVIDING APPROPRIATE GROUND COVER AND/OR DUST CONTROL MAINTENANCE AS NECESSARY AFTER CONSTRUCTION IS COMPLETED.
8. CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL REQUIRED PERMITS FOR THIS PROJECT.

LEGEND

INDICATES STRAW FILTER	SPC-1 XX LF
INDICATES INLET FILTER LOCATION	SPC-7, SPC-9
INDICATES SILT FENCE	SPC-5 XX LF
INDICATES CONSTRUCTION ENTRANCE	EC-5 XX SF
INDICATES STORMWATER FLOW DIRECTION	
DUST CONTROL	DC
INDICATES WASHOUT AREA	WA, GH-4
INDICATES TEMP DRAINAGE DIKE	EC-9 XX LF

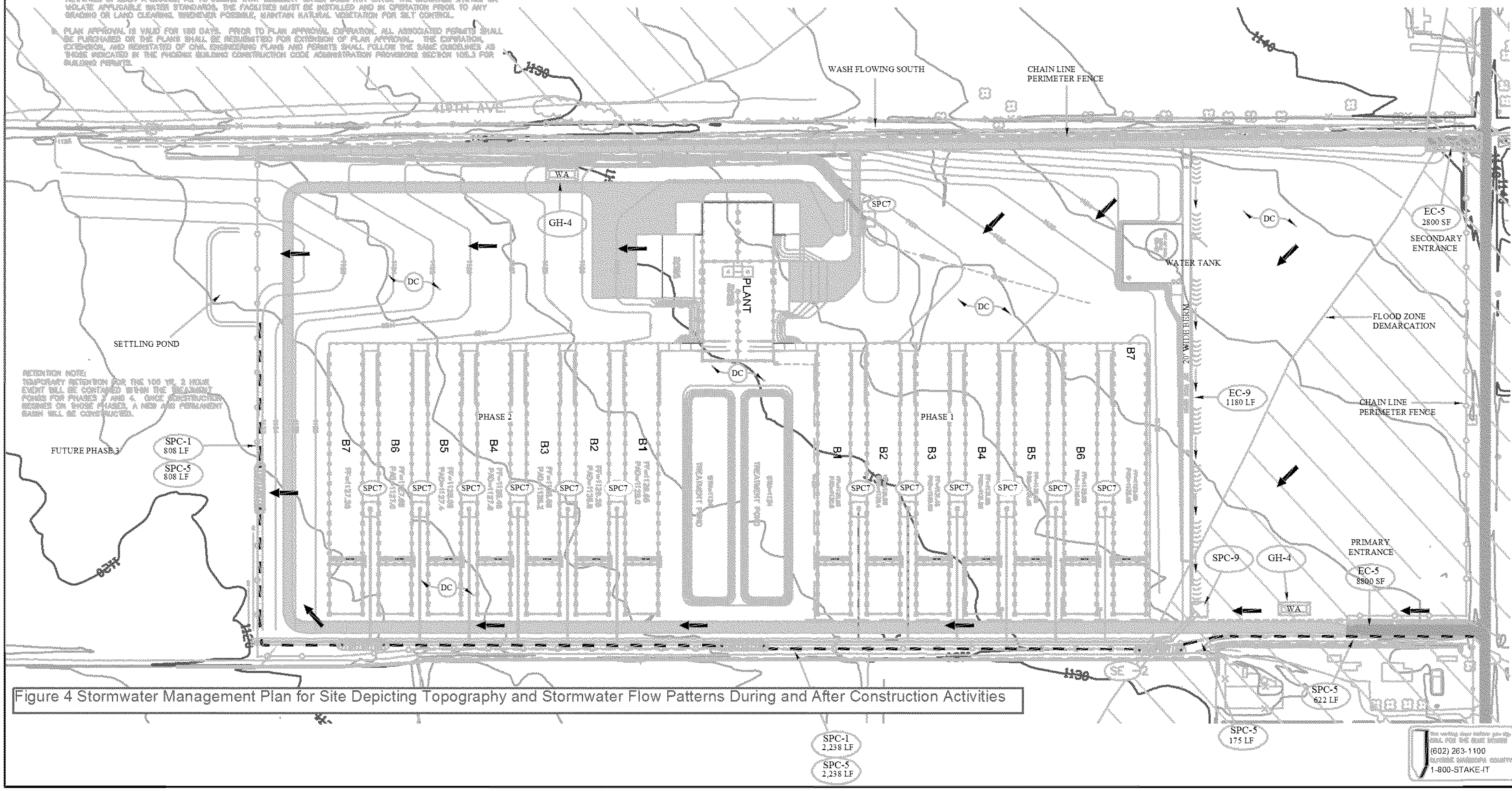


Figure 4 Stormwater Management Plan for Site Depicting Topography and Stormwater Flow Patterns During and After Construction Activities

(602) 263-1100
1-800-STAKE-IT

1" inch = 120 ft.

FOUR PEAKS DESIGN GROUP

STORM WATER MANAGEMENT PLAN
FOR
DESERT PRIDE

HICKMAN'S FAMILY FARMS
SE CORNER OF 411TH AVENUE AND INDIAN SCHOOL RD

REV. NO. | DESCRIPTION | DATE

DRAWING SPECIFICS	
PROJECT:	1307
DATE:	04/24/14
SCALE:	1"=120'
DRAWN BY:	PW
DESIGNED BY:	PW
CHECKED BY:	JDJ

SHEET 1 OF 2

Appendix A
AZPDES General Permit for Stormwater Discharges, Permit No. AZG2013-001

Permit No. AZG2013-001

ADEQ
Arizona Department of Environmental Quality

STATE OF ARIZONA
DEPARTMENT OF ENVIRONMENTAL QUALITY
WATER QUALITY DIVISION
PHOENIX, ARIZONA 85007

ARIZONA POLLUTANT DISCHARGE ELIMINATION SYSTEM GENERAL PERMIT FOR STORMWATER DISCHARGES ASSOCIATED WITH CONSTRUCTION ACTIVITY TO WATERS OF THE UNITED STATES

This permit provides authorization to discharge under the Arizona Pollutant Discharge Elimination System (AZPDES) program, in compliance with the provisions of the Arizona Revised Statutes, Title 49, Chapter 2, Article 3.1, the Arizona Administrative Code (A.C.C.), Title 18, Chapter 9, Articles 9 and Chapter 11, Article 1, and the Clean Water Act as amended (33 U.S.C. 1251 et seq.).

This general permit specifically authorizes stormwater discharges associated with construction activity, pursuant to 40 CFR § 122.26(b)(14)(x) and 40 CFR § 122.26(b)(15) in Arizona. All discharges authorized by this general permit shall be consistent with the terms and conditions of this general permit. Permit coverage is required from the "commencement of construction activities" until "final stabilization", as these terms are defined in this permit.

This general permit becomes effective on June 3, 2013.

This general permit and the authorization to discharge expire at midnight, June 2, 2018.

Signed this 29th day of May, 2013.

ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY

Michael A Fulton, Director
Water Quality Division

TABLE OF CONTENTS

1.0 COVERAGE UNDER THIS GENERAL PERMIT....1

1.1 PERMIT AREA....1
1.2 ELIGIBILITY....1
1.3 AUTHORIZED DISCHARGES....1
1.4 PROHIBITED DISCHARGES....2
1.5 LIMITATIONS OF COVERAGE....3
1.6 EROSIVITY WAIVERS FOR SMALL CONSTRUCTION ACTIVITIES....3

2.0 AUTHORIZATION UNDER THIS GENERAL PERMIT....5

2.1 RESPONSIBILITIES OF OPERATORS....5
2.2 PREREQUISITES FOR SUBMITTING A NOTICE OF INTENT (NOI)....5
2.3 SUBMITTING AN NOI....6
2.4 AUTHORIZATION OF EMERGENCY-RELATED CONSTRUCTION ACTIVITIES....8
2.5 TERMINATING COVERAGE....9
2.6 CHANGE OF OPERATOR REQUEST DUE TO FORECLOSURE OR BANKRUPTCY....10

3.0 EFFLUENT LIMITATIONS AND WATER QUALITY STANDARDS APPLICABLE TO ALL DISCHARGES FROM CONSTRUCTION SITES....11

3.1. NON-NUMERIC EFFLUENT LIMITATIONS AND ASSOCIATED CONTROL MEASURES....11
3.2 WATER QUALITY STANDARDS....22

4.0 INSPECTIONS....23

4.1 INSPECTOR QUALIFICATIONS....23
4.2 INSPECTION SCHEDULE....23
4.3 SCOPE OF INSPECTIONS....24
4.4 INSPECTION REPORT FORM....25
4.5 INSPECTION FOLLOW-UP....26

5.0 CORRECTIVE ACTIONS....27

5.1 CORRECTIVE ACTION TRIGGERS....27
5.2 CORRECTIVE ACTION DEADLINES....27
5.3 CORRECTIVE ACTION REPORT....27

6.0 STORMWATER POLLUTION PREVENTION PLAN (SWPPP) PREPARATION....28

6.1 GENERAL INFORMATION....28
6.2 TYPES OF OPERATORS....28
6.3 SWPPPC ONTENTS....29
6.4 DOCUMENTATION REQUIREMENTS INCLUDING PERMIT RELATED RECORDS....33
6.5 SWPPPU PDATES AND MODIFICATION REQUIREMENTS....34
6.6 DEFICIENCIES IN THE SWPPP....35
6.7 POSTING,SWPPPR EVIEW AND MAKING SWPPPS AVAILABLE....35
6.8 PROCEDURES FOR INSPECTION, MAINTENANCE, AND CORRECTIVE ACTION....36

7.0 STORMWATER MONITORING....37

7.1 MONITORING PROGRAM....37
7.2 GENERAL REQUIREMENTS....37
7.3 ANALYTICAL MONITORING REQUIREMENTS....37

8.0 FEES, REPORTING AND RECORDKEEPING....40

8.1 FEE REQUIREMENTS....40
8.2 RECORDS....40

APPENDIX A. DEFINITIONS AND ACRONYMS (FOR THE PURPOSES OF THIS PERMIT)....A-1

APPENDIX B. STANDARD PERMIT CONDITIONS....B-1

1.0 COVERAGE UNDER THIS GENERAL PERMIT

1.1 Permit Area.

This general permit covers the state of Arizona. This permit is not authorized for use by operators with stormwater discharges associated with construction activities on any Indian Country lands in Arizona. USEPA Region 9 is the permitting authority for Indian lands in Arizona.

1.2 Eligibility.

This general permit authorizes stormwater discharges associated with "construction activities", as defined in Appendix A that will disturb one or more acres of land, or will disturb less than one acre, but is part of a common plan of development or sale that will ultimately disturb one acre or more. This general permit is also applicable to stormwater discharges associated with support activities from temporary plants or operations set up to produce concrete, asphalt, or other materials exclusively for the permitted construction project. See 40 CFR 122.26(b)(14)(x) and (15).

Operators of small construction sites (less than five (5) acres – see 40 CFR 122.26(b)(15) and Appendix A) may, if eligible, choose a waiver from coverage under this permit, provided that site remains in compliance with the applicable requirements of Part 1.5 during construction.

Coverage under this permit may be required for any discharge that ADEQ determines is needed in accordance with A.A.C. R18-9-A902(B)(8)(d).

Any discharges that are not consistent with the eligibility conditions of this permit are not authorized by this permit. A person shall either apply for a separate Arizona Pollutant Discharge Elimination System (AZPDES) permit to cover such ineligible discharge(s), cease the discharge(s), or take necessary steps to make the discharge(s) eligible for coverage under this permit.

Individual Permit Requirements. An operator who desires to obtain an individual stormwater permit (in accordance with the requirements of A.A.C. R18-9-C902(B), or is required by ADEQ to obtain an individual stormwater permit (in accordance with A.A.C. R18-9-C902(A)), shall comply with the requirements of Appendix B, Subsections 17 and 18(a)(i).

1.3 Authorized Discharges.

1. Allowable Stormwater Discharges. An operator may discharge pollutants in:
    a. Stormwater runoff associated with construction activities provided the discharge is conducted in compliance with this permit;
    b. Discharges requiring a stormwater permit under 40 CFR 122.26(a)(1)(v); 40 CFR 122.26(b)(15)(ii); or under 40 CFR 122.26(a)(9);
    c. Stormwater discharges from construction support activities (e.g., concrete or asphalt batch plants, equipment staging yards, material storage areas, excavated material disposal areas, borrow areas) provided:
        i. The support activity is directly related to a construction site that is required to have AZPDES permit coverage for discharges of stormwater associated with construction activity;
        ii. The support activity is not a commercial operation (serving multiple unrelated construction projects by different operators) and does not operate beyond the completion of the construction activity for which the support activity is directly associated.
        iii. The support activity is not otherwise covered by a separate AZPDES permit; and
        iv. Appropriate control measures for the discharges from the support activity areas are identified in the Stormwater Pollution Prevention Plan (SWPPP) and implemented.

ED_001509B_00000855-00034

2. Allowable Non-Stormwater Discharges.

a. The following are the only non-stormwater discharges allowed under this permit. These discharges are allowed provided they are reduced or eliminated to the extent practicable. When allowable non-stormwater discharges can not be practicably eliminated, the operator shall install appropriate control measures to reduce or eliminate pollutants in the discharge to assure compliance with Part 3 of this permit:

i. Discharges from emergency fire-fighting activities;

ii. Water used to control dust, provided reclaimed water or other process wastewaters are not used;

iii. Routine external building wash down where detergents are not used;

iv. Water used to rinse vehicles and equipment, provided that reclaimed water or other wastewater is not used and no soaps, solvents, detergents, oils, grease or fuels are present in the rinsate;

v. Pavement wash waters where spills or leaks of toxic or hazardous materials have not occurred (unless all spilled material has been removed) and where detergents are not used;

vi. Uncontaminated air conditioning or compressor condensate;

vii. Uncontaminated groundwater or spring water;

viii. Foundation or footing drains where flows are not contaminated with process materials such as solvents;

ix. Water from fire fighting system testing and maintenance, including hydrant flushings;

x. Discharges related to installation and maintenance of potable water supply systems, including disinfection and flushing activities, discharges resulting from pressure releases or overflows, and discharges from wells approved by ADEQ for drinking water use;

xi. Hydrostatic testing of new pipes, tanks or vessels using potable water, surface water, or uncontaminated groundwater;

xii. Water used for compacting soil, provided reclaimed water or other wastewaters are not used;

xiii. Water used for drilling and coring such as for evaluation of foundation materials, where flows are not contaminated with additives; and

xiv. Uncontaminated waters obtained from dewatering operations/ foundations in preparation for and during excavation and construction provided the discharge are managed as specified in Part 3.1.4 of this permit.

Note: This permit does not prohibit the use of reclaimed or other process wastewaters on-site for dust control, soil compaction or for landscape irrigation. However, such activities shall be managed in a way that they are not discharged off site or applied during rain events consistent with A.A.C. R18-9-704(G)(3)(c) of the reclaimed water rules. Therefore, they are not permissible 'discharges'.

b. If the site is within 1/4 mile of an outstanding Arizona water (OAW), the operator shall not discharge any non-stormwater under this permit, except for emergency fire-fighting activities, unless specifically authorized by the Department.

1.4 Prohibited Discharges.

The operator shall not allow any non-stormwater discharges from the site except as provided in Part 1.3(2). All other non-stormwater discharges (not listed above) shall be eliminated or authorized under a separate AZPDES permit, as those discharges are not authorized under this permit. Stormwater discharges that are mixed with non-stormwater, other than the allowable non-stormwater discharges

ED_001509B_00000855-00035

listed in Part 1.3(2) are not eligible for coverage under this permit. The following discharges are prohibited:

1. Wastewater from washout of concrete, unless managed by an appropriate control as described in Part 3.1.3.1(1);
2. Wastewater from washout and cleanout of stucco, paint, form release oils, curing compounds and other construction materials, unless managed by an appropriate control as described in Part 3.1.3.1(3);
3. Fuels, oils, or other pollutants used in vehicle and equipment operation and maintenance;
4. Soaps or solvents used in vehicle and equipment washing; and
5. Toxic or hazardous substances from a spill or other release.

1.5 Limitations of Coverage.

1. Post-Construction Discharges. This general permit does not authorize stormwater discharges that originate from the site after construction activities have been completed and the site, including any temporary support activity site, has achieved final stabilization and a Notice of Termination (NOT) has been submitted to ADEQ. Post-construction stormwater discharges from industrial sites may need to be covered by a separate AZPDES permit.
2. Discharges Covered by Another AZPDES Permit . This general permit does not authorize stormwater discharges associated with construction activity that are covered under an individual permit or another applicable general permit.
3. Impaired Waters . The following conditions and requirements apply if any portion of the construction site is located within 1/4 mile of a receiving water listed as impaired under section 303(d) of the Clean Water Act:
   a. The operator must submit a copy of the SWPPP and associated review fee with the NOI to ADEQ;
   b. The SWPPP must include a sampling and analysis plan (see Part 7.3(5)) for analytical monitoring if there is potential for discharges from the site to include the pollutant(s) for which the receiving water is impaired. However, if the operator can demonstrate there is no reasonable potential that construction activities could be an additional source of the identified pollutant(s), analytical monitoring is not required. As part of this demonstration, the operator must consider all on-site activities, including the potential for the pollutants (metals, nutrients, etc.) to be present in site soils. The demonstration must be included in the SWPPP submitted for ADEQ's review;
   c. If a discharge contains pollutants for which an approved Total Maximum Daily Load (TMDL) has been established, the SWPPP shall specifically identify control measures necessary to ensure the discharges will be consistent with the provisions of the TMDL:
4. Outstanding Arizona waters (OAW). The following conditions and requirements apply if any portion of the construction site is located within 1/4 mile of a receiving water listed as an OAW in A.A.C. R18-11-112(G):
   a. The operator must submit a copy of the SWPPP and associated review fee with the NOI to ADEQ;
   b. The SWPPP must include a sampling and analysis plan for analytical monitoring (see Part 7.3(5)) of pollutants expected to discharge from the site, including sediment;

1.6 Erosivity Waivers for Small Construction Activities.

A person performing construction activity which disturbs between one and five acres may be exempt from obtaining coverage under this permit for the duration of the project based on a low potential for soil erosion for the duration of the project (i.e., the Erosivity Waiver).

ED_001509B_00000855-00036

Note: Construction activities that disturb five acres or greater, or less than five acres but are part of a common plan of development or sale, are not eligible for any of this waiver.

1. Calculating the Erosivity Waiver. Low potential for erosion is defined as a rainfall erosivity (R) factor of less than five as calculated using ADEQ's Smart NOI Web site.

   The small construction project's rainfall erosivity factor calculation shall be less than five during the **entire** period of construction activity. The period of construction activity begins at initial earth disturbance (commencement of construction activities) and ends with final site stabilization.

   The applicant shall certify to ADEQ that construction activity will occur only when the rainfall erosivity factor is less than five.

   If any portion of the construction site is located within 1/4 mile of an impaired water or OAW, the site is not eligible for the erosivity waiver. The erosivity waiver is predicated on the above criteria being met and proper application procedures being followed.

   Projects Which Extend Past Certified Period. If the small construction project continues beyond the calculated "end date" as shown on the Permit Waiver Certification, the operator is in violation of this permit. If this occurs, the operator shall prepare a SWPPP and submit an NOI as required under Parts 2.3 and 6.0 before the end of the certified waiver period.

2. Permit Waiver Certification. The operator shall obtain an AZPDES Permit Waiver Certification before commencing construction activities. All waiver certifications require an AZPDES fee in accordance with A.A.C. R18-14-109, Table 6. ADEQ will not issue a waiver until the proper fee is paid.

   An operator of a construction activity that is eligible for one of the above waivers shall provide the following information:

   a. The name, address, and telephone number of the construction site operator(s);
   b. The name (or other identifier), address, county, and parcel or lot number as recorded by the county, of the construction project or site;
   c. An accurate (within 15 seconds) latitude and longitude (in degrees/ minutes/ seconds format) of the construction project or site at the point of discharge nearest to the receiving water;
   d. The project start and completion (final stabilization) dates;
   e. The total project acreage and the acreage to be disturbed by the operator submitting the NOI, to the nearest 0.5 acre;
   f. If there is potential for discharge to a municipal separate storm sewer system (including municipal streets and other improvements that can convey stormwater), the name of the municipal operator of the storm sewer;
   g. The name of the waterbody(s) that would be receiving stormwater discharges from the construction project;
   h. For the erosivity waiver, verification that the rainfall erosivity factor calculation that applies to the active construction phase at the project site is less than five calculated using ADEQ's Smart NOI Web site; and
   i. The waiver certification form shall be signed using the electronic signature feature on the Smart NOI Web site and in accordance with the signatory requirements of Appendix B, Subsection 9.

ED_001509B_00000855-00037

2.0 AUTHORIZATION UNDER THIS GENERAL PERMIT

The operator shall review all the conditions and requirements of this permit before submitting any of the forms described in Part 2.

2.1 Responsibilities of Operators.

2.1.1 All operators. All operators are required to obtain coverage for stormwater discharges associated with construction activity under this permit or an alternative AZPDES permit. For the purposes of this permit, an "operator" is any person associated with a construction project that meets either of the following two criteria:

1. The person has operational control over construction plans and specifications, including the ability to make modifications to those plans and specifications; or
2. The person has day-to-day operational control of those activities at a project that are necessary to ensure compliance with the permit conditions (e.g., they are authorized to direct workers at a site to carry out activities required by the permit).

Subcontractors generally are not considered operators for the purposes of this permit.

2.1.2 Multiple Operators. Where there are multiple operators associated with the same project, all operators are required to obtain permit coverage. The following applies in these situations:

1. If one operator has control over plans and specifications and a different operator has control over activities at the project site, they may divide responsibility for compliance with the terms of this permit as long as they jointly develop a common SWPPP (see Part 6.1(1)), which documents which operator has responsibility for each requirement of the permit.
2. If an operator only has operational control over a portion of a larger project (e.g., one of four homebuilders in a subdivision), the operator is responsible for compliance with applicable effluent limits (see Part 3), terms, and conditions of this permit as it relates to their activities on their portion of the construction site and implementation of control measures described in the SWPPP in the areas under their control.
3. Operators must ensure either directly or through coordination with other operators, that their activities do not render another person's pollutant discharge controls ineffective.
4. If the operator of a construction support activity (see Part 1.3(1)(c)) is different than the operator of the main construction site, that operator is also required to obtain permit coverage.

2.2 Prerequisites for Submitting a Notice of Intent (NOI).

A person may be authorized to discharge under this permit only if the stormwater discharge is associated with construction activities from the project site. Prior to submission of an NOI, an applicant seeking authorization to discharge under this general permit shall:

1. Meet the eligibility requirements under Part 1.2; and
2. Develop a SWPPP that meets the requirements of Part 6 of this permit and that covers either the entire site or all portions of the site for which the person is an operator.
   a. The SWPPP shall be prepared prior to submission of the NOI and shall be implemented prior to the start of construction.
   b. The SWPPP is not required to be submitted to ADEQ (unless the project is within 1/4 mile of an impaired water or OAW as described in Parts 1.5(3) and 1.5(4)) but shall be retained and made available in accordance with Part 6.7.

Note: Emergency-related construction activities (see Part 2.4) are automatically authorized to discharge under this permit (see Appendix A).

ED_001509B_00000855-00038

2.3 Submitting an NOI.

1. Application Required.

   a. The operator shall submit separate, accurate and complete NOIs to ADEQ for each project that disturbs one or more acres of land. The operator of a common plan of development or sale that will ultimately disturb one or more acres must submit completed NOIs to ADEQ at the address specified in Part 8.2.

   b. Submission of the NOI demonstrates the operator's intent to be covered by this permit; it is not a determination by ADEQ that the operator has met the eligibility requirements for the permit. Discharges are not authorized if ADEQ notifies the operator that further evaluation is necessary, or the discharges are not eligible for coverage under this permit.

   c. Whenever the operator changes or another is added during the construction project, the new operator shall also submit an NOI to be authorized under this permit before taking over operational control or commencing construction activities at the site.

2. NOI Requirements. Construction site operators seeking authorization for stormwater discharges under this general permit shall submit a complete and accurate AZPDES NOI form to ADEQ. Submit to the Department a complete and accurate NOI form electronically via the Smart NOI Web site at: https://az.gov/app/smartnoi/ or submit a paper copy with original signature in accordance with A.A.C. R18-9-C901(D) to the address listed in Part 8.2.

   The NOI form is available at http://www.azdeq.gov/environ/water/permits/cgp.html

   The NOI form requires, at a minimum, the following information:

   a. The name, address, and telephone number of the construction site operator;

   b. The type of project (e.g., school, commercial, subdivision, roadway, etc.) shall be specifically identified on the NOI;

   c. Whether the project is part of a greater plan of development;

   d. Estimates of the total project acreage and the acreage to be disturbed by the operator submitting the NOI;

   e. The printed name (or other identifier), address, county, lot number or parcel or lot number as recorded by the county, of the construction project or site;

   f. An accurate (within 15 seconds) latitude and longitude (in degrees/ minutes/ seconds format) of the construction site at the point nearest the closest receiving water. If the site is located within 1/4 mile of an impaired water or OAW, the operator shall provide the latitude and longitude of the property that is closest to the impaired water or OAW. If the site is part of a larger common plan of development, the operator shall provide the latitude and longitude of the discharge point for the portion of the site covered by that NOI;

   g. Whether any part of the site is located on Indian Country;

   h. Confirmation that a SWPPP meeting the requirements in Part 6 of this permit has been developed and will be implemented prior to commencement of construction activities. If the NOI is a late application, the operator shall certify that a SWPPP has been developed and implemented prior to submittal of the NOI;

   i. The onsite location where the SWPPP may be viewed and the name and telephone number of a contact person;

   j. Provide the name of the closest receiving water, which may include an unnamed wash;

   k. The name(s) of the MS4 into which there is a potential to discharge, if applicable;

ED_001509B_00000855-00039

l. The project's estimated start and completion dates;

m. Whether the project has or will need any other water quality permits or approvals, including, but not limited to, subdivision approvals, a Clean Water Act (CWA) section 404 permit, and the permit number(s), if applicable;

n. Whether any portion is within 1/4 mile of an impaired or OAW; and

o. All Notice of Intent forms must be signed in accordance with the signatory requirements of Appendix B, Subsection 9.

p. An NOI is not complete unless the appropriate fee is paid.

3. Effective Date of Permit Coverage.

a. Incomplete NOI Submitted. If ADEQ notifies the operator that an NOI is incomplete or incorrect, the operator shall submit an amended NOI if the operator still intends to obtain coverage under this permit.

b. Discharges to Impaired or outstanding Arizona waters. Applicants seeking coverage for a construction site that is located within 1/4 mile of an impaired or outstanding Arizona water are not authorized under this permit for a minimum of 30 calendar days following receipt of the signed NOI, SWPPP and initial application fee. ADEQ may notify operators within this time-frame that there is cause for a SWPPP amendment or denial of coverage as specified in Parts 1.5(3) and 1.5(4) of this permit. If notification is not received in the 30 calendar day time period, the operator may assume coverage under this permit; the operator must verify with the Department that the Surface Water Section received the NOI and SWPPP prior to commencement of construction activities.

c. NOIs Requiring Additional Evaluation. ADEQ may notify an operator that authorization to discharge shall not occur for up to 30 calendar days in the event that review of the NOI identifies information requiring further evaluation, including that the SWPPP be submitted to ADEQ. This notification may be made either in writing, email, by fax or phone contact. Operators receiving notice of a delay in coverage may discharge 30 calendar days after the date the signed NOI is received unless further notice is received from the Department during this time period. Such further notice may confirm authorization to discharge or deny permit coverage and require an application for an individual permit.

If the operator receives notification from ADEQ that the SWPPP is incomplete or otherwise deficient, the operator shall submit a revised SWPPP to ADEQ that addresses the Department's comments if the operator still intends to obtain permit coverage. If review of the revised SWPPP reveals that a discharge of pollutants may cause or contribute to an exceedance of an applicable water quality standard, monitoring may be required, in accordance with Part 7. The revised SWPPP must include the applicable re-review fee. Permit coverage is suspended until the Department issues the permit authorization certificate.

d. Routine Coverage. Except as provided in Parts 2.3(3)(a) through (c), an eligible operator is authorized to discharge stormwater from a construction project 7 calendar days after a complete and accurate NOI is received by ADEQ's Surface Water Section or when an authorization certificate is issued, whichever is earlier. However, in order to rely on the 7 calendar day "default" provision, the operator must submit the NOI in a manner that documents the date of ADEQ's receipt (i.e., certified mail, hand delivery, etc.).

Alternatively, applicants that submit a SMART NOI using the electronic signature feature will typically obtain immediate authorization unless any portion of the site is located within 1/4 mile of an impaired water or OAW.

e. Ongoing Construction Projects. For operators of construction projects ongoing as of the effective date of this permit that received authorization to discharge for these projects

ED_001509B_00000855-00040

under the expired Construction General Permit (AZG2008-001), coverage will automatically transfer to CGP 2013 and remain in effect until the operator submits an NOT (in accordance with Part 2.5). An operator that has had authorization automatically transferred and re-issued shall comply with the terms of this permit, as described in i., ii. and iii. below. Parts 2.3(3)(b), (c) and (d) do not apply to operators of on-going construction projects that were authorized to discharge under AZG2008-001.

i. Within the first 120 days from the effective date of this permit, the operator shall update the SWPPP as necessary to comply with the requirements of Part 6 of this permit.

ii. The operator may continue to comply with the terms and conditions of the expired AZG2008-001 until the SWPPP is updated, within the first 120 days from the effective date of this permit.

iii. An operator may submit an NOT within the first 120 days from the effective date of this permit, if the operator is eligible to submit an NOT (e.g., construction is finished and final stabilization has been achieved).

f. Change in Operators. For construction projects where the operator changes, including instances where an operator is added after an NOI has been submitted, the new operator shall submit an NOI and receive an authorization certificate before assuming operational control or commencing work on-site (see Appendix B, Subsection 19).

g. Certificate of Authorization. The operator will receive an authorization certificate (by mail, or electronically via the Smart NOI system for electronic submittals with e-signatures) assigning an authorization number and approval date

Note: The Certificate of Authorization is not the permit. The authorization certificate acknowledges that the Department received the NOI and that the operator is authorized to discharge subject to the terms and conditions of this permit. Correspondence with ADEQ concerning any construction activity covered by this permit shall reference the authorization number.

4. Late Applications. The operator is only permitted for discharges that occur after a complete and accurate NOI is received by ADEQ and authorization is granted. ADEQ reserves the right to take enforcement action for any un-permitted discharges or permit noncompliance that occur between the time construction commenced and either permit authorization is granted, denied, or a complete and accurate Permit Waiver Certification form is submitted and the wavier is approved.

5. Discharges to a regulated MS4. Construction sites located within a regulated MS4 shall submit a copy of the Department's Authorization to Discharge to the MS4 operator. A list of regulated MS4s is found at http://www.azdeq.gov/environ/water/permits/stormwater.html#ms4s

6. Revised NOI. If personnel contact information or the operator address on the NOI filed for permit coverage changes during permit coverage, the operator shall submit a revised NOI to ADEQ indicating the updated information. If information other than personnel contact or the operator's address changes, a new NOI shall be submitted to the address specified in Part 8.2. No fee is assessed for submitting a revised NOI.

2.4 Authorization of Emergency-Related Construction Activities

Emergency-related construction activities are automatically authorized provided that:

1. The project is being performed in order to avoid imminent endangerment to human health or the environment or in response to a emergency and the activity requires immediate authorization;

ED_001509B_00000855-00041

2. If the activity continues past 30 calendar days of commencing construction activities (see Part 2.2), the operator shall prepare a SWPPP and submit a complete and accurate NOI;
3. The operator provides documentation in the SWPPP to substantiate the occurrence of the public emergency; and
4. The operator complies with all other applicable requirements in the permit regarding discharges associated with the construction activities.

Note: Operators of emergency-related construction activities are considered provisionally covered under the terms and conditions of this permit immediately, unless ADEQ notifies the operator that the authorization has been delayed or denied.

2.5 Terminating Coverage.

1. Notice Required. To terminate permit coverage, the operator shall submit a complete and accurate Notice of Termination (NOT) form to the address listed in Part 8.2. Other NOT options (i.e., electronic submission) may also be used if ADEQ makes the information available on the Internet of or by public notice. The operator is responsible for meeting the terms and conditions of this permit until the construction site's authorization is terminated.

   All NOT forms must be signed in accordance with the signatory requirements of Appendix B, Subsection 9.

   The operator may submit a complete and accurate NOT form to ADEQ after any of the following conditions have been met:

   a. The operator has established final stabilization on all portions of the site for which the operator is responsible, in accordance with Part 3.1.2.2.
   b. Another operator who has a valid authorization number under this general permit or an individual AZPDES permit has assumed control over all areas of the site that have not been finally stabilized (see Appendix B, Subsection 19);
   c. For residential construction only, temporary stabilization has been completed and the residence has been transferred to the homeowner (or a homeowner's association) in accordance with Part 3.1.2.2(2)(b);
   d. The planned construction activity identified on the original NOI was never initiated (i.e., no grading or earthwork was ever started) and plans for construction have been permanently abandoned or indefinitely postponed;
   e. The operator has obtained coverage for the site under another AZPDES permit;
   f. The operator qualifies for one of the stabilization alternatives in Part 3.1.2.3. If qualifying for either alternative, the operator shall submit the required documentation with the NOT demonstrating compliance with Part 3.1.2.3.

   Note: NOTs can only be submitted to ADEQ for those sites which obtained timely permit authorization by submitting a complete and accurate NOI. Sites which did not receive permit authorization have no permit coverage to terminate.

2. NOT Requirements. The operator shall submit to ADEQ a complete and accurate NOT form electronically via the Smart NOI Web site at: https://az.gov/app/smartnoi/ or submit a paper copy (photocopy/ fax/ e-mail/ electronic) to the address listed in Part 8.2. All NOT forms must be signed in accordance with the signatory requirements of Appendix B, Subsection 9.

   Note: The operator shall receive an acknowledgement letter upon ADEQ's receipt of the operator's completed NOT form.

3. Notification to Municipal Separate Storm Sewer Systems. If the construction site was located within a regulated MS4, the operator shall send a copy of the NOT acknowledgement letter to the MS4 operator. A list of regulated MS4s is found at http://www.azdeq.gov/environ/water/permits/stormwater.html#ms4s

ED_001509B_00000855-00042

4. Effective Date of Permit Termination. Authorization to discharge terminates under this permit at midnight on the date the complete NOT is received by the Department.

2.6 Change of Operator Request due to Foreclosure or Bankruptcy.

If a lending institution or another person takes operational control of the permitted construction site due to foreclosure or bankruptcy then that person is responsible for discharges from the construction site and shall submit an application for permit coverage within 14 days prior to taking control of the site if the construction site has not achieved final stabilization as defined in Part 3.1.2.2.

In the event the person taking control of the construction site fails to submit an application for the construction site, the permittee may submit a petition to the department to terminate permit coverage by submitting a Change of Operator Request (COR) form (available at http://www.azdeq.gov/environ/water/permits/cgp.html). In making this request, the permittee must no longer have access to the property and shall submit the following information:

1. The date of the loss of control of the construction site;
2. identifies the person that has control of the construction site;
3. Identifies the reasons for being unable to submit a NOT that complies with the requirements of Part 2.5;
4. Submits a copy of the SWPPP and associated review fee with the COR;
5. The permittee shall provide an update in the SWPPP documenting conditions at the time of loss of control. The permittee shall indicate areas of exposed soils and material stockpiles; the location, type and quantity of chemicals storage; the existing BMPs left in place and their condition; and areas that have been stabilized. The permittee shall indicate if there is public access to the site (e.g., perimeter fence, gate, etc). The Permittee shall also identify any conditions which may be dangerous or hazardous, or may pose a significant environmental threat.
6. Documentation that the permittee informed the person takingcontrol of the construction site of the requirements of this permit; and
7. If the construction site has the potential to discharge to aregulated MS4, documentation that the permittee notified the MS4 of the change in control and the identity and contact information for the person that has control.

ADEQ will review the COR and related information to determine appropriate actions, including (but not limited to) terminating permit coverage for the original permittee. As part of this assessment, the department may conduct a site inspection. Submitting a CORdoes not suspend ongoing enforcement actions and does not preclude the department from taking enforcement actions for violations of this permit.

ED_001509B_00000855-00043

3.0 EFFLUENT LIMITATIONS AND WATER QUALITY STANDARDS APPLICABLE TO ALL DISCHARGES FROM CONSTRUCTION SITES

The control requirements in this Part implement the technology-based effluent limitations to meet water quality standards that, where applicable, apply to all stormwater and allowable non- stormwater discharges from construction sites eligible for coverage under this permit. These requirements apply the national effluent limitations guidelines and new source performance standards found at 40 CFR Part 450. The operator shall comply with the control measures requirements included in Part 3 through site planning and designing, installing, and maintaining these controls.

Exception for ongoing construction projects

Note: If a project is an "ongoing construction project" (see Part 2.3(3)(e)), and it is infeasible for the operator to comply with a specific requirement in Part 3.1 because (1) the requirement was not part of the permit the project was previously covered under (i.e., AZG2008-001) and (2) the operator is prevented from compliance due to the nature or location of earth disturbances at the site or the operator is unable to comply with the requirement due to the manner in which control measures have already been installed or were already designed prior to October 1, 2013, the operator does not have to comply with that requirement provided that this fact is documented in the SWPPP. This exception only applies to those portions of a project that have already commenced earth-disturbing activities or where control measures implemented in compliance with the previous permit have already been installed.

3.1. Non-numeric Effluent Limitations and Associated Control Measures

Whenever applicable, the operator shall design, install and maintain the following control measures at construction sites:

- Erosion and sediment control (Part 3.1.1)
- Site stabilization (Part 3.1.2)
- Pollution prevention (Part 3.1.3)
- Controls for Allowable Non-Stormwater Discharges and Dewatering Activities (Part 3.1.4)

General Maintenance Requirements.

1. Ensure that all control measures required in this Part remain in effective operating condition during permit coverage and are protected from activities that would reduce their effectiveness.
2. Inspect all control measures in accordance with the inspection requirements in Part 4. The operator shall document the findings in accordance with Part 4.5. When controls need to be replaced, repaired, or maintained, make the necessary repairs or modifications. Routine maintenance does not constitute a corrective action (see Part 5.1). The operator shall comply with the following schedule:
   a. Initiate work to fix the problem immediately after discovery, and complete such work by the close of the next work day, if feasible and the problem does not require significant maintenance, repair or replacement, or if the problem can be corrected through routine maintenance. SWPPP recordkeeping is not required for actions taken under this paragraph.
   b. When installation of a new control that is not in response to a corrective action in Part 5.1, or a significant repair of existing controls is needed, install the new or modified control and make it operational, or complete the repair, by no later than 7 calendar days from the time of discovery, or before the next storm event (whichever is sooner) where feasible. If it is infeasible to complete the installation or repair within 7 calendar days or before the next storm event, SWPPP records must document why it is infeasible. The SWPPP must also document the schedule for installing the control(s) and making it operational as soon as practicable after the 7-day timeframe. Where these actions result in changes to any of the controls or

procedures documented in the SWPPP, modify the SWPPP accordingly within 7 calendar days of completing this work.

3.1.1 Erosion and Sediment Control Requirements.

Design, install and maintain effective erosion controls and sediment controls to minimize the discharge of pollutants. The operator shall minimize the amount of soil exposed during construction activities. The operator is also subject to the deadlines for temporarily and/or permanently stabilizing exposed portions of the site in accordance with Part 3.1.2.

The following general requirements are applicable to all construction sites that implement the erosion and sediment controls in Part 3.1.1.

A. Design Requirements.

1. The operator shall account for the following factors in designing control measures:

   a. The expected amount, frequency, intensity, and duration of precipitation;

   b. The nature of stormwater runoff and run-on at the site, including factors such as expected flow from impervious surfaces, slopes, and site drainage features. If any stormwater flow will be channelized at the site, control measures must be designed to control both peak flowrates and total stormwater volume to minimize erosion at outlets and to minimize downstream channel and streambank erosion; and

   c. The range of soil particle sizes expected to be present on the site.

2. The operator shall direct discharges to vegetated areas of the site to increase sediment removal and maximize stormwater infiltration, including any natural buffers established under Part 3.1.1.6(1), unless infeasible. Use velocity dissipation devices if necessary to prevent erosion when directing stormwater to vegetated areas.

B. Installation Requirements.

1. Complete the installation of control measures by the time each phase of earth-disturbance has begun. In the event it is infeasible to install one or more control measures prior to construction activity, the operator shall ensure that those controls are installed as soon as possible. SWPPP records must document why it is infeasible.

   Following the installation of these initial control measures, all other controls planned for this portion of the site and described in the SWPPP must be installed and made operational as soon as conditions on the site allow. The requirement to install control measures prior to earth-disturbance for each phase of the project does not apply to the earth disturbance associated with the actual installation of these controls.

2. Use good engineering practices and follow manufacturer's specifications. The operator shall install all control measures in accordance with good engineering practices, including applicable design specifications. Design specifications may be found in manufacturer specifications and/or in applicable erosion and sediment control manuals or local ordinances. Any departures from such specifications must reflect good engineering practice and must be explained in the SWPPP.

3.1.1.1 Control stormwater volume and velocity within the site to minimize soil erosion;

1. Run-on Management. If off site areas direct flow onto the construction site, divert run-on flows, or otherwise provide other appropriate control measures to account for off site contributions of stormwater and non-stormwater flow.

   If stormwater conveyance channels are used at the site, the operator shall design and construct them to avoid unstabilized areas and to reduce erosion, unless infeasible. Minimize erosion of channels and their embankments, outlets, adjacent streambanks, slopes, and downstream waters during discharge conditions through the use of erosion controls and

velocity dissipation devices within and along the length of any constructed stormwater conveyance channel, and at any outlet to provide a non-erosive flow velocity.

2. Sediment Basins and Traps. If necessary, the operator shall install and maintain sediment basin(s) and / or traps to manage run-on, runoff, and sediment discharge from the construction site.

   a. Design requirements. The SWPPP shall provide sizing and calculation requirements for sediment basin(s) and shall indicate whether the basin(s) will be temporary or permanent.

      i. When discharging from the sediment basin, utilize outlet structures that minimize pollutants;

      ii. Prevent erosion of (1) the sediment basin using stabilization controls (e.g., erosion control blankets), and (2) the inlet and outlet using erosion controls and velocity dissipation devices; and

      iii. Sediment basins must be situated outside of surface waters and any natural buffers established under Part 3.1.1.5, unless approved under a CWA section 404 permit.

   b. Maintenance requirements. The operator shall maintain sediment basins, ponds, and traps, and remove accumulated sediment when design capacity has been reduced by 50%.

   c. An operator that uses polymers, flocculants, or other cationic treatment chemicals in a sediment basin shall select and use these chemicals in accordance with manufacturers' instructions so as to provide for adequate settling time and minimize or eliminate these chemicals in the discharge. Furthermore, the operator shall comply with the requirements in Part 6.3(10).

3.1.1.2 Control stormwater discharges, including both peak flow rates and total stormwater volume, to minimize erosion at outlets and to minimize downstream channel and streambank erosion;

1. Culvert Stabilization. If culverts are present on the site, the SWPPP shall include measures to sufficiently minimize the threat of erosion at culvert locations to prevent the formation of rills and gullies during construction; and

2. Velocity Dissipation Devices. The operator shall place velocity dissipation devices along the length of any outfall channel on-site, and at locations where discharges leave the construction site as necessary to provide a non-erosive flow velocity.

3.1.1.3 Minimize the amount of soil exposed and the disturbance of steep slopes during construction activity;

1. Preserving Natural Vegetation. Where practicable, existing vegetation should be preserved. If natural vegetation can be preserved, the operator shall clearly mark vegetation before clearing activities begin. Locations of trees and boundaries of environmentally sensitive areas and buffer zones to be preserved shall be identified on the SWPPP site map;

2. Phase or sequence construction activities . Where practicable, minimize the area of disturbance at any one time.

3. Steep slopes . Where practicable, implement standard erosion and sediment control practices, such as phasing disturbances to these areas and using stabilization practices designed to be used on steep grades.

3.1.1.4 Minimize sediment discharges from the site. The design, installation and maintenance of erosion and sediment controls must address factors such as the amount, frequency, intensity and duration of precipitation, the nature of resulting stormwater runoff, and soil characteristics, including the range of soil particle sizes expected to be present on the site;

ED_001509B_00000855-00046

1. Perimeter Control. The operator shall use appropriate control measures (e.g., fiber rolls, berms, silt fences, vegetative buffer strips, sediment traps, or equivalent sediment controls) at all times for all down slope boundaries (and for those side slope boundaries deemed appropriate as dictated by individual site conditions) of the construction site.

   For sites where stormwater from disturbed areas, exclusive of rights-of-way, is conveyed to one or more retention basins that are designed to retain stormwater runoff from a local 100 yr/ 2 hr storm event, the operator is not required to utilize perimeter controls.

   For linear projects (see Appendix A) with rights-of-way that restrict or prevent the use of such perimeter controls, the operator shall maximize the use of these controls where practicable and document in the SWPPP why it is impracticable in other areas of the project.

2. Control discharges from stockpiles of sediment or soil. As necessary, implement the following measures for any stockpiled or land clearing debris composed, in whole or in part, of sediment or soil:

   a. Place stockpiles outside of washes or other surface waters, or stormwater conveyances, such as curb and gutter systems, or streets leading to such conveyances. If infeasible, install appropriate sediment controls and document the reasons in the SWPPP.

   b. Locate the piles outside of any buffers established consistent with Part 3.1.1.5;

   c. Protect from contact with stormwater (including run-on) using a temporary perimeter sediment barrier;

   d. Avoid rinsing sediment, debris, or other pollutants accumulated on pavement or other impervious surfaces after the stockpile has been removed into any stormwater conveyance (unless connected to a sediment basin, sediment trap, or similarly effective control), storm drain inlet, or surface water;

   e. To the extent practicable, implement control measures to prevent the generation of wind blown sediment and debris; and

   f. Use silt fences or other effective sediment control measures around soil stockpiles except when they are being actively worked.

3. Storm Drain Inlet Protection . The operator shall assess the need for and install inlet protection measures as necessary that remove sediment from the site's discharge. If the site discharges to any storm drain inlet that carries stormwater flow directly to a surface water (and it is not first directed to a sediment basin, sediment trap, or similarly effective control and the operator has authority to access the storm drain inlet), then inlet protection is required.

   Note: Inlet protection measures can be removed in the event of flood conditions that may endanger the safety of the public. Such actions are allowable only under extreme conditions and shall be documented on the SWPPP. The operator shall evaluate alternatives to be used in the future to prevent a recurrence of this problem.

4. If existing control measures need to be repaired or modified or if additional control measures are necessary, implementation shall be completed within 7 calendar days or before the next storm event (whichever is sooner), unless otherwise prescribed in a. through d. below. If implementation before the next storm event is impracticable, the reason(s) for delay shall be documented in the SWPPP and alternative control measures shall be implemented as soon as possible. Additionally, the following maintenance activities shall be implemented as follows:

   a. Remove accumulated sediment when it reaches a maximum of one-third the height of the silt fence or one-half the height of a fiber roll.

   b. Sediment shall be removed from temporary and permanent sedimentation basins, ponds and traps when the depth of sediment collected in the basin reaches 50% of the storage capacity.

c. Construction site egress location(s) shall be inspected for evidence of off-site tracking of sediment, debris, and other pollutants onto paved surfaces. Removal of sediment, debris, and other pollutants from all off-site paved areas shall be completed as soon as practicable.

d. Accumulations of sediment, debris, and other pollutants observed in off-site surface waters, drainage ways, catch basins, and other drainage features shall be removed in a manner and at a frequency sufficient to minimize impacts and to ensure no adverse effects on water quality.

3.1.1.5 Maintain natural buffers adjacent to perennial waters and direct stormwater to vegetated areas to increase sediment removal, unless infeasible.

1. Provide Natural Buffers or Equivalent Sediment Controls This requirement only applies when a perennial water (including lakes, unless infeasible) is located within 50 feet of the project's earth disturbances.

   Areas not owned or that are otherwise outside the operational control of the operator may be considered areas of undisturbed natural buffer for purposes of compliance with this part.

   The operator shall ensure that any discharges to perennial waters through the area between the disturbed portions of the property and any perennial waters located within 50 feet of the site are treated by an area of undisturbed natural buffer and/or additional erosion and sediment controls in order to achieve a reduction in sediment load equivalent to that achieved by a 50-foot natural buffer. Refer to Part 3.1.1.5(3) for exceptions to this requirement.

2. Alternatives. In areas where it is infeasible to maintain the 50 foot buffer, the operator shall:

   a. Document in the SWPPP the reasons why the 50 foot buffer cannot be maintained, and identify the additional erosion and sediment controls selected;

   b. Preserve as much buffer as possible and design, implement and maintain additional erosion and sediment controls (such as berms, diversion dikes, sediment basins, etc.);

   c. Ensure that all discharges from the area of earth disturbance to the natural buffer are first treated by the site's erosion and sediment controls, and use velocity dissipation devices if necessary to prevent erosion caused by stormwater within the buffer;

   d. Document in the SWPPP the natural buffer width retained on the property, and show the buffer boundary on the site plan;

   e. Delineate, and clearly mark off, with flags, tape, or other similar marking device all natural buffer areas; and

   f. Follow the additional stabilization requirements described in Part 3.1.2.1.

Note: The operator is not required to enhance the quality of the vegetation that already exists in the buffer, or provide vegetation if none exists.

3. Exceptions.

   a. If there is no discharge of stormwater to perennial waters through the area between the site and any perennial waters located within 50 feet of the site, the operator is not required to comply with the requirements in this Part. This includes situations where control measures, such as a berm or other barrier that will prevent such discharges, have been implemented.

   b. Where no natural buffer exists due to preexisting development disturbances (e.g., structures, impervious surfaces) that occurred prior to the initiation of planning for the current development of the site, operators are not required to comply with the requirements in this Part, unless portions of the preexisting development are removed.

ED_001509B_00000855-00048

Where some natural buffer exists but portions of the area within 50 feet of the perennial water are occupied by preexisting development disturbances, operators are required to comply with the requirements in this Part. For the purposes of calculating the sediment load reduction, an operator is not expected to compensate for the reduction in buffer function from the area covered by these preexisting disturbances.

If, during the life of the project, any portion of these preexisting disturbances will be disturbed, the area disturbed will be deducted from the area treated as natural buffer.

c. Linear projects are not required to comply with the requirements in this Part if site constraints (e.g., limited right-of-way) prevent the operator from meeting any of the compliance alternatives in Part 3.1.1.5(2), provided that, to the extent practicable, disturbances are limited to within 50 feet of the perennial water and/or the operator provides supplemental erosion and sediment controls to treat stormwater discharges from earth disturbances within 50 feet of the perennial water. The operator shall document in the rationale for why it is infeasible to comply with the requirements in Part 3.1.1.5(2) in the SWPPP, and describe any buffer width retained and/or supplemental erosion and sediment controls installed.

d. "Small residential lot" construction (see Appendix A) is exempt from buffer requirements, provided that the operator minimizes the discharge of pollutants by complying with the requirements of Parts 3.1.1.1 through 3.1.1.4.

e. The following disturbances within 50 feet of a perennial water are exempt from the requirements in this Part:

   - Construction approved under a CWA section 404 permit; or
   - Construction of a water-dependent structure or water access area (e.g., pier, boat ramp, trail).

   Any of the above disturbances that may occur within the buffer area shall be documented in the SWPPP.

3.1.1.6 The operator shall minimize soil compaction and, unless infeasible, preserve topsoil (for later revegetation).

Minimize soil compaction in areas of the site where final vegetative stabilization will occur or where infiltration practices will be installed.

3.1.2 Site Stabilization Requirements, Schedules and Deadlines.

The operator shall comply with the stabilization requirements in this Part to minimize the discharge of pollutants.

3.1.2.1 <u>Temporary Stabilization</u>.

The operator must provide temporary stabilization, or initiate permanent stabilization, of disturbed areas within 14 calendar days of the most recent land disturbance in areas where construction or support activities have been temporarily suspended or have permanently ceased, except as follows:

1. Where stabilization by the 14th day is precluded by snow cover or frozen ground conditions, stabilization measures shall be initiated as soon as practicable;
2. When the site is using vegetative stabilization and is located in an area of the state experiencing drought conditions (see Appendix A), vegetative stabilization measures shall be initiated as soon as practicable, when growing conditions are best for planting or seeding;
3. Stabilization shall be initiated within 7 calendar days, for areas within 50 feet of an impaired water or OAW.

ED_001509B_00000855-00049

4. Where disturbed areas are awaiting vegetative stabilization for periods greater than 14 calendar days after the most recent disturbance, non-vegetative methods of stabilization shall be employed. These methods shall be described in the SWPPP.

5. Seeding/ Vegetation. If revegetation plans include seeding, the SWPPP shall include seed mix and application specifications that will be used for vegetative stabilization. If the operator uses fertilizers or tackifiers on-site to establish vegetation, control measures shall be established to minimize the presence of these chemicals in the discharge.

Note: The operator is not expected to apply temporary or permanent stabilization measures to areas that are intended to remain unvegetated or unstabilized following construction (e.g., dirt access roads, utility pole pads, areas being used for storage of vehicles, equipment, or materials).

3.1.2.2 Final Stabilization.

Final stabilization means that one of the following conditions (1, 2, or 3) is met:

1. All soil disturbing activities at the site have been completed; all construction materials, waste, and temporary erosion and sediment control measures (including any sediment that was being retained by the temporary erosion and sediment control measures) have been removed and properly disposed; and either a. and/ or b. below is met:

   a. A uniform (i.e., evenly distributed, without large bare areas) vegetative cover with a density of 70% of the native background vegetative cover for the area is in place on all unpaved areas and areas not covered by permanent structures.

