



Legislation Text

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TO: Mayor Collins and Town Council Members

FROM: Kevin Burke, Town Manager
Brent Skoglund, Public Works Director
Jeremy Knapp, Engineering Services Analyst

DATE: February 9th, 2017

DEPARTMENT: Public Works and Engineering Department

480-348-3622

AGENDA TITLE:

Cheney Watershed Alternatives Analysis and Stormwater Policy Discussion

Council Goals

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

SUMMARY STATEMENT:

At the November 17th, 2016 Town Council Meeting staff presented a status update on the on-going Cheney and Cherokee Watershed Studies. This included how the town and the Flood Control District of Maricopa County (FCDMC) were coordinating on simultaneous studies, the public outreach efforts and results of the project to date, mapping and hazard identification efforts, and alternative analysis effectiveness and feasibility. The next step in the process is to provide direction on selecting the appropriate level of protection and financial commitment when it comes to stormwater management for this particular watershed as well as for the town as a whole.

The presentation and discussion will start the key question of "What is the philosophical position of the Town Council regarding the provision of stormwater management by the municipality." To help frame that discussion, a continuum of stormwater management service levels are outlined from no involvement to significant involvement. Mayor and Council are asked to keep these possible philosophical positions in mind while staff reviews documents (i.e. Cheney Watershed Study and Storm Drain Design Manual) that present different management level options. The discussion will then return to this philosophical debate to determine if there is a consensus regarding the desired level of management.

In the case of the Cheney Watershed Study, four proposed courses of action will be presented they include:

1. Continue the status quo -

This option ensures the town is up to the latest federal, state, and local standards while continuing to require private property owners to address localized stormwater management. It would rely on the updated Stormwater Drainage Design Manual to guide this development as well as any stormwater elements of town projects. The Town's Public Works Department would continue to deal with any stormwater issues within town right-of-way such as road closures during storm events, clearing roads after storm events, and proactively inspecting and cleaning public drainage structures. Finally, town residents would continue to be responsible for the maintenance of all private storm drainage infrastructure as well as any washes that cross their properties.

2. Plan for and implement the lowest cost (\$11M) and lower level of protection -

The lowest cost option with the lower levels of protection includes four different town projects. This option implements Alternatives Cheney 1, Mockingbird 3, Quartz Mountain 1, and Maverick 1 at a total cost of \$11 million and removes 30 out of 36 structures from inundation during a 10-year storm event as well as 21 out of 113 structures during a 100-year storm event.

3. Plan for and implement the highest cost (\$19M) and higher level of protection -

The highest cost option with the higher level of protection includes four different town projects. This option implements Alternatives Cheney 3, Mockingbird 2, Quartz Mountain 3, and Maverick 2 at a total cost of \$19 million and removes 32 out of 36 structures from inundation during a 10-year storm event as well as 29 out of 113 structures during a 100-year storm event.

4. Use mapping and collected data to inform residents and act as a policy guide for future private development -

The Study provides significant improvement in mapping of flows outside the Flood Insurance Rate Map (FIRM). The fourth option would outreach to residents and provide this detailed information so that residents may make more informed decisions about insurance and flood protection measures on their property. Further, this fourth option recommends continued mapping (e.g. inundation limits, flow rates, flow velocities) in the remaining four watersheds and use that information as a policy guide when private properties are developed. Town staff will review pre and post conditions to ensure the flows are not altered per the map which establishes a baseline condition.

In addition to town projects, the Flood Control District of Maricopa County has similarly completed their Alternatives Analysis for the Lower Indian Bend Wash Area Drainage Master Study (ADMS). This draft ADMS has proposed large scale stormwater infrastructure projects within the Town of Paradise Valley as well as Tempe and Scottsdale. Many of their alternatives that fall within the Town are outside of the Cheney Watershed. As such, for purposes of this discussion, the presentation will focus only on those projects that fall within the Cheney Watershed. Current FCDMC policy requires a local municipality cost share of 50% for projects within the municipal limits. For this particular watershed, the total cost for the most expensive FCDMC projects equals \$18 million, which would require a town contribution of \$9 million.

The town projects identified compliment these large FCDMC projects and address more localized issues which, in many cases, could be designed and built regardless of the status of the FCDMC projects.

ATTACHMENT(S):

Cheney Watershed Alternatives Analysis PowerPoint Presentation
Cheney Watershed Alternatives Analysis Report