# 2010 Data Sets

Data Set Name	Time Period	Brief Description
		HBMP SAS Data Sets
Flwd10_HBMP.sd2	1931-2010	Historic daily flow data for: Peace at Bartow, Fort Meade, Zolfo Springs and Arcadia. Daily tributary flows for: Horse Creek near Arcadia; Joshua Creek near Nocatee; Prairie Creek near Ft. Ogden; and Shell Creek near Punta Gorda. Daily flows for the Myakka River near Sarasota and Big Slough near North Port. Historic daily Peace River and Shell Creek Water Treatment Facility withdrawals. All values in cfs.
Cmov8310.sd2	1983-2010	Water quality and phytoplankton biomass measurements (1983-2010) from monthly surface samples collected at each of the four moving isohalines. Relative locations reflect distances from the river mouth in kilometers.
Hymov10.sd2	1983-2010	Monthly hydrolab <i>in situ</i> water quality measurements taken at 0.5 meter intervals at each of the four moving isohalines. Relative locations reflect distances from the river mouth in kilometers.
Hyfix10.sd2	1996-2010	Monthly <i>in situ</i> hydrolab water column profile data taken at 0.5 meter intervals from fixed sample locations from near the river's mouth to just upstream of the Treatment Facility.
Cfix9610.sd2	1996-2010	Monthly surface and bottom chemical water quality samples taken at five intervals from fixed sample locations from near the river's mouth to just upstream of the Treatment Facility.
Efix9610.sd2	1996-2010	Water column extinction coefficients collected at the fixed sampling locations.
Boca04.sd2	1996-2004	Water level at 15-minute intervals from the continuous recording gage near Boca Grande. Discontinued.
HH10.sd2	1996-2010	Water level, and surface and bottom conductivity and temperature at 15-minute intervals from the continuous recording gage on the Peace River near Harbor Heights (River Kilometer 15.5).
PRH10.sd2	1997-2010	Water level, and surface and bottom conductivity and temperature at 15-minute intervals from the continuous recording gage on the Peace River near Peace River Heights (River Kilometer 26.7).
PLATT10.sd2	2009-2010	Water level, and surface and bottom conductivity and temperature at 15-minute intervals from the continuous recording gage on the Peace River at the Facility intake (River Kilometer 29.8).
RK21_10.sd2	2006-2010	Near surface conductivity and temperature at 15-minute intervals from the HBMP continuous recording gage attached to the Manatee Speed Zone Sign located on the Peace River near Liverpool side channel (River Kilometer 21.9).
RK23_10.sd2	2006-2008	Near surface conductivity and temperature at 15-minute intervals from the HBMP continuous recording gage attached to the Manatee Speed Zone Sign located on the Peace at River Kilometer 23.4. Discontinued.
RK24_10sd2	2006-2010	Near surface conductivity and temperature at 15-minute intervals from the HBMP continuous recording gage attached to the Manatee Speed Zone Sign located on the Peace River just downstream of Navigator Marina (River Kilometer 24.5).
RK12_10.sd2	2008-2010	Near bottom conductivity, temperature and dissolved oxygen at 15-minute intervals from the HBMP continuous recording gage attached to a channel marker located on the Peace River just downstream of Shell Creek (River Kilometer 12.9).
RK30_10.sd2	2008-2010	Near surface conductivity and temperature at 15-minute intervals from the HBMP continuous recording gage attached to the Manatee Speed Zone Sign located on the Peace River just upstream of the Facility (River Kilometer 30.6).
RK31_10.sd2	2008-2010	Near surface conductivity and temperature at 15-minute intervals from the HBMP continuous recording gage attached to the old railroad trestle located on the Peace River just upstream of the Facility (River Kilometer



# 2010 Data Sets

Data Set Name	Time Period	Brief Description		
		31.7).		
Historic Data Sets on Next Page				
Environmental Quality Laboratory (EQL) Background Data Sets				
		SAS Version 6.0.8 Data Sets		
Chall_2.sd2	1976-1990	EQL fixed station Charlotte Harbor background water chemistry data.		
Hydroall.sd2	1976-1990	EQL fixed station Charlotte Harbor hydrolab water column profile data.		
		SAS Version 6.1.3 Data Sets		
Chem_v12.sd2	1976-1990	EQL fixed station Charlotte Harbor background water chemistry data.		
Hall_v12.sd2	1976-1990	EQL fixed station Charlotte Harbor hydrolab water column profile data.		

