

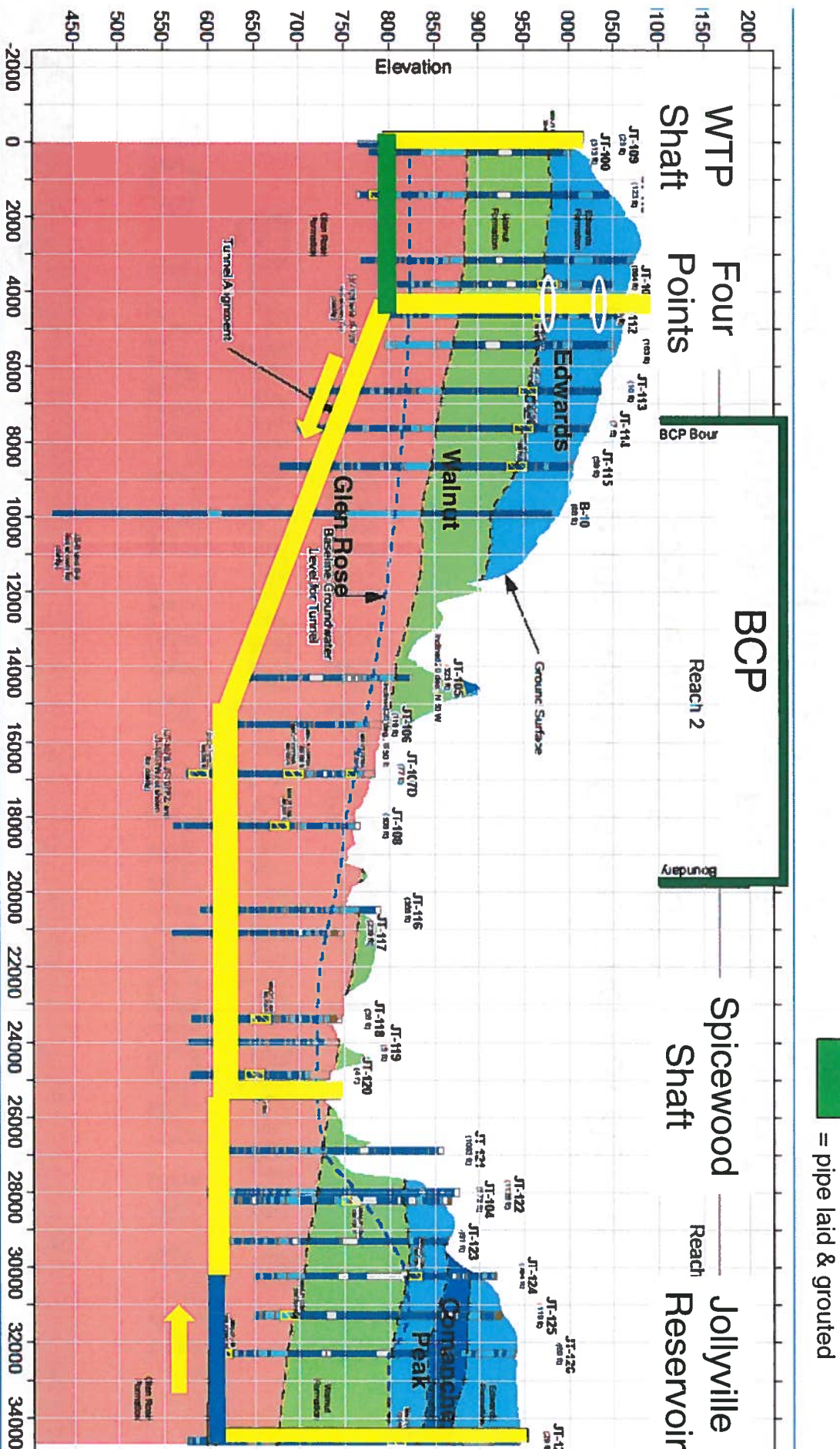


JOLLYVILLE TRANSMISSION MAIN: Environmental Commissioning Monthly Report

**Presented to the Austin Environmental Board
September 18, 2013**

**Thais Perkins, Watershed Protection Department
David Johns, Watershed Protection Department**

Jollyville Transmission Main Project as of 8/31/13





Environmental Commissioning Activities - JVTM

- Monthly shaft site (surface) visits concurrent with plant site visits
- Excavation complete - tunnel mapping visit set for Reach 2 once tunnel excavation infrastructure is removed
- Monthly meetings of the Environmental Commissioning Coordination Group (ECCG) to resolve potential issues
 - Reviewed secondary containment for portable grouting unit additives at Four Points
- Environmental Monitoring
 - Monitoring Schedule changed to post-excavation construction phase monitoring
 - Water level readings associated with tunnel read monthly
 - Groundwater wells at shaft sites sampled for water quality semi-annually
 - Monthly water quality sampling in Bull Creek Trib 4 near Spicewood Shaft
 - Will survey salamanders in Trib 4 once more at end of construction phase



