Table X
Funks Reservoir Diversions Components/Alternatives Matrix
Proposition 204 North of the Delta storage Facility Studies

No.	Alternative	Diversion to Funks	Sacramento River Diversions			New Sacramento River Diversion Location						Existing Canals			Enlarged Canals			New Canals		Existing Pumping Plants		Enlarged Pumping Plants		New Pumping Plants			Notes
		(cfs)	Existing	Enlarged	New	RBDD	HC	CL	BC	NC	SC	TC	GC	CD	TC	GC	CD	NC	SC	TC	GC	TC	GC	NC	SC	CL	
1	TC	5,000		X	X	X									X							X					1
2	5CL/TC	5,000			X			X							X											X	2
3	GC/NC	5,000		X			X									X		X					X	X			3
4	CL/GC/NC	5,000	X		X			X								X		X						X		X	4
5	CD/NC	5,000															X	X						X			5
6	CD/SC	5,000															X		X						X		6
7	5SR/NC	5,000			X					X								X						X			7
8	5SR/SC	5,000			X						X								X						X		8
9	TC+SR/NC	5,000	X		X					X		X						X		X				X			9
10	TC+CD/NC	5,000	X									X					X	X		X				X			10
11	SR/CD/NC	5,000			X				X								X	X						X			11
12	TC+GC/NC	5,000	X													X		X		X	X			X			12
13	TC+GC/NC+CD/NC	5,000	X									X	X	X				X		X	X			X			13
14	TC+GC/NC+SR/NC	5,000	X		X					X		X	X					X		X	X			X			14
15	TC+GC/NC+CD/NC+5SRNC	10,000	X		X					X		X	X	X				X		X	X			X			15
16	TC+GC/NC+CD/NC+5SR/NC	12,000	X		X					X					X	X	X	X		X	X		X	X			16

Notes:

1. Ref. Cal Fed Facility Description and Cost Estimates for Red Bluff Diversion and Tehama-Colusa Canal Enlargement (10/97).
2. Ref. Cal Fed Facility Description and Cost Estimates for Chico Landing Intertie (Add enlarged TC canal to Funks) (10/97).
3. Enlarge all existing GC facilities to 5000 cfs for our HCPP to NC, and new NC to Funks.
4. New 5000 cfs Chico Landing SR gravity diversion and interties to enlarge G-C canal, to new NC to Funks.
5. Enlarge existing CD to 5000cfs from County line to NC, and new NC to Funks (questionable yield).
6. Enlarge existing CD to 5000cfs from County line to SC, and new SC to Funks (questionable yield).
7. New 5000cfs Moulton Weir (Compton Landing) SR gravity diversion and new NC to Funks (stand alone project).
8. New 5000cfs Maxwell Road (Hamilton Bend) diversion and new SC to Funks (stand alone project).
9. Existing 2100 cfs TC facilities plus new 2900 cfs Moulton Weir SR diversion and new NC to Funks
10. Existing 2100 cfs TC facilities plus enlarged 2900 cfs CD diversion to NC to Funks
11. New 5000 cfs Butte City SR gravity diversion to CD, enlarged CD to NC and NC to Funks
12. Existing 2100 cfs TC facilities plus enlarged 2900 cfs GC to NC and NC to Funks
13. Existing 2100 cfs TC facilities plus existing 1800 cfs GC to NC plus existing 1100 cfs CD to NC and new NC to Funks
14. Existing 2100 cfs TC facilities plus existing 1800 cfs GC to NC plus new 1100 cfs SR gravity diversion and new NC to Funks
15. Existing 2100 cfs TC facilities plus existing 1800 cfs GC to NC plus existing 1100 cfs, CD to NC plus new 5000 cfs SR gravity diversion and new NC to Funks
16. Existing 2100 cfs TC facilities plus enlarged 2900 cfs GC to NC plus enlarged 2000 cfs, CD to NC plus new 5000 cfs SR gravity diversion and new NC to Funks

Legend:

CD	Colusa Drain
BC	Butte City
CL	Chico Landing
Funks	Existing Funks Reservoir on TC Canal
GC	Glenn Colusa
HC	Hamilton City
NC	North Canal
PP	Pumping Plant
RBDD	Red Bluff Diversion Dam
SC	South Canal
SR	Sacramento River
TC	Tehama Colusa

Attachment 10

D-011074

D—011074

Martrix.xls, Sheet1

Table X 1
Funks Reservoir Diversions Pumping Plants/Alternatives Matrix
Proposition 204 North of the Delta storage Facility Studies

Line No.	Alt No.	Conveyance Alternative	Diversion to Funks(a)	Pumping Plants					Notes
				Plant Name(b)	Priority	Q(max)(c)	H(net)(d)	Canal Reach(e)	
			(cfs)			(cfs)	(ft)		
1	1	TC	5,000	RBDD		5,000		RBDD-Funks	1
2	2	5CL/TC	5,000	Chico Landing 1		5,000	35	CL-TC	2
3				Chico Landing 2		5,000	40	CL-TC	2
4				Chico Landing 3		5,000	40	CL-TC	2
5	3	GC/NC	5,000	Hamilton City	12	2,000	20	HCPP-NC	3
6				NC3		5,000	111	GC-Funks	
7	4	CL/GC/NC	5,000	Chico Landing 1	11	5,000	20	CL-GC	4
8				NC3		5,000	111	GC-Funks	5
9	5	CD/NC	5,000	NC1		5,000	45	CD-Funks	
10				NC2		5,000	33	CD-Funks	
11				NC3		5,000	111	CD-Funks	5
12	6	CD/SC	5,000	SC1		5,000	50	CD-Funks	
13				SC2		5,000	358	CD-Funks	
14				SC3		5,000	115	CD-Funks	
15	7	5SR/NC	5,000	NC1	1	5,000	45	SR-Funks	9
16				NC2	2	5,000	33	SR-Funks	10
17				NC3	3	5,000	111	SR-Funks	5
18	8	5SR/SC	5,000	SC1		5,000	50	SR-Funks	8
19				SC2		5,000	35	SR-Funks	9
20				SC3		5,000	115	SR-Funks	10
21	9	TC+SR/NC	5,000	NC1	4	2,900	45	SR-Funks	
22				NC2	5	2,900	33	SR-Funks	
23				NC3	6	2,900	111	SR-Funks	
24	10	TC+CD/NC	5,000	NC1		2,900	45	SR-Funks	11
25				NC2		2,900	33	SR-Funks	12
26				NC3		2,900	111	SR-Funks	13
27	11	SR/CD/NC	5,000	NC1		5,000	45	CD-Funks	6
28				NC2		5,000	33	CD-Funks	7
29				NC3		5,000	111	CD-Funks	5
30	12	TC+GC/NC	5,000	NC3		2,900	111	GC-Funks	13
31	13	TC+GC/NC+CD/NC	5,000	NC1		1,100	45	GC-Funks	
32				NC2		1,100	33	GC-Funks	
33				NC3		2,900	111	GC-Funks	13
34	14	TC+GC/NC+SR/NC	5,000	NC1	9	1,100	45	SR-GC	14
35				NC2	10	1,100	33	SR-GC	15
36				NC3		2,900	111	GC-Funks	13
37	15	TC+GC/NC+CD/NC+5SRNC	10,000	NC1		5,000	45	CD-GC	9
38				NC2		6,100	33	CD-GC	
39				NC3		7,900	111	GC-Funks	
40	16	TC+GC/NC+CD/NC+5SR/N	12,000	NC1		7,000	45	CD-GC	
41				NC2	7	7,000	33	CD-GC	
42				NC3	8	9,900	111	GC-Funks	

