



Lower Rio Grande Valley: Low Impact Development Phase I

Water Body	Arroyo Colorado Tidal (Seg 2201), Arroyo Colorado Above Tidal (Seg 2202)
Location	Hidalgo, Cameron, and Willacy Counties
River Basin	Nueces-Rio Grande Coastal (22)
Contractor	Texas A&M University at Kingsville (TAMUK)
Project Period	May 5, 2011 to August 31, 2014
Project Total	\$1,504,207 (Federal 60% and Local Match 40%)

Background

The Lower Rio Grande Valley (LRGV) continues to be one of the fastest-growing areas in the United States. This urbanization is changing the natural hydrology of the region and increasing the pollution and stormwater runoff volumes being delivered to local water bodies. Best management practices (BMPs) must be utilized in order to slow and treat stormwater runoff before it enters and pollutes local streams. Low impact development (LID) is an innovative practice that mitigates the negative impacts of stormwater runoff by encouraging the retention and infiltration of stormwater on site.

The Arroyo Colorado is an important local water body that provides freshwater inflows to the Laguna Madre. The State has classified the stream into two distinct segments, the Arroyo Colorado Above Tidal (Segment 2202) and the Arroyo Colorado Tidal (Segment 2201). Both segments are impaired due to bacteria concentrations that exceed the state criteria for contact recreation. In addition, the tidal segment sometimes experiences periods of low dissolved oxygen that can result in fish kills. In order to restore water quality the Arroyo Colorado [Watershed Protection Plan \(WPP\)](#) was completed in 2007. Implementation efforts have been ongoing since then and LID is one of the recommended stormwater control practices.

Project Description

This project is Phase I of the LRGV LID Program being coordinated by TAMUK. For this project, TAMUK will work with the City of Brownsville, the City of San Juan, the Valley Nature Center (VNC), and the City of La Feria in order to construct LID demonstration practices. These practices will provide educational opportunities for local citizens and local governments to learn about the benefits of LID. Once constructed, the effectiveness of the LID practices will be studied through data collection and evaluation. The study results will be incorporated into a LID regional technical guidance manual.



An evaluation of local city codes will be conducted to determine any potential modifications that could better facilitate and encourage LID practice incorporation into new construction and development.

Current Status

LID Design reports and some construction activities are currently underway. Quarterly regional outreach activities are being conducted.

Public Participation

The Arroyo Colorado Watershed Partnership provides a forum for discussion regarding WPP implementation efforts and water quality issues. Updates for this project will be given at Partnership meetings. The public is welcome to attend. Meeting dates are posted on the [Arroyo Partnership Website](#).

For More Information

TCEQ Project Manager

Tim Cawthon
512.239.0845; Tim.Cawthon@tceq.texas.gov

TAMUK Project Manager

Dr. Kim Jones
361.593.2187; KJones@tamuk.edu

Websites

<<http://www.stormwater.stei.org>>
<www.arroyocolorado.org/>

Project Highlights

- 05/2011 – Contract signed.
- 05/2011 – Post-Award meeting held.
- 06/2011 – Construction began on VNC wetland.
- 09/2011 – The relocation of two LID sites was approved by TCEQ.
- 10/2011 – TCEQ Project Manager visited LID sites.
- 12/2011 – Draft QAPP submitted to TCEQ.
- 09/2012 – VNC Wetland Complete
- 10/2012 – Construction of La Feria pervious paver parking lot complete.
- 10/2012 – TCEQ Project Manager visited LID sites
- 12/2012 – VNC Design Report complete.
- 02/2013 – Monitoring Quality Assurance Project Plan (QAPP) approved.
- 05/2013 – Construction of 2nd application of La Ferie pervious parking lot complete.