- Environmental Cost Summary

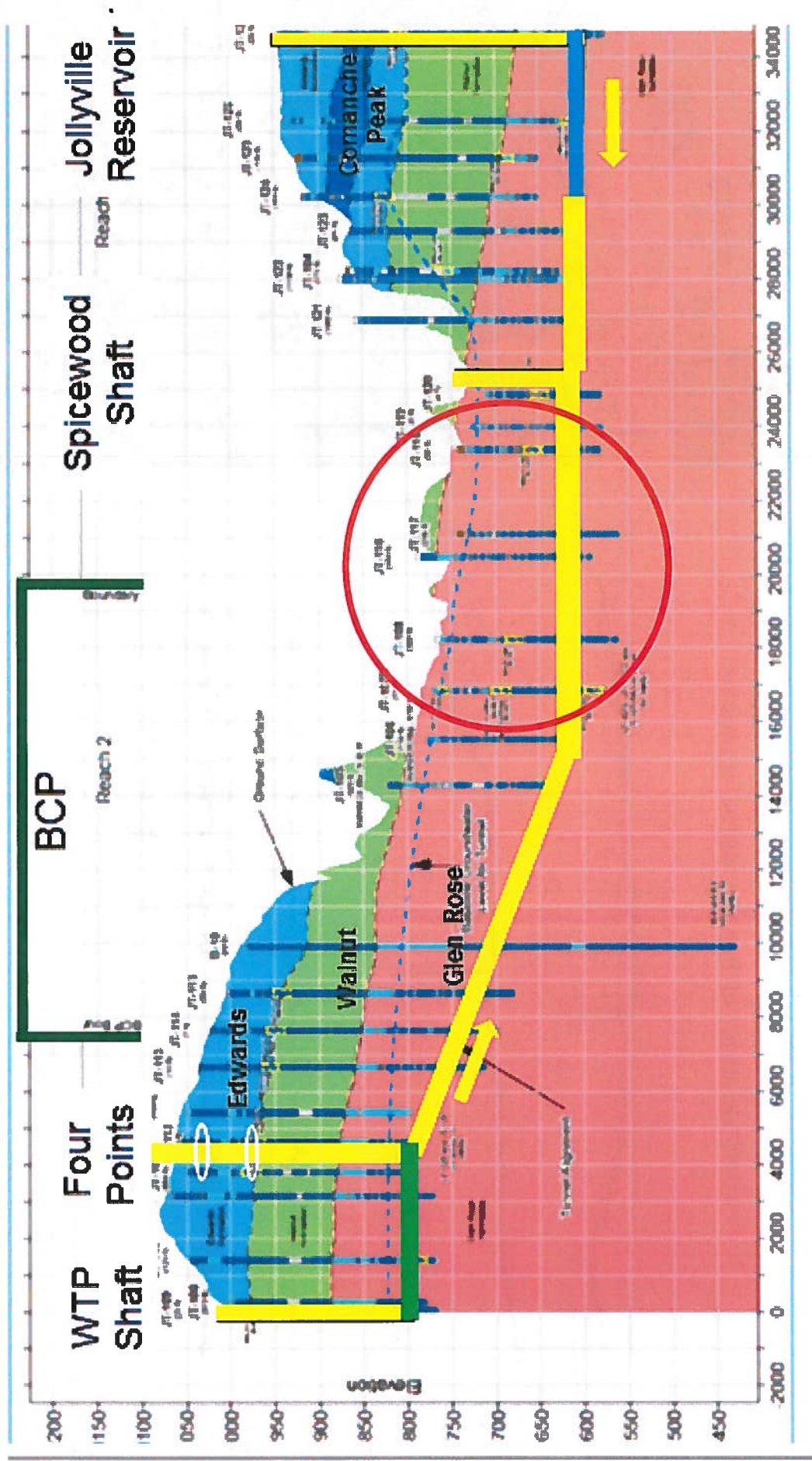
Initial INTERA Contract Amount	\$ 1,773,890
Total Amount Billed to Date	\$ 1,407,269
Total Remaining	\$ 364,496



