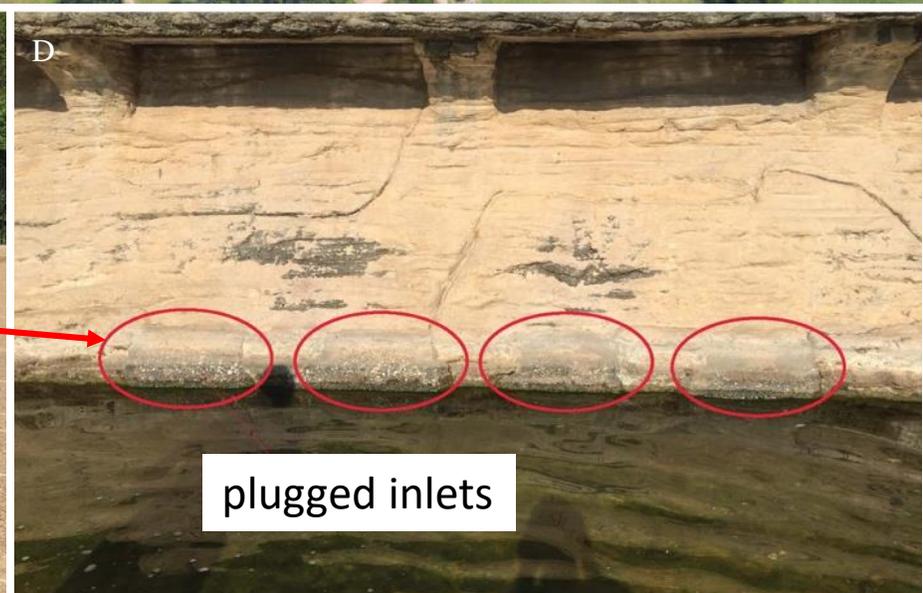
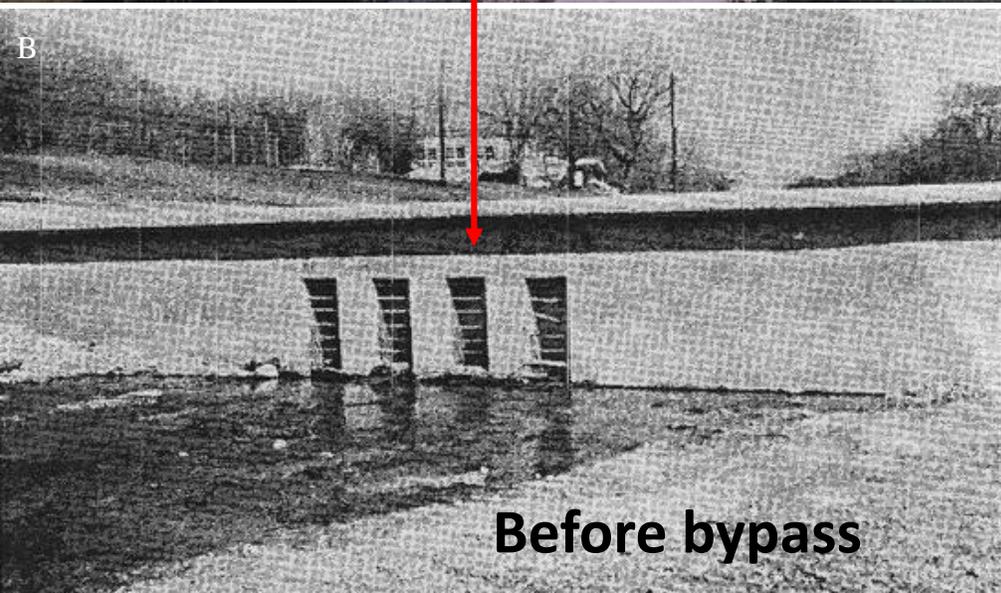
