

## **Inflatable Flotation Device Prohibition**

### **Proposed Code Amendment**

*Austin City Council*

*October 17<sup>th</sup>, 2013*

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## Executive Summary

**Purpose:** The City of Austin’s Parks and Recreation Department proposes amending the City Code to prohibit inflatable Flotation devices and swimming on the Colorado River between Longhorn Dam and Hwy 183/Montopolis Bridge to ensure the safety of the citizens of Austin and the protection of the ecosystem of the Colorado River.

**Background:** In the summer of 2013, a business located on Red Bluff Road just east of the Longhorn Dam expanded its operation selling and renting kayaks to include renting inner tubes and providing shuttles for floating the Colorado River. The business offered two excursions including a short route from its place of business on Red Bluff Road to Hwy183/Montopolis Bridge and a longer excursion down to FM 973. The business was located on privately-owned land and customers accessed the Colorado River by a trail down the bluff behind the business.

The establishment of the business created issues around the type of use, permitting and safety of the operation. However, the regulation and oversight of these issues are not in the purview of the Parks and Recreation Department. The Department’s concerns focus on the risk to public safety and the environmental impact of this recreational activity upon the river, Roy G. Guerrero Colorado River Park and the Colorado River Wildlife Sanctuary. Specific to the risk to public safety is the unpredictable volume and fluctuating water levels in this segment of the Colorado River triggered by Highland Lake dam operations.

**Public Safety:** Section 8-1-72 of City Code is clear that boats used on the Colorado River between Longhorn Dam and Hwy 183/Montopolis Bridge must be able to handle swift currents and fluctuating water levels. The drafters of Section 8-1-72 did not contemplate or foresee the recreational use of non-navigable Flotation devices; therefore, the City is compelled to amend and clarify the restrictions so it is expressly clear to the general public that this stretch of the Colorado should be approached with caution. The proposed amendment will clarify the ordinance to ensure the public’s safety by permitting only navigable vessels on this stretch of the river. In addition, the code amendment will ensure any commercial boat rental operation in Town Lake Park will be regulated to meet public safety and environmental standards through a concession contract with the City.

**Environment:** The Colorado River Corridor within City Limits is a fragile and diverse ecosystem which has significant land protected from future development in the form of the Colorado River Wildlife Sanctuary and the Roy G. Guerrero Colorado River Park. Unregulated and unauthorized access to the shore will have a detrimental effect upon the nesting of birds and the health of the flora and fauna in the riparian area. Existing beach areas are now experiencing illegal swimming and gathering of wood for illegal pit fires. Access directly from the water invites social trails which contribute to habitat fragmentation and loss of native plant diversity. Litter, which consists of mostly plastic bags, cans, glass bottles and Styrofoam, will be an additional impact on the wetland ecosystem.

**Planning:** The City of Austin’s planning and land development efforts have long identified the Colorado River corridor as a natural area with significant resources requiring protection. For example, Section 25-2-671 of the Austin City Code defines the “... parkland located between the Colorado River shoreline and the crest of the bluff north of the Colorado River, from Longhorn Dam to US 183 (Montopolis Bridge)” as a “Natural Area”. A Natural Area is defined as, “...that portion of Town Lake Park that is preserved as a natural environment with limited human activity.”

The City’s Roy G. Guerrero Colorado River Park Master Plan calls for limited access to the river and recommends that the majority of the shoreline remain undisturbed and protected. Other planning studies that focus on the Colorado River Corridor clearly express the need to balance protection of the river’s natural resources with recreation and economic development of the corridor.

**Concession Development:** The process for concession development is found in the Concession Policy and includes an internal review, public input and a competitive solicitation. The Colorado River Corridor holds potential for a concession, but any concession would need to ensure public safety, mitigate environmental impact, provide operational amenities – parking, restrooms, and utilities – and provide a financial benefit to the City.

**Regulatory Authority:** There are multiple entities that have regulatory authority over the uses and activities on the waters within the City of Austin including the Lower Colorado River Authority and Texas Parks and Wildlife. Despite the overlapping jurisdiction, the City has the authority to put in place ordinances to regulate uses and activities on public waters within the City.