Data Set Name	FLWD10_HBMP	Observations	29220
Member Type	DATA	Variables	21
Engine	V9	Indexes	0
Created	Tuesday, April 12, 2011 01:40:59 PM	Observation Length	168
Last Modified	Tuesday, April 12, 2011 01:40:59 PM	Deleted Observations	0

Data Set Page Size 16384

Number of Data Set Pages 302

First Data Page 1

Max Obs per Page 97

Obs in First Data Page 75

Number of Data Set Repairs 0

#### Alphabetic List of Variables and Attributes

#### # Variable Type Len Format Informat Label

9	Arcadia	Num	8	8.1	F12.	Peace River at Arcadia (cfs)
17	BIGS	Num	8	8.1	F12.	Big Slough near North Port (cfs)
12	Bartow	Num	8	8.1	F12.	Peace at Bartow (cfs)
19	CHARLIE	Num	8	8.1	F12.	Charlie Creek near Gardner (cfs)
7	DATE	Num	8	DATE9.	DATE9.	DATE
5	DAY	Num	8	BEST12.	F12.	DAY
13	FTMeade	Num	8	8.1	F12.	Peace at Ft Meade (cfs)
8	Horse	Num	8	8.1	F12.	Horse Creek near Arcadia (cfs)
10	Joshua	Num	8	8.1	F12.	Joshua Creek at Nocatee (cfs)
4	MONTH	Num	8	BEST12.	F12.	MONTH
16	MYAKKA	Num	8	8.1	F12.	Myakka River near Sarasota (cfs)
18	PAYNE	Num	8	8.1	F12.	Payne Creek near Bowling Green (cfs)
20	PHJ	Num	8	8.1		Total gaged flow upstream of the Facility
21	PHJS	Num	8	8.1		Total gaged flow to the upper harbor
2	PWITH	Num	8	8.2	F12.	Peace Facility Widthdrawal (cfs)
14	Prairie	Num	8	8.1	F12.	Prairie Creek near Ft. Ogden (cfs)
1	SASDATE	Num	8	BEST12.	F12.	SAS Date
3	SWITH	Num	8	8.2	F12.	Shell Facility Widthdrawal (cfs)
11	Shell	Num	8	8.1	F12.	Shell Creek near Punta Gorda (cfs
6	YEAR	Num	8	BEST12.	F12.	YEAR
15	Zolfo	Num	8	8.1	F12.	Peace at Zolfo (cfs)

Data Set Name	CMOV8310	Observations	1456
Member Type	DATA	Variables	55
Engine	V9	Indexes	0
Created	Tuesday, April 12,	Observation Length	440
	2011 01:40:59 PM		
Last Modified	Tuesday, April 12,	Deleted Observations	0
	2011 01:40:59 PM		
Data Set Page Size	16384		
Number of Data Set P	ages 40		
First Data Page	1		
Max Obs per Page	37		
Obs in First Data Pa	ge 20		
Number of Data Set R	epairs 0		