      When preconstruction native background vegetation covered less than 100% of the ground (e.g., arid areas, beaches), the 70% coverage criteria is adjusted as follows: if the native vegetation covered 50% of the ground, 70% of 50% (.70 X .50 = .35) or 35% cover density would be required, or

   b. Equivalent permanent stabilization measures (such as the use of riprap, gabions, gravel, or geotextiles) have been employed.

2. For individual lots in residential construction, final stabilization means that the homebuilder:

   a. Has completed final stabilization as specified in Part 3.1.2.2(1)(a) above, or

   b. Has established temporary stabilization, including perimeter controls, for an individual lot prior to occupation of the home by the homeowner and has informed the homeowner of the need for, and benefits of, final stabilization.

3. For construction projects on land used for agricultural purposes (e.g., pipelines across crop or range land), final stabilization may be accomplished by returning the disturbed land to its preconstruction agricultural use. Areas disturbed that were not previously used for agricultural activities, such as buffer strips immediately adjacent to water of the U.S., and areas that are not being returned to their preconstruction agricultural use shall meet the final stabilization criteria above.

Any non-vegetative stabilization methods must achieve the same levels of stabilization as specified in Part 3.1.2.2(1).

3.1.2.3 Site Stabilization Alternatives.

An operator with an eligible site may choose either of the following alternatives instead of implementing the stabilization requirements in Parts 3.1.2.1 or 3.1.2.2:

1. *Sites with additional retention capacity (see A.R.S. § 49 – 255.01(L)).* Stabilization deadline requirements in this permit do not apply to sites with retention capacity that meets or exceeds the 100 year/ 2 hour storm event as calculated by an Arizona registered professional engineer, geologist or landscape architect (A.R.S. § 32-144) and that meet the following conditions:

ED_001509B_00000855-00050

a. The nearest receiving water is ephemeral and not within 2.5 miles of a perennial or intermittent water body;

b. All stormwater generated by disturbed areas of the site, exclusive of public rights-of-way, is directed to one or more retention basins;

c. The operator complies with good housekeeping measures;

d. The operator maintains capacity of retention basin(s); and

e. The operator determines temporary and final stabilization requirements for the site to reduce or minimize the discharge of sediment and other pollutants to meet the requirements of Part 3.2.

Note: for the purposes of this permit, retention and detention are equivalent terms and mean that stormwater is held in a basin on-site up to the design capacity of the basin. However, local ordinances may have specific requirements for on-site stormwater detention/ retention.

2. *Sites returned to pre-construction discharge conditions*. Construction operators may qualify for this exemption by demonstrating that stormwater discharge from the site's pre- and post-construction activities is equal or less than in volume and pollutant load from disturbed areas as calculated by an Arizona registered professional engineer, geologist or landscape architect and where the site is not located within 2.5 miles of an impaired water or OAW.

The above demonstrations must be documented and retained with the SWPPP and submitted with the NOT, in accordance with Part 2.5(1)(f).

3.1.3 Pollution Prevention Requirements.

The operator shall design, install, implement, and maintain effective pollution prevention measures to minimize the discharge of pollutants. To meet this requirement, the operator shall comply with the following:

- Eliminate certain pollutant discharges from the site (see Part 1.4, Prohibited Discharges);
- Properly maintain all pollution prevention controls (see Part 3.1, General Maintenance Requirements); and
- Comply with pollution prevention standards for pollutant-generating activities that occur at the site (see Parts 3.1.3.1 through 3.1.3.3).

The operator shall comply with the pollution prevention standards in this Part if any of the following activities are conducted at the site or at any construction support activity areas covered by this permit (see Part 1.3(1)(c)).

3.1.3.1 Minimize the Discharge of Pollutants – from equipment and vehicle washing, wheel wash water, and other wash waters.

1. Concrete Washout. To comply with the prohibition in Part 1.4(1) for discharges of wastewater from washout of concrete:

   a. Where possible, concrete suppliers should conduct washout activities at their own plants or dispatch facilities.

   b. If conducted at the construction site, the operator shall employ measures to contain and manage on-site concrete washout to prevent discharge (see Part 6.3).

   c. Specify locations of concrete washout activities that will occur at the construction site.

2. Washing of equipment and vehicles. Any operator that washes equipment or vehicles on site shall implement the following control measures:

   a. Provide an effective means of minimizing the discharge of pollutants from equipment and vehicle washing, wheel wash water, and other types of washing;and

b. To comply with the prohibition in Part 1.4(4), for storage of soaps, detergents, or solvents, the operator shall provide either (1) cover (e.g., plastic sheeting or temporary roofs) to prevent these detergents from coming into contact with rainwater, or (2) a similarly effective means designed to prevent the discharge of pollutants from these areas.

3. Washing of Applicators and Containers used for Paint or Other Materials. To comply with the prohibition in Part 1.4(2), the operator shall provide an effective means of eliminating the discharge of water from the washout and cleanout of stucco, paint, form release oils, curing compounds, and other construction materials. To comply with this requirement, the operator shall:

   a. Direct all washwater into a leak-proof container or leak-proof pit. The container or pit must be designed so that no overflows can occur due to inadequate sizing or precipitation;

   b. Locate any washout or cleanout activities as far away as possible from surface waters and stormwater inlets or conveyances, and, to the extent practicable, designate areas to be used for these activities and conduct such activities only in these areas; and

   c. Handle washout or cleanout wastes as follows:

      i. Do not dump liquid wastes in storm sewers;

      ii. Dispose of liquid wastes in accordance with applicable requirements in Part 3.1.3.3;

4. Fueling and Maintenance of Equipment or Vehicles. Any operator that conducts fueling and/or maintenance of equipment or vehicles at the site shall provide an effective means of eliminating the discharge of spilled or leaked chemicals, including fuel, from the area where these activities will take place.

   To comply with the prohibition in Part 1.4(3), operators shall:

   a. If applicable, comply with the Spill Prevention Control and Countermeasures (SPCC) requirements in 40 CFR 112 and Section 311 of the CWA;

   b. Ensure adequate supplies are available at all times to handle spills, leaks, and disposal of used liquids;

   c. Use drip pans and absorbents under or around leaky vehicles;

   d. Dispose of or recycle oil and oily wastes in accordance with other federal, state, tribal, or local requirements;

   e. Clean up spills or contaminated surfaces immediately, using dry clean up measures where possible, and eliminate the source of the spill to prevent a discharge or a furtherance of an ongoing discharge; and

   f. Do not clean surfaces by hosing the area down.

3.1.3.2 Construction Site Egress. The operator shall implement effective control measures to minimize tracking of sediments, debris and other pollutants from vehicles and equipment leaving the site (e.g., stone pads, concrete or steel wash racks, or equivalent systems).

If site conditions make it infeasible to install structural controls to prevent track-out (e.g., a linear operator conducting earth disturbing activities within a paved right-of-way or immediately adjacent and parallel to a paved right-of-way), the operator shall explain in the SWPPP why such controls cannot be installed; what alternative measures will be used to prevent sediment from being tracked-out or accumulated on paved areas; and what procedures will be used to ensure track-out is discovered and removed as soon as practicable.

The reasons for any departure from the use of standard ingress/ egress control measures to control track-out shall be documented in the SWPPP:

ED_001509B_00000855-00052

1. Explain why structural control measures cannot be installed;
2. Describe what alternative measures will be used to prevent sediment from being tracked-out or accumulated on paved areas; and
3. Describe what procedures will be used to ensure track-out is discovered and removed as soon as practicable.

Note: Some fine grains may remain visible on the surfaces of paved roads even after implementing sediment removal practices. Such "staining" is not a violation of Part 3.1.3.2.

3.1.3.3 The operator shall minimize the exposure of building materials, building products, construction wastes, trash, landscape materials, fertilizers, pesticides, herbicides, detergents, sanitary waste and other materials present on the site to precipitation and to stormwater.

1. Good Housekeeping Measures. The operator shall implement good housekeeping procedures to prevent litter, construction debris, and construction chemicals exposed to stormwater from becoming a pollutant source for stormwater discharges. These procedures shall include storage practices to minimize exposure of the materials to stormwater, and spill prevention and response practices.
2. Storage, Handling, and Disposal of Construction Products, Materials, and Wastes. The operator shall minimize the exposure to stormwater of any of the products, materials, or wastes specified below that are present at the site by complying with the requirements in this Part.

   Note: These requirements do not apply to those products, materials, or wastes that are not a source of stormwater contamination or that are designed to be exposed to stormwater.

   The operator shall consider and implement the following control measures, as appropriate:

   a. For building products: In storage areas, provide either (1) cover (e.g., plastic sheeting or temporary roofs) to prevent these products from coming into contact with rainwater, or (2) a similarly effective means designed to prevent the discharge of pollutants from these areas.
   b. For pesticides, herbicides, insecticides, fertilizers, and landscape materials:
      i. In storage areas, provide either (1) cover (e.g., plastic sheeting or temporary roofs) to prevent these chemicals from coming into contact with rainwater, or (2) a similarly effective means designed to prevent the discharge of pollutants from these areas; and
      ii. Comply with all application and disposal requirements included on the registered pesticide, herbicide, insecticide, and fertilizer label.
   c. For diesel fuel, oil, hydraulic fluids, other petroleum products, and other chemicals:
      i. To comply with the prohibition in Part 1.4(3), store chemicals in water-tight containers, and provide either (1) cover (e.g., plastic sheeting or temporary roofs) to prevent these containers from coming into contact with rainwater, or (2) a similarly effective means designed to prevent the discharge of pollutants from these areas (e.g., spill kits), or provide secondary containment (e.g., spill berms, decks, spill containment pallets); and
      ii. Clean up spills immediately, using dry clean-up methods where possible, and dispose of used materials properly. Do not clean surfaces or spills by hosing the area down. Eliminate the source of the spill to prevent a discharge or a continuation of an ongoing discharge.
   d. For hazardous or toxic waste:

ED_001509B_00000855-00053

i. Separate hazardous or toxic waste from construction and domestic waste;

ii. Store in sealed containers, which are constructed of suitable materials to prevent leakage and corrosion, and which are labeled in accordance with applicable Resource Conservation and Recovery Act (RCRA) requirements and all other applicable federal, state, tribal, or local requirements;

iii. Store all containers that will be stored outside within appropriately-sized secondary containment (e.g., spill berms, decks, spill containment pallet) to prevent spills from being discharged, or provide a similarly effective means designed to prevent the discharge of pollutants from these areas (e.g., storing chemicals in covered area or having a spill kit available on site);

iv. Dispose of hazardous or toxic waste in accordance with the manufacturer's recommended method of disposal and in compliance with federal, state, tribal, and local requirements; and

v. Clean up spills immediately, using dry clean-up methods where possible, and dispose of used materials properly. Do not clean surfaces or spills by hosing the area down. Eliminate the source of the spill to prevent a discharge or a furtherance of an ongoing discharge.

e. For construction and domestic waste: Provide waste containers (e.g., dumpster or trash receptacle with covers/ lids) of sufficient size and number to contain construction and domestic wastes. In addition:

i. On work days, clean up and dispose of waste in designated waste containers; and

ii. Clean up immediately if containers overflow.

f. For sanitary waste: Position portable toilets outside of areas of stormwater flow and ensure that they are secure and will not be tipped over.

3.1.3.4 Spill Prevention and Response Procedures. Operators are prohibited from discharging toxic or hazardous substances from a spill or other release, consistent with Part 1.4. The operator shall minimize the potential for leaks, spills and other releases that may be exposed to stormwater and develop plans for timely and effective clean-up of spills if or when they occur by implementing measures such as:

x Procedures for plainly labeling containers (e.g., "Used Oil," "Spent Solvents," "Fertilizers and Pesticides," etc.) that could be susceptible to spillage or leakage to encourage proper handling and facilitate rapid response if spills or leaks occur;

x Preventative measures such as barriers between material storage and traffic areas, secondary containment provisions, and procedures for material storage and handling;

x Procedures for expeditiously stopping, containing, and cleaning up leaks, spills, and other releases. Employees who may cause or detect a spill or leak should be knowledgeable in the proper reporting procedures established by their facility. Employees who are responsible for spill response and/or cleanup, must be properly trained and have necessary spill response equipment available; and

x Procedures for notification of appropriate facility personnel and emergency response. Where a leak, spill, or other release occurs that contains a hazardous substance or oil in an amount equal to or in excess of a reportable quantity established under either 40 CFR Part 110, 40 CFR Part 117, or 40 CFR Part 302, the operator shall notify ADEQ Emergency Response Duty Office at (602) 771-2330 or, toll free, at (800) 234-5677. Contact information must be in locations that are readily accessible and available. Within 7 calendar days of knowledge of the release, operators shall provide a description in the SWPPP of: the release; the circumstances leading to the release; and the date of the release. Local requirements may necessitate additional reporting of spills or discharges to local emergency response, public health, or drinking water supply agencies.

ED_001509B_00000855-00054

3.1.3.5 Fertilizer Discharge Restrictions.

Operators are required to minimize discharges of fertilizers containing nitrogen or phosphorus by applying these products consistent with manufacturer's specifications.

3.1.4 Controls for Allowable Non-Stormwater Discharges and Dewatering Activities.

Discharges from dewatering activities, including discharges from dewatering of trenches and excavations, are prohibited unless managed by appropriate controls. Appropriate controls include, but may not be limited to: sediment basins or traps; dewatering tanks; tube settlers; weir tanks; or filtration systems (e.g., bag or sand filters) that are designed to remove sediment.

The operator shall ensure all water from dewatering or basin draining activities is discharged in a manner that does not cause nuisance conditions, including erosion in receiving channels or on surrounding properties.

The operator shall retain superchlorinated wastewaters (i.e., containing chlorine above residual levels acceptable in drinking water systems) on-site until the chlorine dissipates, or shall otherwise effectively dechlorinate the water prior to discharge.

Note: As with any non-stormwater, if acceptable to the local sanitary sewer authority, this wastewater may be discharged to the sanitary sewer. In this case, dechlorination is not required by this permit.

3.2 Water Quality Standards

3.2.1 Water Quality Standards

The operator shall control discharges from the site as necessary to not cause or contribute to an exceedance of an applicable water quality standard.

ADEQ expects that compliance with other conditions in this permit will control discharges as necessary to not cause or contribute to an exceedance of an applicable water quality standard (A.A.C.R18-11, Article 1). However, if at any time the operator becomes aware, or ADEQ determines, that the facility's discharge causes or contributes to an exceedance of an applicable water quality standard, the operator shall take corrective action as required in Part 5.1, document the corrective actions as required in Parts 5.3 and 6.4, and report the corrective actions to ADEQ as required in Part 8.2(3).

Additionally, ADEQ may impose additional water quality-based requirements on a site-specific basis, or require the operator to obtain coverage under an individual permit in accordance with Part 1.2, if information in the NOI, required reports, or from other sources indicates that additional controls are necessary to not cause or contribute to an exceedance of an applicable water quality standard.

3.2.2 Discharge Limitations for Impaired Waters and OAWs.

Operators of construction sites that are located within 1/4 mile of an impaired water or OAW are required to comply with the following requirements, which supplement the requirements applicable to the site in other corresponding parts of this permit:

1. Frequency of Site Inspections. The operator shall conduct inspections at the frequency specified in Part 4.2(3).
2. Deadline to Complete Stabilization. The operator shall comply with the deadlines for completing site stabilization as specified in Part 3.1.2.

If the discharge is to an impaired water, ADEQ may inform the operator that additional limits or controls are necessary to meet water quality standards or any applicable wasteload allocation (WLA), or to prevent the site from contributing to the impairment, or if coverage under an individual permit is necessary in accordance with Appendix B, Subsection 17.

If during coverage under a previous permit, the operator was required to install and maintain control measures specifically to meet the assumptions and requirements of an USEPA-approved or established TMDL (for any parameter) or to otherwise control a discharge to meet water quality standards, the operator shall continue to implement such controls as part of this permit.

ED_001509B_00000855-00055

4.0 INSPECTIONS

4.1 Inspector Qualifications.

The operator shall provide qualified personnel (as defined in Appendix A) to perform inspections according to the selected inspection schedule identified in the SWPPP. The operator shall conduct inspections of the site in accordance with Parts 4.2 through 45 of this permit.

4.2 Inspection Schedule.

At a minimum, operator shall conducta site inspection in accordance with one of the schedules listed below. The operator shall document in the SWPPP which schedule is being used and, when necessary, the location of the rain gauge or weather station used to obtain rainfall information. The Department encourages adding inspections **before** and/or **during** predicted storm events and "spot" inspections to ensure control measures will be effective in managing stormwater runoff and associated pollutants.

1. Routine Inspection Schedule: The operator shall ensure inspections are performed at the site as indicated below to ensure control measures are functional and that the SWPPP is being properly implemented. To determine the amount of rainfall from a storm event that occurs on the site (in accordance with options b. or c), the operator shall obtain rainfall information (in accordance with Part 4.4(3)) from either a properly maintained rain gauge on the site, or a weather station that is representative of the site's location. For any day of rainfall during normal business hours that measures 0.25 inch or greater, the total rainfall measured for that day shall be recorded in accordance with Part 4.4(3).

    a. The site will be inspected a minimum of once every 7 calendar days, or

    b. The site will be inspected a minimum of once every 14 calendar days, and also within 24 hours of each storm event of 0.5 inch or greater in 24 hours; or

    c. The site will be inspected a minimum of once per month, but not within 14 calendar days of the previous inspection and within 24 hours of the occurrence of a storm event of 0.25 inch or greater.

2. Reduced Inspection Schedule. The operator may reduce inspection if the entire site has been temporarily stabilized, discharges are unlikely based on seasonal rainfall patterns, or runoff is unlikely due to winter conditions (e.g., site is covered with snow, ice, or frozen ground exists). With a reduced inspection schedule, the site shall be inspected at least once per month (but not within 14 calendar days of the previous inspection) and before an anticipated storm event and within 24 hours of each storm event of 0.5 inch or greater in 24 hours.

3. Inspection Schedule for Sites within 1/4 mile of Impaired Waters or OAWs: If any portion of the construction site is within 1/4 mile of an impaired water or OAW, the operator shall inspect the site at least once every 7 calendar days. The operator may reduce inspections to the schedule specified in Part 4.2(2) for those areas of the construction site that have undergone temporary or final stabilization.

4. Inspection Schedule for Inactive and Unstaffed Sites. A site is inactive and unstaffed that will have an anticipated period of no construction activity for at least six consecutive months. *Inactive and unstaffed sites within 1/4 mile of an impaired water or OAW are not eligible for this reduced inspection frequency unless they have undergone temporary stabilization.*

    Operator's responsibilities include:

    a. Immediately before becoming inactive and unstaffed, the operator shall perform an inspection in accordance with Part 4.4. All control measures must be in operational condition in accordance with Part 3.1 prior to becoming inactive and unstaffed;

    b. During the time the site is inactive and unstaffed, the operator shall perform an inspection at least once every six months and within 24 hours of each storm event of 0.5 inch or greater in 24 hours;

ED_001509B_00000855-00056

c. Non-storm event inspections must be at least three months apart;

d. All control measures must be maintained in operational condition;

e. The site shall be secured, such as limited access, blocking or fencing;

f. Maintain a statement in the SWPPP as required in Part 6.4(11) indicating that the construction site is inactive and unstaffed. The statement must be signed and certified in accordance with Appendix B, Subsection 9; and

g. If circumstances change and the site becomes active and/or staffed, this exception no longer applies and the operator shall immediately resume the routine inspection schedule.

ADEQ retains the authority to revoke this exception from routine inspections where it is determined that the discharge causes, has a reasonable potential to cause, or contribute to an exceedance of an applicable water quality standard, including designated uses.

5. Inspections are only required during the project's normal working hours. If an inspection day (except those required relative to a rainfall event) falls on a Saturday or holiday, the inspection may be conducted on the preceding workday. If the inspection day falls on a Sunday, the inspection may be conducted on the following Monday. If rainfall events occur on the weekend or holiday, an inspection relative to that event may be conducted the following workday.

6. Inspections are not required under Adverse Conditions. The operator is not required to inspect areas that, at the time of the inspection, are considered unsafe for inspection personnel. Inspections may be postponed when conditions such as local flooding, high winds, or electrical storms, or situations that otherwise make inspections unsafe. The inspection must resume as soon as conditions are safe.

4.3 Scope of Inspections.

At a minimum, the inspector shall examine each of the following during each inspection:

1. All structural controls identified in the SWPPP to ensure they are in place and functioning as intended. Repair, replace, or maintain any controls as necessary in accordance with Part 3.1;
2. The effectiveness of non-structural controls and practices (such as good housekeeping practices and pollution prevention measures);
3. All areas of the site used for storage of materials that are exposed to precipitation;
4. All locations where new or modified control measures are necessary to meet the requirements of Part 3;
5. Locations where vehicles and equipment enter or exit the site for evidence of tracking sediment, debris, and other pollutants onto and off the site;
6. Site conditions for evidence of, or the potential for, pollutants entering the municipal separate storm sewer;
7. The presence of conditions that could lead to spills, leaks, or other accumulations of pollutants on the site;
8. Accessible discharge locations or discharge points to ascertain whether erosion and sediment control measures are effective in preventing significant impacts to receiving waters;
9. Where discharge locations are inaccessible, nearby downstream locations to the extent that the inspections are practicable;
10. All locations where temporary stabilization measures have been implemented; and
11. When a discharge is occurring during an inspection, observe and note the physical characteristics (color, odor, clarity, floating, settled, or suspended solids, foam, oil sheen, and other obvious indicators of stormwater pollutants). In addition, when there is no discharge, examine each discharge location for evidence of erosion, sedimentation and other pollutants, and the presence of current (and indications of prior) discharges and their sources.

ED_001509B_00000855-00057

4.4 Inspection Report Form.

For each inspection, the operator shall complete an inspection report either on a form provided by the Department online at http://www.azdeq.gov/environ/water/permits/cgp.html or an alternative form developed by the operator that documents all of the information required by this permit. The operator may supplement the inspection report form as necessary with additional information, forms or drawings. Within 7 calendar days of completing the inspection, the corresponding inspection report shall be placed with previous reports (in chronological order) and kept with the SWPPP. At a minimum, the report shall include:

1. The inspection date;
2. Name(s) and title(s) of qualified person(s) making the inspection;
3. Weather information for the period since the last inspection (or since commencement of construction activity for the first inspection) including:
    a. Best estimate of the beginning of each storm event;
    b. Duration of each event;
    c. Time elapsed since last storm event; and
    d. Approximate amount of rainfall for each event (in inches).
4. Identification of discharges of sediment or other pollutants from the site. Identify the discharge location(s) and associated control measures on the site map(s), in accordance with Part 6.3(6);
5. For inspections occurring during or after a storm event:
    a. A description of the physical characteristics of the stormwater discharge (Part 4.3(11)) from the site, when present;
    b. Document the evidence of erosion, sedimentation and other pollutants; and
    c. Document the presence of control measures in all areas inspected and whether such controls are operating effectively.
6. Identification of control measures that need to be maintained, failed to operate as designed, or proved inadequate. Until removed from the site, identify the location(s) of these control measures on the site map(s), in accordance with Part 6.3(6);
7. Identification of what additional control measures are needed, if any, that did not exist at the time of the inspection. Identify the location(s) of these control measures on the site map(s), in accordance with Part 6.3(6);
8. Identification of all sources of non-stormwater discharges occurring at the site and associated control measures in place;
9. Identification of material storage areas and, evidence of or potential for, pollutant discharge from such areas;
10. Corrective actions required (in accordance with Part 5.3), including any necessary changes to the SWPPP, and implementation dates (of corrective actions and SWPPP changes); and
11. Identification of any other instances of non-compliance with the conditions of this permit that are not associated with Part 4.4(10), or where the inspector does not identify any incidents of non-compliance, the inspection report shall contain a certification that the construction project or site is being operated in compliance with the SWPPP and this permit.
12. Document Adverse Conditions. If the operator determines that certain area(s) of the site are unsafe to inspect, the Inspection Report shall document the unsafe condition(s) and specify the locations where the unsafe condition(s) exists.

ED_001509B_00000855-00058

4.5 Inspection Follow-up.

1. Control Measure Assessment. Based on the findings and observations of the inspection, the operator shall implement the changes necessary to comply with the conditions in Part 3 and revise the SWPPP as needed in accordance with Part 6.5. The changes shall be implemented in accordance with the schedule described in "General Maintenance Requirements" in Part 3.1.
2. Corrective Actions. Based on the scope of inspection conducted in accordance with Part 4.3, the operator shall determine and implement appropriate corrective actions, and meet the applicable deadlines pursuant to Part 5.

ED_001509B_00000855-00059

5.0 CORRECTIVE ACTIONS.

5.1 Corrective Action Triggers.

Corrective actions are actions the operator takes in compliance with this Part to modify, or replace any control measure that failed to meet the conditions of Part 3. ADEQ does not consider routine maintenance or repairs as corrective actions. If any of the following conditions at the construction site occur resulting in or from a failure of a control measure, the operator shall implement new or modified control(s):

1. A necessary control measure was never installed, was installed incorrectly, or not in accordance with the requirements in Parts 3.1 and/ or 3.2; or
2. One of the prohibited discharges in Part 1.4 is occurring or has occurred; or
3. ADEQ or USEPA determines that modifications to the control measures are necessary to meet the requirements of Part 3.

On the same day a condition requiring corrective action is discovered, the operator shall take all reasonable steps to minimize or prevent the discharge of pollutants until a permanent solution is installed and made operational. However, if the problem is identified when it is too late in the work day to initiate a corrective action, the corrective action shall be initiated on the following work day, unless the condition poses imminent endangerment to human health or the environment, in which case the operator shall take immediate action.

5.2 Corrective Action Deadlines.

Any control measures or repairs required must be made operational, or completed, by no later than 7 calendar days from the time of discovery. If the operator cannot complete the necessary repairs or installation of controls within 7 calendar days, the SWPPP shall include the following:

1. The reason it is infeasible to complete the installation or repair within the 7 calendar day timeframe; and
2. The schedule for installing and making the control measure(s) operational as soon as practicable after the 7-day timeframe.

Any corrective actions that result in changes to any of the control measures or procedures shall be documented in the SWPPP within 7 calendar days of completing the corrective action work.

The operator shall complete all corrective actions in accordance with the deadlines specified in this Part.

5.3 Corrective Action Report.

For each corrective action taken in accordance with this Part, the operator shall document the details of the corrective action in the inspection report required by Part 4.4. These reports shall be signed in accordance with the signatory requirements in Appendix B, Subsection 9 and maintained with the SWPPP in accordance with the record keeping requirements in Appendix B, Subsection 11.

1. Construction Sites Located within 1/4 Mile of an Impaired Water or OAW. When any condition listed in Part 5.1 occurs, the operator of a construction site that discharges to an impaired water or OAW (in accordance with Parts 1.5(3) or (4)) shall submit this documentation in accordance with Part 8.2(2). . The operator shall retain a copy of the inspection report documenting the corrective action(s) onsite with the SWPPP as required in Part 6.4.
2. Report Schedule. Within 7 calendar days of discovery of any condition listed in Part 5.1, the operator shall document and maintain with the SWPPP the following information:
   a. Summary of corrective action taken or to be taken;
   b. Whether SWPPP modifications are required as a result of this discovery or corrective action;
   c. Date corrective action initiated or will be initiated; and
   d. Date corrective action completed or expected to be completed

ED_001509B_00000855-00060

6.0 STORMWATER POLLUTION PREVENTION PLAN (SWPPP) PREPARATION

6.1 General Information.

1. The operator shall develop a stormwater pollution prevention plan (SWPPP) before submitting the NOI for permit coverage and prior to conducting any construction activity. Any SWPPP prepared for coverage under a previous version of this AZPDES construction general permit must be reviewed and updated by the operator to comply with this permit's requirements prior to submitting the NOI in accordance with Part 2.3(3)(e).

   Note: For projects that did not prepare a SWPPP and submit an NOI before commencement of construction activity, see Part 2.3(2)(h) (late NOI submittal).

   At least one SWPPP must be developed for each construction project or site covered by this permit. A "joint" or "common" SWPPP may be developed and implemented as a cooperative effort where there is more than one operator at a site. All operators shall either implement their portion of a common SWPPP or develop and implement their own SWPPP.

2. The SWPPP shall be prepared and implemented in accordance with good engineering practices and shall:

   a. Identify all potential sources of pollution that may reasonably be expected to affect the quality of stormwater discharges from the construction site;
   b. Identify, describe, and ensure implementation of control measures that will be used to reduce pollutants in stormwater discharges from the construction site;
   c. Assure compliance with the terms and conditions of this permit; and
   d. Identify the responsible person for on-site SWPPP implementation.

3. All operator(s) shall sign and certify the SWPPP in accordance with the signatory requirements of Appendix B, Subsection 9.

4. The operator shall implement the SWPPP from initial commencement of construction activity until an NOT is submitted to ADEQ in accordance with Parts 2.5(1) or 2.6.

5. SWPPPs that do not meet all provisions of this permit are considered incomplete. Operating under an incomplete or inadequate SWPPP is a violation of the permit.

6. Emergency-Related Projects. Operators conducting construction activities in response to an emergency (see Part 2.4), shall document the cause of the emergency (e.g., natural disaster, extreme flooding conditions, etc.), information substantiating its occurrence (e.g., state disaster declaration or similar state or local declaration), and describe the construction necessary to reestablish effected public services.

6.2 Types of Operators

1. Operator Requirements. Either Part 6.1(2)(a) or (b), or both, will apply depending on the type of operational control a person exerts over the site. Part 6.1(2)(c) applies to all operators who have control over only a portion of a construction site.

   a. Operators with Operational Control over Construction Plans and Specifications shall ensure that:

      i. The SWPPP indicates the areas of the project where the operator has operational control over project specifications, including the ability to make modifications in specifications;
      ii. All other operators implementing portions of the SWPPP impacted by any changes made to the SWPPP are notified of such modifications in a timely manner; and
      iii. The SWPPP indicates the name(s) of the person(s) with day-to-day operational

ED_001509B_00000855-00061

control of those activities necessary to ensure compliance with the SWPPP or other permit conditions.

b. Operators with Control over Day-to-Day Activities shall ensure that:
   i. The SWPPP identifies the persons responsible for implementation of control measures identified in the SWPPP;
   ii. The SWPPP indicates areas of the project where each operator has operational control over day-to-day activities; and
   iii. The SWPPP indicates the name(s) of the person(s) with operational control over project specifications (including the ability to make modifications in specifications).

c. Operators with Control over Only a Portion of a Larger Project are responsible for compliance with the terms and conditions of this permit as it relates to the activities on the operator's portion of the construction site (including implementation of control measures required by the SWPPP). Operators shall ensure either directly or through coordination with other operators, that activities do not render another person's control measure(s) ineffective.

6.3 SWPPP Contents

1. Stormwater Team.

   Each operator, or group of operators, must assemble a "stormwater team," which is responsible for overseeing the development of the SWPPP, any later modifications to it, and for compliance with the requirements in this permit.

   The SWPPP must identify the name, title and a description of the qualifications and a copy of any training certificates of team members, including inspector(s), as well as their individual responsibilities. Each member of the stormwater team must have ready access to an electronic or paper copy of applicable portions of this permit, the most updated copy of the SWPPP, and other relevant documents or information that must be kept with the SWPPP.

   The team may include members who are not employed by the operator (such as third party consultants).

2. Identification of Operators.

   The SWPPP shall identify all operators, including contact information, for the project site and the areas and phases over which each operator has control.

3. Nature of Construction Activities.

   The SWPPP must describe the nature of construction activities, including the size of the property (in acres) and the total area expected to be disturbed by the construction activities (in acres), construction support activity areas covered by this permit (see Part 1.3(1)(c)), and the maximum area expected to be disturbed at any one time.

4. Sequence and Estimated Dates of Construction Activities

   The SWPPP must include a description of the intended sequence of construction activities, including a schedule of the estimated start dates and the duration of the activity, for the following activities:

   a. Installation of control measures, and when they will be made operational, including an explanation of the sequence and schedule for installation of the control measures;

   b. Commencement and duration of construction activities, including clearing and grubbing, grading, site preparation (i.e., excavating, cutting and filling), underground utility installation, infrastructure installation, final grading, and creation of soil and vegetation stockpiles requiring stabilization;

ED_001509B_00000855-00062

c. Cessation, temporarily or permanently, of construction activities on the site, or in designated portions of the site including the beginning and ending dates of inactive/ unstaffed status, when applicable;

d. Final or temporary stabilization of areas of exposed soil. The dates for stabilization must reflect the applicable deadlines to which the operator is subject in Part 3.1.2; and

e. Removal of temporary stormwater conveyances/ channels and other control measures, removal of construction equipment and vehicles, and cessation of any pollutant-generating activities.

Note: If plans change due to unforeseen circumstances or for other reasons, the requirement to describe the sequence and estimated dates of construction activities is not meant to "lock in" the operator to meeting these projections. When departures from initial projections are necessary, this should be documented in the SWPPP itself or in associated records, as appropriate.

5. Site Description. The SWPPP shall describe the construction site, including:

a. A description of the site and its intended use after the NOT is submitted to ADEQ (e.g. low density residential, shopping mall, highway, etc.);

b. The total area of the site, and an estimate of the total area of the site expected to be disturbed by construction activities including off-site supporting activities, borrow and fill areas, staging and equipment storage areas;

c. The percentage of the site that is impervious (e.g., paved, roofed, etc.) before and after construction;

d. A description of the site's soils including potential for erosion;

e. Areas where it is infeasible to maintain a 50 foot buffer in accordance with Part 3.1.1.5(1), describe which alternative was selected for the site, and comply with any additional requirements to provide documentation (Part 3.1.1.5(2));

f. On-site and Offsite Material Storage. The operator shall identify and describe all material storage areas (including overburden and stockpiles of dirt, borrow areas, etc.) used for the permitted project in the SWPPP unless those areas are covered by another AZPDES permit; and

g. A general location map (e.g., USGS quadrangle map, a portion of a city or county map, or other map) – with enough detail to identify:

i. The location of the construction site and one mile radius; and

ii. The waters of the U.S. including tributaries within one mile radius of the site.

6. Site Map(s). The SWPPP shall contain legible site map or series of maps completed to scale, showing the entire site that identifies:

Note: If a marked-up site map is too full to be easily read, the operator should date and fold it, put it in the SWPPP for documentation, and start a new one.

a. Topography of the site, existing types of cover (e.g., forest, pasture, pavement, structures), and drainage pattern(s) of flow onto, over, and from the site property before and after major grading activities;

b. Drainage divides and direction of stormwater flow for all drainage areas located within the project limits (i.e., use arrows to show which way stormwater will flow);

c. Areas of soil disturbance and areas that will not be disturbed. Boundaries of the property and of the locations where construction activities will occur, including:

i. Locations where construction activities will occur, noting any phasing of construction activities;

ii. Locations where sediment or soil will be stockpiled;

ED_001509B_00000855-00063

iii. Locations of any crossings of surface waters;

iv. Designated points on the site where vehicles will exit onto paved roads; and

v. Locations of construction support activity areas covered by this permit (see Part 1.3(1)(c)).

d. Locations of temporary and permanent control measures identified in the SWPPP;

e. Locations where stabilization control measures are expected to occur;

f. Areas protected by buffers (i.e., either the 50-foot buffer or other buffer areas retained on site when within 50 feet of a perennial water) consistent with Part 3.1.1.5. The site map must show the boundary line of all such buffers;

g. Locations of on-site material, waste, borrow areas, or equipment storage areas, and other supporting activities (per Part 1.3(1)(c));

h. Locations of all potential pollutant-generating activities identified in Part 6.3(9). Examples include, but are not limited to: the pollutant-generating activities listed in Part 3.1.3.1 (fueling and maintenance operations; concrete, paint, and stucco washout); waste disposal; solid waste storage and disposal (Part 3.1.3.3); and dewatering operations (Part 3.1.4);

i. Locations of all surface waters and any impaired waters or OAWs within 1/4 mile of the facility. If none exist on site, the SWPPP shall indicate so;

j. Stormwater discharge location(s), using arrows to indicate discharge direction. Include the following:

i. Location(s) where stormwater and/or allowable non-stormwater discharges are discharged to waters of the U.S. (in accordance with Part 1.3); and

ii. Location(s) of any discharges to municipal separate storm sewer systems (MS4s) from the construction site.

Note: Where surface waters and/or MS4s receiving stormwater will not fit on the plan sheet, they shall be identified with an arrow indicating the direction and distance to the surface water and/or MS4;

k. Locations and registration numbers of all on-site drywells and drywells on adjacent properties that have the potential to receive stormwater from the site (If none exist the SWPPP shall indicate so);

l. Areas where final stabilization has been accomplished and no further construction permit requirements apply (if none, the SWPPP shall indicate so); and

m. Location and boundaries of environmentally sensitive areas and buffer zones to be preserved.

7. Receiving Waters. The SWPPP shall identify the nearest receiving water(s), including ephemeral and intermittent streams, dry washes, and arroyos. If applicable, the SWPPP shall also identify the areal extent and describe any wetlands near the site that could be disturbed or that could potentially receive discharges from disturbed areas of the project.

Indicate if the receiving water is listed as impaired, or an OAW.

Note: Operators may determine whether their sites are located within 1/4 mile of any impaired waters or OAWs by using ADEQ's Smart NOI system or by obtaining a list of impaired waters at http://www.azdeq.gov/environ/water/assessment/assess.html. OAWs are listed in A.A.C. R18-11-112(G).

8. Control Measures to be used During Construction Activity. The SWPPP shall describe all control measures as required in Part 3.1 and that will be implemented and maintained as part of the construction project to control pollutants in discharges. For each control measure, the SWPPP shall contain:

a. For each major activity identified at Part 6.3 in the project sequence of activities

ED_001509B_00000855-00064

description, a description of:

i. The appropriate control measures, including controls to minimize or eliminate non-stormwater discharges;

ii. The general sequence during the construction process or schedule that the control measures will be implemented; and

iii. Which operator is responsible for the implementation of control measures.

b. Standard detail drawings and/or specifications for the structural control measures, including design or installation details, used on the project;

c. What specific sediment controls will be installed and made operational prior to conducting earth-disturbing activities in any given portion of the site to meet the requirement of Part 3.1.1;

d. For site egress points, document the control measures that are intended to minimize tracking of pollutants from vehicles leaving the site consistent with Part 3.1.3.2.

9. Summary of Potential Pollutant Sources The SWPPP shall identify the location and describe any pollutant sources, including any non-stormwater discharges expected to be associated with the project, from areas other than construction (i.e., support activities including stormwater discharges from dedicated asphalt or concrete plants and any other non-construction pollutant sources such as fueling and maintenance operations, materials stored on-site, waste piles, equipment staging yards, etc.). The operator shall implement control measures in these areas to minimize pollutant discharges and shall detail these controls in the SWPPP.

   If any portion of the construction site is within 1/4 mile of an impaired water, the SWPPP shall identify sources of the pollutants of concern listed on the 303(d) list that may potentially be discharged from the construction site and describe additional or enhanced control measures to minimize discharges of these pollutants.

10. Use of Treatment Chemicals If polymers, flocculants, or other cationic treatment chemicals will be used at the site, the SWPPP shall include:

    a. A justification for the need for such chemicals and an assessment of potential water quality impacts;

    b. A description of the training specific personnel have or will receive on the use and storage of any cationic treatment chemicals and/or chemical treatment systems at the construction site;

    c. A listing of all treatment chemicals to be used at the site, a description of how the chemicals will be stored, and why the selection of these chemicals is suited to the soil characteristics of the site;

    d. The dosage of all treatment chemicals that will be used at the site or the methodology that will be used to determine dosage;

    e. A copy of any applicable Material Safety Data Sheets (MSDS);

    f. Schematic drawings of any chemically-enhanced controls or chemical treatment systems to be used for application of the treatment chemicals;

    g. Copies of applicable manufacturer's specifications regarding the use of specific treatment chemicals and/or chemical treatment systems and references to state or local requirements affecting the use of these chemicals.

11. Pollution Prevention Procedures.

    a. Spill Prevention and Response Procedures The SWPPP must describe procedures to prevent and respond to spills, leaks, and other releases consistent with Part 3.1.3, including:

ED_001509B_00000855-00065

i. Procedures for plainly labeling containers (e.g., "Used Oil, " "Spent Solvents," "Fertilizers and Pesticides," etc.) that could be susceptible to spillage or leakage to encourage proper handling and facilitate rapid response if spills or leaks occur;

ii. Preventative measures such as barriers between material storage and traffic areas, secondary containment provisions, and procedures for material storage and handling;

iii. Procedures for expeditiously stopping, containing, and cleaning up spills, leaks, and other releases. Identify the name or position of the employee(s) responsible for detection and response of spills or leaks; and

iv. Procedures for notification of appropriate facility personnel, emergency response agencies, and regulatory agencies where a leak, spill, or other release containing a hazardous substance or oil in an amount equal to or in excess of a reportable quantity consistent with Part 3.1.3.4 and established under either 40 CFR Part 110, 40 CFR Part 117, or 40 CFR Part 302, occurs during a 24-hour period. Contact information must be in locations that are readily accessible and available.

The operator may reference the existence of other plans, such as the Spill Prevention Control and Countermeasure (SPCC) plans developed for the construction activity under Part 311 of the CWA, or spill control programs otherwise required by an AZPDES permit for the construction activity, provided that a copy of that other plan is kept with the SWPPP onsite. If an SPCC or other spill prevention plan already exists, the operator may use such plans and incorporate them by reference in the SWPPP.

b. Waste Management Procedures. The SWPPP must describe procedures for handling and disposing all wastes generated at the site, including, but not limited to, clearing and demolition debris, sediment removed from the site, construction and domestic waste, hazardous or toxic waste, and sanitary waste.

6.4 Documentation Requirements including Permit Related Records

The operator shall keep the following inspection, monitoring, and certification records complete and up-to-date. Retaining these records with the SWPPP (unless otherwise specified below) is necessary to demonstrate compliance with the conditions of this permit.

1. A copy of this permit (an electronic copy easily available to SWPPP personnel is also acceptable);
2. A copy of the NOI submitted to ADEQ, including any correspondence exchanged between the operator and ADEQ specific to coverage under this permit;
3. A copy of the authorization certificate received from ADEQ;
4. Identification of any municipality that received a copy of the authorization certificate;
5. Copies of any other agreements (such as a CWA section 404 permit, local grading permit, etc.) with any state, local, or federal agencies that would affect the provisions or implementation of the SWPPP, if applicable;
6. Descriptions and dates of any incidences of significant spills, leaks, or other releases that resulted in discharges of pollutants in stormwater to a regulated MS4 or to waters of the U.S., the circumstances leading to the release and actions taken in response to the release and measures taken to prevent the recurrence of such releases (see Part 3.1.3.4);
7. Documentation of repairs of structural control measures, including the date(s) of discovery of areas in need of repair/replacement, date(s) that the structural control measure(s) returned to full function, and the justification for any extended repair schedules (see Part 3.1). The maintenance records shall include the date(s) of regular maintenance;
8. All inspection reports (see Part 4.4);

ED_001509B_00000855-00066

9. Description of any corrective action taken at the site, including triggering event and dates when problems were discovered and modifications occurred;

10. Buffer Documentation. If the construction site's earth disturbances are located within 50 feet of a perennial water, the operator shall describe which alternative was selected for the site, and comply with any additional documentation requirements in Part 3.1.1.5.

11. Documentation to support the operator's claim that the facility has changed its status from active to inactive and unstaffed with respect to the requirements to conduct inspections (see Part 4.2(4));

12. Post-Construction Stormwater Management.
    a. The SWPPP shall include a description of post-construction stormwater management control measures that will be installed during the construction process to control pollutants in stormwater discharges after construction has been completed.
    b. If 'temporary' sediment basins are to be used as/converted to retention or detention basins in the post-constructionphase, the operator shall remove and properly dispose of all sediments accumulated in the basin during construction activities prior to filing an NOT.
    c. New discharge connections or permanent stormwater outfalls directly to OAWs are prohibited under this permit.

    Note: The installation of these devices may also require a separate permit under section 404 of the Clean Water Act.

    Note: This permit only authorizes and requires the operator to install and maintain stormwater management measures up to and including final stabilization of the site, and does not require continued maintenance after stormwater discharges associated with the construction activity have been eliminated from the site and an NOT has been submitted to ADEQ. However, post-construction control measures that discharge pollutants from point sources once construction is complete may require authorization under a separate AZPDES permit.

6.5 SWPPP Updates and Modification Requirements

6.5.1 Maintaining an Updated SWPPP.

The SWPPP shall be revised as necessary during permit coverage to reflect current conditions and to maintain accuracy. The operator shall make any required amendments to the SWPPP within 7 calendar days whenever:

1. There is a change in design, construction, operation, or maintenance at the construction site that may have a significant effect on the discharge of pollutants to the waters of the U.S. that has not been previously addressed in the SWPPP; or
2. During inspections, monitoring if required, or investigations by the operator or by ADEQ or USEPA, it is determined the discharges are causing or contributing to water quality exceedances or the SWPPP is ineffective in eliminating or significantly minimizing pollutants in stormwater discharges from the construction site;or
3. There is a change to the stormwater team.

6.5.2 Conditions Requiring SWPPP Modification.

The operator shall complete required revisions to the SWPPP within 7 calendar days following the occurrence of any of the conditions listed below. The operator shall modify the SWPPP, including the site map(s), in response to any of the following conditions

1. New operators become active in construction activities at the site, construction plans are changed (that will affect the quality of the discharge), control measures, pollution prevention measures, or other activities at the site are no longer accurately reflected in the SWPPP. This includes changes made in response to corrective actions triggered

under Part 5.1. Operators do not need to modify their SWPPPs if the estimated dates in Part 6.3(6) change during the course of construction;

2. Areas on the site map where operational control has been transferred (and the date of transfer) since initiating permit coverage;
3. If inspections or investigations by site staff, or by local, state, or federal officials determine that SWPPP modifications are necessary for compliancewith this permit;
4. ADEQ determines it is necessary to impose additional requirements on the discharge (in accordance with Part 6.5.1), the following must be included inthe SWPPP:
   a. A copy of any correspondence describing such requirements; and
   b. A description of the control measures that will be used to meet such requirements.
5. To reflect any revisions to applicable federal, state, tribal, or local requirements that affect the control measures implemented at the site; and
6. If applicable, if a change in chemical treatment systems or chemically-enhanced control is made, including use of a different treatment chemical, different dosage rate, or different area of application.
7. SWPPP Modification Records. Operators are required to maintain records showing the dates of all SWPPP modifications. The records must include the name of the person authorizing each change (see Part 6.1(3)) and a brief summary of all changes.

6.5.3 Certification Requirements.

All modifications made to the SWPPP consistent with Part 6.5.2 must be authorized by a person identified in Appendix B, Subsection 9.

6.5.4 Required Notice to Other Operators.

When the operator determines that a modification to the SWPPP is required and there are multiple operators covered under a common SWPPP, any operators who may be impacted by the change to the SWPPP shall be notified at the address of record in the SWPPP.

6.6 Deficiencies in the SWPPP

ADEQ may notify the operator at any time that the SWPPP does not meet one or more of the requirements of this permit. The notification shall identify the parts of this permit that are not being met and parts of the SWPPP that require modification to comply with permit. Within 15 calendar days of receipt of the notification from ADEQ (or as otherwise provided by ADEQ), the operator shall make the required changes to the SWPPP and submit to ADEQ a written certification that the changes have been made. ADEQ may require re-submittal of the SWPPP to confirm all deficiencies have been adequately addressed.

In accordance with Appendix B, Subsection 1, ADEQ also is not precluded from taking enforcement action for any period of time the operator was operating under a SWPPP that did not meet the minimum requirements of this permit.

6.7 Posting, SWPPP Review and Making SWPPPs Available

1. The operator must post the authorization number(s) in a conspicuous location near the main entrance of the construction site and retain a copy of the authorization certificate in the SWPPP. For linear projects, the authorization number(s) must be posted near the entrance where most of the construction activity is occurring.
2. A copy of the site specific SWPPP shall be on-site whenever construction or support activities are actively underway, and shall be available to the Department or any other federal, state or local authority having jurisdiction over the project at any reasonable time (generally Monday through Friday, 8:00 a.m. to 5:00 p.m.).

ED_001509B_00000855-00068

3. The SWPPP shall be made available to the Department or another federal, state, tribal, or local authority having jurisdiction over stormwater discharges from the project at the time of an on-site inspection.

4. Any person, including, tribal authority, state, federal or local agency may make a written request to ADEQ for access to a copy of the SWPPP. ADEQ may request, and within 7 calendar days the operator shall provide, a copy for ADEQ to make available for public review;

5. *Inactive and Unstaffed Sites:* Operators with sites that meet the requirements for inactive and unstaffed are not required to maintain the SWPPP on-site. However, the SWPPP must be locally available (i.e., in Arizona) and must be on-site when conducting the inspections required by Part 4. For the purpose of a regulatory inspection, the SWPPP shall be made available to ADEQ, USEPA, or other Federal, State or local authority having stormwater program authority, within 48 hours of request. If otherwise requested by ADEQ, the operator shall submit copies of these documents within 14 calendar days of request.

6.8 Procedures for Inspection, Maintenance, and Corrective Action

The SWPPP must describe the procedures operators will follow for maintaining their control measures, conducting site inspections, and, where necessary, taking corrective actions, in accordance with Part 3.1, Part 4, and Part 5 of the permit. The following information must also be included in the SWPPP:

1 Personnel responsible for conducting inspections;

2 The inspection schedule that will be followed based on whether the site is subject to Part 4.2(1) or 4.2(3), and whether the site qualifies for any of the reduced inspection frequencies in Part 4.2(2) or 4.2(4). If conducting inspections in accordance with the inspection schedule in Part 4.2(1) or 4.2(3), document the weather information required in the inspection report (see Part 4.5);

3 If reducing the inspection frequency in accordance with Part 4.2(2) or 4.2(4), the beginning and ending dates of the reduced inspection period; and

4 Any inspection or maintenance checklists or other forms that will be used.

5. The operator shall ensure that all qualified personnel (see Appendix A) review the requirements of this permit. Qualified personnel are responsible for:

- The design, installation, maintenance, and/ or repair of control measures (including pollution prevention measures);
- The application and storage of treatment chemicals (if applicable);
- Conducting inspections as required in Part 4.1; and
- Taking corrective actions as required in Part 5.

ED_001509B_00000855-00069

7.0 STORMWATER MONITORING

The provisions of Part 7 apply only to operators with construction projects located within 1/4 mile of an impaired or outstanding Arizona water (OAW), or as otherwise specified by ADEQ. Any portion of the project area that extends within this distance is subject to the requirements of this Part, unless the operator provides a justification for not monitoring, consistent with Part 7.1. The monitoring plan, or justification, must be a part of the SWPPP and submitted along with it to ADEQ for approval.

The Department may notify the permittee, in writing, of additional discharge monitoring required to ensure protection of receiving water quality if it is determined that the pollutant may be causing or contributing to an exceedance of a water quality standard.

7.1 Monitoring Program.

Operators of projects that are located within 1/4 mile of impaired or outstanding Arizona waters (OAW) shall prepare and implement a monitoring program that meets the requirements of this Part. Sites can be exempted from monitoring if the operator provides a demonstration acceptable to ADEQ that there is no potential for the discharge to reach the OAW or impaired receiving water.

For any portion of a construction site that is located within 1/4 mile of an impaired water, if the operator can demonstrate that there is no reasonable potential that construction activities will be an additional source of the specific pollutant for which the water is impaired, analytical monitoring for that parameter is not required. As part of this demonstration, the operator must consider all on-site activities and sources, as well as the potential for any pollutants (metals, nutrients, etc.) to be present in the on-site soils that will be disturbed.

7.2 General Requirements.

The operator shall develop a written site-specific monitoring program for analytical monitoring of stormwater unless an acceptable rationale demonstrates that stormwater monitoring is not necessary, in accordance with Part 7.1. . The monitoring program shall be a part of the SWPPP as either an appendix or separate SWPPP section. The monitoring program shall include:

1. Locations of monitoring sites;
2. The name(s) and title of the person(s) who will perform the monitoring;
3. A map showing the segments or portions of the receiving water that are most likely to be impacted by the discharge of pollutant(s);
4. Water quality parameters/ pollutants to be sampled;
5. The citation and description of the sampling protocols to be used; and
6. Identification of the analytical methods and related methodetection limits (if applicable) for each parameter required. Method detection limits shall be below applicable surface water quality standards when possible.
7. Additionally, for construction sites within 1/4 mile of an impaired water, the monitoring program shall include:
    a. An identification of the pollutant(s) of concern based on the most recent 305(b) / 303(d) listing or other information available; and
    b. A description of potential source(s) of this pollutant(s) from the project, if any.

7.3 Analytical Monitoring Requirements.

1. Analytical Monitoring Schedule. The operator shall conduct analytical monitoring a minimum of two times per wet season throughout the duration of permit coverage. Analytical monitoring is only required when stormwater or snowmelt exits the construction site by way of a discharge point in sufficient quantity to allow for sample collection and analysis.

    Wet seasons, for the purposes of analytical monitoring, are defined as follows:

- x Summer wet season: June 1 – October 31
- x Winter wet season: November 1 – May 31

2. Adverse Conditions. The operator is not required to collect samples under adverse conditions, in accordance with Part 4.2(6). Information about any adverse conditions that prevented sampling shall be documented in the SWPPP.

