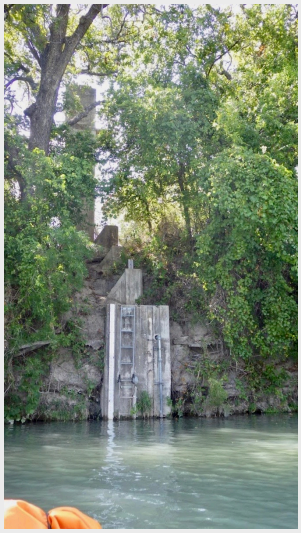
WATERSHED WEEK IN REVIEW

Mystery Location Game

Round 13 Coordinates

Last week's coordinates take us to the USGS Llano River near Junction gage. This gage was installed below Junction in 1915 and has never recorded zero flow. It reached 3 cfs during the 50s.



This week's coordinates

30.738058, 99.207546

Streamside Restoration Efforts Partner with Winterfisch

This year's WinterFisch event will have a new activity: *streamside restoration*. This year, thanks to generous donations from Texas River Protection Association and Fly Fishers International, and in partnership with Winterfisch, TPWD, Llano River Region Adventures and the Alliance, volunteers will have the opportunity help restore streamside habitat at two locations in Mason County:...

More on Streamside Restoration

the Jamie Hemphill Nature Trail at Fort Mason Park and the island at James River Crossing.

The stream side (or riparian) area along Comanche Creek by the nature trail is in pretty good shape, but needs some attention to restore bare areas and control erosion. The island at James River Crossing was severely altered by the floods in October of last year and will benefit from some additional plantings that expedite aquatic habitat recovery. **Restoration activities will begin on December 7 at 10am-noon at Fort Mason Park and resume from 2-3pm at James River Crossing.** Riparian experts will be available at both locations to explain riparian processes and make suggestions for your property. Bring gloves.

Junction City Council faces Flood Repairs

By James Murr
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City Council receives report on condition of city dam

Urgent repairs needed for main sewer line

James Murr
The Junction Eagle

On November 12, the City Council held its monthly meeting and received an engineering firm's preliminary report on the structural condition of the city's dam, critically needed repairs on a main sewer line, dredging behind the city dam, and changes to the raw water intake for the water treatment plant. The council also approved a contract with the Kimble County Chamber Commerce, discussed dumpsters for hunters, and approved holidays for city employees in 2020, as well as the schedule for free dumping days at the city landfill.

Mayor Russell Hammonds and all the council members, except Preston McDonald Jr. (Place 2), were present: Steve Couey (Place 1), Michael Miller (Place 4), Olan Raley (Place 5) and Znobia Wootan (Place 3). All votes taken by the council were unanimous.

Earlier in the year, the city had engaged

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the engineering firm of LNV, Inc. (San Antonio), at a cost of $243,500, to (1) assess the structural integrity of the city dam after the major flooding in October 2018 and (2) address other water infrastructure matters. At this meeting LNV representatives – Abe Salinas and Jonathan Teafatiller – reported on the dam's condition, the problem of an exposed pressurized main sewer line, modification of the intake for the city's water treatment plant and dredging the body of water behind the city dam.

LNV's representatives emphasized that their preliminary report is subject to further modification, and they recommended a later meeting with the council in a workshop to review these matters in more detail. A summary of their preliminary findings/recommendations follows.

The city dam requires three repair and mitigation measures. First, roller compacted concrete should be placed along the downstream toe of the dam to provide energy dissipation and increase the factor of safety to prevent the dam from sliding downstream. Second, the cutoff walls must be widened under the concrete abutments to reduce flow through the alluvium on each side of the dam; this will assist in mitigating potential piping (internal erosion caused by seepage) in the abutments. Third, the concrete abutments must be reconstructed, including toe walls to prevent erosion through the abutments. The probable cost for these measures is an estimated $4.0 million to $4.5 million, which includes a 30 percent contingency amount.

LNV also addressed the problem of the exposed main sewer line, which is pressurized, that goes under the South Llano River at the confluence of the South and North Llano Rivers at the City Park. The exposed line/pipe is subject to breaking in another storm event. In its current condition, the line is "at high risk of collapse due to the pipe being unsupported or due to high stream flows". Failure of the line will result in contamination of the Llano River with untreated wastewater sewage and stop the city's ability to provide sanitary sewer services.