## Current Code

### Current Code

In January 1989, City Council adopted the Town Lake Park Master Plan as part of a sweeping set of ordinances regulating recreational activity on the Lake and the Colorado River. In the 1989 ordinance, the following language was added to code regulating concession operation on the Colorado River between Longhorn Dam and Hwy 183: “...boats rented must be able to handle swiftly flowing water and fluctuating water levels.”<sup>1</sup> The code’s clear intent is to protect public safety by dictating the type of vessels considered safe for a concession. The ordinance was amended in 2003 to its current form:

#### **§ 8-1-72 BOATING CONCESSIONS.**

*(F) On the Colorado River, between Longhorn Dam and U.S. Highway 183, a person may obtain a concession to rent to the public a boat designed for recreational rowing that can withstand swiftly flowing water and fluctuating water levels, including a rowboat, fishing boat, or johnboat.*

### Code Amendment - Proposed

In 1989, the writers of Section 8-1-72 did not consider or foresee the use of non-navigable Flotation devices below the Longhorn Dam. The City, therefore, is obligated to amend and clarify the restrictions of the code so to ensure the public’s safe use and access to this stretch of the Colorado. The Department proposes amending the code to prohibit inflatable Flotation devices and ensure any commercial boat rental operation operating in this section of the Colorado River corridor will be regulated to meet public safety and environmental standards through a concession contract with the City. The ordinance would amend Section 8-1-72 (f) to read as follows:

#### **§8-1-72 BOATING CONCESSIONS.**

*(F) On the Colorado River, between Longhorn Dam and U.S. Highway 183, a person must obtain a concession to rent a boat designed for recreational rowing that can withstand swiftly flowing water and fluctuating water levels, including a kayak, canoe, rowboat, fishing boat, or johnboat to the public. A person may not obtain a concession to rent inflatable Flotation devices.*

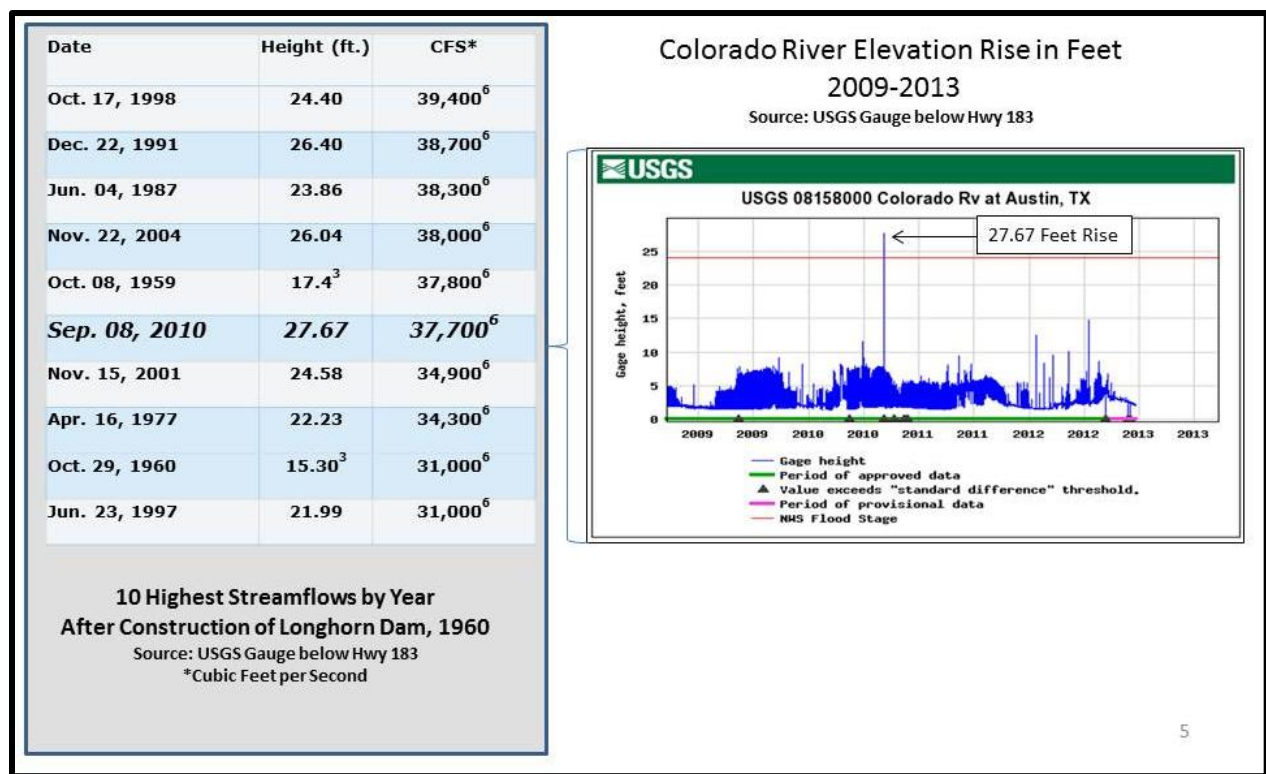
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<sup>1</sup> It is interesting to note that in 1987 a flood event created a streamflow of 38,300 cubic feet per second and river height of 23.86 feet at the Montopolis Bridge. This is the third highest flow rate recorded from 1960 to present.