3. Analytical Monitoring Locations. The operator shall conduct discharge sampling at locations observed or suspected to contain the greatest pollutant load resulting from the construction activities. If any portion of the construction site is located within 1/4 mile of an impaired water or OAW, the operator shall use Table 7-1 to determine the minimum number of samples to collect for purposes of analytical monitoring.

Table 7-1. Minimum number of samples to collect	
Number of Discharge Points	Number of Samples
1 to 4	1
5 to 19	2
20 or more	10% of total

   a. Where the construction site is adjacent to or otherwise discharges directly to an OAW, the operator shall sample for turbidity both immediately upstream and downstream of each discharge point. If there are two or more discharge locations from the site to the same OAW, the operator may sample at one upstream and one downstream location in the stream

   b. If the impaired water or OAW is a lake, a site-specific proposal for sampling the impact area shall be submitted.

4. Analytical Monitoring Parameters.

   a. All operators with construction sites that are located within 1/4 mile of an OAW shall monitor for turbidity. The operator shall compare turbidity values from the sample locations referenced in Part 7.3(3)(a). If there is a 25% or more increase at the downstream monitoring location, or for lakes, in the area of impact, the operator shall evaluate and replace, maintain, or install additional control measures as necessary to reduce sediment transport.

   b. For sites with discharges to OAWs, the operator shall also sample for any pollutants known to be present at the site or that have the potential to be discharged from the site.

   c. All operators with construction sites that are located within 1/4 mile of an impaired water shall monitor for the pollutant(s) for which the water is impaired.

5. Sampling and Analysis Plan (SAP) The operator shall establish written procedures for sample collection, preservation, tracking, handling, and analyses. The approved SAP (in accordance with Parts 1.5(3) and 1.5(4)) shall be a part of the SWPPP, either as an appendix or a separate SWPPP section. The SAP shall include the following:

   a. Sample Collection, Preservation, Tracking, Handling and Analyses.

      - x Designate and train personnel to collect, maintain, and handle samples in accordance with the appropriate sample protocols.
      - x Identify water quality parameters/pollutants to be sampled including any pollutant(s) of concern in accordance with this Part;
      - x Identify the required sample analyses and associated analytical methods (analytical laboratory and field analyses).

ED_001509B_00000855-00071

- Written procedures for:
  - Sample collection (equipment and containers, calibration procedures, document site conditions during sampling, field notes and conditions under which the sample was taken),
  - Preservation (sample preparation to meet holding times),
  - Tracking (including chain-of-custody procedures), and
  - Handling (packing, transporting and shipping procedures to maximize sample integrity).

b. Calibration and Maintenance of Equipment and Monitoring Methods.

All monitoring instruments and equipment (including operators' own field instruments for measuring pH and turbidity) shall be calibrated and maintained in accordance with manufacturers' recommendations. All laboratory analyses shall be conducted according to test procedures specified in 40 CFR Part 136, unless other test procedures have been specified in this general permit.

All samples collected for analytical monitoring shall be analyzed by a laboratory that is licensed by the Arizona Department of Health Service (ADHS) Office of Laboratory Licensure and Certification. This requirement does not apply to parameters that require analysis at the time of sample collection as long as the testing methods used are approved by ADHS or ADEQ. These parameters may include flow, dissolved oxygen, pH, temperature, and total residual chlorine. The operator may conduct field analysis of turbidity if the operator has sufficient capability (qualified and trained employees, properly calibrated and maintained field instruments, etc.) to properly perform the field analysis.

ED_001509B_00000855-00072

8.0 FEES, REPORTING AND RECORDKEEPING

8.1 Fee Requirements.

In accordance with A.A.C R18-14-109, the operator shall pay the initial AZPDES water quality protection services fee for coverage under this permit at the time the NOI is submitted. In addition, the operator shall pay the applicable annual fee when billed, unless a notice of termination has been submitted to ADEQ. The annual fee is due on the anniversary of the date the authorization certificate (see Part 2.3(3)(d)). Both fees are based on the amount of acreage identified in the NOI, in accordance with A.A.C. R18-14-109, Table 6.

8.2 Records.

1. Address for Submittal of All Forms and Reports All documents required by this permit (signed copies of NOIs, NOTs, DMRs and paper copies of any reports required in Parts 4, 5, 6, 7 and 8) and any other written correspondence concerning discharges covered under this permit shall be signed and dated in accordance with Appendix B, Subsection 9 of this permit and submitted to ADEQ at the address below. Other options (i.e., electronic submittal) may also be used if ADEQ makes the information available on the Internet or by public notice.

   Arizona Department of Environmental Quality
   Surface Water Section, Stormwater Permits Unit—CGP Monitoring
   1110 W. Washington Street, Mail Code 5415 A-1
   Phoenix, AZ 85007

   Reports of non-compliance shall be reported to:

   Arizona Department of Environmental Quality
   Water Quality Compliance Section
   1110 W. Washington Street, Mail Code 5515 B-1
   Phoenix, AZ 85007
   Office: 602/ 771 – 4497; Fax 602/ 771 – 4505

2. Record Submittal. Operators of construction sites that are required to monitor in accordance with Part 7, shall submit analytical monitoring results annually. Monitoring records for the period between January 1 and December 31 shall be submitted to ADEQ by January 31 of each year or at the time of final stabilization and NOT submittal, whichever is sooner.

   Monitoring results must be reported on a Discharge Monitoring Report (DMR) form available at http://www.azdeq.gov/environ/water/permits/cgp.html or other format specified by the Director, and submitted to:

   Arizona Department of Environmental Quality
   Surface Water Section
   Stormwater and General Permits Unit/NOI (5415A-1)
   1110 W. Washington Street
   Phoenix, Arizona 85007

3. Record Retention. The operator shall retain records of all stormwater monitoring information, corrective actions, inspection and other reports with the SWPPP for a period of at least three years from the date the NOT was submitted to ADEQ.

ED_001509B_00000855-00073

APPENDIX A. DEFINITIONS and ACRONYMS (for the purposes of this permit).

A – 1. DEFINITIONS

"24 hour period" – any consecutive 24-hour period.

"Anticipated storm event"– any storm event with at least a 30% chance of precipitation as predicted by the National Weather Service for the area local to the construction site.

"Approved Total Maximum Daily Loads (TMDLs)"–Approved TMDLs are those that are developed by the Arizona Department of Environmental Quality and approved by USEPA. See also, Total Maximum Daily Load.

"Arid areas" – the parts of Arizona that receive an annual rainfall of less than 20 inches.

"Best management practices" (BMPs) – those methods, measures or practices to prevent or reduce discharges and includes structural and nonstructural BMPs and operation and maintenance procedures. Best management practices may be applied before, during and after discharges to reduce or eliminate the introduction of pollutants into receiving waters. In addition, the term shall include erosion and sediment control BMPs, stormwater conveyance, stormwater diversion, and treatment structures, and any procedure or facility used to minimize the exposure of pollutants to stormwater or to remove pollutants from stormwater.

"Borrow Areas" – the areas where materials are dug for use as fill, either onsite or off-site.

"Calendar day" – a calendar day or any 24-hour period that reasonably represents the calendar day.

"Cationic Treatment Chemical" – polymers, flocculants, or other chemicals that contain an overall positive charge. Among other things, they are used to reduce turbidity in stormwater discharges by chemically bonding to the overall negative charge of suspended silts and other soil materials and causing them to bind together and settle out. Common examples of cationic treatment chemicals are chitosan and cationic PAM.

"Commencement of construction activities" – the initial disturbance of soils (or 'breaking ground') associated with clearing, grading, excavating, or stockpiling of fill material activities or other construction-related activities (such as the placement of fertilizers, pesticides, herbicides, detergents, fuels, oils, or other chemicals, or the occurrence of authorized non-stormwater washout activities, or dewatering activities have begun on the site).

"Common plan of development"– a contiguous area where multiple separate and distinct land disturbing activities may be taking place at different times, on different schedules, but under one plan. A 'plan' is broadly defined to include design, permit application, advertisement or physical demarcation indicating that land-disturbing activities may occur.

"Construction activity" – earth-disturbing activities such as, clearing, grading, excavating, stockpiling of fill material and other similar activities. This definition encompases both large construction activities defined in 40 CFR 122.26 (b)(14)(x) and small construction activities in 40 CFR 122.26 (b)(15)(i) and includes construction support activities.

"Construction and Development Effluent Limitations and New Source Performance Standards" (C&D Rule) – as published in 40 CFR § 450 is the regulation requiring effluent limitations guidelines (ELGs) and new source performance standards (NSPS) for controlling the discharge of pollutants from construction sites.

"Construction site" or **"site"** – the land or water area where construction activities will occur, including construction support activities, and where control measures will be installed and maintained. The construction support activities may be located at a different part of the property from where the primary construction activity will take place, or on a different piece of property altogether. The construction site is often a smaller subset of the lot or parcel within which the project is taking place.

"Construction support activity" – a construction-related activity that exclusively supports the construction activity and involves earth disturbance or pollutant-generating activities of its own, and can include activities associated with concrete or asphalt batch plants, equipment staging yards, materials storage areas, excavated material disposal areas, and borrow areas. When the term "support activities" is used without clarification, it means "construction support activities".

"Construction waste" – discarded material (such as packaging materials, scrap construction materials, masonry products, timber, steel, pipe, and electrical cuttings, plastics, and Styrofoam).

"Control measure" – refers to any BMP or other method (including effluent limitations) used to prevent or reduce the discharge of pollutants to waters of the United States.

"Conveyance channel" – a temporary or permanent waterway designed and installed to safely convey stormwater flow within and out of a construction site.

"Corrective action" – any action taken to (1) modify, or replace any ineffective control measure used at the site; (2) mitigate any conditions that resulted in a discharge of pollutants above surface water quality standards; or (3) remedy a permit violation.

"Department" – the Arizona Department of Environmental Quality.

"Discharge" – any addition of any pollutant to waters of the United States or to a MS4 from any point source.

"Discharge of a pollutant" – any addition of any "pollutant" or combination of pollutants to "waters of the United States" from any "point source," or 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 includes additions of pollutants into waters of the United States from surface runoff which is collected or channeled by man. See 40 CFR 122.2.

"Discharge point" – the location where stormwater flows exit the construction site.

"Domestic waste" – typical household trash, garbage or rubbish items generated by construction activities.

"Drought" – weather conditions considered "severely" or "extremely" dry (i.e., has a value of -1.50 or less) as evaluated by the 3-month Standardized Precipitation Index (SPI) which compares current cumulative precipitation to average conditions.

"Effective operating condition" – a control measure is kept in effective operating condition if it has been implemented and maintained in such a manner that it is working as designed to minimize pollutant discharges.

"Effluent limitations" – any of the Part 1.4 or Part 3 requirements.

"Effluent Limitations Guideline" (ELG) – defined in 40 CFR § 122.2 as a regulation published by the Administrator under section 304(b) of CWA to adopt or revise effluent limitations.

"Emergency-related construction activity" – an activity initiated in response to a emergency (e.g., natural disaster, disruption in essential public services), for which the related work requires immediate authorization to avoid imminent endangerment to human health or the environment, or to reestablish essential public services.

"Ephemeral water" – a surface water that has a channel that is at all times above the water table, and that flows only in direct response to precipitation. [A.A.C. R18-11-101(22)]

"Erosion control" – temporary or permanent measures to prevent soil particles from detaching and being transported in stormwater.

"Hazardous materials" or **"Hazardous substances"** or **"Hazardous or toxic waste"** – any liquid, solid, or contained gas that contain properties that are dangerous or potentially harmful to human health or the environment. See also 40 CFR §261.2.

"Impaired water" – waters that have been assessed by ADEQ, under the Clean Water Act, as not attaining a water quality standard for at least one designated use, and are listed in Arizona's current 303(d) List or on the 305(b) Category 4 list.

"Intermittent water" or **"Intermittent stream"** – a stream or reach that flows continuously only at certain times of the year, as when it receives water from a spring or from another surface source, such as melting snow. [A.A.C. R18-11-101(25)]

"Linear project" – includes the construction of roads, bridges, conduits, substructures, pipelines, sewer lines, towers, poles, cables, wires, connectors, switching, regulating and transforming equipment and associated ancillary facilities in a long, narrow area.

"Minimize" – to reduce and/or eliminate to the extent achievable using control measures that are technologically available and economically practicable and achievable in light of best industry practices.

"Municipal separate storm sewer" – a conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels, or storm drains):

i. 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, stormwater, 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 Clean Water Act (33 U.S.C. 1288) that discharges to waters of the United States;
ii. Designed or used for collecting or conveying stormwater;
iii. Which is not a combined sewer; and
iv. Which is not part of a Publicly Owned Treatment Works.

"Municipal separate storm sewer system" (MS4) – all separate storm sewers defined as "large," "medium," or "small" municipal separate storm sewer systems or any municipal separate storm sewers on a system-wide or jurisdiction-wide basis as determined by the Director under A.A.C. R18-9-C902(A)(1)(g)(i) through (iv). [A.A.C. R18-9-A901(23)]. This also includes similar systems owned or operated by separate storm sewer municipal jurisdictions not required to obtain stormwater discharge authorization.

"Notice of Intent" (NOI) – the application to operate under this general permit.

"Notice of Termination" (NOT) – the application to terminate coverage under this general permit.

"Outstanding Arizona Water" – a surface water that has been designated by ADEQ as an outstanding state resource under A.A.C. R18-11-112.

"Perennial water" – a surface water that flows continuously throughout the year (A.A.C. R18-11-101(30)).

"Person" – an individual, employee, officer, managing body, trust, firm, joint stock company, consortium, public or private corporation, including a government corporation, partnership, association or state, a political subdivision of this state, a commission, the United States government or any federal facility, interstate body or other entity. [A.R.S. § 49-201(27)]

"Point(s) of discharge" – see "Discharge Point."

"Point source" – 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 stormwater runoff.

"Pollutant" – sediment, fluids, contaminants, toxic wastes, toxic pollutants, dredged spoil, solid waste, substances and chemicals, pesticides, herbicides, fertilizers and other agricultural chemicals, incinerator residue, sewage, garbage, sewage sludge, munitions, petroleum p roducts, chemical wastes, biological materials, radioactive materials, heat, wrecked or discarded equipment, rock, sand, cellar dirt (e.g., overburden material), and mining, industrial, municipal and agricultural wastes or any other liquid, solid, gaseous or hazardous substances. [A.R.S. § 49-201(29)]

"Pollutant-generating activities" – at construction sites, those activities that lead to or could lead to the discharge of pollutants, either as a result of construction activity or construction support activity. Types of pollutants that are typically associated with construction sites include, but are not limited to:

- Sediment;
- Nutrients;
- Heavy metals;
- Pesticides and herbicides;
- Oil and grease;
- Bacteria and viruses;
- Trash, debris, and solids;
- Treatment polymers; and
- Any other toxic chemicals.

"Pollution prevention measures" – control measures designed to reduce or eliminate the addition of pollutants to construction site discharges through analysis of pollutant sources, implementation of proper handling/ disposal practices, employee education, and other actions.

"Polymers" – coagulants and flocculants used to control erosion on soil or to enhance the sediment removal capabilities of sediment traps or basins. Common construction site polymers include polyacrylamide (PAM), chitosan, alum, polyaluminum chloride, and gypsum.

"Prohibited discharges" – discharges that are not allowed under this permit, including

1. Wastewater from washout of concrete;
2. Wastewater from washout and cleanout of stucco, paint, form release oils, curing compounds and other construction materials;
3. Fuels, oils, or other pollutants used in vehicle and equipment operation and maintenance;
4. Soaps or solvents used in vehicle and equipment washing; and
5. Toxic or hazardous substances from a spill or other release.

"Provisionally covered under this permit" – ADEQ provides temporary coverage under this permit for emergency-related projects prior to receipt of a complete and accurate NOI. Discharges from earth-disturbing activities associated with the emergency-related projects are subject to the terms and conditions of the permit during the period of temporary coverage.

"Qualified person" or **"Qualified personnel"** – Qualified personnel are those (either the operator's employees or outside personnel) who are knowledgeable in the principles and practice of erosion and sediment controls and pollution prevention, who possess the skills to assess conditions at the construction site that could impact stormwater quality, and the skills to assess the effectiveness of any control measures selected to control the quality of stormwater discharges from the construction activity.

"Received" – for the purposes of this permit and in reference to NOIs or NOTs or Permit Waiver Certificate forms means:

1. The day the information was signed electronically via the Smart NOI system and submitted to ADEQ,
2. The date of hand-delivery of the signed form to ADEQ, or
3. The date ADEQ signs for certified mail containing the signed form.

"Receiving water" – a "Water of the United States" as defined in 40 CFR §122.2 into which the regulated stormwater discharges.

"Reclaimed water" – water that has been treated or processed by a wastewater treatment plant or an on-site wastewater treatment facility. A.R.S. § 49-201(31).

"**Run-on**" – stormwater that drains from land located upslope or upstream from the regulated site in question.

"Sediment control" – measures designed to intercept and settle out soil particles that have become detached and transported by water. Sediment control measures complement soil stabilization measures (erosion control).

"Site" – see "construction site".

"Small construction activity" – defined at 40 CFR §122.26(b)(15) and incorporated here by reference. A small construction activity includes clearing, grading, and excavating resulting in a land disturbance that will disturb equal to or greater than one (1) acre and less than five (5) acres of land or will disturb less than one (1) acre of total land area but is part of a larger common plan of development or sale that will ultimately disturb equal to or greater than one (1) acre and less than five (5) acres. Small construction activity does not include routine maintenance that is performed to maintain the original line and grade, hydraulic capacity, or original purpose of the site.

"Spill" – the release of a hazardous or toxic substance from its container or containment (see Part 3.1.3.5).

"Stabilization" – covering or maintaining an existing cover over soil that reduces and minimizes erosion. The use of vegetative and/or non-vegetative cover to prevent erosion and sediment loss in areas exposed through the construction process.

"Storm event" – a precipitation event that results in a measurable amount of precipitation.

"Stormwater" – stormwater runoff, snow melt runoff, and surface runoff and drainage. See 40 CFR 122.26(b)(13).

"Stormwater discharges associated with construction activity" – a discharge of pollutants in stormwater runoff from areas where soil disturbing activities (e.g., clearing, grading, or excavating), construction materials, or equipment storage or maintenance (e.g., fill piles, borrow areas, concrete truck washout, fueling), or other industrial stormwater directly related to the construction process (e.g., concrete or asphalt batch plants) are located. See 40 CFR 122.26(b)(14)(x) and 40 CFR 122.26(b)(15).

"Stormwater Pollution Prevention Plan" (SWPPP) – a site-specific, written document that, among other things: (1) identifies potential sources of stormwater pollution at the construction site; (2) describes control measures to reduce or eliminate pollutants in stormwater discharges from the construction site; and (3) identifies procedures the operator will implement to comply with the terms and conditions of this general permit.

"Stormwater team" – an individual or group of individuals responsible for oversight of the development and modifications of the SWPPP, and oversight of compliance with the permit requirements. The individual(s) on the "Stormwater Team" must be identified in the SWPPP.

"Surface Water" – a "Water of the United States" as defined in 40 CFR §122.2.

"Temporary stabilization" – a condition where exposed soils or disturbed areas are provided a temporary vegetative and/or non-vegetative protective cover to prevent erosion and sediment loss. Temporary stabilization may include temporary seeding, geotextiles, mulches, and other techniques to reduce or eliminate erosion until either final stabilization can be achieved or until further construction activities take place to re-disturb this area.

"Total Maximum Daily Load" (TMDL) – an estimation of the total amount of a pollutant from all sources that may be added to a water while still allowing the water to achieve and maintain applicable surface water quality standards. Each total maximum daily load shall include allocations for sources that contribute the pollutant to the water, as required by section 303(d) of the clean water act (33 United States Code, Section 1313(d)) and regulations implementing that statute to achieve applicable surface water quality standards. [A.R.S. § 49-231(4)]

"Toxic waste" – see "Hazardous Materials"

"Turbidity" – a condition of water quality characterized by the presence of suspended solids and/or organic material; expressed as nephelometric turbidity units (NTU).

"Waters of the United States" (U.S.) – defined in 40 CFR 122.2.

"Waste Load Allocation" – The maximum load of pollutants each discharger of waste is allowed to release into a particular waterway. Discharge limits are usually required for each specific water quality criterion being, or expected to be, violated. WLAs constitute a type of water quality-based effluent limitation. (See 40 C.F.R. § 130.2(h))

"Water Quality Standards" – A water quality standard defines the water quality goals of a water body, or portion thereof, by designating the use or uses to be made of the water and by setting criteria necessary to protect the uses. States and USEPA adopt water quality standards to protect public health or welfare, enhance the quality of water and serve the purposes of the Clean Water Act (See CWA sections 101(a)(2) and 303(c)). Water quality standards also include an antidegradation policy. See P.U.D. no. 1 of Jefferson County et al v. Wash Dept of Ecology et al, 511 US 701, 705 (1994).

"Wetland" – an area that is inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances does support, a prevalence of vegetation typically adapted for life in saturated soil conditions. A wetland includes a swamp, marsh, bog, cienega, tinaja, and similar areas. [A.A.C. R18-11-101(49)]

"Work day" – a calendar day on which construction activities will take place.

A – 2. ACRONYMS

AAC	Arizona Administrative Code	NOI	Notice of Intent
ADEQ	Arizona Department of Environmental Quality	NOT	Notice of Termination
ARS	Arizona Revised Statute	NPDES	National Pollutant Discharge Elimination System
AZPDES	Arizona Pollutant Discharge Elimination System	SWPPP	Stormwater Pollution Prevention Plan
CFR	Code of Federal Regulations	TMDL	Total Maximum Daily Load
CWA	Clean Water Act	USEPA	United States Environmental Protection Agency
MS4	Municipal Separate Storm Sewer System	USGS	United States Geological Survey

APPENDIX B. STANDARD PERMIT CONDITIONS.

Standard permit conditions in Appendix B are consistent with the general permit provisions required under 40 CFR 122.41 and A.A.C. R-18-9-A905(A)(3).

1. **Duty to Comply.** [A.A.C. R18-9-A905(A)(3)(a), which incorporates 40 CFR 122.41(a)(1) and A.R.S. §§ 49-261, 262, 263.01, and 263.02.]

   a. The operator shall comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the Clean Water Act; A.R.S. Title 49, Chapter 2, Article 3.1; and A.A.C. Title 18, Chapter 9, Article 9, and is grounds for enforcement action, permit termination, revocation and reissuance, or modification, or denial of a permit renewal application.

   b. The issuance of this permit does not waive any federal, state, county, or local regulations or permit requirements with which a person discharging under this permit is required to comply.

   c. The operator shall comply with any effluent standards or prohibitions established under section 307(a) of the Clean Water Act for toxic pollutants within the time provided in the regulations that establish these standards or prohibitions, even if this permit has not yet been modified to incorporate the requirement.

2. **Duty to Reapply / Continuation of the Expired General Permit** [A.A.C. R18-9-A905, which incorporates 40 CFR 122.41(b) and A.A.C. R18-9-C903]

   a. Upon reissuance of the general permit, the permittee shall file an NOI, within the timeframe specified in the new general permit, and shall obtain new written authorization to discharge from the Director.

   b. If the Director does not reissue the general permit before the expiration date, the current general permit will be administratively continued and remain inforce and effect until the general permit is reissued.

   c. Any operator granted authorization to discharge under the general permit before the expiration date automatically remains covered by the continued general permit until the earlier of:

      i. Reissuance or replacement of the general permit, at which time the operator shall comply with the NOI conditions of the new general permit to maintain authorization to discharge; or

      ii. The date the operator has submitted a Notice of Termination; or

      iii. The date the Director has issued an individual permit for the discharge; or

      iv. The date the Director has issued a formal permit decision not to reissue the general permit, at which time the operator shall seek coverage under an alternative general permit or an individual permit, or cease discharge.

3. **Need To Halt or Reduce Activity Not a Defense.** [A.A.C. R18-9-A905(A)(3)(a), which incorporates 40 CFR 122.41(c)]

   It shall not be a defense for an operator in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

4. **Duty to Mitigate.** [A.A.C. R18-9-A905(A)(3)(a), which incorporates 40 CFR 122.41(d)]

   The operator shall take all reasonable steps to minimize or prevent any discharge in violation of this permit that has a reasonable likelihood of adversely affecting human health or the environment per A.R.S. § 49-255.01(E)(1)(d).

5. **Proper Operation and Maintenance.** [A.A.C. R18-9-A905(A)(3)(a), which incorporates 40 CFR 122.41(e)]

   The operator shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the operator to achieve compliance with the conditions of this permit. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assuranceprocedures.

6. **Permit Actions.** [A.A.C. R18-9-A905(A)(3)(a), which incorporates 40 CFR 122.41(f)]

   This permit may be modified, revoked and reissued, or terminated for cause. Filing a request by the operator for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any permit condition.

7. **Property Rights.** [A.A.C. R18-9-A905(A)(3)(a), which incorporates 40 CFR 122.41(g)]

   This permit does not convey any property rights of any sort, or any exclusive privileges, nor does it authorize any injury to private property or invasion of personal rights, nor any infringement of federal, state, Indian tribe, or local laws or regulations.

8. **Duty to Provide Information.** [A.A.C. R18-9-A905(A)(3)(a), which incorporates 40 CFR 122.41(h)]

   The operator shall furnish to ADEQ, within a reasonable time, any information which the Director may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit or to determine compliance with this permit. The operator shall also furnish to ADEQ upon request, copies of records required to be kept by this permit.

9. **Signatory Requirements.** [A.A.C. R18-9-A905(A)(3)(a), which incorporates 40 CFR 122.41(k) and (l); A.A.C. R18-9-A905(A)(1)(c), which incorporates 40 CFR 122.22]

   All Notices of Intent (NOI) and Notices of Termination (NOT) must be signed as follows:

   a. NOIs:

      i. For a corporation: By a responsible corporate officer. For the purpose of this section, a responsible corporate officer means: a president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision-making functions for the corporation; or 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 can ensure that the necessary systems are established or actions taken to gather complete and accurate information for permit application requirements; and where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures;

      ii. For a partnership or sole proprietorship: By a general partner or the proprietor, respectively; or

      iii. For a municipality, state, federal, or other public agency: By either a principal executive officer or ranking elected official. For purposes of this section, a principal executive officer of a federal (or state) agency includes: (1) The chief executive officer (or director) of the agency, or (2) a senior executive officer having responsibilityfor the overall operations of a principal geographic unit of the agency.

   b. All NOTs, reports, including SWPPPs, inspection reports, monitoring reports, and other information required by this permit must be signed by a person described in Appendix B, Subsection 9(a) above or by a duly authorized representative ofthat person. A person is a

duly authorized representative only if:

i. The authorization is made in writing by a person described in Subsection 9(a) above;

ii. The authorization specifies either an individual or a positon having responsibility for the overall operation of the regulated facility or activity such asthe position of manager, operator, superintendent, position of equivalent responsibility or an individual or position having overall responsibility for environmental matters for thecompany. (A duly authorized representative may be either a named individual or any individual occupying a named position); and

iii. The signed and dated written authorization is included in the SWPPP. A copy must be submitted to ADEQ, upon request.

c. Certification. Any person signing documents under the terms of this permit shall make the following 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.

10. Inspection and Entry. [A.A.C. R18-9-A905(A)(3)(a), which incorporates 40 CFR 122.41(i)]

The operator shall allow the Director or an authorized representative upon the presentation of credentials and such other documents as may be required by law to:

a. Enter upon the operator's premises where a regulated facility or activity is located or conducted or where records must be kept under the conditions ofthis permit;

b. Have access to and copy at reasonable times, any records that must be kept under the conditions of this general permit;

c. Inspect at reasonable times any facility or equipment (including monitoring and control equipment), practices or operations regulated or required underthis permit;

d. Sample or monitor at reasonable times any substances or parameters at any location, for the purposes of assuring permit compliance or as otherwise authorized by A.R.S. Title 49, Chapter 2, Article 3.1, and 18 A.A.C. 9, Articles 9.

11. Monitoring and Records. [A.A.C. R18-9-A905(A)(3)(a), which incorporates 40 CFR 122.41(j)]

a. Representative Samples/Measurements. Samples and measurements taken for the purpose of monitoring must be representative of the volume and nature of the monitored activity.

b. Retention of Records. The operator shall retain records of all monitoring information, including all calibration and maintenance records, copies of all reports required by this permit, and records of all data used to complete the application for this permit, for a period of at least three (3) years from the date permit coverage ends. Operators shall submit any such records to the Director upon request. The operator shall retain the SWPPP developed in accordance with Part 6 of this permit, for at least three (3) years after the last modification or amendment is made to the plan. The Director may extend this retention period upon request by notifying the operator in writing at any time prior to the end of the standard three year retention period.

c. Records Contents. Records of monitoring information must include:

i. The date, exact place, and time of sampling or measurements;

ii. The initials or name(s) of the individual(s) who performed the sampling or measurements;

iii. The date(s) analyses were performed;

iv. The time(s) analyses were initiated;
v. The initials or name(s) of the individual(s) who performed the analyses;
vi. References and written procedures, when available, for the analytical techniques or methods used;
vii. The analytical techniques or methods used; and
viii. The results of such analyses.

d. Any person who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained in this permit is subject to the enforcement actions established under A.R.S. Title 49, Chapter 2, Article 4, which includes the possibility of fines and/or imprisonment.

12. Reporting Requirements. [A.A.C. R18-9-A905(A)(3)(a), which incorporates 40 CFR 122.41(l)]

a. Planned changes. The operator shall give notice to the Director as soon as possible of any planned physical alterations or additions to the permitted facility. Notice is required only when:

i. The alteration or addition to a permitted facility may meet one of the criteria for determining whether a facility is a new source in 40 CFR 122.29(b) (incorporated by reference at A.A.C. R18-9-A905(A)(1)(e)); or

ii. The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants which are subject neither to effluent limitations in the permit, nor to notification requirements under 40 CFR 122.42(a)(1) (incorporated by reference at A.A.C. R18-9-A905(A)(3)(b)).

b. Monitoring reports. Monitoring results must be reported at the intervals specified elsewhere in this permit.

i. Monitoring results must be reported on a Discharge Monitoring Report (DMR) or forms (paper or electronic) provided or specified by ADEQ. Pursuant to Part 8.2(2), all monitoring data collected pursuant to Part 7 must be submitted to the Department using the Discharge Monitoring Report (DMR) form, available at http://www.azdeq.gov/environ/water/permits/cgp.html.

ii. If the operator monitors any pollutant more frequently than required by the permit using test procedures approved under 40 CFR Part 136 unless otherwise specified in 40 CFR Part 503, or as specified in the permit, the results of this monitoring shall be included in the calculation and reporting of the data submitted in the DMR.

iii. Calculations for all limitations which require averaging of measurements must use an arithmetic mean and non-detected results must be incorporated in calculations as the limit of quantitation for the analysis.

c. Anticipated noncompliance. The operator shall give advance notice to the Director of any planned changes in the permitted facility or activity that mayresult in noncompliance with permit requirements.

d. Twenty-four hour reporting.

i. The operator shall report to ADEQ any noncompliance with this permit which may endanger human health or the environment. The operator shall orally notify the office listed below within 24 hours:

Arizona Department of Environmental Quality – Water Quality Compliance
1110 W. Washington Street, Mail Code 5515 B-1
Phoenix, AZ 85007
Office: 602-771 – 2330; Fax 602-771 – 4505

ii. A written submission shall also be provided to the office identified above within five (5) days of the time the operator becomes aware of the circumstances. The written

submission shall contain a description of the noncompliance andits cause; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; andsteps taken or planned to reduce, eliminate, and prevent recurrence of the noncompliance.

iii. The following shall be included as information which must be reported within 24 hours under this paragraph.

1) Any upset which exceeds any effluent limitation in the permit.

2) Violation of a maximum daily discharge limitation for any ofthe pollutants listed by the Director in the permit to be reported within 24 hours. (See 40 CFR 122.44(g) which is incorporated by reference at A.A.C. R18-9-A905(A)(3)(d)).

iv. ADEQ may waive the written report on a case-by-case basis for reports under this subsection if the oral report has been received within 24 hours

e. Other noncompliance. The operator shall report all instances of noncompliance not otherwise required to be reported under this subsection, at the time monitoring reports are submitted. The reports shall contain the information listed in subsection 12(d).

f. Other information. When the operator becomes aware that it failed to submit any relevant facts or submitted incorrect information in the Notice of Intent or in any other report to the Department, the operator shall promptly submit the facts or information to ADEQ at the address listed in Part 8.2.

13. Reopener Clause. [A.A.C. R18-9-A905(A)(3)(d), which incorporates 40 CFR 122.44(c)]

The Department may elect to modify the permit prior to its expiration (rather than waiting for the new permit cycle) to comply with any new statutory or regulatory requirements, such as for effluent limitation guidelines, which may be promulgated in the course of the current permit cycle.

14. Other Environmental Laws.

No condition of this general permit releases the operator fromany responsibility or requirements under other environmental statutes or regulations. For example, this permit does not authorize the "taking" of endangered or threatened species as prohibited by Section 9 of the Endangered Species Act, 16 U.S.C. 1538. Information regarding the location of endangered and threatened species and guidance on what activities constitute a "taking" are available from the U.S. Fish and Wildlife Service. The operator shall also comply with applicable State and Federal laws, including Spill Prevention Control and Countermeasures (SPCC).

15. State or Tribal Law. [Pursuant to A.A.C. R18-9-A904(C)]

Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the operator from any responsibilities, liabilities, or penalties established pursuant to any applicable State or Tribal law or regulation under authority preserved by Section 510 of the Clean Water Act.

16. Severability.

The provisions of this general permit are severable, and if anyprovision of this general permit, or the application of any provision of this general permit to any circumstance, is held invalid, the application of the provision to other circumstances, and the remainder of this general permit shall not be affected.

17. Requiring Coverage under an Individual Permit or an Alternative General Permit. [Pursuant to A.A.C. R18-9-C902 and R18-9-A909]

a. The Director may require a person authorized by this permit to apply for and/or obtain either an individual AZPDES permit or an alternative AZPDES general permit. Any interested person may petition the Department to take action under this section. The Department may

require an operator authorized to discharge under this permit to apply for an individual permit in any of the following cases:

i. A change occurs in the availability of demonstrated technology or practices for the control or abatement of pollutants applicable to the point source;

ii. Effluent limitation guidelines are promulgated for point sources covered by the general permit;

iii. An Arizona Water Quality Management Plan containing requirements applicable to the point sources is approved;

iv. Circumstances change after the time of the request to be covered so that the discharger is no longer appropriately controlled under the general permit,or either a temporary or permanent reduction or elimination of the authorized discharge is necessary;

v. If the Director determines that the discharge is a significant contributor of pollutants. When making this determination, the Director shall consider:

1) The location of the discharge with respect to waters of the United States,
2) The size of the discharge,
3) The quantity and nature of the pollutants discharged to waters of the U.S., and
4) Any other relevant factor.

b. If an individual permit is required, the Director shall notify the discharger in writing of the decision. The notice shall include:

i. A brief statement of the reasons for the decision;

ii. An application form;

iii. A statement setting a deadline to file the application;

iv. A statement that on the effective date of issuance or denial of the individual permit, coverage under the general permit will automatically terminate;

v. The applicant's right to appeal the individual permit requirement with the Water Quality Appeals Board under A.R.S. § 49-323, the number of days the applicant has to file a protest challenging the individual permit requirement, and thename and telephone number of the Department contact person who can answer questions regarding the appeals process; and

vi. The applicant's right to request an informal settlement conference under A.R.S. 41-1092.03(A) and 41-1092.06.

c. The discharger shall apply for an individual permit within 90 days of receipt of the notice, unless the Director grants a later date. In no case shall the deadline be more than 180 days after the date of the notice.

d. If the discharger fails to submit the individual permit application within the time period established in Appendix B, Subsection 17(c) the applicability of the general permit to the discharger is automatically terminated at the end of the day specified by the Director for application submittal.

e. Coverage under the general permit shall continue until an individual permit is issued or denied unless the general permit coverage is terminated under Appendix B, Subsection 17(d).

18. Request for an Individual Permit. [Pursuant to A.A.C. R18-9-C902]

a. An operator may request an exclusion from coverage of a general permit by applying for an individual permit.

i. The operator shall submit an individual permit application under R18-9-B901(B) and include the reasons supporting the request no later than 90 days after publication of the general permit.

ii. The Director shall grant the request if the reasons cited by the operator are adequate to

support the request.

b. If an individual permit is issued to a person otherwise subject to a general permit, the applicability of the general permit to the discharge is automatically terminated on the effective date of the individual permit.

19. Change of Operator. [A.A.C. R18-9-C904]

If a change of ownership or operator occurs for a facility operating under a general permit:

a. Permitted owner or operator. The operator shall provide the Department with a Notice of Termination by certified mail within 30 days after the new owner or operator assumes responsibility for the facility.

i. The Notice of Termination shall include all requirements for termination specified in the general permit for which the Notice of Termination is submitted

ii. An operator shall comply with the permit conditions specified in the general permit for which the Notice of Termination is submitted until the Notice of Termination is received by the Department.

b. New owner or operator.

i. The new owner or operator shall complete and file a Notice of Intent with the Department within the time period specified in the general permit before taking over operational control of, or initiation of activities at, the facility.

ii. If the previous operator was required to implement a stormwater pollution prevention plan, the new owner shall develop a new stormwater pollution prevention plan, or may modify, certify, and implement the old stormwater pollution preventionplan if the old stormwater pollution prevention plan complies with the requirements of the current general permit.

iii. The operator shall provide the Department with a Notice of Termination if a permitted facility ceases operation, ceases to discharge, or changes operator status. In the case of a construction site, the operator shall submit a Notice of Termination to the Department when:

1) The facility ceases construction operations and the discharge is no longer associated with construction or construction-related activities,

2) The construction is complete and final site stabilization is achieved, or

3) The operator's status changes.

20. Bypass. [A.A.C. R18-9-A905(A)(3)(a), which incorporates 40 CFR 122.41(m)]

a. Definitions.

i. Bypass means the intentional diversion of waste streams fromany portion of a treatment facility

ii. Severe property damage means substantial physical damage to property, damage to the treatment facilities which causes them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production.

b. Bypass not exceeding limitations. The operator may allow any bypass to occur that does not cause effluent limitations to be exceeded, but only if it also is for essential maintenance to assure efficient operation. These bypasses are not subject to the provisions Appendix B, Subsections 20(c) and 20(d).

c. Notice.

i. Anticipated bypass. If the operator knows in advance of the need for a bypass, if possible

prior notice shall be submitted at least ten days before the date of the bypass.

ii. Unanticipated bypass. The operator shall submit notice of an unanticipated bypass as required in Appendix B, Subsection 12(d).

d. Prohibition of bypass.

i. Bypass is prohibited, and ADEQ may take enforcement action against the operator for bypass, unless:

1) Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage;

2) There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass which occurred during normal periods of equipment downtime or preventive maintenance; and

3) The operator submitted notices as required under Appendix B,Subsection 20(c).

ii. ADEQ may approve an anticipated bypass, after considering its adverse effects, if the Department determines that it will meet the three conditions listed above in this Appendix B, Subsection 20(d).

21. Upset. [A.R.S. §§ 49-255(8) and 255.01(E), A.A.C. R18-9-A905(A)(3)(a), which incorporates 40 CFR 122.41(n)]

a. Definition. Upset means an exceptional incident in which there is unintentional and temporary noncompliance with technology based permit effluent limitations because of factors beyond the reasonable control of the operator. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation.

b. Effect of an upset. An upset constitutes an affirmative defense to an action brought for noncompliance with such technology based permit effluent limitations if the requirements of Appendix B, Subsection 21(c) are met. No determination made during administrative review of claims that noncompliance was caused by upset, and before an action for noncompliance, is final administrative action subject to judicial review.

c. Conditions necessary for a demonstration of upset. An operator who wishes to establish the affirmative defense of upset must demonstrate, through properly signed, contemporaneous operating logs, or other relevant evidence that

i. An upset occurred and that the operator can identify the cause(s) of the upset;

ii. The permitted facility was at the time being properly operated;

iii. The operator submitted notice of the upset as required inAppendix B, Subsection 12(d)(iii); and

iv. The operator complied with any remedial measures required under Appendix B, Subsection 4.

d. Burden of proof. In any enforcement proceeding, the operator, who is seeking to establish the occurrence of an upset, has the burden of proof.

22. Penalties for Violations of Permit Conditions.

Any permit noncompliance constitutes a violation and is groundsfor an enforcement action, permit termination, revocation and reissuance, modification, or denial of a permit renewal application.

a. Civil Penalties. A.R.S. § 49-262 provides that any person who violates any provision of A.R.S. Title 49, Chapter 2, Article 2, 3 or 3.1 or a rule, permit, discharge limitation or order issued or adopted under A.R.S. Title 49, Chapter 2, Article 3.1 is subject to a civil penalty not

to exceed $25,000 per day per violation.

b. Criminal Penalties. Any person who violates a condition of this general permit, or violates a provision under A.R.S. Title 49, Chapter 2, Article 3.1, or AA.C. Title 18, Chapter 2, Article 9 is subject to the enforcement actions established under A.R.S. Title 49, Chapter 2, Article 4, which may include the possibility of fines and/or imprisonment.

Appendix B
Arizona Stormwater Construction General Permit (CGP2013) SWPPP Checklist

Arizona Stormwater Construction General Permit (CGP2013) Stormwater Pollution Prevention Plan (SWPPP) Checklist

In accordance with Arizona's Stormwater Construction General Permit (CGP-2013), Part 6.1, an operator is to develop a Stormwater Pollution Prevention Plan (SWPPP) before submitting the Notice of Intent (NOI) for permit coverage and prior to conducting any construction activity. For construction projects initiated under CGP-2008, this checklist may also be used to update an existing SWPPP for an ongoing construction project to meet the requirements of CGP-2013.

Although the use of this SWPPP checklist is not required, operators are encouraged to use this checklist to help ensure the site SWPPP meets the requirements of Arizona's CGP-2013 (AZG2013-001). The "Descriptions" provided below do not necessarily reflect the exact wording used in the permit; rather these are stated in simplified language to provide additional guidance. (Note: If any inadvertent conflict exists between this document and the permit, the permit language prevails). The "Permit Citation" column shows you where each particular requirement is found in the CGP-2013. Use the "Location in the SWPPP" column to note the page where the requirement is addressed in your SWPPP or use "N/A" (not applicable) if your project doesn't include the activity or information described. Please leave the "For ADEQ Use Only" column blank. Using this SWPPP checklist will help you ensure that all the permit requirements are addressed in your SWPPP and will also assist the Department in conducting a more efficient review of your SWPPP if it is required to be submitted.

Please note that your SWPPP does not have to follow the format of this checklist; the purpose of this checklist is to help ensure that your SWPPP contains all required components. This checklist includes information and guidance for preparing your initial SWPPP, as well as information to include throughout the duration of your construction project, including control measures, inspections, corrective actions, and other pertinent information.

Stormwater Pollution Prevention Plan Description of Requirements **SWPPP Contents**	**Permit Citation**	**Location in SWPPP**	**For ADEQ Use Only**
All operator(s) shall sign and certify the SWPPP.	6.1(3)	Section 1.1	
Identify the name, title, contact information and a description of the qualifications and a copy of any training certificates of each operator, or group of operators, including inspector(s), as well as the areas and phases over which each operator has control.	6.3(1 & 2)	Section 1.2	
Describe the nature of construction activities, including the size of the property, the total area expected to be disturbed by the construction activities, the construction support activity areas covered by this permit and the maximum area expected to be disturbed at any one time.	6.3(3)	Section 1.3	
Sequence and Estimated Dates of Construction Activities			
Installation of stormwater control measures.	6.3(4)a	Section 2.1	
Commencement and duration of construction activities.	6.3(4)b	Section 2.2	
Cessation, temporarily or permanently, of construction activities on the site, or in designated portions of the site including the beginning and ending dates of inactive/unstaffed status, when applicable.	6.3(4)c	Section 2.3	

ED_001509B_00000855-00090

Final or temporary stabilization of areas of exposed soil. The dates for stabilization must reflect the applicable deadlines.	6.3(4)d	Section 2.4 and 2.6	
Removal of temporary stormwater conveyances / channels and other stormwater control measures, removal of construction equipment and vehicles, and cessation of any pollutant-generating activities.	6.3(4)e	Section 2.5 and 2.6	
A description of the intended sequence of construction activities, including a schedule of the estimated start dates and the duration of the activity.	6.3(4)	Section 2.6	
Site Description			
Construction site description.	6.3(5)	Section 3.0	
Describe the site and its intended use after the Notice of Termination is filed (e.g. low density residential, shopping mall, highway, etc.).	6.3(5)a	Section 3.1	
The total area of the site and an estimate of the total area of the site expected to be disturbed by construction activities.	6.3(5)b	Section 3.1	
The percentage of the site that is impervious (e.g., paved, roofed, etc.) before and after construction.	6.3(5)c	Section 3.1	
A description of site soils including potential for erosion.	6.3(5)d	Section 3.1.1	
For areas where it is infeasible to maintain a 50 foot buffer describe selected alternative(s).	6.3(5)e	Section 3.1.2	
Identify and describe all material storage areas (including on-site and offsite overburden and stockpiles of dirt, borrow areas, etc.).	6.3(5)f	Section 3.1 and 5.3	
Provide general location map (e.g., a portion of an USGS quadrangle map, a city or county map or other map) – with enough detail to identify the location of the construction site and one mile radius and the waters of the U.S. including tributaries within a one mile radius of the site.	6.3(5) g(i & ii)	Figure 1	
Site Maps			
Provide a site map or series of maps completed to scale showing the entire site that identifies:	6.3(6)	Figures 1-4	
x Topography of the site, existing types of cover (e.g., forest, pasture, pavement, structures), and drainage pattern(s) of flow onto, over, and from the site property before and after major grading activities.	6.3(6)a	Before Figure 1 After Figure 4	
x Drainage divides and direction of stormwater flow (i.e., use arrows to show which way stormwater will flow).	6.3(6)b	Figures 1 & 4	
x Areas of soil disturbance and areas that will not be disturbed. Boundaries of the property and of the locations where construction activities will occur, noting any phasing of construction activities; locations where sediment or soil will be stockpiled; locations of any crossings of surface waters; designated points on the site where vehicles will exit onto paved roads and locations of construction support activity areas covered by this permit.	6.3(6) c(i – v)	Figures 1 & 3	
x Locations of temporary and permanent stormwater control measures identified in the SWPPP.	6.3(6)d	Figure 4	

ED_001509B_00000855-00091

x Locations where stabilization control measures are expected to be implemented.	6.3(6)e	Figures 4	
x Areas protected by buffers (i.e., either the 50-foot buffer or other buffer areas retained on site when within 50 feet of a perennial water), including the boundary line of all such buffers.	6.3(6)f	Section 6.1 and Figure 3	
x Locations of on-site material, waste, borrow areas, or equipment storage areas, and other supporting activities.	6.3(6)g	Figure 3	
x Locations of all potential pollutant-generating activities (see Part 6.3(9)).	6.3(6)h	Figure 3	
x Locations of all surface waters and any impaired waters or OAWs within 1/4 mile of the facility.	6.3(6)i	Figures 1, 2, & 3	
x Stormwater discharge location(s), using arrows to indicate discharge direction. Include: location(s) where stormwater and/or allowable non-stormwater discharges are discharged to waters of the U.S. and location(s) of any discharges to municipal separate storm sewer systems (MS4s) from the construction site. Note: Where surface waters and/or MS4s receiving stormwater will not fit on the plan sheet, they shall be identified with an arrow indicating the direction and distance to the surface water and/or MS4.	6.3(6) j(i & ii)	Figures 1, 2, & 4	
x Locations and registration numbers of on-site drywells and drywells on adjacent properties that have the potential to receive stormwater from the site.	6.3(6)k	No Drywells On-Site	
x Areas where final stabilization has been established and no further construction permit requirements apply.	6.3(6)l	None Established	
x Location and boundaries of environmentally sensitive areas and buffer zones to be preserved.	6.3(6)m	Figure 1 and 3	
x Identify the nearest receiving water(s), including ephemeral and intermittent streams, dry washes, and arroyos. If applicable, the SWPPP shall also identify the areal extent and describe any wetlands near the site that could be disturbed or that could potentially receive discharges from disturbed areas of the project. Indicate if the receiving water is listed as impaired, or an OAW.	6.3(7)	Figures 1 and 3	
Stormwater Control Measures			
Describe all control measures that will be implemented and maintained as part of the construction project to control pollutants in stormwater and allowable non-stormwater discharges.	3.1.4, 6.3(8)	Section 4.0	
Erosion and sediment controls for the following: x Volume and velocity x Peak flow rates and total discharge x To minimize exposed soils and disturbance on steep slopes x To minimize sediment discharges from the site x Maintain natural buffers x Minimize soil compaction	3.1.1 3.1.1.1 3.1.1.2 3.1.1.3 3.1.1.4 3.1.1.5 3.1.1.6	Section 4.0	

ED_001509B_00000855-00092

Site stabilization x Temporary stabilization x Final stabilization x Alternative stabilization	3.1.2 3.1.2.1 3.1.2.2 3.1.2.3	Sections 2.4 and 4.4	
Pollution prevention x Minimize the discharge of pollutants x Construction site egress x Good housekeeping x Spill prevention and response	3.1.3 3.1.3.1 3.1.3.2 3.1.3.3 3.1.3.4	Sections 4.3 and 5.0	
For each major activity identified at Part 6.3 in the project sequence of activities a description of: the control measures, including controls to minimize or eliminate non-stormwater discharges; the general sequence during the construction process or schedule that the control measures will be implemented; and which operator is responsible for the implementation of which control measures.	6.3(8) a(i – iii)	Section 4.1	
Provide drawings and/or specifications for the structural control measures.	6.3(8)b	Figure 4 and Appendix G	
Describe how sediment controls will be installed and made operational prior to conducting earth-disturbing activities.	6.3(8)c	Section 4.3	
For site egress points, document the control measures that are intended to minimize tracking of pollutants from vehicles leaving the site.	6.3(8)d	Section 4.3.1	
Provide a written account or other documentation of repairs of structural control measures, including date(s) of discovery and when repairs were made.	6.4(7)	Appendix H	
For sites located within 50 feet of a perennial water, describe how existing vegetation will be preserved. If existing vegetation cannot be preserved, describe alternative sediment control measures to be implemented.	6.4(10)	Section 3.1.2	
Summary of Potential Pollutant Sources			
Identify the location and describe any pollutant sources, including any non-stormwater discharges expected to be associated with the project, from areas other than construction (i.e., support activities including stormwater discharges from dedicated asphalt or concrete plants and any other non-construction pollutant sources such as fueling and maintenance operations, materials stored on-site, waste piles, equipment staging yards, etc.).	6.3(9)	Section 5.0	
Describe control measures to minimize pollutant discharges.	6.3(9)	Section 5.3	
If within 1/4 mile of an impaired water, identify sources of the pollutants of concern listed on the 303(d) list that may potentially be discharged from the construction site and describe additional or enhanced control measures to minimize discharges of these pollutants.	6.3(9)	NA	
Use of Treatment Chemicals			
If polymers, flocculants, or other cationic treatment chemicals will be used at the site, the SWPPP shall include:	6.3(10)	NA	
x Justification for the need for such chemicals and an assessment of potential water quality impacts.	6.3(10)a	NA	

ED_001509B_00000855-00093

x Description of the training specific personnel have or will receive on the use and storage of any cationic treatment chemicals and/or chemical treatment systems at the construction site.	6.3(10)b	NA	
x Listing of all treatment chemicals to be used at the site, a description of how the chemicals will be stored, and why the selection of these chemicals is suited to the soil characteristics of the site.	6.3(10)c	NA	
x Dosage of all treatment chemicals that will be used at the site or the methodology that will be used to determine dosage.	6.3(10)d	NA	
x Copy(ies) of any applicable Material Safety Data Sheets (MSDS).	6.3(10)e	NA	
x Schematic drawings of any chemically-enhanced stormwater controls or chemical treatment systems to be used for application of the treatment chemicals.	6.3(10)f	NA	
x Copies of applicable manufacturer's specifications regarding the use of specific treatment chemicals and/or chemical treatment systems and references to state or local requirements affecting the use of these chemicals.	6.3(10)g	NA	
Pollution Prevention Procedures			
Describe procedures to prevent and respond to spills, leaks, and other releases including procedures for plainly labeling containers; preventative measures between material storage and traffic areas; secondary containment provisions; procedures for material storage and handling; procedures for responding to releases - include the name or position of the employee(s) responsible for detection and response and procedures for notification of appropriate parties when a release occurs.	6.3(11), a (i – iv)	Section 5.3.4	
Describe procedures for handling and disposing of wastes generated at the site.	6.3(11)b	Section 5.3.2	
Inspections			
Identify the frequency the site will be inspected (routine, reduced, sensitive water schedule, inactive/unstaffed schedule, etc).	4.2, 6.8(2)	Section 7.1	
Include a copy of the Inspection Report Form to be used at the site.	4.4, 6.8(4)	Appendix H	
A copy of each completed inspection form.	6.4(8)	Section 7.1	
Identify personnel responsible for conducting site inspections and inspector qualifications.	6.8(1), 6.8(5)	Section 6.2	
Identify beginning and end dates of any reduced inspections schedules.	6.8(3)	NA	
If the construction site becomes inactive and unstaffed, provide information about the change in status, including dates and any change to the inspection schedule.	6.4(11)	NA	
Monitoring (for site located within 1/4 mile of an impaired water or Outstanding Arizona Water)	1.5(3), 1.5(4), and 7	NA	
Provide justification / rationale as to why analytical monitoring is not necessary, if appropriate.	7.0, 7.1	Section 7.3	

ED_001509B_00000855-00094

If monitoring is required, provide the following:			
x Sampling frequency (when will samples be collected).	7.3(1)	NA	
x Sample locations (where will samples be collected, how many locations, and other pertinent information).	7.3(3)	NA	
x For sites adjacent to, or discharge directly to an impaired water, identify instream turbidity monitoring procedures and locations.	7.3(3)a	NA	
x Site specific sampling proposal if the site discharges to a lake that is listed as impaired or OAW.	7.3(3)b	NA	
x Monitoring parameters (what will samples be tested for; turbidity, metals, pesticides, etc.).	7.3(4)	NA	
x Sampling and Analyses Plan (SAP). Identify and ensure personnel are trained and include written procedures for sample collection, preservation, tracking (chain-of-custody procedures), handling, and equipment maintenance and calibration.	7.3(5)	NA	
Corrective Actions			
Update the SWPPP, as necessary, in response to corrective action triggers.	5.1, 5.2, 6.4(9)	Section 7.4	
Provide a summary of corrective actions taken or to be taken in response to a corrective action trigger.	5.3(2)(a)	Section 7.2	
Identify any required SWPPP modifications in response to a corrective action.	5.3(2)(b)	Section 7.4	
Identify dates when corrective actions are initiated or to be initiated.	5.3(2)(c)	Section 7.4	
Record dates when corrective actions are completed or expected to be completed.	5.3(2)(d)	Section 7.4	
Include copies of corrective action report(s) with the SWPPP.	5.3	Section 7.1	
Documentation and Reporting Requirements (as applicable - either include in SWPPP or include a place holder for if/when these documents are generated.)			
x A copy of CGP-2013 (**AZG2013-001**).	6.4(1)	Appendix A	
x A copy of the NOI submitted to ADEQ, including any correspondence related to coverage under this permit.	6.4(2)	Appendix C	
x A copy of the authorization certificate from ADEQ.	6.4(3)	Appendix C	
x Identification of any municipality that received a copy of the authorization certificate.	6.4(4)	Appendix J	
x Copies of any other environmental agreements (such as 404 permits, local grading permits, etc) with any state, local, or federal agencies.	6.4(5)	Appendix J	
x Descriptions and dates of any incidences of significant spills, leaks, or other releases.	6.4(6)	Appendix H & I	
x Provide a listing and description of permanent, post-construction stormwater management control measures that will be installed during the construction process to control pollutants in stormwater discharges after construction activities are complete.	6.4(12)	Section 4.0 and Appendix G.	

