STORMWATER MANAGEMENT PLAN

MONUMENT STEEL STRUCTURES

LOT 2 OF GREATER EUROPE MISSION SUBDIVISION FILING NUMBER 1

18910 BASE CAMP ROAD

EL PASO COUNTY, COLORADO

PREPARED FOR OWNER / DEVELOPER / SWMP ADMINISTRATOR:

Steel Structures America Inc.
3635 E. Covington Ave.
Post Falls, ID 83854
Justin Sternberg - 208-659-4800

Prepared By:

Terra Forma Solutions

Contractor:
TBD

April 2019

Add PCD File No. PPR1919

ENGINEER'S CERTIFICATION:

This Stormwater Management Plan for Monument Steel Structures was prepared by me (or under my direct supervision) in accordance with the provisions of El Paso County and the State of Colorado.

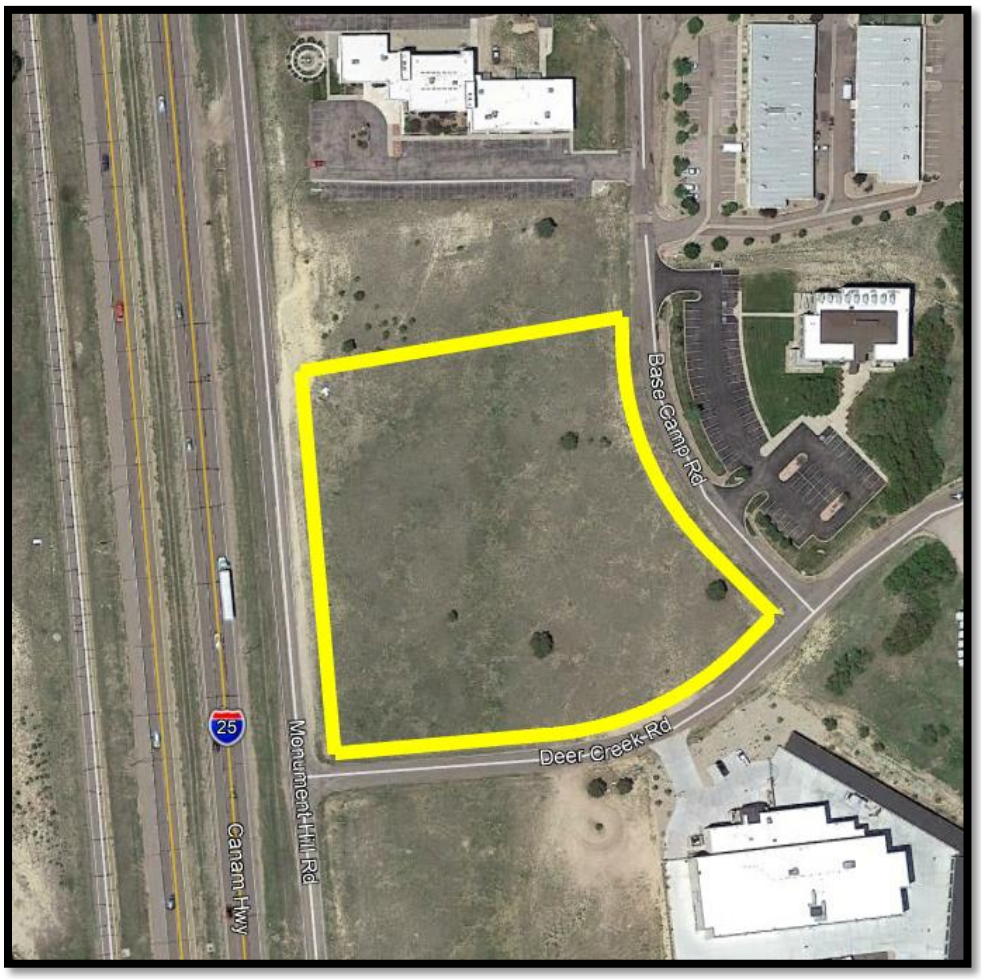
_____ _____

Todd Johnson, P.E. #37660 Date

TABLE OF CONTENTS

PROJECT LOCATION

- The Monument Steel Structures development is located at 18910 Base Camp Road in Section 11, Township 11 South, Range 67 West of the 6th Principal Meridian in El Paso County, State of Colorado.
- Approximate geodetic coordinates for the site are: 39°6'21"N, 104°51'48"W
- The site is bordered to the north by the Greater Europe Missions, to the east by Base Camp Road, to the west by Monument Hill Road and to the south by Deer Creek Road.
- See Site Location Map below for overall site location:



PROJECT DESCRIPTION

The nature and purpose of the land disturbing activities are for the development of a small sales office, display structures, and mini warehouse / RV Boat storage with access drives, parking spaces, and landscape areas.

EXISTING SITE CONDITIONS

The site is approximately 4.0 acres in size. The site is currently vacant and is covered by native grasses and weeds. Topography generally slopes from northeast to southwest towards a roadside ditch along Monument Hill Road with grades generally varying from 1% to 10%. There are no wetlands or non-stormwater discharges on the site.

RECEIVING WATERS

The receiving waters for stormwater runoff is Crystal Creek tributary to Monument Creek. The site is not located within a flooplain as shown on the FEMA FIRM Map No. 08041C0276G dated December 7, 2018. The site lies within Zone X which is described as follows: Areas of 0.2% annual chance flood; areas of 1% annual chance of a flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood. The proposed on-site extended detention basin discharges to an existing storm sewer culvert transporting the runoff under Deer Creek Road and off site.