## Public Safety Concerns

### Swift and Fluctuating Waters

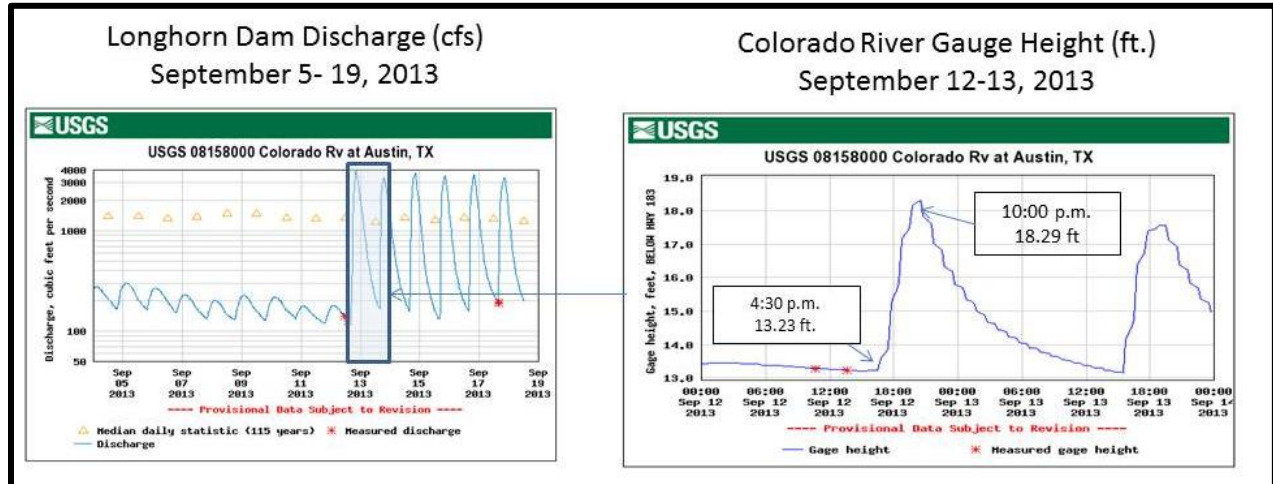
The flow of the Colorado River downstream of Longhorn Dam is measured by a USGS gauge located beneath the Montopolis Bridge approximately 4,500 linear feet from Longhorn Dam. The gauge takes readings every 15 minutes, 24 hours a day, 365 days a year. The USGS provides historic flow data dating back to the 1800s on their website<sup>2</sup>. There are no tributaries flowing into the Colorado River between the dam and the bridge, therefore the readings at the gauge are an accurate reflection of the volume of water passing through the Longhorn Dam at any given time.



The graphic above identifies the ten highest streamflows measured at the Hwy 183 gauge after the Longhorn Dam was constructed in 1960. The last significant flood event occurred in 2010. During this event, the Colorado River rose 27 feet and flowed at a rate of 37,700 cubic feet per second. The graph illustrates spikes in the river's height over the last five years. As the graph illustrates, the river experiences significant spikes in elevation on a regular basis even during this period of drought.

<sup>2</sup> [http://nwis.waterdata.usgs.gov/nwis/peak?site\\_no=08158000&agency\\_cd=USGS&format=brief\\_list](http://nwis.waterdata.usgs.gov/nwis/peak?site_no=08158000&agency_cd=USGS&format=brief_list)

Changes to the Colorado River's height and rate are not just a result of rain events. The LCRA releases water from Tom Miller Dam for a number of reasons including electric generation, fresh water obligations to rice farmers, and to ensure the environmental quality of Matagorda Bay.



