

DRAFT Table 8-1a
Project Data for MZ3/MZ4/MZ5 Sustainability Projects¹

Project	Benefiting Management Zone	Summary of Key Project Features	New Supply (acre-ft/yr)	Capital Cost (\$)	Annualized Capital Cost (\$)	Annual O&M Cost (\$)	Other Annual Cost (\$/acre-ft)	Supplemental Water Acquisition Cost (\$)	Total Annual Cost (\$)	Unit Cost (\$/acre-ft)	Reliability of the Water Supply	Production Sustainability Score ⁴
Min General In-Lieu	3	Construct two wells and related conveyance to move non-MZ3 groundwater or imported water to the JCSD.	5,800	\$ 5,440,000	\$ 354,000	\$ 524,000	\$ -	\$ -	\$ 878,000	\$ 151	High	2
Max General In-Lieu	3	Construct four wells and related conveyance to move non-MZ3 groundwater or imported water to the JCSD.	11,600	\$ 10,640,000	\$ 692,000	\$ 1,048,000	\$ -	\$ -	\$ 1,740,000	\$ 150	High	2
Chino Hills/MVWD Exchange Project	3	Chino Hills forgoes taking Desalter I water and provides that water to the JCSD. Chino Hills makes up the exchanged supply from MZ1 groundwater production or imported water treated at the WFA plant.	2,800	\$ -	\$ -	(see note 5 below)	\$ -	\$ -	(see note 5 below)		High	2
OGRP Project ²	3	Installation of one well and extend OGRP raw water conveyance.	2,900	\$ 4,222,500	\$ 275,000	\$ -	\$ -	\$ -	\$ 275,000	\$ 95	High	2
Ont-CDA MZ3 In-Lieu ³	3	Ontario sale of 5,000 acre-ft/yr of their CDA water to the JCSD using existing connections.	5,000	\$ -	\$ -	\$ -	\$ 920	\$ -	\$ 4,600,000	\$ 920	High	2

¹ The amount and timing of in-lieu supply required to ensure sustainability is unknown.

² The total estimated costs for the well and pipeline were derived from Table 9 of the Technical Report, Ontario Groundwater Recovery Project (Carollo, 2013). The production rate was assumed to be 2,000 gpm (2,900 acre-ft/yr at an operating factor of 90%).

³ The Other Annual Cost for the CDA MZ3 In-Lieu project is the Fiscal Year 2013/14 gross cost/acre-ft for Ontario before the MWD local projects contribution. Source is Exhibit A of the June 6, 2013 CDA Special Board of Directors Meeting Agenda. Note that this cost does not reflect a credit for the avoided cost of pumping by JCSD.

⁴ The production sustainability score is a tool to characterize a project's contribution to production sustainability in areas with sustainability challenges. Per the evaluation criteria described in Section 7, the score will be as follows: 0 – does not contribute to production sustainability, 1 – contributes minimally to production sustainability (a necessary but not sufficient condition of sustainability), and 2 – contributes significantly to production sustainability (a necessary and sufficient condition of sustainability).

⁵ Annual and unit costs are unknown. The cost to produce and convey water to the JCSD could be paid for by the JCSD or some other arrangement that could involve the Watermaster. Some or all the cost to produce and convey the water to the JCSD would be offset by the JCSD's avoided cost to produce and convey its own water. There is possibility of no new capital cost and that this alternative could be the lowest cost production sustainability alternative.

DRAFT Table 8-1c
Ranked MZ3/MZ4/MZ5 Sustainability Projects

Project	New Supply (acre-ft/yr)	Unit Cost (\$/acre-ft)	Capital Cost (\$)
Recommended Projects			
Min General In-Lieu	5,800	\$ 151	\$ 5,440,000
Total of Recommended Projects	Up to 5,800	\$ 151	\$ 5,440,000
Other Projects			
Chino Hills/MVWD Exchange Project ¹	2,800	Unknown	Unknown
OGRP Project	2,900	\$ 95	\$ 4,222,500
Max General In-Lieu	11,600	\$ 150	\$ 10,640,000
Ont-CDA MZ3 In-Lieu	5,000	\$ 920	\$ -

¹ Annual and unit costs are unknown. The cost to produce and convey water to the JCSD could be paid for by the JCSD or some other arrangement that could involve the Watermaster. Some or all the cost to produce and convey the water to the JCSD would be offset by the JCSD's avoided cost to produce and convey its own water. There is possibility of no new capital cost and that this alternative could be the lowest cost production sustainability alternative.