ED_001509B_00000855-00095

Appendix C
Notice of Intents (NOIs)
Blank Notice of Termination (NOT)

ADEQ
Arizona Department of Environmental Quality

NOTICE OF INTENT (NOI)
for Construction Activity Discharges
to Waters of the United States under the
AZPDES Stormwater Construction General Permit
(AZG2013-001)

FOR COVERAGE, A COMPLETE AND ACCURATE NOI (INCLUDING REQUIRED FEE) MUST BE SUBMITTED TO:
Arizona Department of Environmental Quality, Surface Water Section / Stormwater and General Permits Unit
1110 West Washington Street, 5415A-1, Phoenix, Arizona 85007

,V WKLV 12, D UHYLVLRQ WR D SURMHFW ILOHG XQGHU 6WRUPZDWHU &RQVWUXFWLRQ *HQHUDO 3HUPLW" ____<(6 ✔ ____12 WKH IROORZLQJ FRPSOHWH

æ 3URYLGH \RXU FXUUHQW DXWKRUL]DWLRQ QXPEHU $=&21 ________________
æ 3URYLGH WKH QDPH RI WKH SURMHFW VLWH LQ 3DUW ,, DQG WKH FRPSOHWH WKH HQWLUH IRUP 3URYLGH RQO\ WKH LQIRUPDWLRQ WKDW FKDQJHG IURP RULJLQDO 12,
æ &RPSOHWH WKH FHUWLILFDWLRQ LQ 3DUW 9, LQFOXGLQJ VLJQDWXUH RI

$'(4 8VH 2QO\: **Authorization Number:**

,V WKH VLWH ORFDWHG RQ ,QGLDQ /DQGV" ____<(6 ✔ ____12

I. OPERATOR (Applicant) INFORMATION:

æ &RQWDFW 1DPH Billy G. Hickman 3KRQH 1XPEHU (623) 872-1120
æ (PDLO DGGUHVV bhickman@hickmanseggs.com)D[1XPEHU (623) 872-9220
æ 2SHUDWRU∂V %XVLQHVV 1DPH Hickman's Family Farms
æ 2SHUDWRU∂V 0DLOLQJ $GGUHVV 6515 South Jackrabbit Trail
æ &LW\ Buckeye 6WDWH AZ =LS &RGH 85326
æ %XVLQHVV 6WDWXV)HGHUDO ____ 6WDWH ____ 3ULYDWH ✔ 2WKHU ____

II. CONSTRUCTION ACTIVITY INFORMATION:

æ 3URMHFW 6LWH 1DPH Hickman's Family Farms - Desert PrideTonopah Plant
æ 6LWH SK\VLFDO ORFDWLRQ 3URYLGH DGGUHVV ,I QR DGGUHVV LGHQWLI\ GLUHFWLRQV IURP QHDUHVW PXQLFLSDOLW\
41625 W. Indian School Rd - Development includes approximately 400 acres of land west of the 411th Avenue and W. Indian School Rd.
æ &LW\ Tonopah 6WDWH AZ =LS &RGH 85354 &RXQW\ Maricopa
æ &RXQW\ 3DUFHO 1R DW PDLQ HQWUDQFH 506-34-039D 3KRQH (623) 694-5190
æ 7\SH RI 3URMHFW VXEGLYLVLRQ FRPPHUFLDO URDG $L]RQD 'LVFKDUJH 3HUPLW CAFO

II. CONSTRUCTION ACTIVITY INFORMATION (FRQWLQXHG)

æ (VWLPDWHG 3URMHFW 6WDUW 'DWH 11/18/2015 (VWLPDWHG &RPSOHWLRQ 'DWH 11/18/2018
0RQWK 'D\ <HDU 0RQWK 'D\ <HDU

æ ,V WKH SURMHFW SDUW RI D ODUJHU FRPPRQ SODQ <(6 ✔ 12

æ (VWLPDWH RI WRWDO DFUHV WR QHDUHVW ZKROH DFUH RI WKH HQWLUH FRQVWUXFWLRQ DFWLYLW\ 400

æ (VWLPDWH RI WRWDO DFUHV WR QHDUHVW WHQWK RI DQ DFUH WR EH GLVWXUEHG E\ FRQVWUXFWLRQ RSHUDWLRQV 400.0

III. DISCHARGE LOCATION

æ 3URYLGH WKH ODWLWXGH DQG ORQJLWXGH RI WKH FRQVWUXFWLRQ VLWH ZKHUH GLVFKDUJHV HQWHU WKH UHFHLYLQJ ZDWHU (QDWXUDO ZDWHU FRXUVH)

/DWLWXGH 33 29 36.227 /RQJLWXGH 112 57 6.979
'HJUHHV PLQXWHV VHFRQGV 'HJUHHV PLQXWHV VHFRQGV

æ ,GHQWLI\ WKH FORVHVW UHFHLYLQJ ZDWHU WR WKH FRQVWUXFWLRQ VLWH (QDPHG DQG XQQDPHG ZDWHUERGLHV)
Two unnamed washes on the property

æ ,V WKHUH D SRWHQWLDO IRU DQ\ GLVFKDUJHV IURP WKH FRQVWUXFWLRQ VLWH WR D VWRUP VHZHU V\VWHP (06|) RU D SULYDWHO\ RZQHG FRQYH\DQFH ✔ <(6 12

,I \HV HQWHU WKH QDPH RI WKH 06| FDQDO RU Various Private Ag Irrigation Canals

æ ,V WKH VLWH ORFDWHG ZLWKLQ ¼ PLOHV RI DQ RXWVWDQGLQJ ZDWHU RU LPSDLUHG ZDWHU <(6 ✔ 12

IV. STORMWATER POLLUTION PREVENTION PLAN (SWPPP)

$ 6:333 PXVW EH GHYHORSHG LQ DFFRUGDQFH ZLWK WKH JHQHUDO SHUPLW EHIRUH FRPSOHWLQJ DQG VXEPLWWLQJ WKLV 12,

æ ✔ , FRQILUP WKDW D 6:333 PHHWLQJ WKH UHTXLUHPHQWV RI &RQVWUXFWLRQ *HQHUDO 3HUPLW 1R $=* ¶ ⊤ ¶ KDV EHHQ GHYHORSHG DQG ZLOO EH LPSOHPHQWHG SULRU WR FRQVWUXFWLRQ DFWLYLWLHV DW WKLV VLWH 7KH 6:333 ZLOO EH ORFDWHG DW WKH FRQVWUXFWLRQ VLWH ,I WKLV LV D ODUJH 6:333 KDV EHHQ GHYHORSHG DQG LPSOHPHQWHG SULRU WR VXEPLWWDO RI WKLV

æ :KHQ FRQVWUXFWLRQ DFWLYLWLHV DUH QRW DFWLYH WKH 6:333 ZLOO EH DYDLODEOH DW WKH IROORZLQJ ORFDWLRQ
6515 South Jackrabbit Trail, Buckeye, AZ 85326

æ 1DPH RI 6:333 &RQWDFW 3HUVRQ Frank G. Ruiz

æ 7HOHSKRQH 1XPEHU RI 6:333 &RQWDFW 3HUVRQ (623) 764-3878

æ ,V WKH VLWH ORFDWHG ZLWKLQ ¶ PLOH RI DQ LPSDLUHG RU RXWVWDQGLQJ ZDWHU ✔ <(6 12

,I \HV D FRS\ RI P\ 6:333 LV LQFOXGHG ZLWK WKLV $12,

V. PERMITTING FEE SCHEDULE (AZPDES fees are set in Arizona Administrative Code, R18-14-109)

BBBB , FRQILLUP WKDW WKH FRLUHFW IHH SD\PHQW LVH LQFOXGHG ZLWK WK

BBBB /HW WKDQ RU HTXDO WR , *DFUH • ↑ ‼ ◀ ‼ ‼

BBBB *UHDWHU WKDQ ¶ DFUH EXW OHVV WKDQ RU • HTXDO ◀ WR ‼↑ ‼ DFUHV

BBBB *UHDWHU WKDQ ↑ ‼ DFUHV • ↑ ‼ ‼ ◀ ‼ ‼

BBBB 5HYLHZ RI 6:333 E\ $'(4 LI UHTXLUHG ♂ VHHH VHFWLRQ ,⊕ ¶DER ‼ ‼ ◀ ‼ ‼

7RWDO IHH SD\PHQW LQFOXGHG 500.00 • BBBBBBBBBBBBB

BBBB 1R IHH LV UHTXLUHG◀ 7KH VLJQHU EHORZ UHSUHVHQWV WKDW DQ HQ[HPSW IURP $=3'(6 IHH □ ◀

BBBB 1R IHH LV UHTXLUHG◀ 7KLV LV DQ DPHQGPHQW RI DQ HQ2XQSUHYLWKH ‼ ¶ 6\VWHPZLWH &RQWUXFWLR
*HQHUDO 3HUPLW IRU ZKLFK WKH IHH ZDV SDLG RU QRW UHTXLUHG◀

♂, I WKH SURMHFW ZLOO GLWXUE CHW WKDQ RQH DFUH DQ &RQHUPLW FRYHUDJH LV UHTXLUHG RQ
WKH SURMHFW LV SDUW RI D CDUJHU FRPPRQ SODQ RI DGHYHORPHQW RUXXOWLPDWHO\ GLWXUE RQH DFUH RU F

VI. CERTIFICATION BY AUTHORIZED SIGNATORY (see Appendix B.9 of the General Permit for requirements)

≥, FHUWLI\ XQGHU SHQDOW RI ODZ WKDW WKLV GRFXPHQW DQG DOO DWWDFKPHQWV XQGHU P\ GLUHFWLRQ RU VXSHUYLVLRQ
DFFRUGDQFH ZLWK D V\VWHP GHVLJQHG WR HQVXUH WKDW RQDOOL LUHDKSHUVRQG HYDOXDWH WKH LQIRUPDWLRQ VXEPLWWHG◀
%DVHG RQ P\ LQTXLU\ RI WKH SHUVRQ RU SHUVRQV ZKR \WDHDUH RUKLWKRWH SHUVRQV GLUHFW\ UHVSRQVLEH IRU
JDWKHULQJ WKH LQIRUPDWLRQ ‼ , EHOLHYH WKH LQIRUPDWLRQ XXEPLWWHG LV WUXH DQG FRPSOHWH◀ , DP DZDUH WKDW
VLJQLILFDQW SHQDOWLHV IRU VXEPLWWLQJ IDOVH LQIRUPDWLRQ SRVXHEXQGW RI ILQH DQG LPSULVRQPHQW◀ KH ,Q DGGLL
RSHUDWRU ‼ , FHUWLI\ WKDW , KDYH UHYLHZHG DQG ODOLOOK HFWRRPV ZDDG EFRGLWLRQV WLSXODWHG LQ WKH 6\VWHPZ
&RQWUXFWLRQ *HQHUDO 3HUPLW ♂ $=* ‼ ¶ ‼ ‼ ¶ □ ◀ ¥

æ 3ULQWHG 1DPH Frank G. Ruiz HW\OH Safety Coordinator

æ 6LJQDWXUH 'DWH 11/18/2015

æ (PDLO fruiz@hickmanseggs.com 3KRQH (623) 872-2341

æ %XVLQHVV 1DPH Hickman's Family Farms

æ $GGUHVV 6515 South Jackrabbit Trail

æ &LW\ Buckeye 6WDWH AZ &RGH 85326

127,&(2) ,17(17 UFK ‼ ‼ ¶
$=3'(6 6\VWHPZDWHU &RQWUXFWLRQ *HQHUDO 3HUPLW
$=* ‼ ¶ ‼ ‼ ¶

3DJH R

ADEQ
Arizona Department of Environmental Quality

NOTICE OF TERMINATION (NOT)

IRU &RQVWUXFWLRQ $FWLYLW\ 'LVFKDUJHV WR :DWHUV RI WKH 8QLWHG 6W

6XEPLVVLRQ RI WKLV 127 FRQVWLWXWHV QRWLFH WKDW WKH SDUW\ LGHQWLILHG LQ WKLV IRUP LV WHUPLQDWLQJ FRYHUDJH XQGHU WKH $=3'(6 6WRUP &RQVWUXFWLRQ *HQHUDO 3HUPLW IRU 'LVFKDUJHV IURP FRQVWUXFWLRQ DFWLYLW\ GLVFKDUJHV WR ZDWHUV RI WKH 8QLWHG 6WDWHV WHUPLQDWH WKH GD\ WKH 127 LV UHFHLYHG E\ 7R WHUPLQDWH \RXU SURMHFW ID[RU VXEPLW D FRPSOHWHG 127 DQG DFFXUDWH

Arizona Department of Environmental Quality
Surface Water Section — Stormwater & General Permits Unit
1110 West Washington, 5415A-1; Phoenix, Arizona 85007
FAX (602) 771-4528

I. PERMITTEE INFORMATION

$=3'(6 6WRUPZDWHU &RQVWUXFWLRQ $XWKRUL]DWLRQ 1XPEHU $=&21 BBBBBBBBBBBBBBBBBBBBBBBBBBBBBB

1DPH RI 2SHUDWRU RQ 1RWLFH RI ,QWHQW 12, BBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBB

2SHUDWRU %XVLQHVV BBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBB $GGUHVV BBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBB

&LW\ BBBBBBBBBBBBBBBBBBBBBBBBBBBBBB 6WDWH BBBBB =LS BBB BBBBBBB BBBBBBBBBBBBBBBBBBBBBBBBBBB

II. CONSTRUCTION SITE INFORMATION

3URMHFW 6LWH 1DPH Hickman's Family Farms - Tonopah Plant BBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBB

6LWH DGGUHVV RU SK\VLFDO ORFDWLRQ BBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBB

BBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBB

&LW\ BBBBBBBBBBBBBBBBBBBBBBBBBBBBBB 6WDWH BBBBB =LS BBBBBBBBBBB 3KRQH BBBBBBBBBBBBBBBBBBBBBBBBBB

III. REASON FOR TERMINATING COVERAGE: (&KHFN DV DSSOLFDEOH)

BBBBB)LQDO VWDELOL]DWLRQ KDV EHHQ DFKLHYHG RQ DOO SRUWLRQV RI WKH VLWH IRU ZKLFK WKH RSHUDWRU LV UHVSRQVLEOH

BBBBB $QRWKHU RSHUDWRU KDV DVVXPHG FRQWURO RYHU DOO DUHDV RI WKH VLWH WKDW KDYH QRW EHHQ ILQDOO\ VWDELOL]HG. 3URYLGH QHZ RSHUDWRU¶V 12, $=&21 1XPEHU¶V BBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBB

BBBBB)RU UHVLGHQWLDO FRQVWUXFWLRQ RQO\ WHPSRUDU\ VWDELOL]DWLRQ KDV EHHQ FRPSOHWHG DQG WKH UHVLGHQFH KDV EHHQ WUDQVIHUUHG WR WKH KRPHRZQHU.

BBBBB 7KH RSHUDWRU KDV REWDLQHG FRYHUDJH XQGHU DQ DOWHUQDWLYH $=3'(6 SHUPLW. 7R TXDOLI\ IRU WKLV FRQGLWLRQ VXEPLW WKH QHZ $=3'(6 SHUPLW QXPEHU 1HZ $=&21 RU $=3'(6 1XPEHU¶V BBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBB

BBBBB &RQVWUXFWLRQ DFWLYLW\ ZDV QHYHU LQLWLDWHG DQG ZLOO EH FDQFHOOHG RU SRVWSRQHG.

BBBBB 7KH RSHUDWRU TXDOLILHV IRU DOWHUQDWLYH VWDELOL]DWLRQ XQGHU ¶ RI WKH &*3 DQG WKH GRFXPHQWDWLRQ LV LQFOXGHG ZLWK WKLV 127 VXEPLVVLRQ. 6XEPLW FRS\ RI WKH UHFHQW 6WRUPZDWHU 3ROOXWLRQ 3UHYHQWLRQ 3ODQ DQG UHYLHZ IHH (VHH RSHUDWLRQDO GRFXPHQWDWLRQ UHTXLUHPHQWV)

IV. CERTIFICATION BY AUTHORIZED SIGNATORY

"I certify under penalty of law that all stormwater discharges associated with construction activity from the identified facility that are authorized by a general permit have been eliminated or that I am no longer the operator of the facility or construction site. I understand that by submitting this Notice of Termination, I am no longer authorized to discharge stormwater associated with construction activity under this general permit, and that discharging pollutants in stormwater associated with construction activity to waters of the United States is unlawful under the Clean Water Act where the discharge is not authorized by an AZPDES permit. I also understand that the submittal of this Notice of Termination does not release an operator from liability for any violations of this permit or the Clean Water Act."

3ULQWHG 1DPH BBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBB 7LWOH BBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBB

6LJQDWXUH BBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBB 'DWH BBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBB

$GGUHVV (LI GLIIHUHQW IURP DERYH) BBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBB

&LW\ BBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBB 6WDWH BBBBB BBBBBBB BBBBB 3KRQH BBBBBBBBBBBBBBBBBBBBBBBBBB

Appendix D
Construction Timeline Tables

Sequence of Construction Activities for 2016							
Activity	Estimated Dates	Phase I	Phase II	Phase III	Phase IV	Parking Lot	Truck Wash
Installation of Control Measures	Start						
	End						
Clear and Grubbing	Start						
	End						
Grading	Start						
	End						
Site Preparation	Start						
	End						
Underground Utilities	Start						
	End						
Infrastructure Installation	Start						
	End						
Final Grading	Start						
	End						
Removal of Equipment and Controls Measures	Start						
	End						
Final Stabilization	Start						
	End						
Other	Start						
	End						

Operator:	Hickman's Family Farms - Tonopah Plant
Signature:	
Name:	
Title:	

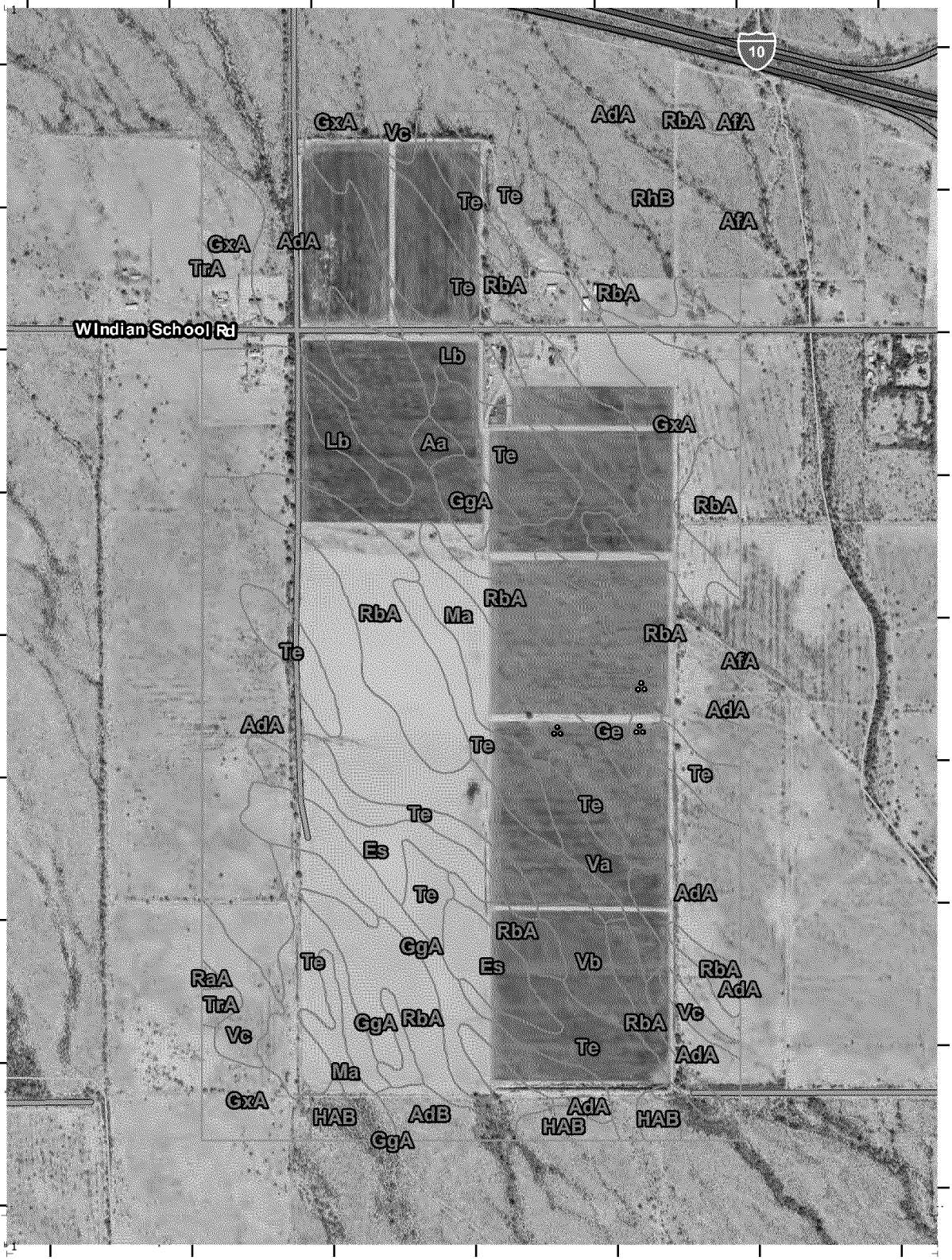
Sequence of Construction Activities for 2017							
Activity	Estimated Dates	Phase I	Phase II	Phase III	Phase IV	Parking Lot	Truck Wash
Installation of Control Measures	Start						
	End						
Clear and Grubbing	Start						
	End						
Grading	Start						
	End						
Site Preparation	Start						
	End						
Underground Utilities	Start						
	End						
Infrastructure Installation	Start						
	End						
Final Grading	Start						
	End						
Removal of Equipment and Controls Measures	Start						
	End						
Final Stabilization	Start						
	End						
Other	Start						
	End						

Operator:	Hickman's Family Farms - Tonopah Plant
Signature:	
Name:	
Title:	

Sequence of Construction Activities for 2018							
Activity	Estimated Dates	Phase I	Phase II	Phase III	Phase IV	Parking Lot	Truck Wash
Installation of Control Measures	Start						
	End						
Clear and Grubbing	Start						
	End						
Grading	Start						
	End						
Site Preparation	Start						
	End						
Underground Utilities	Start						
	End						
Infrastructure Installation	Start						
	End						
Final Grading	Start						
	End						
Removal of Equipment and Controls Measures	Start						
	End						
Final Stabilization	Start						
	End						
Other	Start						
	End						

Operator:	Hickman's Family Farms - Tonopah Plant
Signature:	
Name:	
Title:	

Appendix E
U.S.D.A. NRCS Web Soil Survey Report



USDA

1DWXUDO 5HVRXUFHV &RQVHUYDWLRQ 6HUYLFH

:HE 6RLO 6XUYH\ 1DWLRQDO &RRSHUDWLYH 6RLO 6XUYH\

3DJH ¶ RI

0$3└ /(*(1'

$UHD└ RI└ ,QWHUHVW└ ♂ $2,

$UHD└ RI└ ,QWHUHVW└ ♂ $2,

6RLOV

6RLO└ 0DS└ 8QLW└ 3RO\JRQV

6RLO└ 0DS└ 8QLW└ /LQHV

6RLO└ 0DS└ 8QLW└ 3RLQWV

6SHFLDO└ 3RLQW└)HDWXUHV

%ORZRXW

%RUURZ└ 3LW

&OD\└ 6SRW

&ORVHG└ 'HSUHVVLRQ

*UDYHO└ 3LW

*UDYHOO\└ 6SRW

/DQGILOO

/DYD└)ORZ

0DUVK└ RU└ VZDPS

0LQH└ RU└ 4XDUU\

0LVFHOODQHRXV└ :DWHU

3HUHQQLDO└ :DWHU

5RFN└ 2XWFURS

6DOLQH└ 6SRW

6DQG\└ 6SRW

6HYHUHO\└ (URGHG└ 6SRW

6LQNKROH

6OLGH└ RU└ 6OLS

6RGLF└ 6SRW

6SRLO└ $UHD

6WRQ\└ 6SRW

9HU\└ 6WRQ\└ 6SRW

:HW└ 6SRW

2WKHU

6SHFLDO└ /LQH└)HDWXUHV

:DWHU└)HDWXUHV

6WUHDPV└ DQG└ &DQDOV

7UDQVSRUWDWLRQ

5DLOV

,QWHUVWDWH└ +LJKZD\V

86└ 5RXWHV

0DMRU└ 5RDGV

/RFDO└ 5RDGV

%DFNJURXQG

$HULDO└ 3KRWRJUDSK\

0$3└ ,1)250$7,21

7KH└ VRLO└ VXUYH\V└ WKDW└ FRPSULVH└ \RXU└ $2,└ ZHUH└ PDSSHG└ DW└ ¶ ┴ ‼ ☼ ‼ ‼ ‼

3OHDVH└ UHO\└ RQ└ WKH└ EDU└ VFDOH└ RQ└ HDFK└ PDS└ VKHHW└ IRU└ PDS PHDVXUHPHQWV◂

6RXUFH└ RI└ 0DS└ └1DWXUDO└ 5HVRXUFHV└ &RQVHUYDWLRQ└ 6HUYLFH
:HE└ 6RLO└ 6XUYH\└ 85/└ └ └ KWWS ↕ ↕ ZHEVRLOVXUYH\◂ QUFV◂ XVGD◂ JRY
&RRUGLQDWH└ 6\VWHP└ └ └ :HE└ 0HUFDWRU└ ♂ (36* ┬ ← ↑ →

0DSV└ IURP└ WKH└ :HE└ 6RLO└ 6XUYH\└ DUH└ EDVHG└ RQ└ WKH└ :HE└ 0HUFDWRU SURMHFWLRQ☼ └ ZKLFK└ SUHVHUYHV└ GLUHFWLRQ└ DQG└ VKDSH└ EXW└ GLVWRUWV GLVWDQFH└ DQG└ DUHD◂ └ $└ SURMHFWLRQ└ WKDW└ SUHVHUYHV└ DUHD☼ └ VXFK└ DV└ WKH $OEHUV└ HTXDO┤ DUHD└ FRQLF└ SURMHFWLRQ☼ └ VKRXOG└ EH└ XVHG└ LI└ PRUH└ DFFX FDOFXODWLRQV└ RI└ GLVWDQFH└ RU└ DUHD└ DUH└ UHTXLUHG◂

7KLV└ SURGXFW└ LV└ JHQHUDWHG└ IURP└ WKH└ 86'$┤ 15&6└ FHUWLILHG└ GDWD└ DV└ WKH└ YHUVLRQ└ GDWH♂ V└ OLVWHG└ EHORZ◂

6RLO└ 6XUYH\└ $UHD└ └ └ 0DULFRSD└ &RXQW\☼ └ $UL]RQD☼ └ &HQWUDO└ 3DUW
6XUYH\└ $UHD└ 'DWD└ └ └ 9HUVLRQ└ → ☼ └ 'HF└ ¶ ┴ ☼ └ ┴ ‼ ¶ ┬

6RLO└ PDS└ XQLWV└ DUH└ ODEHOHG└ ♂ DV└ VSDFH└ DOORZV└ IRU└ PDS└ VFDOHV└ ¶ ↑ ‼ RU└ ODUJHU◂

'DWH♂ V└ DHULDO└ LPDJHV└ ZHUH└ SKRWRJUDSKHG└ └ └ 1RY└ ¶ ☼ ┴ ‼ ¶ ‼ ≤0DU└ ¶ ┴ ‼ ¶ ¶

7KH└ RUWKRSKRWR└ RU└ RWKHU└ EDVH└ PDS└ RQ└ ZKLFK└ WKH└ VRLO└ OLQHV└ ZHUH FRPSLOHG└ DQG└ GLJLWL]HG└ SUREDEO\└ GLIIHUV└ IURP└ WKH└ EDFNJURXQG LPDJHU\└ GLVSOD\HG└ RQ└ WKHVH└ PDSV◂ └ $V└ D└ UHVXOW☼ └ VRPH└ PLQRU└ VKLIWLQJ RI└ PDS└ XQLW└ ERXQGDULHV└ PD\└ EH└ HYLGHQW◂

0DS L 8QLW L /HJHQG

0DULFRSD L &RXQW\ L $UL]RQD L &HQWUDO L 3DUW L ♂ $= ↑ ¶ □			
0DS L 8QLW L 6\PERO	**0DS L 8QLW L 1DPH**	**$FUHV L LQ L $2,**	**3HUFHQW L RI L $2,**
$D	$JXDQW L CRDP	¶ ◀	→ ‼ ◀ ┬ ◘
G	$QWKR L JUDYHOO\ L VDQG\ L CRDP L ‼ L WR ¶ L SHUFHQW L VORSHV	¶ ┴ ┴	◀ ┴ ┴ ‼ ◀ ‼ ◘
$G%	$QWKR L JUDYHOO\ L VDQG\ L CRDP L ¶ L WR ┬ L SHUFHQW L VORSHV	┤ ◀	↑ ‼ ◀ → ◘
I	$QWKR┤ &DUUL]R L FRPSCH[L ‼ L WR L ¶ SHUFHQW L VORSHV	‼ ◀	┤ ‼ ◀ ¶ ◘
(V	(VWUHOOD L CRDP	¶ → ◀	├ ┴ ◀ ◘
*H	*LCPDQ L ILGH L VDQG\ L CRDP	┬ ◀	↑ ‼ ◀ ├ ◘
*J$	*LCPDQ L CRDP L ‼ L WR L ¶ L SHUFHQW VORSHV	┴ ┤ ◀	┬ ┤ ◀ ‼ ◘
*[$	*XQ/LJKW┤ 5LOOLWR L FRPSCH[L ‼ L WR L ¶ SHUFHQW L VORSHV	┬ ◀	┤ ├ ◀ ┤ ◘
+$%	+DUTXD L FRPSCH[L ‼ L WR L ┬ L SHUFHQW VORSHV	→ ◀	↑ ¶ ◀ ┴ ◘
/E	/DYHHQ L VDQG\ L CRDP	¶ ¶ ◀	← ¶ ◀ ◘
0D	0DULSR L VDQG\ L CRDP	← ┤ ◀	¶ ┬ ◀ ◘
5D$	5LOOLWR L VDQG\ L CRDP L ‼ L WR L ¶ SHUFHQW L VORSHV	‼ ◀	↑ ‼ ◀ ¶ ◘
5E$	5LOOLWR L CRDP L ‼ L WR L ¶ L SHUFHQW VORSHV	¶ ┴ ┤ ◀	├ ┴ ‼ ◀ ◘
5K%	5LOOLWR┤ +DUTXD L FRPSCH[L ¶ L WR L ┬ SHUFHQW L VORSHV	┬ ┬ ◀	┤ ↑ ◀ ↑ ◘
7H	7UHPDQW L CRDP	¶ ‼	◀ ├ ¶ → ◀ ◘
7U$	7UHPDQW┤ 5LOOLWR L FRPSCH[L ‼ L WR L ¶ SHUFHQW L VORSHV	¶ ◀	├ ‼ ◀ ┬ ◘
9D	9DCHQFLD L VDQG\ L CRDP	├ ◀	→ ¶ ◀ ¶ ◘
9E	9DCHQFLD L VDQG\ L CRDP L VDOLCH┤ DONDOL	├ ◀	├ ¶ ◀ ¶ ◘
9F	9DCHQFLD L JUDYHOO\ L VDQG\ L CRDP	¶ ‼ ◀	├ ¶ ◀ → ◘
7RWDOV L IRU L $UHD L RI L ,QWHUHVW		├ ¶ ¶	◀ ┤ ¶ ‼ ‼ ◀ ‼ ◘

USDA

1DWXUDO 5HVRXUFHV &RQVHUYDWLRQ 6HUYLFH

:HE 6RLO 6XUYH\ 1DWLRQDO &RRSHUDWLYH 6RLO 6XUYH\

3DJH ¶ RI

ED_001509B_00000855-00109

0$3└ /(*(1'

$UHD└ RI└ ,QWHUHWW└ ♂ $2,□

$UHD└ RI└ ,QWHUHWW└ ♂ $2,

6RLOV

6RLO└ 0DS└ 8QLW└ 3RO\JRQV

6RLO└ 0DS└ 8QLW└ /LQHV

6RLO└ 0DS└ 8QLW└ 3RLQWV

6SHFLDO└ 3RLQW└)HDWXUHV

%CRZRXW

%RUURZ└ 3LW

&CD\└ 6SRW

&CRVHG└ 'HSUHVVLRQ

*UDYHO└ 3LW

*UDYHOO\└ 6SRW

/DQGILOO

/DYD└)CRZ

0DUVK└ RU└ VZDPS

0LQH└ RU└ 4XDUU\

0LVFHOODQHRXV└ :DWHU

3HUHQQLDO└ :DWHU

5RFN└ 2XWFURS

6DOLQH└ 6SRW

6DQG\└ 6SRW

6HYHUHO\└ (URGHG└ 6SRW

6LQNKRCH

6OLGH└ RU└ 6OLS

6RGLF└ 6SRW

6SRLO└ $UHD

6WRQ\└ 6SRW

9HU\└ 6WRQ\└ 6SRW

:HW└ 6SRW

2WKHU

6SHFLDO└ /LQH└)HDWXUHV

:DWHU└)HDWXUHV

6WUHDPV└ DQG└ &DQDOV

7UDQVSRUWDWLRQ

5DLOV

,QWHUXWDWH└ +LJKZD\V

86└ 5RXWHV

0DVRU└ 5RDGV

/RFDO└ 5RDGV

%DFNJURXQG

$HULDO└ 3KRWRJUDSK\

0$3└ ,1)250$7,21

7KH└ VRLO└ VXUYH\V└ WKDW└ FRPSULVH└ \RXU└ $2,└ ZHUH└ PDSSHG└ DW└ ¶ ┴ ‼ ☼ ‼ ‼ ‼

:DUQLQJ └ 6RLO└ 0DS└ PD\└ QRW└ EH└ YDOLG└ DW└ WKLV└ VFDOH◄

(QDDUJHPHQW└ RI└ PDSV└ EH\RQG└ WKH└ VFDOH└ RI└ PDSSLQJ└ FDQ└ FDXVH PLVXQGHUWWDQGLQJRI└ WKH└ GHWDLO└ RI└ PDSSLQJ└ DQG└ DFFXUDF\└ RI└ VRLO└ OLQH SODFHPHQW◄ └ 7KH└ PDSV└ GR└ QRW└ VKRZ└ WKH└ VPDOO└ DUHDV└ RI└ FRQWUDWWLQJ VRLOV└ WKDW└ FRXOG└ KDYH└ EHHQ└ VKRZQ└ DW└ D└ PRUH└ GHWDLOHG└ VFDOH◄

3CHDVH└ UHO\└ RQ└ WKH└ EDU└ VFDOH└ RQ└ HDFK└ PDS└ VKHHW└ IRU└ PDS PHDVXUHPHQW◄

6RXUFH└ RI└ 0DS └ └ 1DWXUDO└ 5HVRXUFHV└ &RQVHUYDWLRQ└ 6HUYLFH :HE└ 6RLO└ 6XUYH\└ 85/ └ └ KWWS ↕ ↕ ZHEVRLOVXUYH\◄ QUFV◄ XVGD◄ JRY &RRUGLQDWH└ 6\WWHP └ └ :HE└ 0HUFDWRU└ ♂ (36* ┬ ← ↑ → □

0DSV└ IURP└ WKH└ :HE└ 6RLO└ 6XUYH\└ DUH└ EDVHG└ RQ└ WKH└ :HE└ 0HUFDWRU SURMHFWLRQ☼ └ ZKLFK└ SUHVHUYHV└ GLUHFWLRQ└ DQG└ VKDSH└ EXW└ GLWWRUWW GLWWDQFH└ DQG└ DUHD◄ └ $└ SURMHFWLRQ└ WKDW└ SUHVHUYHV└ DUHD☼ └ VXFK└ DV└ WKH $CEHUV└ HTXDO┼ DUHD└ FRQLF└ SURMHFWLRQ☼ └ VKRXOG└ EH└ XWEDWH LI└ PRUH└ DFFX FDCFXODWLRQV└ RI└ GLWWDQFH└ RU└ DUHD└ DUH└ UHTXLUHG◄

7KLV└ SURGXFW└ LV└ JHQHUDWHG└ IURP└ WKH└ 86'$┼ 15&6└ FHUWRILHG└ GDWD└ DV└ WKH└ YHUVLRQ└ GDWH♂ V□ └ OLWWHG└ EHORZ◄

6RLO└ 6XUYH\└ $UHD └ └ 0DULFRSD└ &RXQW\☼ └ $UL]RQD☼ └ &HQWUDO└ 3DUW 6XUYH\└ $UHD└ 'DWD └ └ 9HUVLRQ└ ☼ └ 2FW└ ¶ ☼ └ ┴ ‼ ¶ ↑

6RLO└ PDS└ XQLWW└ DUH└ ODEHOHG└ ♂ DV└ VSDFH└ DOORZV□ └ IRU└ PDS└ VFDOHV└ ¶ ↑ ‼ RU└ ODUJHU◄

'DWH♂ V□ └ DHULDO└ LPDJHV└ ZHUH└ SKRWRJUDSKHG └ └ 1RY└ ¶ ☼ └ ┴ ‼ ¶ ‼ ≤ 1RY└ ┴ ┴ ‼ ¶ ‼

7KH└ RUWKRSKRWR└ RU└ RWKHU└ EDVH└ PDS└ RQ└ ZKLFK└ WKH└ VRLO└ OLQHV└ ZHUH FRPSLOHG└ DQG└ GLJLWL]HG└ SUREDEO\└ GLIIHUV└ IURP└ WKH└ EDFNJURXQG LPDJHU\└ GLVSOD\HG└ RQ└ WKHVH└ PDSV◄ └ $V└ D└ UHVXOW☼ └ VRPH└ PLQRU└ VKLIWLQJ RI└ PDS└ XQLWV└ ERXQGDULHV└ PD\└ EH└ HYLGHQW◄

0DS└ 8QLW└ /HJHQG

0DULFRSD└ &RXQW\☼ └ $UL]RQD☼ └ &HQWUDO└ 3DUW└ ♂ $=├ ↑ ¶ □			
0DS└ 8QLW└ 6\PERO	0DS└ 8QLW└ 1DPH	$FUHV└ LQ└ $2,	3HUFHQW└ RI└ $2,
I	$QWKR├ &DUUL]R└ FRPSCH[☼ └ ‼ SHUFHQW└ VCRSHV	└ WR└ ¶ → ◀	→ ¶ ← ◀ ↑ ◘
(V	(WWUHOOD└ CRDP	‼ ◀	┴ ‼ ◀ ↑ ◘
*[$	*XQVLJKW├ 5LOOLWR└ FRPSCH[☼ SHUFHQW└ VCRSHV	┴ ‼ └ WR└ ¶ → ◀	¶ ◀ ┴ ◘
5E$	5LOOLWR└ CRDP☼ └ ‼ └ WR└ ¶ └ VCRSHV	SHUFHQW ┴ ┴ ◀	┤ ↑ ┤ ◀ ┴ ◘
5K%	5LOOLWR├ +DUTXD└ FRPSCH[☼ └ ¶ SHUFHQW└ VCRSHV	└ WR└ ┬ ¶ ◀	→ ┤ ◀ ¶ ◘
7H	7UHPDQW└ CRDP	¶ ◀	┤ ┬ ◀ ↑ ◘
7RWDOV└ IRU└ $UHD└ RI└ ,QWHUHWW		┤ ¶ ◀	┬ ¶ ‼ ‼ ◀ ‼ ◘

USDA

1DWXUDO 5HVRXUFHV &RQVHUYDWLRQ 6HUYLFH

:HE 6RLO 6XUYH\ 1DWLRQDO &RRSHUDWLYH 6RLO 6XUYH\

3DJH ¶ RI

0$3 L /(*(1'

$UHD L RI L ,QWHUHVW L ♂ $2,

$UHD L RI L ,QWHUHVW L ♂ $2,

6RLOV

6RLO L 0DS L 8QLW L 3RO\JRQV

6RLO L 0DS L 8QLW L /LQHV

6RLO L 0DS L 8QLW L 3RLQWV

6SHFLDO L 3RLQW L)HDWXUHV

%&RZRXW

%RUURZ L 3LW

8&D\ L 6SRW

&&RVHG L 'HSUHVVLRQ

*UDYHO L 3LW

*UDYHOD\ L 6SRW

/DQGILOO

/DYD L)&RZ

0DUVK L RU L VZDPS

0LQH L RU L 4XDUU\

0LVFHOODQHRXV L :DWHU

3HUHQQLDO L :DWHU

5RFN L 2XWFURS

6DOLQH L 6SRW

6DQG\ L 6SRW

6HYHUHD\ L (URGH L 6SRW

6LQNKRO H

6OLGH L RU L 6OLS

6RGLF L 6SRW

6SRLO L $UHD

6&RQ\ L 6SRW

9HU\ L 6&RQ\ L 6SRW

:HW L 6SRW

2&KHU

6SHFLDO L /LQH L)HDWXUHV

:DWHU L)HDWXUHV

6&LHDPV L DQG L &DQDOV

7UDQVSRUWDWLRQ

5DLOV

,QWHUXXDWH L +LJKZD\V

86 L 5RXWHV

0DUU L 5RDGV

/RFDO L 5RDGV

%DFNJURXQG

$HULDO L 3KRWRJUDSK\

0$3 L ,1)250$7,21

7KH L VRLO L VXUYH\V L WKDW L FRPSULVH L \RXU L $2, L ZHUH L PDSSHG L DW L ¶ ⊥ ‼ ☼ ‼ ‼ ‼

:DUQLQJ L 6RLO L 0DS L PD\ L QRW L EH L YDOLG L DW L WKLV L VFDOH◀

(QDDUJHFHQW L RI L PDSV L EH\RQG L WKH L VFDOH L RI L PDSSLQJ L FDQ L FDXVH PLVXQGHUVWDQGLQJ RI L WKH L GHWDLO L RI L PDSSLQJ L DQG L DFFXUDF\ L RI L VRLO L OLQH SODFHPHQW◀ L 7KH L PDSV L GR L QRW L VKRZ L WKH L VPDOO L DUHDV L RI L FRQWDWLQJ VRLOV L WKDW L FRXOG L KDYH L EHHQ L VKRZQ L DW L D L FRUH L GHWDLHG L VFDOH◀

3HDVH L UHD\ L RQ L WKH L EDU L VFDOH L RQ L HDFK L PDS L VKHHW L IRU L PDS FHDVXUHPHQWV◀

6RXUFH L RI L 0DS L 1DWXUDO L 5HVRXUFHV L &RQVHUYDWLRQ L 6HUYLFH :HE L 6RLO L 6XUYH\ L 85/ L KWWS ↕ ↕ ZHEVRLOVXUYH\◀ QUFV◀ XVGD◀ JRY &RUUHODWH L 6\WWHP L :HE L 0HUFDWRU L ♂ (36* ┬ ← ↑ → □

0DSV L IURP L WKH L :HE L 6RLO L 6XUYH\ L DUH L EDVHG L RQ L WKH L :HE L 0HUFDWRU SURMHFWLRQ☼ L ZKLFK L SUHVHUYHV L GLUHFWLRQ L DQG L VKDSH L EXW L GLVWRUWV GLVWDQFH L DQG L DUHD◀ L $ L SURMHFWLRQ L WKDW L SUHVHUYHV L DUHD☼ L VXFK L DV L WKH $&HHUV L HTXDO┤ DUHD L FRQLF L SURMHFWLRQ☼ L VKRXOG L EH L XVHG L LI L PRUH L DFFX FDFXODWLRQV L RI L GLVWDQFH L RU L DUHD L DUH L UHTXLUHG◀

7KLV L SURGXFW L LV L JHQHUDWHG L IURP L WKH L 86'$┤ 15&6 L FHUWLILHG L GDWD L DV L WKH L YHUVLRQ L GDWH☼ V□ L OLWWHG L EHORZ◀

6RLO L 6XUYH\ L $UHD L 0DULFRSD &RXQW\☼ L $UL]RQD☼ L &HQWUDO L 3DUW 6XUYH\ L $UHD L 'DWD L 9HUVLRQ L ☼ L 2FW L ¶ ☼ L ⊥ ‼ ¶ ↑

6RLO L PDS L XQLW L DUH L DEEHHG L ♂ DV L VSDFH L DOORZV□ L IRU L PDS L VFDOH L ¶ ↑ ‼ RU L DDJHU◀

'DWH☼ V□ L DHULDO L LPDJHV L ZHUH L SKRWRJUDSKHG L 1RY L ¶ ☼ L ⊥ ‼ ¶ ‼ ≤ 1RY L ⊥ ⊥ ‼ ¶ ‼

7KH L RUWKRSKRWR L RU L RWKHU L EDVH L PDS L RQ L ZKLFK L WKH L VRLO L OLQHV L ZHUH FRPSLHG L DQG L GLJLWL]HG L SUHEDEO\ L GLIIHUV L IURP L WKH L EDFNJURXQG LPDJHU\ L GLVSOD\HG L RQ L WKHVH L PDSV◀ L $V L D L UHVXOW☼ L VRPH L PLQRU L VKLIWLQJ RI L PDS L XQLW L ERXQGDULHV L PD\ L EH L HYLGHQW◀

0DS└ 8QLW└ /HJHQG

0DULFRSD└ &RXQW\☼ └ $UL]RQD☼ └ &HQWUDO└ 3DUW└ ♂ $=├ ↑ ¶ □			
0DS└ 8QLW└ 6\PERO	**0DS└ 8QLW└ 1DPH**	**$FUHV└ LQ└ $2,**	**3HUFHQW└ RI└ $2,**
+U%	+DUTXD┤ 5LOOLWR└ FRPSOH[☼ └ ¶ └ WR└ ┬ SHUFHQW└ VORSHV	‼ ◄	¶ ‼ ◄ ┴ ◘
5E$	5LOOLWR└ CRDP☼ └ ‼ └ WR└ ¶ └ VORSHV	SHUFHQW ‼ ◄	├ ├ ◄ ◘
7H	7UHPDQW└ CRDP	→ ◄	‼ ← ┴ ◄ ◘
7RWDOV└ IRU└ $UHD└ RI└ ,QWHUHVW		← ◄	↑ ¶ ‼ ‼ ◄ ‼ ◘

Appendix F
Himes Consulting, LLC Memorandum
Threatened and Endangered Species List

Himes Consulting LLC

Technical Memorandum

To: Huston Environmental Services

From: Jill Himes

Date: April 5, 2014

Re: Hickman's FamilyFarms Desert Pride Egg Farm Construction, Tonop ah\, Maricopa County, Arizona

---

INTRODUCTION

Himes Consulting LLC was retained by Huston Environmental Services to conduct a preliminary evaluation of waters of the U.S. within areas under construction at the Hickman's Family Farms Desert Pride Egg Farm in Tonopah, Maricopa County, Arizona. Aerial photographs were reviewed and a site visit was conducted on April 4, 2013.

PROJECT LOCATION AND DESCRIPTION

The project site is located south interstate 10, south of Indian School Road and west of 411th Avenue within the Town of Tonopah. Figures 1 and 2 show the location of the project site (Attachment A).

The project site is located in the Tonopah Desert, approximately two miles west of Winters Wash, 12 miles west of the Hassyampa River, north of Saddle Mountain, and southeast of the Big Horn Mountains Wilderness. The site is an existing agricultural area with both active (alfalfa) and fallow farmlands. Lined and unlined irrigation canals occur within the project area. A portion of the site is currently under construction.

Vegetation communities in the region are Lower Colorado River subdivision of Sonoran Desertscrub as described by Brown (Brown, David E., 1994. Biotic Communities, Southwestern United States and Northwestern Mexico. University of Utah Press; Salt Lake City). The majority of native vegetation has been previously-cleared from farming and/or construction. Vegetation observed within or adjacent to the project site includes desert broom (*Baccharis sarothroides*), palo verde (*Cercidium floridum*), mesquite (*Prosopis juliflora*), Russian thistle (*Salsola kali*), salt cedar (*Tamarix ramossissima*), Sahara mustard

(*Brassica tournefortii*), globe mallow (*Sphaeralcea ambigua*), white thorn (*Acacia constricta*), creosotebush (*Larrea tridentata*). Photographs provided in Attachment B show characteristic habitat in the area. Wildlife and/or wildlife sign observed on or adjacent to the project area includes cottontail (*Sylvilagus auduboni*), mourning dove (*Zenaida macroura*), common raven (*Corvus corax*), turkey vulture (*Cathartes aura*), ground squirrel (*Ammospermophilus* sp.), and whiptails (*Cnemidophorus* sp.).

RESULTS

A concrete-lined irrigation ditch occurs along the western side of the site. This ditch is currently bermed, preventing irrigation water from continuing downstream to provide water for onsite dust control. A wash, approximately 8 to 13 ft wide, occurs to the west of the irrigation ditch and farm road. This wash carries storm water flow from offsite the property on the north and discharges in the southwest corner of the property downstream. This wash would be considered waters of the U.S.

The wash to the west captures all potential run-on to the property; therefore ensuring that stormwater flow does not enter the property. No waters of the U.S. were observed within the construction area. Two other irrigation ditches occur on the property that appear to receive only irrigation flows. These discharge into a tailwater pond along the southeastern boundary of the site. Since the water in the tailwater pond may contribute to downstream waters, this pond is considered a potential water of the U.S. and/or wetland and would require further investigation.

RECOMMENDATIONS

- No impacts to waters of the U.S. were observed during the site visit.

- The natural wash on the western side of the property should be avoided unless a Section 404 permit is obtained. If the farm road on the west side needs to be widened and/or is planned to encroach into the wash, a jurisdictional delineation (JD) and Section 404 permit application is required to be filed with the US Army Corps of Engineers prior to construction.

- No further work or investigation is proposed at this time to make a final determination of the status of the tailwater pond, unless construction or alterations (such modification to inflows or outflows, dredging, grading, or filling) are planned in that area.

- This does not constitute a detailed jurisdictional delineation required by the US Army Corps of Engineers in order for them to make a determination of waters of the US.

