




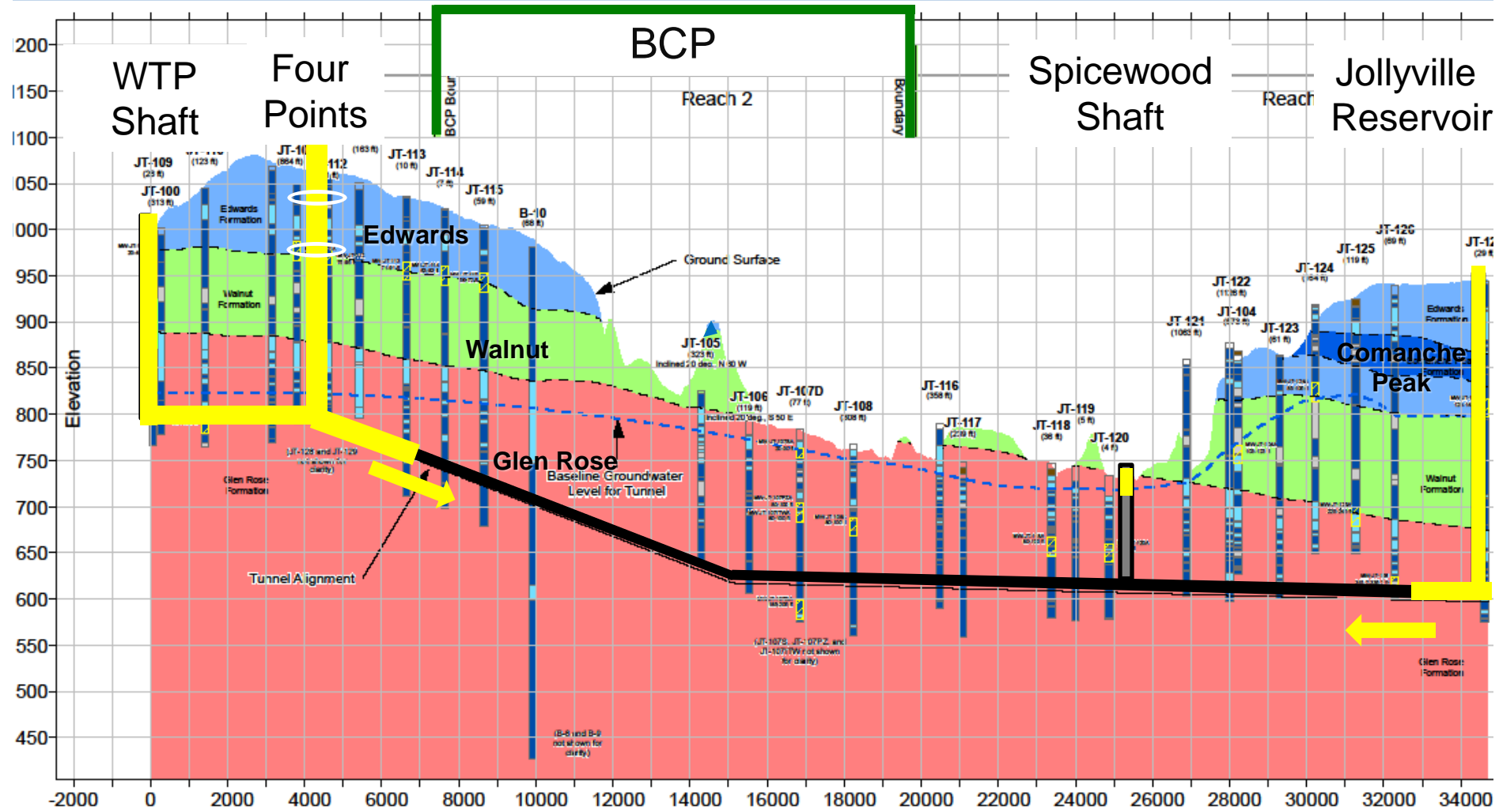
JOLLYVILLE TRANSMISSION MAIN: Environmental Commissioning Monthly Report

Presented to the Austin Environmental Board
October 17, 2012

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

Jollyville Transmission Main Project

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Environmental Commissioning Activities - JVTM

- Monthly shaft site (surface) visits concurrent with plant site visits
- Biweekly shaft/tunnel visits to active shafts (4Points, Jollyville) and tunnel reaches (R2, R3)
- Biweekly meetings of the Environmental Commissioning Coordination Group (ECCG) to resolve possible issues
- Environmental Monitoring
 - *Increased monitoring schedule at adjacent sites as mining progresses in Reach 2, Reach 3 and Spicewood Shaft*
 - *Age Dating sampling 90-95% complete (still will take samples in tunnel once it progresses)*
 - *Dye Trace Results*



Environmental Commissioning Cost Summary


Initial INTERA Contract Amount	\$ 1,713,814
Total Amount Billed to Date (work from July 2012)	\$ 1,310,589
Total Remaining	\$ 403,225

