

# COUNCIL DECISION REQUEST

SUBJECT: Storm Water Detention Requirement Changes

MEETING DATE: 03-15-07

CSP ITEM: Yes  No  KRA#

ITEM NO.:

TENTATIVE SCHEDULE:

SUBMITTED BY: LaRon G. Garrett, Public Works AMOUNT BUDGETED: \$ 0

SUBMITTAL TO AGENDA  
APPROVED BY TOWN MANAGER

EXPENDITURE REQUIRED: \$ 0

CONT. FUNDING REQUIRED: \$ 0

EXHIBITS (If Applicable, To Be Attached):

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## **POSSIBLE MOTION**

I move to direct staff to prepare an Ordinance to modify portions of Town Code Chapter 152 to incorporate the following changes: (List which of the changes, if any are desired)

## **SUMMARY OF THE BASIS FOR THE POSSIBLE MOTION:**

In the early 1980's the Town of Payson adopted its original storm drainage requirements for new residential developments and commercial construction. The original requirements were based on flat terrain but worked for the time. In 2002 the Town adopted an updated drainage code that is much more comprehensive and more restrictive than the original code. Since the 2002 code implementation, drainage issues caused by new development and construction have been greatly reduced. However, our code is still not as strict as other Arizona municipalities.

The current code requires that post development storm water flows leaving a site cannot exceed pre-development flows leaving the site for a 2-, 10- and 100-year storm. While this is better than the original code, it does not improve any drainage situations. It continues to allow downstream drainage issues. In an effort to promote enhanced citizen welfare, health and safety, staff recommends that modifications be made to the storm water detention requirements of our current drainage code.

There are a number of different changes that could be made to the existing code that would reduce downstream drainage issues. However, implementation of these options will have the effect of increasing the size of storm water detention basins, thus increasing the cost to the developer and increasing the cost of building construction in Payson. Following is a list of potential changes that would all have a positive effect on the down stream properties:

- The post-development storm water flows exiting a detention basin or site shall not exceed 75% of the pre-development flows for a 2-, 10-, and 100 year-24 hour storm event.
- All concentrated storm water flows leaving a detention basin shall be regulated using an outlet control device.

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- The only outlet allowed in the lower 1/3 of a detention basin is a 2" diameter or equivalent orifice.
- Additional outlet control devices shall be designed to accomplish the criteria of this section in the upper 2/3 of a detention basin.
- The initial point of compliance for the reduction of storm water flows shall be at all locations where concentrated flows exit the development site. Additional down stream points of compliance may be required by the Public Works Department.
- All post-development sheet storm water flows leaving a development shall not have a peak flow exceeding the pre-development storm water sheet flows.
- If a pump is used to empty a storm water detention basin, the water flow rate leaving the detention basin shall meet the requirements of reducing the pre-development flows. This is that the post-development storm water flows exiting a detention basin or site shall not exceed 75% of the pre-development flows for a 2-, 10-, and 100 year-24 hour storm event. This may require staging multiple pumps.
- The pump shall not turn on until there is 1 foot of water in the detention basin.
- Any pumps used to empty a storm water detention basin shall be located at the edge of the basin in a wet well that can be accessed at all times.
- The Public Works Engineer may allow down stream drainage improvements (or other similar improvements) in lieu of reducing the post-development peak discharge if:
  - (1) The pre-development peak storm water discharge for the 2-, 10-, and 100 year-24 hour storm event is not exceeded, and;
  - (2) The flows are directed into a channel or storm drain that has adequate capacity to handle the flows, and;
  - (3) There is a downstream location that can be improved to provide enhanced drainage facilities and improve neighborhoods.

Staff recommends that the Town Council review the above options and pick the ones that they would like staff to implement.

**PROS:** The implementation of any of these changes will reduce the potential for property flooding downstream from a development or construction. It will also increase the size of detention basins and increase the time required to empty the detention basin, thus allowing more water to percolate into the groundwater.

**CONS:** These changes will increase the cost of housing and commercial construction in Payson and could have a negative impact on affordable or workforce housing.

**PUBLIC INPUT (if any):** None

**BOARD/COMMITTEE/COMMISSION ACTIONS/RECOMMENDATIONS (if any) (give dates and attach minutes):** N/A