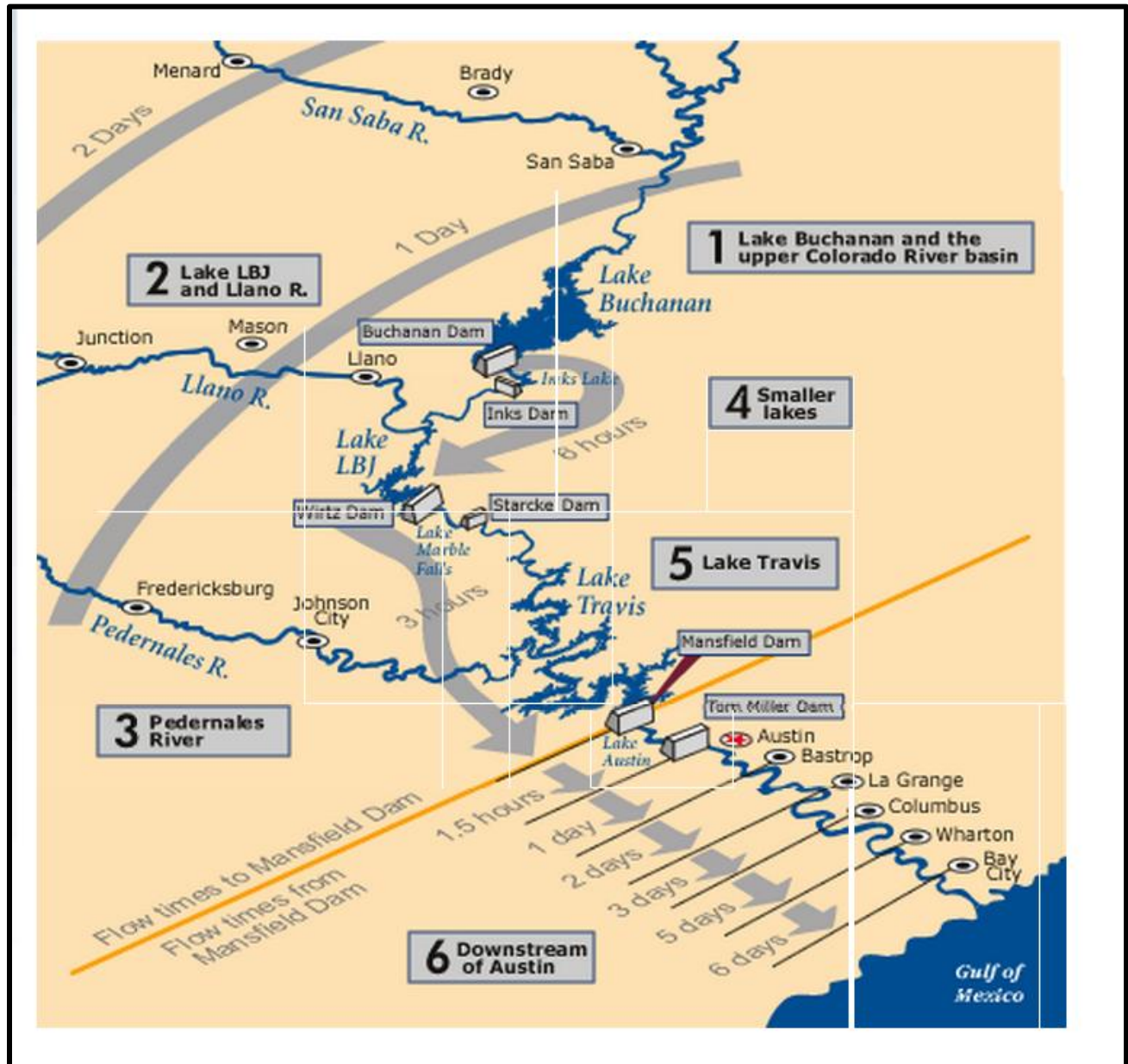
A recent example of this occurred on September 12<sup>th</sup>, 2013 when LCRA began to pulse water through Tom Miller Dam to meet a required target for freshwater inflow into the Matagorda Bay. The graph on the left illustrates how the flow of the river in cubic feet per second is fairly consistent prior to the release of water from the dam. Then on September 12<sup>th</sup> as the waters moved downstream and under the Montopolis Bridge, the gauge registered a spike in the flow and height of the river. **In a period of five and half hours the river rose five feet and the rate of flow increased from ~200 cfs to ~4,000 cfs.**

### Facts about LCRA Water Releases

Two common misconceptions regarding the release of water from Tom Miller Dam, rain events and the Colorado River flow rates below Longhorn Dam are: 1) the LCRA publishes or announces when water releases from Tom Miller Dam will occur, and 2) the river rises only when it is raining over that section of the river, therefore, no one would be on the river or at risk. The facts do not back up these beliefs:

1. The timing of the release of water into Lady Bird Lake is not public information. **LCRA does not provide advance notice of water releases.**
2. LCRA releases water for a number of reasons including electric generation, water obligations to rice farmers, or to ensure environmental quality of Matagorda Bay. These releases are not contingent upon specific rain events.
3. As seen in the graphic on the next page, rains in the upper end of the Lower Colorado River Watershed can take as long as two to three days to reach the Longhorn Dam. This is another