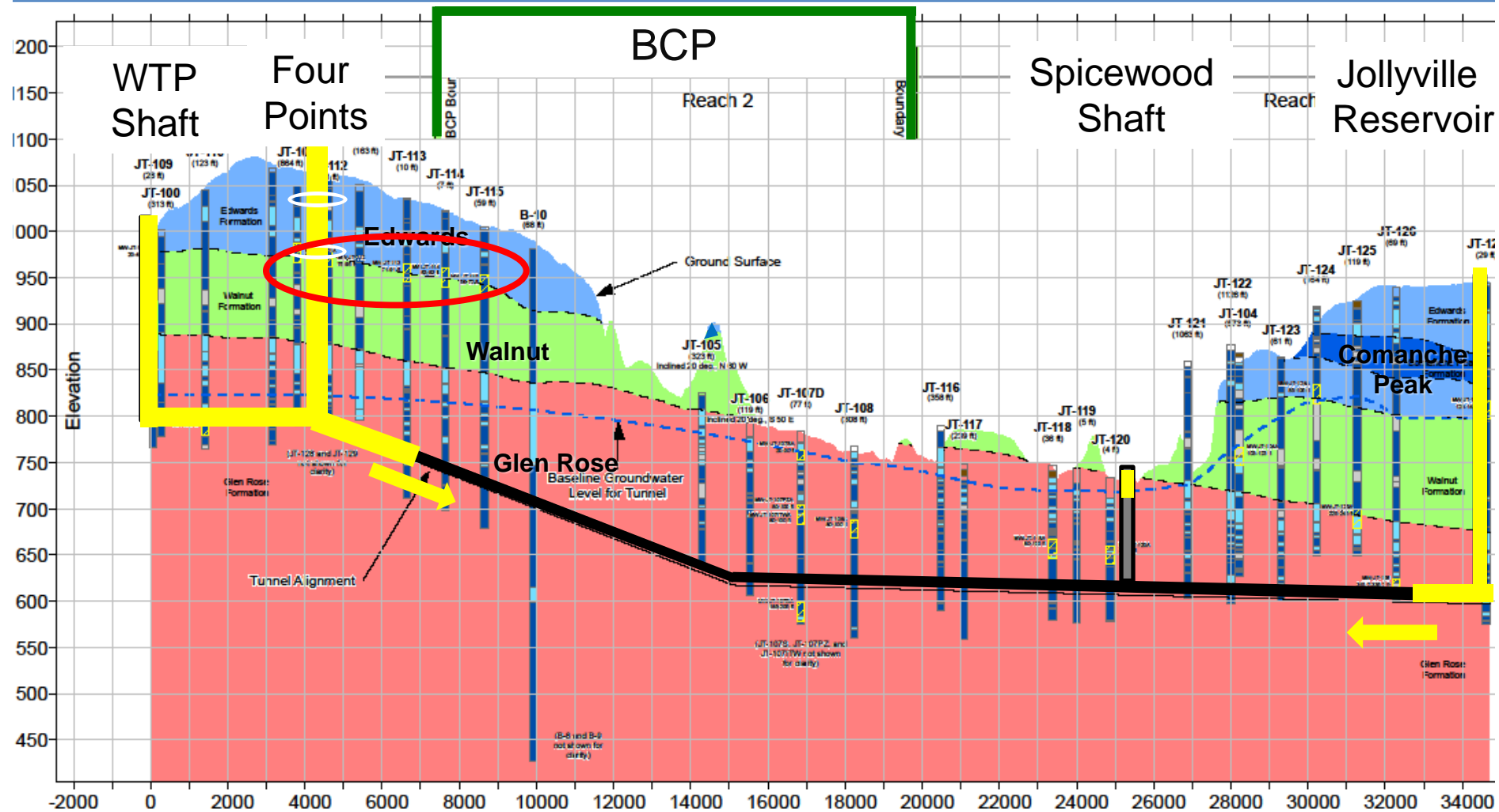


Groundwater Monitoring Well Summary

- West side wells (along tunnel route, Ed/Walnut contact): steady
- Piezometer wells in the BCP along tunnel route: steady
- Spicewood shaft wells reflect rainfall; no shaft influence evident
- East side wells in the Glen Rose continue to decline; shallower Ed/Walnut wells steady.

