
From: Kunysz,Kathy
Sent: Friday, July 10, 2015 11:28 AM
To: Ti,Mike N
Subject: FW: IRP Groundwater Update
Attachments: Ground and Surface Water Data for the San Diego Region.xlsx

I will look through the san diego data responses and let you know what I think.

From: Brian Olney [mailto:Brian.Olney@HELIXWATER.org]
Sent: Monday, June 29, 2015 10:11 AM
To: 'Mariscal, Maria'; Paul Gebert (pgeb@sdewa.org)
Cc: Kunysz,Kathy; Sumi,David H; Mark Umphres
Subject: RE: IRP Groundwater Update

Hi Paul and Maria,
Attached is the updated spreadsheet with updated Helix surface water data.

Brian Olney
Helix Water District
System Operations Manager
Office:619-596-1362
Cell: 619-962-7442

From: Mariscal, Maria [mailto:MMariscal@sdewa.org]
Sent: Wednesday, June 17, 2015 4:59 PM
To: Cross, Gregory; Crocker, Cindy; Abutin, Larry; Wiborg, Lan; asandvik@padre.org; jslakeside@yahoo.com; Mark Umphres; Adrian, George; Albert Lau; Brian Olney; Sanders, Brett; 'Jack Bebee'; Simpson, John; 'mgarrod@sweetwater.org'; Bill O'Donnell; 'Cor V. Shaffer'; Craig Whittemore; 'Don A. Smith (dsmith@vid-h2o.org)'; 'Jim Anderson'; 'tzaragoza@ci.poway.ca.us'
Cc: Gebert, Paul; Sumi,David H (DSumi@mwdh2o.com); Kathy Kunysz (kkunysz@mwdh2o.com); Frieauf, Dana; Stadler, Mark; Chen, Amy
Subject: IRP Groundwater Update

Dear Member Agency Managers and Staff,

Attached is an excel spreadsheet indicating agency draft projections for surface water, groundwater production, and projections of sources and amounts of groundwater recharge in normal and multiple-dry-year situations. This information will be used in Metropolitan's 2015 update of its Integrated Resources Plan (IRP). This update will help to identify strategies and policies formulated to address potential regional deficits of groundwater recharge under multiple-dry-year scenarios.

Please review the spreadsheet carefully **and provide corrections to the production and recharge projections in RED font** for those basins/reservoirs under your jurisdiction beginning in calendar year 2014 on through 2050 (data is shown by calendar year). Also provide a brief explanation regarding your assumptions/rationale for any corrections in RED font as well.

Please return the modified spreadsheets to the attention of Maria Mariscal AND Paul Gebert with a copy to David Sumi and Kathy Kunysz by Monday, June 29. If you have questions, please call Kathy Kunysz, with MWD at (213) 217-

6272. The adjusted projections will be discussed at an upcoming IRP workshop scheduled later this summer. Thank you.

Regards,

Maria Mariscal
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San Diego County Water Authority

