Table 1. Alternatives Identified by the Lake Belt Committee for Subregional Modeling

Scenario Number	Scenario Name	Description	Mining Acreage
1	NOLAKES	No lakes (pre-rock mining scenario)	0
2	CURREN T	Generalized Existing Conditions (present condition)	4,870
3	PER-MITTED	Generalized Permitted Lakes	12,449
4	PRMIP	Proposed Rock Miners Initial Plan	29,046
5	PRMIP-PENN	Proposed Rock Miners Initial Plan minus the Pennsuco Wetlands	26,614
6	PRMIP-PENN-FPL	Proposed Rock Miners Initial Plan minus the Pennsuco Wetlands and the FPL strip	20,424
7	PRMIP-PENN-FPLNOW N	Proposed Rock Miners Initial Plan minus the Pennsuco Wetlands and no mining in FPL lands not currently owned by the Industry	24,212
8	PRMIP-1MBUFF	Proposed Rock Miners Initial Plan minus the a one mile buffer along L-30 from Miami Canal to Tamiami Trail	27,186

Table 2 . Wellfield Pumpage Rates (MGD) Used in the Steady State Runs

Northwest Wellfield	**Preston - Miami Springs - Hialeah Wellfields**	**All Other Wellfields**
42	9 (1989 Annual Average)	1989 Annual Average
155 (1989 Annual Average)	9 (1989 Annual Average)	1989 Annual Average
198	0	1989 Annual Average
245	0	1989 Annual Average

Table 3. Steady-State simulation results under various pumpage scenarios for NW wellfield. (Note: 198 MGD pumpage was simulated only under 1989 hydrologic conditions)

	Alternative Configuration (tabulated in increasing order of mining acreage)							
	1	2	3a	6	7	5	8	4
Steady-State Seepage (1000 ac.ft/yr) from WCA-3B - 1969 average conditions and percent change compared to "current" conditions (Configuration 2)								
a. 42 MGD from NW Wellfield	223 (-1.8)	227	235 (3.7)	236 (4.2)	245 (8.1)	265 (16.8)	253 (11.3)	284 (25.1)
b. 155 MGD from NW Wellfield	242 (0.2%)	242	246 (1.9)	245 (1.4)	254 (5.0)	273 (13.0)	260 (7.8)	292 (21.1)
c. 245 MGD from NW Wellfield	257 (1.6)	253	255 (0.7)	252 (-0.6)	260 (2.7)	279 (10.3)	267 (5.3)	299 (18.2)
Steady-State Seepage (1000 ac.ft/yr) from WCA-3B - 1989 average conditions and percent change compared to "current" conditions (Configuration 2)								
a. 42 MGD from NW Wellfield	178 (-0.5)	179	183 (2.3)	183 (2.2)	188 (5.2)	201 (12.1)	193 (7.6)	214 (19.6)
b. 155 MGD from NW Wellfield	196 (1.5)	193	194 (0.4)	192 (-0.9)	197 (1.8)	209 (8.1)	201 (3.8)	223 (15.4)
c. 198 MGD from NW Wellfield	203 (2.2)	199	198 (-0.2)	195 (-1.9)	200 (0.7)	212 (6.7)	204 (2.6)	226 (13.9)
d. 245 MGD from NW Wellfield	211 (3.0)	204	203 (-0.9)	198 (-3.0)	203 (-0.5)	215 (5.3)	207 (1.3)	230 (12.5)
Steady-State Net Recharge (1000 ac.ft/yr) in the Lake Belt region - 1969 average conditions and percent								