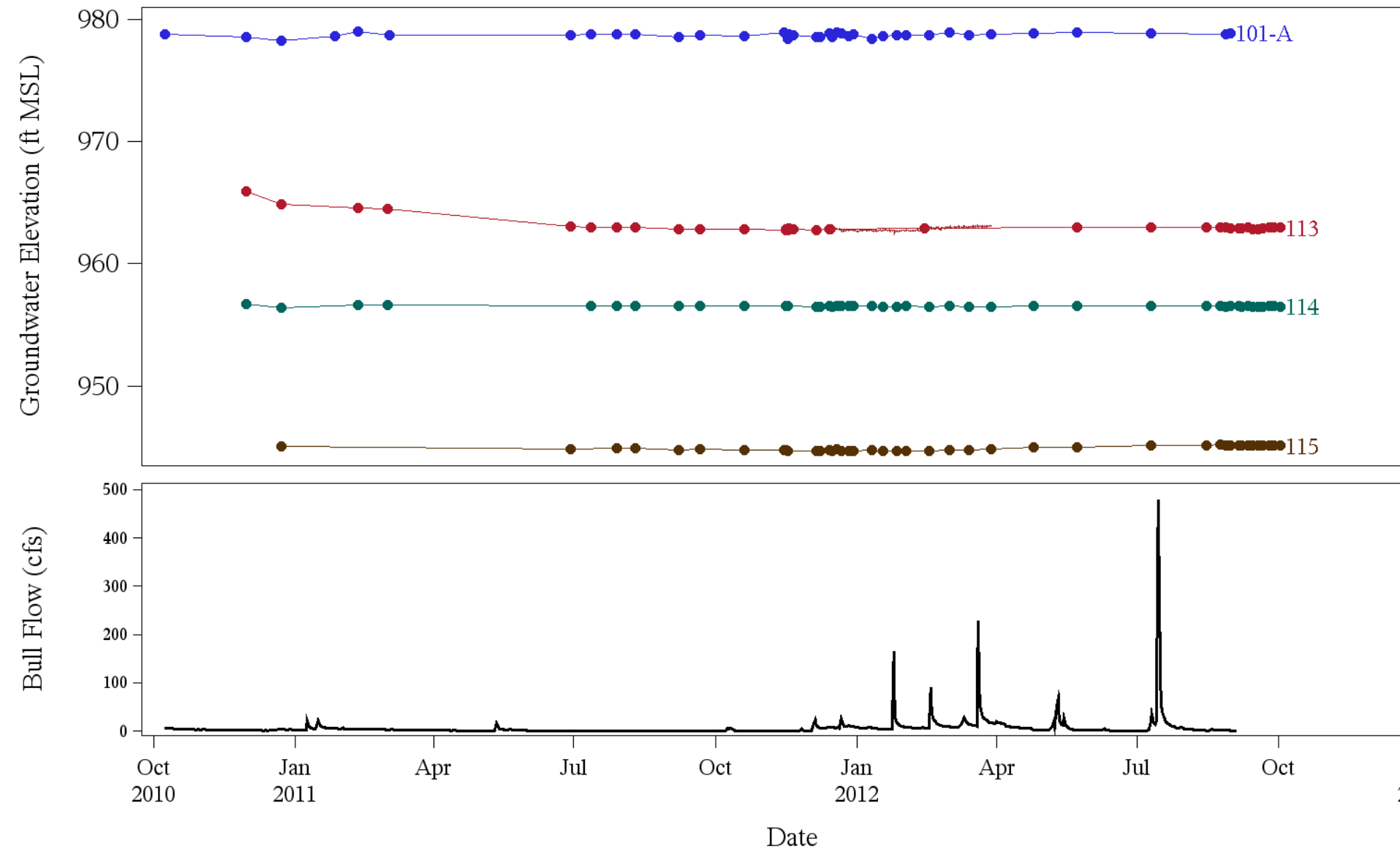
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West Edwards Wells

