USIBWC Mission

The International Boundary and Water Commission (IBWC) is made up of the Mexican Section and the U.S. Section. The IBWC's mission is to provide binational solutions to issues that arise during the application of U.S. – Mexico treaties related to boundary demarcation, national ownership of waters, sanitation, water quality, and flood control in the border region.

The United States Section of the IBWC (USIBWC) oversees the Lower Rio Grande Flood Control Project (LRGFCP). LRGFCP Staff are responsible for maintaining levees, removing obstructions from floodways, and maintaining and operating diversion dams and irrigation structures.

During river flooding, Anzalduas Dam south of Mission, Texas diverts floodwater from the Rio Grande into the Main Floodway. The Main Floodway splits near Mercedes, Texas where about 80 percent of flows continue northward through the Northern Floodway to the Laguna Madre. A diversion structure diverts the remaining flow (20 percent) into Arroyo Colorado. Arroyo Colorado is a natural channel confined by high banks in most areas, but levees help contain floodwaters in other areas, especially near Mercedes.

NEPA Process

The National Environmental Policy Act (NEPA) requires federal agencies to consider the potential environmental consequences of proposed actions and alternatives to those actions. USIBWC will prepare an Environmental Assessment to identify and evaluate potential consequences of four alternatives. Public input is an important step in the identification and evaluation potential consequences. The four alternatives currently under consideration are:

1. No-Action Alternative
2. Off-Channel Storage Alternative
3. Expanded Vegetation Removal Alternative
4. Expanded Vegetation and Sediment Removal Alternative

Project Need & Purpose

Improvements to Arroyo Colorado's flood conveyance capabilities are needed because, in its current condition, it may not convey the design flood, which increases the flood risk to adjacent properties. Also, its reduced capacity may affect flood protection functions in other parts of the LRGFCP system.

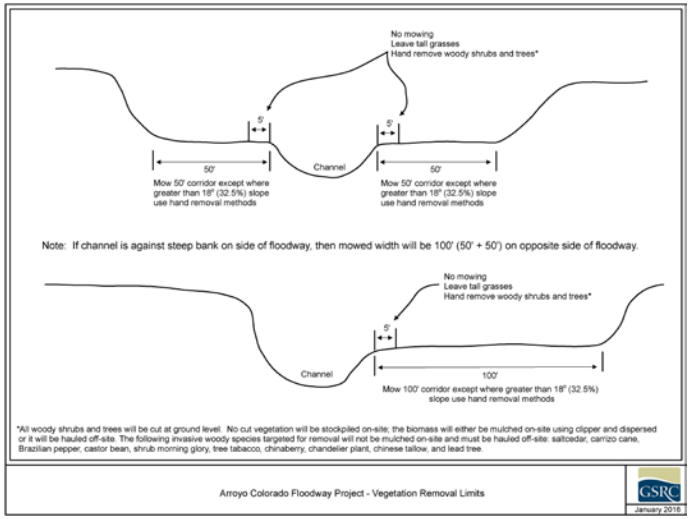
Increases in vegetation and sediment caused Arroyo Colorado to lose more than 50 percent of its capacity to carry floodwaters, which increases flood risk. Recent vegetation and sediment removal have restored some of Arroyo Colorado's flood conveyance capacity. USIBWC is considering several alternatives to address remaining deficiencies in Arroyo Colorado's capability to carry its design flow of 21,000 cubic feet per second.

The purpose of the project is to restore Arroyo Colorado's flood conveyance capacity and reduce the potential for flood impacts to surrounding areas.

Current Vegetation & Sediment Management

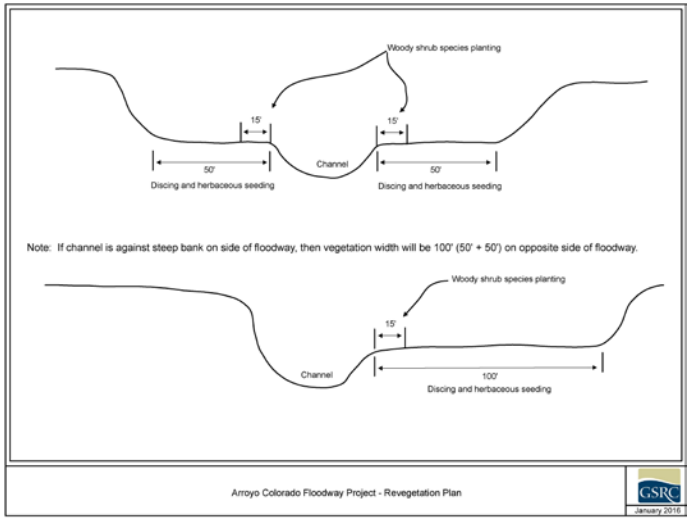
Vegetation Removal

In 2017 USIBWC coordinated with agencies and stakeholders to develop a vegetation management plan for a 3.7-mile reach that reduced flood flow obstructions and preserved habitat. Woody vegetation was removed from certain portions of the Arroyo Colorado floodplain and native species were selectively planted.



