



**PIMA COUNTY
REGIONAL FLOOD CONTROL DISTRICT**
97 E. CONGRESS STREET, 3RD FLOOR
TUCSON, ARIZONA 85701-1797

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Revised December 22, 2005**

**ENGINEERING ANALYSIS REQUIREMENTS
FOR EROSION HAZARD SETBACK EVALUATION**

Title 16 of the Pima County Code also known as the Floodplain and Erosion Hazard Management Ordinance No. 2005-FC2 at Chapter 16.28. Requires minimum building setbacks in erosion hazard areas where watercourses are subject to flow related erosion hazards unless an engineering analysis which establishes safe limits is performed by an Arizona Registered Professional Civil Engineer and is approved by the County Engineer.

Documentation of an engineering analysis performed pursuant to the above requirement of the Ordinance must include a technical evaluation of the factors affecting the erosion potential of the proposed building site including the following items at a minimum:

1. The submittal must include a site plan to scale showing the proposed building location and the safe setback determined from the analysis and a statement that the building site shown is safe from erosion.
2. Data including 100-year peak discharge and channel and overbank flow depth and velocity data.
3. Information on channel overbank soils conditions,
4. Channel bank conditions including slope, stability and vegetation,
5. Channel alignment, curvature and past lateral channel movement. The Pima County Floodplain Management Section maintains aerial photographs dating back to the early 1940's for this use.
6. Description of unusual conditions such as rock outcrops, cut banks, excavations, natural channel armoring and drainage and flood control improvements and their effect on erosion potential.
7. The documentation should include at-ground photographs of the channel, channel bank and overbank conditions at the site.

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Engineering Analysis
for EH Reduction

Additional information will be required under the special conditions outlined below:

8. Erosion hazard reductions along a watercourse of 10,000 cfs or greater, must utilize calculations from erosion hazard setback methodologies appropriate for use within Pima County such as the Erosion/Setback Criteria within the City of Tucson Department of Transportation “Standards manual for Drainage Design and Floodplain Management in Tucson, Arizona” or an alternate methodology approved for use by the Pima County Flood Control District. The analysis should also provide information on the channel stability citing accepted sources such as the U.S. Geological Society, the Soil Conservation Service or thesis work at the University of Arizona on the potential for aggradation or degradation within the channel. An alternate method of proving channel stability is to provide this office with a sediment transport analysis. This additional information is required to provide a level of evaluation commensurate with the magnitude of the hazard.

9. Any analysis which changes a previous erosion hazard setback analysis accepted by this office, will have to address the previous analysis and justify the change. This includes reconciling any previous calculations, soils analysis and channel stability analysis.

The engineering analysis submitted should be organized per the listing given above for ease of review unless an alternative format is approved in advance by the Floodplain Management Section.