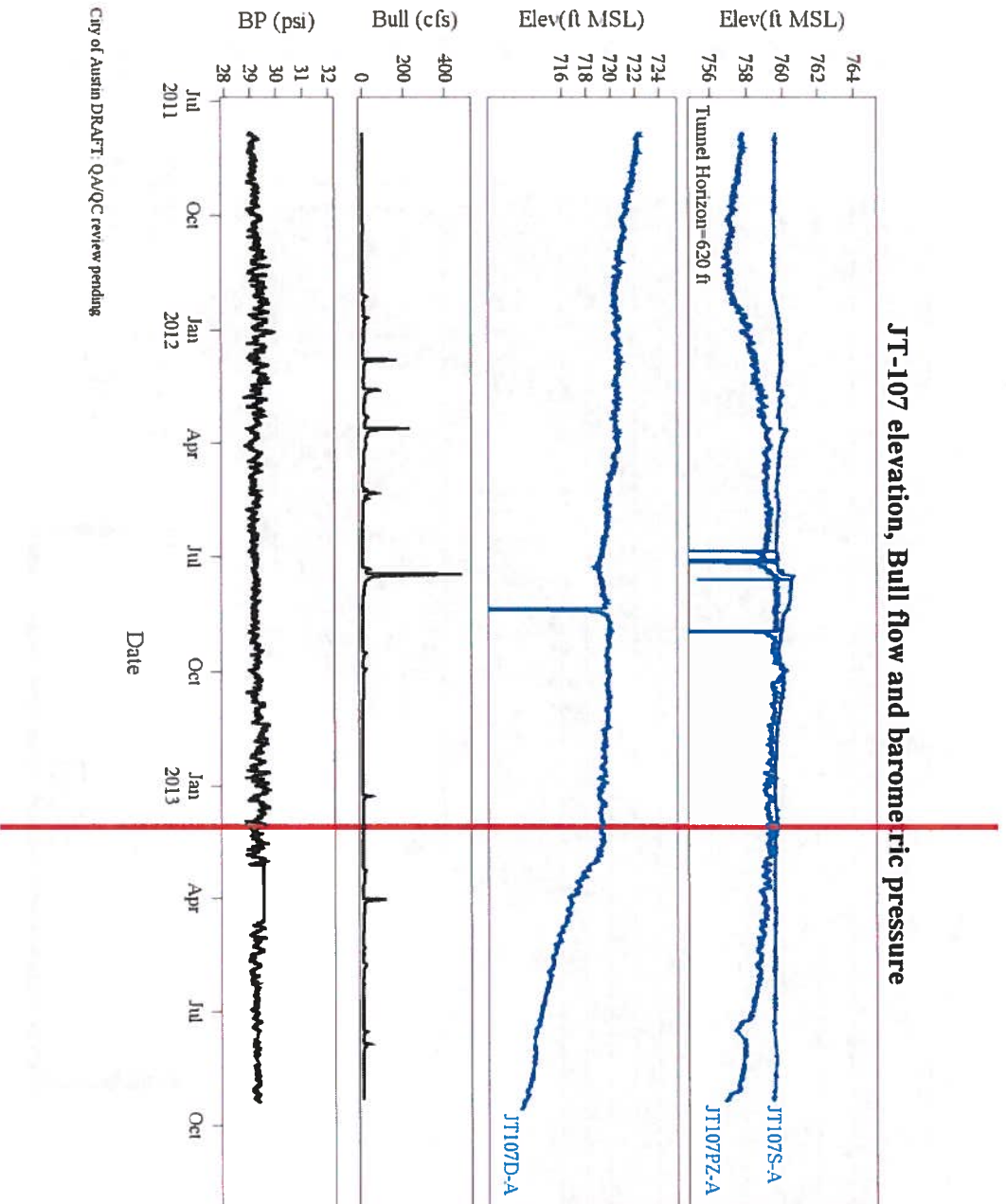
Tunnel Exiting BCP



= progress



Tunnel passes 107 cluster 2/13/13

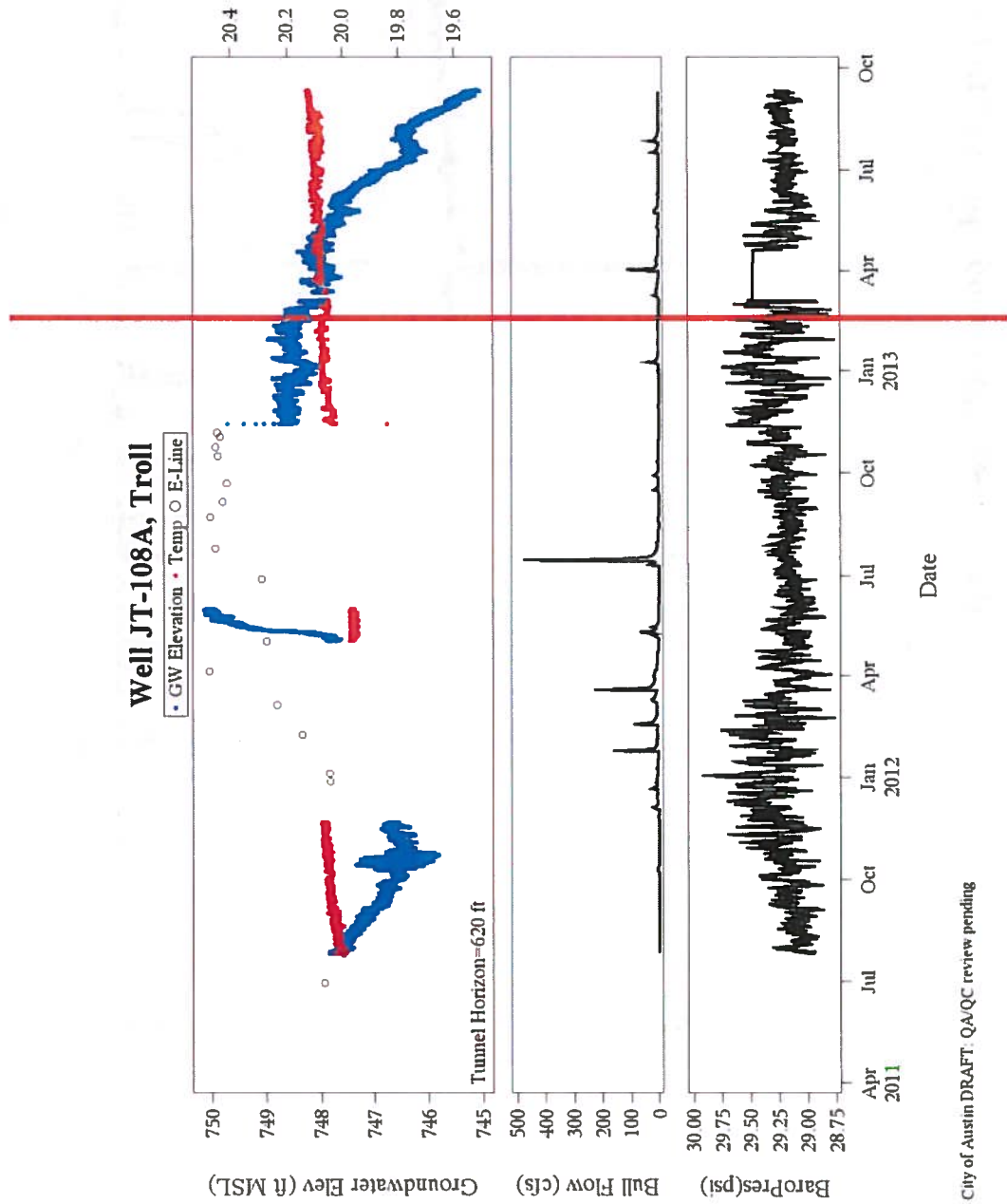


City of Austin DRAFT: QA/QC review pending



- Decline (~8 feet) in deepest well as tunnel passes; small decline in PZ-A (~3 ft) followed by response to July rains
- no decline in 107S-A.