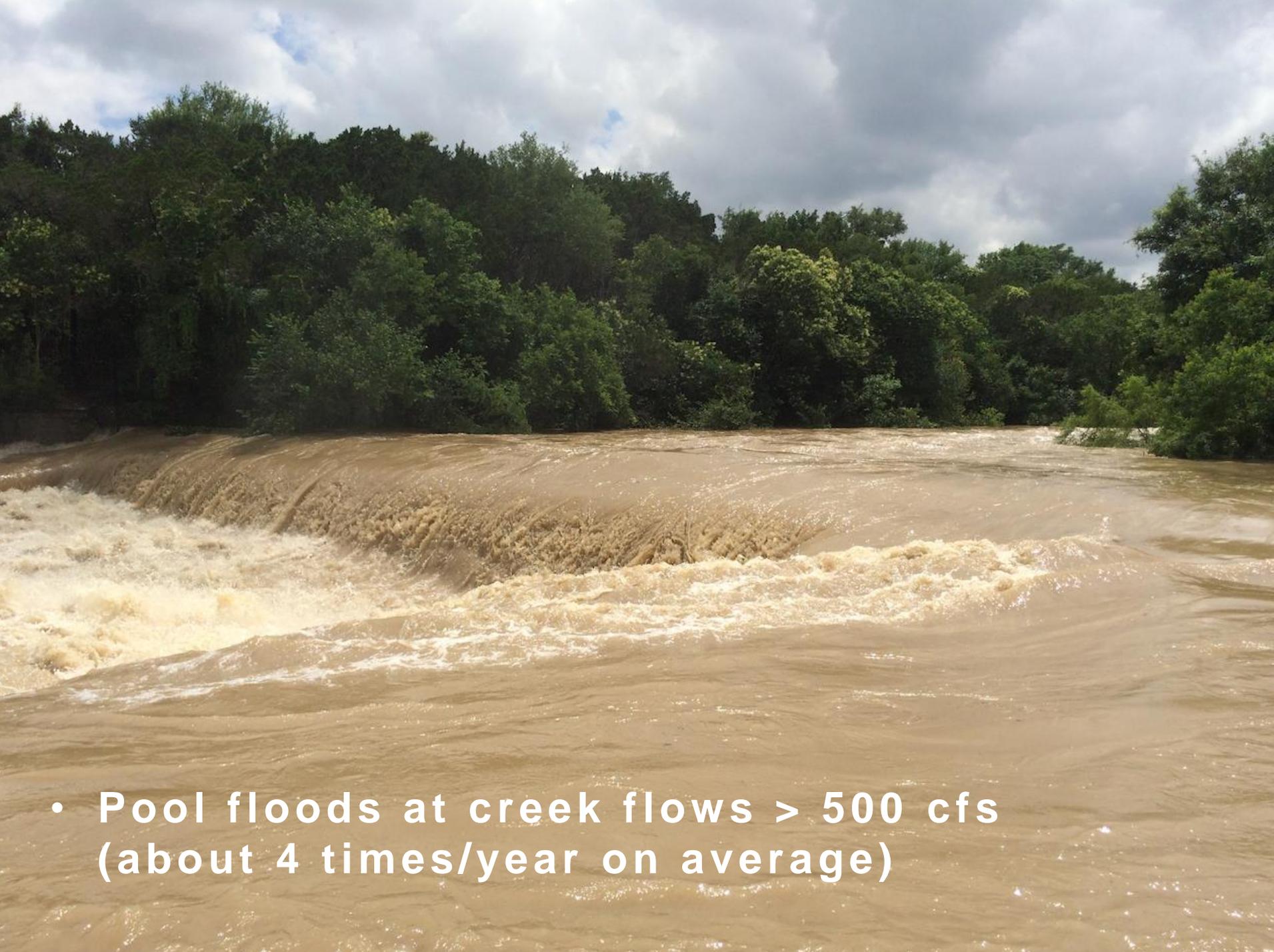


