



Fluvanna County Water Options

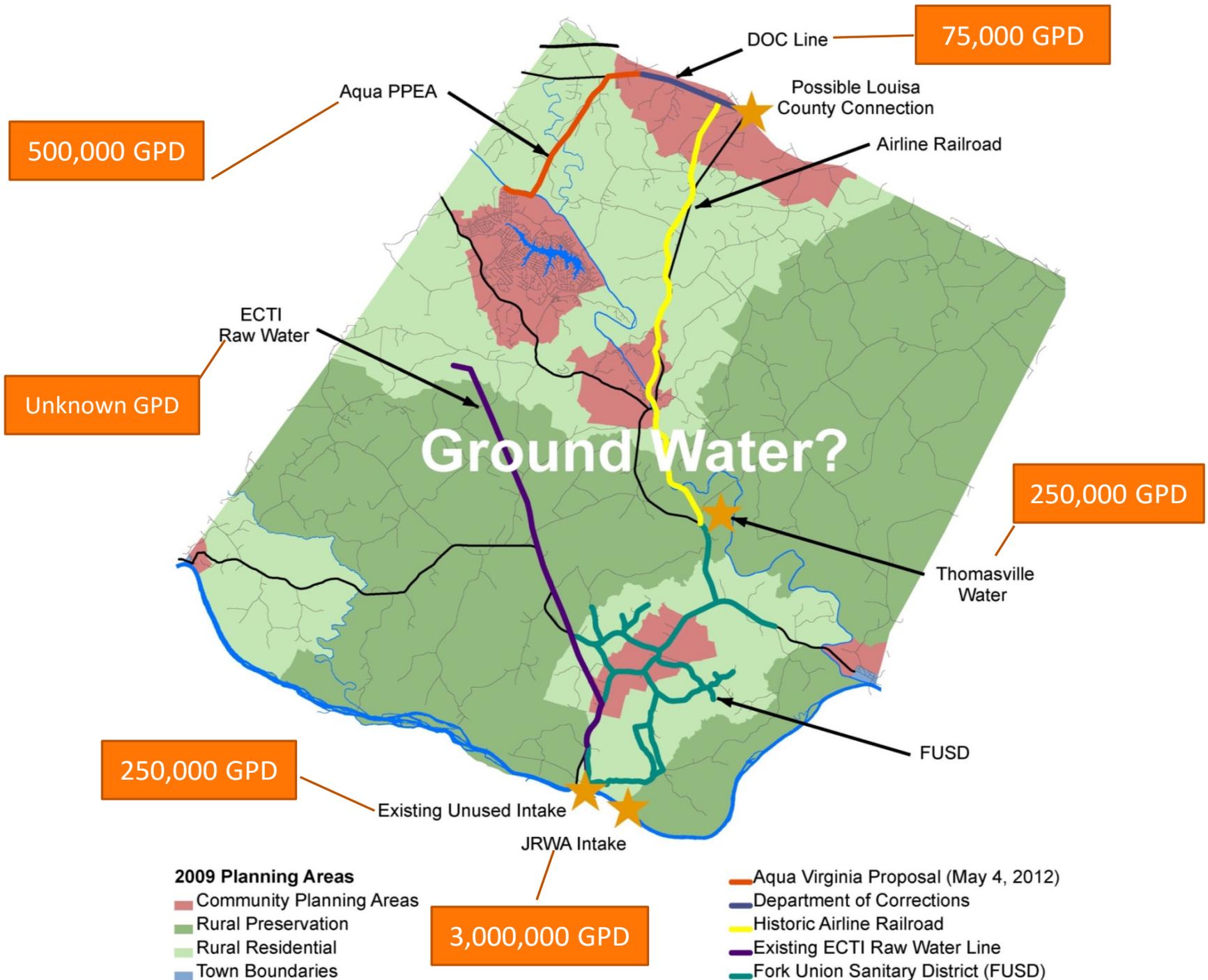
July 3, 2013



Water Source Review

- **We are surface water “rich”**
 - Investigating all surface water sources
 - JRWA (3,000,000 GPD permit)
 - Aqua Virginia PPEA (500,000 GPD)
 - DOC (75,000 GPD plus sewer)