	Notes:
1	Ref. Cal Fed Facility Description and Cost Estimates for Red Bluff Diversion and TC Canal Enlargement (10/97).
2	Ref. Cal Fed Facility Description and Cost Estimates for Chico Landing Intertie (Add enlarged TC canal to Funks) (10/9
3	2000 cfs expansion of HCPP, or alternative 2000cfs new
4	SR diversion between HCPP and Hamilton City
5	Similar to Line 2, but location east of GC Canal
6	Same Pumping Plant as line 6.
7	Same Pumping Plant as line 9.
8	Same Pumping Plant as line 10.
9	Same Pumping Plant as line 12.
10	Same Pumping Plant as line 13.
11	Same Pumping Plant as line 14.
12	Same Pumping Plant as line 21.
13	Same Pumping Plant as line 22.
14	Same Pumping Plant as line 23.
15	Same Pumping Plant as line 31.
16	Same Pumping Plant as line 32.
(a)	Alternatives 1-14, 5,000 cfs diversion to Funks based on CALFED /Prop 204 criteria; Alternative15 10,000 cfs diversion
	to Funks based on existing canals capacity at NC, plus 5,000 cfs SR diversion at Moulton Weir. 12,000 cfs diversion to
	Funks based on enlarged GC and CD canals, plus 5,000 cfs SR diversion at Moulton Weir.
(b)	Plumping plant name or number based east to west flow direction, see attached map.
(c)	Plant flow (Q) based on maximum flow from water source, and equal to canal capacity.
(d)	Plant head (H) is estimated from USGS quad sheets and CD/ND/DOE discussions.
(e)	SeeTable X for Components/Alternatives Matrix, See Table X2 for Canal Reaches/ Alternatives Matrix

Table X 2
Funks Reservoir Diversions Canal Reaches/Alternatives Matrix
Proposition 204 North of the Delta storage Facility Studies

No.	Alternative	Diversion to Funks	Canal	Canal Reaches									Notes
				No.	Q(max)	Length Station	Length Distance	Status	From	To	Plants	Lined	
		(cfs)			(cfs)	(1000 ft)	(Miles)		(cfs min)	cFunkss max)			
1	TC	5,000	TC	all	5,000	352.52	66.70	Enlarge	RBDD	Funks	0	Yes	1
2	5CLI/TC	5,000	CLI	1	5,000	6.00	1.10	New	SR	PP1	0	Yes	2
			CLI	2	5,000	22.20	4.20	New	PP1	PP2	1	Yes	
			CLI	3	5,000	22.00	4.20	New	PP2	PP3	1	Yes	
			CLI	4	5,000	7.40	1.40	New	PP3	TC	1	Yes	
			TC	all	5,000	169.83	32.20	Enlarge	CLI	Funks	0	Yes	
3	GC/NC	5,000	GC	all	5,000	204.00	38.60	Enlarge	HCPP	NC	0	No	3
			NC	all	5,000	14.10	2.70	New	NC	Funks	3	No	
4	CLI/GC/NC	5,000	CLI	all	5,000	7.20	1.40	New	SR	GC	1	No	4
			GC	all	5,000	154.60	29.30	Enlarge	GC	NC	0	No	
			NC	all	5,000	14.10	2.70	New	NC	Funks	1	Yes	
5	CD/NC	5,000	CD	all	5,000	28.09	5.30	Enlarge	Co.Line	NC	0	No	5
			NC	1	5,000	30.40	5.40	New	CD	PP1	0	No	
			NC	2	5,000	17.00	3.20	New	PP1	PP2	1	Yes	
			NC	3	5,000	2.50	0.50	New	PP2	PP3	1	Yes	
			NC	4	5,000	11.00	2.10	New	PP3	Funks	1	Yes	
6	CD/SC	5,000	CD	all	5,000	59.66	11.30	Enlarge	Co.Line	SC	0	No	6
			SC	1	5,000	33.80	6.40	New	CD	PP1	0	No	
			SC	2	5,000	25.00	4.70	New	PP1	PP2	1	Yes	
			SC	3	5,000	13.00	2.50	New	PP2	PP3	1	Yes	
			SC	4	5,000	2.50	0.50	New	PP3	Funks	1	Yes	
7	5SR/NC	5,000	NC	1	5,000	45.00	8.50	New	SR	PP1	0	No	7
			NC	2	5,000	17.00	3.20	New	PP1	PP2	1	Yes	
			NC	3	5,000	2.50	0.50	New	PP2	PP3	1	Yes	
			NC	4	5,000	11.00	2.10	New	PP3	Funks	1	Yes	
8	5SR/SC	5,000	SC	1	5,000	50.60	9.60	New	SR	PP1	0	No	8
			SC	2	5,000	25.00	4.70	New	PP1	PP2	1	Yes	
			SC	3	5,000	13.00	2.50	New	PP2	PP3	1	Yes	
			SC	4	5,000	2.50	0.50	New	PP3	Funks	1	Yes	
9	TC+SR/NC	5,000	TC	all	2,100	352.52	66.70	Existing	RBDD	Funks	0	Yes	9
			NC	1	2,900	45.00	8.50	New	SR	PP1	0	No	
			NC	2	2,900	17.00	3.20	New	PP1	PP2	1	Yes	
			NC	3	2,900	2.50	0.50	New	PP2	PP3	1	Yes	
			NC	4	2,900	11.00	2.10	New	PP3	Funks	1	Yes	