#### Alphabetic List of Variables and Attributes

## # Variable Type Len Format Informat Label

47	ALK	Num	8			Alkalinity (mg/l)
24	CF1	Num	8	8.1		Chlorophyll a >20 um Fraction (mg/m3)
25	CF2	Num	8	8.1		Chlorophyll a 20><5 um Fraction (mg/m3)
26	CF3	Num	8	8.1		Chlorophyll a 5> um Fraction (mg/m3)
27	CF4	Num	8	8.1		% Chlorophyll a >20 um Size Fraction
28	CF5	Num	8	8.1		% Chlorophyll a 20><5 um Size Fraction
29	CF6	Num	8	8.1		% Chlorophyll a 5> um Size Fraction
15	CHLA	Num	8	8.1		Chlorophyll-a (ug/l)
54	CHLB	Num	8			Chlorophyll b (mg/m3)
55	CHLC	Num	8			Chlorophyll c (mg/m3)
44	CL	Num	8	8.1		Chloride (mg/l)
7	COLOR	Num	8	8.		Color (CPU)
45	DATE	Num	8	DATE8.	DATE9.	Date
5	DAY	Num	8	8.		Day
4	DIS	Num	8	8.1	F12.	Distance (km)
42	DOC	Num	8	8.2		Dissolved Organic Carbon (mg/l)
50	DOP	Num	8			Dissolved Orthophosphate (mg/L)
14	EXC	Num	8	8.2		Light Extinction Coefficient
18	F1	Num	8	8.2		<pre>Uptake &gt;20 um Fraction (mg Carbon/m3/E)</pre>
19	F2	Num	8	8.2		<pre>Uptake 20&gt;&lt;5 um Fract. (mg Carbon/m3/E)</pre>
20	F3	Num	8	8.2		<pre>Uptake 5&gt; um Fraction (mg Carbon/m3/E)</pre>
21	F4	Num	8	8.1		% Carbon Uptake >20 um Size Fraction
22	F5	Num	8	8.1		% Carbon Uptake 20><5 um Size Fraction
23	F6	Num	8	8.1		% Carbon Uptake 5> um Size Fraction
32	IOC	Num	8	8.2		<pre>Inorganic Carbon (mg/l)</pre>
43	IRON	Num	8	8.2		<pre>Iron (mg/l)</pre>
6	LIGHT	Num	8	8.1		Light Same Day (Einsteins)
2	MONTH	Num	8	8.		Month
9	N23	Num	8	8.3		<pre>Nitrite/Nitrate (mg/l)</pre>
8	NH34	Num	8	8.3		Ammonia/Ammonium (mg/l)
11	NP	Num	8	8.1		Available N/P Ratio
33	NPA	Num	8	8.1		Available N/P Atomic Ratio
35	ONIT	Num	8	8.2		TKN - NH4 (mg/l)
10	OP	Num	8	8.3		Orthophosphorus (mg/l)
37	OPD01	Num	8	8.2		Depth 1% of Surface Light Remains (m)
38	OPD10	Num	8	8.2		Depth 10% of Surface Light Remains (m)
39	OPD50	Num	8	8.2		Depth 50% of Surface Light Remains (m)
17	P2	Num	8	8.2		Carbon Uptake (mg Carbon/m3/hr)
16	P3	Num	8	8.2		Carbon Uptake (mg Carbon/m3/E)

## Data Set Name CMOV8310(continued)

46	SASDATE	Num	8			SAS Date
13	SI	Num	8	8.2		Silica (mg/l)
51	SOURCE	Char	3			
3	STATION	Num	8	8.	F12.	Sample Location
30	TKN	Num	8	8.2		Total Kjeldahl Nitrogen (mg/l)
36	TN	Num	8	8.2		TKN + N23 (mg/1)
12	TNTP	Num	8	8.1		Total N/P Ratio
34	TNTPA	Num	8	8.1		Total N/P Atomic Ratio
41	TOC	Num	8	8.2		Total Organic Carbon (mg/l)
31	TP	Num	8	8.3		Total Phosphorus (mg/l)
48	TSS	Num	8			Total Suspended Solids (mg/l)
40	TURB	Num	8	8.2		Turbidity
52	TYPE	Char	6			_
49	vss	Num	8			Volatile Suspended Solids (mg/L)
1	YEAR	Num	8	8.		Year
53	time	Num	8	TIME5.	TIME8.	Time

Data Set Name	HYMOV2010	Observations	8724
Member Type	DATA	Variables	17
Engine	V9	Indexes	0
Created	Tuesday, April 12,	Observation Length	136
	2011 01:40:59 PM		
Last Modified	Tuesday, April 12,	Deleted Observations	0