- **Are we ground water rich?**
 - Investigating ground water sources
 - Hydrogeological analysis planned in FY14 that can typically increase the reliability of ground water sources
 - Good quality, high yield wells are less expensive to develop, treat, and operate than surface water systems



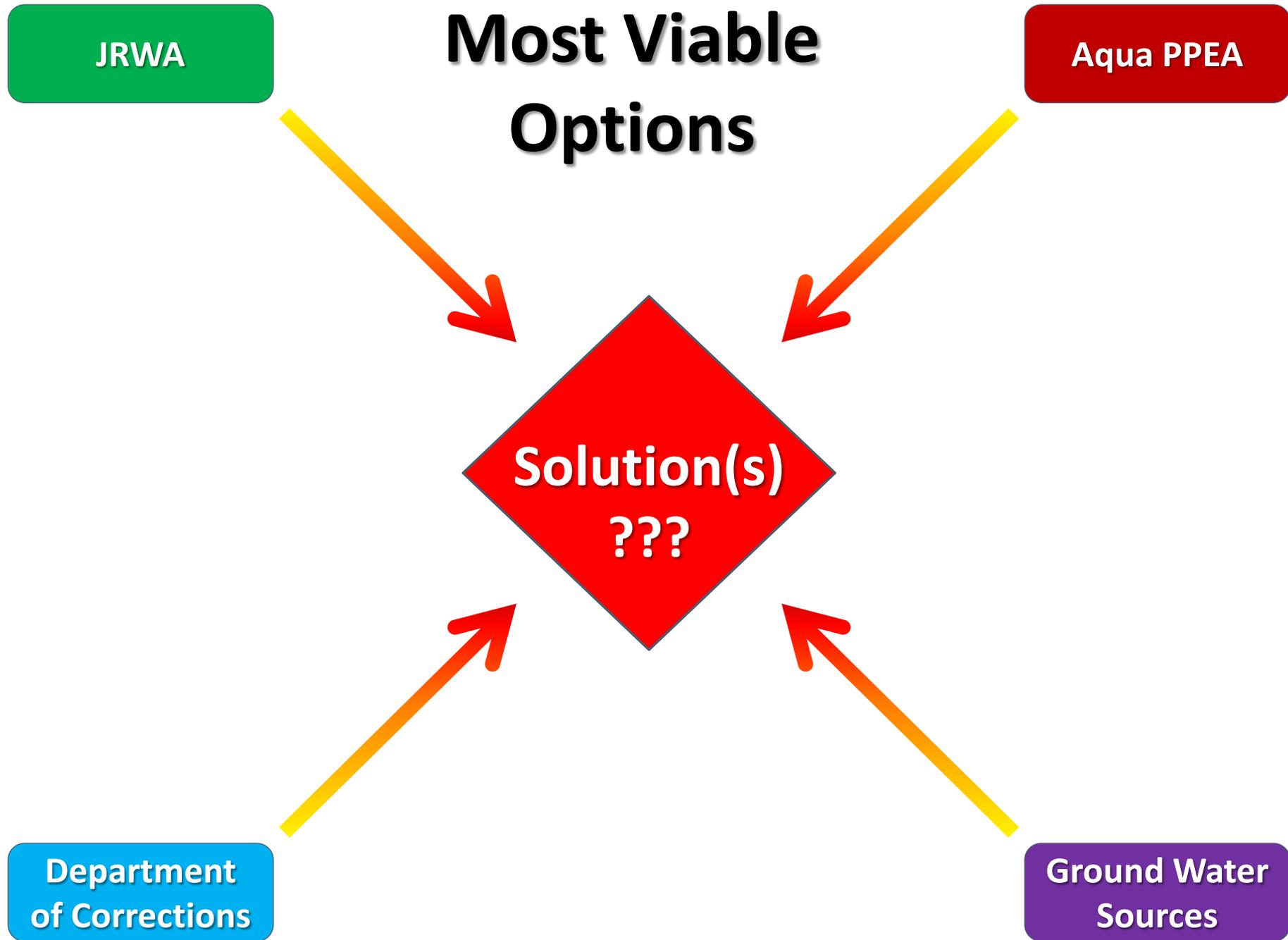
Estimated Water Capacity Requirements to Support Zion Crossroads Development