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change compared to "current" conditions (Configuration 2)								
a. 42 MGD from NW Wellfield	112 (-1.8)	114	107 (-5.9)	100 (-12.0)	98 (-14.1)	96 (-15.8)	96 (-16.0)	94 (-17.7)
b. 155 MGD from NW Wellfield	113 (-1.8)	115	108 (-6.3)	101 (-12.5)	98 (-14.6)	96 (-16.3)	96 (-16.5)	94 (-18.2)
c. 245 MGD from NW Wellfield	115 (-0.7)	116	108 (-6.9)	101 (-13.3)	98 (-15.4)	96 (-17.1)	96 (-17.3)	94 (-19.1)
Steady-State Net Recharge (1000 ac.ft/yr) in the Lake Belt region - 1989 average conditions and percent change compared to "current" conditions (Configuration 2)								
a. 42 MGD from NW Wellfield	-22 (13.6)	-26	-41 (-59)	-57 (-123)	-63 (-146)	-67 (-162)	-68 (-165)	-71 (-179)
b. 155 MGD from NW Wellfield	-11 (43)	-19	-36 (-95)	-55 (-192)	-60 (-224)	-65 (-248)	-66 (-252)	-69 (-272)
c. 198 MGD from NW Wellfield	-5 (66.1)	-15	-34 (-125.8)	-53 (-255.2)	-59 (-295.9)	-64 (-327.6)	-65 (-331.7)	-68 (-357.8)
d. 245 MGD from NW Wellfield	0 (97)	-11	-31 (-181)	-51 (-369)	-58 (-426)	-63 (-471)	-63 (-477)	-67 (-513)
Steady-State range of drawdown (ft.) in the Pennsuco Wetlands relative to Configuration 2 under 1969 average conditions								
a. 42 MGD from NW Wellfield	-0.1 to 0		0 to 0.2	0 to 0.2	0 to 0.6	0 to 0.7	0 to 0.7	0 to 0.7
b. 155 MGD from NW Wellfield	0		0	0	0 to 0.4	0 to 0.5	0 to 0.6	0 to 0.6
c. 245 MGD from NW Wellfield	0 to 0.2		-0.1 to 0	-0.2 to 0	-.1 to 0.3	0 to 0.4	0 to 0.5	-.2 to 0.6

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Steady-State range of drawdown (ft.) in the Pennsuco Wetlands relative to Configuration 2 under 1989 average conditions								
a. 42 MGD from NW Wellfield	0		0	0	0 to 0.3	0 to 0.3	0 to 0.4	0 to 0.4
b. 155 MGD from NW Wellfield	0 to 0.1		0	-0.1 to 0	-.1 to 0.1	0 to 0.1	0 to 0.3	-0.1 to 0.4
c. 198 MGD from NW Wellfield	0 to 0.2		-0.1 to 0	-0.2 to 0	-0.2 to 0.1	-0.1 to 0.1	-0.1 to 0.3	-0.2 to 0.4
d. 245 MGD from NW Wellfield	0 to 0.3		-0.2 to 0	-.3 to 0	-.3 to 0.1	-.2 to 0.1	-.2 to 0.2	-.3 to 0.3

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Table 4. Frequency of Ponding (Days) within the Pennsuco Wetlands from Transient Runs under 1969 Hydrologic Conditions.

Pennsuco Location	**Model Location**		Alternatives/Scenarios							
	Row	Col	Alt 1	Alt 2	Alt 3	Scn 6	Scn7	Scn 5	Scn 8	Alt 4
North near Delivery Canal	72	70	138	154	120	128	12	8	7	8
	72	69	195	200	191	191	23	18	17	19
	72	68	200	201	201	201	135	99	85	113
North Central	75	70	156	180	147	156	15	13	12	14
	75	68	201	201	201	201	156	137	132	151
	75	66	237	241	240	241	200	200	200	201
	75	64	272	278	278	284	249	247	246	250
	77	70	143	166	141	145	17	15	14	16
	77	68	200	201	201	201	169	147	140	164
	77	66	236	240	239	240	201	200	200	201
	77	64	262	271	271	272	244	243	242	244
Central	79	70	120	140	121	121	19	16	16	18
	79	68	201	201	201	201	179	151	146	178
	79	66	235	238	237	238	202	201	201	202
	79	64	263	271	271	272	248	247	246	248
South Central West of Wellfield	85	70	67	105	90	91	40	20	19	25
	85	68	201	201	201	201	188	141	132	176
	85	66	219	230	225	230	203	202	202	203
	85	64	260	268	269	272	252	249	248	253

Table 4. Frequency of Ponding (Days) within the Pennsuco Wetlands from Transient Runs under 1969 Hydrologic Conditions.

Pennsuco Location	Model Location		Alternatives/Scenarios							
	Row	Col	Alt 1	Alt 2	Alt 3	Scn 6	Scn7	Scn 5	Scn 8	Alt 4
North near Delivery Canal	72	70	138	154	120	128	12	8	7	8
	72	69	195	200	191	191	23	18	17	19
	72	68	200	201	201	201	135	99	85	113
North Central	75	70	156	180	147	156	15	13	12	14
	75	68	201	201	201	201	156	137	132	151
	75	66	237	241	240	241	200	200	200	201
	75	64	272	278	278	284	249	247	246	250
	77	70	143	166	141	145	17	15	14	16
	77	68	200	201	201	201	169	147	140	164
	77	66	236	240	239	240	201	200	200	201
	77	64	262	271	271	272	244	243	242	244
Central	79	70	120	140	121	121	19	16	16	18
	79	68	201	201	201	201	179	151	146	178
	79	66	235	238	237	238	202	201	201	202
	79	64	263	271	271	272	248	247	246	248
South Central West of Wellfield	85	70	67	105	90	91	40	20	19	25
	85	68	201	201	201	201	188	141	132	176
	85	66	219	230	225	230	203	202	202	203
	85	64	260	268	269	272	252	249	248	253