2011 01:40:59 PM

Data Set Page Size 12288

Number of Data Set Pages 98

First Data Page 1

Max Obs per Page 90

Obs in First Data Page 69

Number of Data Set Repairs 0

#	Variable	Type	Len	Format	Informat	Label
7	COND	Num	8	8.1	F12.	Conductivity
12	DATE	Num	8	DATE7.	DATE9.	DayMonthYear
3	DAY	Num	8	4.		Day
4	DEPTH	Num	8	4.1	F12.	Sample Depth (m)
13	DIS	Num	8	8.1	F12.	Distance (km)
6	DO	Num	8	8.1	F12.	Dissolved Oxygen (mg/l)
2	MONTH	Num	8	8.		Month
9	ORP	Num	8	5.		Oxidation Reduction Potential
8	PH	Num	8	8.1	F12.	рн
10	SAL	Num	8	8.1	F12.	Salinity (ppt)
11	SASDATE	Num	8	6.		SAS Date
14	SOURCE	Char	4			Data Source
16	STATION	Num	8	6.	F12.	Station
5	TEMP	Num	8	8.1	F12.	Temperature (C)
15	TYPE	Char	6			Moving or Fixed
1	YEAR	Num	8	8.		Year
17	time	Num	8	TIME5.	TIME8.	Time

Data Set Name	HYFIX2010	Observations	19430
Member Type	DATA	Variables	16
Engine	V9	Indexes	0
Created	Tuesday, April 12, 2011 01:40:59 PM	Observation Length	128
Last Modified	Tuesday, April 12,	Deleted Observation	s 0

2011 01:40:59 PM

Data Set Page Size 12288
Number of Data Set Pages 205
First Data Page 1
Max Obs per Page 95
Obs in First Data Page 74

Number of Data Set Repairs 0

#	Variable	Type	Len	Format	Informat	Label
10	COMP	<b>3</b> 7	8	0	<b>510</b>	destific destructions (
12	COND	Num	•	8.	F12.	Specific Conductance (us/cm)
6	DATE	Num	8	DATE7.	DATE9.	Date
10	DAY	Num	8			Day
5	DEPTH	Num	8	8.1	F12.	Sampling Depth (m)
4	DIS	Num	8			River Kilometer of Site Location
13	DO	Num	8	8.2	F12.	Dissolved Oxygen (mg/L)
9	MONTH	Num	8	8.		Month
14	PH	Num	8	8.2	F12.	pH Water Whole Field (std.units)
16	SAL	Num	8	8.1	F12.	Salinity (psu)
3	SASDATE	Num	8			SAS Date
1	SOURCE	Char	4			Collected By
15	STATION	Num	8	6.	F12.	Station
11	TEMP	Num	8	8.1	F12.	Temperature (C)
7	TIME	Num	8	TIME5.	TIME8.	Time
2	TYPE	Char	5			Moving or Fixed
8	YEAR	Num	8	8.		Year

Data Set Name Member Type	CFIX9610 DATA	Observations Variables	1726 42
Engine	V9	Indexes	0
Created	Tuesday, April 12, 2011 01:40:59 PM	Observation Length	328
Last Modified	Tuesday, April 12, 2011 01:40:59 PM	Deleted Observations	0
Data Set Page Size	16384		
Number of Data Set F	Pages 36		
First Data Page	1		
Max Obs per Page	49		
Obs in First Data Pa	ige 31		