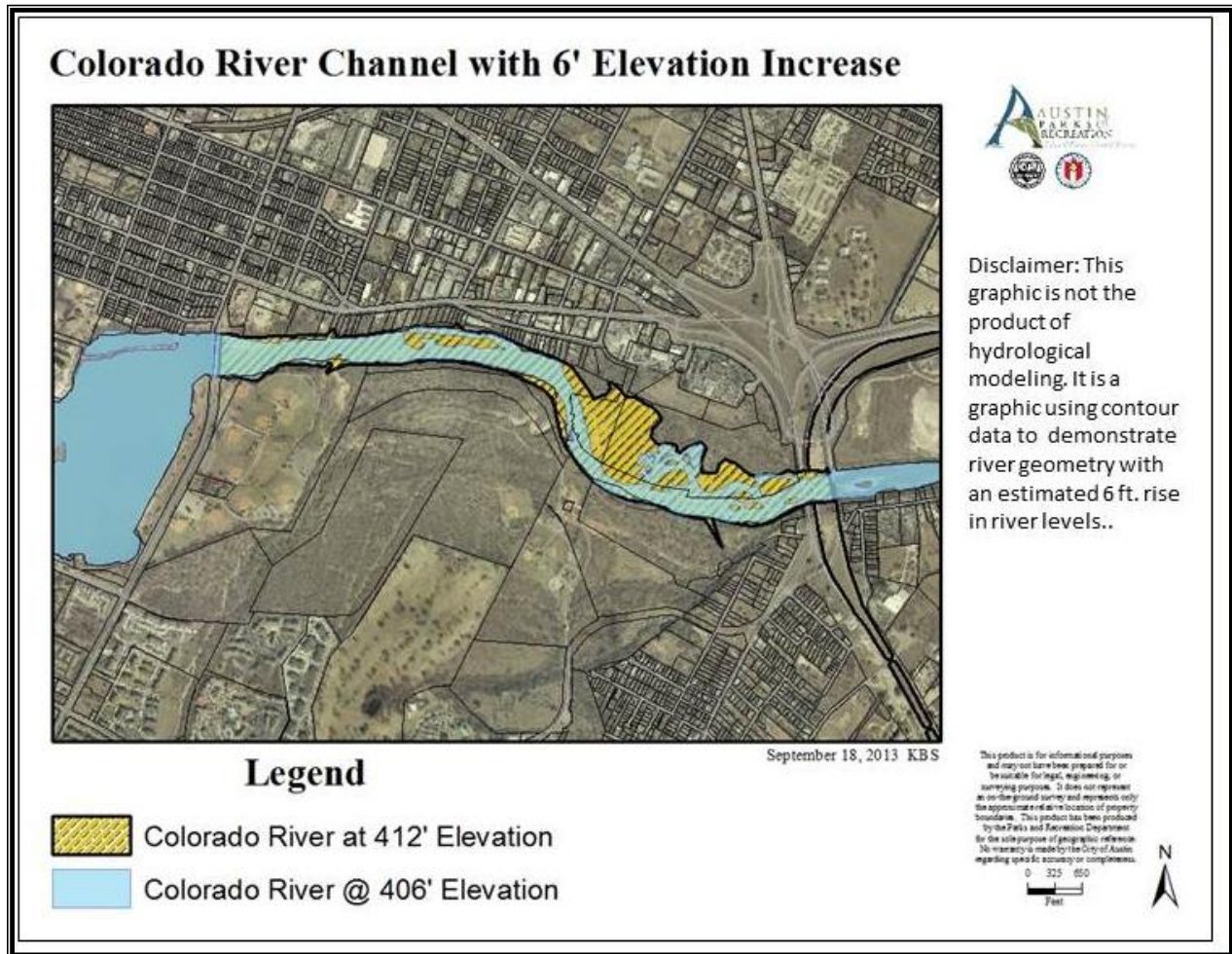
example of how the lack of an observable rain event at Longhorn Dam does not eliminate the risk of rising and swift waters on the Colorado River below the dam.



This illustration shows the length of time it can take for rain water to make its way through the Highland Lake system.<sup>3</sup>

<sup>3</sup> Lower Colorado River Authority, <http://www.lcra.org/water/flood/system.html>





## Water Levels and River Geometry

The map above illustrates how the river channel could potentially change due to a six foot increase in height. By following the 412' contour line and accounting for the nine feet elevation loss between the dam and the bridge, the channel expands dramatically, especially in the eastern half of this section of river. The effect this has on the safety of recreational activities on the water includes:

1. It is estimated that the width of the river could increase from 70 ft. to up to 1,000 ft. in areas. This change in the river geometry would greatly decrease the ability of a person on a Flotation device -- with no method of propulsion -- to reach shore.
2. Sand bars and areas with brush and trees would go underwater and could potentially become a hazard by trapping or snaring the Flotation devices.

## Flotation Devices – Non-navigable

The previous sections describe how the Colorado River below Longhorn Dam can rise and change geometry over a fairly short period of time. Most vessels would be able to steer and guide through the increased rate of flow, stronger current and changing depth and width of the river. The U.S. Coast Guard, however, does not define inner tubes as vessels: “The term ‘vessel’ includes every description of watercraft or other artificial contrivance used, or capable of being used, as a means of transportation on the water....Unmodified inner tubes have not been determined to be ‘vessels’ to date” (U.S. Coast Guard, Recreational Boating Statistics, 2011).

In the proposed amendment, a definition of Flotation devices clearly articulates that the prohibition addresses *non-navigable* watercraft. Inflatable kayaks and rafts that are navigable are not covered under the prohibition.