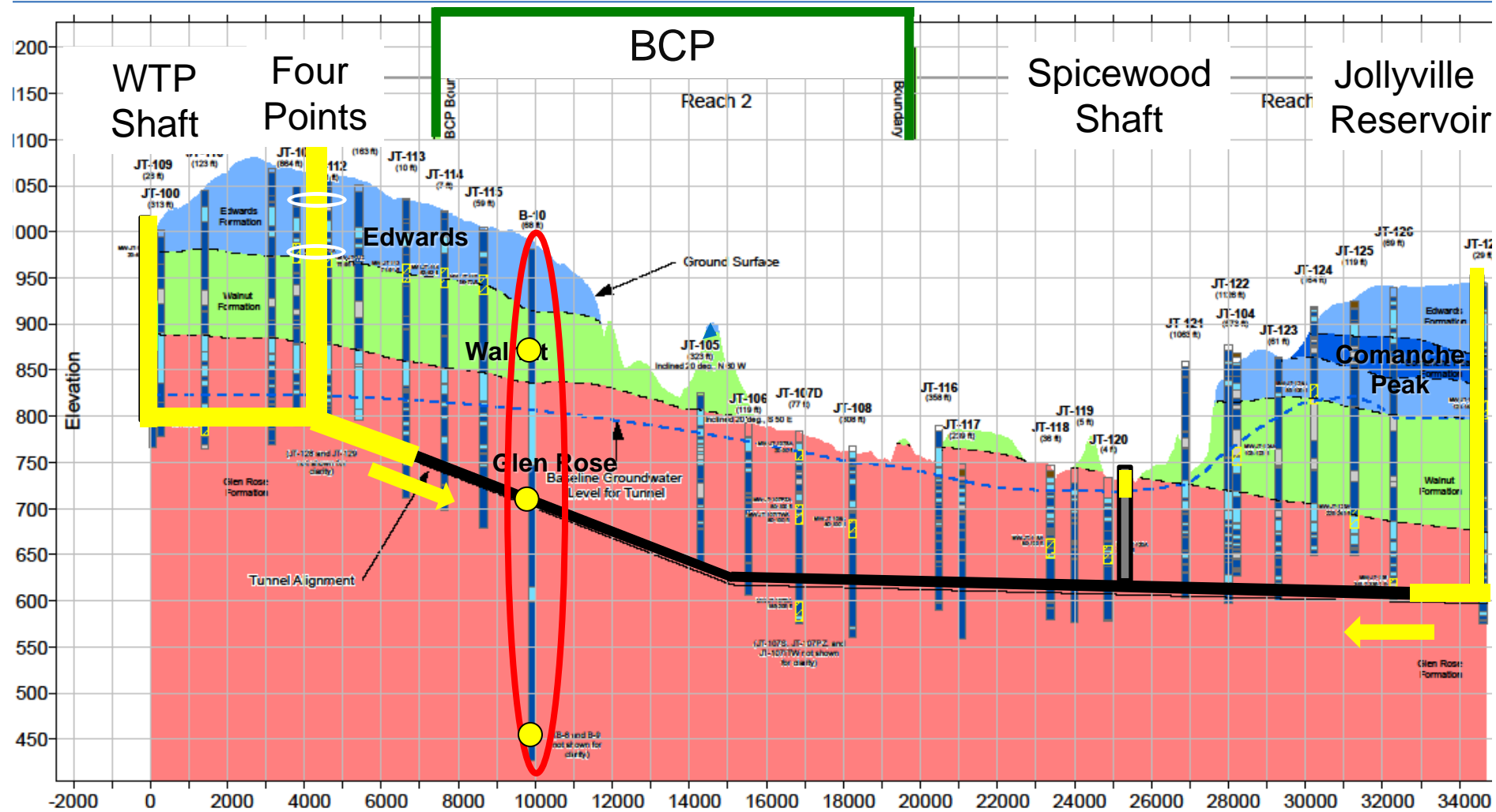
● 101-A ● 113 ● 114 ● 115 ●



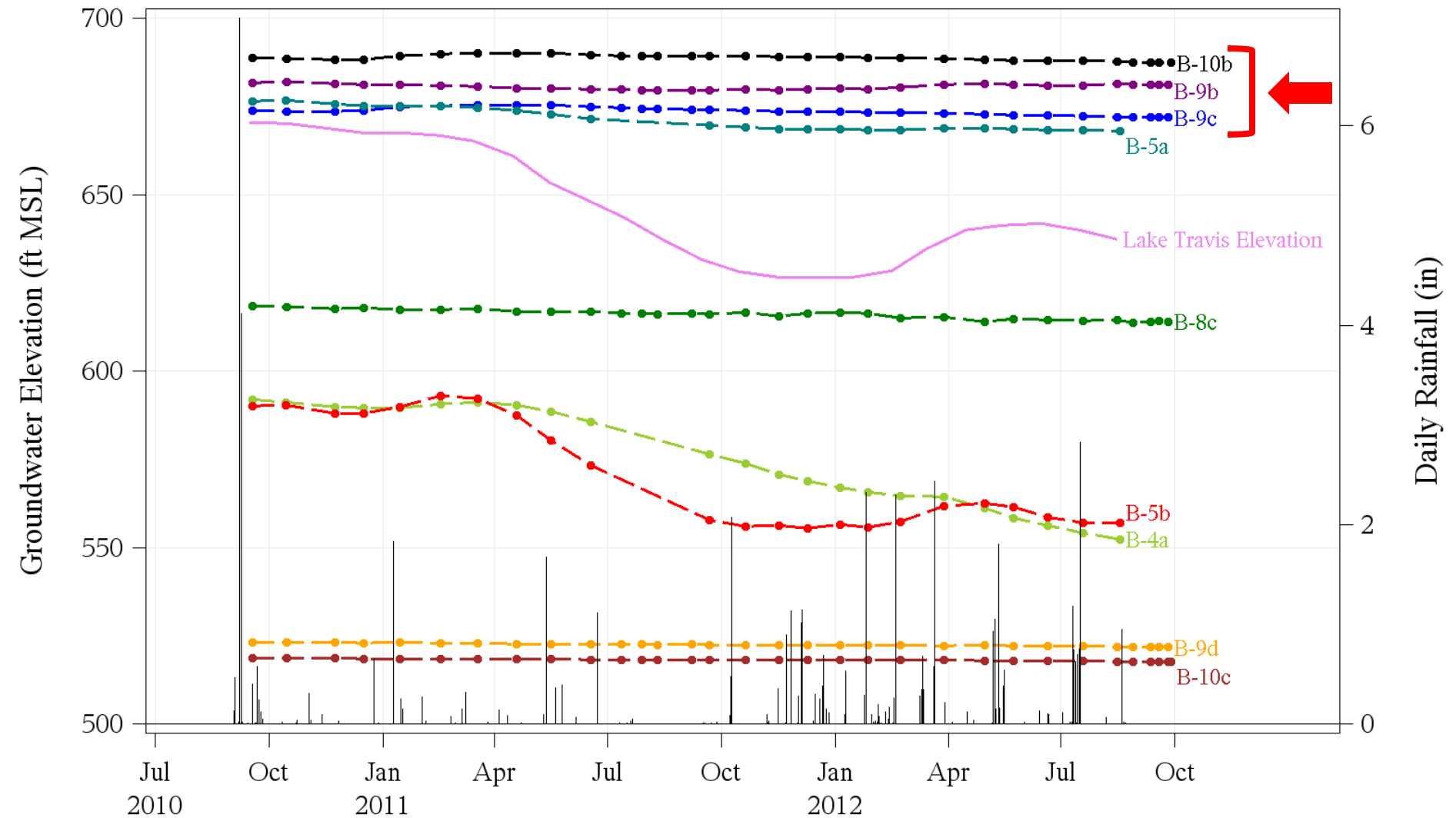
City of Austin DRAFT: QA/QC review pending

