



STORM DRAINAGE DESIGN MANUAL UPDATE

April 13th, 2017



RECOMMENDED ACTION

Approve Ordinance 2017-01, Amending Sections 5-10-2 and 15-2-12 of the Town Code

and

Approve Resolution 2017-06, establishing the Storm Drainage Design Manual and amended Town Code Sections as public documents



April 13th, 2017

AGENDA

- **What is the Storm Drainage Design Manual?**
- **Current Storm Drain Design Manual**
- **Updated Storm Drainage Design Manual**
- **Public Outreach**
- **Adoption Process / Recommended Action**



WHAT IS THE STORM DRAINAGE DESIGN MANUAL?

- **Day to day document utilized by staff to review drainage improvement plans and stormwater master plans typically for development of private property**
- **Document utilized by developers to design drainage improvement plans for their projects**
- **Includes:**
 - **Acceptable design requirements specific to the Town**
 - **Submittal requirements for drainage plans/reports**
 - **Methods for runoff calculations, retention, etc.**



CURRENT STORM DRAIN DESIGN MANUAL

- Originally adopted in March of 1987 by Resolution 537
- Uses outdated rainfall data and engineering practices
- Part of Dibble's scope with the Watershed Studies to Update this document

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UPDATED STORM DRAINAGE DESIGN MANUAL

- **Incorporates all aspects of Stormwater Management**
 - **Floodplain Management**
 - **Stormwater Management**
 - **Erosion Hazards**
 - **Stormwater Quality**
 - **Low Impact Development**



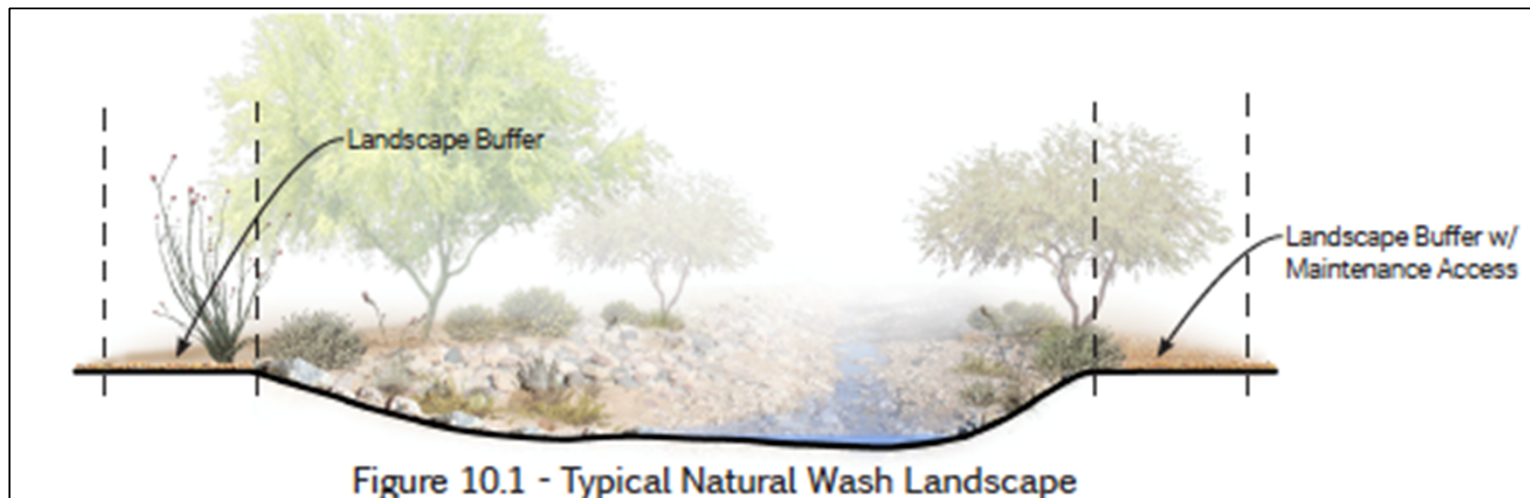
UPDATED STORM DRAINAGE DESIGN MANUAL

- **In addition, more specifically provides guidance on:**
 - **Drainage Reports and Plans**
 - **Drainage Easements**
 - **Grading Permits**
 - **Design and Maintenance of infrastructure**
- **All while keeping with the Town's unique character**



UPDATED STORM DRAINAGE DESIGN MANUAL

- **Coordination of Government Authorities and their Standards (i.e. FEMA, EPA, Corps, ADWR, ADEQ, FCDMC)**
- **Requirements for Stormwater Quality during construction**



UPDATED STORM DRAINAGE DESIGN MANUAL

- **Stormwater Quality During Construction**
 - **Provides information to contractors on the Arizona Department of Environmental Quality's process for Notice of Intent**
 - **Storm Water Pollution Prevention Plan requirements and process**