Tunnel passes 108 well



City of Austin DRAFT. QA/QC review pending

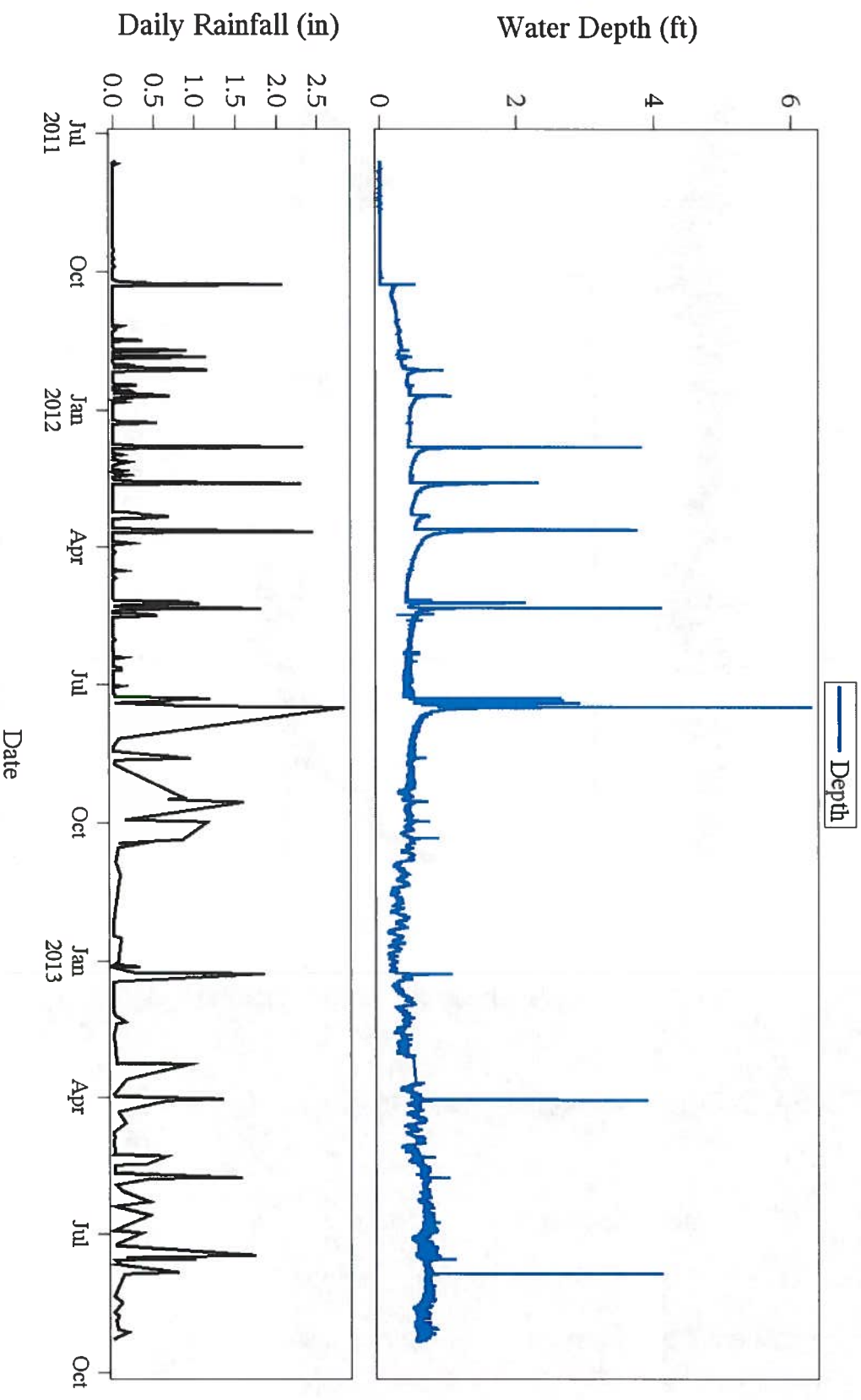


Decline seen in well after tunnel passes, only recently dropping below 2011 drought minimum



Bull Creek @ Trib 7 (Pit Spring proxy)