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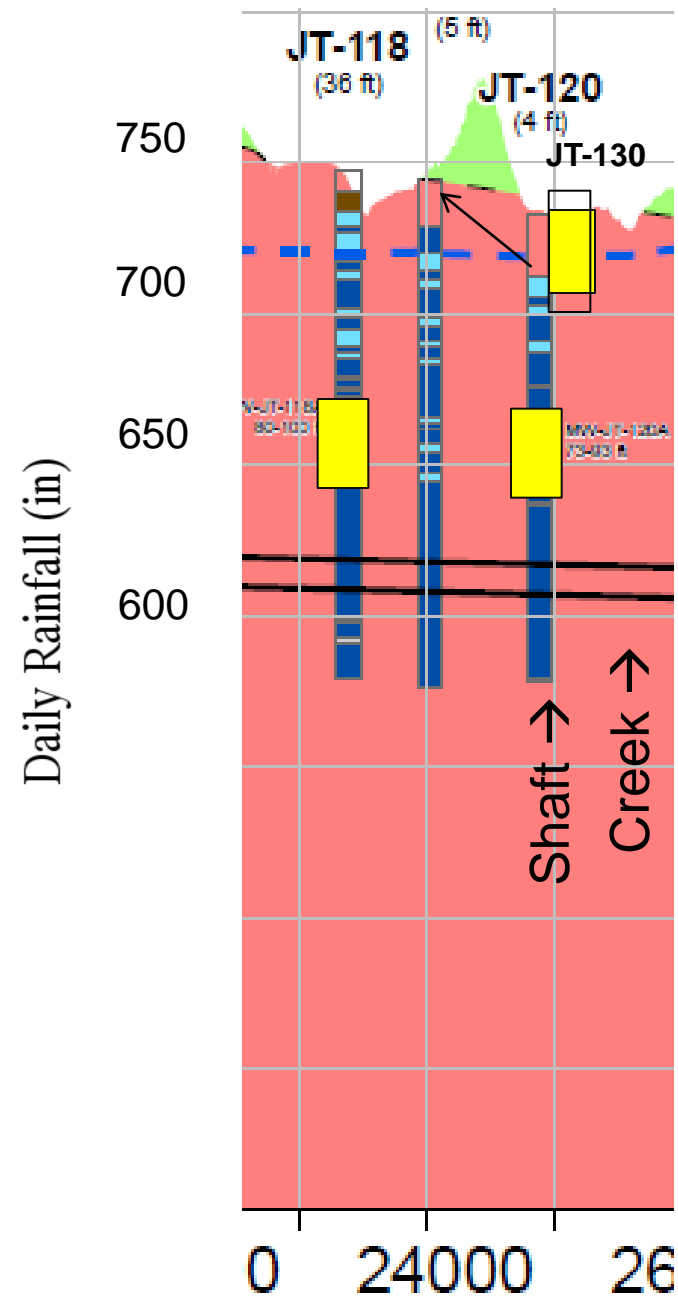
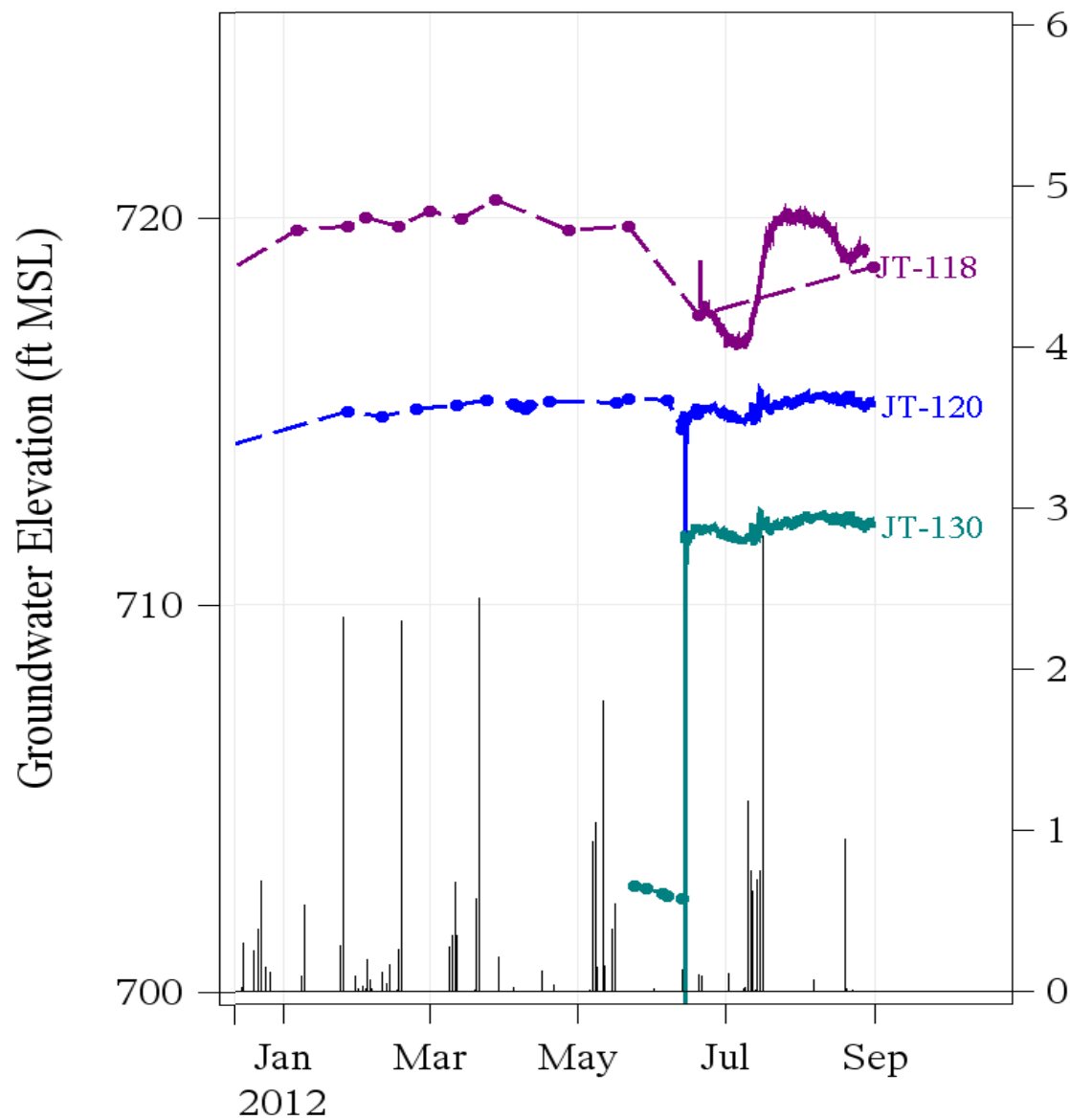