ADJACENT AREAS

The site receives runoff from the adjacent property to the north and to the east. The site slopes to the southwest into the Monument Hill roadside ditch.

SOIL IDENDIFICATION

The soil types on site as identified by the Natural Resources Conservation Service (NRCS) are as follows:

Hydrologic Soil Group				
Map unit symbol	**Map unit name**	**Rating**	**Acres in AOI**	**Percent of AOI**
92	Tomah – Crowfoot Loamy sands, 3 to 8 percent slopes	B	4.7	80.6%
93	Tomah – Crowfoot complex, 8 to 15 percent slopes	B	1.1	19.4%

RUNOFF COEFFICIENTS

The existing runoff coefficient is derived to be 0.44 for the 100-year event. The developed runoff coefficient is derived to be 0.73 for the 100-year event.

POTENTIAL POLLUTANTS

During and after construction, potential pollutants that could be encountered include, but are not limited to vehicle fueling, concrete waste, hydraulic oil / fluids, antifreeze / coolant, paints and stains, sediment, trash, portable toilet waste, and cleaning solvents.

SOIL BORINGS / TEST AND GROUNDWATER

Soil borings and tests were conducted in February 2019 by CTL Thompson. There were no contaminated materials discovered that would require remediation and disposal. Groundwater was found at a depth of 13-15 feet in bore holes located at the southwest corner of the site where the proposed Extended Detention Basin is located.

AREA AND EARTHWORK VOLUMES

The site is 4.00 acres. The area of disturbance is 4.19 acres, slightly larger than the site due to the need for some off-site grading at the entrance from Base Camp Road and roadside ditch grading along Monument Hill Road and Deer Creek Road. The projected earthwork has the site near balance with a projected export volume of ~ 1,700 cy.

EROSION CONTROL MEASURES IMPLEMENTATION

Prior to any earth moving or construction activities, the following BMP's will be installed:

- Construction Fence
- Silt Fence
- Vehicle Tracking Control
- Sediment Basin
- Diversion Ditches
- Curb Socks
- Stabilized Staging Area
- Concrete Washout Area
- Check Dams

All of these sediment control measures should minimize any sediment from leaving the site.

Once these measures are in place, earthwork operations will commence. Upon completion of the earthwork, utility installation will start. During all phases of construction, especially after rainfall events, the BMPs will be inspected and maintained. Maintenance of the BMPs is discussion further on in this report.

Upon completion of the utility installation, the following BMPs will be installed:

- Inlet Protection

All of the BMPs listed above will remain in place until completion of construction and final stabilization, with the exception of the sediment basin, which will be removed for site final grading and paving.

Good housekeeping management practices shall be followed by the contractor to prevent pollution associated with solid, liquid and hazardous construction related materials and wastes. These practices should include:

- Provide for waste management — Designate waste/trash collection areas on site. Locate these areas away from streets, gutters and storm inlets. Segregate and provide for proper disposal options for hazardous materials waste. Empty waste containers before they are full.
- Clean up litter and trash on a daily basis.
- Provide convenient, well-maintained and properly located toilet facilities away from gutter and inlets. Tie down or stake down portable toilets. Assure frequent pump-out of those facilities.
- Provide secondary containment for fuels, paints and stains, hazardous and toxic material wastes.
- Establish proper equipment and vehicle fueling and maintenance procedures.
- Establish proper building material handling and staging areas.
- Minimize the excess use of water on-site during construction. Any allowable non- stormwater discharge of water should be routed to the BMPs.
- Develop a spill prevention and response plan. A spill response plan is included in Appendix A of this report. This plan was adopted from a City of Aurora standard procedure.

SCHEDULE

The following is an anticipated schedule for the project:

Install Initial BMPs	June, 2019
Start Site Grading	June, 2019
Complete Site Grading	August, 2019
Start Utility Installation	August, 2019
Complete Utility Installation	October, 2019
Install Inlet Protection BMP	October, 2019
Start Building Construction	October, 2019
Start Site Paving	February, 2020
Final Site Stabilization	March, 2020
Remove BMPs	March, 2020

PERMANENT STABILIZATION

The majority of the site will consist of buildings, concrete & asphalt pavement. Permanent stabilization will consist of the site paving, permanent seeding and landscaping.

INSPECTION AND MAINTENANCE

The following inspection and maintenance procedures shall be used for each BMP:

Construction Fence — Inspect on a daily basis. Inspect within 24 hours of a storm. Repair or replace damage such as rips and sags. Construction fence shall remain in place until final stabilization is approved.

Silt Fence - Inspect on a daily basis. Inspect within 24 hours of a storm. Repair or replace damage such as rips and sags. Remove sediment accumulation upstream of the silt fence when the accumulation is approximately 6". Silt fence shall remain in place until final stabilization is approved.

Vehicle Tracking Control — Inspect on a daily basis. Replace rock and regrade as needed to maintain a consistent depth. Remove sediment tracked onto paved access road throughout the day and at the end of the day by sweeping and shoveling. Vehicle tracking control shall remain in place until site paving is complete.

Stabilized Staging Area — Inspect on a daily basis. Replace rock and regrade as necessary if rutting occurs or underlying subgrade is exposed. Stabilized staging area shall remain in place until final site paving is complete.