Barton Springs Pool Upper Dam Project Update

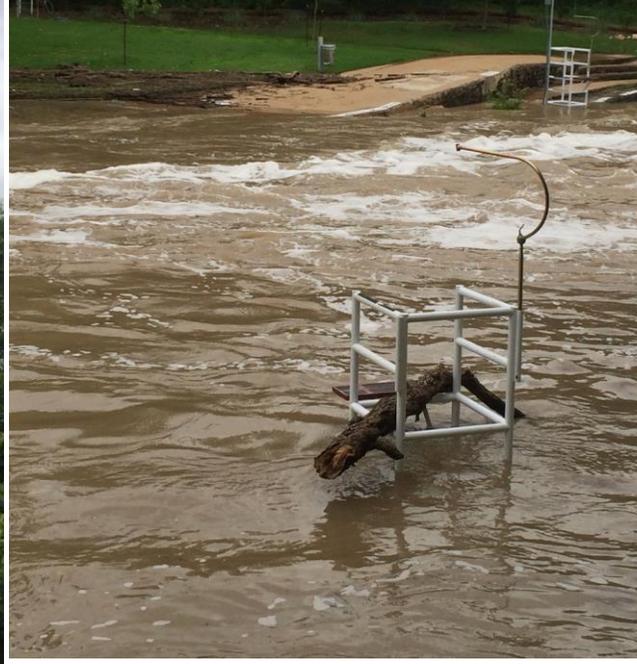
October 16, 2019







- Pool floods at creek flows > 500 cfs (about 4 times/year on average)



Genesis of the Pool Master Plan

- Oct 2006 – Council resolution for Barton Springs Pool improvements
- 2007-2008 – Staff and stakeholders develop plan
- Dec 2008 – Council adopts “Barton Springs Pool Master Plan: Concepts for Preservation and Improvement”

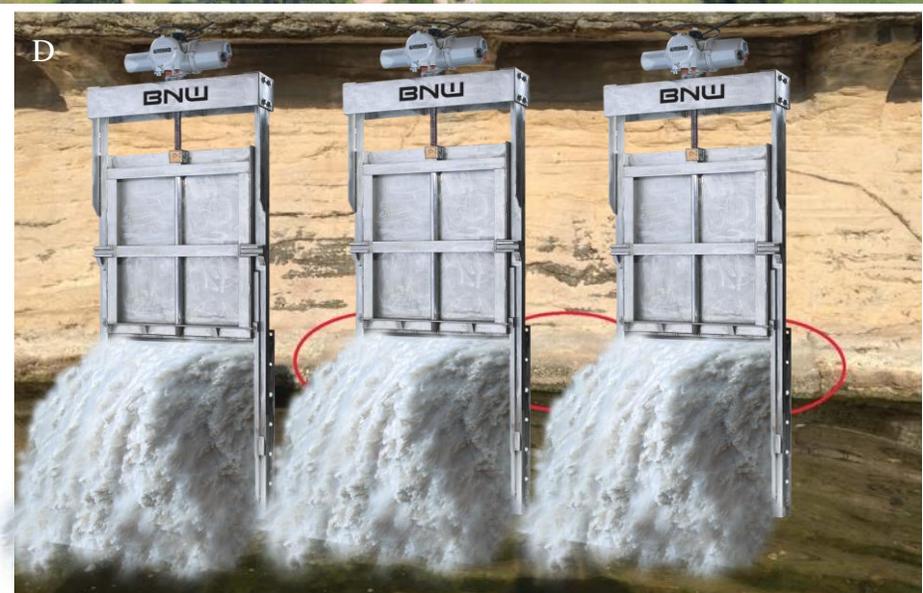
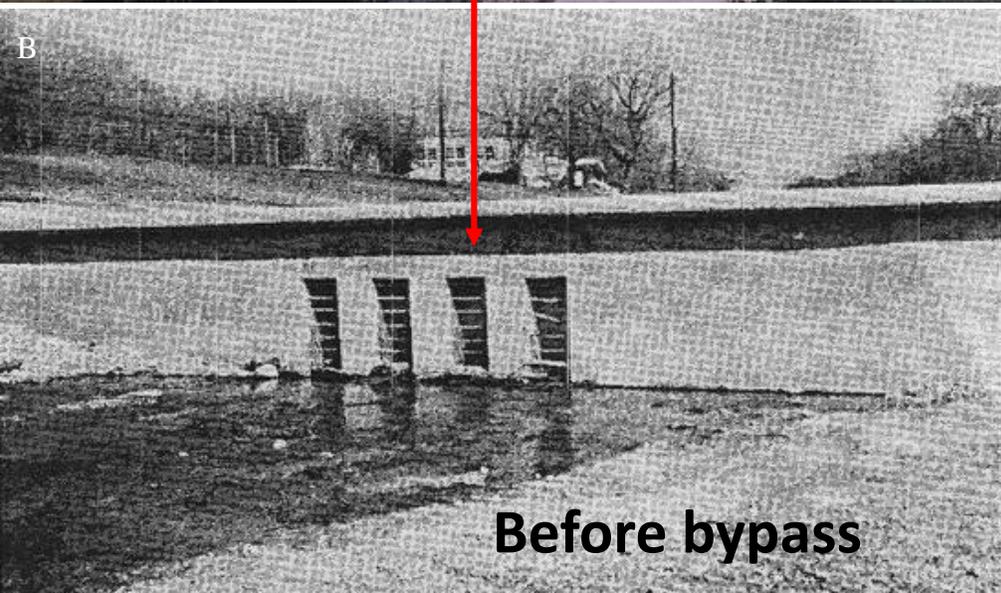