Hydrographs for Western Area, Deep

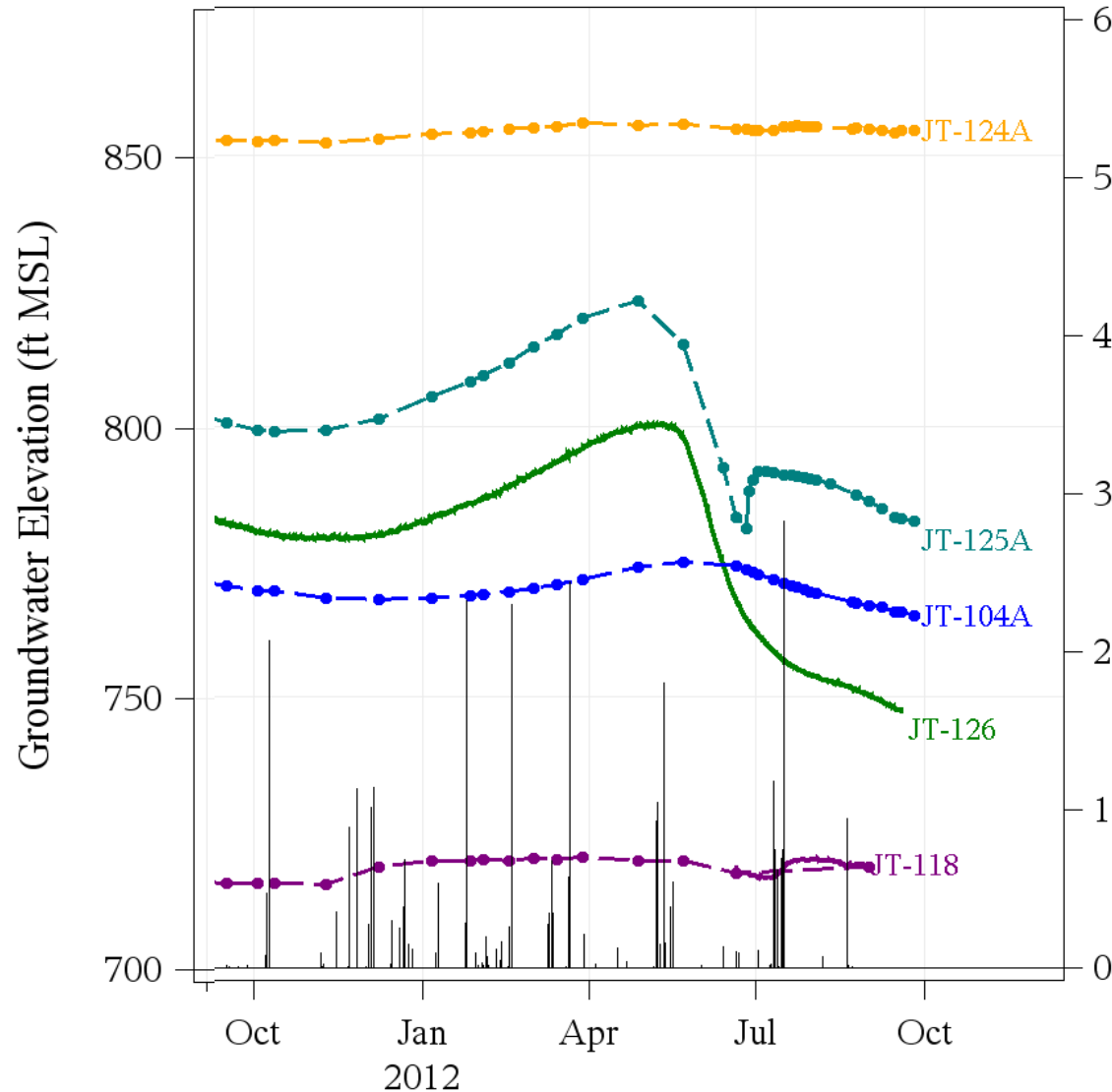


— Rainfall —●— B-10b —●— B-9b —●— B-9c —●— B-5a —●— B-8c —●— B-4a —●— B-5b —●— B-9d —●— B-10c

