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Title: Storm Drainage Design Manual Policy Discussion
60 Minutes

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Attachments: 1. Storm Drainage Design Manual 4/5/2017, 2. Comment Tracking and Resolution, 3. Current Drainage Easement and Drainage Easement Agreement Form, 4. Proposed Drainage and Flood Control Easement Agreement Form Redlined, 5. Presentation - Storm Drainage Design Manual

Date	Ver.	Action By	Action	Result
6/8/2017	1	Town Council	Received and Filed	

TO: Mayor Collins and Town Council Members

FROM: Kevin Burke, Town Manager
Paul Mood, P.E., Town Engineer
Jeremy Knapp, Engineering Services Analyst

DATE: June 8th, 2017

DEPARTMENT: Public Works and Engineering Department

AGENDA TITLE:

Storm Drainage Design Manual Policy Discussion

Council Goals

Storm Water - Identify the scope, scale and possible solution to recurring storm water management issues.

SUMMARY STATEMENT:

At the February 9th Town Council Meeting staff presented the proposed Storm Drainage Design Manual, highlighting some of the updates and changes. The discussion led to several Town Council questions which needed further input as well as Council request for public comment.

After the February 9th meeting, the Engineering Department began publicizing the draft document, advertising a public meeting, and soliciting public comment. Staff utilized the town's website, e-mailed the notify me builders list, placed flyers at the Building and Engineering Departments counters, published a noticed in the March 8th Paradise Valley Independent, and placed ads on the TV screens at Town Hall. On March 21st, staff held a public meeting in the Community Room to

present the draft and receive public input. A summary of the input was presented at the March 23rd Council Meeting.

At the March 23rd meeting staff addressed Council's questions regarding what new regulations were included in the document and the cost implications associated with complying. In light of comments received by Council and the addition of a new Town Engineer, it is staff recommendation to address the outstanding policy issues before the summer recess with Town Council. During the summer recess staff will continue to address non policy Council comments, text clean up, and final formatting and will present a final version for adoption in the fall.

There are five outstanding policy decisions that required clarification, they include retention basin and access easements, first flush retention, on-going maintenance approach, natural wash preservation, and parking lot storage.

Retention Basin Easements:

The proposed Storm Drainage Design Manual introduces a new requirement for an easement over retention basins to ensure that as property changes hands, new property owners are aware of the requirement to keep and maintain the basins on their property. The manual, as written, require an easement over the basin as well as certain clear areas around the basin and access easements from adjacent right-of-way. Attached you will find the current Drainage Easement and Drainage Maintenance Agreement form the town utilizes for washes which cross private property as well as a redlined version showing the form modified to include retention basins and other stormwater facilities. There appears to be Council majority interest in requiring easements for the retention basins, but less than Council majority interest in requiring access easements and associated clear zones. The study session will focus upon resolving the Council position on these topics.

First Flush:

The EPA delegates stormwater enforcement to the individual states. The Arizona Department of Environmental Quality is the state department that oversees municipal compliance with state regulations for stormwater quality. This is accomplished through permitting municipalities through the Municipal Separate Storm Sewer System or MS4. The basins for first flush are not a requirement of the MS4 permit, but are practice to be chosen by each municipality. As such, the Town is not bound by the EPA's definition of first flush. The Town's proposed calculation for first flush requirement is based off the disturbed area of the proposed development and not the entire site.

While not bound by the state to include first flush requirements in the Town's Storm Drainage Design Manual, staff believes that the practical implementation of first flush retention/detention will ultimately help the town accomplish other requirements of the MS4, such as illicit discharge detection and elimination.

After the discussion at the March 23rd meeting, staff has reviewed the first flush requirement as written in the draft and is recommending some changes be incorporated to further clarify the intent of the requirement and provide some flexibility due to the practical challenges of retaining the first flush on lots with steep topography or where driveways meet the Town's roadways.

The previous text stated, in Section 3-2 B.2.a:

First flush volume shall be retained on all lots

The revised text states, in Section 3-2 B.2.a:

Where detention is allowed, first flush volume shall be retained on all lots or within common retention areas, and a reasonable attempt shall be made to route all runoff from disturbed areas to first flush basin(s) subject to grading plan approval.

Additionally, Section 3-4 B does allow for smaller basins and/or alternative stormwater controls, if they meet the approval of the Town Engineer, to retain/detain the first flush requirement.

On-going maintenance:

This use of on-going maintenance of stormwater facilities is closely tied to the retention and drainage easement agreements. As property is sold, some new owners don't know there are facilities on their property that need on-going maintenance. Currently the Town's approach to this is reactive to complaints received by neighboring property owners. The presentation outlines two possible approaches to addressing this issue: continue the status quo or take a more proactive approach to the on-going maintenance.

Natural Wash Preservation:

There are currently Town Code sections that require property owners to maintain washes in their natural state as they cross private property to preserve open space and natural character of the town. The proposed Storm Drainage Design Manual furthers these town code sections with additional clarifications on when washes can be altered. It is staffs request to revisit this approach to ensure it is still the wish of Town Council to continue this practice or alter the policy to acknowledge that every square foot of property is so valuable in Paradise Valley it may therefore be less important to preserve the entire wash as long as the entrance and exit points stay the same on the property as development occurs.

Parking Lot Storage:

The Town does not currently allow for the storage of stormwater on parking lots as an approved practice. This practice is becoming more and more common as a way to reduce basin size but still provide the required retention capacity. Typically, stormwater will first fill a basin adjacent to a parking lot, then back up onto the parking lot in a designed area. As the basin empties, the parking lot relieves the backed up water into the basin. The proposed manual allows for this scenario if certain requirements are met.

ATTACHMENT(S):

Storm Drainage Design Manual 4/5/2017

Comment Tracking and Resolution

Current Drainage Easement and Drainage Easement Agreement Form

Proposed Drainage and Flood Control Easement Agreement Form Redlined

PowerPoint Presentation