Groundwater			Revenue																																															
Agency	Type	IMP/EXP	Basin/Reservoir	2009	2010	2011	2012	2013	2009-2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050				
San Diego	GW	OWN	El Monte Basin	384	538	1,257	656	928	753	700	700	700	700	700	700	700	700	700	700	700	700	700	700	700	700	700	700	700	700	700	700	700	700	700	700	700	700	700	700	700	700	700	700	700	700	700	700	700		
San Diego	GW	OWN	Pavona Basin	1,015	811	1,339	1,645	951	1,152	1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200
San Diego	GW	OWN	San Diego Formation	1,999	2,133	2,115	1,830	2,048	2,025	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000
San Diego	GW	OWN	Santa Margarita Basin	7,904	7,242	6,659	6,631	7,491	7,186	7,200	7,200	7,200	7,200	7,200	7,200	7,200	7,200	7,200	7,200	7,200	7,200	7,200	7,200	7,200	7,200	7,200	7,200	7,200	7,200	7,200	7,200	7,200	7,200	7,200	7,200	7,200	7,200	7,200	7,200	7,200	7,200	7,200	7,200	7,200	7,200	7,200	7,200	7,200	7,200	7,200
San Diego	GW	OWN	Santa Maria Basin	-	-	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
San Diego	GW	OWN	Santee Basin	769	666	561	698	654	670	700	700	700	700	700	700	700	700	700	700	700	700	700	700	700	700	700	700	700	700	700	700	700	700	700	700	700	700	700	700	700	700	700	700	700	700	700	700	700	700	700
San Diego	OWR	OWN	Mission Basin	1,678	2,813	4,458	4,028	7,408	4,077	5,401	5,509	5,616	5,724	5,832	5,939	6,047	6,154	6,262	6,370	6,477	6,585	6,692	6,800	6,908	7,015	7,123	7,230	7,338	7,446	7,553	7,661	7,768	7,876	7,984	8,092	8,200	8,308	8,416	8,524	8,632	8,740	8,848	8,956	9,064	9,172	9,280	9,388	9,496	9,604	
San Diego	OWR	OWN	Lower Sweetwater River Basin	3,085	3,050	3,440	3,518	2,924	3,323	3,181	3,245	3,308	3,372	3,435	3,498	3,562	3,625	3,689	3,752	3,815	3,879	3,942	4,005	4,069	4,132	4,196	4,259	4,322	4,385	4,448	4,511	4,574	4,637	4,700	4,763	4,826	4,889	4,952	5,015	5,078	5,141	5,204	5,267	5,330	5,393	5,456	5,519	5,582	5,645	5,708
Total Groundwater				17,433	17,253	19,829	19,006	22,405	19,185	20,383	20,554	20,725	20,896	21,067	21,238	21,409	21,580	21,751	21,922	22,093	22,263	22,434	22,605	22,776	22,947	23,118	23,289	23,458	23,566	23,673	23,781	23,888	23,920	23,920	23,920	23,920	23,920	23,920	23,920	23,920	23,920	23,920	23,920	23,920	23,920	23,920	23,920			

Groundwater Projection			2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050								
Projection GW			11,800	11,800	11,800	11,800	11,800	11,800	11,800	11,800	11,800	11,800	11,800	11,800	11,800	11,800	11,800	11,800	11,800	11,800	11,800	11,800	11,800	11,800	11,800	11,800	11,800	11,800	11,800	11,800	11,800	11,800	11,800	11,800	11,800	11,800	11,800	11,800	11,800	11,800	11,800	11,800	11,800	11,800	11,800	11,800	
Projection GWR			4,583	4,754	4,925	5,096	5,267	5,438	5,609	5,780	5,951	6,122	6,293	6,463	6,634	6,805	6,976	7,147	7,318	7,489	7,658	7,829	7,999	8,169	8,339	8,509	8,679	8,849	9,019	9,189	9,359	9,529	9,699	9,869	10,039	10,209	10,379	10,549	10,719	10,889	11,059	11,229	11,399	11,569	11,739	11,909	12,079

Surface Water			2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050										
Surface water is estimated in the model based on long term average and climate effects.																																																	
San Diego	SUR	OWN	City of Escondido Reservoirs	2,841	7,319	8,287	3,560	2,039	4,807																																								
San Diego	SUR	OWN	City of Poway Reservoirs	249	671	237	70	41	254																																								
San Diego	SUR	OWN	City of San Diego Reservoirs	15,913	9,402	28,171	23,299	20,908	18,739																																								
San Diego	SUR	OWN	National City Reservoirs	429	1,729	771	3,183	2,800	1,782																																								
San Diego	SUR	OWN	Ramona MWD Reservoirs	-	-	-	-	-	0																																								
San Diego	SUR	OWN	San Diego's MWD Reservoirs	4,875	4,568	4,078	4,314	2,040	3,887																																								
San Diego	SUR	OWN	Santa Fe ID Reservoirs	6,111	5,507	4,408	5,475	1,966	4,613																																								
San Diego	SUR	OWN	South Bay ID Reservoirs	1,303	6,027	2,505	9,886	8,536	5,651																																								
San Diego	SUR	OWN	Vista ID Reservoir	2,859	6,816	6,677	3,468	2,077	4,579																																								
San Diego	SUR	OWN	Hells Water District Reservoirs	2,157	7,225	11,117	6,438	508	5,689	1100	1100	1100	1100	1100	1100	1100	1100	1100	1100	1100	1100	1100	1100	1100	1100	1100	1100	1100	1100	1100	1100	1100	1100	1100	1100	1100	1100	1100	1100	1100	1100	1100	1100	1100	1100	1100	1100	1100	
Total				37,235	46,264	67,253	59,743	50,002																																									

Hells Remarks Projections based on assumed local use projections from historical data. Actual use may vary based on actual local run-off received