ATTACHMENT A

MAPS

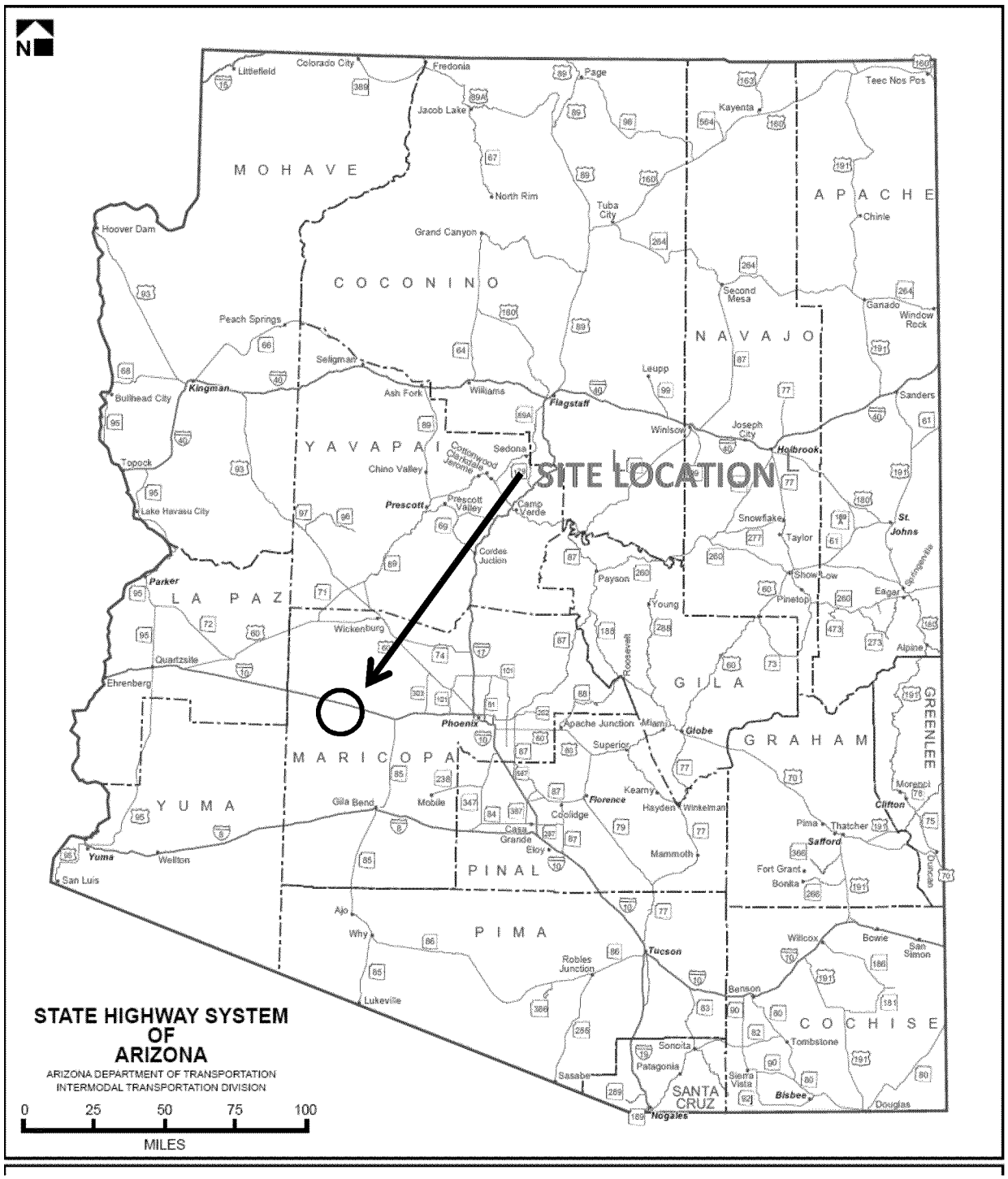


Figure 1. Vicinity Map. Hickman's Farmily Farms Desert Pride Site. Tonopah, Maricopa County, AZ.

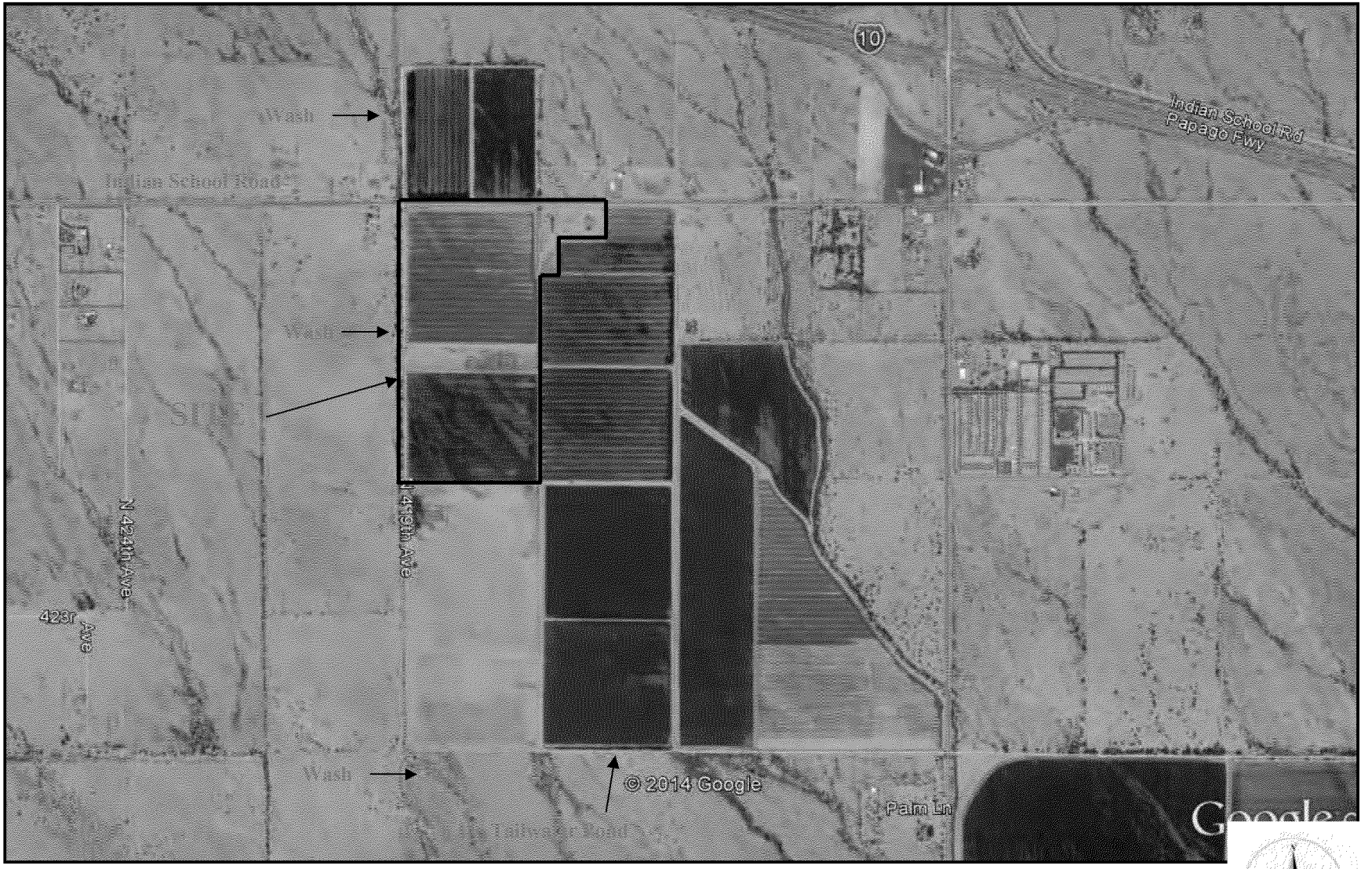


Figure 2. Site Map.
Hickman's Family Farms Desert Pride

0 500 ft

ATTACHMENT B

REPRESENTATIVE SITE PHOTOGRAPHS

Photograph 1. View of existing farmed area typical of property (view facing east).

Photograph 2. Unculverted road dip on Indian School Road where storm water continues to wash (water of the U.S); view facing west.

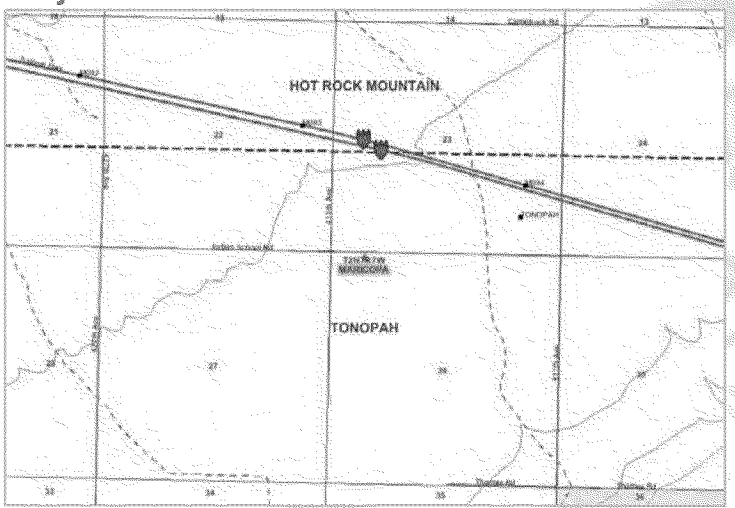
Photograph 3. Wash along western side of property, west of farm road and west of chain link fence (view facing north).

Photograph 4. Tailwater pond at southeastern corner of property; view facing west.

Photograph 5. Culverts from tailwater pond to adjacent agricultural property to the east (view facing west).

Arizona's On-line Environmental Review Tool
Search ID: 20140418023117
Project Name: Hickman's Family Farm - Tonopah
Date: 4/18/2014 4:39:37 PM

Project Location



Project Name: Hickman's Family Farm - Tonopah
Submitted By: Kellie Huston
On behalf of: CONSULTING
Project Search ID: 20140418023117
Date: 4/18/2014 4:39:30 PM
Project Category: Agricultural Operations,Livestock Operations/Management,New and/or maintenance to domestic animal farm (sheep, pigs, goats, dairy cows, etc.)
Project Coordinates (UTM Zone 12-NAD 83): 318690.986, 3707684.532 meter
County: MARICOPA
USGS 7.5 Minute Quadrangle ID: 1285
Quadrangle Name: TONOPAH
Project locality is currently being scoped

The Department appreciates the opportunity to provide in-depth comments and project review when additional information or environmental documentation becomes available.

Special Status Species Occurrences/Critical Habitat/Tribal Lands within 3 miles of Project Vicinity:

Name	Common Name	FWS	USFS	BLM	State
Gopherus morafkai	Sonoran Desert Tortoise	C*	S		WSC

Location Accuracy Disclaimer

Project locations are assumed to be both precise and accurate for the purposes of environmental review. The creator/owner of the Project Review Receipt is solely responsible for the project location and thus the correctness of the Project Review Receipt content.

 APPLICATION INITIALS: _____

Please review the entire receipt for project type recommendations and/or species or location information and retain a copy for future reference. If any of the information you provided did not accurately reflect this project, or if project plans change, another review should be conducted, as this determination may not be valid.

Arizona's On-line Environmental Review Tool:

1. This On-line Environmental Review Tool inquiry has generated recommendations regarding the potential impacts of your project on Special Status Species (SSS) and other wildlife of Arizona. SSS include all U.S. Fish and Wildlife Service federally listed, U.S. Bureau of Land Management sensitive, U.S. Forest Service sensitive, and Arizona Game and Fish Department (Department) recognized species of concern.
2. These recommendations have been made by the Department, under authority of Arizona Revised Statutes Title 5 (Amusements and Sports), 17 (Game and Fish), and 28 (Transportation). These recommendations are preliminary in scope, designed to provide early considerations for all species of wildlife, pertinent to the project type you entered.
3. This receipt, generated by the automated On-line Environmental Review Tool does not constitute an official project review by Department biologists and planners. Further coordination may be necessary as appropriate under the National Environmental Policy Act (NEPA) and/or the Endangered Species Act (ESA).

The U.S. Fish and Wildlife Service (USFWS) has regulatory authority over all federally listed species under the ESA. Contact USFWS Ecological Services Offices: http://arizonaes.fws.gov/.

Phoenix Main Office
2321 W. Royal Palm Road, Suite 103
Phoenix, AZ 85021
Phone 602-242-0210
Fax 602-242-2513

Tucson Sub-Office
201 North Bonita, Suite 141
Tucson, AZ 85745
Phone 520-670-6144
Fax 520-670-6154

Flagstaff Sub-Office
323 N. Leroux Street, Suite 101
Flagstaff, AZ 86001
Phone 928-226-0614
Fax 928-226-1099

Disclaimer:

1. This is a preliminary environmental screening tool. It is not a substitute for the potential knowledge gained by having a biologist conduct a field survey of the project area.
2. The Department's Heritage Data Management System (HDMS) data is not intended to include potential distribution of special status species. Arizona is large and diverse with plants, animals, and environmental conditions that are ever changing. Consequently, many areas may contain species that biologists do not know about or species previously noted in a particular area may no longer occur there.
3. Not all of Arizona has been surveyed for special status species, and surveys that have been conducted have varied greatly in scope and intensity. Such surveys may reveal previously undocumented population of species of special concern.
4. HDMS data contains information about species occurrences that have actually been reported to the Department.

Arizona Game and Fish Department Mission

To conserve, enhance, and restore Arizona's diverse wildlife resources and habitats through aggressive protection and

 APPLICATION INITIALS: _____

management programs, and to provide wildlife resources and safe watercraft and off-highway vehicle recreation for the enjoyment, appreciation, and use by present and future generations.

Project Category: Agricultural Operations,Livestock Operations/Management,New and/or maintenance to domestic animal farm (sheep, pigs, goats, dairy cows, etc.)

Project Type Recommendations:

Based on the project type entered; coordination with Arizona Department of Environmental Quality may be required (http://www.azdeq.gov/).

Based on the project type entered; coordination with State Historic Preservation Office may be required http://azstateparks.com/SHPO/index.html

Based on the project type entered; coordination with the Environmental Protection Agency may be required http://www.epa.gov/

During planning and construction, minimize potential introduction or spread of exotic invasive species. Invasive species can be plants, animals (exotic snails), and other organisms (e.g. microbes), which may cause alteration to ecological functions or compete with or prey upon native species and can cause social impacts (e.g. livestock forage reduction, increase wildfire risk). The terms noxious weed or invasive plants are often used interchangeably. Precautions should be taken to wash all equipment utilized in the project activities before and after project activities to reduce the spread of invasive species. Arizona has noxious weed regulations (Arizona Revised Statutes, Rules R3-4-244 and R3-4-245). See Arizona Department of Agriculture website for restricted plants http://www.azda.gov/PSD/quarantine5.htm. Additionally, the U.S. Department of Agriculture has information regarding pest and invasive plant control methods including: pesticide, herbicide, biological control agents, and mechanical control: http://www.usda.gov/wps/portal/usdahome. The Department regulates the importation, purchasing, and transportation of wildlife and fish (Restricted Live Wildlife), please refer to the hunting regulations for further information http://www.azgfd.gov/h_f/hunting_rules.shtml.

Follow manufacturer's recommended application guidelines for all chemical treatments. The U.S. Fish and Wildlife Service, Region 2, Environmental Contaminants Program has a reference document that serves as their regional pesticide recommendations for protecting wildlife and fisheries resources, titled "Recommended Protection Measures for Pesticide Applications in Region 2 of the USFWS." The Department recommends direct or indirect impacts to sensitive species and their forage base from the application of chemical pesticides or herbicides be considered carefully.

Project Location and/or Species recommendations:

Heritage Data Management System records indicate that one or more listed, proposed, or candidate species or Critical Habitat (Designated or Proposed) have been documented in the vicinity of your project (refer to page 1 of the receipt). Please contact:
Ecological Services Office
US Fish and Wildlife Service
2321 W. Royal Palm Rd.
Phoenix, AZ 85021-4951

 APPLICATION INITIALS: _____

Phone: 602-242-0210
Fax: 602-242-2513

Recommendations Disclaimer:

1. Potential impacts to fish and wildlife resources may be minimized or avoided by the recommendations generated from information submitted for your proposed project.
2. These recommendations are proposed actions or guidelines to be considered during **preliminary project development**.
3. Additional site specific recommendations may be proposed during further NEPA/ESA analysis or through coordination with affected agencies.
4. Making this information directly available does not substitute for the Department's review of project proposals, and should not decrease our opportunity to review and evaluate additional project information and/or new project proposals.
5. The Department is interested in the conservation of all fish and wildlife resources, including those Special Status Species listed on this receipt, and those that may have not been documented within the project vicinity as well as other game and nongame wildlife.
6. **Further coordination requires the submittal of this initialed and signed Environmental Review Receipt with a cover letter and project plans or documentation that includes project narrative, acreage to be impacted, how construction or project activity(s) are to be accomplished, and project locality information (including site map).**
7. Upon receiving information by AZGFD, please allow 30 days for completion of project reviews. Mail requests to:

Project Evaluation Program, Habitat Branch
Arizona Game and Fish Department
5000 West Carefree Highway
Phoenix, Arizona 85086-5000

Phone Number: (623) 236-7600
Fax Number: (623) 236-7366

Terms of Use

By using this site, you acknowledge that you have read and understand the terms of use. Department staff may revise these terms periodically. If you continue to use our website after we post changes to these terms, it will mean that you accept such changes. If at any time you do not wish to accept the Terms, you may choose not to use the website.

1. This Environmental Review and project planning website was developed and intended for the purpose of screening projects for potential impacts on resources of special concern. By indicating your agreement to the terms of use for this website, you warrant that you will not use this website for any other purpose.
2. Unauthorized attempts to upload information or change information on this website are strictly prohibited and may be punishable under the Computer Fraud and Abuse Act of 1986 and/or the National Information Infrastructure Protection Act .
3. The Department reserves the right at any time, without notice, to enhance, modify, alter, or suspend the website and to terminate or restrict your access to the website.
4. This Environmental Review is based on the project study area that was entered. The review must be redone if the project study area, location, or the type of project changes. If additional information becomes available, this review may need to be reconsidered.
5. A signed and initialed copy of the Environmental Review Receipt indicates that the entire receipt has been read by the signer of the Environmental Review Receipt.

Security:

The Environmental Review and project planning web application operates on a complex State computer system. This system is

 APPLICATION INITIALS: _____

monitored to ensure proper operation, to verify the functioning of applicable security features, and for other like purposes. Anyone using this system expressly consents to such monitoring and is advised that if such monitoring reveals possible evidence of criminal activity, system personnel may provide the evidence of such monitoring to law enforcement officials. Unauthorized attempts to upload or change information; to defeat or circumvent security measures; or to utilize this system for other than its intended purposes are prohibited.

This website maintains a record of each environmental review search result as well as all contact information. This information is maintained for internal tracking purposes. Information collected in this application will not be shared outside of the purposes of the Department.

If the Environmental Review Receipt and supporting material are not mailed to the Department or other appropriate agencies within six (6) months of the Project Review Receipt date, the receipt is considered to be null and void, and a new review must be initiated.

Print this Environmental Review Receipt using your Internet browser's print function and keep it for your records. Signature of this receipt indicates the signer has read and understands the information provided.

Signature:_____

Date: _____

Proposed Date of Implementation: _____

Please provide point of contact information regarding this Environmental Review.

Application or organization responsible for project implementation

Agency/organization:_____

Contact Name: _____

Address: _____

City, State, Zip: _____

Phone: _____

E-mail: _____

Person Conducting Search (if not applicant)

Agency/organization:_____

Contact Name: _____

Address: _____

 APPLICATION INITIALS: _____

City, State, Zip: _____

Phone: _____

E-mail: _____

 APPLICATION INITIALS: _____

ED_001509B_00000855-00130

U.S. Fish and Wildlife Service

Natural Resources of Concern

This resource list is to be used for planning purposes only — it is not an official species list.

Endangered Species Act species list information for your project is available online and listed below for the following FWS Field Offices:

Arizona Ecological Services Field Office
2321 WEST ROYAL PALM ROAD, SUITE 103
PHOENIX, AZ 85021
(602) 242-0210
http://www.fws.gov/southwest/es/arizona/
http://www.fws.gov/southwest/es/EndangeredSpecies/lists/

Project Name:

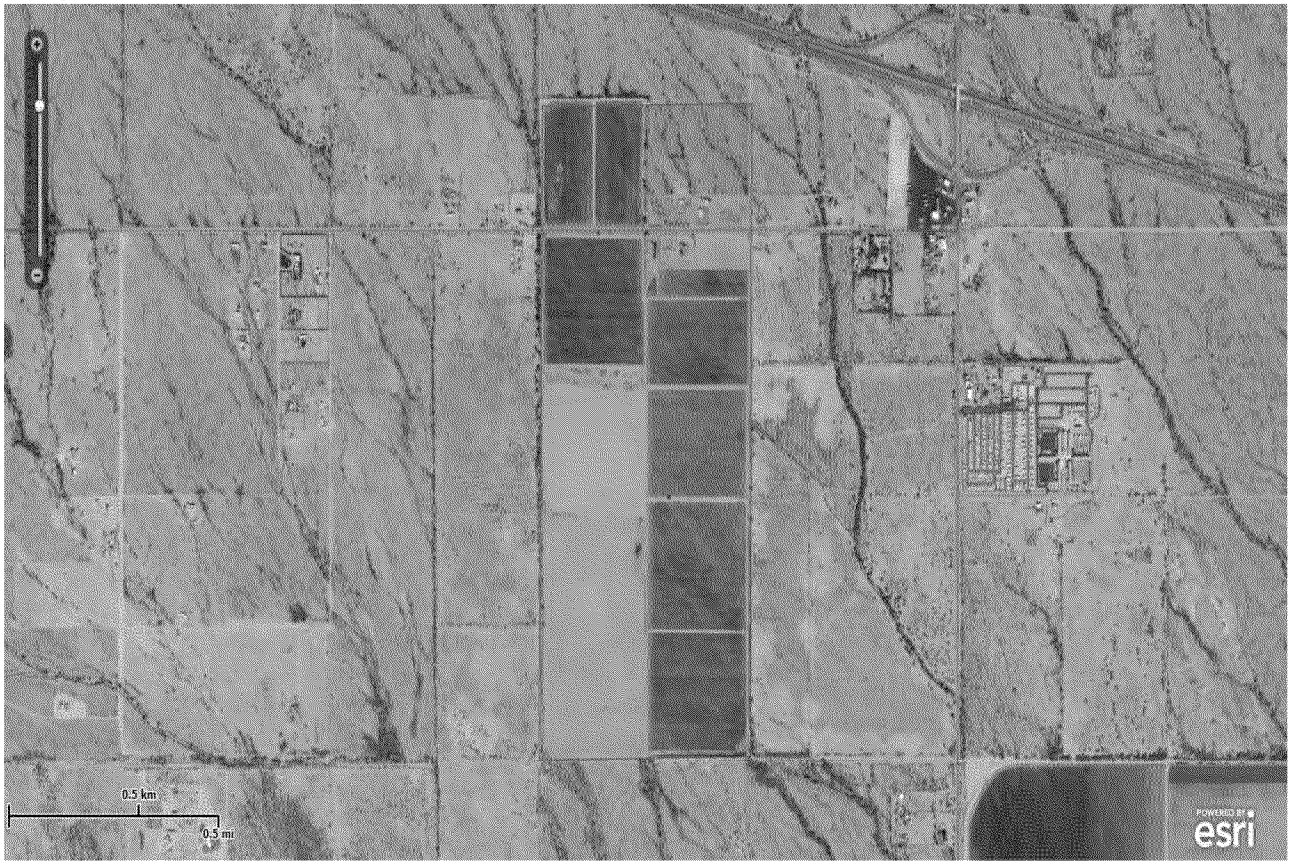
Hickmans Family Farms - Tonopah

ED_001509B_00000855-00131

U.S. Fish and Wildlife Service

Natural Resources of Concern

Project Location Map:



Project Counties:

Maricopa, AZ

Geographic coordinates (Open Geospatial Consortium Well-Known Text, NAD83):

MULTIPOLYGON (((-112.954125 33.49712, -112.9454539 33.4971916, -112.9454968 33.4792959, -112.9542537 33.4791885, -112.954125 33.49712)))

Project Type:

Agriculture

U.S. Fish and Wildlife Service

Natural Resources of Concern

Endangered Species Act Species List (USFWS Endangered Species Program).

There are a total of 8 threatened, endangered, or candidate species on your species list. Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fishes may appear on the species list because a project could cause downstream effects on the species. Critical habitats listed under the **Has Critical Habitat** column may or may not lie within your project area. See the **Critical habitats within your project area** section below for critical habitat that lies within your project area. Please contact the designated FWS office if you have questions.

Species that should be considered in an effects analysis for your project:

Birds	Status		Has Critical Habitat	Contact
California Least tern (*Sterna antillarum browni*)	Endangered	species info		Arizona Ecological Services Field Office
Southwestern Willow flycatcher (*Empidonax traillii extimus*) Population: Entire	Endangered	species info	Final designated critical habitat	Arizona Ecological Services Field Office
Sprague's Pipit (*Anthus spragueii*)	Candidate	species info		Arizona Ecological Services Field Office
Yellow-Billed Cuckoo (*Coccyzus americanus*) Population: Western U.S. DPS	Proposed Threatened	species info		Arizona Ecological Services Field Office
Fishes				
Roundtail chub (*Gila robusta*) Population: Lower Colorado River Basin DPS	Candidate	species info		Arizona Ecological Services Field Office
Mammals				
Sonoran pronghorn (*Antilocapra americana sonoriensis*) Population: Entire	Endangered	species info		Arizona Ecological Services Field Office

Natural Resources of Concern

Reptiles				
Sonoran desert tortoise (*Gopherus morafkai*) Population:	Candidate	species info		Arizona Ecological Services Field Office
Tucson Shovel-Nosed Snake (*Chionactis occipitalis klauberi*)	Candidate	species info		Arizona Ecological Services Field Office

Critical habitats within your project area:

There are no critical habitats within your project area.

FWS National Wildlife Refuges (USFWS National Wildlife Refuges Program).

There are no refuges found within the vicinity of your project.

FWS Migratory Birds (USFWS Migratory Bird Program).

Most species of birds, including eagles and other raptors, are protected under the Migratory Bird Treaty Act (16 U.S.C. 703). Bald eagles and golden eagles receive additional protection under the Bald and Golden Eagle Protection Act (16 U.S.C. 668). The Service's Birds of Conservation Concern (2008) report identifies species, subspecies, and populations of all migratory nongame birds that, without additional conservation actions, are likely to become listed under the Endangered Species Act as amended (16 U.S.C 1531 et seq.).

Migratory bird information is not available for your project location.

NWI Wetlands (USFWS National Wetlands Inventory).

The U.S. Fish and Wildlife Service is the principal Federal agency that provides information on the extent and status of wetlands in the U.S., via the National Wetlands Inventory Program (NWI). In addition to impacts to

wetlands within your immediate project area, wetlands outside of your project area may need to be considered in any evaluation of project impacts, due to the hydrologic nature of wetlands (for example, project activities may affect local hydrology within, and outside of, your immediate project area). It may be helpful to refer to the USFWS National Wetland Inventory website. The designated FWS office can also assist you. Impacts to wetlands and other aquatic habitats from your project may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal Statutes. Project Prop onents should discuss the relationship of these requirements to their project with the Regulatory Program of the appropriate U.S. Army Corps of Engineers District.

There are no wetlands found within the vicinity of your project.

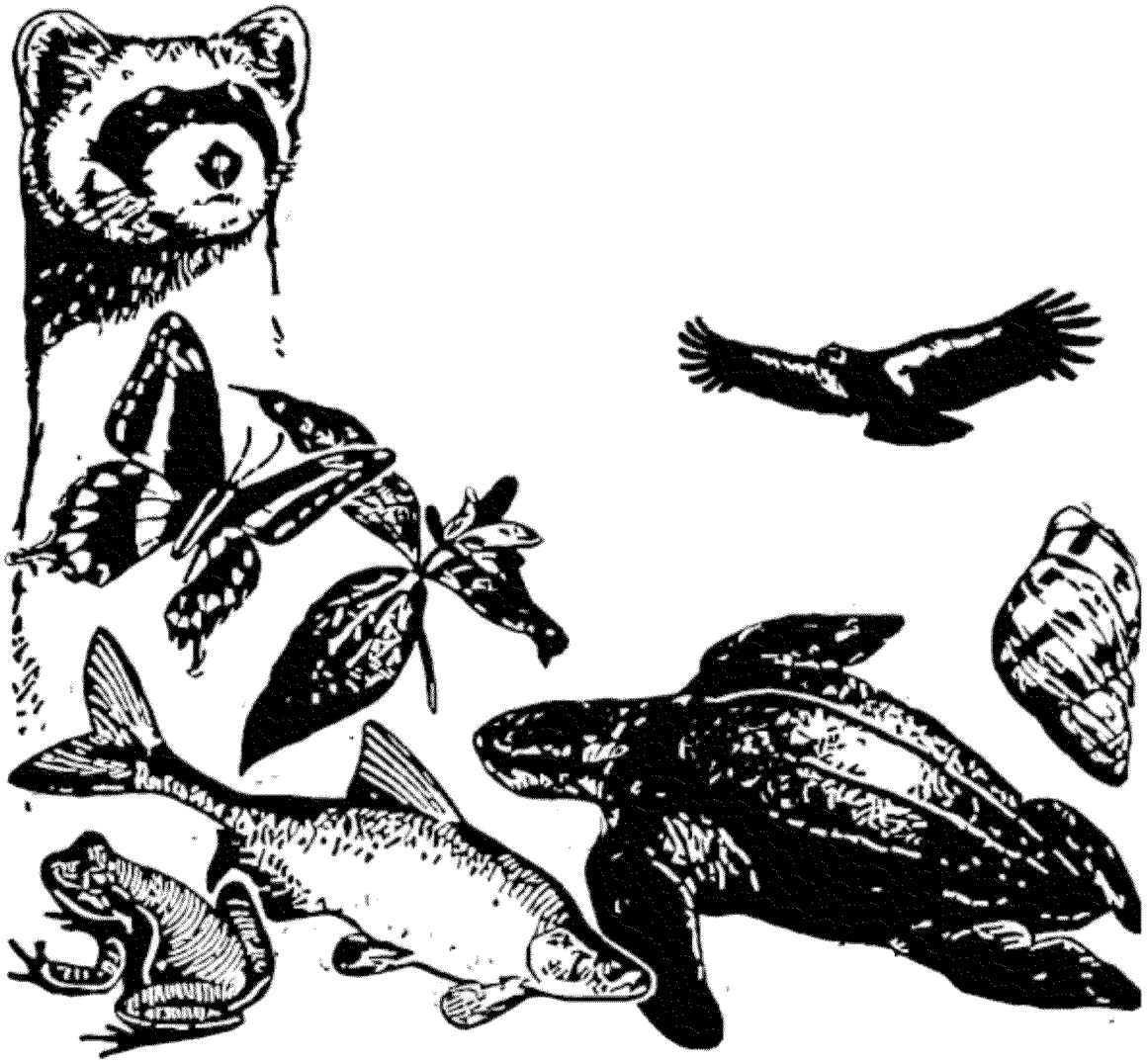
U.S. Fish & Wildlife Service

Hickman's Tonopah Plant

IPaC Trust Resource Report

Generated November 16, 2015 01:11 PM MST

This report is for informational purposes only and should not be used for planning or analyzing project-level impacts. For projects that require FWS review, please return to this project on the IPaC website and request an official species list from the Regulatory Documents page.



US Fish & Wildlife Service

IPaC Trust Resource Report

Project Description

NAME

Hickman's Tonopah Plant

PROJECT CODE

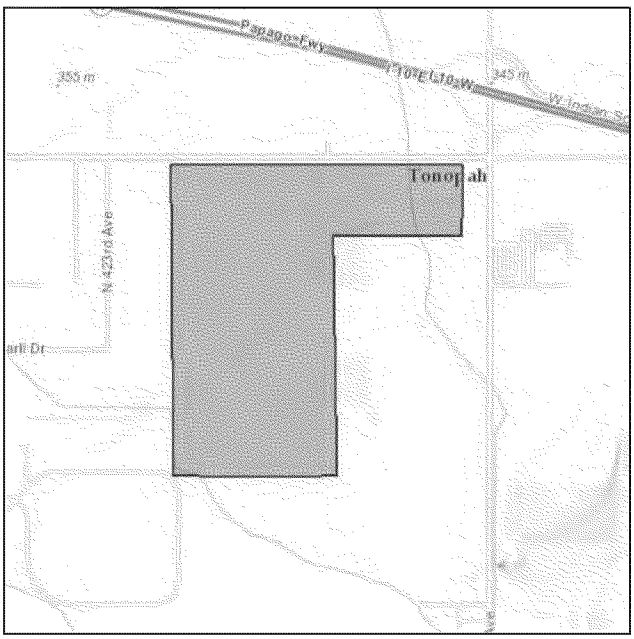
6WNGR-XXYQZ-HT7FY-RSYKJ-2TRV54

LOCATION

Maricopa County, Arizona

DESCRIPTION

Approximately 403 Acre Property



U.S. Fish & Wildlife Contact Information

Species in this report are managed by:

Arizona Ecological Services Field Office
2321 West Royal Palm Road, Suite 103
Phoenix, AZ 85021-4915
(602) 242-0210

ED_001509B_00000855-00137

Endangered Species

Proposed, candidate, threatened, and endangered species that are managed by the Endangered Species Program and should be considered as part of an effect analysis for this project.

This unofficial species list is for informational purposes only and does not fulfill the requirements under Section 7 of the Endangered Species Act, which states that Federal agencies are required to "request of the Secretary of Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action." This requirement applies to projects which are conducted, permitted or licensed by any Federal agency.

A letter from the local office and a species list which fulfills this requirement can be obtained by returning to this project on the IPaC website and requesting an official species list on the Regulatory Documents page.

Birds

California Least Tern Sterna antillarum browni — Endangered

CRITICAL HABITAT
No critical habitat has been designated for this species.

https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=B03X

Southwestern Willow Flycatcher Empidonax traillii extimus — Endangered

CRITICAL HABITAT
There is **final** critical habitat designated for this species.

https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=B094

Sprague's Pipit Anthus spragueii — Candidate

CRITICAL HABITAT
No critical habitat has been designated for this species.

https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=B0GD

Yellow-billed Cuckoo Coccyzus americanus — Threatened

CRITICAL HABITAT
There is **proposed** critical habitat designated for this species.

https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=B06R

Fishes

Roundtail Chub Gila robusta — Proposed Threatened

CRITICAL HABITAT
No critical habitat has been designated for this species.

https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=E02Z

ED_001509B_00000855-00138

Mammals

Sonoran Pronghorn Antilocapra americana sonoriensis Endangered

CRITICAL HABITAT
No critical habitat has been designated for this species.

https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=A009

Critical Habitats

Potential effects to critical habitat(s) within the project area must be analyzed along with the endangered species themselves.

There is no critical habitat within this project area

ED_001509B_00000855-00139

Migratory Birds

Birds are protected by the Migratory Bird Treaty Act and the Bald and Golden Eagle Protection Act.

Any activity which results in the take of migratory birds or eagles is prohibited unless authorized by the U.S. Fish and Wildlife Service (1). There are no provisions for allowing the take of migratory birds that are unintentionally killed or injured.

You are responsible for complying with the appropriate regulations for the protection of birds as part of this project. This involves analyzing potential impacts and implementing appropriate conservation measures for all project activities.

Bald Eagle Haliaeetus leucocephalus — Bird of conservation concern
Season: Wintering
https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=B008

Bell's Vireo Vireo bellii — Bird of conservation concern
Season: Breeding

Bendire's Thrasher Toxostoma bendirei — Bird of conservation concern
Year-round

Black-chinned Sparrow Spizella atrogularis — Bird of conservation concern
Seasons: Wintering, Breeding

Brewer's Sparrow Spizella breweri — Bird of conservation concern
Season: Wintering
https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=B0HA

Burrowing Owl Athene cunicularia — Bird of conservation concern
Year-round

Common Black-hawk Buteogallus anthracinus — Bird of conservation concern
Season: Breeding

Costa's Hummingbird Calypte costae — Bird of conservation concern
Season: Breeding

Elf Owl Micrathene whitneyi — Bird of conservation concern
Season: Breeding
https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=B0GV

Gila Woodpecker Melanerpes uropygialis — Bird of conservation concern
Year-round
https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=B0EH

Gilded Flicker Colaptes chrysoides — Bird of conservation concern
Year-round
https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=B0EG

Golden Eagle Aquila chrysaetos — Bird of conservation concern
Year-round
https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=B0DV

Le Conte's Thrasher toxostoma lecontei — Bird of conservation concern
Season: Breeding
https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=B0GE

ED_001509B_00000855-00140

Least Bittern Ixobrychus exilis — Bird of conservation concern
Year-round

Lewis's Woodpecker Melanerpes lewis — Bird of conservation concern
Season: Wintering

Loggerhead Shrike Lanius ludovicianus — Bird of conservation concern
Year-round
https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=B0FY

Lucy's Warbler Vermivora luciae — Bird of conservation concern
Season: Breeding
https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=B0DL

Mountain Plover Charadrius montanus — Bird of conservation concern
Season: Wintering
https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=B078

Prairie Falcon Falco mexicanus — Bird of conservation concern
Year-round
https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=B0ER

Snowy Plover Charadrius alexandrinus — Bird of conservation concern
Season: Migrating

Sonoran Yellow Warbler Dendroica petechia ssp. sonorana — Bird of conservation concern
Seasons: Breeding, Migrating
https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=B0F7

Swainson's Hawk Buteo swainsoni — Bird of conservation concern
Season: Breeding
https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=B070

ED_001509B_00000855-00141

Refuges

Any activity proposed on National Wildlife Refuge lands must undergo a 'Compatibility Determination' conducted by the Refuge. If your project overlaps or otherwise impacts a Refuge, please contact that Refuge to discuss the authorization process.

There are no refuges within this project area

ED_001509B_00000855-00142

Wetlands

Impacts to NWI wetlands and other aquatic habitats from your project may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal Statutes.

Project proponents should discuss the relationship of these requirements to their project with the Regulatory Program of the appropriate U.S. Army Corps of Engineers District.

DATA LIMITATIONS

The Service's objective of mapping wetlands and deepwater habitats is to produce reconnaissance level information on the location, type and size of these resources. The maps are prepared from the analysis of high altitude imagery. Wetlands are identified based on vegetation, visible hydrology and geography. A margin of error is inherent in the use of imagery; thus, detailed on-the-ground inspection of any particular site may result in revision of the wetland boundaries or classification established through image analysis.

The accuracy of image interpretation depends on the quality of the imagery, the experience of the image analysts, the amount and quality of the collateral data and the amount of ground truth verification work conducted. Metadata should be consulted to determine the date of the source imagery used and any mapping problems.

Wetlands or other mapped features may have changed since the date of the imagery or field work. There may be occasional differences in polygon boundaries or classifications between the information depicted on the map and the actual conditions on site.

DATA EXCLUSIONS

Certain wetland habitats are excluded from the National mapping program because of the limitations of aerial imagery as the primary data source used to detect wetlands. These habitats include seagrasses or submerged aquatic vegetation that are found in the intertidal and subtidal zones of estuaries and nearshore coastal waters. Some deepwater reef communities (coral or tuberficid worm reefs) have also been excluded from the inventory. These habitats, because of their depth, go undetected by aerial imagery.

DATA PRECAUTIONS

Federal, state, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either the design or products of this inventory, to define the limits of proprietary jurisdiction of any Federal, state, or local government or to establish the geographical scope of the regulatory programs of government agencies. Persons intending to engage in activities involving modifications within or adjacent to wetland areas should seek the advice of appropriate federal, state, or local agencies concerning specified agency regulatory programs and proprietary jurisdictions that may affect such activities.

There are no wetlands identified in this project area

ED_001509B_00000855-00143

Appendix G

Engineering Drawings and BMPs from Drainage Design Manual

POLLUTION PREVENTION NOTES

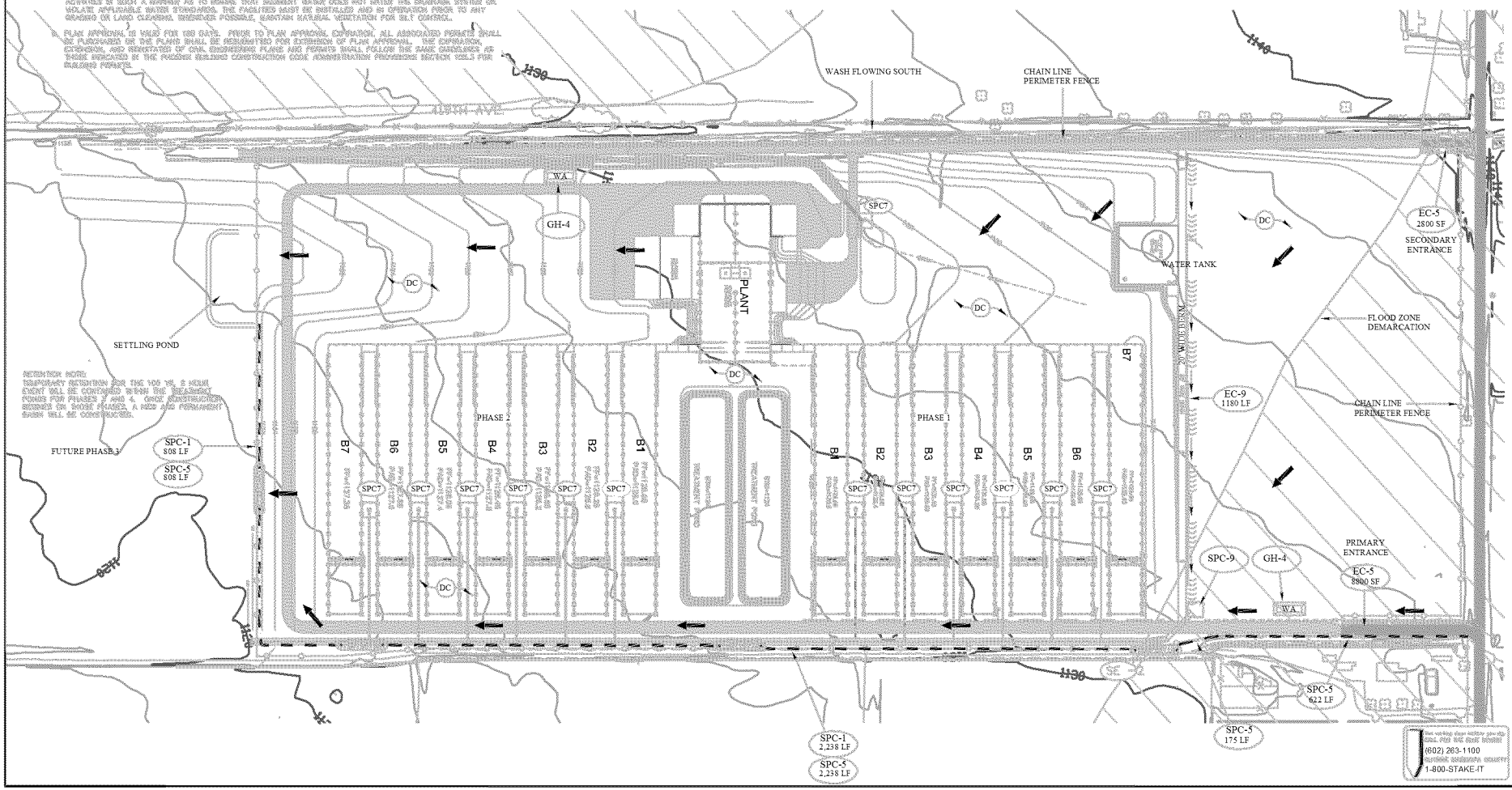
1. A COPY OF THE GRADING AND DRAINAGE PLAN FOR THIS PROJECT, TOGETHER WITH A COPY OF THE NOTICE OF INTENT (N.O.I.) AND THE STORM WATER POLLUTION PREVENTION PLAN (SWPPP), SHALL BE MAINTAINED ON THE SITE AND AVAILABLE FOR REVIEW UNDER SUBJECT OF THE GRADING AND DRAINAGE PLAN PERMIT(S) TO OR REFERENCED ON THE SWPPP SHALL BE CONSIDERED A PART OF THE SWPP.
2. THE OPERATOR SHALL OBTAIN A DUST CONTROL PERMIT FROM MARICOPA COUNTY AND PERFORM MEASURES AS REQUIRED BY THE PERMIT TO PREVENT EXCESS DUST.
3. THE OPERATOR SHALL PERFORM AT A MINIMUM A WEEKLY INSPECTION OF THE CONSTRUCTION SITE ONCE EVERY MONTH AND WITHIN 24 HOURS OF RAINFALL GREATER THAN OR EQUAL TO HALF OF AN INCH OR MORE. THE OPERATOR'S REPORT IS TO BE SUBMITTED TO THE CONSTRUCTION ENGINEERING DEPARTMENT INSPECTOR FOR REVIEW. FACILITIES SHALL BE MAINTAINED AS NECESSARY TO ENSURE THEIR CONTINUED FUNCTIONING. IN ADDITION, ALL TEMPORARY EROSION CONTROLS SHALL BE MAINTAINED IN A SATISFACTORY CONDITION UNTIL SUCH TIME THAT CLEARING AND/OR CONSTRUCTION IS COMPLETED, PERMANENT DRAINAGE FACILITIES ARE OPERATIONAL, AND THE POTENTIAL FOR EROSION HAS PASSED.
4. THE OPERATOR SHALL AMEND THIS PLAN AS NECESSARY DURING THE COURSE OF CONSTRUCTION TO RESOLVE ANY PROBLEM AREAS, WHICH BECOME EVIDENT DURING THE CONSTRUCTION AND / OR RAINFALLS.
5. THE PERMITEE SHALL FILE A NOTICE OF TERMINATION (N.O.T.) AFTER COMPLETION OF CONSTRUCTION AND PLACEMENT OF FINAL LANDSCAPE MATERIALS. THE N.O.T. IS TO BE SUBMITTED TO THE PLANNING AND DEVELOPMENT DEPARTMENT CIVIL/SITE INSPECTOR TO THE FINAL SWPP PERMIT.
6. THE PERMITEE SHALL SAVE ALL RECORDS, INCLUDING THE N.O.I., SWPPP, N.O.T., AND INSPECTION REPORTS, ON FILE FOR MINIMUM OF THREE YEARS FROM THE DATE OF FILING THE NOT.
7. THE IMPLEMENTATION OF THESE PLANS AND THE CONSTRUCTION, MAINTENANCE, REPLACEMENT, AND UPGRADING OF THESE FACILITIES IS THE RESPONSIBILITY OF THE PERMIT UNTIL ALL CONSTRUCTION IS APPROVED AND THE N.O.T. IS SUBMITTED TO THE PLANNING AND DEVELOPMENT DEPARTMENT CIVIL / SITE INSPECTOR.
8. THE FACILITIES SHOWN ON THIS PLAN MUST BE CONSTRUCTED IN CONJUNCTION WITH ALL CLEARING AND GRADING ACTIVITIES IN SUCH A MANNER AS TO ENSURE THAT SEDIMENT WATER DOES NOT ENTER THE DRAINAGE SYSTEM OR VIOLATE APPLICABLE WATER STANDARDS. THE FACILITIES MUST BE INSTALLED AND IN OPERATION PRIOR TO ANY GRADING OR LAND CLEARING. WHENEVER POSSIBLE, MAINTAIN NATURAL VEGETATION FOR SILT CONTROL.
9. PLAN APPROVAL IS VALID FOR 180 DAYS. PRIOR TO PLAN APPROVAL EXPIRATION, ALL ASSOCIATED PERMITS SHALL BE PURCHASED OR THE PLANS SHALL BE RESUBMITTED FOR EXTENSION OF PLAN APPROVAL. THE EXPIRATION, EXTENSION, AND REINSTATED OF CIVIL ENGINEERING PLANS AND PERMITS SHALL FOLLOW THE SAME GUIDELINES AS THOSE INDICATED IN THE PHOENIX BUILDING CONSTRUCTION CODE ADMINISTRATION PROVISIONS SECTION 105.5 FOR BUILDING PERMITS.

ENGINEER'S GENERAL NOTES

1. THE LOCATION OF ALL EXISTING UNDERGROUND UTILITIES IS BASED ON INFORMATION PROVIDED TO THE ENGINEER BY THE UTILITY COMPANIES AND THE CITY. IT IS THE CONTRACTOR'S RESPONSIBILITY TO LOCATE ALL EXISTING UNDERGROUND UTILITIES, TELEPHONE AND ELECTRIC CONDUITS AND STRUCTURES IN ADVANCE OF ANY CONSTRUCTION AND TO OBSERVE ALL POSSIBLE PRECAUTIONS TO AVOID ANY DAMAGE TO SUCH. THE ENGINEER AND/OR OWNER CANNOT GUARANTEE ANY LOCATIONS SHOWN ON THESE PLANS OR THOSE OMITTED FROM SAME.
2. "BLUE STAKE" LOCATES ONLY UTILITIES WITHIN THE PUBLIC RIGHT OF WAY. THE CONTRACTOR SHALL PROVIDE OTHER MEANS OF ON-SITE UTILITY LOCATION.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY ESTIMATES, BID, CONSTRUCTION, OR OTHER ACTIONS OR DECISIONS MADE WHICH HAVE BEEN BASED ON PRELIMINARY OR UNAPPROVED PLANS.
4. IT IS THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE, VERIFY, AND ACCEPT ALL CONSTRUCTION STAKES PRIOR TO STARTING ANY CONSTRUCTION.
5. ALL ON-SITE CONSTRUCTION SHALL CONFORM TO THE LATEST APPLICABLE MARICOPA ASSOCIATION OF GOVERNMENT (M.A.G.) UNIFORM STANDARD SPECIFICATIONS & DETAILS AND THE LATEST CITY SUPPLEMENTALS TO THE M.A.G. UNIFORM STANDARD SPECIFICATIONS & DETAILS, UNLESS OTHERWISE NOTED ON THE PLANS OR IN THE SPECIFICATIONS. THE CONTRACTOR SHALL COMPLY WITH O.S.H.A. REQUIREMENTS RELATING TO CONSTRUCTION AT ALL TIMES.
6. ANY ALTERATIONS OR ADDITIONS TO THESE PLANS MUST BE APPROVED BY THE UNDERSIGNED REGISTERED PROFESSIONAL ENGINEER.
7. CONTRACTOR SHALL OBTAIN A DUST CONTROL PERMIT AND PROVIDE DUST CONTROL FOR ALL UNPAVED AREAS DURING CONSTRUCTION. OWNER IS RESPONSIBLE FOR PROVIDING APPROPRIATE GROUND COVER AND/OR DUST CONTROL MAINTENANCE AS NECESSARY AFTER CONSTRUCTION IS COMPLETED.
8. CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL REQUIRED PERMITS FOR THIS PROJECT.

LEGEND

	INDICATES STRAW FILTER (SPC-1 XX LF)
	INDICATES INLET FILTER LOCATION (SPC-7 SPC-9)
	INDICATES SILT FENCE (SPC-5 XX LF)
	INDICATES CONSTRUCTION ENTRANCE (EC-5 XX SF)
	INDICATES STORMWATER FLOW DIRECTION
DC	DUST CONTROL
WA	INDICATES WASHOUT AREA (GH-4)
	INDICATES TEMP DRAINAGE DIKE (EC-9 XX LF)



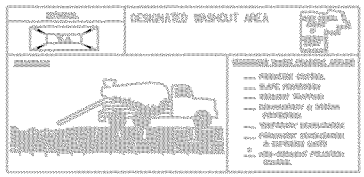
STORM WATER MANAGEMENT PLAN
FOR
DESERT PRIDE

HICKMAN'S FAMILY FARMS
SE CORNER OF 41 TH AVENUE AND INDIAN SCHOOL RD

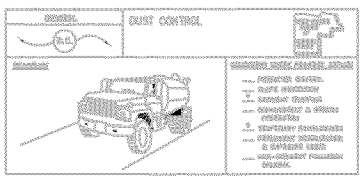
FOUR PEAKS DESIGN GROUP

DRAWING SPECIFICS	
PROJECT:	1307
DATE:	04/24/14
SCALE:	1"=120'
DRAWN BY:	PW
DESIGNED BY:	PW
CHECKED BY:	JDJ

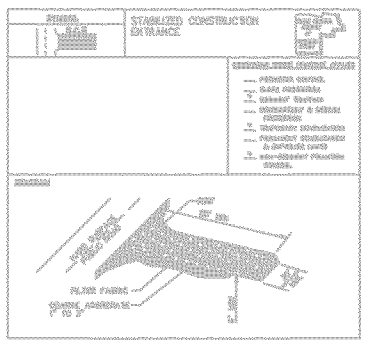
SHEET 1 OF 2



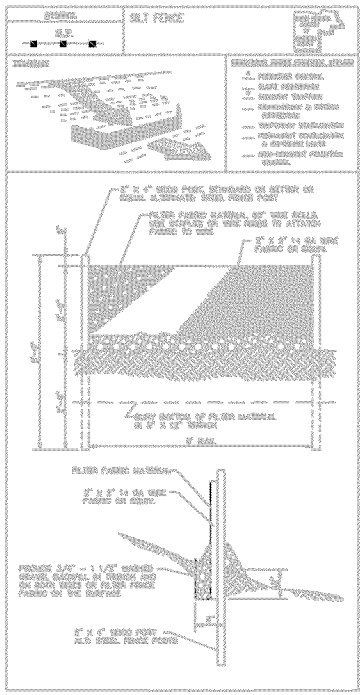
DESIGNATED WASHOUT AREA
CE4 / BMP 19



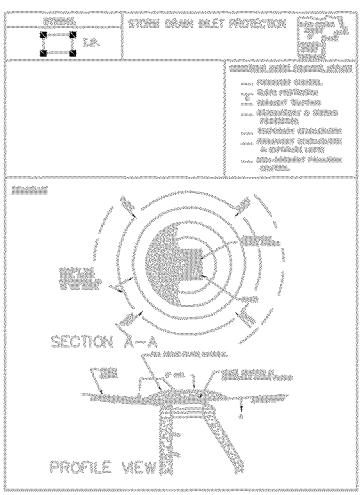
DUST CONTROL
EC7 / BMP 9



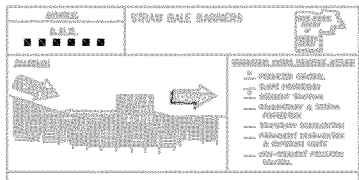
STABILIZED CONSTRUCTION ENTRANCE
EC8 / BMP 10

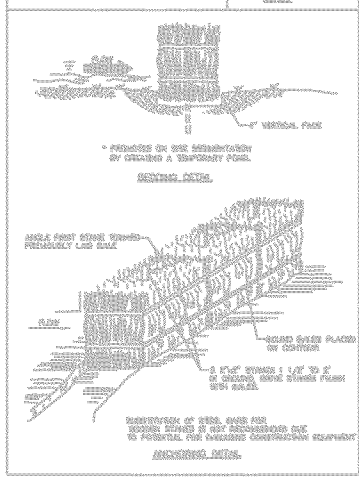


SILT FENCE
SPC5 / BMP 18

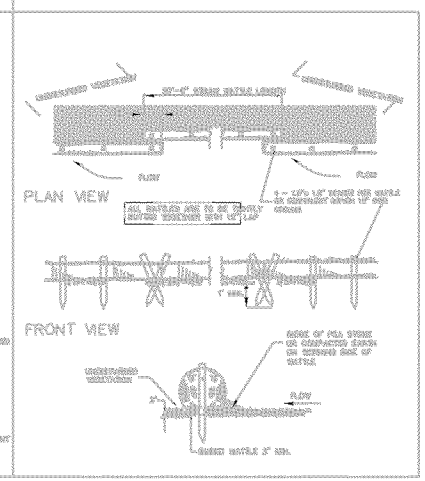


RCA STONE INLET FILTER
SPC7

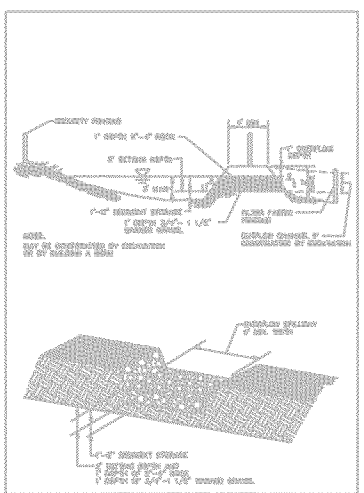




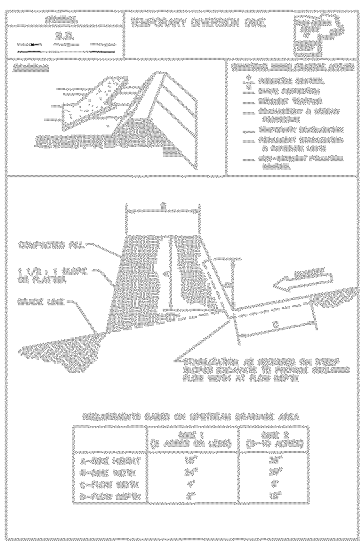
STRAW BALE BARRIERS
SPC1



STRAW WATTLE INSTALLATION DETAIL
SPC1



TEMPORARY SEDIMENT TRAP
SPC9 / BMP 60



TEMPORARY DIVERSION DIKE
SC9

(602) 263-1100
1-800-STAKE-IT

REV. NO.	DESCRIPTION	DATE

FOUR PEAKS DESIGN GROUP

STORM WATER MANAGEMENT PLAN
FOR
DESERT PRIDE

HICKMAN'S FAMILY FARMS
SE CORNER OF 411th AVENUE AND INDIAN SCHOOL RD.