New Business Types	Number of Businesses	Total GPD Required
Restaurants	2	5,000
Motel	1	9,750
Fast Food	2	15,000
Medical Facility	1	45,000
Doctors Offices	4	2,000
Light Industry	2	6,000
Misc.	1	1,000
Total Gallons Per Day (Ten Year Span)		83,750

Available Gallons Per Day for Water Options

Water Source	Gallons Per Day (GPD)
Aqua Virginia Proposal	500,000
Department of Corrections	75,000
“Thomasville” Wells	250,000
ECTI Raw Water	Full GPD Unknown
Existing Unused Intake (James)	250,000
James River Water Authority	3,000,000

Most Viable Options



JRWA

Aqua PPEA

Solution(s)
???

Department
of Corrections

Ground Water
Sources

JRWA

JRWA

Aqua PPEA

- **“Big Straw” water source**
 - Total of 3,000,000 GPD for Fluvanna/Louisa
- **Louisa ready to move forward**
- **Considerations**
 - Cost/effort to move permit from Bremono Bluff area to Columbia area
 - Cost of intake
 - Cost of easements along Colonial Pipeline
 - Cost of raw water pipeline adjacent to Colonial Gas pipeline
 - Fluvanna County costs now

Department
of Corrections

Ground Water
Sources

JRWA

Aqua Virginia PPEA

Aqua PPEA

- **Provides up to 500K GPD of treated water**
 - Requires agreement with DOC and connection for sewer service
- **Annual payment of at least \$912K for 20 years**
 - *One year advance deposit required 45 days after signature*
 - 10% annual escrow payment also required
 - Service district size and mandatory connections required
 - *Options after 20 years for continuation, buyout, turn over*
- **Water Cost - \$2.94 per thousand gallons**
- **Sewer Cost - \$1.60 per thousand gallons**

Department
of CorrectionsGround Water
Sources

JRWA

DOC

Aqua PPEA

- **Excess capacity under existing withdrawal permit**
 - Water - 75K GPD
 - Sewer – 125K GPD
- **Build-out and operating costs estimate**
 - FY14 CIP - \$575,000
 - FY15 CIP - \$3,100,000
 - FY16 CIP - \$975,000
- **Water Cost - \$1.50 per thousand gallons**
- **Sewer Cost - \$1.50 per thousand gallons**

Department
of Corrections

Ground Water
Sources

JRWA

Ground Water

Aqua PPEA

- **FY14 CIP funding for first phase Hydrogeologic studies in growth areas**
- **“Thomasville” wells under review**
 - Potential 250K GPD
- **Additional existing FUSD well under review**

Department
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Ground Water
Sources