Bull Creek Spicewood Springs 7th Crossing, Troll

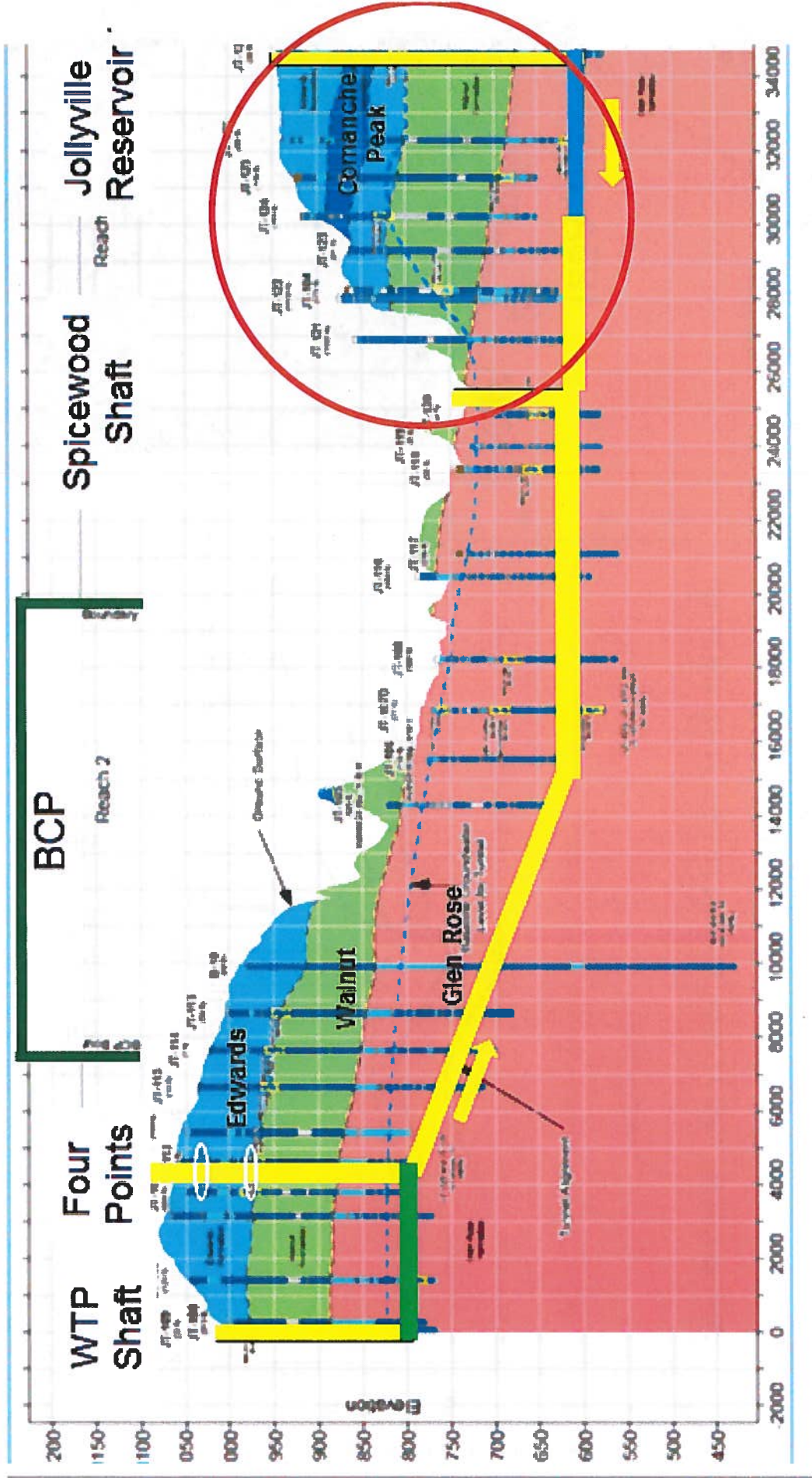


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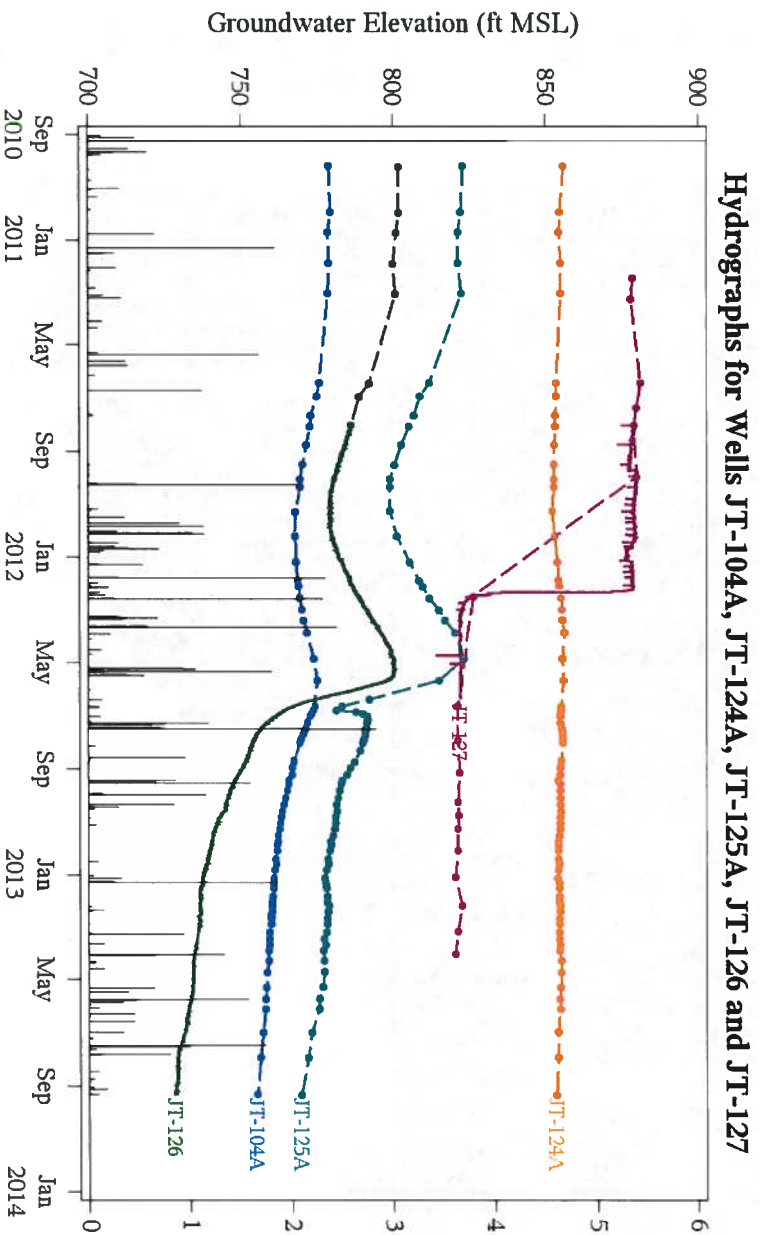