Concrete Washout Area — Inspect on a daily basis. The Concrete washout area shall be repaired, cleaned or enlarged as necessary to maintain capacity for concrete waste. Concrete materials, accumulated in pit, shall be removed once the they have reached a depth of 2". Concrete washout water, wasted pieces of concrete and all other debris in the pit shall be transported from the job site in a water-tight container and disposed of properly in accordance with local requirements. The concrete washout area shall remain in place until all concrete tor the project is placed.

Inlet Protection — Inspect daily. Sediment accumulation upstream of inlet protection shall be removed as necessary to maintain BMP effectiveness, typically when the accumulation reaches one-half of the height of the cinder block/rock sock protection. Inlet protection shall be removed upon approval of final stabilization.

Rock Sock — Inspect daily. Replace rock socks that become heavily soiled or damaged. Sediment accumulated upstream of rock socks shall be removed as needed to maintain the functionality of the BMP or when the depth of accumulation is approximately one-half of the height of the rock sock.

Sediment Basin — Inspect on a weekly basis and as soon as possible (minimum within 24 hours) of any rainfall event. Inspect daily during periods of prolonged rainfall. Accumulated sediment shall be removed before the sediment reaches one-half of the basin volume. The sediment basin shall remain in place until final site paving is complete.

SWMP PLAN REVISIONS

Typically, the SWMP plan is considered a work in progress or a "living" document. The contractor will mark up the SWMP Plan in the field with any revisions, additions or deletions to the plan as they occur. The contractor will review the updated plan with the county inspector during their site visits.

CONCLUSION

This Stormwater Management Plan for the Monument Steel Structures site is in conformance to Engineering Criteria Manual, standards and practices established by El Paso County.

APPENDICES

APPENDIX A – Spill Response Plan

APPENDIX B – Referenced Information

APPENDIX A - SPILL RESPONSE PLAN

SPILL RESPONSE PLAN

Upon detection of any spill, the first action to be taken is to ensure personal safety. All possible ignition sources, including running engines, electrical equipment (including cellular telephones, etc.), or other hazards will be immediately turned off or removed from the area. The extent of the spill and the nature of the spilled material will be evaluated to determine if remedial actions could result in any health hazards, escalation of the spill, or further damage that would intensify the problem. If such conditions exist, a designated employee will oversee the area of the spill and the construction Permittee will be notified immediately.

The source of the spill will be identified and if possible the flow of pollutants stopped if it can be done safely. However, no one should attend to the source or begin cleanup of the spill until ALL emergency priorities (fire, injuries, etc.) have been addressed.

Small Spills:
Small spills (usually <5 gallons) consist of minor quantities of gasoline, oil, anti-freeze, or other materials that can be cleaned up by a single employee using readily available materials.
The following procedures should be used for clean-up of small spills:

a) Ensure personal safety, evaluate the spill, and if possible, stop the flow of pollutants.
b) Contain the spread of the spill using absorbents, portable berms, sandbags, or other available measures.
c) Spread absorbent materials on the area to soak up as much of the liquid as possible and to prevent infiltration into the soil.
d) Once the liquids have been absorbed, remove all absorbents from the spill and place the materials in a suitable storage container. On paved areas, wipe any remaining liquids from the surface and place the materials in a storage container. *Do not spray or wash down the area using water*. For open soil areas, excavate any contaminated soil as soon as possible and place the soil in a suitable storage container. All materials will then be transported off-site for disposal.
e) If immediate transfer and storage of the contaminated soil is not practical, excavate and place the contaminated soil on a double thickness sheet of 3-mil or higher polyethylene film. In addition, a small berm should be formed around the outer edges of the soil stockpile, underneath the polyethylene film, to ensure that contaminants are not washed from the site during precipitation events and that materials do not seep through the berm.
f) Record all significant facts and information about the spill, including the following:
    a. Type of pollutant
    b. Location
    c. Apparent source
    d. Estimated volume
    e. Time of discovery
    f. Actions taken to clean up spill
g) Notify the Permittee of the spill and provide the information from Item #6. The Permitte will then contact the City of Colorado Springs Erosion Control Staff.

Medium to Large Spills:
Medium to large spills consist of larger quantities of materials (usually >5 — 25 gallons) that are used on site that cannot be controlled by a single employee. Generally, a number of facility personnel will be needed to control the spill and a response may require the suspension of other facility activities.

The following procedure shall be used for the cleanup of medium to large spills:

a) Ensure personal safety, evaluate the spill, and if possible, stop the flow of pollutants.

b) Immediately dispatch a front-end loader or similar equipment to the spill and construct a berm or berms down gradient of the spill to minimize the spread of potential pollutants. On paved surfaces, portable berms, sandbags, booms, or other measures will be used to control the lateral spread of the pollutants.

c) When the spread of the spill has been laterally contained, contact the Permittee or designated facility employee and provide them information on the location, type, and amount of spilled material, and a briefing on the extent of the spread and measures undertaken to contain the contaminants.

d) Depending on the nature of the spill, mobilize additional resources as needed to contain the contaminants.

e) Cleanup will commence when the lateral spread has been contained and the notification to the Permittee has been made.