Financing Costs

July 2013 Estimate

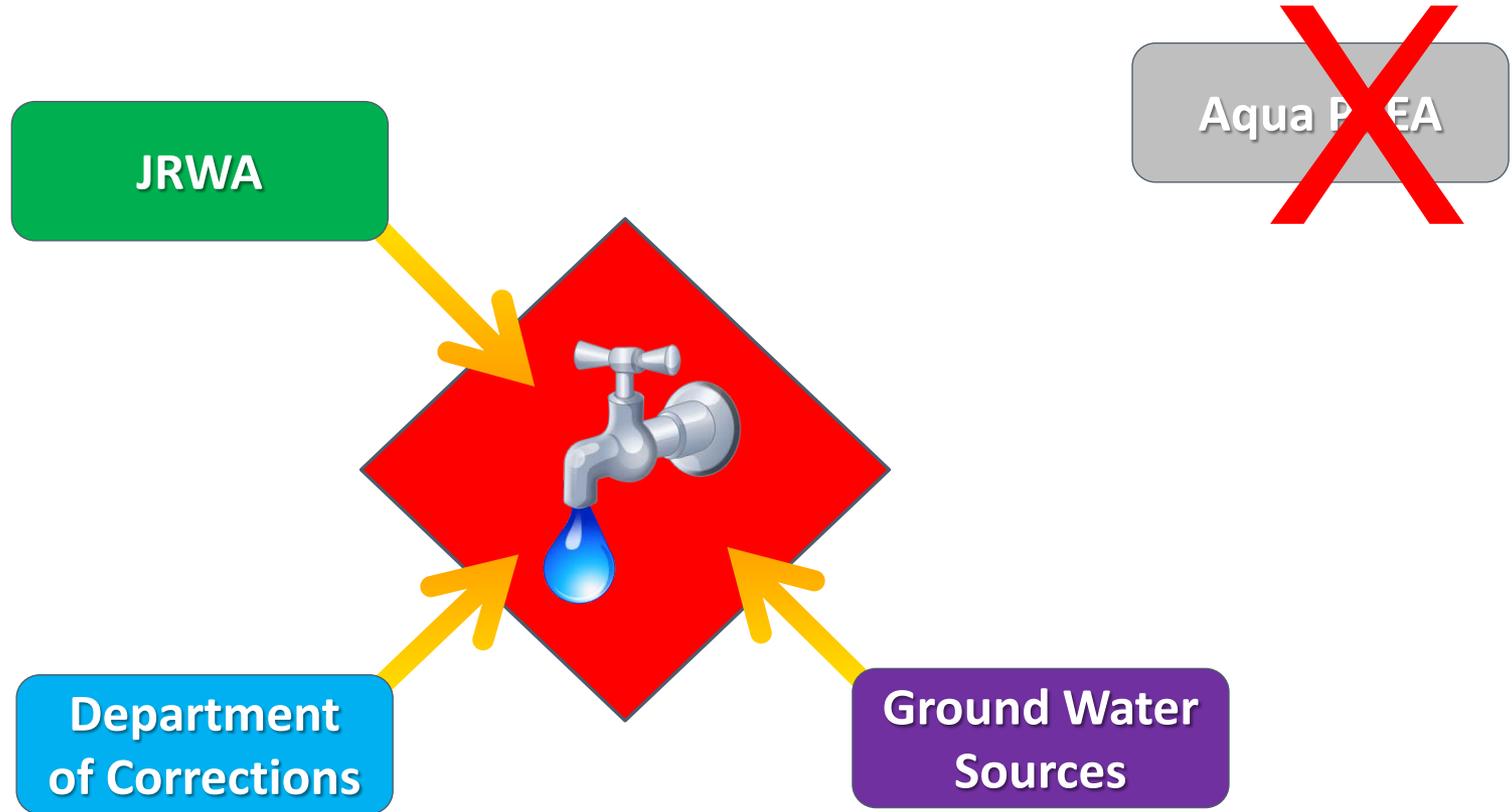
Term	Amount Financed		
20 Years (at 5%)	\$3,000,000	\$5,000,000	\$10,000,000

Payment	Date	Total Payment (P&I)	Total Payment (P&I)	Total Payment (P&I)
1	15-Jul-15	\$267,945	\$446,575	\$893,151
2	14-Jul-16	292,500	487,500	975,000
3	14-Jul-17	285,000	475,000	950,000
4	15-Jul-18	277,849	463,082	926,164
5	15-Jul-19	270,000	450,000	900,000
6	14-Jul-20	262,500	437,500	875,000
7	14-Jul-21	255,000	425,000	850,000
8	15-Jul-22	247,767	412,945	825,890
9	15-Jul-23	240,000	400,000	800,000
10	14-Jul-24	232,500	387,500	775,000
11	14-Jul-25	225,000	375,000	750,000
12	15-Jul-26	217,685	362,808	725,616
13	15-Jul-27	210,000	350,000	700,000
14	14-Jul-28	202,500	337,500	675,000
15	14-Jul-29	195,000	325,000	650,000
16	15-Jul-30	187,603	312,671	625,342
17	15-Jul-31	180,000	300,000	600,000
18	14-Jul-32	172,500	287,500	575,000
19	14-Jul-33	165,000	275,000	550,000
20	15-Jul-34	157,521	262,534	525,068
TOTAL PAYMENTS		\$4,543,870	\$7,573,116	\$15,146,233