Vegetation Planting and Maintenance

After initial removal and planting were completed, regular maintenance activities began. These activities are ongoing along a 3.7-mile reach of Arroyo Colorado between US 77 Business and FM 509. They are a part of each alternative under consideration today and are expected to continue along with minor sediment removal near bridges and other structures.



No Action

Near-term Action:

- None

Long-term Action:

- Current vegetation maintenance and minor sediment removal operations would continue in the 3.7-mile reach between US 77 and FM 509. Continuing maintenance would affect approximately 53 acres of floodplain vegetation and minor sediment removal would continue near bridges and other structures.

Potential Environmental Consequences:

- None beyond those associated with current vegetation and sediment maintenance operations.

Effect on Flood Conveyance Capacity:

- None. Arroyo Colorado's flood conveyance capacity would not be restored.

Effect on Flood Risk:

- None. Adjacent properties would continue to have an increased flood risk.

Off-Channel Storage

Near-term Action:

- Acquire up to 2,204 acres of land upstream of Harlingen adjacent to Arroyo Colorado and design and construct of an off-channel detention basin.

Long-term Action:

- Maintain and operate the off-channel detention basin.
- Continue vegetation maintenance and minor sediment removal between US 77 Business and FM 509.

Potential Environmental Consequences:

- Continued vegetation growth and deposition of silt in Arroyo Colorado near Harlingen.
- Displacements (e.g., residential, agricultural, commercial).

Effect on Flood Conveyance Capacity:

- None. Arroyo Colorado's flood conveyance capacity would not be restored.

Effect on Flood Risk:

- Substantially Reduced. Adjacent properties would have a much-reduced flood risk initially. However, vegetation growth and sediment deposition would continue to reduce Arroyo Colorado's flood conveyance capacity.

Expanded Vegetation Removal

Near-term Action:

- Remove floodplain vegetation between FM 509 and Cemetery Road in a manner similar to the removal operations that occurred between US 77 and FM 509.
- Replant with native vegetation

Long-term Action:

- Continue vegetation maintenance and minor sediment removal between US 77 Business and FM 509 and expand them downstream to Cemetery Road.

Potential Environmental Consequences:

- Habitat alteration
- Temporary water quality impacts (e.g., sedimentation)

Effect on Flood Conveyance Capacity:

- Partially restored. Vegetation maintenance alone may not fully restore Arroyo Colorado's flood conveyance capacity.

Effect on Flood Risk:

- Somewhat reduced. Adjacent properties may continue to have an increased flood risk initially. However, sediment may continue to accumulate in the future.

Expanded Vegetation & Sediment Removal

Near-term Action:

- Expand vegetation removal and planting from FM 509 to Cemetery Road.
- Replant with native vegetation.
- Remove approximately 300,000 cubic yards of sediment from the stream channel between US 77 Business and Cemetery Road.
- Transport and dispose of excavated sediment.

Long-term Action:

- Continue vegetation maintenance and targeted sediment removal between US 77 Business and FM 509 and expand them downstream to Cemetery Road.

Potential Environmental Consequences:

- Habitat alteration
- Temporary water quality impacts (e.g., sedimentation)

Effect on Flood Conveyance Capacity:

- Fully restored. Vegetation and sediment removal would fully restore Arroyo Colorado's flood conveyance capacity.

Effect on Flood Risk:

- Greatly reduced. Adjacent properties would see the greatest reduction in flood risk.

Comments

Written comments can be submitted tonight in the Comment Box

Electronic submittals will also be accepted through

January 11, 2020

More information is available at:

https://www.ibwc.gov/EMD/EIS_EA_Public_Comment.html

Arroyo Colorado - Study Reach

Project Detail

Study Reach
Proposed Sediment Disposal Site
NHD Stream
City Boundary

Discharge Points
Drainage Ditch Outfall
Storm Sewer Outfall
WWTP Outfall

0 1,200 Feet
0 400 Meters

Map Created: 12/11/2019
Data Sources: NHD (2018), IBWC (2019), CMEC (2019), TxDOT (2019), CCAD (2019)
Aerial Source: DigitalGlobe (2018)