f) Freestanding liquid will be bailed or pumped into 55-gallon storage drums, steel tanks, or other suitable storage containers. When all the liquid has been removed from the pavement or soil layer, absorbents will be applied to the surface and transferred to the storage containers when they have soaked up as much of the spill as possible.

g) On paved surfaces, the remaining contaminants will be removed to the extent possible, with rags, sweeping, or similar measures. *The area of the spill will not be sprayed or washed down using water*. Any contaminant soaked materials will be placed into the storage containers with the other absorbents.

h) The remaining contaminated soils will be excavated and loaded into a dump truck(s) for disposal off-site at a designated facility. If transport off-site is not immediately available, the remaining soils will be stockpiled on a double thickness sheet of 3-mil or higher polyethylene film. In addition, a small berm will be formed around the outer edges of the soil stockpile, underneath the polyethylene film, to ensure that contaminants are not washed from the site during precipitation and do not seep through the berm.

i) Record all significant facts and information about the spill, including the following:

    a. Type of pollutant
    b. Location
    c. Apparent source
    d. Estimated volume
    e. Time of discovery
    f. Actions taken to clean up spill
    g. Provide the Permittee (or designated employee) with the information from Item #9. The Permittee will then contact the City of Colorado Springs Flow Control Center.

NOTIFICATION

Notification to the Colorado Department of Public Health & Environment (CDPHE) and the City of Colorado Springs is required if there is any release or suspected release of any substance, including oil or other substances that spill into or threaten State waters. Unless otherwise noted, notifications are to be

made by the Permittee and only after emergency responses related to the release have been implemented. This will prevent misinformation and assures that notifications are properly conducted. The notification requirements are as follows:

1. **Spills into/or Threatens State Waters**: Immediate notification is required for releases that occur beneath the surface of the land or impact or threaten waters of the State of threaten the public health and welfare. Notifications that will be made are:
    a. For any substance, regardless of quantity, contact CDPHE at 1-877-518-5608. State as follows:
        i. Give your name.
        ii. Give location of spill (name of city).
        iii. Describe the nature of the spill, type of products, and estimate size of spill.
        iv. Describe type of action taken thus far, type of assistance or equipment needed.
    b. For any quantity of oil or other fluids, call the National Response Center at 1- 800-424-8802. State as follows:
        i. Give your name.
        ii. Give location of spill (name of city and state).
        iii. Describe the nature of the spill, type of product, and estimate size of spill.
        iv. Describe type of action taken thus far, type of assistance or equipment needed.
2. **Reportable Quantity Spill on Land Surface:** Immediate notification is required of a release upon the land surface of an oil in quantity that exceeds 25 gallons, or of a hazardous substance that equals or exceeds 10 pounds or its reportable quantity under Section 101(14) of the Comprehensive Environmental Response, Compensation Liability Act (CERCLA) of 1980 as amended (40 CFR Part 302) and Section 329 (3) of the Emergency Planning and Community Right to Know Act of 1986 (40 CFR Part 355) whichever is less. This requirement does apply at a minimum to the substances listed in Table A below.

TABLE A

Substances Requiring Notification

SUBSTANCE	REPORTABLE QUANTITY
Motor Oil	25 Gallons
Hydraulic Oil	25 Gallons
Gasoline/Diesel Fuel	25 Gallons

The notification procedures to be followed are:

a) Give your name.
b) Give location of spill (name of city and state).
c) Describe nature of the spill, type of product, and estimate size of spill.

d) Describe type of action taken thus far, type of assistance or equipment needed.

3. Notification is not required for release of oil upon the land surface of 25 gallons or less that will not constitute a threat to public health and welfare, the environmental or a threat of entering the waters of the State.

4. Notification, as required in paragraphs 1 and 2 above, will be made to the CDPHE using the 24-hour telephone number to report environmental spills. All information known about the release at the time of discovery is to be included, such as the time of occurrence, quantity and type of material, location and any corrective or clean-up actions presently being taken. Table B lists these phone numbers.

SPILL RESPONSE CONTACTS

TABLE B

Emergency Notification Contacts

Name/Agency	Number
City of Colorado Springs Fire Department	911
City of Colorado Springs Police Department	911
Ambulance	911
Hospital	911
National Response Center	1-800-424-8802
CDPHE — Report Environmental Spills (24 hrs/day)	1-877-518-5608
El Paso County — Stormwater Inspections	719-520-6879
Colorado Emergency Planning Committee	303-273-1622
Also contact Permittee and Owner	

It is the responsibility of the Permittee to contact the City of Colorado Springs, CDPHE, and/or the National Response Center.

- The National Response Center is to be contacted when a release containing a hazardous substance or oil in an amount equal to or in excess of a reportable quantity established under either 40 CFR 110, 4- DFR 117, or 40 CFR 302 occurs during a 24-hour period.
- Notification to the CDPHE and El Paso county is required if there is any release or suspected release of any material, including oil or hazardous substances that spill into or threaten state waters.

REPORTS

The CDPHE and El Paso County require written notification of a spill or discharge of oil or other substance that may cause pollution of the waters of the State of Colorado. A written report must be submitted to the Water Quality Control District (WQCD) and the El Paso County Erosion Control Staff within five days after becoming aware of the spill or discharge.

The CDPHE and El Paso County require a written final report within 15 days for all releases of an oil or hazardous substance that require implementation of a contingency plan. The CDPHE and El Paso County may also require additional reports on the status of the clean up until any required remedial action has been complete.