DRAFT Table 8-2b
Screening of Yield Enhancement Projects

Project ID	Project	Management Zone	Capital Cost	Annualized Capital Cost (\$)	Annual O&M Cost (\$)	Total Annual Cost (\$)	New Yield	Recycled Water	Unit Cost	Water Quality Challenges	Institutional Challenges
1	Montclair Basins	1	\$ 5,450,000	\$ 354,500	\$ 2,644	\$ 357,144	71	0	\$ 4,997		c
1a	Montclair Basins	1	\$ 5,050,000	\$ 328,500	\$ 2,644	\$ 331,144	71	0	\$ 4,634		c
2	Montclair Basins	1	\$ 1,440,000	\$ 93,700	\$ 9,176	\$ 102,876	248	0	\$ 415		c
3	Montclair Basins	1	\$ 50,000	\$ 3,300	\$ -	\$ 3,300	0	0	--		c
4	Montclair Basins	1	\$ 790,000	\$ 51,400	\$ -	\$ 51,400	0	0	--		c
5	North West Upland Basin	1	\$ 5,490,000	\$ 357,100	\$ 3,458	\$ 360,558	93	0	\$ 3,858		c, g
5a	North West Upland Basin	1	\$ 4,640,000	\$ 301,800	\$ 3,458	\$ 305,258	93	0	\$ 3,267		c, g
6	Princeton Basin	2	\$ -	\$ -	\$ -	\$ -	0	0	--		c
7	San Sevaline Basins	2	\$ 1,775,000	\$ 115,500	\$ 23,756	\$ 139,256	642	1,911	\$ 217		c, e, f
8	San Sevaline Basins	2	\$ 2,620,000	\$ 170,400	\$ 12,781	\$ 183,181	345	1,911	\$ 530		c, e
9	San Sevaline Basins	2	\$ 300,000	\$ 19,500	\$ -	\$ 19,500	0	0	--		c
10	San Sevaline Basins	2	\$ 1,980,000	\$ 128,800	\$ -	\$ 128,800	0	0	--		c
11	Victoria Basin	2	\$ 75,000	\$ 4,900	\$ 1,584	\$ 6,484	43	120	\$ 151		c, e, f
12	Lower Day Basin (2010 RMPU)	2	\$ 2,480,000	\$ 161,300	\$ 29,182	\$ 190,482	789	0	\$ 242		c
13	Lower Day Basin	2	\$ 600,000	\$ 39,000	\$ 2,791	\$ 41,791	75	0	\$ 554		c
14	Turner Basin	2	\$ 890,000	\$ 57,900	\$ 2,438	\$ 60,338	65	0	\$ 916		c
15	Ely Basin	2	\$ 9,120,000	\$ 593,300	\$ 8,162	\$ 601,462	221	0	\$ 2,727	b	
15a	Ely Basin	2	\$ 3,200,000	\$ 208,200	\$ 8,162	\$ 216,362	221	0	\$ 981	b	
16	Ontario Bioswale Project	2	\$ 650,000	\$ 42,300	\$ 279	\$ 42,579	8	0	\$ 5,652		
17	Lower San Sevaline Basin (2010 RMPU)	2	\$ 45,430,000	\$ 2,955,300	\$ 45,165	\$ 3,000,465	1,221	500	\$ 2,458		d, e
17a	Lower San Sevaline Basin (2010 RMPU)	2	\$ 22,550,000	\$ 1,466,900	\$ 45,165	\$ 1,512,065	1,221	500	\$ 1,239		d, e
18	CSI Storm Water Basin	3	\$ 900,000	\$ 58,500	\$ 3,012	\$ 61,512	81	0	\$ 756	b	g