City of Junction ...

The recommendation was to place a new line 15 feet below the lowest point in the river. The line would be made of high-density polyethylene. The old main line would be abandoned in place and filled with sand and grout. Based on preliminary estimates, the cost for completing this critically needed work is around $1.2 million to $1.5 million.

The raw water intake for the city's water treatment plant is in the South Llano River. The flow of the river and the shifting sediment and gravel, especially during flooding, raise concerns about damage to the current intake or the course of the river shifting and leaving the intake out of the water. LNV proposed a new intake structure referred to as an "infiltration gallery" to address these concerns. The estimated cost for the new water intake is between $0.8 million and $1.0 million.

As built, the permitted volume of impounded water behind the city dam was 312 acre feet; it is unlikely that this amount of water has ever been impounded. Currently, the actual amount of impounded water is around 105 acre feet. The depth of accumulated sediment on the upstream face of the dam is presently estimated at 12 feet. To help ensure that water is available upstream for the water treatment plant's raw water intake, a target storage volume of 160 acre feet was considered. The estimated cost for required dredging is $6 million to $8 million. (Note: An acre foot is equal to 326,000 gallons.)

In summary, the total preliminary estimate for the cost of the above projects is around $12 million to $15 million, which includes $6 million to $8 million for dredging.

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South Llano River State Park Programs for November 2019

Hike with a Ranger! - Come hike with a ranger and explore the West Canyon Loop trail! The trail is rated as moderate - it's 4 miles long. We will meet at the **Agarita bird blind** next to HQ. ***Thursday, November 21, 9 – 11am***

Talk Turkey to Me – Meet at the Lora's Blind to find out what turkeys are talking about. We will also go on a short excursion to see if we can find them. ***Friday, November 22, 10am***

Scat and Tracks! - Come learn about what gets left behind. Held at the ***Acorn Blind. Saturday, November 23, 10am***

Star Party! – Join some local astronomers, volunteers, and park staff for a special evening! We'll look through telescopes at celestial objects. We'll also find out what the park is doing to protect its dark skies for people and wildlife. **Park in overflow parking lot across from campsites 18 and 20.** All ages are welcome.
Bring : flashlight (red-light flashlight) and a lawn chair. Dress for the weather!. ***Saturday, November 23, 6:30-8:30pm***

2nd Annual Turkey Trot 5k! – Earn those Thanksgiving calories here at the park for our 2nd annual Turkey Trot 5K. Come see if you can spot any Turkeys as you run/walk through the roose area towards the finish line. ***Thursday, November 28, 10:30am***

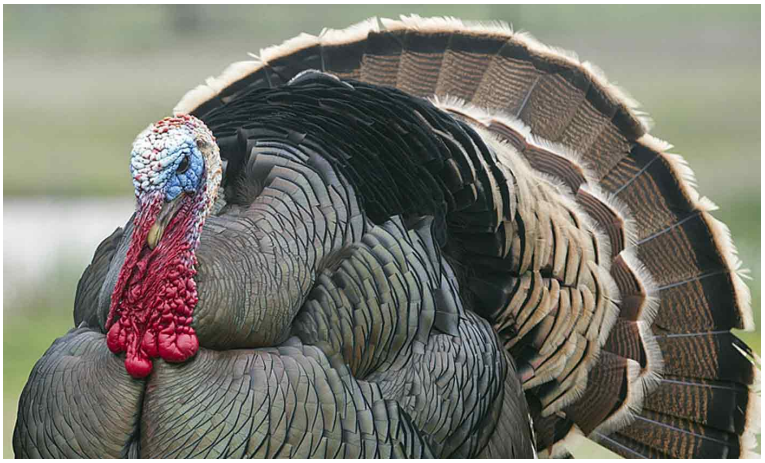

Photo : Texas Parks and Wildlife Department

No Newsletter next week

The Llano River Watershed Alliance wishes everyone a safe and peaceful Thanksgiving.

The newsletter will resume on December 8.