D-011077
D—011077

No.	Alternative	Diversion to Funks	Canal	Canal Reaches									Notes
				No.	Q(max)	Length		Status	From	To	Plants	Lined	
						Station	Distance						
		(cfs)			(cfs)	(1000 ft)	(Miles)		(cfs min)	cFunkss max)			
10	TC+CD/NC	5,000	TC	all	2,100	352.52	66.70	Existing	RBDD	Funks	0	Yes	10
			CD	all	2,900	28.09	5.30	Enlarge	Co.Line	NC	0	No	
			NC	1	2,900	30.40	5.80	New	CD	PP1	0	No	
			NC	2	2,900	17.00	3.20	New	PP1	PP2	1	Yes	
			NC	3	2,900	2.50	0.50	New	PP2	PP3	1	Yes	
			NC	4	2,900	11.00	2.10	New	PP3	Funks	1	Yes	
11	SR/CD/NC	5,000	CD1	all	5,000	13.00	2.50	New	SR	CD	0	No	11
			CD1	all	5,000	44.00	8.30	Enlarge	CD	NC	0	No	
			NC	1	5,000	30.40	5.80	New	CD	PP1	0	No	
			NC	2	5,000	17.00	3.20	New	PP1	PP2	1	Yes	
			NC	3	5,000	2.50	0.50	New	PP2	PP3	1	Yes	
			NC	4	5,000	11.00	2.10	New	PP3	Funks	1	Yes	
12	TC+GC/NC	5,000	TC	all	2,100	352.52	66.70	Existing	RBDD	Funks	0	Yes	12
			GC	all	2,900	204.00	38.60	Enlarge	HCPP	NC	0	No	
			NC	3	2,900	3.10	0.60	New	GC	PP3	0	Yes	
			NC	4	2,900	11.00	2.10	New	PP3	Funks	1	Yes	
13	TC+GC/NC+CD/NC	5,000	TC	all	2,100	352.52	66.7	Existing	RBDD	Funks	0	Yes	13
			GC	all	1,800	204.00	38.6	Existing	HCPP	NC	0	No	
			CD	all	1,100	28.09	5.3	Existing	Co.Line	NC	0	No	
			NC	1	1,100	30.40	5.8	New	CD	PP1	0	No	
			NC	2	1,100	17.00	3.2	New	PP1	PP2/GC	1	Yes	
			NC	3	2,900	2.50	0.5	New	PP2/GC	PP3	1	Yes	
			NC	4	2,900	11.00	2.10	New	PP3	Funks	1	Yes	
14	TC+GC/NC+SR/NC	5,000	TC	all	2,100	352.52	66.70	Existing	RBDD	Funks	0	Yes	14
			GC	all	1,800	204.00	38.60	Existing	HCPP	NC	0	No	
			NC	1	1,100	45.00	8.50	New	SR	PP1	0	No	
			NC	2	1,100	17.00	3.20	New	PP1	PP2	1	Yes	
			NC	3	2,900	2.50	0.50	New	PP2	PP3	1	Yes	
			NC	4	2,900	11.00	2.10	New	PP3	Funks	1	Yes	
15	TC+GC/NC+CD/NC+5SRNC	10,000	TC	all	2,100	352.52	66.70	Existing	RBDD	Funks	0	Yes	15
			GC	all	1,800	204.00	38.60	Existing	HCPP	NC	0	No	
			CD	all	1,100	28.09	5.30	Existing	Co.Line	NC	0	No	
			NC	1a	5,000	14.60	2.70	New	SR	CD	0	No	
			NC	1b	5,000	30.40	5.80	New	CD	PP1	0	No	
			NC	2	6,100	17.00	3.20	New	PP1	PP2/GC	1	Yes	
			NC	3	6,100	2.50	0.50	New	PP2/GC	PP3	1	Yes	
			NC	4	7,900	11.00	2.10	New	PP3	Funks	1	Yes	