UPDATED STORM DRAINAGE DESIGN MANUAL

- **Requirement for First Flush per the Environmental Protection Agency's National Pollutant Discharge Elimination System (NPDES)**
 - **Reduces the amount of pollutants entering the storm drain system and subsequent washes and waterways**
 - **Requires first ½ inch of rainfall to be retained and/or "treated" before leaving the site**



UPDATED STORM DRAINAGE DESIGN MANUAL

- **Stormwater Storage Volume based on 100 Year 2 Hour Storm for consistency with FCD**
 - **Non-SFR – Retain entire runoff volume**
 - **Flatland SFR's – Retain change in runoff volume due to development**
 - **Hillside SFR's – Retain change in runoff volume with a tiered reduction based on increasing slopes**
- **Certified volume requirement and easements over retention basins**



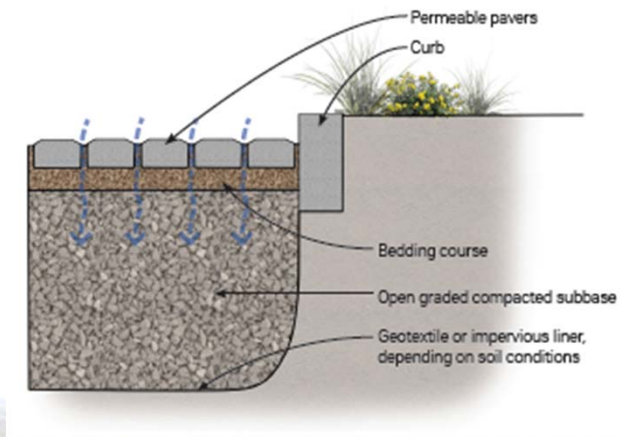
UPDATED STORM DRAINAGE DESIGN MANUAL

- **Hillside SFR's – Retain change in runoff volume with a tiered reduction based on increasing slopes**
 - **Lots with Slope 10-20% require 100% retention**
 - **Lots with Slope 20-30% require 50% retention**
 - **Lots with Slope above 30% require no retention**
- **Storage options:**
 - **Basins, underground storage, permeable pavers, LID techniques**



UPDATED STORM DRAINAGE DESIGN MANUAL

- **Low Impact Development**
 - **Toolbox for homeowners/developers to utilize**
 - **Encourages more natural approach to addressing stormwater management at the source**



April 13th, 2017



UPDATED STORM DRAINAGE DESIGN MANUAL

- **Drainage Reports**
 - **Type of reports required for different submittals**
 - **What is required in each report**
- **Drainage Plans and Permits**
 - **When required**
 - **Acceptable methodology and calculations**
- **Grading Permits**
- **On-going maintenance**



PUBLIC OUTREACH

- March 8th Newspaper Advertisement
- Flyers at Building Dept and Engineering Dept
- Media Boards
- Notify Me E-mail List

TOWN OF PARADISE VALLEY INDEPENDENT 23

You are Invited!
Paradise Valley Watershed Study
Public Meeting: Storm Drainage
Design Manual Draft Review
Tuesday, March 21st 6:00pm - 8:00pm
Paradise Valley Town Hall

Storm Drainage Design Manual
Come hear about proposed
new requirements for:

- Stormwater Management
- Drainage Reports
- Storm Drainage Design
- Town Grading Permits

Meeting Purpose: The town is currently in the process of updating its Storm Drainage Design Manual, originally written in 1987. A proposed draft of the updated document can be downloaded by going to the website below. The updated document seeks to provide property owners and the development community the most comprehensive source for storm drainage design, including requirements for Drainage Reports, SWPPP's, storm water facility design guidelines, retention requirements, first flush requirements, etc. for projects within the Town of Paradise Valley. The town will be holding a public meeting to receive public comments on the document. www.paradisevalley.gov/520/Stormwater-Management

Meeting Location:
Paradise Valley Town Hall
8401 E Lincoln Dr.
Paradise Valley, AZ 85253

When:
Tuesday, March 21st
6:00pm - 8:00pm

If you have any questions or would like to provide comments prior to the meeting or in writing, please e-mail them to Jeremy Knapp at jknapp@paradisevalleyaz.gov.

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Paradise Valley Watershed Study Public Meeting:
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Town of Paradise Valley
WATERSHED STUDIES



PUBLIC COMMENTS

- **Phone Calls / E-mails**
 - **2 e-mails, 1 phone call**
- **March 21st Public Meeting**
 - **3 Residents**
 - **1 Project Manager**
 - **1 Engineer**
- **Public and Council Comments in attached Comment Resolution Document**



ADOPTION PROCESS

- **Two part process:**
 - 1. Ordinance to change the text of Town Code Section 5-10-3 Storm Drainage Design and Section 15-2-12 regarding pool backwash**
 - 2. Resolution adopting the amended Storm Drainage Design Manual**



RECOMMENDED ACTION

**Approve Ordinance 2017-01, Amending Sections 5-10-3
and 15-2-12 of the Town Code**

and

**Approve Resolution 2017-06, establishing the Storm
Drainage Design Manual and amended Town Code Sections
as public documents**