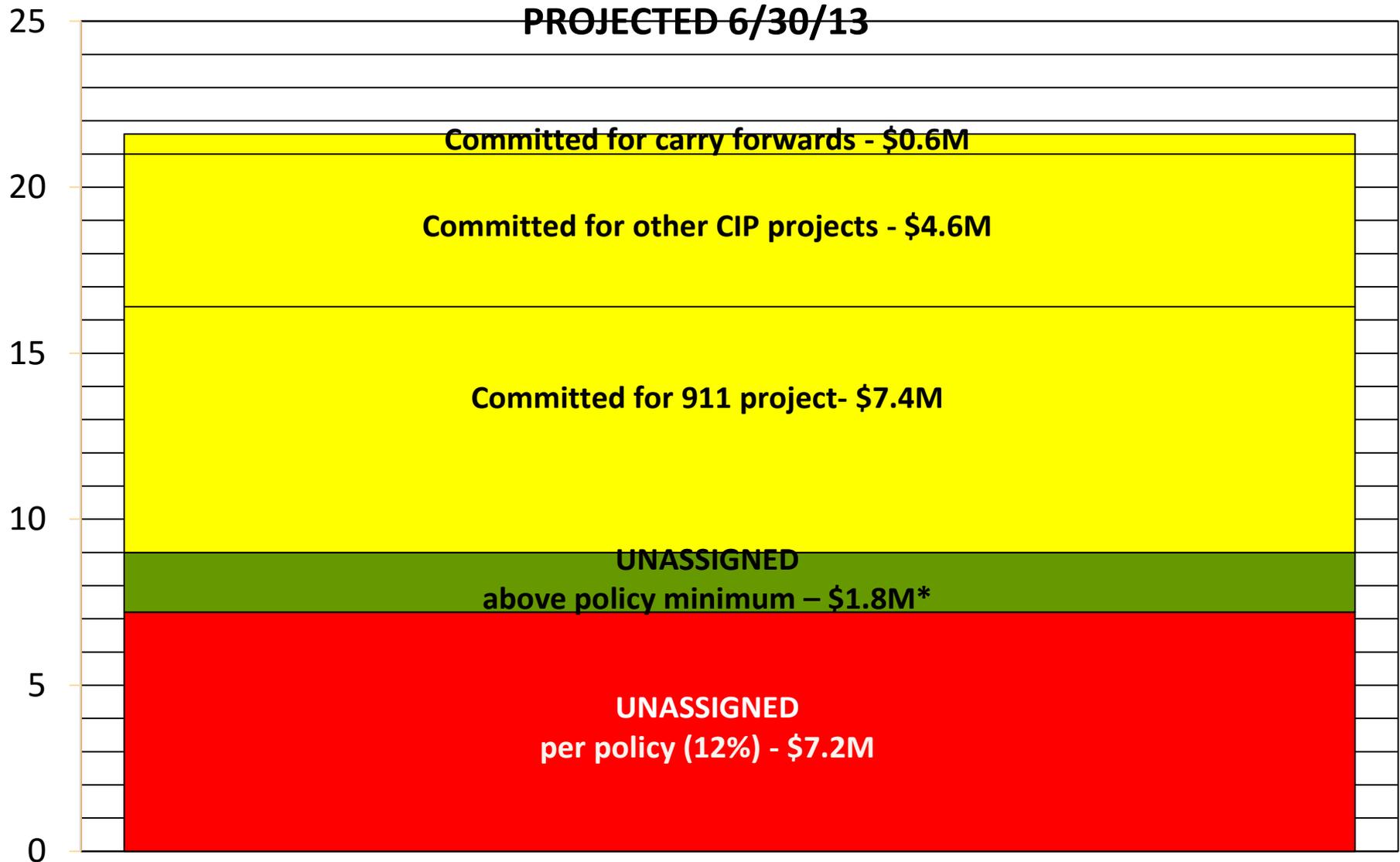
AQUA PPEA	
<i>Plus 10% annual escrow payment</i>	
Date	Payment Minimums
~01-Jan-14	\$912,292
15-Jul-15	912,292
14-Jul-16	912,292
14-Jul-17	912,292
15-Jul-18	912,292
15-Jul-19	912,292
14-Jul-20	912,292
14-Jul-21	912,292
15-Jul-22	912,292
15-Jul-23	912,292
14-Jul-24	912,292
14-Jul-25	912,292
15-Jul-26	912,292
15-Jul-27	912,292
14-Jul-28	912,292
14-Jul-29	912,292
15-Jul-30	912,292
15-Jul-31	912,292
14-Jul-32	912,292
14-Jul-33	912,292
	\$18,245,840

Staff Recommended Water Solution

- Based on short- and long-term needs



Fund Balance Projection (in Millions)



* Based on proposed FY14 CIP



Questions?