(3) INFLATABLE FLOTATION DEVICE means an inner tube or other water recreational form or apparatus that is inflated with air or foam and is non- navigable. This term includes inflatable chaise loungers, air mattresses, and other inflatable devices.

(6) NAVIGABLE RECREATIONAL APPARATUS means an apparatus that is capable of being guided or steered against swiftly flowing and fluctuating water levels.

## Austin Fire Department – Incidents

Between 2006 and the present, the Austin Fire Department responded to 31 rescue incidents within boundary defined as a 500-foot area surrounding the Colorado River between Longhorn Dam and Montopolis Bridge/183. Of the 31 incidents, 18 were either swift or still water rescues. In the table below, further detail on the time and number of incidents is provided. Austin Fire Department personnel related that incidents labeled *vehicle rescue* typically involved vehicles driving on the sand bars in the river channel getting caught by rising waters.

Rescue Incidents Occurring Along Colorado River between Longhorn Dam and Montopolis Bridge/183 from 2006 through September 18, 2013		
RESCUE TYPE	YEAR	NUMBER OF INCIDENTS
RESQW - Still Water Rescue	2012	1
RESQSR - Search and Rescue	2012	1
<b>TOTAL</b>	<b>2012</b>	<b>2</b>
RESQSR - Search and Rescue	2011	1
<b>TOTAL</b>	<b>2011</b>	<b>1</b>
RESQWI - Wilderness Rescue	2010	1
RESQWS - Swift Water	2010	2
RESQW - Still Water Rescue	2010	4
<b>TOTAL</b>	<b>2010</b>	<b>7</b>

Rescue Incidents Occurring Along Colorado River between Longhorn Dam and Montopolis Bridge/183 from 2006 through September 18, 2013 [continued]		
RESCUE TYPE	YEAR	NUMBER OF INCIDENTS
RESQWS - Swift Water	2009	2
RESQW - Still Water Rescue	2009	1
RESQC - Rescue Condition	2009	1
<b>TOTAL</b>	<b>2009</b>	<b>4</b>
RESQC - Rescue Condition	2008	1
RESQV - Vehicle Rescue	2008	1
RESQW - Still Water Rescue	2008	1
RESQWS - Swift Water	2008	1
RESQWI - Wilderness Rescue	2008	1
<b>TOTAL</b>	<b>2008</b>	<b>5</b>
RESQW - Still Water Rescue	2007	3
RESQWS - Swift Water	2007	3
RESQC - Rescue Condition	2007	1
RESQV - Vehicle Rescue	2007	2
<b>TOTAL</b>	<b>2007</b>	<b>9</b>
RESQV - Vehicle Rescue	2006	3
<b>TOTAL</b>	<b>2006</b>	<b>3</b>
<b>TOTAL</b>		<b>31</b>

### Austin Police Department – Incidents

Austin Police Department (APD) responds to calls at the two public access points to the Colorado River: Roy G. Guerrero Colorado River Park and Montopolis Bridge. In 2012 at Roy G. Guerrero Colorado River Park the APD gave 17 citations for alcohol and curfew violations. This number increased to 21 in 2013. In 2012 and 2013, the APD gave no citations at 5901 Lavender Loop under Montopolis Bridge; however they did respond to calls for Suspicious Vehicles, Assisting EMS and Checking Welfare of a Person in 2012.

## Environmental Concerns

### Environmental Impact of Increased and Unauthorized Access

The Colorado River Wildlife Sanctuary, CRWS, is a unique wetland ecosystem located just to the west of the Hwy 183/Montopolis Bridge. The habitat along the wildlife sanctuary currently serves as a valuable nesting and foraging area for resident and migratory waterfowl and wading birds.

The Colorado River Wildlife Sanctuary does not have any endangered species listed but in 2008 a rare plant, *Iva corbinii* (TEX) of the Asteracea family, was located upstream of the Montopolis Bridge. Since the plant has not been listed, it would not be classified as a take but it would be ill advised to knowingly allow its demise while it is being considered for listing as an endangered species.

Immediate impacts on the ecology and mission of the preserve caused by unauthorized access to riparian habitat along the banks of the Colorado Wildlife Sanctuary would include: stream and river bank compaction; loss of aquatic vegetation; loss of native sedge and grass communities; disturbance to sediment and bottom substrates of streams and the river ecosystem, which is habitat for the benthic macro invertebrate species; disturbance of shallow aquatic nesting areas, and disturbance to woody snags or overhanging vegetation along the river.

Existing beach areas are now experiencing illegal swimming and gathering of wood for illegal pit fires. Access directly from the water invites social trails which contribute to habitat fragmentation and loss of native plant diversity. Litter, which consists of mostly plastic bags, cans, glass bottles and Styrofoam type trash, will be an additional impact on the wetland ecosystem<sup>4</sup>.