D-011078

D-011078

No.	Alternative	Diversion to Funks	Canal	No.	Q(max)	Length Station	Length Distance	Status	From	To	Plants	Lined	Notes
		(cfs)			*(cfs)*	*(1000 ft)*	*(Miles)*		*(cfs min)*	*cFunkss max)*			
16	TC+GC/NC+CD/NC+5SR/NC	12,000	TC	all	2,100	352.52	66.70	Existing	RBDD	Funks	0	Yes	16
			GC	all	2,900	204.00	38.60	Enlarge	HCPP	NC	0	No	
			CD	all	2,000	28.90	5.30	Enlarge	Co.Line	NC	0	No	
			NC	1a	5,000	14.60	2.70	New	SR	CD	0	No	
			NC	1b	5,000	30.40	5.80	New	CD	PP1	0	No	
			NC	2	7,000	17.00	3.20	New	PP1	PP2/GC	1	Yes	
			NC	3	7,000	2.90	0.50	New	PP2/GC	PP3	1	Yes	
			NC	4	9,900	11.00	2.10	New	PP3	Funks	1	Yes	

Notes:

1. Ref. Cal Fed Facility Description and Cost Estimates for Red Bluff Diversion and Tehama-Colusa Canal Enlargement (10/97).
2. Ref. Cal Fed Facility Description and Cost Estimates for Chico Landing Intertie (Add enlarged TC canal to Funks) (10/97).
3. Enlarge all existing GC facilities to 5000 cfs for our HCPP to NC, and new NC to Funks.
4. New 5000 cfs Chico Landing SR gravity diversion and interties to enlarge G-C canal, to new NC to Funks.
5. Enlarge existing CD to 5000cfs from County line to NC, and new NC to Funks (questionable yield).
6. Enlarge existing CD to 5000cfs from County line to SC, and new SC to Funks (questionable yield).
7. New 5000cfs Moulton Weir (Compton Landing) SR gravity diversion and new NC to Funks (stand alone project).
8. New 5000cfs Maxwell Road (Hamilton Bend) diversion and new SC to Funks (stand alone project).
9. Existing 2100 cfs TC facilities plus new 2900 cfs Moulton Weir SR diversion and new NC to Funks
10. Existing 2100 cfs TC facilities plus enlarged 2900 cfs CD diversion to NC to Funks
11. New 5000 cfs Butte City SR gravity diversion to CD, enlarged CD to NC and NC to Funks
12. Existing 2100 cfs TC facilities plus enlarged 2900 cfs GC to NC and NC to Funks
13. Existing 2100 cfs TC facilities plus existing 1800 cfs GC to NC plus existing 1100 cfs CD to NC and new NC to Funks
14. Existing 2100 cfs TC facilities plus existing 1800 cfs GC to NC plus new 1100 cfs SR gravity diversion and new NC to Funks
15. Existing 2100 cfs TC facilities plus existing 1800 cfs GC to NC plus existing 1100 cfs, CD to NC plus new 5000 cfs SR gravity diversion and new NC to Funks
16. Existing 2100 cfs TC facilities plus enlarged 2900 cfs GC to NC plus enlarged 2000 cfs, CD to NC plus new 5000 cfs SR gravity diversion and new NC to Funks

D-011079
D—011079