Spicewood Shaft Wells

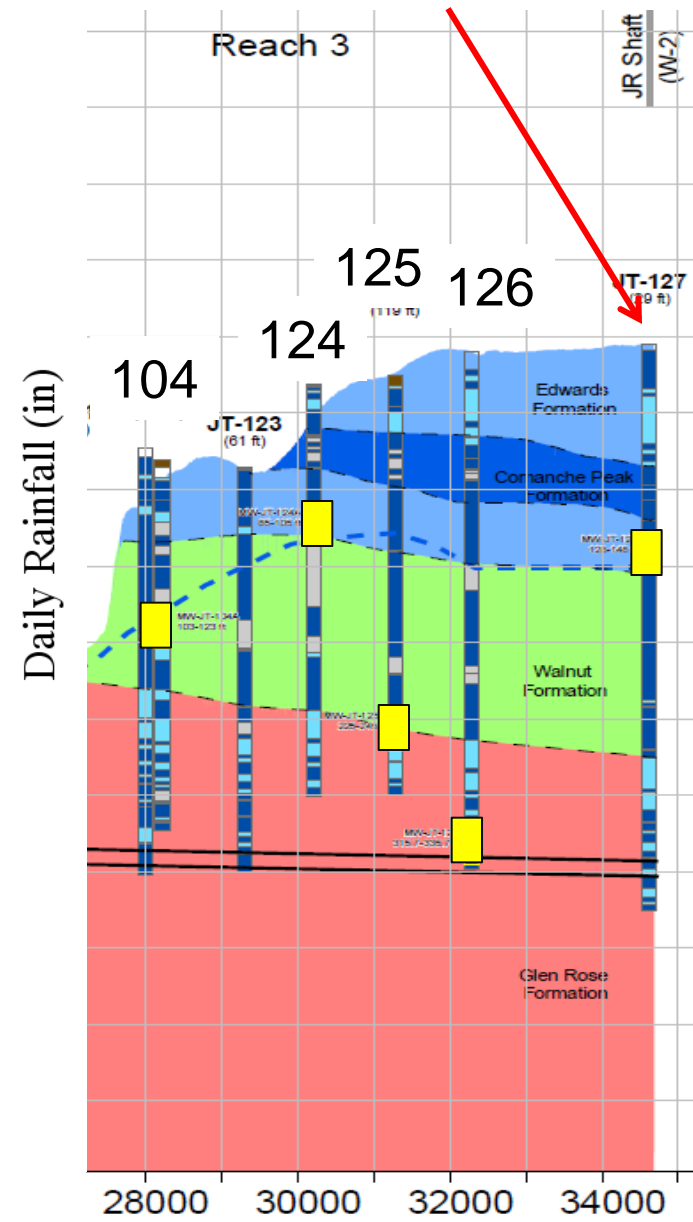


East Side Wells



- JT-126 and JT-125 continue to decline. JT-104 shows similar recent trend.

Jollyville Reservoir Shaft



Environmental Monitoring Update – Surface flow



- All springs and stream reaches flowing
- Water quality parameters within expected ranges
- Nondetects for indicators of mining, vehicular operation, and drilling (TPH, Cu, Cr, Zn)
- Nondetects for di-n-butyl grout compounds in JT-112, Gaas spring

Trib 4 by Spicewood Shaft 7/25/12



Jollyville Plateau Salamander Monitoring

Site	Date of Last Count	Count #	Historical Average (& last four counts)
Lanier	Sept 7, 2012	100	65 (100,56,48,59)
Franklin/Pit	May 18, 2012	100	78 (73,87,39,100)
Tanglewood	May 16, 2012	3	8 (0,0,0,3)
Lower Ribelin	September 2012	94	94 (176,43,42,94)
Upper Ribelin	May 23, 2011	75	64 (123,74,67, 75)
Trib 4 @ Spicewood	August 1, 2012	0	10 (20, 9, 2,0)

-- provided by Nathan Bendik, Salamander Biologist for WPD



JVTM Environmental Monitoring Summary (cont.)

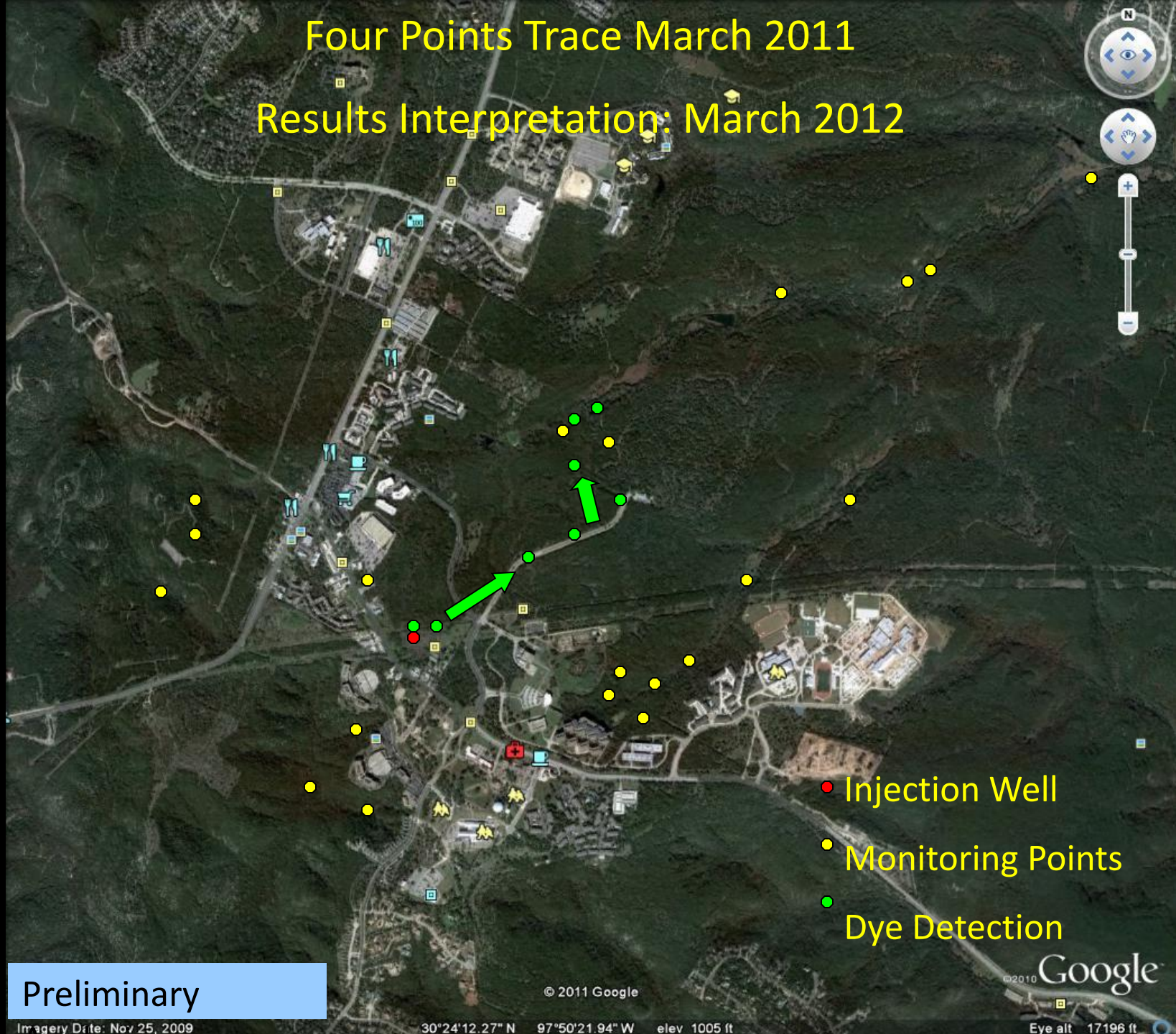
Trigger	Range	Recent Occurrences
TROLL Alarms	Outside of range of historical Variability	None
Tunnel Inflow Triggers	Baseline water inflow triggers: 50 gpm over 10 feet of tunnel length 200 gpm over 500 feet of tunnel length 400 gpm over a single tunnel reach (1, 2, or 3) Sensitive area triggers: 25 gpm over 10 ft of tunnel length 100 gpm over 500 ft of tunnel length	No measurable water inflows No tunneling in sensitive areas
Spring/Streamflow Triggers	Relative to one another; paired comparison analysis	All surface sites responding consistently with rainfall and general trends