East Side Wells

 = progress



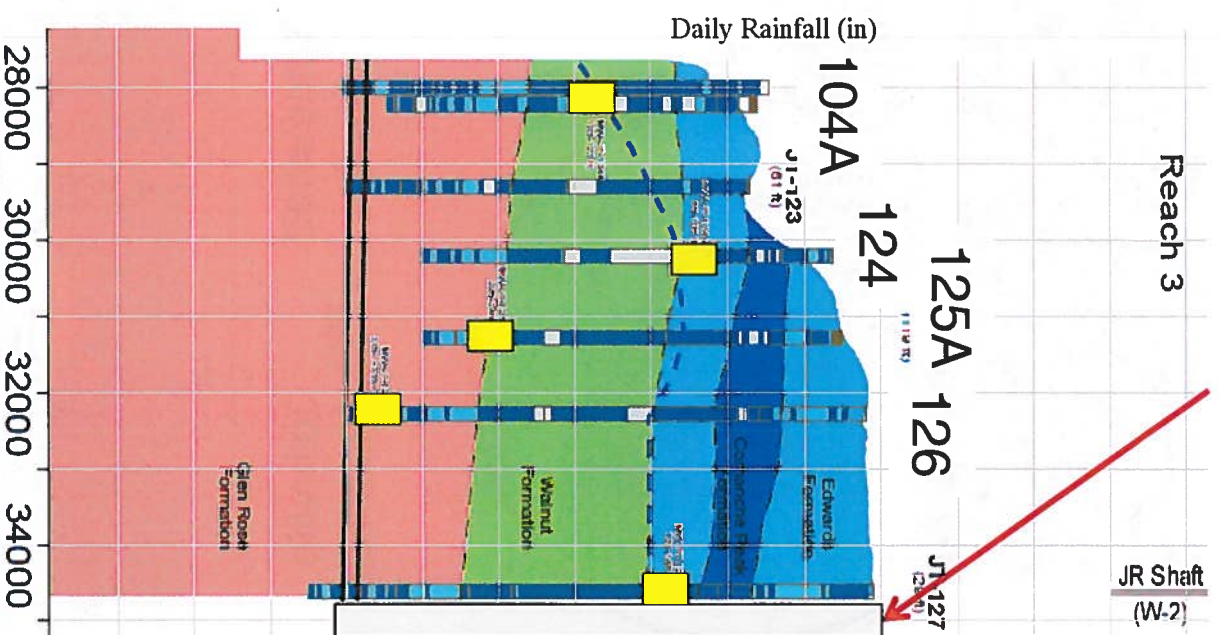
East Side Wells



City of Austin DRAFT, QA/QC review pending

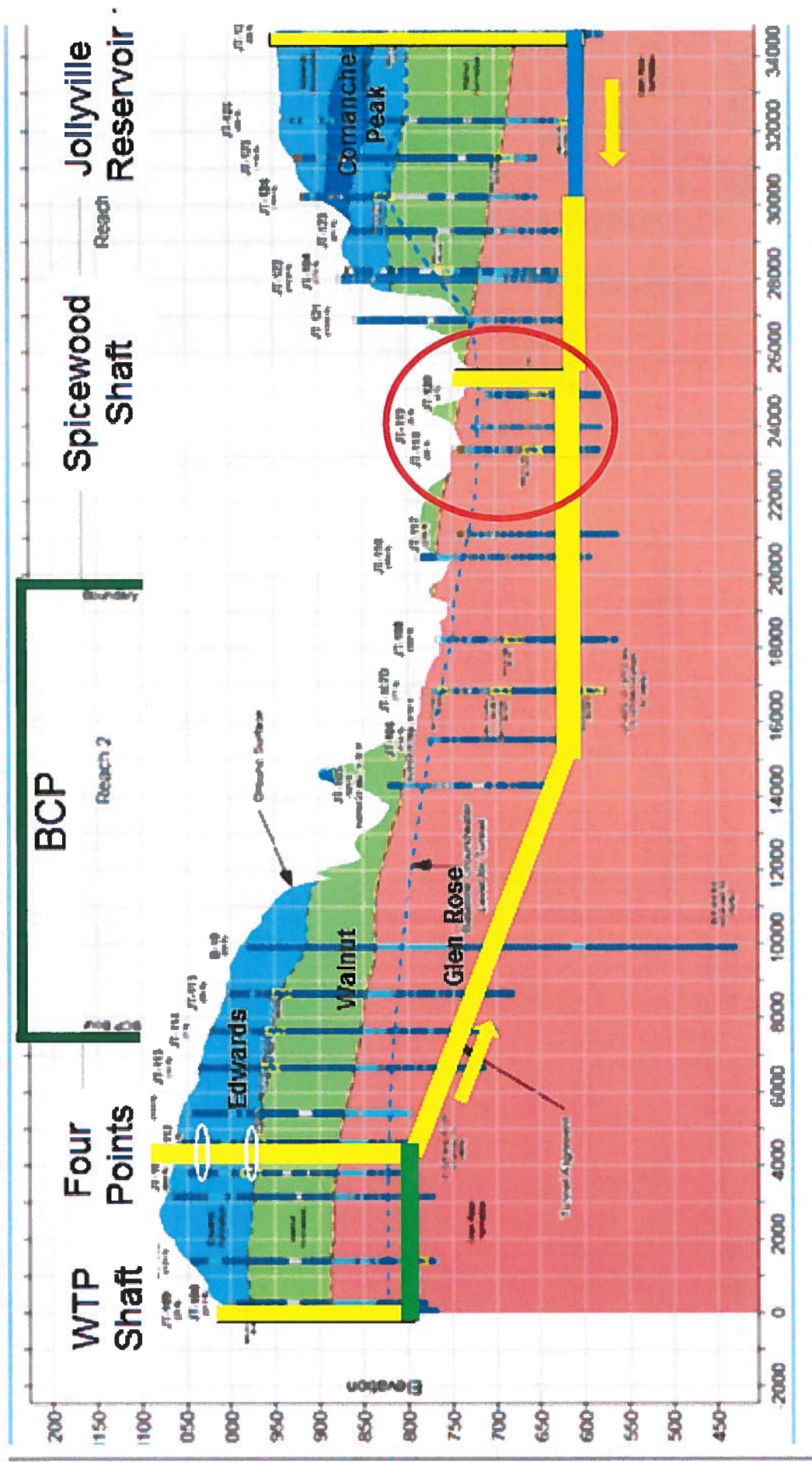
- Reach 3 excavation complete – tunnel has progressed past all wells
- 126, 104 and 125A declining
- JT-124 Edwards well level relatively flat.