### River Floating and Litter

There is a well-documented relationship between the activity of floating or tubing on a river to the consumption of alcohol and pollution of waterways. In response to increased litter on the Comal and Guadalupe rivers, as well as public safety concerns, the City of New Braunfels established regulations banning disposable containers, containers under 5 fluid ounces and beer bongs, and they limited the size of tubes and coolers. Preventing the degradation of the river and riparian area through litter and detritus is an obvious benefit to the ecology and natural beauty of the area.

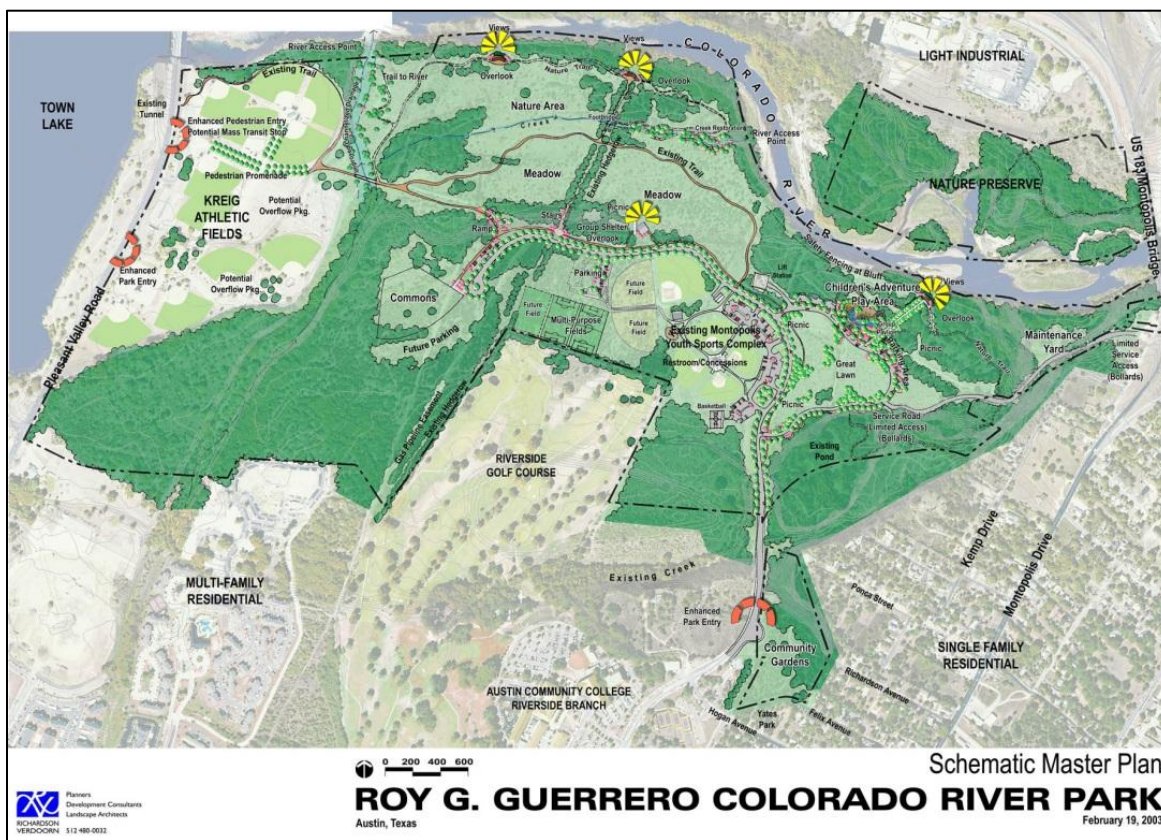
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<sup>4</sup> Louis R. Barrera, Environmental Conservation Information Specialist, Austin Nature Preserves System



## Vision for the Corridor:

There are multiple examples of planning efforts aimed at ensuring the environmental health and natural landscape of the Colorado River corridor. The Master Plan for Roy G. Guerrero Colorado River Park illustrated below calls for limited access to the river and lays out that most of the shoreline should remain undeveloped natural areas.



- *“This notion of preservation does not preclude human use in the Preserve districts, but implies restrictions on that use.”*