Reach 3 tunnel – no measurable inflows

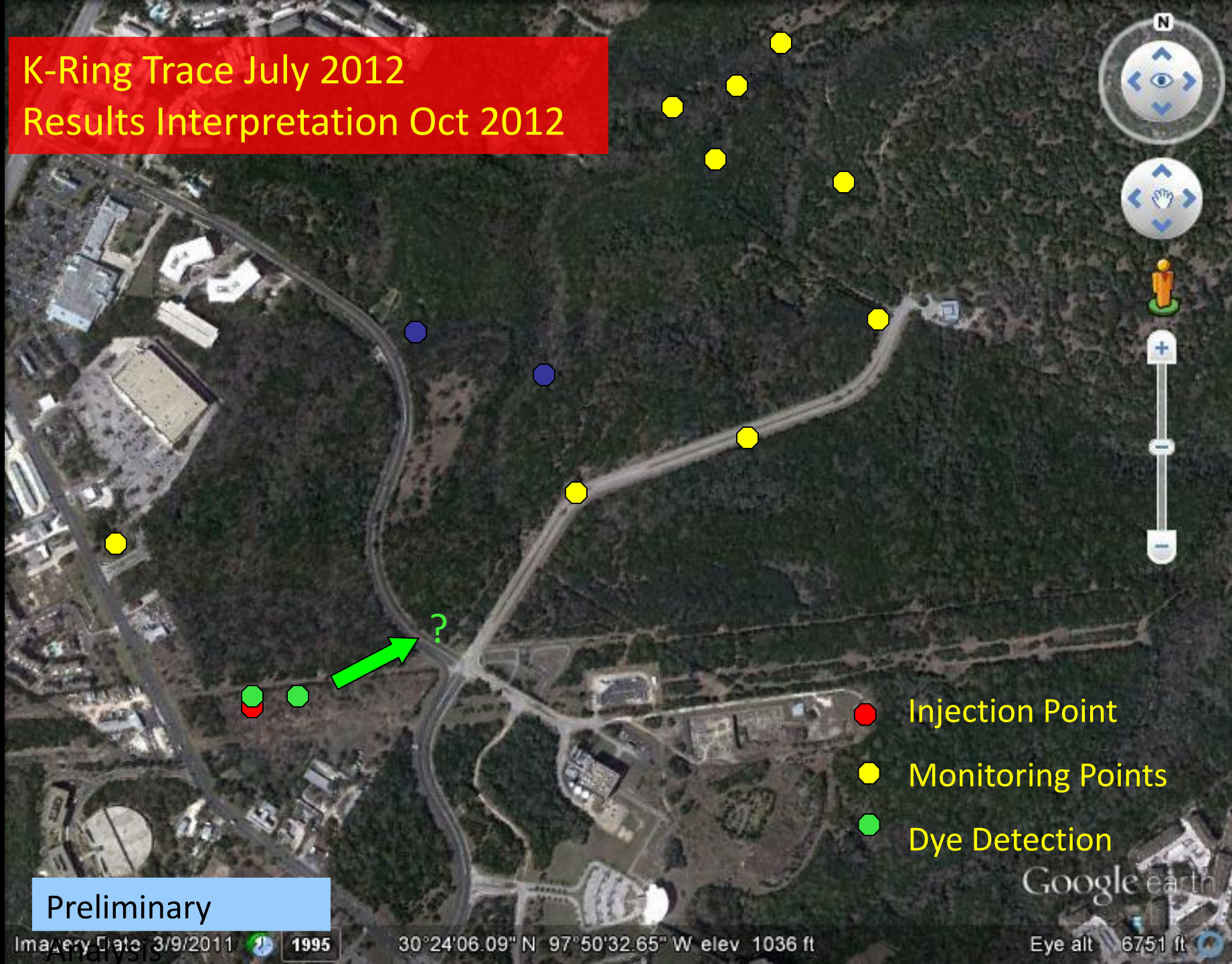


Four Points Trace March 2011

Results Interpretation: March 2012



K-Ring Trace July 2012 Results Interpretation Oct 2012



Preliminary



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