Steady-State Seepage for the 1969 Wet Season (June 1--Nov.30)
(Model Revised To Reflect the new Transient Calibration Data Set of October 1997)

Model	Seepage through L-30				Seepage through L-31N			
Scenario	ac-ft/wk	cfs	Over Perm (cfs,%)		ac-ft/wk	cfs	Over Perm (cfs,%)	
Current	4,317	311	-4	-1.14%	3,280	236	-2	-0.76%
Permitted	4,367	315	0	0.00%	3,304	238	0	0.00%
ALL	4,586	330	16	5.01%	3,366	242	4	1.86%
ALL+A	4,171	300	-14	-4.47%	3,054	220	-18	-7.57%
ALL+B	4,504	324	10	3.14%	3,329	240	2	0.75%
ALL+A+B	4,089	295	-20	-6.35%	3,018	217	-21	-8.68%

A -- raise stage in Snapper Creek to 5.5 ft; stage in L-31N to 6.25 ft.

B -- raise stage C-4 Canal to 5.5 ft.

Mean Transient Seepage for the 1969 Wet Season (June 1--Nov.30)
(Model Revised To Reflect the new Transient Calibration Data Set of October 1997)

Model	Seepage through L-30				Seepage through L-31N			
Scenario	ac-ft/wk	cfs	Over Perm (cfs,%)		ac-ft/wk	cfs	Over Perm (cfs,%)	
Current	4,473	322	-3	-0.96%	3,278	236	-2	-0.77%
Permitted	4,516	325	0	0.00%	3,303	238	0	0.00%
ALL	4,728	341	15	4.70%	3,366	242	5	1.90%
ALL+A+B	4,230	305	-21	-6.34%	3,018	217	-21	-8.63%

A+B

Snapper Creek daily stage raised by 1.53 to 1.59 ft, mean stage is 5.5 ft NGVD for June 1--Nov.30.

C-4 Canal daily stage raised by 1.38 to 1.58 ft, mean stage is 5.5 ft NGVD for June 1--Nov.30.

L-31N Canal daily stage raised by 0.15 to 0.18 ft, mean stage is 6.25 ft NGVD for June 1--Nov.30.

Steady-State Seepage for the 1989 Dry Season (Jan. 1--May 31)
(Model Revised To Reflect the new Transient Calibration Data Set of October 1997)

Model	Seepage through L-30				Seepage through L-31N			
Scenario	ac-ft/wk	cfs	Over Perm (cfs,%)		ac-ft/wk	cfs	Over Perm (cfs,%)	
Current	3,205	231	0	0.09%	379	27	-2	-5.48%
Permitted	3,202	231	0	0.00%	401	29	0	0.00%
ALL	3,329	240	9	3.98%	444	32	3	10.82%
ALL+A	3,229	233	2	0.85%	356	26	-3	-11.20%
ALL+B	3,298	238	7	3.00%	432	31	2	7.82%
ALL+A+B	3,197	230	0	-0.13%	344	25	-4	-14.20%

A -- raise stage in Snapper Creek to 3.5 ft; stage in L-31N to 4.25 ft.

B -- raise stage C-4 Canal to 3.5 ft.

Mean Transient Seepage for the 1989 Dry Season (Jan. 1--May 31)
(Model Revised To Reflect the new Transient Calibration Data Set of October 1997)

Model	Seepage through L-30				Seepage through L-31N			
Scenario	ac-ft/wk	cfs	Over Perm (cfs,%)		ac-ft/wk	cfs	Over Perm (cfs,%)	
Current	3,161	228	0	0.20%	375	27	-1	-4.88%
Permitted	3,155	227	0	0.00%	395	28	0	0.00%
ALL	3,264	235	8	3.48%	433	31	3	9.63%
ALL+A+B	3,132	226	-2	-0.71%	332	24	-5	-15.86%

A+B

Snapper Creek daily stage raised by 0.37 to 0.43 ft, mean stage is 3.5 ft NGVD for June 1--Nov.30.

C-4 Canal daily stage raised by 0.4 to 0.6 ft, mean stage is 3.5 ft NGVD for June 1--Nov.30.

