



PIMA COUNTY
REGIONAL FLOOD CONTROL DISTRICT
97 EAST CONGRESS STREET, THIRD FLOOR
TUCSON, ARIZONA 85701-1797



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January 18, 2007

Letter to Community Engineers and Landscape Architects:

Recently, the Regional Flood Control District has been unable to approve development proposals which included certain types and locations of landscaping in basins and channels. The purpose of this letter is to attempt to reduce confusion about Regional Flood Control District requirements related to landscaping and to improve communication to avoid review delays.

While the general goal of landscape planning is to promote environmental sensitivity and quality of life, landscape planning must also consider the functional requirements of the Regional Flood Control District to maintain the capacity and conveyance of constructed stormwater facilities.

One source of District landscaping requirements is the Pima County and City of Tucson Stormwater Detention/Retention Manual. The purpose of the Manual is to establish uniform policies, criteria and methodologies for the planning and design of stormwater detention/retention facilities. Section 4.3.2 of the Manual establishes basin landscaping guidelines. In addition, the Floodplain and Erosion Hazard Management Ordinance establishes policy for the maintenance of drainage improvements. To assist landscape planners and engineers with meeting Flood Control District regulations, the District has developed Technical Policy TECH-009. The goal of this policy is to clarify District requirements, pursuant to the Stormwater Retention/Detention Manual and Section 16.36.130 of the Floodplain Ordinance, for maintenance of all drainage improvements.

Attached are a copy of Technical Policy TECH-009 and a copy of Section 16.36.130 of the Floodplain Ordinance for your use. Development Plans and Plats with Landscape Plans which do not maintain required capacity, conveyance and access in accordance with these documents will not be approved by the Regional Flood Control District.

For your convenience, all the information contained herein is also available at the Pima County Regional Flood Control District website at <http://www.rfcd.pima.gov>.

Please advise your staff that all Landscape Plans and drainage improvements must comply with Technical Policy TECH-009 and the Floodplain and Erosion Hazard Management Ordinance.

Thank you for your cooperation

Sincerely,

A handwritten signature in blue ink, appearing to read "S Shields", is written over a faint, larger version of the same signature.

Suzanne Shields, P.E.
Director

SS/sja

cc: John Bernal, Deputy County Administrator
Carmine DeBonis, Development Services
Subhash Raval, Development Services

PIMA COUNTY REGIONAL FLOOD CONTROL DISTRICT TECHNICAL POLICY

POLICY NO.: Technical Policy, TECH-009

EFFECTIVE DATE: June 13, 2006

POLICY NAME: Standards and conditions for the design and placement of landscaping in or adjacent to drainage channels and basins.

PURPOSE: To clarify section 4.3.2 "Basin Landscaping" of the Stormwater Detention/Retention Manual (Manual) regarding the design and placement of landscaping in or adjacent to drainage channels and detention/retention basins (basins) and explain the potential limitations of this landscaping in satisfying other landscaping requirements, due to the need for access and maintenance required pursuant to 16.36.130 of the Ordinance.

BACKGROUND:

Section 4.3.2 of the Manual establishes basin landscaping guidelines, including specifications of the type, size, and location of trees, shrubs, ground cover and inert materials. Due to the lack of clearly defined terms and implementation procedures as well as the desire by Development Services Department (DSD) and Design Review Committee (DRC) to encourage environmentally sensitive design, a number of proposals have been submitted that do not conform to this Section.

The following design statements require clarification:

- "Trees may be used on basin side slopes, bottom, and periphery. They may not be planted in flow channels".
- "Shrubs may be planted on basin side slopes (both above and below the flood zone), in the periphery, and with special precautions, in the basin bottom. They may not be planted in flow channels."

These statements suggest that the flow channels exist within the basins themselves. Furthermore, the inclusion of a list of water-tolerant species recommended for planting below the inundation level, may compound the confusion. However, the intent of the landscaping guidelines is to **prohibit** landscaping within the flows channels, which are constructed drainageways designed to convey flow, and to **require** landscape buffering around and, in some cases, even within basins; thus the list of plant that can tolerate periodic inundation. Simply put, planting is allowed within basins; plantings in constructed channels are not allowed.

Finally, when placing landscaping around or within basins, the need for maintenance access must be considered. Due to invasive nature of the periodic basin maintenance using heavy equipment, the use in-basin landscaping to satisfy other landscaping or open space requirements is not recommended without taking the maintenance issue into consideration during design.

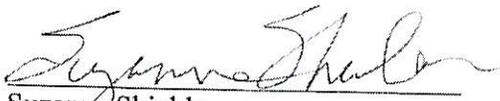
In order to minimize the number of submittals which do not comply with Section 4.3.2 of the Manual, the following policy establishes that landscaping is prohibited in "flow channels", at basin inlets and outlets, and other areas requiring access. In addition, it states that the use of landscaping in basins to satisfy other requirements must be acknowledged and addressed at the time of basin design.

POLICY:

For the purposes of implementation of landscaping standards of the Manual, the following shall apply:

- 1) The "flow channel" shall be defined as "Constructed drainageways which are required in order to convey storm water flow" and landscaping shall be prohibited in these areas,
- 2) In addition, landscaping is also prohibited in the following locations:
 - a. Detention/retention basin sediment traps,
 - b. Any area within a 20' radius of the detention/retention basin inlet or outlet as measured from the edge of the structure, and
 - c. A 12' physical access corridor adjacent to the inflow channel and within the 16' access easement for maintenance purposes.
- 3) If the in-basin landscaping is intended to satisfy other landscaping requirements, then a sediment trap shall be installed in the basin to reduce the frequency and extent of basin maintenance, the design of the trap shall address the following:
 - a. Designed pursuant to the criteria established in Section 3.4 of the Manual,
 - b. Permanent concrete monument shall be installed in the trap to define the limits of sediment removal, and
 - c. Adequate routine inspection and maintenance schedule pursuant to the maintenance plan that has been reviewed and approved by the District.
 - d. If in a public basin, channel or easement, a license agreement which establishes on-going landscaping maintenance responsibilities as well as any mitigation, if needed, shall be completed.

APPROVED BY:


Suzanne Shields
Director

6/14/06

Date

Original Policy Approved:

Date(s) Revised:

16.36.130

Maintenance access to drainage improvements.

Any and all drainage improvements shall be designed with adequate access to the drainage improvements to allow for maintenance of the intended design conveyance and/or storage capacity, maintenance of erosion control, and maintenance of flood control function. Such drainage improvements may include, but are not limited to, channels, culverts, storm water detention/retention basins, storm drains, streets, or other permanent conveyances or storage facilities designed to meet the requirements of this title. (Ord. 2005 FC-2)