Jollyville Reservoir Shaft



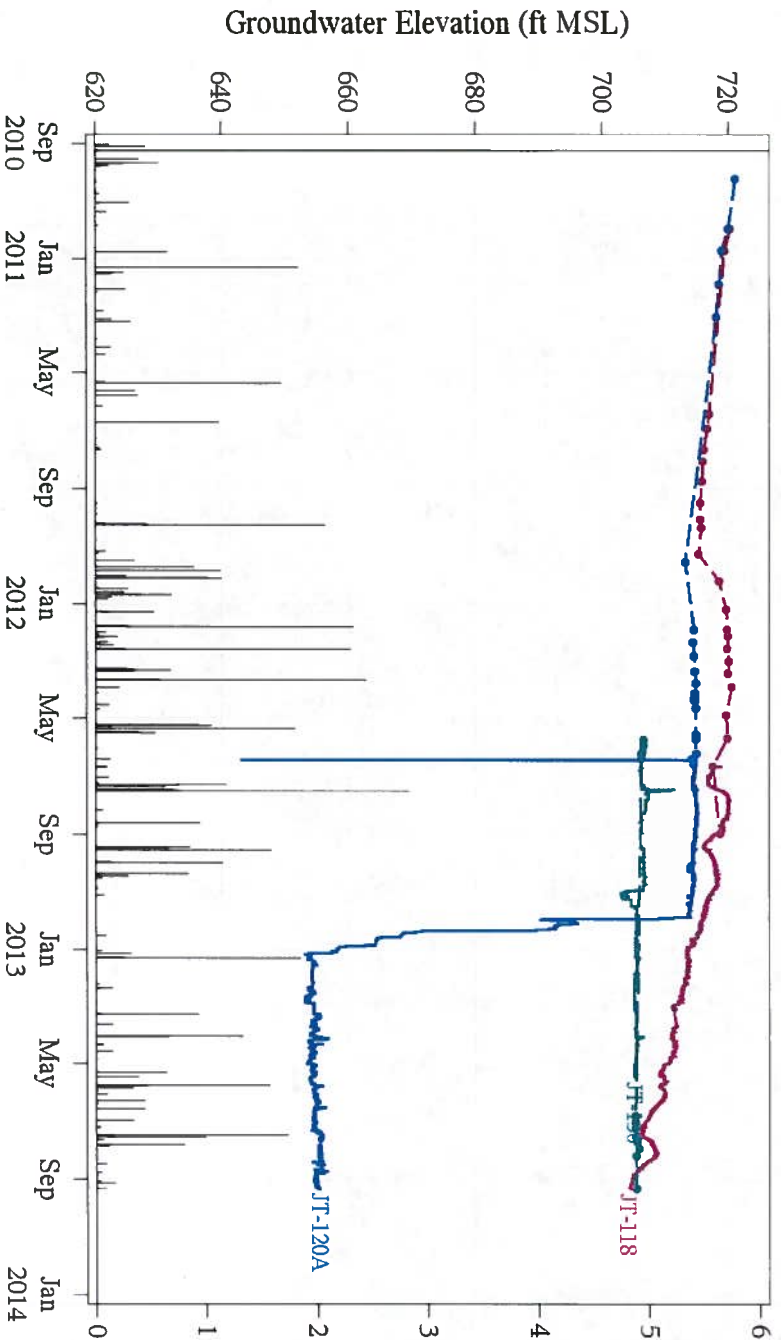


 = progress



Spicewood Shaft Wells

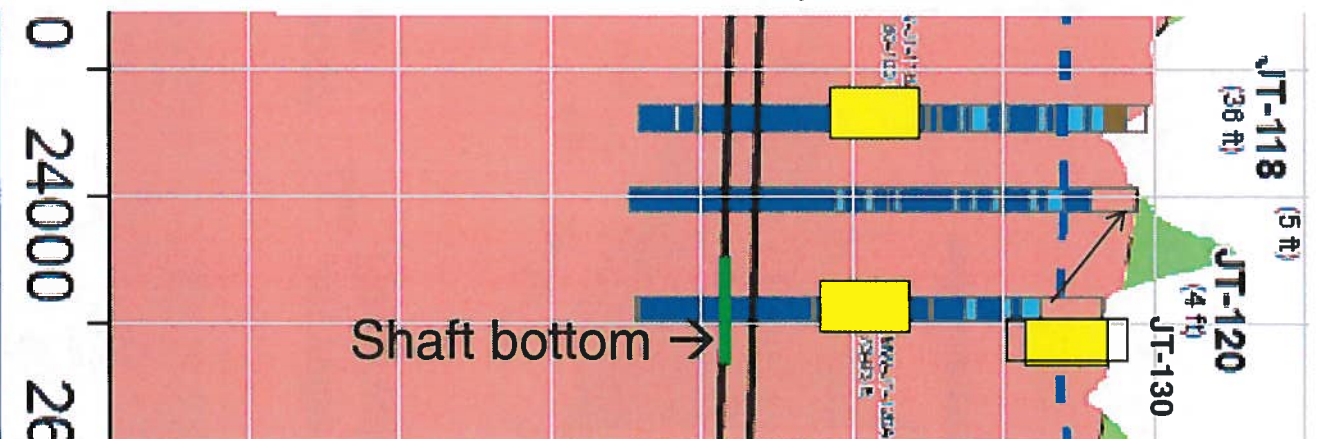
Hydrographs for Wells JT-118, JT-120A and JT-130



City of Austin DRAFT: QA/QC review pending

- JT-120 (adjacent to shaft) water level at bottom of screen
- JT-118 declines influenced by shaft and responsive to rainfall
- JT-130 relatively flat

Daily Rainfall (in)