DRAWING SPECIFICS

PROJECT:	1307
DATE:	04/24/14
SCALE:	NA
DRAWN BY:	PW
DESIGNED BY:	PW
CHECKED BY:	JDJ

SHEET
2 OF 2

ED_001509B_00000855-00146

EC-5 EC-5: Stabilized Construction Entrance

DEFINITION

A stabilized pad of aggregate underlain with filter cloth located at any point where traffic will be entering or exiting a construction site to or from a public right-of-way, street, alley, sidewalk or parking area. For added effectiveness, a wheel wash or wash rack area can be incorporated into the design to further reduce sediment tracking.

GENERAL INFORMATION
Applicability - Effectiveness Perimeter and Access Controls - high
Most effective when used with: EC-6 Construction Road Stabilization EC-7 Dust Control GH-6 Road Sweeping/Trackout Cleaning
Alternative BMPs: GH-4 Designated Washdown Areas – wheel wash is especially useful with clay soils.

RATINGS			
Associated Costs	**H**	**M**	**L**
Implementation		X	
Maintenance		X	
Training			X
Target Pollutants Removal	**H**	**M**	**L**
Oil and Grease			X
Nutrients			X
Sediment		X	
Floatable Material			X
Metals		X	
Other Construction Waste			X

FIGURES
Photos/Sketches Stabilized Construction Entrance Photos
CAD Drawings Stabilized Construction Entrance Drawing

ED_001509B_00000855-00147

PURPOSE

Stabilized construction entrances reduce or eliminate the tracking of sediment onto public rights-of-ways or streets. Reducing trackout of sediments and other pollutants onto paved roads helps prevent deposition of sediments into local storm drain and production of airborne dust. It also can direct traffic to a single location, reducing the number of disturbed areas on the site and providing traffic control.

APPROPRIATE APPLICATIONS

A stabilized construction entrance should be used at all points of construction ingress and egress. Use at construction sites:

- Where dirt of mud can be tracked onto public roads.
- Adjacent to water bodies.
- Where clayey or silty soils are encountered.
- Where dust is a problem during dry weather conditions.

AZPDES/NDPES permits and Maricopa County dust control regulations require that appropriate measures are implemented to prevent trackout of sediments onto paved roadways.

LIMITATIONS

Stabilized construction entrances may not be completely effective against preventing the deposition of sediments onto paved surfaces. To further reduce the chance of these sediments polluting stormwater runoff, sweeping of the paved area adjacent to the stabilized site entrance is recommended.

PLANNING CONSIDERATIONS

Limit points of entrance/exit to only stabilized locations.

Stabilized construction entrances are most effect when used in conjunction with EC-6: Construction Road Stabilization, EC-7: Dust Control, and GH-6: Road Sweeping/Trackout Cleaning.

RECOMMENDED STANDARDS AND SPECIFICATIONS

Stabilized construction entrances alone are not very effective in removing sediment from equipment leaving a construction site. Efficiency is greatly increased, though, when a washing rack is included at the point of egress.

ED_001509B_00000855-00148

Design and Sizing Considerations

The aggregate for stabilized construction entrance aprons should have a nominal diameter of 1 to 3 inches in size, washed, well-graded gravel or crushed rock. The apron dimensions recommended are 30 feet by 50 feet and 6 inches deep.

- The entrance must be properly graded to prevent runoff from leaving the construction site.
- Install a washrack at ground elevation.
- When wash areas are provided, washing should be done on an area stabilized with crushed stone which drains into a properly constructed sediment trap or basin (pond).

RECOMMENDED MAINTENANCE AND INSPECTION

- Inspect monthly and after each rainfall.
- Replace gravel mat when surface voids are no longer visible. Periodic top dressing with additional stone will be required.
- All sediments deposited on paved roadways must be removed within 24 hours.
- Remove gravel and filter fabric upon completion of construction.

Note: If working on a project that is subject to a Maricopa County Dust Control Permit under Rule 310, follow the permit requirements for Stabilized Construction Entrance design and sizing.

POST CONSTRUCTION METHODS

None.

REFERENCES

Tacoma Public Works Environmental Services, January 1993, City of Tacoma Surface Water Management Manual Volume II, Construction Stormwater Pollution Prevention. http://www.cityoftacoma.org/Page.aspx?hid=951#manual

CALTRANS, State of California Department of Transportation, March 2003, Construction Site Best Management Practices (BMPs) Manual. http://www.dot.ca.gov/hq/construc/stormwater/manuals.htm

U.S. Environmental Protection Agency, December 1999, Construction Site Storm Water Runoff Control, National Menu of Best Management Practices for Storm Water Phase II. http://cfpub2.epa.gov/npdes/stormwater/menuofbmps/con_site.cfm

North Central Texas Council of Governments, December 2003, integrated Storm Water Management (iSWM) Design Manual for Construction.

ED_001509B_00000855-00149

North Carolina State University, (NCSU) North Carolina Nonpoint Source Pollution Control Measures. http://www.water.ncsu.edu/watershedss/info/bmps.html

Center for Watershed Protection, Inc., Stormwater Manager's Resource Center (SMRC). http://www.stormwatercenter.net/

Kamber Engineering Gaithersberg, Maryland, April, 1991, Sedimentation and Erosion Control, An Inventory of Current Practices, USEPA,

City of Austin, Texas, March, 2004, Environmental Criteria Manual.

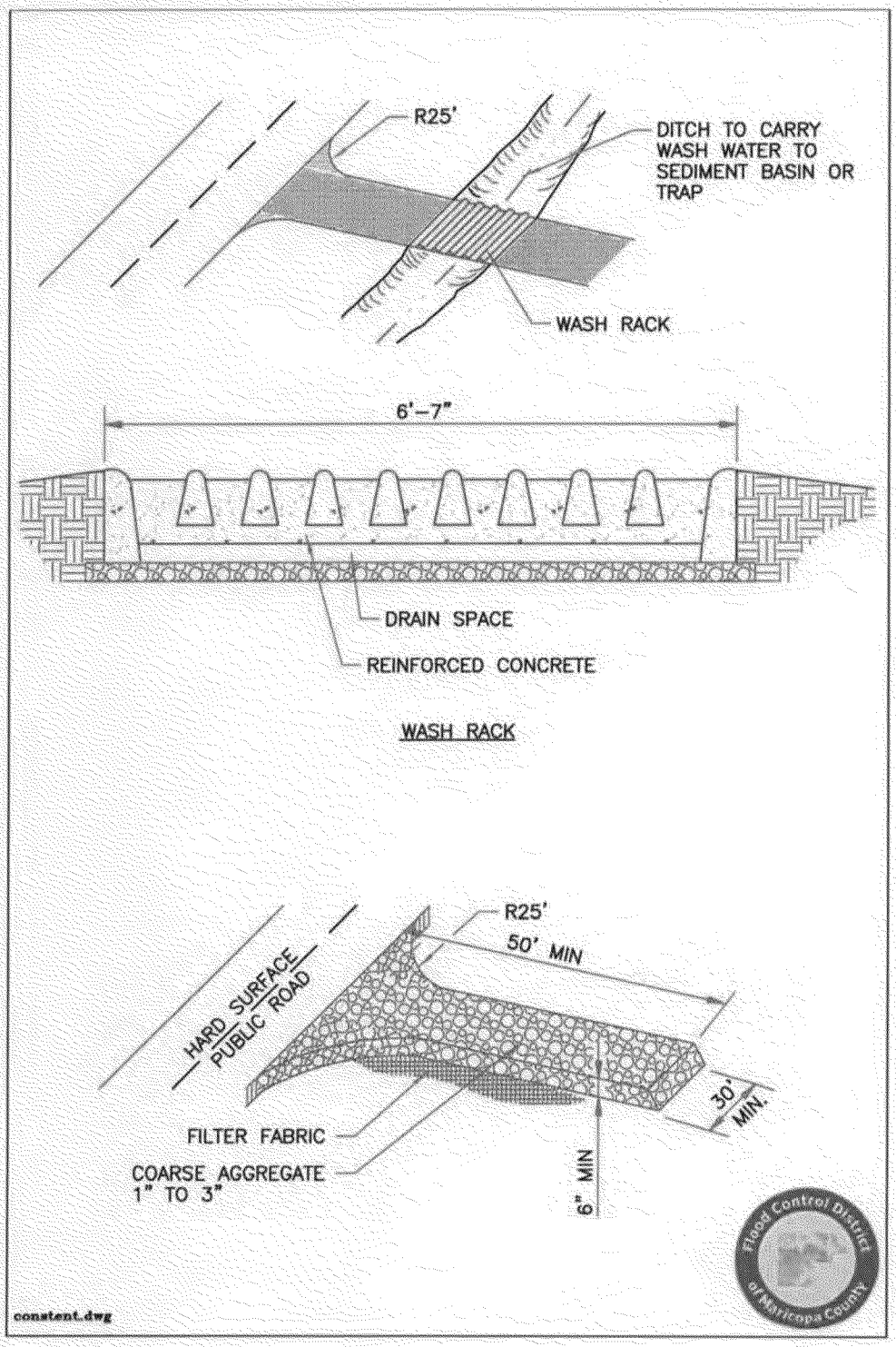
EC-5 Stabilized Construction Entrance Photos

Stabilized entrances should consist of well-graded, washed gravel up to 3 inches in diameter

Stabilized construction entrances reduce trackout to public right-of-ways or streets

ED_001509B_00000855-00151

EC-5 Stabilized Construction Entrance Drawing



ED_001509B_00000855-00152

EC-7 EC-7: Dust Control

DEFINITION

A comprehensive plan to limit offsite sediment depression by minimizing or controlling airborne fugitive dust.

GENERAL INFORMATION
Applicability - Effectiveness Perimeter and Access Controls - high
Most effective when used with: EC-5 Stabilized Construction Entrance EC-6 Construction Road Stabilization GH-6 Road Sweeping/Trackout Cleaning
Alternative BMPs: For long term dust control, consider SPC-6 Revegetation

RATINGS			
Associated Costs	**H**	**M**	**L**
Implementation			X
Maintenance	X		
Training			X
Target Pollutants Removal	**H**	**M**	**L**
Oil and Grease			X
Nutrients			X
Sediment	X		
Floatable Material			X
Metals		X	
Other Construction Waste			X

FIGURES
Photos/Sketches
EC-7 Dust Control Photos
Tables
Commonly Used Dust Suppressants

PURPOSE

Sediments which are transported from construction sites by stormwater runoff, wind, erosion and vehicle trackout are often re-dispersed to the air by subsequent vehicular traffic and high winds. Likewise, these sediments may be transported by the next rainfall into public storm sewer systems. Implementation of control measures to minimize the generation of fugitive dust from construction sites will reduce particulate matter in the air, which has significant health effects to workers and any nearby residents. There are three methods of dust control: (1) Geotextiles, mats, plastic covers, and other mechanical methods (2) dust palliatives (soil binders), and (3) revegetation.

APPROPRIATE APPLICATIONS

Dust control measures should be applied at the following locations and activities:

- Grading Operations (land clearing and earthmoving)
- Drilling and blasting
- Batch drop operations (loader operation)
- Exposed areas, cleared unstabilized area.
- Vehicle traffic on unpaved surfaces
- Sediment tracking on paved surfaces
- Blasting and wrecking ball operations
- Soil and debris storage piles

The contractor is responsible for complying with the Maricopa County Air Quality regulations. A summary of the basic requirements are as follows:

- Permits require the use of reasonably available dust control measures.
- Enforce visible opacity emission limits to determine compliance.
- Require dust control plans for construction or land clearing projects.
- Enforcement activities with priority given to citizen complaints.
- Require contractors to maintain records.

LIMITATIONS

Dust suppressants have a range of limitations and precautions. Refer to Commonly Used Dust Suppressants Table for limitations of each type of dust suppressant.

ED_001509B_00000855-00154

- All dust suppressants are temporary in nature and may need reapplication(s) throughout the life of a project.
- Dust suppressants require a minimum curing time until fully effective, as prescribed by the manufacturer, which may be 24 hours or longer. Reapplication may be necessary after a storm event.
- Dust suppressants will generally experience spot failures during heavy rainfall events. If runoff penetrates the soil at the top of a slope treated with a soil binder, the runoff may completely undercut the stabilized soil layer and discharge at a point further down the slope.
- Dust suppressants may not penetrate soil surfaces made up primarily of silt and clay, particularly when compacted.
- Some dust suppressants can be environmentally hazardous, especially if the dust suppressant dissolves in water. Dissolved chemicals can migrate with the runoff or percolate further below the ground surface. For additional information, refer to the EPA document, "Potential Environmental Impacts of Dust Suppressants: Avoiding Another Times Beach", referenced at the end of this BMP.
- Some dust suppressants do not perform well with low relative humidity, while others become slippery or leach out of the soil under heavy precipitation.

PLANNING CONSIDERATIONS

Many of the reasonably available control measures for controlling fugitive dust from construction sites can also be implemented as Best Management Practices for stormwater pollution prevention. Those best management practices include:

- Pave, vegetate, or chemically stabilize access points to paved roads.
- Provide covers for trucks transporting materials that contribute dust.
- Provide for wet suppression or chemical stabilization of exposed soils.
- Provide for rapid cleanup of sediments deposited on paved roads.
- Furnish stabilized construction road entrances and vehicle wash down areas.
- Stabilize unpaved haul roads, parking and staging areas.
- Implement dust control measures for material stockpiles.
- Prevent drainage of sediment-laden stormwater onto paved surfaces.
- Stabilize abandoned construction sites using vegetation or chemical stabilization methods.

ED_001509B_00000855-00155

- Limit the amount of areas disturbed by clearing and earth moving operations by scheduling these activities in phases.

RECOMMENDED STANDARDS AND SPECIFICATIONS

There are many products available as dust suppressants for chemicals available and recommendations for their use are summarized in Commonly Used Dust Suppressants Table.

RECOMMENDED MAINTENANCE AND INSPECTION

Dust control is an ongoing process during site construction. Re-application of dust control measure may be necessary until construction is complete.

POST CONSTRUCTION METHODS

Consider Revegetation or emulsion chip seals for more permanent dust control after the construction project has been completed.

REFERENCES

Tacoma Public Works Environmental Services, January 1993, City of Tacoma Surface Water Management Manual Volume II, Construction Stormwater Pollution Prevention. http://www.cityoftacoma.org/Page.aspx?hid=951#manual

CALTRANS, State of California Department of Transportation, March 2003, Construction Site Best Management Practices (BMPs) Manual. http://www.dot.ca.gov/hq/construc/stormwater/manuals.htm

U.S. Environmental Protection Agency, December 1999, Construction Site Storm Water Runoff Control, National Menu of Best Management Practices for Storm Water Phase II. http://cfpub2.epa.gov/npdes/stormwater/menuofbmps/con_site.cfm

North Central Texas Council of Governments, December 2003, Integrated Storm Water Management (iSWM) Design Manual for Construction

U.S. Environmental Protection Agency, Nevada May 30-31, 2002, Potential Environmental Impacts of Dust Suppressants: "Avoiding Another Times Beach" An Expert Panel Summary, Las Vegas.

ED_001509B_00000855-00156

EC-7 Dust Control Photos

Wind blown dust.

ED_001509B_00000855-00157

EC-7 Dust Control Table

TABLE 5.2
COMMONLY USED DUST SUPPRESSANTS

Types	Functional Mechanism	Advantages	Limitations
Freshwater	Moisture wets particles, thereby increasing their mass and binding them together.	Usually readily available, low material cost, and easy to apply	Frequent light applications may be necessary during hot dry weather and can be labor intensive. Over application may result in loss of traction, erosion, or points of road failure.
Calcium Chloride	At a relative humidity greater than approximately 30% (77 F), the salts within the soil will pull moisture from the air above and retain it in the soil.	Reduces evaporation rate of surface moisture, lowers the freezing point of water, which reduces frost heave and freeze-thaw cycles, thereby reducing required road maintenance. Calcium Chloride also increases the compacted density of existing road base material. Effectiveness is retained after reblading.	Effectiveness in arid and semi-arid regions may be limited due to low relative humidity. It is very corrosive to aluminum alloys and slightly corrosive to steel. Solubility of calcium chloride results in leaching during heavy precipitation. Releases heat when mixed with water.
Magnesium Chloride	At a relative humidity greater than approximately 30% (77° F), the salts within the soil will pull moisture from the air above and retain it in the soil.	Reduces evaporation rate of surface moisture, lowers the freezing point of water, which reduces frost heave and freeze-thaw cycles, thereby reducing required road maintenance. Magnesium Chloride increases the compacted density of existing road base material more than Calcium Chloride. Effectiveness is retained after reblading.	Effectiveness in arid and semi-arid regions may be limited due to low relative humidity. It is very corrosive to aluminum alloys and slightly corrosive to steel. Solubility of calcium chloride results in leaching during heavy precipitation.
Lignin Derivatives	Act as adhesives by binding soil particles together and curing.	Greatly increases dry strength of soil, not humidity-dependent, imparts some plasticity to road surfaces, and lowers freezing point of road surface and base. Effectiveness is retained after reblading.	High solubility results in leaching during heavy precipitation. It is corrosive to aluminum alloys due to acidity ($CaCO_3$ can neutralize the acidity). Proper aggregate mix is important to performance. Becomes slippery when wet and brittle when dry.
Tree Resin Emulsions (tall oil)	Act as adhesives by binding soil particles together and curing.	Low solubility after curing minimizes leaching and provides degree of surface waterproofing. Imparts some plasticity to road surfaces, has a high bonding strength, and is non-corrosive.	Requires proper weather and time to cure. No residual effectiveness after reblading. Equipment requires prompt cleanup to avoid curing of resin in hoses and pipes.
Synthetic Polymer	Bind soil particles together by forming a polymerizing matrix; a function similar to adhesives.	Applicable to a range of emission sources and function well in sandy soil conditions. Some types allow seeded vegetation to grow through the polymer matrix.	Requires proper weather and time to cure. Water repellent. May be subject to UV (sunlight) degradation. Application equipment requires timely cleaning. There is no residual effectiveness after reblading.
Bituments, Tars, and Resins	Asphalt and resinous products are adhesive binding soil particles together. Petroleum oil products coat soil particles, increasing their mass and binding them together.	Water insoluble when dry; provide a degree of surface waterproofing. Good residual effectiveness.	Surface crusting fracturing arid potholing may develop. Long-term application may cause road to become too hard for reblading. Bituments won't lower freezing point and petroleum oil products lack adhesive characteristics.
Cementitious Based Binders	High purity gypsum mixes with water and mulch to form a thin cement-like crust on the soil surface.	Flexible, durable, water permeable, arid resists soil chemicals. Reduces amount of aggregate required during initial construction and has lower maintenance costs than other dust suppressants.	Cementitious based binders are only effective for dust control in non-traffic areas. Instead, consider mixing cementitious based binders with sub-base soils for greater soil strength.

ED_001509B_00000855-00158

EC-7 Dust Control Table

TABLE 5.2
COMMONLY USED DUST SUPPRESSANTS (CONTINUED)

Types	Ideal Soil Characteristics	Relative Cost Comparison (average life expectancy)	Environmental Considerations
Freshwater	None	Low initial cost, high long-term maintenance cost (0 months)	Minimal environmental hazard. If applied excessively, may result in erosion and sediment runoff. Supply may be limited in some areas and, depending on the source, may require a water right permit.
Calcium Chloride	Plasticity index > 8 10-20 percent fines passing the No. 200 sieve (by weight)	Low initial cost, medium long-term maintenance cost (1-6 months)	Repeated applications and long term use may harm adjacent vegetation (See the manufacturer's product information).
Magnesium Chloride	Plasticity index > 8 10-20 percent fines passing the No. 200 sieve (by weight)	Low initial cost, medium long-term maintenance cost (1-6 months)	Repeated applications and long term use may harm adjacent and nearby vegetation (See the manufacturer's product information).
Lignin Derivatives	Plasticity index > 8 10-30 percent fines passing the No. 200 sieve (by weight)	Medium initial cost, low long-term maintenance cost (3-12 months)	Lignin products have high BOD (biological oxygen demand) in aquatic systems. Spills or runoff into surface or groundwaters may create low dissolved oxygen conditions resulting in fish kills or increases in ground water concentrations of iron, sulfur compounds arid other pollutants. (See the product MSDS for specific information).
Tree Resin Emulsions (tall oil)	Plasticity index < 3 10-20 percent fines passing the No. 200 sieve (by weight)	Medium initial cost, low long-term maintenance cost (1-6 months)	(See the manufacturer's product information)
Synthetic Polymer	Plasticity index < 3 5-20 percent fines passing the No. 200 sieve (by weight)	High initial cost, low long-term maintenance cost (1-3 months)	(See the manufacturer's product information)
Bituments, Tars, and Resins	Plasticity index < 3 <20 percent fines passing the No. 200 sieve (by weight)	High initial cost, high long-term maintenance cost (1-3 months)	Use of used oils prohibited. Some petroleum based products may contain carcinogenic polycyclic aromatic hydrocarbons (PAHs). (See the manufacturer's product information)
Cementitious Based Binders	Depending on the type of cementitious based binder, will work with both high and low plasticity index soils.	Low initial cost, medium long-term maintenance cost (3-6 months)	None

ED_001509B_00000855-00159

EC-9 EC-9: Diversion Dikes

DEFINITION

A ridge of compacted soil (recommended with a vegetated lining) that is often located at the top or base of a sloping disturbed area, and redirects runoff to a less sensitive outfall or area.

GENERAL INFORMATION

Applicability - Effectiveness

Slope Protection - high
Excavated areas (trenches, pits, etc.) - high
Perimeter and Access Controls - high

Most effective when used with:

EC-1 Erosion Control Mats to help reduce erosion along the dike.

EC-4 Pipe Slope Drains to provide additional control if flow cannot be completely routed around the disturbed area.

Alternative BMPs:

For a less expensive, temporary control, consider SPC-2 Sand Bag Barrier

RATINGS

Associated Costs	H	M	L
Implementation		X	
Maintenance		X	
Training		X	
Target Pollutants Removal	**H**	**M**	**L**
Oil and Grease			X
Nutrients			X
Sediment		X	
Floatable Material		X	
Metals			X
Other Construction Waste			X

FIGURES

Photos/Sketches

EC-9 Diversion Dikes Photos

CAD Drawings

Diversion Dikes

ED_001509B_00000855-00160

PURPOSE

Depending on the location and topography, diversion dikes can achieve two different goals:

- Located on the upslope of a site, they can prevent surface sheet flow runoff from entering a disturbed construction site.
- Located on the downslope of a site, they can divert sediment-laden runoff created onsite to sediment trapping devices, preventing soil loss from the disturbed area.

APPROPRIATE APPLICATIONS

Diversion dikes may be used to:

- Intercept and divert runoff to avoid sheet flow over sloped surfaces.
- Divert and direct runoff towards a stabilized watercourse, drainage pipe or channel.
- Intercept runoff from paved surfaces.

Diversion dikes may be installed:

- Below steep grades where runoff begins to concentrate.
- Along roadways and facility improvements subject to flood drainage.
- At the top of slopes to divert runon from adjacent or undisturbed slopes.
- At bottom and mid-slope locations to intercept sheet flow and convey concentrated flows.

LIMITATIONS

- Limit to upstream drainage areas of 10 acres or less and for slopes less than 5 percent. For larger areas more permanent structures should be built.
- All structures should be in compliance with hydraulic design standards set by the local municipality or Flood Control District of Maricopa County.
- Earth dikes may create more disturbed area on site and become barriers to construction equipment.
- Earth dikes must be stabilized immediately which increases maintenance and installation costs.
- Diverted stormwater flow may cause flood damage to adjacent areas.
- Diversion dikes are not suitable as sediment trapping devices.

ED_001509B_00000855-00161

- The concentrated runoff in a channel or ditch has increased erosion potential. To alleviate this erosion capability, diversion dikes must be used in conjunction with sediment trapping devices, soil stabilization, and sediment controls.

PLANNING CONSIDERATIONS

Several considerations must be made before installing diversion dikes. Diversion dikes can either be installed temporarily or as a permanent structure:

Temporary diversion dikes are generally made up of earth material. Earth dikes are advantageous because they can handle flows from large drainage areas, are relatively inexpensive and easy to install, use onsite materials, and once stabilized, earth dikes require little maintenance. However, earth dikes, alone, do not control erosion or remove sediment from runoff. Rather, they direct runoff to erosion control devices such as Temporary Sediment Basins or Temporary Sediment Traps, or away from an erodible surface. Temporary diversion dikes should not adversely impact adjacent properties and must conform to local floodplain management regulations.

For large flows, earth dikes can begin to erode and further contribute to the sediment loading in the runoff. Stone, recycled concrete, rip-rap, or filter cloth can be used to temporarily stabilize a diversion dike (see Recommended Standards and specifications below).

Consider using Erosion Control Mats and Pipe Slope Drains in conjunction with a Sand Bag Barrier for additional erosion control and stabilization.

RECOMMENDED STANDARDS AND SPECIFICATIONS

- All dikes should be compacted by earth-moving equipment.
- All dikes should have positive drainage to an outlet.
- Top width may be wider and side slopes may be flatter if desired to facilitate crossing by construction traffic.
- Runoff should be conveyed to a sediment trapping device such as a sediment trap or sediment basin when either the dike channel or the drainage area above the dike are not adequately stabilized.
- Temporary stabilization, when necessary, should be as scheduled below:
  - Stone or recycled concrete equivalent, should be applied in a layer at least 8 inches in thickness and be pressed into the soil with construction equipment.
  - Rip-rap should be applied in a layer at least two times the D50 and pressed into the soil.
  - Approved equivalents can be substituted for any of the above materials.

ED_001509B_00000855-00162

- Filter cloth and erosion control mats may be used for dikes in use for long periods.

RECOMMENDED MAINTENANCE AND INSPECTION

- Inspect temporary measures prior to the rainy season, after rainfall events, and regularly during the rainy season.
- Inspect ditches and berms for washouts. Replace lost riprap, damaged linings or soil stabilizers as needed.

POST CONSTRUCTION METHODS

By providing a vegetated cover to the diversion dike, the dike can become a permanent structure.

REFERENCES

Tacoma Public Works Environmental Services, January 1993, City of Tacoma Surface Water Management Manual Volume II, Construction Stormwater Pollution Prevention. http://www.cityoftacoma.org/Page.aspx?hid=951#manual

CALTRANS, State of California Department of Transportation, March 2003, Construction Site Best Management Practices (BMPs) Manual. http://www.dot.ca.gov/hq/construc/stormwater/manuals.htm

U.S. Environmental Protection Agency, December 1999, Construction Site Storm Water Runoff Control, National Menu of Best Management Practices for Storm Water Phase II. http://cfpub2.epa.gov/npdes/stormwater/menuofbmps/con_site.cfm

North Central Texas Council of Governments, December 2003, integrated Storm Water Management (iSWM) Design Manual for Construction.

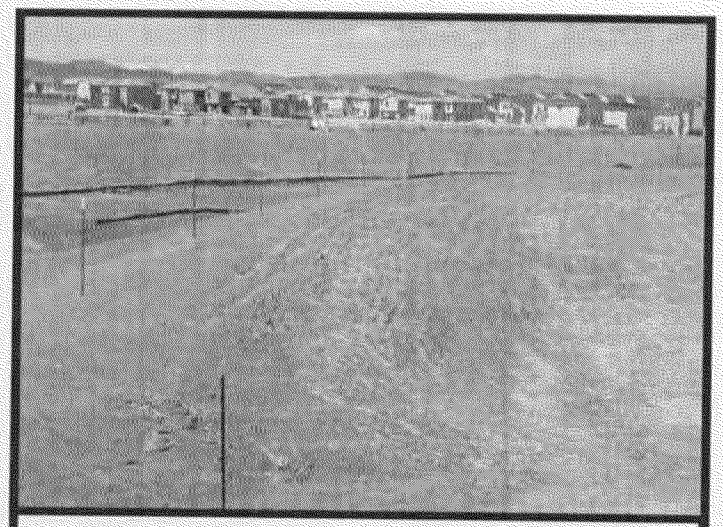
North Carolina Department of Transportation, August 2003, Best Management Practices for Construction and Maintenance Activities, Chapter 5.0 "Operation Best Management Practices", http://www.doh.dot.state.nc.us/operations/BMP_manual/

Center for Watershed Protection, Inc., Stormwater Manager's Resource Center (SMRC). http://www.stormwatercenter.net/

Kamber Engineering Gaithersberg, Maryland, April, 1991, Sedimentation and Erosion Control, An Inventory of Current Practices, USEPA.

ED_001509B_00000855-00163

EC-9 Diversion Dikes Photos



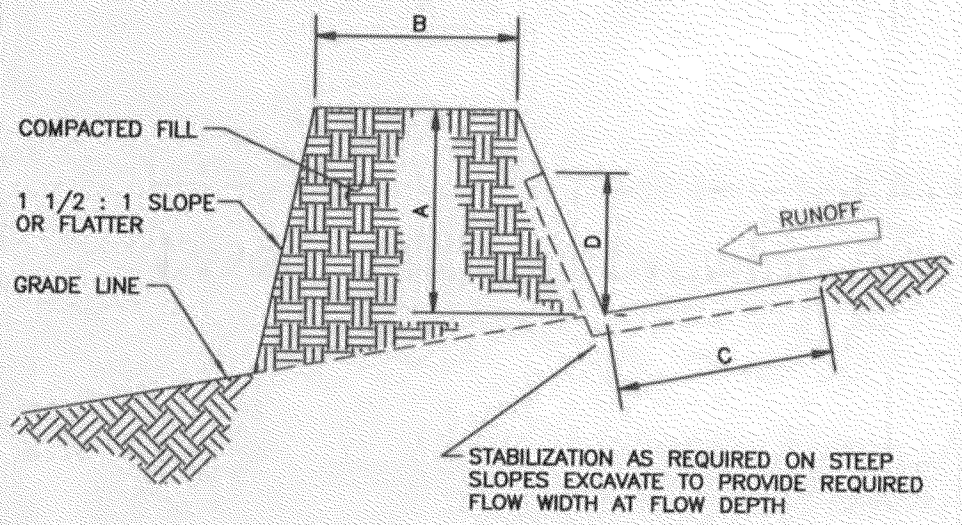
A temporary diversion dike can be stabilized with straw mulching.

Courtesy of Douglas County

Permanent diversion dikes can be constructed of grouted riprap and vegetated.

ED_001509B_00000855-00164

EC-9 Diversion Dikes Drawing



REQUIREMENTS BASED ON UPSTREAM DRAINAGE AREA

	DIKE 1 (5 ACRES OR LESS)	DIKE 2 (5–10 ACRES)
A–DIKE HEIGHT	18"	36"
B–DIKE WIDTH	24"	36"
C–FLOW WIDTH	4'	6'
D–FLOW DEPTH	8"	15"

tmpdike.dwg

ED_001509B_00000855-00165

SPC-1 SPC-1: Organic Filter Barrier

DEFINITION

A temporary linear sediment barrier consisting of straw bales, sediment wattles or similar material, designed to intercept and slow sediment-laden sheet flow runoff. Organic filter barriers allow sediment to settle from runoff before water leaves the construction site. Organic filter barriers include straw bales, sediment wattles, and other organic filter berms.

GENERAL INFORMATION

Applicability - Effectiveness

Slope Protection - moderate
Excavated Areas (trenches, pits, etc.) - high
Perimeter and Access Controls - high

Most effective when used with:

SPC-8 Temporary Sediment Basins

SPC-9 Temporary Sediment Traps

Alternative BMPs:

For higher flows or paved surfaces, consider rock socks detailed under SPC-2: Sand Bag Barrier.

RATINGS

Associated Costs	H	M	L
Implementation	X		
Maintenance	X		
Training		X	
Target Pollutants Removal	**H**	**M**	**L**
Oil and Grease			X
Nutrients			X
Sediment			X
Floatable Material	X		
Metals			X
Other Construction Waste		X	

FIGURES

Photos/Sketches

SPC-1 Organic Filter Barrier Photos

CAD Drawings

Organic Filter Barrier

ED_001509B_00000855-00166

PURPOSE

Organic filter barriers reduce runoff velocity and cause deposition of the transported sediment load. They are well suited to sites with small disturbed drainage areas that are not subjected to concentrated flows and that will ultimately be seeded, sodded, or landscaped.

APPROPRIATE APPLICATIONS

Organic filter barriers are useful where there are no concentrations of water in a channel or drainage way, and where erosion would occur from sheet flow. These barriers are typically constructed:

- Along the perimeter of a site, around stockpiles, and parallel to a roadway to keep sediment off paved areas.
- Along streams and channels and across minor swales or ditches with small catchments.
- Below the toe of exposed and erodible slopes and down slope of exposed soil areas.
- Around above grade type temporary concrete washouts.

LIMITATIONS

Of all the organic filter barriers, straw bale barriers may be the most limited in erosion control and sediment loading reduction. The following limitations are associated with straw bale barriers.

- Suitable only for sheet flow on slopes of 2 percent (%) or flatter and are not appropriate for drainage areas greater than one acre. Cannot be used in areas of concentrated flow, channel flow, and live streams.
- Installation and maintenance can be labor intensive.
- Degraded straw bales may fall apart when removed or left in place for extended periods due to rotting.
- Bale bindings of jute or cotton are not recommended.
- Straw bale barriers are not efficient on paved surfaces.
- Straw bale barriers are not to be used for drain inlet protection.
- Can be an attractive food source for some animals and may introduce some undesirable non-native plants to the area.

ED_001509B_00000855-00167

PLANNING CONSIDERATIONS

Optimal efficiency of organic filter barriers can be achieved through careful maintenance with special attention to replacing rotted or broken barriers. Barriers should be constructed on a level contour to prevent concentration of flow against a small portion of the barrier. Organic filter barriers are additionally more efficient when used in conjunction with Temporary Sediment Basins and Temporary Sediment Traps. Consider using rock socks under Sand Bag Barrier for higher flows or paved surfaces.

RECOMMENDED STANDARDS AND SPECIFICATIONS

Installation

- Organic filter barriers must be installed in a trench and tightly abut adjacent barriers/segments along a line of constant elevation (along a contour line) if possible, with the last organic filter barrier turned up slope.
- Construct organic filter barriers with a set-back of at least 3 feet (ft) from the toe of a slope. Where it is determined not to be practical due to specific site conditions, the organic filter barrier may be constructed at the toe of the slope, but should be constructed as far from the toe of the slope as practical
- Limit the drainage area upstream of the barrier to 0.25 acre/100ft of barrier and the maximum flow to any 20 foot section to less than 1 cubic feet per second (cfs).
- Limit the slope length draining to the organic filter barrier to 100 ft for average slopes of 2V:100H (2%) or flatter.
- If the slope exceeds 1V:10H (10%), the length of slope upstream of the barrier must be less than 50 ft.
- Organic filter barriers may be seeded with a seed loading of 1 pound (lb) per 10 linear feet for small berms or 2.25 lbs per 10 linear foot for larger berms.

Specifications

See Organic Filter Barrier Drawing for the required dimensions of organic filter barriers as described below.

- Size: Each straw bale type organic filter barrier should be a minimum of 14" wide, 18" high, 36" long and should have a minimum weight of about 50 lbs. Alternatively, organic filter barriers can be trapezoidal, triangular, or circular in cross-section. Each sediment wattle shall be 9" to 18" in diameter. Sediment wattles that are flattened during shipping or construction activities should be reshaped if practical or replaced. The bottom three wattles shall be 18" in diameter when the slope length exceeds 100 feet.

ED_001509B_00000855-00168

- Materials: Organic filter barriers can either be composed entirely of straw (i.e. straw bale), or constructed of a mixture of 50% compost and 50% wood mulch (untreated woodchips less than 5 inches in length, 95% passing a 2 inch screen, and less than 30% passing a 1 inch screen). Materials shall be certified to be weed-free. Organic filter barriers may be seeded with a County approved seed mix with a loading of 1 pound (lb) per 10 linear feet for small berms or 2.25 lbs per 10 linear foot for larger berms.

- Bindings: Straw bales only: Barrier should be bound by steel wire, nylon or polypropylene string placed horizontally. Jute and cotton binding should not be used. Steel wire should be a minimum diameter of 0.06 inches. Nylon or polypropylene string should be approximately 0.08 inches in diameter with a breaking strength of no less than 80 lbs. of force.

- Stakes: Wood stakes should be commercial quality lumber of the size and shape shown on the plans. Each stake should be free from decay, splits or cracks longer than the thickness of the stake, or other defects that would weaken the stakes and cause the stakes to be structurally unsuitable. Steel bar reinforcement should be equal to a number four designation or greater. End protection should be provided for any exposed bar reinforcement.

RECOMMENDED MAINTENANCE AND INSPECTION

- Inspect organic filter barriers before and after each rainfall event, and weekly throughout the rainy season for sediment accumulations and remove sediment when depth reaches one-third the barrier height.

- Replace or repair damage barriers as needed. Remove barriers or dismantle as mulching when no longer needed. Remove sediment accumulation, and clean, re-grade, and stabilize the area.

POST CONSTRUCTION METHODS

There are no post construction uses for organic filter barriers, but filter barriers can be dismantled and used as mulching for erosion control purposes when a filter barrier is no longer needed.

REFERENCES

Arizona Department of Transportation, Intermodal Transportation Division, February 2005, ADOT Erosion and Pollution Control Manual for Highway Design and Construction. http://www.azdot.gov/inside_adot/OES/Water_Quality/Stormwater/Manuals.asp

Tacoma Public Works Environmental Services, January 1993, City of Tacoma Surface Water Management Manual Volume II, Construction Stormwater Pollution Prevention. http://www.cityoftacoma.org/Page.aspx?hid=951#manual

CALTRANS, State of California Department of Transportation, March 2003, Construction Site

Best Management Practices (BMPs) Manual.
http://www.dot.ca.gov/hq/construc/stormwater/manuals.htm

U.S. Environmental Protection Agency, December 1999, Construction Site Storm Water Runoff Control, National Menu of Best Management Practices for Storm Water Phase II.
http://cfpub2.epa.gov/npdes/stormwater/menuofbmps/con_site.cfm

North Central Texas Council of Governments, December 2003, integrated Storm Water Management (iSWM) Design Manual for Construction.

Fifield, J.S., 2002, Field Manual on Sediment and Erosion Control, Forester Press, Santa Barbara CA.

Kamber Engineering Gaithersberg, Maryland, April, 1991, Sedimentation and Erosion Control, An Inventory of Current Practices, USEPA.

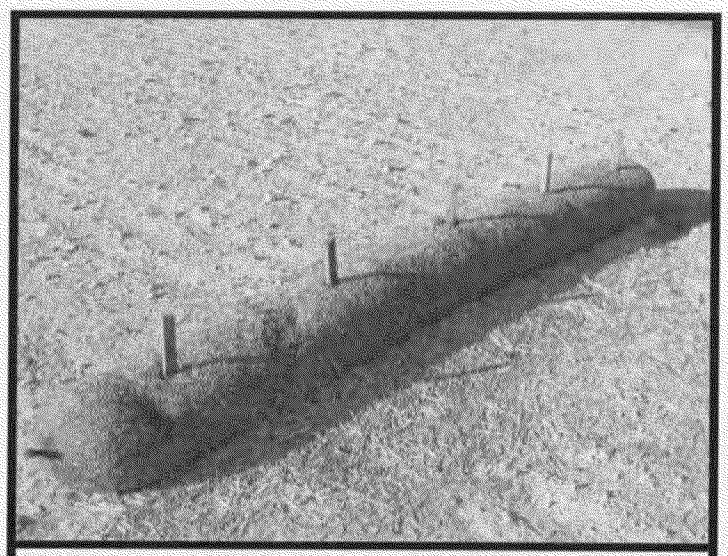
City of Austin, Texas, March, 2004, Environmental Criteria Manual.

City of Bellevue, Washington, 1990, Water Quality for Construction Businesses, First Edition, Storm and Surface Water Utility.

Washington Department of Ecology, August 2001, Stormwater Management Manual for Western Washington, Publications #99-11 through 99-15.

ED_001509B_00000855-00170

SPC-1 Organic Filter Barrier Photos



Properly staked organic filter barrier.

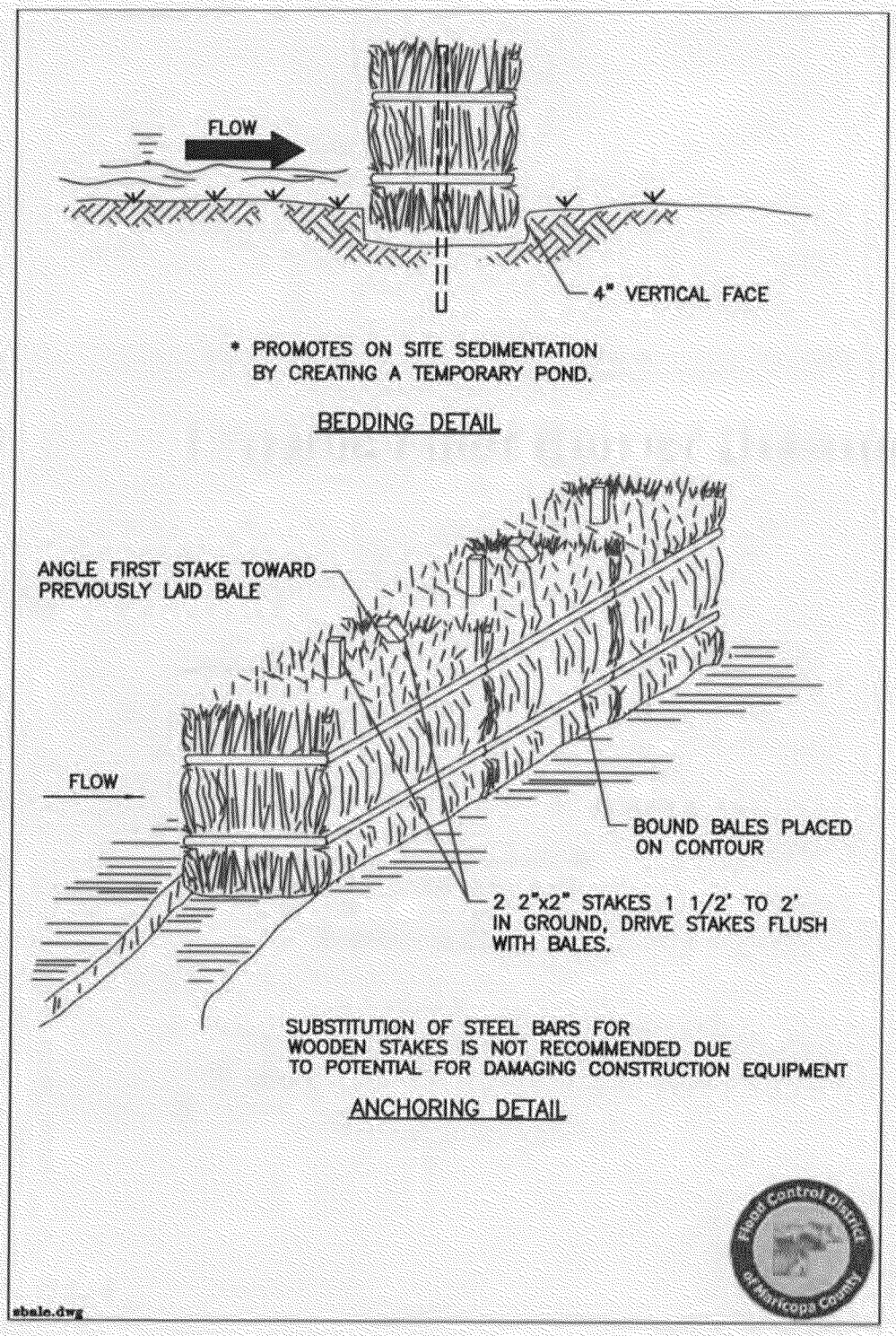
Storm wattle (wrapped).

Courtesy of Kristar

Use of an organic filter barrier in the highway median.

ED_001509B_00000855-00171

SPC-1 Organic Filter Barrier Drawing



ED_001509B_00000855-00172

SPC-5 SPC-5: Silt Fence

DEFINITION

A geotextile fabric stretched between either wooden or metal posts with the lower edge of the fabric securely embedded in the soil. The fence is typically located downstream of disturbed areas to intercept sheet flow runoff.

GENERAL INFORMATION

Applicability - Effectiveness
Slope Protection - moderate
Excavated Areas (trenches, pits, etc.) - high
Perimeter and Access Controls - high

Most effective when used with:

An Erosion Control (EC) BMP

Alternative BMPs:

EC-9: Diversion Dikes

SPC-1: Organic Filter Barrier

SPC-2: Sand Bag Barrier

SPC-3: Gravel Filter Berms

SPC-6: Revegetation

SPC-7: Storm Drain Inlet Protection

RATINGS

Associated Costs	H	M	L
Implementation		X	
Maintenance	X		
Training			X
Target Pollutants Removal	**H**	**M**	**L**
Oil and Grease			X
Nutrients			X
Sediment		X	
Floatable Material	X		
Metals			X
Other Construction Waste		X	

FIGURES

Photos/Sketches

Silt Fence Photos

CAD Drawings

Silt Fence Drawing

ED_001509B_00000855-00173

PURPOSE

There are two main purposes for silt fences:

- To intercept and detain small amounts of sediment from disturbed areas during construction operations in order to prevent sediment from leaving the site.
- To decrease the velocity of sheet flows and low-to-moderate level channel flows.

APPROPRIATE APPLICATIONS

Silt fences, as the name implies, are more effective with sandy or silty soil types. For very fine grained soils, such as clays, a soils engineer should confirm the suitability of a silt fence for that area.

Silt fences are generally applicable to construction sites with relatively small drainage areas. Silt fences are not intended for use in detaining concentrated flows. They are appropriate where runoff is a low-level shallow flow, not exceeding 0.5 cubic foot per second (cfs). The drainage area for silt fences generally should not exceed 0.25 acre per 100 feet (ft) of fence length. Slope length above the fence should not exceed 100 ft.

Silt fences may be used:

- Below disturbed areas where runoff may occur in the form of sheet and rill erosion; wherever runoff has the potential to impact downstream resources.
- Parallel to minor swales or ditch lines for up to one acre of contributing drainage areas.
- For both site development areas and linear roadway type projects.

LIMITATIONS

- Silt fences are less effective in areas with predominately clay soil types.
- Silt fences will create a temporary sedimentation pond on the upstream side of the fence, which may cause temporary flooding.
- Silt fences are not practical for large flows. Drainage areas should be restricted to less than one acre and a flow rate less than 0.5 cfs. Do not allow water depth to exceed 1.5 ft at any point in front of the silt fence.
- Silt fences may not filter runoff effectively if the pore size of the fabric is incorrectly selected. Improperly installed fences are subject to failure from undercutting, overtopping, or collapsing.

ED_001509B_00000855-00174

PLANNING CONSIDERATIONS

If the site contains a high content of clays, consult a soils engineer before installing a silt fence. The Virginia Highway and Transportation Research Council has shown that silt fences can trap a much higher percentage of suspended sediments than straw bales can. Silt fences are preferable to straw barriers in many cases. However, while the failure rate of silt fences is lower than that of straw barriers, there are many instances locally in which silt fences have been improperly installed. The installation methods outlined here can improve performance.

- Anchor the site fence fabric below the ground surface sufficiently to prevent flow from undercutting the fence.
- Construct along a level contour.
- Silt fences should remain in place until the disturbed area is permanently stabilized.
- Provide sufficient room for sediment removal equipment between the silt fence and toes of slopes or other obstructions.
- The ends of the filter fence should be turned uphill to prevent stormwater from flowing around the fence.
- Provide an undisturbed or stabilized outlet suitable for sheet flow.
- Do not construct in live streams or intermittently flowing channels.

As alternatives to silt fences, consider using the following: Diversion Dikes, Organic Filter Barrier, Gravel Filter Berms, Sand Bag Barrier, Revegetation, or Storm Drain Inlet Protection.

RECOMMENDED STANDARDS AND SPECIFICATIONS

Materials

Selection of a filter fabric is based on soil conditions at the construction site, which affect the equivalent opening size (EOS) fabric specification, and characteristics of the support fence, which affect the choice of tensile strength. The designer should specify a filter fabric that retains the soil found on the construction site yet will have openings large enough to permit drainage and prevent clogging. If 50 percent (%) or less of the soil, by weight, passes through US Standard Sieve No. 200, select the EOS that will retain 85% of the soil, by weight. In addition, consider the following recommendations in the table below during the selection of the equivalent opening size:

ED_001509B_00000855-00175

US Standard Sieve No.	Sieve hole size, inches	Comments / EOS Recommendations
70	0.0083	The EOS should not be larger than the openings of US Sieve No. 70
100	0.0059	If there is direct discharge to a stream, lake, or wetland, then the EOS should not be greater than the openings of US Sieve No. 100
200	0.0029	If greater than 85% of the soil passes this sieve hole size, by weight, do not use silt fences. Most of the particles in such a soil would not be retained if the EOS was too large or they would clog the fabric quickly if the EOS was too small. Consider Temporary Sediment Basins as an alternative BMP.

Fabric fences are supported with wire mesh, as recommended by the fabric manufacturer. Filter fabric material should contain ultraviolet ray inhibitors and stabilizers to provide a minimum of six months of expected usable life at a temperature range of 0° F. to 120° F.

Installation

The following drainage and topographical characteristics of the site should be considered before installing silt fences.

- Upstream drainage area limited to 1 acre or less when used alone or in combination with sediment basin in a larger site.
- Maximum slope steepness perpendicular to fence line is 1:1.
- Maximum sheet or overland flow path length to the fence is 100 feet.
- Silt fences are not intended for concentrated flows greater than 0.5 cfs.

Filter fences are to be constructed, as described below, on a level contour to maximize the available ponding area and prevent concentration of flow against the fence.

- Posts should be spaced a *maximum* of 6 feet apart and driven securely into the ground a *minimum* of 30 inches.
- A trench should be excavated approximately 8 inches wide and 12 inches deep along the line of posts and upslope from the barrier.
- When standard strength filter fabric is used, a wire mesh support fence should be fastened securely to the upslope side of the posts using heavy-duty wire staples at least 1 inch long, tie wires or hog rings. The wire should extend into the trench a minimum of 4 inches.

ED_001509B_00000855-00176

- The standard strength filter fabric should be stapled or wired to the fence, and 20 inches of the fabric should extend into the trench. When extra-strength filter fabric and closer post spacing are used, the wire mesh support fence may be eliminated and the filter fabric stapled or wired directly to the posts.

- The use of joints should be avoided. When joints are necessary, filter cloth should be spliced together only at a support post, with a minimum 6-inch overlap and both ends securely fastened to the post.

- The trench should be backfilled with 3/4-inch minimum diameter washed gravel or compacted native material.