Written notification of reports must contain at a minimum:

1. Date, time, and duration of the release.
2. Location of the release.
3. Person or persons causing and responsible for the release.
4. Type and amount of oil or substance released.
5. Cause of the release.
6. Environmental damage caused by the release.
7. Actions taken to respond, contain, and clean up the release.
8. Location and method of ultimate disposal of the oil or other fluids.
9. Actions taken to prevent a reoccurrence of the release.
10. Any known or anticipated acute or chronic health risks associated with the release.

APPENDIX B - REFERENCED INFORMATION

NOTES TO USERS

This map is for use in administering the National Flood Insurance Program. It does not necessarily identify all areas subject to flooding, particularly from local drainage sources of small size. The **community map repository** should be consulted for possible updated or additional flood hazard information.

To obtain more detailed information in areas where **Base Flood Elevations** (BFEs) and/or **floodways** have been determined, users are encouraged to consult the Flood Profiles and Floodway Data and/or Summary of Stillwater Elevations tables contained within the Flood Insurance Study (FIS) report that accompanies this FIRM. Users should be aware that BFEs shown on the FIRM represent rounded whole-foot elevations. These BFEs are intended for flood insurance rating purposes only and should not be used as the sole source of flood elevation information. Accordingly, flood elevation data presented in the FIS report should be utilized in conjunction with the FIRM for purposes of construction and/or floodplain management.

Coastal Base Flood Elevations shown on this map apply only landward of 0.0' North American Vertical Datum of 1988 (NAVD88). Users of this FIRM should be aware that coastal flood elevations are also provided in the Summary of Stillwater Elevations table in the Flood Insurance Study report for this jurisdiction. Elevations shown in the Summary of Stillwater Elevations table should be used for construction and/or floodplain management purposes when they are higher than the elevations shown on this FIRM.

Boundaries of the **floodways** were computed at cross sections and interpolated between cross sections. The floodways were based on hydraulic considerations with regard to requirements of the National Flood Insurance Program. Floodway widths and other pertinent floodway data are provided in the Flood Insurance Study report for this jurisdiction.

Certain areas not in Special Flood Hazard Areas may be protected by **flood control structures**. Refer to section 2.4 "Flood Protection Measures" of the Flood Insurance Study report for information on flood control structures for this jurisdiction.

The **projection** used in the preparation of this map was Universal Transverse Mercator (UTM) zone 13. The **horizontal datum** was NAD83, GRS80 spheroid. Differences in datum, spheroid, projection or UTM zones zones used in the production of FIRMs for adjacent jurisdictions may result in slight positional differences in map features across jurisdiction boundaries. These differences do not affect the accuracy of this FIRM.

Flood elevations on this map are referenced to the **North American Vertical Datum of 1988 (NAVD88)**. These flood elevations must be compared to structure and ground elevations referenced to the same **vertical datum**. For information regarding conversion between the National Geodetic Vertical Datum of 1929 and the North American Vertical Datum of 1988, visit the National Geodetic Survey website at http://www.ngs.noaa.gov/ or contact the National Geodetic Survey at the following address:

NGS Information Services
NOAA, NNGS12
National Geodetic Survey
SSMC-3, #9202
1315 East-West Highway
Silver Spring, MD 20910-3282

To obtain current elevation, description, and/or location information for **bench marks** shown on this map, please contact the Information Services Branch of the National Geodetic Survey at (301) 713-3242 or visit its website at http://www.ngs.noaa.gov/.

Base Map information shown on this FIRM was provided in digital format by El Paso County, Colorado Springs Utilities, City of Fountain, Bureau of Land Management, National Oceanic and Atmospheric Administration, United States Geological Survey, and Anderson Consulting Engineers, Inc. These data are current as of 2006.

This map reflects more detailed and up-to-date **stream channel configurations and floodplain delineations** than those shown on the previous FIRM for this jurisdiction. The floodplains and floodways that were transferred from the previous FIRM may have been adjusted to conform to these new stream channel configurations. As a result, the Flood Profiles and Floodway Data tables in the Flood Insurance Study Report (which contains authoritative hydraulic data) may reflect stream channel distances that differ from what is shown on this map. The profile baselines depicted on this map represent the hydraulic modeling baselines that match the flood profiles and Floodway Data Tables if applicable, in the FIS report. As a result, the profile baselines may deviate significantly from the new base map channel representation and may appear outside of the floodplain.

Corporate limits shown on this map are based on the best data available at the time of publication. Because changes due to annexations or de-annexations may have occurred after this map was published, map users should contact appropriate community officials to verify current corporate limit locations.

Please refer to the separately printed **Map Index** for an overview map of the county showing the layout of map panels; community map repository addresses; and a Listing of Communities table containing National Flood Insurance Program dates for each community as well as a listing of the panels on which each community is located.

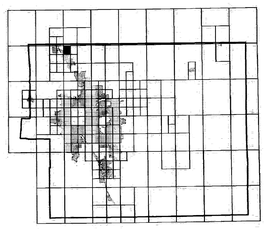
Contact **FEMA Map Service Center** (MSC) via the FEMA Map Information eXchange (FMIX) 1-877-336-2627 for information on available products associated with this FIRM. Available products may include previously issued Letters of Map Change, a Flood Insurance Study Report, and/or digital versions of this map. The MSC may also be reached by Fax at 1-800-358-9620 and its website at http://www.msc.fema.gov/.