18a	CSI Storm Water Basin	3	\$ 440,000	\$ 28,600	\$ 3,012	\$ 31,612	81	0	\$ 388	b	g
19	Wineville Basin (2010 RMPU)	3	\$ 6,280,000	\$ 408,500	\$ 79,824	\$ 488,324	2,157	630	\$ 226	b	
19a	Wineville Basin (2010 RMPU)	3	\$ 4,890,000	\$ 318,100	\$ 79,824	\$ 397,924	2,157	630	\$ 184	b	
20	Jurupa Basin	3	\$ 1,900,000	\$ 123,600	\$ 15,591	\$ 139,191	421	0	\$ 330		
21	RP3 Basin Improvements (2010 RMPU)	3	\$ 22,044,000	\$ 1,434,000	\$ 15,004	\$ 1,449,004	406	0	\$ 3,573		
21a	RP3 Basin Improvements (2010 RMPU)	3	\$ 13,464,000	\$ 875,900	\$ 15,004	\$ 890,904	406	0	\$ 2,197		
22	RP3 Basin Improvements (2013 RMPU)	3	\$ 2,645,000	\$ 172,100	\$ 5,087	\$ 177,187	137	2,905	\$ 1,289		f
22a	RP3 Basin Improvements (2013 RMPU)	3	\$ 1,855,000	\$ 120,700	\$ 5,087	\$ 125,787	137	2,905	\$ 915		f
23	2013 RMPU Proposed Wineville PS to Jurupa, Expanded Jurupa PS to RP3 Basin with 2013 Proposed RP3 Improvements	3	\$ 23,324,000	\$ 1,517,300	\$ 311,014	\$ 1,828,314	3,166	3,535	\$ 577		d, e
23a	2013 RMPU Proposed Wineville PS to Jurupa, Expanded Jurupa PS to RP3 Basin with 2013 Proposed RP3 Improvements	3	\$ 21,314,000	\$ 1,386,500	\$ 311,014	\$ 1,697,514	3,166	3,535	\$ 536		d, e
24	Vulcan Pit	3	\$ 27,700,000	\$ 1,801,900	\$ 31,701	\$ 1,833,601	857	840	\$ 2,140	b	d, e, g
25	Sierra	3	\$ 1,000,000	\$ 65,100	\$ 2,362	\$ 67,462	64	0	\$ 1,057		g
25a	Sierra	3	\$ 490,000	\$ 31,900	\$ 2,362	\$ 34,262	64	0	\$ 537		g
26	Sultana Avenue	3	\$ 1,025,200	\$ 66,800	\$ 260	\$ 67,060	7	0	\$ 9,556		g
26a	Sultana Avenue	3	\$ 502,200	\$ 32,700	\$ 260	\$ 32,960	7	0	\$ 4,697		g
27	Decler Basin	3	\$ 4,070,000	\$ 264,800	\$ 8,920	\$ 273,720	241	0	\$ 1,135		
28	Banana Basin (annual cleanings)	3					11	130	\$ 294		
29	Banana Basin (semiannual cleanings)	3					31	155	\$ 495		
30	Decler Basin (annual cleaning)	3					16	178	\$ 409		
31	Decler Basin (semiannual cleanings)	3					47	210	\$ 701		
32	Ely Basin (annual cleaning)	2					44	217	\$ 668	b	
33	Ely Basin (semiannual cleanings)	2					128	258	\$ 997	b	
34	Hickory Basin (annual cleaning)	2					7	148	\$ 518		
35	Hickory Basin (semiannual cleanings)	2					20	175	\$ 877		