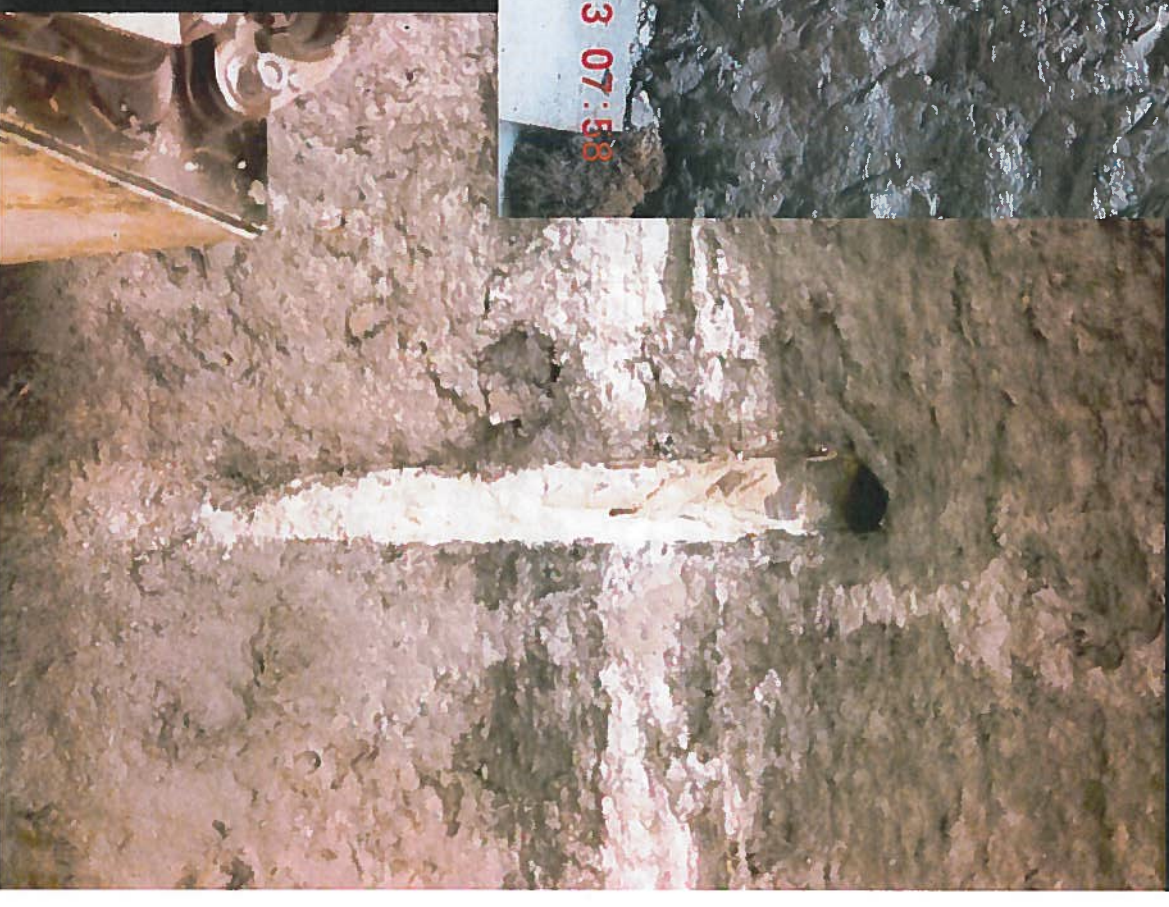
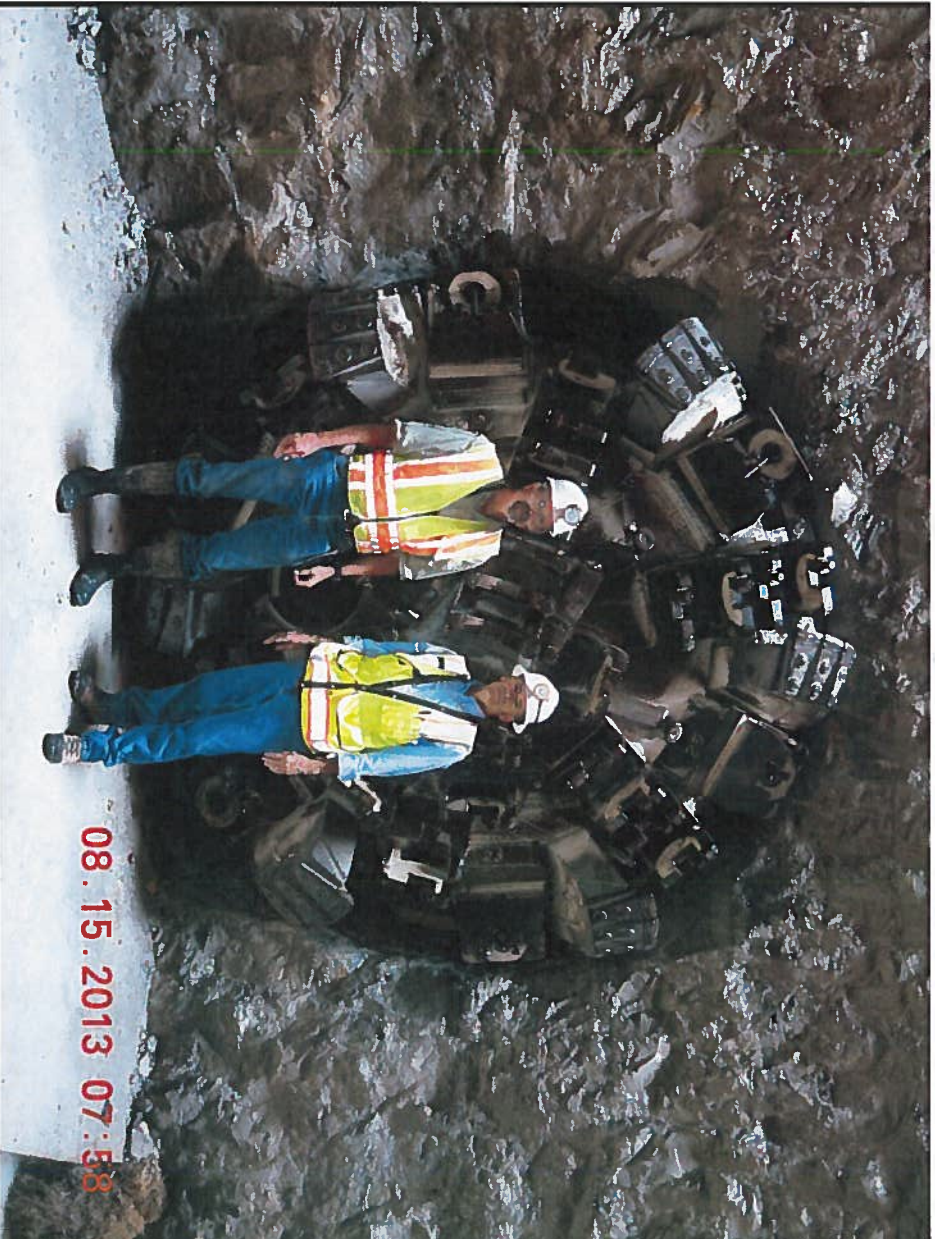
Environmental Monitoring Update – Surface flow



- Main stem Bull creek below Pit Spring is not flowing, although water still present; Lanier spring is dry. Water quality samples not taken.
- Next round of phthalate sampling occurs October 2013 (no new sampling since last report).

Pit Spring 7/2/13

Reach 2 tunnel





JVTM Environmental Monitoring Summary (cont.)

Trigger	Range	Recent Occurrences
TROLL Alarms (107, 130)	Outside of range of historical variability	None
Tunnel Inflow Triggers	Baseline water inflow triggers: 50 gpm over 10 feet of tunnel length 200 gpm over 500 feet of tunnel length 400 gpm over a single tunnel reach (1, 2, or 3) Sensitive area triggers: 25 gpm over 10 ft of tunnel length 100 gpm over 500 ft of tunnel length	Water inflows ~0.15 gpm over entire length of Reach 2 tunnel; ~0.2 gpm Reach 3
Spring/Streamflow Triggers	Relative to one another; paired comparison analysis	All surface sites responding consistently with rainfall and general trends



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