If you have **questions about this map** or questions concerning the National Flood Insurance Program in general, please call **1-877-FEMA MAP** (1-877-336-2627) or visit the FEMA website at http://www.fema.gov/business/nfip.

El Paso County Vertical Datum Offset Table

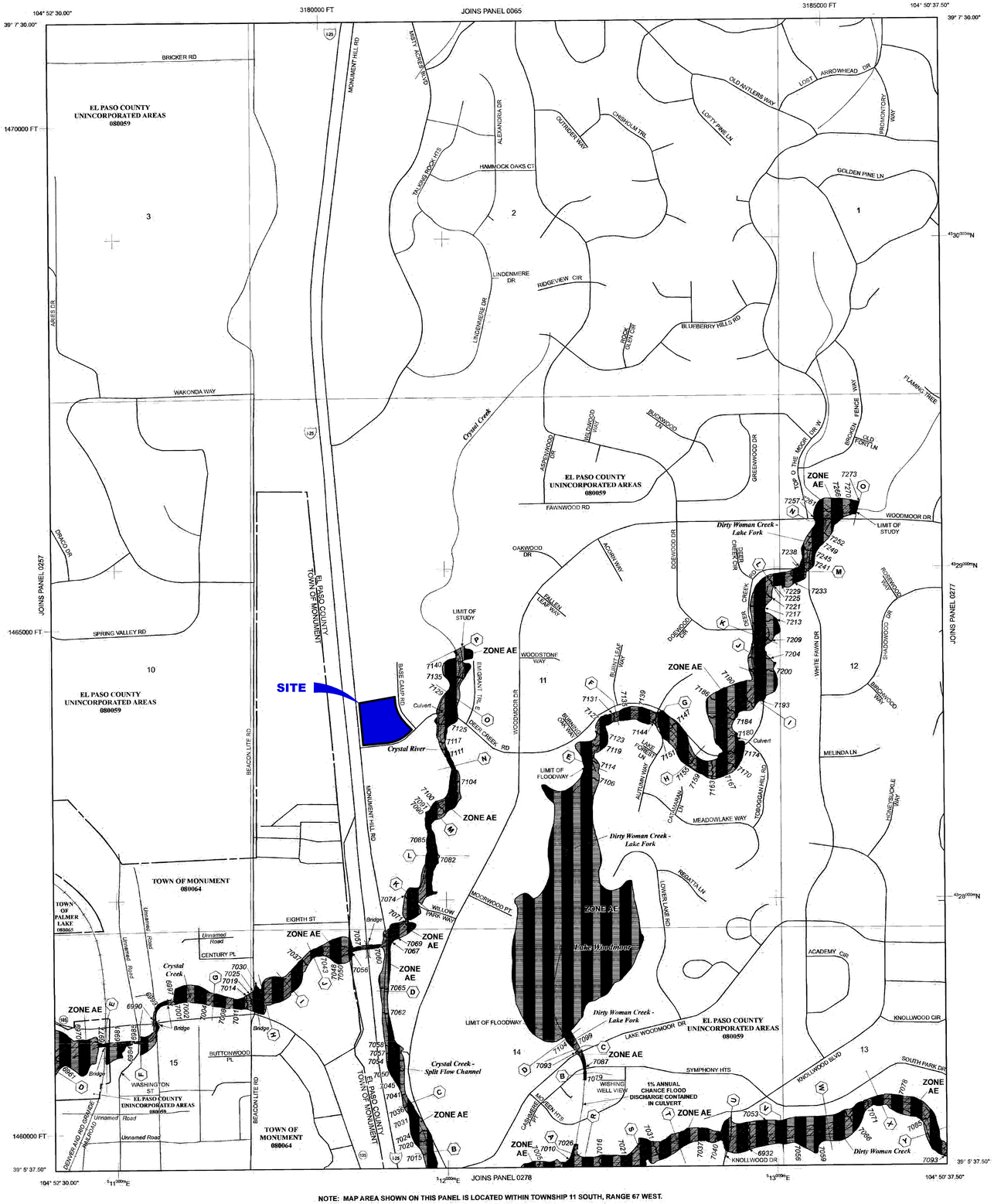
Flooding Source	Vertical Datum Offset (ft)
REFER TO SECTION 3.3 OF THE EL PASO COUNTY FLOOD INSURANCE STUDY FOR STREAM BY STREAM VERTICAL DATUM CONVERSION INFORMATION	

Panel Location Map



This Digital Flood Insurance Rate Map (DFIRM) was produced through a Cooperating Technical Partner (CTP) agreement between the State of Colorado Water Conservation Board (CWCB) and the Federal Emergency Management Agency (FEMA).

Additional Flood Hazard information and resources are available from local communities and the Colorado Water Conservation Board.



NOTE: MAP AREA SHOWN ON THIS PANEL IS LOCATED WITHIN TOWNSHIP 11 SOUTH, RANGE 67 WEST.

LEGEND

SPECIAL FLOOD HAZARD AREAS (SFHAS) SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD

The 1% annual chance flood (100-year flood), also known as the base flood, is the flood that has a 1% chance of being equaled or exceeded in any given year. The Special Flood Hazard Area is the area subject to flooding by the 1% annual chance flood. Areas of Special Flood Hazard include Zones A, AE, AH, AO, AR, A99, V, and VE. The Base Flood Elevation is the water-surface elevation of the 1% annual chance flood.