Improving the “Flow Regime”

Identified as important objective in:

- Barton Springs Pool Master Plan
- Habitat Conservation Plan
“The City will restore and maintain more natural flow regimes in Barton Springs Pool, Eliza Spring and Old Mill Spring . . .”
(City 2013, pp. 112-113).





WPD memo September 2017

- In response to request made to Environmental Commission in August 2017
- Hydrodynamic flow modeling report completed but failed to evaluate modifying upstream dam
- November 2017 request made for WPD to reevaluate openings in upstream dam



Feasibility study

WPD examined:

- frequency and duration of baseflow in Barton Creek
- differences in water quality between creek and Pool
- consequences for hydraulics if 3 inlets were to be restored
- consequences for ecosystem in the Pool if streamflow reintroduced



Findings

- Baseflow in creek occurs more frequently and lasts longer than originally envisioned
- Water quality in creek as high or higher than Pool under baseflow conditions
- Inflows increase Pool turnover rate
- Increased connectivity may improve ecosystem integrity and functioning in Pool



Potential benefits

1. Increased Pool turnover rate:
 - facilitate routine and post-flood cleaning
 - mitigate effects of accidental spills or discharges
 - Improve clarity during high-use periods
2. Improved ecological connection

December 2018 sediment discharge

Other considerations

If creek water is entering the pool:

- cooler Pool temperatures in winter
- warmer Pool temperatures in summer
- higher water velocities in shallow end
- additional maintenance task for Pool staff to operate gates



Draft operational guidelines

- open gates only if Barton Creek is flowing across entire recharge zone
- close gates before and during storm events
- during operating hours – open only while maintaining acceptable Pool conditions
- after hours – open gates if flows are acceptable and no storms forecast
- these are draft considerations subject to change



Next steps

- Stakeholder input (1 month)
- Decision by WPD whether to proceed (1 month)
- If yes, -> Preliminary Engineering Phase (12 months)
 - Structural assessment of dam
 - Refine inlet design
 - Refine estimated costs
- Examine PER findings and determine whether to proceed
- If yes, -> secure funding
- Proceed to design
- Permitting
- Bid and contracting
- Construction

