FLOOD RISK REDUCTION METHODS AND TOOLS

The Harris County Flood Control District uses a comprehensive approach that includes three main types of flood damage reduction tools: Structural Tools, Non-Structural Tools, and Infrastructure Maintenance.

- **Structural tools** are engineered solutions designed to manage and redirect stormwater. These include channel modifications, stormwater detention basins, and tunnel systems, which are all built to move or temporarily store water during heavy rain events.
- **Non-structural tools** focus on reducing risk by changing how we plan, develop, and communicate. These include floodplain mapping, buyout programs, and public education efforts that help people understand their flood risk and make informed decisions.
- **Infrastructure maintenance** includes regular inspections, sediment removal, and repairs to ensure our drainage systems, channels, and basins perform as designed, especially when it matters most.

There are a variety of criteria that determine which tools are most appropriate to use when implementing a project. A few of the most important criteria are the expected benefits of reducing the risk of flood damage with the total dollars invested in the project, ensuring the project has no negative impacts to other areas, and making sure the project selected has appropriate regard for community and natural values.

Structural Tools

- Channel Modification
- Stormwater Detention Basins
- Nature-Based Solutions
- Stormwater Tunnel Systems

Non-Structural Tools

- Floodplain Mapping
- Public Education
- Home Buyouts
- Home Elevations

Infrastructure Maintenance

- Drainage System Repairs
- Regular Inspections
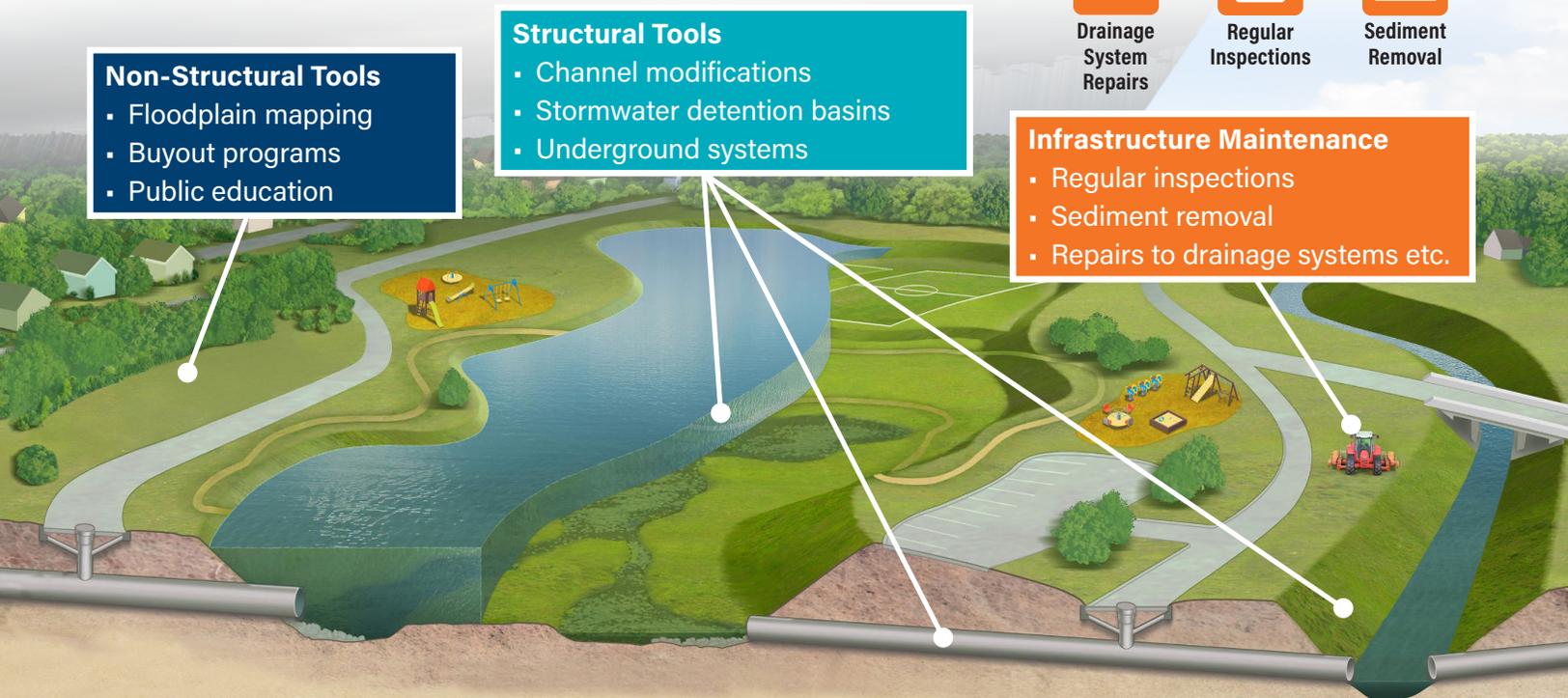- Sediment Removal

Non-Structural Tools
- Floodplain mapping
- Buyout programs
- Public education

Structural Tools
- Channel modifications
- Stormwater detention basins
- Underground systems

Infrastructure Maintenance
- Regular inspections
- Sediment removal
- Repairs to drainage systems etc.

Learn more at: hcfcd.org