a - Project ID no.'s with an "a" extension indicate that the project includes excavation and haul-off costs, and the capital cost shown assumes that the project's excavation and haul-off costs are reduced by 50 percent with the excavated materials being used in another construction project.
 Key to Water Quality Challenges
 b - A potential water quality challenge has been identified with this project.
 Key to Institutional Challenges
 c - An agreement will be required with the property owner to construct and operate stormwater recharge facilities. Other agreements with resource agencies may also be required. The time required to negotiate and approve these agreements could range from one to two years.
 d - This basin is not currently included in the Watermaster/EUA recharge permit. Therefore, the existing permit will need to be amended to include recycled water at this basin. The time required to prepare the Title 22 engineering report and regulatory process is about two years.
 e - The project includes a recycled water recharge component. The IEUA has discretion as to whether to participate or not in this project.
 f - At the July 18, 2013 Steering Committee Meeting, Ryan Shaw (IEUA) indicated that Project IDs 7, 11, and 22a are being recommended to be cost shared. The capital cost shown assumes a 50/50 split of the capital cost per Peace II Agreement Article VIII.
 g - The Watermaster will have to submit a Petition for Change with the State Water Resources Control Board for the project because it is not included in the Watermaster's current diversion permits.

DRAFT Table 8-3
Ranked Yield Enhancement Projects with Capital Cost Breakdown and Amortization Cost

Project ID	Group ¹	Project	Yield	Recycled Water	Storm Water Recharge Unit Cost	Direct Construction Cost	Engineering and Admin Costs	Total Capital Cost	Annual Amortization Cost		Annual Costs for Pay-As-You-Go for All Soft Costs											
									Finance All Costs	Finance Construction Costs Only	Fiscal 2015	Fiscal 2016	Fiscal 2017	Fiscal 2018	Fiscal 2019	Fiscal 2020	Fiscal 2021					
Recommended MZ3 Projects																						
18a	i	CSI Storm Water Basin	81	0	\$ 388	\$ 291,000	\$ 150,000	\$ 441,000	\$ 29,000	\$ 19,000												
23a	iv	2013 RMPU Proposed Wineville PS to Jurupa, Expanded Jurupa PS to RP3 Basin, and 2013 Proposed RP3 Improvements	3,166	2,905	\$ 497	\$ 17,513,000	\$ 1,879,000	\$ 19,392,000	\$ 1,261,000	\$ 1,139,000												
25a	i	Sierra	64	0	\$ 537	\$ 323,000	\$ 167,000	\$ 490,000	\$ 32,000	\$ 21,000												
Total MZ3			3,311	2,905	\$ 495				\$ 1,322,000	\$ 1,179,000												
Recommended MZ2 Projects																						
11	i	Victoria Basin	43	120	\$ 151	\$ 65,000	\$ 9,750	\$ 74,750	\$ 5,000	\$ 4,000												
7	ii	San Sevaline Basins	642	1,911	\$ 217	\$ 1,614,000	\$ 161,500	\$ 1,775,500	\$ 115,000	\$ 105,000												
12	ii	Lower Day Basin (2010 RMPU)	789	0	\$ 242	\$ 2,158,000	\$ 324,000	\$ 2,482,000	\$ 161,000	\$ 140,000												
Total MZ2			1,474	2,031	\$ 228				\$ 281,000	\$ 249,000												
Recommended MZ1 Projects																						
2	i	Montclair Basins	248	0	\$ 415	\$ 1,251,900	\$ 188,000	\$ 1,439,900	\$ 94,000	\$ 102,876												
Total MZ1			248	0	\$ 415				\$ 94,000	\$ 102,876												
Total Recommended Projects			5,033	4,936	\$ 413	\$ 23,215,900	\$ 2,879,250	\$ 26,095,150	\$ 1,697,000	\$ 1,530,876	\$ 100,000	\$ 300,944	\$ 300,944	\$ 773,775	\$ 773,775	\$ 322,406	\$ 322,406					

\$100,000 CEQA cost as a lump sum. Project-level for the projects listed above and programmatic level for all other unique projects in Table 8-2c.
 \$100,000 Watermaster cost to negotiate implementation agreements, legal costs and staff time
 15% Preliminary engineering as a fraction of E&A
 60% Final design as a fraction of E&A
 25% C&S as a fraction of E&A