- **ZONE A** No Base Flood Elevations determined.
- **ZONE AE** Base Flood Elevations determined.
- **ZONE AH** Flood depths of 1 to 3 feet (usually areas of ponding); Base Flood Elevations determined.
- **ZONE AO** Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined. For areas of alluvial fan flooding, velocities also determined.
- **ZONE AR** Special Flood Hazard Area Formerly protected from the 1% annual chance flood by a flood control system that was subsequently decertified. Zone AR indicates that the former flood control system is being restored to provide protection from the 1% annual chance or greater flood.
- **ZONE A99** Area to be protected from 1% annual chance flood by a Federal flood protection system under construction; no Base Flood Elevations determined.
- **ZONE V** Coastal flood zone with velocity hazard (wave action); no Base Flood Elevations determined.
- **ZONE VE** Coastal flood zone with velocity hazard (wave action); Base Flood Elevations determined.

FLOODWAY AREAS IN ZONE AE

The floodway is the channel of a stream plus any adjacent floodplain areas that must be kept free of encroachment so that the 1% annual chance flood can be carried without substantial increases in flood heights.

OTHER FLOOD AREAS

- **ZONE X** Areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood.

OTHER AREAS

- **ZONE X** Areas determined to be outside the 0.2% annual chance floodplain.
- **ZONE D** Areas in which flood hazards are undetermined, but possible.

COASTAL BARRIER RESOURCES SYSTEM (CBRS) AREAS

OTHERWISE PROTECTED AREAS (OPAs)

CBRS areas and OPAs are normally located within or adjacent to Special Flood Hazard Areas.

- Floodplain boundary
- Floodway boundary
- Zone D Boundary
- CBRS and OPA boundary
- Boundary dividing Special Flood Hazard Areas of different Base Flood Elevations, flood depths or flood velocities.
- 513 (EL 987) Base Flood Elevation line and value; elevation in feet* / Base Flood Elevation value where uniform within zone; elevation in feet*

* Referenced to the North American Vertical Datum of 1988 (NAVD 88)

- A–A Cross section line
- 23 Transect line
- 97° 07' 30.00" / 32° 22' 30.00" Geographic coordinates referenced to the North American Datum of 1983 (NAD 83)
- 4275000mN 1000-meter Universal Transverse Mercator grid ticks, zone 13
- 6000000 FT 5000-foot grid ticks: Colorado State Plane coordinate system, central zone (FIPSZONE 0502), Lambert Conformal Conic Projection
- DX5510 Bench mark (see explanation in Notes to Users section of this FIRM panel)
- M1.5 River Mile

MAP REPOSITORIES
Refer to Map Repositories list on Map Index

EFFECTIVE DATE OF COUNTYWIDE FLOOD INSURANCE RATE MAP
MARCH 17, 1997

EFFECTIVE DATE(S) OF REVISION(S) TO THIS PANEL
DECEMBER 7, 2018 - to update corporate limits, to change Base Flood Elevations and Special Flood Hazard Areas, to update map format, to add roads and road names, and to incorporate previously issued Letters of Map Revision.

For community map revision history prior to countywide mapping, refer to the Community Map History Table located in the Flood Insurance Study report for this jurisdiction.

To determine if flood insurance is available in this community, contact your insurance agent or call the National Flood Insurance Program at 1-800-638-6620.

MAP SCALE 1" = 500'
250 0 500 1000 FEET
150 0 150 300 METERS

NATIONAL FLOOD INSURANCE PROGRAM

PANEL 0276G

FIRM
FLOOD INSURANCE RATE MAP
EL PASO COUNTY, COLORADO AND INCORPORATED AREAS

PANEL 276 OF 1300
(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
EL PASO COUNTY	080059	0276	G
MONUMENT, TOWN OF	080064	0276	G
PALMER LAKE, TOWN OF	080065	0276	G