L-31N Canal daily stage raised by 0.03 to 0.06 ft, mean stage is 4.25 ft NGVD for June 1--Nov.30.

Steady-State Leakage from Canals for 1969 Wet Season (June 1 -- Nov.30)

	Snapper--Modified		Snapper--Entire		C-4--Modified		L-31N--Above G-211		L-30	
Scenarios	ac-ft/wk	cfs	ac-ft/wk	cfs	ac-ft/wk	cfs	ac-ft/wk	cfs	ac-ft/wk	cfs
Current	-1,853	-133	-1,853	-133	-1,008	-73	-1,922	-138	-561	-40
Permitted	-1,747	-126	-1,745	-126	-1,006	-72	-1,817	-131	-527	-38
ALL	-1,564	-113	-1,507	-109	-1,008	-73	-1,579	-114	-342	-25
ALL+A	211	15	-149	-11	-1,027	-74	-1,071	-77	-513	-37
ALL+B	-1,567	-113	-1,521	-110	626	45	-1,692	-122	-440	-32
ALL+A+B	208	15	-162	-12	607	44	-1,184	-85	-611	-44

A -- raise stage in Snapper Creek to 5.5 ft; stage in L-31N to 6.25 ft.

B -- raise stage C-4 Canal to 5.5 ft.

Steady-State Leakage from Canals for 1989 Dry Season (Jan.1--May 31)

	Snapper--Modified		Snapper--Entire		C-4--Modified		L-31N--Above G-211		L-30	
Scenarios	ac-ft/wk	cfs	ac-ft/wk	cfs	ac-ft/wk	cfs	ac-ft/wk	cfs	ac-ft/wk	cfs
Current	-673	-48	261	19	-315	-23	991	71	-86	-6
Permitted	-629	-45	393	28	-312	-22	1,083	78	-98	-7
ALL	-294	-21	821	59	-286	-21	1,276	92	5	0
ALL+A	153	11	1,162	84	-291	-21	1,423	103	-36	-3
ALL+B	-295	-21	816	59	316	23	1,239	89	-35	-3
ALL+A+B	152	11	1,157	83	312	22	1,386	100	-77	-6

A -- raise stage in Snapper Creek to 3.5 ft; stage in L-31N to 4.25 ft.

B -- raise stage C-4 Canal to 3.5 ft.

Sensitivity of 1969 Transient Results to Pennsuco Wetland Representation

	Scenario	Permitted	ALL Lakes			ALL Lakes + Structures		
Item		Value	Value	Change	% Change	Value	Change	% Change
Seepage through L-30 Levee for June 1--Nov.30 (CFS)	Base Model	325	341	15	5%	305	-21	-6%
	Test 1	322	340	17	5%	299	-24	-7%
	Test 2	357	379	22	6%	329	-28	-8%
	Test 3	360	381	22	6%	330	-29	-8%
Average Number of Inundation Days in the Pennsuco in 1969	Base Model	225	190	-35	-15%	229	5	2%
	Test 1	235	201	-34	-14%	243	8	3%
	Test 2	230	206	-24	-10%	249	18	8%
	Test 3	228	206	-23	-10%	249	21	9%
Minimum Number of Inundation Days in the Pennsuco in 1969	Base Model	3	2	-1	-33%	12	9	300%
	Test 1	13	10	-3	-23%	37	24	185%
	Test 2	179	91	-88	-49%	195	16	9%
	Test 3	171	91	-80	-47%	195	24	14%
Maximum Number of Inundation Days in the Pennsuco in 1969	Base Model	365	365	0	0%	365	0	0%
	Test 1	365	365	0	0%	365	0	0%
	Test 2	340	307	-33	-10%	365	25	7%
	Test 3	342	312	-30	-9%	365	23	7%

Structures

Snapper Creek daily stage raised by 1.53 to 1.59 ft; mean stage is 5.5 ft NGVD for June 1--Nov.30.

C-4 Canal daily stage raised by 1.38 to 1.58 ft; mean stage is 5.5 ft NGVD for June 1--Nov.30.

L-31N Canal daily stage raised by 0.15 to 0.18 ft; mean stage is 6.25 ft NGVD for June 1--Nov.30.

Test 1 -- use 100,000 ft/day as conductivity for the Pennsuco Wetland.

Test 2 -- use 5,000,000 ft/day as conductivity for the Pennsuco Wetland.

Test 3 -- use 30,000,000 ft/day as conductivity for the Pennsuco Wetland.