RECOMMENDED MAINTENANCE AND INSPECTION

Silt fences should be inspected regularly and frequently as well as after each rainfall event to ensure that they are intact and that there are no gaps at the fence-ground interface or tears along the length of the fence. If gaps or tears are found, they should be repaired or the fabric should be replaced immediately. Accumulated sediments should be removed from the fence base when the sediment reaches one-third to one-half the height of the fence. Sediment removal should occur more frequently if accumulated sediment is creating noticeable strain on the fabric and there is the possibility of the fence failing from a sudden storm event. Silt fences should not be removed until the upslope area has been permanently stabilized. When the silt fence is removed, the accumulated sediment also should be removed.

POST CONSTRUCTION METHODS

None.

REFERENCES

Tacoma Public Works Environmental Services, January 1993, City of Tacoma Surface Water Management Manual Volume II, Construction Stormwater Pollution Prevention. http://www.cityoftacoma.org/Page.aspx?hid=951#manual

CALTRANS, State of California Department of Transportation, March 2003, Construction Site Best Management Practices (BMPs) Manual. http://www.dot.ca.gov/hq/construc/stormwater/manuals.htm

U.S. Environmental Protection Agency, December 1999, Construction Site Storm Water Runoff Control, National Menu of Best Management Practices for Storm Water Phase II. http://cfpub2.epa.gov/npdes/stormwater/menuofbmps/con_site.cfm

North Central Texas Council of Governments, December 2003, Integrated Storm Water Management (iSWM) Design Manual for Construction.

North Carolina Department of Transportation, August 2003, Best Management Practices for Construction and Maintenance Activities, Chapter 5.0 "Operation Best Management

ED_001509B_00000855-00177

Practices". http://www.doh.dot.state.nc.us/operations/BMP_manual/

Center for Watershed Protection, Inc., Stormwater Manager's Resource Center (SMRC). http://www.stormwatercenter.net/

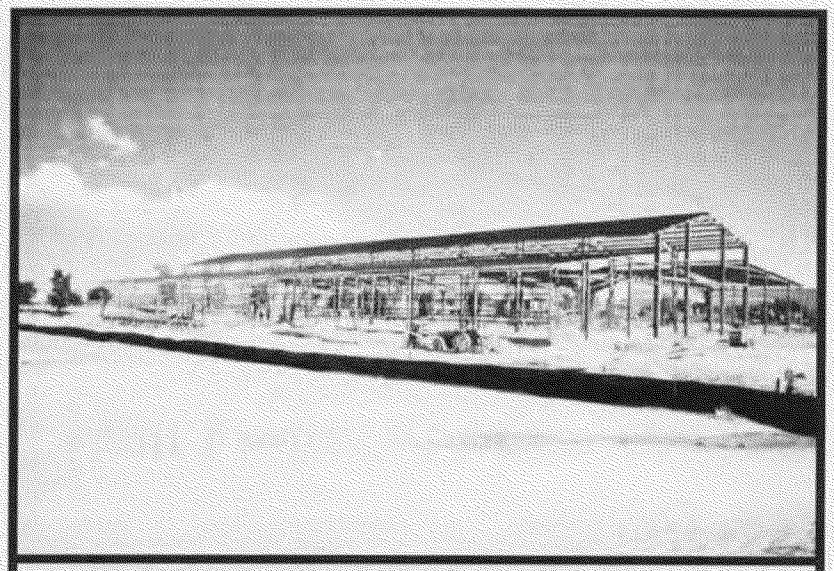
Fifield, J.S., 2002, Field Manual on Sediment and Erosion Control, Forester Press, Santa Barbara CA.

Kamber Engineering Gaithersberg, Maryland, April, 1991, Sedimentation and Erosion Control, An Inventory of Current Practices, USEPA.

City of Austin, Texas, March, 2004, Environmental Criteria Manual.

Washington Department of Ecology, August 2001, Stormwater Management Manual for Western Washington, Publications #99-11 through 99-15.

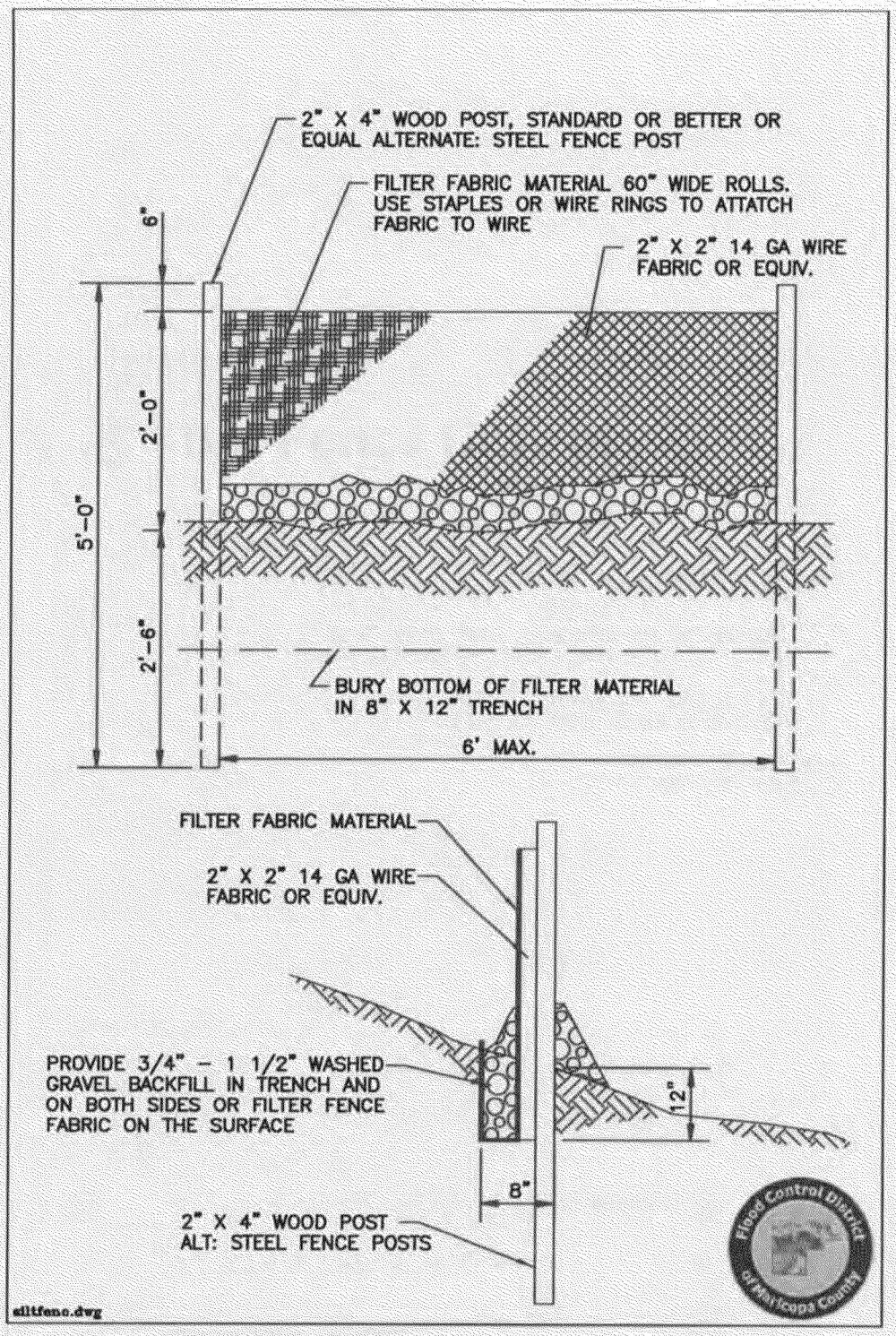
SPC-5 Silt Fence Photos



Silt fences can span the entire length of a construction site when installed properly.

ED_001509B_00000855-00179

SPC-5 Silt Fence Drawing



ED_001509B_00000855-00180

SPC-7 SPC-7: Storm Drain Inlet Protection

DEFINITION

A variety of methods of intercepting sediment at low point inlets through the use of stone, filter fabric, inlet inserts, and other materials. This is normally located at the inlet, providing either detention or filtration to reduce sediment and floatable materials in stormwater.

GENERAL INFORMATION
Applicability - Effectiveness Inlet Drain Protection - high Channels and Medians - high Perimeter and Access Controls - high
Most effective when used with: An Erosion Control (EC) BMP
Alternative BMPs: SPC-1 Organic Filter Barrier SPC-2 Sand Bag Barrier SPC-3 Gravel Filter Berms SPC-5 Silt Fence

RATINGS			
Associated Costs	**H**	**M**	**L**
Implementation	X		
Maintenance	X		
Training			X
Target Pollutants Removal	**H**	**M**	**L**
Oil and Grease			X
Nutrients			X
Sediment		X	
Floatable Material		X	
Metals			X
Other Construction Waste			X

FIGURES
Photos/Sketches
SPC-7 Storm Drain Inlet Protection Photos
CAD Drawings
Filter Fabric Fence Drop Inlet Filter
Curb Inlet Protection

ED_001509B_00000855-00181

PURPOSE

Storm drain inlet protection measures prevent soil and debris from site erosion from entering storm drain drop inlets and clogging them. Typically, these measures are temporary controls that are implemented prior to large-scale disturbance of the surrounding site. The early use of storm drains during project development significantly reduces the occurrence of future erosion problems.

APPROPRIATE APPLICATIONS

Storm drain inlet protection is appropriate where storm drain inlets are to be made operational before permanent stabilization of the disturbed drainage area. There are a variety of types of structures that are applicable to different conditions:

- Filter Fabric Fence – applicable where the inlet drains a relatively small (less than 1 acre) flat area (less than 5 percent slope). Intended for relatively low flows.
- Excavated Drop Inlet Sediment Trap – intended for relatively high flows. An excavated drop inlet trap provides protections against sediment entering a storm drain inlet can be provided by excavating an area in the approach to the drain. The excavation volume should be approximately 1800 to 3600 cubic feet per acre of disturbed area drained.
- Block and Gravel Protection – used when the flows exceed 0.5 cubic feet per second (cfs) and it is necessary to allow for overtopping to prevent flooding around the inlet area.
- Foam or Fiber Roll Barriers - use for relatively low flows in areas where they can be anchored to the surface. Most appropriate for inlets on an unpaved surface.

LIMITATIONS

- Special caution should be exercised when installing inlet protection on publicly traveled streets or in developed areas.
- Inlet protection is only viable at low point inlets. Inlets that are on slope cannot be effectively protected because stormwater will bypass the inlet and continue downstream, causing an overload on downstream inlets.
- Ponding will occur at the inlet with possible short term flooding.
- Curb inlets on slopes cannot be effectively protected because the stormwater will bypass the inlet and continue downgrade.
- Filter fabric fences are limited to storm drain inlets for small drainage areas of five acres or less. Filter fabric fences are not appropriate in paved areas. For larger drainage areas, smaller sediment catchment areas are recommended.

ED_001509B_00000855-00182

PLANNING CONSIDERATIONS

Where storm sewers are made operational before their drainage area is stabilized, or where construction is adjacent to an existing storm sewer, large amounts of sediment may enter the storm sewer system. In cases of extreme sediment loading, the storm sewer itself may clog and lose a major portion of its capacity. To avoid these problems, it is necessary to prevent sediment from entering the system at the inlets.

This practice contains several types of inlet filters and traps which have different applications dependent upon site conditions and type of inlet. Other innovative techniques for accomplishing the same purpose are encouraged, but only after specific plans and details are submitted to and approved by the local government.

RECOMMENDED STANDARDS AND SPECIFICATIONS

Install inlet protection in accordance with the following:

- Filter fabric fence: Place 2 inch by 2 inch wooden stakes around the perimeter of the inlet a maximum of 3 feet apart and drive them at least 8 inches into the ground. Excavate a trench approximately 8 inches wide and 12 inches deep around the outside perimeter of the stakes. Staple the filter fabric (for material specifications, see SPC-5: Silt Fence to wooden stakes so that 32 inches of the fabric extends out and can be formed into the trench. Use heavy-duty wire staples at least 1/2 inch in length. Backfill the entire trench with 3/4 inch or less washed gravel.

- Excavated Drop Inlet Sediment Trap: Construct the inlet trap as shown in the Storm Drain Drop Inlet Protection Drawing. Ensure that the excavation volume can contain approximately 1800 to 3600 cubic feet per acre of disturbed area.

- Gravel Bag Filter: If there is a high content of clays and silts, use filter fabric in conjunction with gravel for additional filtering capacity. Construct the gravel bag filter as specified by Gravel Filter Berms.

- Foam or Fiber Roll Barrier: Foam or fiber roll is placed around the inlet and must be anchored to the curb surface, so that it is not carried away by runoff flows.

RECOMMENDED MAINTENANCE AND INSPECTION

For systems using filter fabric, inspections should be made on a regular basis, especially after large storm events. If the fabric becomes clogged, it should be replaced. Sediment should be removed when it reaches approximately half the height of the fence. If an excavated inlet sediment trap is used, sediment should be removed when it fills approximately half the depth of the hole.

ED_001509B_00000855-00183

POST CONSTRUCTION METHODS

Following the completion of construction projects in residential and municipal areas, more permanent drop-inlet protection devices can be installed in storm drain inlets. The link under the Vendor Products section lists several different drop-inlet protection devices.

REFERENCES

Tacoma Public Works Environmental Services, January 1993, City of Tacoma Surface Water Management Manual Volume II, Construction Stormwater Pollution Prevention. http://www.cityoftacoma.org/Page.aspx?hid=951#manual

CALTRANS, State of California Department of Transportation, March 2003, Construction Site Best Management Practices (BMPs) Manual. http://www.dot.ca.gov/hq/construc/stormwater/manuals.htm

U.S. Environmental Protection Agency, December 1999, Construction Site Storm Water Runoff Control, National Menu of Best Management Practices for Storm Water Phase II. http://cfpub2.epa.gov/npdes/stormwater/menuofbmps/con_site.cfm

North Central Texas Council of Governments, December 2003, integrated Storm Water Management (iSWM) Design Manual for Construction.

North Carolina State University, (NCSU) North Carolina Nonpoint Source Pollution Control Measures. http://www.water.ncsu.edu/watershedss/info/bmps.html

Center for Watershed Protection, Inc., Stormwater Manager's Resource Center (SMRC). http://www.stormwatercenter.net/

Kamber Engineering Gaithersberg, Maryland, April, 1991, Sedimentation and Erosion Control, An Inventory of Current Practices, USEPA.

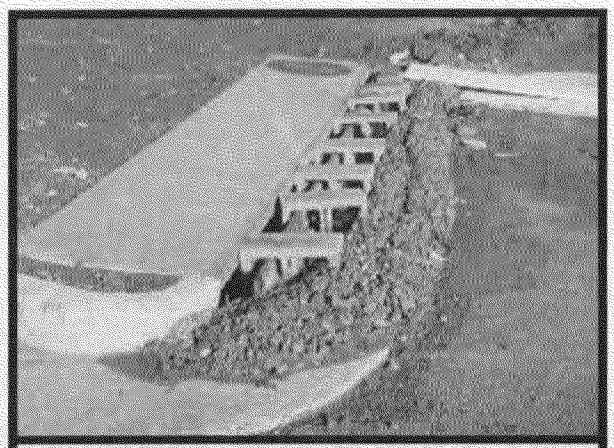
Urban Drainage and Flood Control District, Construction BMPs Chapter of Urban Storm Drainage Criteria Manual, Vol. 3: Best Management Practices, 1999 Denver, Colorado.

Goldman, S.J., Jackson, K., and Bursztynsky, T.A., 1986, Erosion and Sediment Control Handbook, McGraw Hill Book Company.

Washington Department of Ecology, August 2001, Stormwater Management Manual for Western Washington, Publications #99-11 through 99-15.

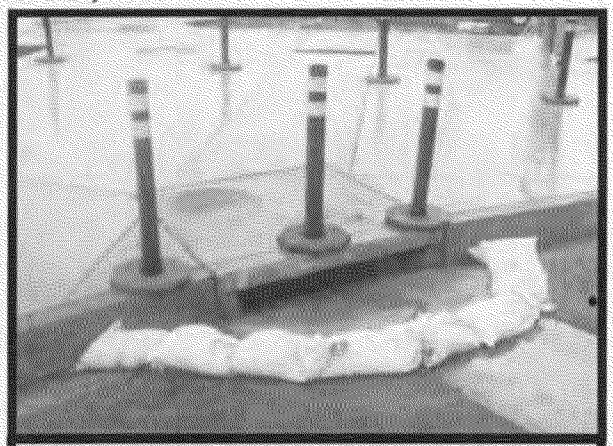
Smolen, M.D., September 1988, North Carolina Erosion and Sediment Control Planning and Design Manual, North Carolina Sediment Control Commission, et al.

SPC-7 Storm Drain Inlet Protection Photos



Coarse gravel and cinder blocks are often used to keep sediment and other pollutants out of storm drains.

Courtesy of EPA

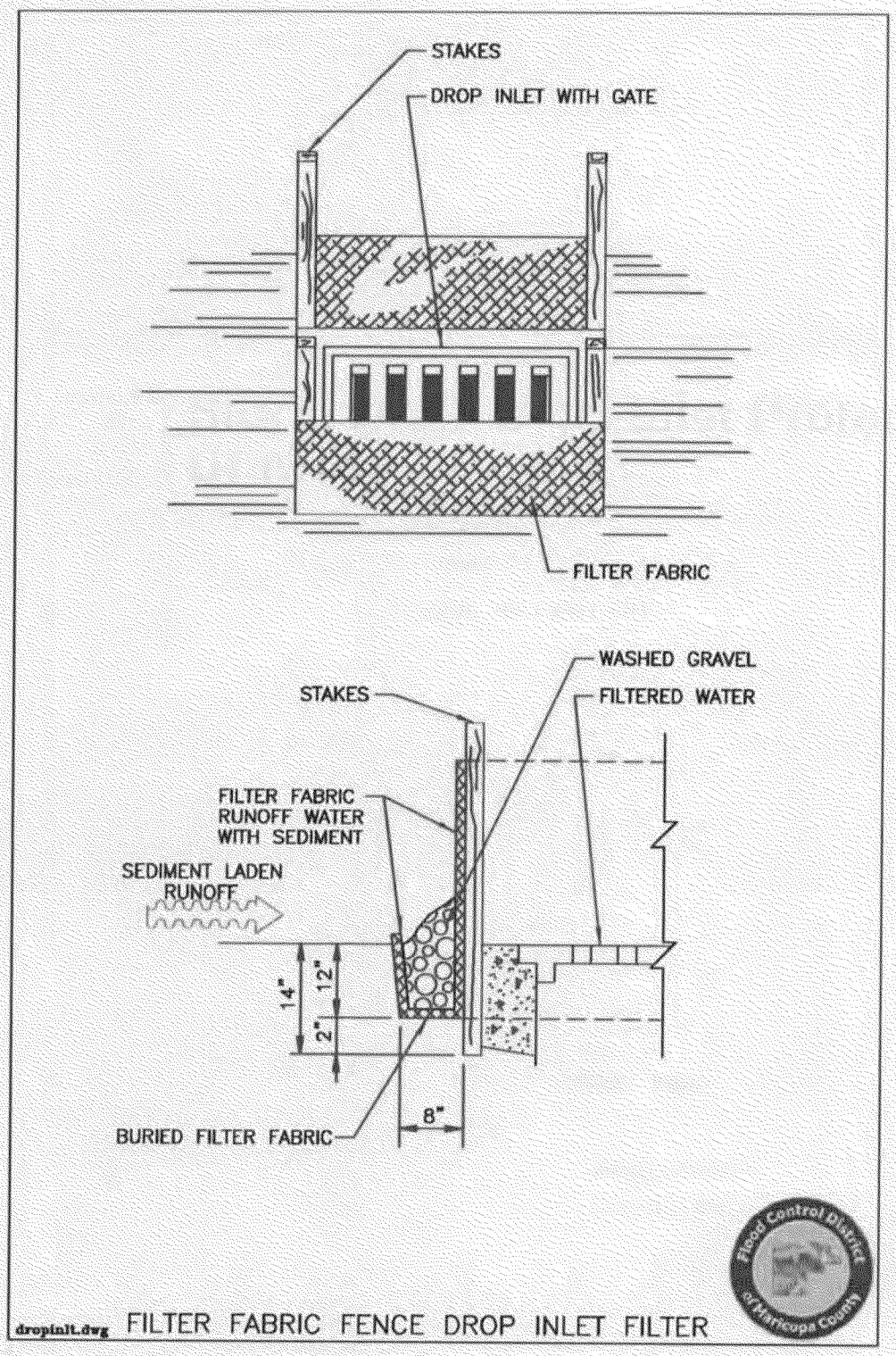


Gravel bag inlet drain protection.

Courtesy of California Regional Water Quality Board.

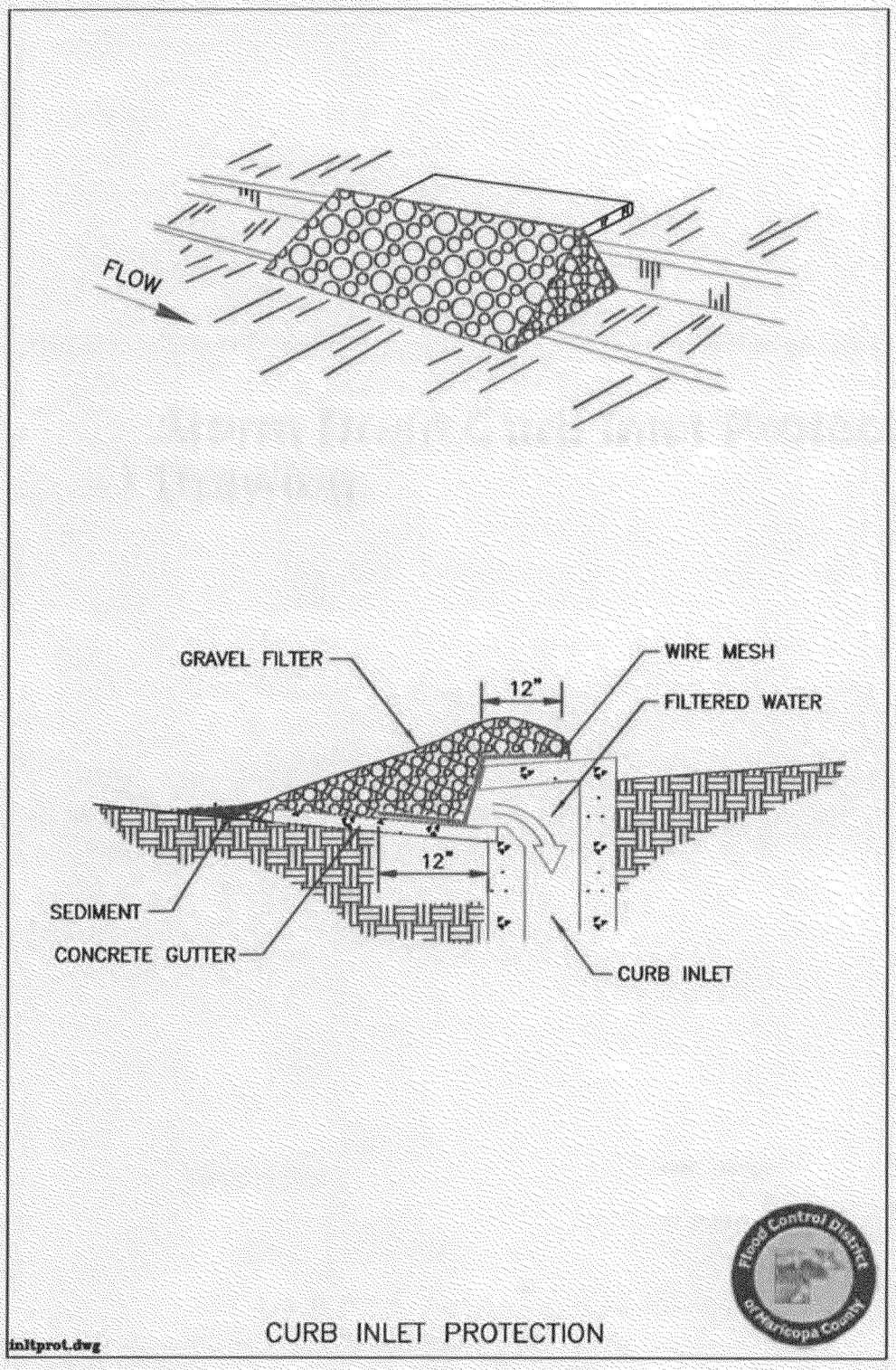
ED_001509B_00000855-00185

SPC-7 Storm Drain Drop Inlet Protection Drawing



ED_001509B_00000855-00186

SPC-7 Storm Drain Curb Inlet Protection Drawing



ED_001509B_00000855-00187

SPC-8 SPC-8: Temporary Sediment Basins

DEFINITION

A pond area formed by constructing an embankment of compacted soil across a drainageway with a controlled outlet in which sedimentary laden runoff is directed to allow settling of suspended sediment from the runoff.

GENERAL INFORMATION
Applicability - Effectiveness Slope Protection - high Excavated Areas (trenches, pits, etc.) - high Perimeter and Access Controls - high Landscaping and Vegetation - high
Most effective when used with: An Erosion Control (EC) BMP
Alternative BMPs: To treat lower flows and volumes than described in this BMP, consider SPC-9 Temporary Sediment Traps

RATINGS			
Associated Costs	**H**	**M**	**L**
Implementation	X		
Maintenance		X	
Training			X
Target Pollutants Removal	**H**	**M**	**L**
Oil and Grease			X
Nutrients		X	
Sediment	X		
Floatable Material		X	
Metals		X	
Other Construction Waste			X

FIGURES
Photos/Sketches
SPC-8 Temporary Sediment Basins Photos
CAD Drawings
Temporary Sediment Basins

ED_001509B_00000855-00188

PURPOSE

To collect and store sediment from sites cleared and/or graded during construction or for extended periods of time before reestablishment of permanent vegetation and/or construction of structures. It is intended to help treat and control silt-laden runoff. The basin is a temporary measure (with a design life less than 1 year) and is to be maintained until the site area is permanently protected against erosion or a permanent detention basin is constructed.

APPROPRIATE APPLICATIONS

Sediment basins serve as treatment devices which can be used on a variety of project types. They are normally used in construction projects where:

- Large areas of land drain to the basin
- A minor stream or off-line drainage way crosses the site
- A specific water feature is planned for the site
- Disturbed areas are greater than 5 acres during the rainy season
- Sediment-laden water may enter the drainage system

LIMITATIONS

Sediment basins and ponds must be installed only within the property limits where failure of the structure would not result in loss of life, damage to homes or buildings, or interruption of use or service of public roads or utilities. Also, sediment basins and ponds are attractive to children and can be very dangerous. Local ordinances regarding health and safety must be adhered to. If fencing of the pond is required, the type of fence and its location should be shown on the Stormwater Pollution Prevention Plan (SWPPP).

- Generally temporary sedimentation basins are for disturbed upstream drainage areas of 5 acres or more.
- Because of additional detention time, sediment basins may be capable of trapping smaller sediment particles than traps. However, they are most effective when used in conjunction with other BMPs such as seeding or mulching.
- Sediment basins may become attractive to children and care must be taken to adhere to all safety practices. Also, standing water can attract mosquitoes.
- Sediment basins are only practically effective in removing sediment down to about the medium silt size fraction. Sediment-laden runoff with smaller size fractions (fine silt and

ED_001509B_00000855-00189

clay) will pass through untreated. This emphasizes the need to control erosion to the maximum extent first, rather than relying on sediment basins alone.

PLANNING CONSIDERATIONS

Effectiveness

- Sediment basins are at best only 70-80 percent effective in trapping sediment which flows into them. Therefore, they should be used in conjunction with erosion control practices such as temporary seeding, mulching, diversion dikes, etc. to reduce the amount of sediment flowing into the basin.

- Whenever possible, construct the sedimentation basins before clearing and grading work begins.

Location

- To improve the effectiveness of the basin, it should be located so as to intercept the largest possible amount of runoff from the disturbed area. The best locations are generally low areas below disturbed areas. Drainage into the basin can be improved by the use of diversion dikes and ditches. The basin must not be located in a stream but should be located to trap sediment-laden runoff before it enters the stream. The basin should not be located where its failure would result in the loss of life or interruption of the use or service of public utilities or roads. The sediment basin should be located more than 25 feet from septic system facilities.

RECOMMENDED STANDARDS AND SPECIFICATIONS

The sediment basin may be formed by partial excavation and/or by construction of a compacted embankment, or it may be a permanent retention basin designed in accordance with the Drainage Policies and Standards for Maricopa County. Each basin may have one or more inflow points carrying polluted runoff. For temporary basins, a securely anchored riser pipe is the principal discharge mechanism along with an emergency overflow spillway. The riser pipe should be solid with two 1-inch diameter dewatering holes located at the top of the sediment storage volume on opposite sides of the riser pipe as shown in the CAD file. Permanent basins are drained by percolation or dry wells. Outlet protection is provided to reduce erosion at the pipe outlet.

- As a general guideline, the sediment basin volume should be designed for 2,000 cubic feet, assuming limited infiltration.

- A hydraulics engineer should be consulted to properly design a sediment basin. Refer to the Drainage Design Manual for Maricopa County, Arizona for detailed design guidance. Total sediment pond volume and dimensions are determined as outlined below:

ED_001509B_00000855-00190

- Determine pond geometry for the storage volume calculated above using 3 feet in depth and 3:1 side slopes from the bottom of the basin. Note, the basin bottom is level.
- Adjust the geometry of the basin to effectively combine the settling zone volume and sediment storage volumes while preserving the depth and side slope criteria.
- Provide an emergency spillway with a crest elevation 1 foot above the top of the riser pipe.
- A minimum 3:1 length to width ratio is necessary. A larger length to width ratio (6:1) is even more effective to prevent short-circuiting. Baffles may also be implemented.

MAINTENANCE AND INSPECTION

- Inspect sediment basins before and after rainfall events or exceptionally large storms.
- Examine basin banks for seepage and structural soundness.
- Check inlet and outlet structures and spillway for any damage, obstructions, or erosion.
- Sediment basins should be drained within 36 hours after a rain event.
- Remove accumulated sediment when its volume reaches one-third the volume of the sediment storage. Properly dispose of sediment and debris removed from the basin, within the construction site.
- Check fencing for damage and repair.

POST CONSTRUCTION METHODS

Sediment basins can be converted to permanent structures after completion of the construction project. Remove all excess sediment from the basin. The containment volume of permanent sediment basins will need to be expanded to meet the design storm requirements in the Maricopa County Drainage Regulations. The inside of a permanent sediment basin should either be vegetated or rock lined. Alternatively, if the permeability of the soil is high and groundwater is close to the ground surface, a clay or synthetic liner may be installed. Ensure that the sedimentation basin has a stabilized outlet (see EC-11: Outlet Protection, Velocity Dissipation Devices).

REFERENCES

Tacoma Public Works Environmental Services, January 1993, City of Tacoma Surface Water Management Manual Volume II, Construction Stormwater Pollution Prevention. http://www.cityoftacoma.org/Page.aspx?hid=951#manual

CALTRANS, State of California Department of Transportation, March 2003, Construction Site Best Management Practices (BMPs) Manual.

ED_001509B_00000855-00191

http://www.dot.ca.gov/hq/construc/stormwater/manuals.htm

U.S. Environmental Protection Agency, December 1999, Construction Site Storm Water Runoff Control, National Menu of Best Management Practices for Storm Water Phase II. http://cfpub2.epa.gov/npdes/stormwater/menuofbmps/con_site.cfm

North Central Texas Council of Governments, December 2003, Integrated Storm Water Management (iSWM) Design Manual for Construction.

Center for Watershed Protection, Inc., Stormwater Manager's Resource Center (SMRC). http://www.stormwatercenter.net/

Kamber Engineering Gaithersberg, Maryland, April, 1991, Sedimentation and Erosion Control, An Inventory of Current Practices, USEPA.

Goldman, S.J., Jackson, K., and Bursztynsky, T.A., 1986, Erosion and Sediment Control Handbook, McGraw Hill Book Company.

Washington Department of Ecology, August 2001, Stormwater Management Manual for Western Washington, Publications #99-11 through 99-15.

Flood Control District of Maricopa County (FCDMC), 2003, Drainage Design Manual for Maricopa County, Volume II, Hydraulics.

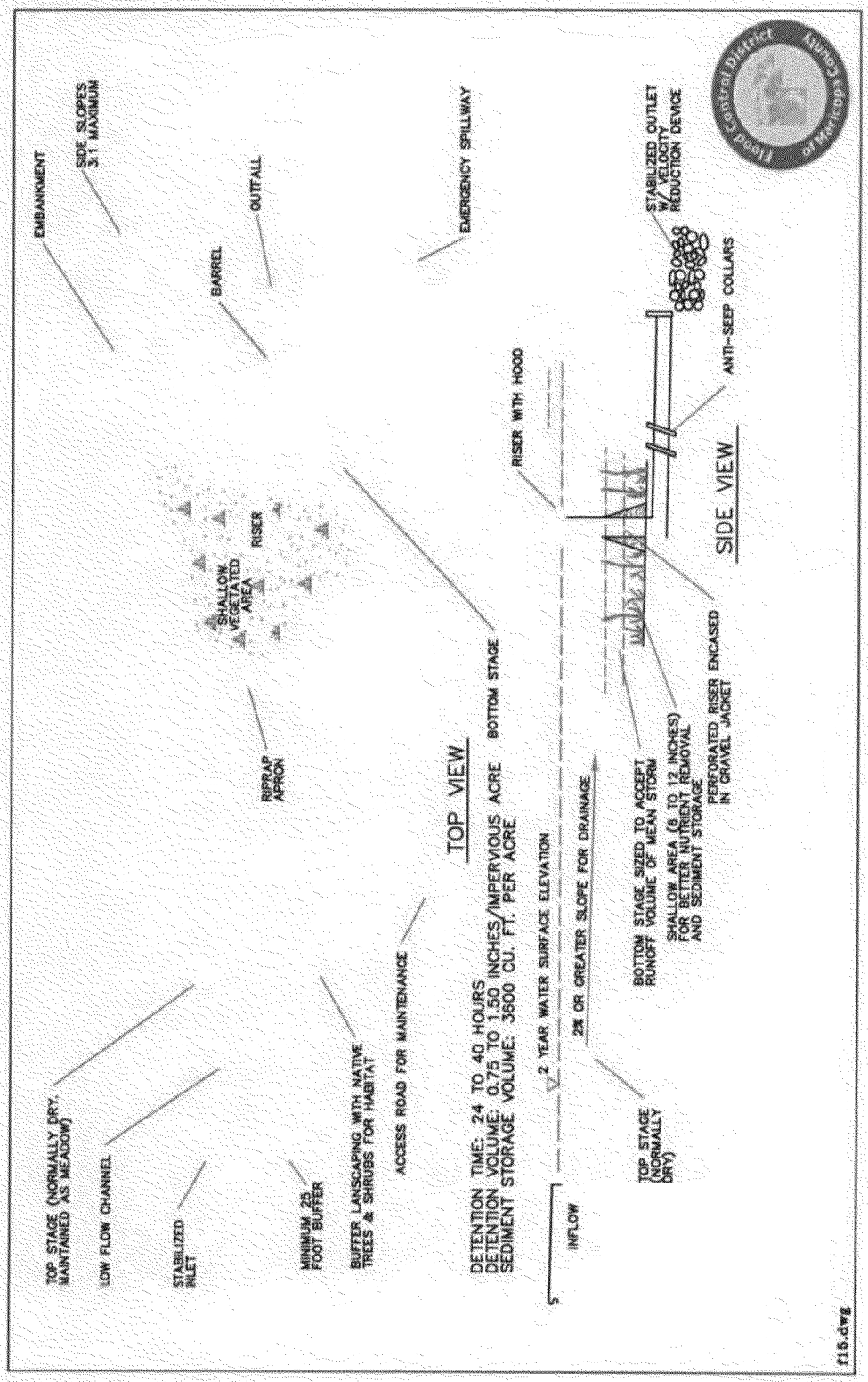
SPC-8 Temporary Sediment Basins Photos

Temporary sediment basin with outlet protection.

Temporary sediment basins provide stormwater storage during the construction process.

ED_001509B_00000855-00193

SPC-8 Temporary Sediment Basins Drawing



ED_001509B_00000855-00194

SPC-9 SPC-9: Temporary Sediment Traps

DEFINITION

A sediment trap is a temporary containment area that allows sediment in collected stormwater to settle out during infiltration or before the runoff is discharged through a stabilized spillway. Sediment traps are formed by excavating or constructing an earthen embankment across a waterway or low drainage area. Sediment traps are smaller and less expensive to install than sediment basins, but generally settle out coarser particles than sediment basins.

GENERAL INFORMATION

Applicability - Effectiveness
Slope Protection - high
Excavated Areas (trenches, pits, etc.) - high
Perimeter and Access Controls - high
Landscaping and Vegetation - high

Most effective when used with:

An Erosion Control (EC) BMP

Alternative BMPs:

To treat higher flows and volumes than described in this BMP, consider SPC-8 Temporary Sediment Basins

RATINGS

Associated Costs	H	M	L
Implementation	X		
Maintenance		X	
Training		X	
Target Pollutants Removal	**H**	**M**	**L**
Oil and Grease			X
Nutrients		X	
Sediment		X	
Floatable Material		X	
Metals		X	
Other Construction Waste			X

FIGURES

Photos/Sketches

SPC-9 Temporary Sediment Traps Photos

CAD Drawings

Excavated Drop Inlet Sediment Trap

Temporary Sediment Trap

ED_001509B_00000855-00195

PURPOSE

Sediment traps generally remove larger particles (gravel and sand) than sediment basins, and some metals that settle out with the sediment. The trap is a temporary measure (with a design life of approximately 6 months) and is to be maintained until the site area is permanently protected against erosion by vegetation and/or structures.

APPROPRIATE APPLICATIONS

Sediment traps are generally temporary control measures to slow concentrated runoff velocity and catch sediment, and they can be used with other temporary stormwater control measures. Traps should be placed where sediment laden stormwater enters a storm drain or watercourse. They are commonly used at the outlets of stormwater diversion structures, channels, slope drains, construction site entrance wash racks, or any other runoff conveyance that discharges waters containing erosion sediment and debris. Sediment traps can also be used as part of a stormwater drop intake protection system when the inlet is located below a disturbed area and will receive runoff with large amounts of sediment. Sediment traps may be used on construction projects where the drainage area is less than 5 acres.

LIMITATIONS

- Requires large surface areas to permit infiltration and settling of sediment.
- Not appropriate for drainage areas greater than 5 acres.
- Only removes large and medium sized particles and requires upstream erosion control.
- Attractive and dangerous to children, and requires protective fencing.
- Not to be located in live streams.
- Size may be limited by availability of right-of-way.

PLANNING CONSIDERATIONS

Sediment traps should be used only for small drainage areas. If the contributing drainage area is greater than 5 acres, refer to SPC-8 Temporary Sediment Basins, or subdivide the catchment area into smaller drainage basins.

Sediment must be removed from the trap after each significant rainfall event. Plans should detail how this sediment is to be disposed of, either using in-fill areas onsite or removal to an approved offsite dump. Sediment traps, along with other perimeter controls, should be installed before any land disturbance takes place in the drainage area.

ED_001509B_00000855-00196

Sediment traps and ponds must be installed only on sites where failure of the structure would not result in loss of life, damage to home or buildings, or interruption of use of service public roads or utilities. Also, sediment traps are attractive to children and can be dangerous. The following recommendations should be implemented to reduce risks:

- Install continuous fencing around the sediment trap. Consult local ordinances regarding requirements for maintaining health and safety.
- Restrict sediment trap side slopes to 3:1 or flatter.

RECOMMENDED STANDARDS AND SPECIFICATIONS

The sediment trap may be formed completely by excavation or by construction of a compacted embankment. The outlet should be a weir/spillway section, with the area below the weir acting as a filter for sediment and the upper area as the overflow spillway depth.

The effectiveness of sediment traps is directly related to the size of the trap. As a general guideline, based on soil and slope characteristics, the recommended sediment trap volume is approximately 2,000 cubic feet per acre of disturbed upstream drainage area for drainage areas of 5 acres or less. The required volume can be reduced if additional erosion and/or sediment control practices have been implemented upstream of the sediment trap.

After determining the necessary volume, size the trap by adding an additional 1.5 feet for sediment accumulation to the volume computed.

RECOMMENDED MAINTENANCE AND INSPECTION

Inspect sediment traps before and after rainfall events and weekly during the rest of the rainy season. During extended rainfall events, inspect sediment traps on a more frequent basis. The key to a functional sediment trap is continual monitoring and regular maintenance.

If captured runoff has not completely drained within 36 hours. Then the sediment trap must be dewatered.

- Inspect trap banks for embankment seepage and structural soundness.
- Inspect outlet structure and rock spillway for any damage or obstructions. Repair damage and remove obstructions as needed. Inspect outlet area for erosion and stabilize if required.
- Remove accumulated sediment when the volume has reached one-third the original trap volume.
- Inspect fencing for damage and repair as needed.

ED_001509B_00000855-00197

POST CONSTRUCTION METHODS

None.

REFERENCES

CALTRANS, State of California Department of Transportation, March 2003, Construction Site Best Management Practices (BMPs) Manual.
http://www.dot.ca.gov/hq/construc/stormwater/manuals.htm

U.S. Environmental Protection Agency, December 1999, Construction Site Storm Water Runoff Control, National Menu of Best Management Practices for Storm Water Phase II.
http://cfpub2.epa.gov/npdes/stormwater/menuofbmps/con_site.cfm

North Central Texas Council of Governments, December 2003, integrated Storm Water Management (iSWM) Design Manual for Construction.

Center for Watershed Protection, Inc., Stormwater Manager's Resource Center (SMRC).
http://www.stormwatercenter.net/

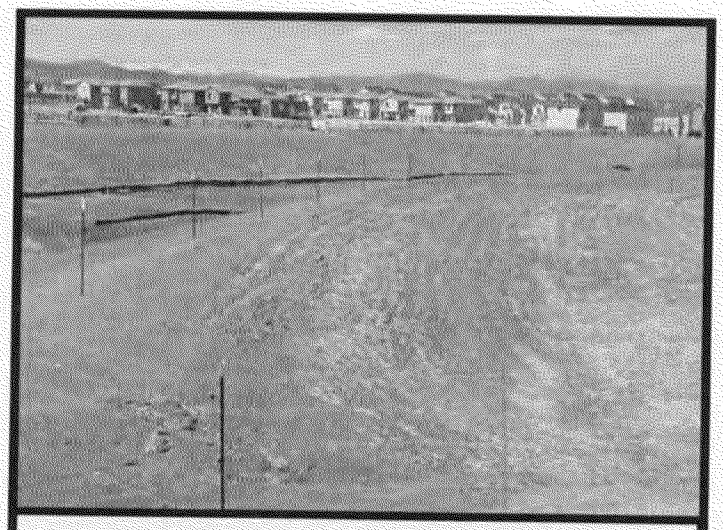
Kamber Engineering Gaithersberg, Maryland, April, 1991, Sedimentation and Erosion Control, An Inventory of Current Practices, USEPA.

City of Austin, Texas, March, 2004, Environmental Criteria Manual.

Washington Department of Ecology, August 2001, Stormwater Management Manual for Western Washington, Publications #99-11 through 99-15.

ED_001509B_00000855-00198

EC-9 Diversion Dikes Photos



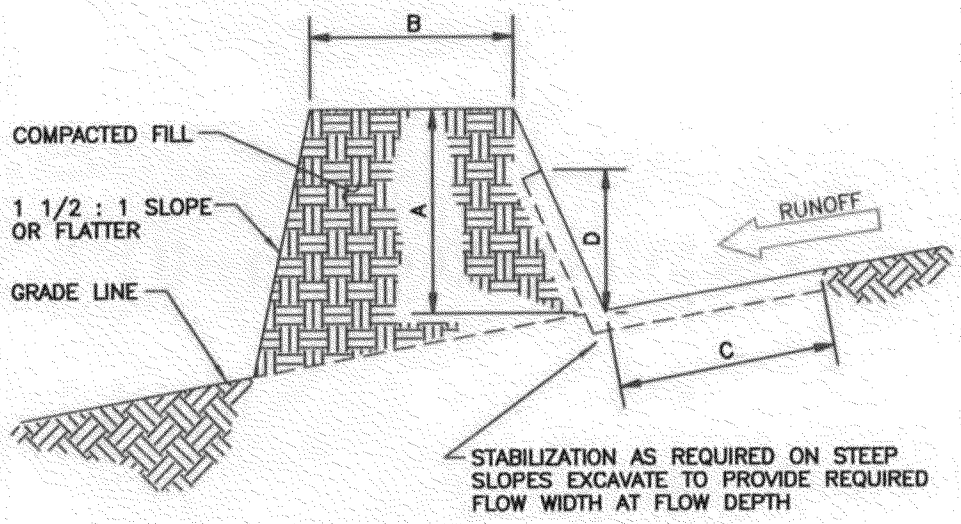
A temporary diversion dike can be stabilized with straw mulching.

Courtesy of Douglas County

Permanent diversion dikes can be constructed of grouted riprap and vegetated.

ED_001509B_00000855-00199

EC-9 Diversion Dikes Drawing



REQUIREMENTS BASED ON UPSTREAM DRAINAGE AREA

	DIKE 1 (5 ACRES OR LESS)	DIKE 2 (5–10 ACRES)
A–DIKE HEIGHT	18"	36"
B–DIKE WIDTH	24"	36"
C–FLOW WIDTH	4'	6'
D–FLOW DEPTH	8"	15"

tmpdike.dwg

ED_001509B_00000855-00200

GH-1 GH-1: Chemical Management

DEFINITION

Chemical management includes the proper labeling, handling, storage and disposal of chemical products.

GENERAL INFORMATION

Applicability - Effectiveness

Inlet Drain Protection - high
Debris Management, Cleanup, and Washout - moderate
Equipment Storage/Maintenance - high

Most effective when used with:

Protect excavated areas before runoff enters by using:

GH-2 Solid Waste Management

GH-3 Equipment Maintenance Procedures

GH-5 Spill Containment Plan

Alternative BMPs:

None

RATINGS

Associated Costs	H	M	L
Implementation		X	
Maintenance		X	
Training		X	
Target Pollutants Removal	**H**	**M**	**L**
Oil and Grease	X		
Nutrients	X		
Sediment			X
Floatable Material			X
Metals	X		
Other Construction Waste	X		

FIGURES

Photos/Sketches

GH-1 Chemical Management Photos

CAD Drawings

None

ED_001509B_00000855-00201

PURPOSE

Proper chemical management prevents, or at least minimizes stormwater runoff from being polluted through spills or other forms of contact. It is not intended to supercede or replace normal site assessment and remediation procedures.

APPROPRIATE APPLICATIONS

Chemical management practices, along with the applicable OSHA, DOT, and EPA guidelines, should be incorporated at all construction sites that use or generate potentially hazardous wastes. Target chemicals include:

- Paints, solvents, and stains
- Wood preservatives
- Fuel, lube oils, grease, and cutting oils
- Roofing tar
- Pesticides, herbicides, and fertilizer
- Antifreeze

LIMITATIONS

- Chemical management practices are not intended to address site-assessments and pre-existing soil and water contamination. Major contamination and large spills require immediate response from spill-response personnel.
- Demolition activities and potential pre-existing materials, such as lead-based paint and asbestos in building materials, are not addressed by this practice.
- Chemical management practices cover general procedures and are not intended for products and uses that may require additional safeguards.

RECOMMENDED STANDARDS AND SPECIFICATIONS

The best method for controlling chemical pollution is to provide adequate controls at the point of storage and use. The following recommendations are intended to prevent, and/or minimize contamination of runoff:

Storage and Labeling Procedures

- Where possible, cover stockpiled materials indoors or with a temporary roof structure. Do not allow water to pond around stored drums.

ED_001509B_00000855-00202

- Do not pinch a drum with a forklift when unloading or moving.
- If moving multiple drums (i.e. on a pallet), make sure they are held together with shrink wrap or a steel band.
- Mark any damaged containers.
- Do not store chemicals, drums, and bagged materials directly on the ground. Use secondary containment platforms or wooden pallets.
- Provide spill containment dikes around chemical and fuel storage tanks. Line with plastic film to prevent soil contamination.
- When possible, keep chemical products in their original containers, bungs on lids closed (except during use), and labeled in accordance with DOT and EPA regulations. Use proper devices to transfer chemicals from one container to another.
- Containment areas that have collected precipitation should not be drained until the site supervisor has ensured that the drainage will not contaminate surrounding soil.

Waste Handling and Disposal Procedures

- Ensure that adequate hazardous waste storage space is available, hazardous waste collection containers are conveniently located, and that adequate cleanup and containment materials are available onsite.
- Store hazardous wastes in an appropriate type of container and properly labeled per EPA, OSHA, and DOT regulations.
- Consult with the local municipality jurisdiction as to whether wash up water from water-based paints may go into a sanitary sewer.
- Regularly dispose of oil-based paints, solvents, thinners, and mineral spirits through a licensed waste management firm.
- Follow the recommendations of the manufacturer to dispose of construction chemicals such as curing compounds, form releases, etc.
- Follow the manufacturer's instructions regarding the intended use, protective equipment, ventilation, flammability, and mixing of chemicals.

The effectiveness of chemical management is enhanced when the following BMPs are also implemented: Solid Waste Management, Equipment Maintenance Procedures, and Spill Containment Plan

RECOMMENDED MAINTENANCE AND INSPECTION

Various components of a Chemical Management program must be continually maintained and revised:

Educating workers

- Safety procedures for proper construction site chemical storage and management.
- Identification of potential sources of chemical pollutants.
- Spill prevention and response procedures.
- Potential dangers to humans and the environment from chemical pollutants.
- Establish a continuing education program to educate new employees.

Quality Assurance

- Foreman and/or construction supervisor should monitor onsite chemical storage and disposal procedures.
- Educate and if necessary, retain and/or discipline workers who violate procedures.
- Ensure the hazardous waste disposal contractor is reputable and licensed.

Emergency Response Plan

As specified by the local Fire Department, revisions may be necessary to the Protected Chemical and Materials Storage Area Plan during the course of construction based upon materials to be stored on site.

If a spill occurs which equals or exceeds the reportable quantity (RQ) for a 24-hour period as defined by the EPA in 40 CFR Part 110, 40 CFR Part 117, and 40 CFR Part 302, then:

- Report spill to the National Response Center, 1-800-424-8802, within 24 hours. Also notify the Arizona Emergency Response Commission and the Maricopa County Emergency Management Department.
- Revise the Stormwater Pollution Prevention Plan (SWPPP) to show corrective actions.
- Notify local EPA Region IX office within 14 days.

POST CONSTRUCTION METHODS

If hazardous materials are stored onsite after the development is completed, proper chemical management procedures and structures should be maintained.

ED_001509B_00000855-00204

REFERENCES

Tacoma Public Works Environmental Services, January 1993, City of Tacoma Surface Water Management Manual Volume II, Construction Stormwater Pollution Prevention. http://www.cityoftacoma.org/Page.aspx?hid=951#manual

CALTRANS, State of California Department of Transportation, March 2003, Construction Site Best Management Practices (BMPs) Manual. http://www.dot.ca.gov/hq/construc/stormwater/manuals.htm

North Central Texas Council of Governments, December 2003, integrated Storm Water Management (iSWM) Design Manual for Construction.

Washington Department of Ecology, August 2001, Stormwater Management Manual for Western Washington, Publications #99-11 through 99-15.

Smolen, M.D., September 1988, North Carolina Erosion and Sediment Control Planning and Design Manual, North Carolina Sediment Control Commission, et al.

GH-1 Chemical Management Photos

Secondary drum containment platform.

Courtesy of Interstate Products, Inc.

Secondary drum containment covered storage.

Courtesy of Interstate Products, Inc.

ED_001509B_00000855-00206

GH-2 GH-2: Solid Waste Management

DEFINITION

The routine collection, recycling, and disposal of accumulated solid waste generated at the construction site.

GENERAL INFORMATION
Applicability - Effectiveness Debris Management, Cleanup, and Washout - moderate Trash Collection/Management - high
Most effective when used with: GH-1: Chemical Management GH-3: Equipment Maintenance Procedures GH-5: Spill Containment Plan
Alternative BMPs: None

RATINGS			
Associated Costs	**H**	**M**	**L**
Implementation		X	
Maintenance		X	
Training		X	
Target Pollutants Removal	**H**	**M**	**L**
Oil and Grease			X
Nutrients		X	
Sediment			X
Floatable Material	X		
Metals	X		
Other Construction Waste	X		

FIGURES
Photos/Sketches Solid Waste Management Photos **CAD Drawings** None

ED_001509B_00000855-00207

PURPOSE

Solid waste is one of the major pollutants caused by construction activities. By limiting the trash and debris on site and through proper disposal methods, stormwater quality is improved and there is reduced clean up at the completion of a project.

APPROPRIATE APPLICATIONS

Proper solid waste management is applicable to all construction activities. Solid wastes include, but are not limited to:

- Construction wastes including plastic, glass, rubber, brick, mortar, timber, steel and metal scraps, sawdust, pipe and electrical cuttings, non-hazardous equipment parts, Styrofoam and other materials used to transport and package construction materials, materials from the demolition of structures. Highway planting wastes, including vegetative material, plant containers, and packaging materials.

- Domestic waste products, including sanitary wastes, food containers, beverage cans, coffee cups, paper bags, plastic wrappers, cigarettes, and litter generated by the public.

LIMITATIONS

- Temporary stockpiling of certain construction wastes may not necessitate stringent drainage related controls during the non-rainy season or in desert areas with low rainfall.

- This practice only applies to non-hazardous solid waste.

RECOMMENDED STANDARDS AND SPECIFICATIONS

Education

- Site supervisor or other designated personnel should oversee and enforce proper solid waste procedures and practices.