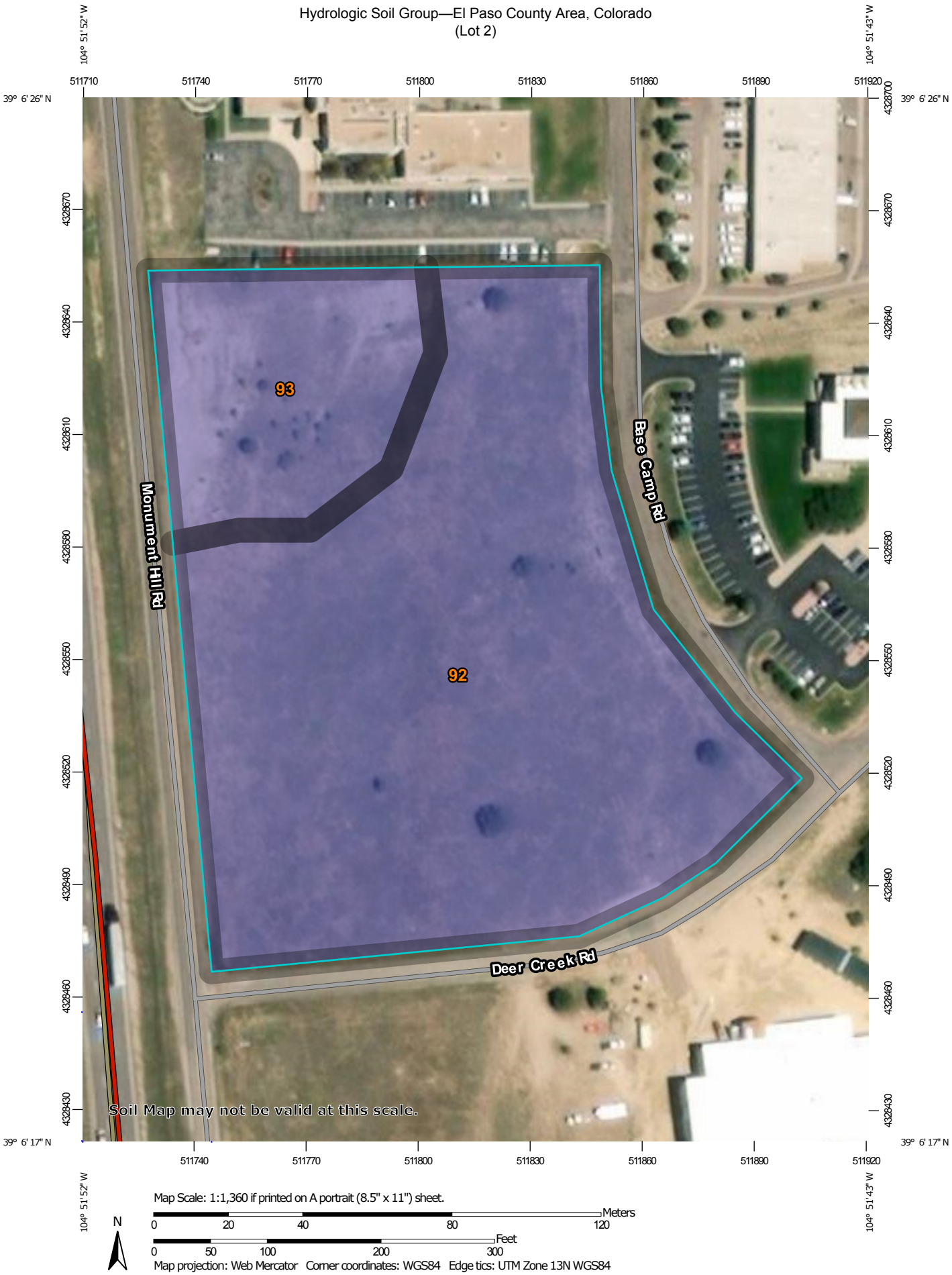
Notice to User: The **Map Number** shown below should be used when placing map orders; the **Community Number** shown above should be used on insurance applications for the subject community.

MAP NUMBER
08041C0276G

MAP REVISED
DECEMBER 7, 2018

Federal Emergency Management Agency

Hydrologic Soil Group—El Paso County Area, Colorado
(Lot 2)



Map Scale: 1:1,360 if printed on A portrait (8.5" x 11") sheet.

N

Meters
0 20 40 80 120

Feet
0 50 100 200 300

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 13N WGS84

MAP LEGEND

Area of Interest (AOI)

Area of Interest (AOI)

Soils

Soil Rating Polygons

A
A/D
B
B/D
C
C/D
D
Not rated or not available

Soil Rating Lines

A
A/D
B
B/D
C
C/D
D
Not rated or not available

Soil Rating Points

A
A/D
B
B/D
C
C/D
D
Not rated or not available

Water Features

Streams and Canals

Transportation

Rails
Interstate Highways
US Routes
Major Roads
Local Roads

Background

Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: El Paso County Area, Colorado
Survey Area Data: Version 16, Sep 10, 2018

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Jul 4, 2010—Oct 16, 2017

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Hydrologic Soil Group

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
92	Tomah-Crowfoot loamy sands, 3 to 8 percent slopes	B	4.7	80.6%
93	Tomah-Crowfoot complex, 8 to 15 percent slopes	B	1.1	19.4%
Totals for Area of Interest			**5.9**	**100.0%**

Description

Hydrologic soil groups are based on estimates of runoff potential. Soils are assigned to one of four groups according to the rate of water infiltration when the soils are not protected by vegetation, are thoroughly wet, and receive precipitation from long-duration storms.

The soils in the United States are assigned to four groups (A, B, C, and D) and three dual classes (A/D, B/D, and C/D). The groups are defined as follows:

Group A. Soils having a high infiltration rate (low runoff potential) when thoroughly wet. These consist mainly of deep, well drained to excessively drained sands or gravelly sands. These soils have a high rate of water transmission.

Group B. Soils having a moderate infiltration rate when thoroughly wet. These consist chiefly of moderately deep or deep, moderately well drained or well drained soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission.

Group C. Soils having a slow infiltration rate when thoroughly wet. These consist chiefly of soils having a layer that impedes the downward movement of water or soils of moderately fine texture or fine texture. These soils have a slow rate of water transmission.

Group D. Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. These consist chiefly of clays that have a high shrink-swell potential, soils that have a high water table, soils that have a claypan or clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.

If a soil is assigned to a dual hydrologic group (A/D, B/D, or C/D), the first letter is for drained areas and the second is for undrained areas. Only the soils that in their natural condition are in group D are assigned to dual classes.

Rating Options

Aggregation Method: Dominant Condition

Component Percent Cutoff: None Specified

Tie-break Rule: Higher

SWMP_v1-redline.pdf Markup Summary

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