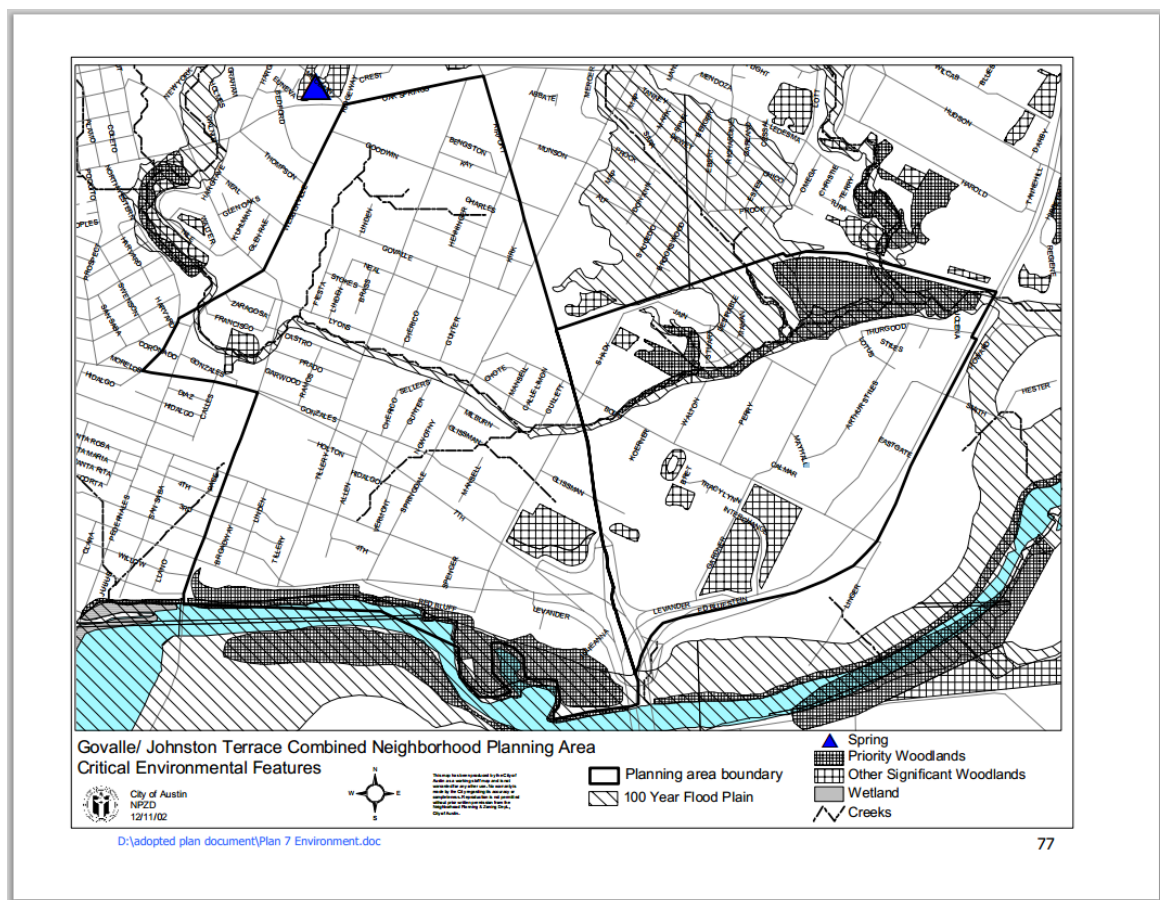
– Town Lake Master Plan

- *GOALS for Riparian Management: To promote actions that conserve and maintain a healthy riparian system along the Austin-Bastrop Colorado River Corridor.*

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- However, some remnants of natural habitats and environmental features worthy of preservation still exist. The most notable of these are the Colorado River and the associated floodplain and habitat areas, and priority woodland west of 183 and south of the railroad....Although undisturbed mature forests are rare in the developed areas of East Austin, there are areas in the natural floodplain of the river and the creeks in the area that are considered “priority woodlands”. “Priority woodlands” are the oldest and most mature woodlands which are least disturbed from their natural condition.

--Govalle/Johnston Terrace Combined Neighborhood Plan adopted by City Council on March 27, 2003.



The Critical Environmental Features Map above illustrates the significant areas of “priority woodlands” along the shore of the Colorado River east of US 183 in the Govalle/Johnston Terrace area.

## Concession Feasibility

The City of Austin's Concession Policy outlines the process for the review, approval, and solicitation for concessions. When the Department identifies a need or receives a proposal for a concession, the proposal must be vetted by an internal review and public input process, and culminates in an open and competitive solicitation through a request for proposals (RFP).

The potential for a concession east of Longhorn Dam on the Colorado River would depend on a number of factors including demand, public safety, environmental impact, land use compatibility and revenue generation. The success of the outfitter certainly illustrates a demand for boat rental and access to the river. That said, a vendor would need to propose a business model that worked within the established vision for the corridor, for example, the inclusion of a strong environmental program that might incorporate interpretive guided tours and/or partnerships with non-profits and schools for classes, field trips and river clean-ups. The vendor would also need to show that ancillary effects -- such as traffic, noise, and parking -- caused by the business would not disrupt adjacent land use. Further, a concession would need to meet the directives of code, providing navigable vessels that can withstand swift and fluctuating waters. If all of those requirements were satisfied, the proposal would still require a public vetting to ensure that the needs and desires of the local and city-wide constituency were considered. And finally, the concession must be shown to pose a sound business model that would ensure long-term financial benefit to the City.