- Instruct employees and subcontractors on identification of solid waste and hazardous waste, solid waste storage and disposal procedures. Require that employees and subcontractors follow solid waste handling and storage procedures.

- Hold regular meetings to discuss and reinforce disposal procedures (incorporate into regular safety meetings).

- Prohibit littering by employees, subcontractors, and visitors.

- Wherever possible, minimize production of solid waste materials.

ED_001509B_00000855-00208

Collection, Storage, and Disposal

- Covered dumpsters of sufficient size and number should be provided to contain the solid waste generated by the project operations.
- Prevent clogging of the storm drainage system by removing litter and debris from drainage grates, trash racks, and ditch lines.
- Trash receptacles should be provided in the contractor's yard, field trailer areas, and at locations where workers congregate for lunch and break periods.
- Construction debris and litter from work areas within the construction limits of the project site should be collected and placed in watertight dumpsters at least weekly regardless of whether the litter was generated by the contractor, the public, or others. Collected litter and debris should not be placed in or next to drain inlets, stormwater drainage systems, or watercourses.
- Full dumpsters should be removed from the project site.
- Litter stored in collection areas and containers should be handled and disposed of by trash hauling contractors every two weeks or more frequently, if necessary. Notify trash hauling contractors that only watertight dumpsters are acceptable for use onsite. Plan for additional containers and more frequent pickup during the demolition phase of construction.
- Stormwater runoff should be prevented from contacting stored solid waste through the use of berms, dikes, or other temporary diversion structures.
- Solid waste storage areas should be located more than 50 ft from drainage facilities and watercourses and should not be located in areas prone to flooding or ponding.
- Dumpster washout on the project site is not allowed.
- Keep the site clean of litter debris.

Hazardous Waste Management

- Segregate potentially hazardous waste from non-hazardous construction site waste. Make sure that toxic liquid wastes (e.g., used oils, solvents, and paints) and chemicals (e.g., acids, pesticides, additives, curing compounds) are not disposed of in dumpsters designated for construction debris. For disposal of hazardous waste, see Chemical Management. Have hazardous waste hauled to an appropriate disposal and/or recycling facility.

Recycling

- Salvage or recycle useful vegetation debris, packaging and/or surplus building materials when practical. For example, trees and shrubs from land clearing can be converted into

wood chips, then used as mulch on graded areas. Wood pallets, cardboard boxes, and construction scraps can also be recycled.

Sanitary Waste Management

- Educate employees, subcontractors, and suppliers on sanitary/septic waste storage and disposal procedures and potential dangers to humans and the environment from sanitary/ septic wastes.
- Hold regular meetings to discuss and reinforce disposal procedures (incorporate into regular safety meetings) and to educate new employees.
- Locate portable toilets a minimum of 20 feet away from storm drain inlets, drainage facilities, watercourses, and from traffic circulation. If unable to meet the 20-foot distance requirement, provide secondary containment for portable toilets.
- Properly connect temporary sanitary facilities that discharge to the sanitary sewer system to avoid illicit discharges. Sanitary and septic systems that discharge directly into sanitary sewer systems, where permissible, should comply with the local health agency, city, county, and sewer district requirements.
- If using an onsite disposal system, such as a septic system, comply with local health agency requirements.
- Ensure that sanitary/septic facilities are maintained in good working order by a licensed service. Use only reputable, licensed sanitary/septic waste haulers.

The effectiveness of solid waste management is enhanced when the following BMPs are also implemented: Chemical Management, Equipment Maintenance Procedures, and Spill Containment Plan.

RECOMMENDED MAINTENANCE AND INSPECTION

- Onsite trash should be collected and disposed of on a regular basis. Sanitary systems should also be regularly serviced.
- Repair trash containers and dumpsters on an as needed basis. Where possible provide cover for waste containers to prevent the entry of rainwater and loss of contents by wind.
- Maintain a contingency plan in the case that hazardous or toxic materials are discovered onsite.

POST CONSTRUCTION METHODS

Long term solid waste practices should be implemented (i.e. dumpsters, and regular trash pick-ups, etc.)

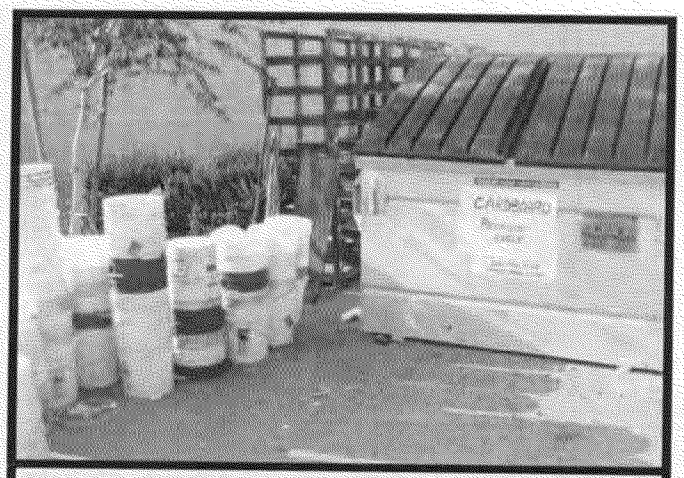
ED_001509B_00000855-00210

REFERENCES

North Central Texas Council of Governments, December 2003, integrated Storm Water Management (iSWM) Design Manual for Construction.

Washington Department of Ecology, August 2001, Stormwater Management Manual for Western Washington, Publications #99-11 through 99-15.

GH-2 Solid Waste Management Photos



Separate out different wastes from each other for recycling.

Place signage on the dumpster to prevent improper disposal of hazardous wastes.

ED_001509B_00000855-00212

GH-4 GH-4: Designated Washdown Areas

DEFINITION

Procedures and practices that are designed to minimize or eliminate the discharge of concrete waste materials to the storm drain systems of watercourses.

GENERAL INFORMATION
Applicability - Effectiveness Inlet Drain Protection - high Debris Management, Cleanup, and Washout - high
Most effective when used with: GH-1: Chemical Management GH-3: Equipment Maintenance Procedures GH-5: Spill Containment Plan
Alternative BMPs: None

RATINGS			
Associated Costs	**H**	**M**	**L**
Implementation		X	
Maintenance		X	
Training		X	
Target Pollutants Removal	**H**	**M**	**L**
Oil and Grease		X	
Nutrients			X
Sediment			X
Floatable Material			X
Metals		X	
Other Construction Waste	X		

FIGURES
Photos/Sketches GH-4 Designated Washdown Areas Photos
CAD Drawings None

ED_001509B_00000855-00213

PURPOSE

Designated washout areas and associated procedures ensure the proper washout of concrete trucks, tools, and equipment and prevents fresh concrete or cement laden mortar from entering a storm drainage system.

APPROPRIATE APPLICATIONS

Concrete waste management procedures and practices are implemented on construction projects where concrete is used as a construction material or where concrete dust and debris result from demolition activities.

- Where slurries containing Portland cement concrete (PCC) or asphalt concrete (AC) are generated, such as from sawcutting, coring, grinding, grooving, and hydro-concrete demolition.
- Where mortar-mixing stations exist.
- Where concrete trucks and other concrete-coated equipment are washed on site. See also Equipment Maintenance Procedures.

LIMITATIONS

None.

PLANNING CONSIDERATIONS

- Educate employees, subcontractors, and suppliers on the concrete waste management techniques described herein.
- The site supervisor or designated personnel should oversee and enforce concrete waste management procedures.

The effectiveness of washdown areas may be enhanced when the following BMPs are also implemented: Chemical Management, Equipment Maintenance Procedures, and Spill Containment Plan.

RECOMMENDED STANDARDS AND SPECIFICATIONS

PCC and AC Wastes

- PCC and AC waste should not be allowed to enter storm drains or watercourses. Instead, PCC and AC waste should be collected and properly disposed of outside the highway right-of-way or placed in a temporary concrete washout structure.
- Install a sign adjacent to each temporary concrete washout structure to inform concrete equipment operators to utilize the installed structures.

ED_001509B_00000855-00214

- A foreman and/or construction supervisor should monitor onsite concrete working tasks, such as saw cutting, coring, grinding and grooving to ensure proper methods are implemented.

- Saw cutting residue should not be allowed to flow across the pavement, and should not be left on the surface of the pavement. Vacuum slurry residue and dispose in a temporary facility and allow slurry to dry. Dispose of dry slurry residue in accordance with GH-2: Solid Waste Management.

- Similarly, residue from grinding operations should be picked up by means of a vacuum attachment to the grinding machine.

Onsite Temporary Concrete Washout Facility Procedures

- Temporary concrete washout facilities should be located a minimum of 50 feet from storm drain inlets, open drainage facilities, and watercourses, unless determined infeasible by the site supervisor. Each facility should be located away from construction traffic or access areas to prevent disturbance or tracking.

- Temporary concrete washout facilities should be constructed above grade or below grade at the option of the contractor and have sufficient quantity and size to contain all liquid and concrete waste generated by washout operations.

- Perform washout of concrete mixer trucks in designated areas only. A sign should be installed adjacent to each washout facility to inform concrete equipment operators to utilize the proper facilities.

- Wash concrete only from mixer truck chutes into approved concrete washout facility. Washout may be collected in an impermeable bag for disposal.

Above Grade Temporary Concrete Washout Structure

- Above grade temporary concrete washout structures should have a minimum length and width of 10 feet or larger to provide sufficient volume to contain all liquid and concrete waste generated by washout operations. If deemed necessary, the length and width of the washout structure may be expanded for more capacity.

- Straw bales, wood stakes, and sandbag materials should conform to the specifications in SPC-1: Organic Filter Barrier and SPC-2: Sand Bag Barrier.

- Plastic lining material should be a minimum of 10-mil polyethylene sheeting and should be free of holes, tears or other defects that compromise the impermeability of the material.

Below Grade Temporary Concrete Washout Structure

- Below grade temporary concrete washout should have a minimum length and width of 10 feet or larger to provide sufficient volume to contain all liquid and concrete

waste generated by washout operations. If deemed necessary, the length and width of the washout structure may be expanded for more capacity.

- Plastic lining material should be a minimum of 10-mil polyethylene sheeting and should be free of holes, tears or other defects that compromise the impermeability of the material.

- Ensure that the soil base is free of rocks or other debris that may cause tears or holes in the plastic lining material.

Removal of Temporary Concrete Washout Facilities

- When temporary concrete washout facilities are no longer required for the work, as determined by the site supervisor, hardened concrete should be broken up, removed, and disposed of in accordance with GH-2: Solid Waste Management.

- Holes, depressions or other ground disturbance caused by the removal of the temporary concrete washout facilities should be backfilled.

RECOMMENDED MAINTENANCE AND INSPECTION

- Monitor on site concrete waste storage and disposal procedures at least weekly.

- Monitor concrete working tasks, such as saw cutting, coring, grinding and grooving to ensure proper methods are employed.

POST CONSTRUCTION METHODS

None.

REFERENCES

CALTRANS, State of California Department of Transportation, March 2003, Construction Site Best Management Practices (BMPs) Manual.
http://www.dot.ca.gov/hq/construc/stormwater/manuals.htm

U.S. Environmental Protection Agency, December 1999, Construction Site Storm Water Runoff Control, National Menu of Best Management Practices for Storm Water Phase II.
http://cfpub2.epa.gov/npdes/stormwater/menuofbmps/con_site.cfm

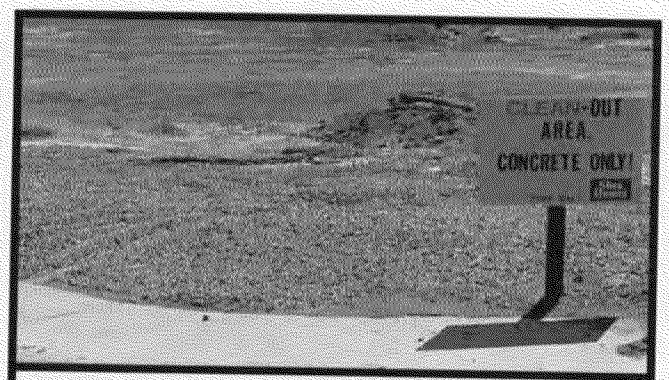
North Central Texas Council of Governments, December 2003, integrated Storm Water Management (iSWM) Design Manual for Construction.

Washington Department of Ecology, August 2001, Stormwater Management Manual for Western Washington, Publications #99-11 through 99-15.

GH-4 Designated Washdown Areas Photos

Concrete washout container.

Courtesy of Concrete Washout Systems, Inc.



Concrete washout area.

Courtesy of Douglas County

ED_001509B_00000855-00217

GH-5 GH-5: Spill Containment Plan

DEFINITION

An emergency plan to contain spills of dangerous, hazardous, or toxic wastes which mitigates environmental damage and provides prompt notice to proper authorities.

GENERAL INFORMATION

Applicability - Effectiveness
Inlet Drain Protection - high
Debris Management, Cleanup, and Washout - high

Most effective when used with:

GH-1: Chemical Management

GH-3: Equipment Maintenance Procedures

GH-4: Designated Washdown Areas

Alternative BMPs:

None

RATINGS

Associated Costs	H	M	L
Implementation		X	
Maintenance			X
Training		X	
Target Pollutants Removal	**H**	**M**	**L**
Oil and Grease	X		
Nutrients			X
Sediment			X
Floatable Material			X
Metals		X	
Other Construction Waste		X	

FIGURES

Photos/Sketches

GH-5 Spill Containment Plan Photos

CAD Drawings

None

ED_001509B_00000855-00218

PURPOSE

These procedures and practices are implemented to prevent and control spills in a manner that minimizes or prevents the discharge of spilled material to the drainage system or watercourses.

APPROPRIATE APPLICATIONS

This best management practice (BMP) applies to all construction projects. Spill control procedures are implemented any time chemicals and/or hazardous substances are stored. Substances may include, but are not limited to:

- Soil stabilizers/binders.
- Dust Palliatives.
- Herbicides.
- Growth inhibitors.
- Fertilizers.
- Deicing chemicals.
- Fuels.
- Lubricants.
- Other petroleum distillates.
- Sanitary and septic wastes.

To the extent that the work can be accomplished safely, spills of oil, petroleum products, substances listed under 40 CFR parts 110, 117, and 302.

LIMITATIONS

- The procedures and practices presented in this BMP are general. Contractor should identify appropriate practices for the specific materials used or stored onsite.
- This BMP only applies to *emergency* spill response. Refer to Chemical Management for proper storage, use, and disposal of dangerous, hazardous, and toxic wastes that should be observed at all times to minimize the potential for a spill.

ED_001509B_00000855-00219

PLANNING CONSIDERATIONS

Education

- Educate employees and subcontractors on what a significant spill is for each material they use, and what is the appropriate response for "significant" and "insignificant" spills.
- Educate employees and subcontractors on potential dangers to humans and the environment from spills and leaks.
- Hold regular meetings to discuss and reinforce appropriate disposal procedures (incorporate into regular safety meetings) and establish a program to instruct new employees.

Spill Response Procedures

- Significant/Hazardous Spills - for significant or hazardous spills that cannot be controlled by personnel in the immediate vicinity, the following steps should be taken:
  - Immediately notify the following:
    - Site supervisor and follow up with a written report.
    - Local emergency response (Fire department).
    - A spills contractor or a Haz-Mat team immediately. Construction personnel should not attempt to clean up the spill until the appropriate and qualified staff have arrived at the job site.
    - For spills of federal reportable quantities, in conformance with the requirements in 40 CFR parts 110,119, and 302, the contractor should notify the National Response Center (see contact number in table below).
  - Any applicable divisions within ADEQ should also be contacted. Notification should first be made by telephone and followed up with a written report.

Agency	Situation	Phone
Arizona Department of Environmental Quality (ADEQ) -Emergency Response Unit	Emergency	602-771-2330 800-234-5677
Arizona Department of Environmental Quality (ADEQ) -Emergency Response Unit	Routine Business	602-771-4106 602-771-4155
National Response Center	Emergency	800-424-8802
Local Fire Department/District	Emergency	911

ED_001509B_00000855-00220

Other ADEQ Contact Numbers	
ADEQ front desk	602-771-2300
Air Quality Division	602-771-2308
Waste Programs Division	602-771-4209
Pollution Prevention/TRI	602-771-4235
Water Quality Division	602-771-2306
Stormwater	**602-771-4574**

Post Spill Response Procedures

- Spills should not be buried or washed with water.
- Used clean up materials, contaminated materials, and recovered spill material that is no longer suitable for the intended purpose should be stored and disposed of in conformance with the special provisions.
- Water used for cleaning and decontamination should not be allowed to enter storm drains or watercourses and should be collected and disposed of in accordance with GH-1: Chemical Management. Water overflow or minor water spillage should be contained and should not be allowed to discharge into drainage facilities or watercourses.
- Proper storage, clean-up and spill reporting instruction for hazardous materials stored or used on the project site should be posted at all times in an open, conspicuous and accessible location.
- Waste storage areas should be kept clean, well organized and equipped with ample clean-up supplies as appropriate for the materials being stored. Perimeter controls, containment structures, covers and liners should be repaired or replaced as needed to maintain proper function.

The effectiveness of spill containment is enhanced when the following BMPs are also implemented: GH-1: Chemical Management, GH-3: Equipment Maintenance Procedures, and GH-4: Designated Washdown Areas.

RECOMMENDED MAINTENANCE AND INSPECTION

- Comply with suggestions and requirements set by local fire department.
- Verify weekly that spill control clean up materials are located near material storage, unloading, and use areas. Restock appropriate clean-up materials after a spill incident has occurred.

ED_001509B_00000855-00221

- Update spill prevention and control plans and stock appropriate clean-up materials whenever changes occur in the types of chemicals used or stored onsite, or after a spill incident has occurred.

POST CONSTRUCTION METHODS

None.

REFERENCES

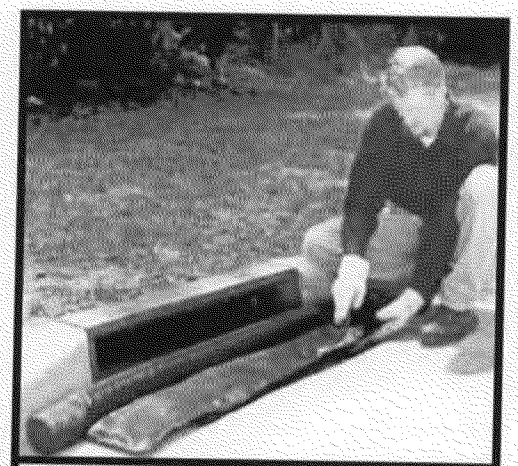
Tacoma Public Works Environmental Services, January 1993, City of Tacoma Surface Water Management Manual Volume II, Construction Stormwater Pollution Prevention. http://www.cityoftacoma.org/Page.aspx?hid=951#manual

CALTRANS, State of California Department of Transportation, March 2003, Construction Site Best Management Practices (BMPs) Manual. http://www.dot.ca.gov/hq/construc/stormwater/manuals.htm

U.S. Environmental Protection Agency, December 1999, Construction Site Storm Water Runoff Control, National Menu of Best Management Practices for Storm Water Phase II. http://cfpub2.epa.gov/npdes/stormwater/menuofbmps/con_site.cfm

GH-5 Spill Containment Plan Photos

Provide temporary inlet protection against any spills approaching drain inlets to a stormwater collection system.



Absorbent snakes can be used to protect storm drains from spills.

Courtesy of Stormwater 911

Containing leaks from equipment

Courtesy of Stormwater 911

ED_001509B_00000855-00223

GH-6 GH-6: Road Sweeping/ Trackout Cleaning

DEFINITION

Road trackout cleaning procedures refer to methods to remove tracked sediment around construction site points of egress.

GENERAL INFORMATION

Applicability - Effectiveness
Perimeter and Access Controls - high
Debris Management, Cleanup, and Washout - high

Most effective when used with:

EC-5 Stabilized Construction Entrance

EC-6 Construction Road Stabilization

EC-7 Dust Control

Alternative BMPs:

None

RATINGS

Associated Costs	H	M	L
Implementation		X	
Maintenance	X		
Training		X	
Target Pollutants Removal	**H**	**M**	**L**
Oil and Grease			X
Nutrients			X
Sediment	X		
Floatable Material	X		
Metals		X	
Other Construction Waste	X		

FIGURES

Photos/Sketches

GH-6 Road Sweeping/Trackout Cleaning Photos

CAD Drawings

None

ED_001509B_00000855-00224

PURPOSE

Cleaning road trackout prevents the sediment from entering a storm drain or watercourse.

APPROPRIATE APPLICATIONS

These practices are implemented anywhere sediment is tracked from the project site onto public or private paved roads, typically at points of ingress/egress. Studies have shown that vacuum or regenerative air street sweepers can effectively remove fine dust particles and yield significant runoff quality benefits.

LIMITATIONS

- Sweeping and vacuuming may not be effective when soil is wet or muddy.
- Mechanical brush sweepers may only remove coarser particles.

RECOMMENDED STANDARDS AND SPECIFICATIONS

- Visible sediment tracking should be swept and/or vacuumed daily. For smaller areas of trackout, kick brooms can be used. For larger areas, consider mechanical brush or vacuum sweepers. Some mechanical sweepers can remove debris and dust particles down to 2.5 microns.
- Conduct sweepings at least once per week during the project operations. During rainy seasons, implement sweepings on a more frequent basis.
- Consider incorporating the removed sediment back into the project, rather than hauling offsite to disposal.

RECOMMENDED MAINTENANCE AND INSPECTION

- Inspect ingress/egress access points daily and sweep tracked sediment as needed.
- Properly dispose of any unknown substances or objects that may be potentially hazardous.
- Adjust brooms frequently; maximize efficiency of sweeping operations.
- After sweeping is finished, sweeper water can be reused or disposed of at an approved dump-site.
- The operator is responsible for compliance with Maricopa County Dust Control Rules for Trackout Control.

ED_001509B_00000855-00225

POST CONSTRUCTION METHODS

In most cases, the municipality will continue with road sweeping operations after construction is complete.

REFERENCES

CALTRANS, State of California Department of Transportation, March 2003, Construction Site Best Management Practices (BMPs) Manual.
http://www.dot.ca.gov/hq/construc/stormwater/manuals.htm

Kamber Engineering Gaithersberg, Maryland, April, 1991, Sedimentation and Erosion Control, An Inventory of Current Practices, USEPA.

ED_001509B_00000855-00226

GH-6 Road Sweeping/Trackout Cleaning Photos

Road sweeping

Courtesy of Douglas County

ED_001509B_00000855-00227

Appendix H
Inspection and Corrective Action Report Form

ADEQ Arizona Department of Environmental Quality

⊥ ‼ ¶ ┬ &RQVWUXFWLRQ *HQHUDO 3HUPLW ,QVSHFWLRQ &RUUHFWLYH $FWLRQ 5HSRUW)RUP

6HFWLRQ ,◄ *HQHUDO ,QIRUPDWLRQ LQVWUXFWLRQV					
1DPH RI 3URMHFW	Hickman's Family Farms - Tonopah	&*3 7UDFNLQJ 1R◄	$=&21 ± BBBBBBBBBBBBBBBBBBB	,QVSHFWLRQ 'DWH	BBB

☐ &KHFN ER[ZKHQ XVLQJ WKLV IRUP IRU LQVSHFWLRQ DQ LQDFWLYH FRQVWUXFWLRQ VLWH ♂ WKLV LQFOXGHV WR DQ HQWLUH VLWH RU DQ\ 3DUW ┤ ◄ ⊥ ♂ ┤ ☐ RI WKH SHUPLW ,QVSHFW WKH VLWH LPPHGLDWHO\ EHFRPLQJ LQDFWLYH, HYHU\ ┤ KRXUV RI HDFK VWRUP HYHQW RI ‼ ◄⊥↑┤ LQFKHV RU JUHDWHU

,QVSHFWRU 1DPH◊ 7LWOH◊ &RQWDFW ,QIRUPDWLRQ	1DPH Frank G. Ruiz or Subcontractor/Designated Person 7LWOH Safety Coordinator or Subcontractor/Designated Inspector &RQWDFW LQIRUPDWLRQ (623) 764-3878 or
3UHVHQW 3KDVH RI &RQVWUXFWLRQ	

,QVSHFWLRQ 6FKHGXOH ♂ DOO GD\V DUH FDOHQGDU GD\V (Note: you may be subject to different inspection frequencies in different areas of the site. Check all that apply.)

5RXWLQH 6FKHGXOH ☐ (YHU\ → GD\V (YHU\ ¶ ┤ GD\V DQG ZLWKLQ ‼ ◄ ¥ VWRUP HYHQW

☐ 2QFH SHU PRQWK◊ EXW QRW ZLWKLQ ¶ ┤ GD\V RI WKH SUHYLRXV LQVSHFWLRQ KRXUV RI D ‼ ◄ ⊥ ↑ ¥ VWRUP HYHQW

5HGXFHG 6FKHGXOH RQFH SHU PRQWK ♂ EXW QRW ZLWKLQ ¶ ┤ GD\V RI WKH SUHYLRXV LQVSHFWLRQ DQWLFLSDWHG VWRUP HYHQW DQG ZLWKLQ ┤ KRXUV RI WKH HQG RI HDFK VWRUP HYHQW RI ‼ ◄ ↑ LQFK RU JUHDWHU LQ ⊥ ┤ KRXUV◄

☐ 2QFH SHU PRQWK ♂ LQ VWDELOL]HG DUHDV☐

☐ 2QFH SHU PRQWK ♂ ZKHUH GLVFKDUJHV DUH XQOLNHO\ EDVHG RQ VHDVRQDO FRQGLWLRQV☐

☐ 2QFH SHU PRQWK ♂ ZKHUH ZLQWHU FRQGLWLRQV H[LVW DQG HDUWK GLVWXUELQJ DFWLYLWLHV DUH EHLQJ FRQGXFWHG☐

'LVFKDUJH SRLQWV ZLWKLQ ¶ ↕ ┤ PLOHV RI DQ LPSDLUHG RU RXWVWDQGLQJ $UL]RQD ZDWHU ♂ 2$: ☐ (YHU\ → GD\V DQG ZLWKLQ ⊥ ┤ KRXUV RI D ‼ ◄ ↑ ¥ VWRUP HYHQW

:DV WKLV LQVSHFWLRQ WULJJHUHG E\ HLWKHU D ‼ ◄ ⊥ ↑ ¥ HYHQW ‼ ◄ ↑ ¥ VWRUP HYHQW

,I \HV◊ GXUDWLRQ RI VWRUP HYHQW ¶ KRXUV KUV ! KUV

,I \HV◊ KRZ ZDV WKH VWRUP GHWHUPLQHG ♂ HLWKHU ‼ ◄ ⊥ ↑ ¥ RU ‼ ◄ ↑ ¥ ☐ "

☐ 5DLQ JDXJH RQ VLWH ☐ :HDWKHU VWDWLRQ UHSUHVHQWDWLYH RI VLWH◄ 6SHFLI\ ZHDWKHU VWDWLRQ BBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBB

7RWDO UDLQIDOO DPRXQW WKDW WULJJHUHG WKH LQVSHFWLRQ☐ BBBBBBBBBBBBBBBBBBBBBBBB

,GHQWLI\ DOO VRXUFHV RI QRQ┤ VWRUPZDWHU GLVFKDUJHV RFFXUULQJ DW WKH VLWH DQG WKH DVVRFLDWHG FRQWURO PHDVXUHV LQ SODFH	
VRXUFHV RI QRQ┤ VWRUPZDWHU GLVFKDUJHV	FRQWURO PHDVXUHV DVVRFLDWHG ZLWK QRQ┤ VWRUPZDWHU GLVFKDUJHV
¶ ◄ Sediment BBBBBBBB	¶ ◄ EC-5, EC-7, EC-8, SRC-1, SRC-5, SRC-7, SRC-8, GH-6 (as needed)
⊥ ◄ Concrete Washout BBBBBBBB	⊥ ◄ Designated Washdown Areas GH-4
┬ ◄ Fuels/Oils BBBBBBBB	┬ ◄ Chemical Management GH-1, Spill Prevention GH-5
┤ ◄ Solid Waste (Port-A-Potty & Trash Bins) BBBBBBBB	┤ ◄ Chemical Management GH-1, Solid Waste Management GH-2
↑ ◄ Asphalt, Paints, Etc. (if present) BBBBBBBB	↑ ◄ GH-1, GH-2, GH-5 (as needed)

$GYHUVH RU 8QXDIH &RQGLWLRQV IRU ,QVSHFWLRQ

'LG \RX GHWHUPLQH WKDW DQ\ RSHUDWL WKH VLWH ZDV XQVDIH SHFWLRQ SHU &*3 3DUW ◀ ♂ <HV" ☐ 1R

,I ≥ \HV ¥ FRPSOHWH WKH IROORZLQJ

É 'HVFULEH WKH FRQGLWLRQV WKDW SUHYHQWHG \RX IURP FRQGXFWLQJ WKH LQVSHFWLRQ WKLV RFFDVLRQ

É /RFDWLRQ V ZKHUH FRQGLWLRQV ZHUH IRXQG

Note: *Inspections may be postponed when adverse or unsafe conditions exist such as local flooding, high winds, or electrical storms, or situations that otherwise make inspections unsafe. However, the inspection must resume as soon as conditions are safe.*

6HFWLRQ ,,◀ 'HVFULSWLRQ RI 'LVFKDUJHV DQG &RQGLWLRQ RI WKH 'LVFKDUJH /RFDWLRQV ♂ &*3/H3DUW&XFWLRQ ¶ ¶ □ □

'LVFKDUJH 3RLQW	2EVHUYDWLRQV (Note: discharges may not occur at every discharge point on the site after a storm event. Check all that apply.)
¶ ◀ Agriculture Field to the South	'HVFULEH WKH GLVFKDUJH 6WRUPZDWHU ☐ 1RQ\ WRUPZDWHU ☐ 1RQH 6LQFH WKH CDWV LQVSHFWLRQ GR \RX VHH DQ\ HYLGHQFH RI EHRXEXDOWLRQ DQG RU RWKHU SRROXWDQWV WKDW PXVW \RXU GLVFKDUJH" ☐ <HV ☐ 1R
If yes, describe the characteristics of the discharge (color, odor, clarity, etc.) specify the location(s) of these conditions, and indicate whether modification, maintenance, or corrective action is needed to correct the problem. Also, describe any visible signs of erosion or sediment accumulation.	
◀ Open Lot with Irrigation Ditch Further South	'HVFULEH WKH GLVFKDUJH 6WRUPZDWHU ☐ 1RQ\ WRUPZDWHU ☐ 1RQH 6LQFH WKH CDWV LQVSHFWLRQ GR \RX VHH DQ\ HYLGHQFH RI EHRXEXDOWLRQ DQG RU RWKHU SRROXWDQWV WKDW PXVW \RXU GLVFKDUJH" ☐ <HV ☐ 1R
If yes, describe the characteristics of the discharge (color, odor, clarity, etc.) specify the location(s) of these conditions, and indicate whether modification, maintenance, or corrective action is needed to correct the problem. Also, describe any visible signs of erosion or sediment accumulation.	
◀ Dishcharge Point on Truck Wash Property	'HVFULEH WKH GLVFKDUJH 6WRUPZDWHU ☐ 1RQ\ WRUPZDWHU ☐ 1RQH 6LQFH WKH CDWV LQVSHFWLRQ GR \RX VHH DQ\ HYLGHQFH RI EHRXEXDOWLRQ DQG RU RWKHU SRROXWDQWV WKDW PXVW \RXU GLVFKDUJH" ☐ <HV ☐ 1R
If yes, describe the characteristics of the discharge (color, odor, clarity, etc.) specify the location(s) of these conditions, and indicate whether modification, maintenance, or corrective action is needed to correct the problem. Also, describe any visible signs of erosion or sediment accumulation.	

6HFWLRQ ,,&217,18$7,21 6+((7)25 'HVFULEH RI 'LVFKDUJHV DQG &RQGLWLRQV WKH 'LVFKDUJH /RFDWLRQ&RQWUROV &RQWUROODEOH DV &HHFHVVDU\@	
'LVFKDUJH 3RLQW	2EVHUYDWLRQV *(Note: discharges may not occur at every discharge point on the site after a storm event. Check all that apply.)*
Discharge Point on Parking Lot Property	'HVFULEH WKH GLVFKDUJH &RORUZDWHU 1RQ &OHDUZDWHU 1RQH 6LQFH WKH ODVW LQVSHFWLRQ GR \RX VHH DQ\ HYLGHQFH &RORU &RQGLW RU &RONXVDQW &RQWDPLQDWHG DWWU \RXU GLVFKDUJH" & &RORU &RQGLW RU &RONXVDQW &RQWDPLQDWHG DWWU
If yes, describe the characteristics of the discharge (color, odor, clarity, etc.) specify the location(s) of these conditions, and indicate whether modification, maintenance, or corrective action is needed to correct the problem. Also, describe any visible signs of erosion or sediment accumulation.	
	'HVFULEH WKH GLVFKDUJH &RORUZDWHU 1RQ &OHDUZDWHU 1RQH 6LQFH WKH ODVW LQVSHFWLRQ GR \RX VHH DQ\ HYLGHQFH &RORU &RQGLW RU &RONXVDQW &RQWDPLQDWHG DWWU \RXU GLVFKDUJH" & &RORU &RQGLW RU &RONXVDQW &RQWDPLQDWHG DWWU
If yes, describe the characteristics of the discharge (color, odor, clarity, etc.) specify the location(s) of these conditions, and indicate whether modification, maintenance, or corrective action is needed to correct the problem. Also, describe any visible signs of erosion or sediment accumulation.	
	'HVFULEH WKH GLVFKDUJH &RORUZDWHU 1RQ &OHDUZDWHU 1RQH 6LQFH WKH ODVW LQVSHFWLRQ GR \RX VHH DQ\ HYLGHQFH &RORU &RQGLW RU &RONXVDQW &RQWDPLQDWHG DWWU \RXU GLVFKDUJH" & &RORU &RQGLW RU &RONXVDQW &RQWDPLQDWHG DWWU
If yes, describe the characteristics of the discharge (color, odor, clarity, etc.) specify the location(s) of these conditions, and indicate whether modification, maintenance, or corrective action is needed to correct the problem. Also, describe any visible signs of erosion or sediment accumulation.	
	'HVFULEH WKH GLVFKDUJH &RORUZDWHU 1RQ &OHDUZDWHU 1RQH 6LQFH WKH ODVW LQVSHFWLRQ GR \RX VHH DQ\ HYLGHQFH &RORU &RQGLW RU &RONXVDQW &RQWDPLQDWHG DWWU \RXU GLVFKDUJH" & &RORU &RQGLW RU &RONXVDQW &RQWDPLQDWHG DWWU
If yes, describe the characteristics of the discharge (color, odor, clarity, etc.) specify the location(s) of these conditions, and indicate whether modification, maintenance, or corrective action is needed to correct the problem. Also, describe any visible signs of erosion or sediment accumulation.	

6HFWLRQ ,,,◄ &RQGLWLRQ DQG (IIHFWLYHQHVV RI $OO 2Q-VLWH (URVLRQ DQG 6HGLPHQW ♂ (6) 6WDELOL]DWLRQ DQG 3ROOXWLRQ 3UHY
3UDFWLFHV ♂ &*3 3DUW ┬ ◄ ¶ ◄ ¶ WKURXJK LQVWUXFWLRQV

'HVFULSWLRQ RI &RQWURO 0HDVXUHV	7\SH RI &RQWURO 0HDVXUH É (URVLRQ DQG 6HGLPHQW ♂ (É 6WDELOL]DWLRQ É 3ROOXWLRQ 3UHYHQWLRQ	$GGLWLRQDO FRQWURO UHTXLUHG"	5HSDLUV RU RWKHU PDLQWHQDQFH QHHGHG"	&RUUHFWLYH DFWLRQ UHTXLUHG" 'DWH RI GLVFRYHU	6SHFLI\ VWDELOL]DWLRQ PHWKRG ♂ PXOFK URFN SODQWHG YHJHWDWLRQ HWF◄)
¶ ◄ Construction Entrance/Egress	☐ (6 ☐ 6WDELOL]DWLRQ ☐ 3	☐ <HV ☑ 1R	☐ <HV ☑ 1R	☐ <HV ☐ 1R BBB ↕ BBB ↕ BBBBBB	EC-5 Stabilized Construction Entrance/Egress GH-6 Road Sweeping & Trackout Cleaning

1RWHV ♂ H◄ J◄ SURYLGH GHWDLOV DERXW QHHGHG DGGLWLRQDO PDLQWHQDQFH DV SHUIRUPHG HWF◄)

'HVFULSWLRQ RI &RQWURO 0HDVXUHV	7\SH RI &RQWURO 0HDVXUH É (URVLRQ DQG 6HGLPHQW ♂ (É 6WDELOL]DWLRQ É 3ROOXWLRQ 3UHYHQWLRQ	$GGLWLRQDO FRQWURO UHTXLUHG"	5HSDLUV RU RWKHU PDLQWHQDQFH QHHGHG"	&RUUHFWLYH DFWLRQ UHTXLUHG" 'DWH RI GLVFRYHU	6SHFLI\ VWDELOL]DWLRQ PHWKRG ♂ PXOFK URFN SODQWHG YHJHWDWLRQ HWF◄)
⊥ ◄ Concrete Washout	☐ (6 ☐ 6WDELOL]DWLRQ ☐ 3	☐ <HV ☑ 1R	☐ <HV ☑ 1R	☐ <HV ☐ 1R BBB ↕ BBB ↕ BBBBBB	GH-4 Designated Washdown Areas

1RWHV ♂ H◄ J◄ SURYLGH GHWDLOV DERXW QHHGHG DGGLWLRQDO PDLQWHQDQFH DV SHUIRUPHG HWF◄)

1RWH ¶ 7KH SHUPLW GLIIHUHQWLDWHV EHWZHHQ FRQGLWLRQV WKDW UHTXLUH URXWLQH PDLQWHQDQFH DQG WKRVH WKDW UHTXLUH FRUUHFWLYH DFWLRQ◄ 7KH SHUPLW UHTXLUHV PDLQWHQDQFH LQ RUGHU WR NHHS FRQWUROV LQ HIIHFWLYH RSHUDWLQJ FRQGLWLRQ DQG UHTXLUHV FRUUHFWLYH DFWLRQV WR UHSDLU RU UHSODFH FRQWUROV WKDW DUH QRW RSHUDWLQJ DV LQWHQGHG◄ &RUUHFWLYH DFWLRQV DUH WULJJHUHG RQO\ IRU VSHFLILF PRUH LQFOXGH ¶ ☐ $ QHFHVVDU\ VWRUPZDWHU FRQWURO ZDV QHYHU LQVWDOOHG RU ZDV LQVWDOOHG LQFRUUHFWO\ RU QRW LQ DFFRUGDQFH ZLWK WKH UHTXLUHPHQWV LQ 3DUW ┬ ◄ ¶ DQG RU 3DUW ┬ ◄ ⊥ ⊥ ⊥ ☐ 2 SURKLELWHG GLVFKDUJHV LQ 3DUW ¶ ◄ ┤ LV RFFXUULQJ RU KDV RFFXUUHG 86(3$ GHWHUPLQHV WKDW PRGLILFDWLRQV WR WKH FRQWURO PHDVXUHV DUH QHFHVVDU\ WR PHHW RI 3DUW ┬ ◄

1RWH ⊥⊥ ,I DQVZHULQJ ≥<HV¥ FRUUHFWLYH DFWLRQ VKRXOG EH WDNHQ ZKHQ RQH RU WKH WKUHH FULWHULD LQ 1RWH ¶ DERYH UHTXLUHV FRUUHFWLYH DFWLRQ◄ 2 FRPSOHWH 6HFWLRQ ,9 ♂ &RUUH $FWLRQ 5HSRUW) EHORZ◄ 6HH WKH &*3 SHUPLW IRU PRUH LQIRUPDWLRQ

6HFWLRQ ,,, &217,18$7,21 6+((7)25 &RQWURO 0HDVXUH &RQGLWLRQ (IIHFWLYHQHVV >3ULQW DGGLWLRQDO VKHHWV DV QHFHVVDU\@

'HVFULSWLRQ RI &RQWURO 0HDVXUHV	7\SH RI &RQWURO 0HDVXUH É (URVLRQ DQG 6HGLPHQW É 6WDELOL]DWLRQ É 3ROOXWLRQ 3UHYHQWLRQ	$GGLWLRQDO FRQWURO UHTXLUHG"	5HSDLUV RU RWKHU PDLQWHQDQFH QHHGHG"	&RUUHFWLYH DFWLRQ UHTXLUHG" 'DWH RI GLVFRYHU\	6SHFLI\ VWDELOL]DWLRQ PHWKRG PXOFK URFN SODQWHG YHJHWDWLRQ HWF
Fuel Tanks/Oils	☐ (6 ☐ 6WDELOL]DWLRQ ☐ 3	☐ <HV ☐ 1R	☐ <HV ☐ 1R	☐ <HV ☐ 1R BBB BBB BBBBBB	GH-1 Chemical Management GH-5 Spill Containment

1RWHV H J SURYLGH GHWDLOV DERXW QHHGHG DGGLWLRQDO FRQWURO PHDVXUHV HWF

From 4/4/14 Inspection. Consider moving fuel tanks to concrete pad when tanks are empty. Continue with spill containment and good housekeeping practices including the use of "kitty litter" and/or absorbent socks for minor drips and use of spill tray during fueling operation.
From 5/12/14 Inspection. ADEQ inspector gave 30 days to move fuel tank. Requested photographs documenting move including presence of spill kits and drip tray.

Status: Fuel tank is at acceptable level to move without representing a hazardous condition. Fuel tank will be moved to the concrete pad this week and spill containment and drip pans will be placed in new tank location.

'HVFULSWLRQ RI &RQWURO 0HDVXUHV	7\SH RI &RQWURO 0HDVXUH É (URVLRQ DQG 6HGLPHQW É 6WDELOL]DWLRQ É 3ROOXWLRQ 3UHYHQWLRQ	$GGLWLRQDO FRQWURO UHTXLUHG"	5HSDLUV RU RWKHU PDLQWHQDQFH QHHGHG"	&RUUHFWLYH DFWLRQ UHTXLUHG" 'DWH RI GLVFRYHU\	6SHFLI\ VWDELOL]DWLRQ PHWKRG PXOFK URFN SODQWHG YHJHWDWLRQ HWF
Irrigation Ditch & Agriculture Field to the South	☐ (6 ☐ 6WDELOL]DWLRQ ☐ 3	☐ <HV ☐ 1R	☐ <HV ☐ 1R	☐ <HV ☐ 1R BBB BBB BBBBBB	As needed/required: SPC-1 Organic Filter Barrier SPC-5 Silt Fence SPC-7 Storm Drain Inlet SPC-8 Sediment Basin SCP-9 Sediment Trap

1RWHV H J SURYLGH GHWDLOV DERXW QHHGHG DGGLWLRQDO FRQWURO PHDVXUHV HWF

1RWH 7KH SHUPLW GLIIHUHQWLDWHV EHWZHHQ FRQGLWLRQV UHTXLULQJ DGGLWLRQDO FRQWURO DQG WKRVH UHTXLULQJ FRUUHFWLYH DFWLRQ PDLQWHQDQFH LQ RUGHU WR NHHS FRQWUROV LQ HIIHFWLYH RSHUDWLQJ FRQGLWLRQ DQG UHSODFHPHQW RU PRGLILFDWLRQ RI FRQWUROV QRW RSHUDWLQJ DV LQWHQGHG &RUUHFWLYH DFWLRQV DUH WULJJHUHG RQO\ IRU VSHFLILF FRQGLWLRQV LQFOXGH ... RI 3DUW

1RWH ,I DQVZHULQJ <HV WR FRUUHFWLYH DFWLRQ UHTXLUHG FRPSOHWH 6HFWLRQ ,9 &RUUHFWLYH $FWLRQ 5HSRUW EHORZ 6HH SHUPLW IRU FRPSOHWLRQ WLPHIUDPH

ADEQ Arizona Department of Environmental Quality

6HFWLRQ ,9◀ &RUUHFWLYH &WLRQ 5HSRUW)RUP

6HFWLRQ ,9◀ $◀ ± *HQHUDO ,QIRUPDWLRQ

&RPSOHWH WKLV VHFWLRQ ZLWKLQ RI GLVFRYHULQJ WKH FRQGLWLRQ WKDW WULJJHUHG FRUUHFWLYH DFWLRQ

'DWH] 7LPH 3UREOHP)LUW 'LVFRYHUHG	'DWH BBB ↕ BBB ↕ BBBBBB 7LPH BBBBBBBBBB	7RGD\ ∂V 'DWH BBBB ↕ BBB ↕ BBBBBB	
1DPH DQG &RQWDFW ,QIRUPDWLRQ RI ,QGLYLGXDO &RPSOHWLQJ WKLV)RUP &RQWDFW LQIRUPDWLRQ	1DPH Frank G. Ruiz or Designated Person (623) 764-3878 or		

:KDW VWHS FRQGXFWHG WKH UHTXLUHG WR FRQWURO FRUUHFW DFWLRQ? *(Check the box that applies)*

☐ $ CHFH-VDU\ VWRUPZDWHU FRQWURO-HY-U LQVWDOOHG ZDV GLQVWDOOHG RU HFWO\ RU CRQGXCEG DEFWU WKH UHTXLUHFHQWDUWLQ DQG RU T

☐ $ SURKLELWHG GLVFKDUJHEHGMHQ 3DUW ¶◀ KDV RFFXUEEGXURDJ L

☐ $'(4 RU 86(3$ KDV GHWHUPLQHG WKDW FRGLILFDWLRQV WR PHQXUFRQWDUDD CHFH-VDU\ WR FHHW WKH UHTXLUHFHQW RI 3DUW T◀

3URYLGH D GHVFULSWLRQ RI WKH SUREOHPRYLGH GHVFULSWLRQ RI WKH VSHFLILF SUREOHP WKDW WULJJHUHG WKH CHHG IRUWKHFRUSHFWLYH CRQWDUQ ZKHDM IWXQG◀ , I \RX KDYH DOUHDG\ SURYLGHG WKLV H[SODQDWLRQ LQ DQ LQVSHFWRQFDCHSEHWU WR WKDW UHSRUW◀

'HDOLQH IRU FRPSOHWLQJ FRUUHFWLYH DFWLRQ

☐ :RUN ZLOO EH FRPSOHWHG QR FRUH WKDQ → FDOHQGDUGDWHD\WKHDWWUREWWP ZDV GLVERYHUHG GDWH

☐ ,W LV LQIHDVLEOH WR FRPSOHWH ZRUN ZLWKLQ WKH ILUW → GD\V WKHUHIEUHDV WRRQ ZBUN SZDEDLFEEZHGRPRWWK GD\ ∂ HQWHU GBBBB ↕ BBBB ↕ BBBBBBB

,I WKH HWLPDWHG GDWH RI ERBSOHWDOV DIWHU WKH → KDW GHWXFHQW WKH IROORZLQJ 7KH UHDVRQ RW WRESOHWH HZWUCH ZLWKLQ → GD\V 7RGD ∂ → VFKHGXOH IRU LQWDOOLQJ DQG PDNLQJ WKH CHZ RU PRGLILHGHUWRRRRRRD RSHUDWLRQDO LQ WKH VRRQHW SUDWLFDEH WLPHIUDPH◀

NOTE: *Any corrective actions that result in changes to any of the stormwater controls or procedures shall be documented in the SWPPP within 7 calendar days of completing the corrective action work.*

Section IV.B. – Stormwater Control Modifications to be Implemented in Response to a Corrective Action Trigger [Print additional sheets as necessary]			
List of stormwater control(s) to be modified or replaced to correct the condition that required the Corrective Action	Actual or Planned Completion Date	SWPPP Update Necessary? If yes, specify date SWPPP modified	Notes and observations
1.	____ / ____ / _____	☐ Yes ☐ No ____ / ____ / _____	
2.	____ / ____ / _____	☐ Yes ☐ No ____ / ____ / _____	
3.	____ / ____ / _____	☐ Yes ☐ No ____ / ____ / _____	
4.	____ / ____ / _____	☐ Yes ☐ No ____ / ____ / _____	
5.	____ / ____ / _____	☐ Yes ☐ No ____ / ____ / _____	
6.	____ / ____ / _____	☐ Yes ☐ No ____ / ____ / _____	
7.	____ / ____ / _____	☐ Yes ☐ No ____ / ____ / _____	

Section V. CONTINUATION SHEET for Miscellaneous Items (see instructions) [Print additional sheets as necessary]

Use this space for miscellaneous information or as continuation of items found elsewhere in this report.

ADEQ
Arizona Department of Environmental Quality

6HFWLRQ 9,◀ &HUWLILFDWLRQ DQG 6LJQDWXUH ♂&*3 $SSHQGL[%◀ ◀

6HFWLRQ 9,◀ $◀ ± &HUWLILFDWLRQ DQG 6LJQDWXUH E\ &RQWUDFWRU RU 6XEFRQWUDFWRU SHUIRUPLQJ WKH LQVSHFWLRQV ♂ LI DSSOLFDEOH

&KHFN RQH RI WKH IROORZLQJ

1R LQVWDOOHV RI &RQ FRPSOLDQFH ZHUH GLVFRYHUHG GXULQJ WKH SURVHFW ZDV LQ IXOO FRPSOLDQFH ZLWK &333 DQ

,QVSHFWLRQ IROORZ XS LV UHTXLUHG LQ DFFRUGDQFH ZLWK DQ DSSURYHG ◀ RI WKH SHUPLW◀

≥ , FHUWLI\ XQGHU SHQDOWLHV RI ZKDZ GRFXPHQW DQG DOO DWWDFKPHQW ZHUH SUHSDUHG XQGHU P\ GLUHFWLRQ RUUHGDQHHUZDMRQ DLQ\WDWR GHVLJHG WR DVXUH WKDW TXDOLILHG SHUVRQQHO SURSHUO\ JDWKHUHG DQG HYDOXDWHG WKH LQIRUPDWLRQ VXEPLWWHG ◀ %DVHG RQ UP\SHUVRQDOU\ZKRR PDQDJH WKH V\VWHP RU WKRVH SHUVRQV GLUHFWO\ UHVSRQVLEOH IRU JDWKHULQJ WKH LQIRUPDWLRQ VXEPLWWHG LV WRUXH DFFXUDWH DQG FRPSOHWH ◀ , DP DZDUH WKDW WKHUH DUH VLJQLILFDQW SHQDOWLHV IRU NQRZLQJ YLRODWLRQV ◀ ¥

6LJQDWXUH RI &RQWUDFWRU RU 6XEFRQWUDFWRU 7LWOH

3ULQWHG QDPH 'DWH

%XVLQHVV ↕ $JHQF\ 3KRQH QXPEHU

6HFWLRQ 9,◀ %◀ ± &HUWLILFDWLRQ DQG 6LJQDWXUH E\ 3HUPLWWHH RSSHUDWRU RU D GXO\ DXWKRUL]HG UHSUHVHQWDWLYH

&KHFN RQH RI WKH IROORZLQJ

1R LQVWDOOHV RI &RQ FRPSOLDQFH ZHUH GLVFRYHUHG GXULQJ WKH SURVHFW ZDV LQ IXOO FRPSOLDQFH ZLWK &333 DQ

,QVSHFWLRQ IROORZ XS LV UHTXLUHG LQ DFFRUGDQFH ZLWK DQ DSSURYHG ◀ RI WKH SHUPLW◀

≥ , FHUWLI\ XQGHU SHQDOWLHV RI ZKDZ GRFXPHQW DQG DOO DWWDFKPHQW ZHUH SUHSDUHG XQGHU P\ GLUHFWLRQ RUUHGDQHHUZDMRQ DLQ\WDWR GHVLJHG WR DVXUH WKDW TXDOLILHG SHUVRQQHO SURSHUO\ JDWKHUHG DQG HYDOXDWHG WKH LQIRUPDWLRQ VXEPLWWHG ◀ %DVHG RQ UP\SHUVRQDOU\ZKRR PDQDJH WKH V\VWHP RU WKRVH SHUVRQV GLUHFWO\ UHVSRQVLEOH IRU JDWKHULQJ WKH LQIRUPDWLRQ VXEPLWWHG LV WRUXH DFFXUDWH DQG FRPSOHWH ◀ , DP DZDUH WKDW WKHUH DUH VLJQLILFDQW SHQDOWLHV IRU NQRZLQJ YLRODWLRQV ◀ ¥

6LJQDWXUH RI 3HUPLWWHH RU

≥ 'XO\ $XWKRUL]HG 5HSUHVHQWDWLYH ¥

7LWOH

3ULQWHG 1DPH 'DWH

%XVLQHVV ↕ $JHQF\ 3KRQH QXPEHU

$'(4 ┼ 6HSWHPEHU ± ‼ ¶ ┬

Appendix I
Modifications/Amendments log

6:333 L 02',),&$7,21 L /2* L

Project name: +LFNPDQ∂V L)DPLO\ L)DUPV L 7RQRSDK L 3DDQW L

Number	Description of the Amendment	Date	Amendment Prepared By (Name/ Title)	Signature
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				

L

6:333 L 02',),&$7,21 L /2* L

Project name: +LFNPDQ∂V L)DPLO\ L)DUPV L 7RQRSDK L 3ODQW L

Number	Description of the Amendment	Date	Amendment Prepared By (Name/ Title)	Signature
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				
23				
24				

6:333 L 02',),&$7,21 L /2* L

Project name: +LFNPDQ∂V L)DPLO\ L)DUPV L 7RQRSDK L 3DDQW L

Number	Description of the Amendment	Date	Amendment Prepared By (Name/ Title)	Signature
25				
26				
27				
28				
29				
30				
31				
32				
33				
34				
35				
36				

Appendix J

Miscellaneous Information