#### Alphabetic List of Variables and Attributes

### # Variable Type Len Format Informat Label

Number of Data Set Repairs 0

23	ALK	Num	8	BEST12.	F12.	Alkalinity (mg/l)
33	CF1	Num	8			> 20 um Size Fraction
34	CF2	Num	8			20> <5 um Size Fraction
35	CF3	Num	8			> 5 um Size Fraction
32	CHLA	Num	8	8.2	F12.	Chlorophyll a (mg/m3)
39	CHLB	Num	8	8.2	F12.	Chlorophyll b (mg/m3)
40	CHLC	Num	8	8.2	F12.	Chlorophyll c (mg/m3)
19	CL	Num	8	BEST12.	F12.	Chloride (mg/l)
11	COLOR	Num	8	BEST12.	F12.	Color (CPU)
1	DATE	Num	8	DATE7.	DATE9.	Date
4	DAY	Num	8	BEST12.	F12.	Day
9	DEP	Char	3	\$3.	\$3.	Surface or Bottom Sample
6	DIS	Num	8			Distance from Mouth of River
17	DOC	Num	8	BEST12.	F12.	Dissolved Organic Carbon (mg/L)
25	DOP	Num	8			Dissolved Orthophosphate (mg/L)
18	IOC	Num	8	BEST12.	F12.	Inorganic Carbon (mg/L)
36	IRON	Num	8	BEST12.	F12.	Iron (mg/L)
3	MONTH	Num	8	BEST12.	F12.	Month
15	N23	Num	8	BEST12.	F12.	Nitrite/Nitrate (mg/l)
37	NH34	Num	8	BEST12.	F12.	Ammonia/Ammonium (mg/l)
26	NP	Num	8	8.1		Ration of Availiable Nitriogen
						to Phosphorus
28	NPA	Num	8	8.1		Atomic Ration of Availiable
						Nitriogen to Phosphorus
30	ONIT	Num	8			Organic Nitrogen (mg/L)
22	OP	Num	8	BEST12.	F12.	Orthophosphorus (mg/l)
5	SASDATE	Num	8			SAS Date
20	sı	Num	8	BEST12.	F12.	Silica (mg/l)
7	SOURCE	Char	4			Collected By
24	STATION	Num	8	BEST12.	F12.	Station Number
41	T1	Num	8			
42	т2	Num	8			
14	TKN	Num	8	BEST12.	F12.	Total Kjeldahl Nitrogen (mg/l)
	TN	Num	8	<b> </b>		Total Nitrogen (mg/L)
	TNTP	Num	_	8.1		Ration of Total Nitriogen to Phosphorus
	TNTPA	Num	_	8.1		Atomic Ration of Total
	-			-		Nitriogen to Phosphorus

## Data Set Name CFIX9610 (continued)

16	TOC	Num	8	BEST12.	F12.	Total Organic Carbon (mg/L)
21	TP	Num	8	BEST12.	F12.	Total Phosphorus (mg/l)
13	TSS	Num	8	BEST12.	F12.	Total Suspended Solids (mg/l)
10	TURB	Num	8	BEST12.	F12.	Turbidity (NTU)
8	TYPE	Char	5			Moving or Fixed
12	VSS	Num	8	BEST12.	F12.	Volatile Suspended Solids (mg/L)
2	YEAR	Num	8	BEST12.	F12.	Year
38	time	Num	8	TIME5.	TIME8.	Time

Data Set Name	EFIX9610	Observations	2179
Member Type	DATA	Variables	13
Engine	V9	Indexes	0
Created	Tuesday, April 12,	Observation Length	96
	2011 01:40:59 PM		
Last Modified	Tuesday, April 12,	Deleted Observations	. 0
	2011 01:40:59 PM		

Data Set Page Size 8192
Number of Data Set Pages 27
First Data Page 1
Max Obs per Page 84
Obs in First Data Page 60
Number of Data Set Repairs 0

#	Variable	Type	Len	Format	Label
9	DATE	Num	8	DATE8.	Sampling Date
2	DAY	Num	8		Day
12	DIS	Num	8		River Kilometer
5	EXC	Num	8		Extinction Coefficient
1	MONTH	Num	8		Month
6	OPD01	Num	8		1% Light Depth
7	OPD10	Num	8		10% Light Depth
8	OPD50	Num	8		50% Light Depth
10	SASDATE	Num	8		
13	SOURCE	Char	3		
4	STATION	Num	8		EQL Station #
11	TYPE	Char	5		
3	YEAR	Num	8		Year

Data Set Name HH10 Observations 481621 Member Type DATA Variables 15 Engine V9 Indexes 0 Created Tuesday, April 12, Observation Length 112 2011 01:40:59 PM Last Modified Tuesday, April 12, Deleted Observations 0 2011 01:40:59 PM

#### Engine/Host Dependent Information

Data Set Page Size 12288 Number of Data Set Pages 4419 First Data Page 1 Max Obs per Page 109 Obs in First Data Page 85 Number of Data Set Repairs 0

#	Variable	Type	Len	Format	Informat	Label
6	CONDBOT	Num	8			Bottom Conductance (uS/cm @25C)
5	CONDSURF	Num	8			Surface Conductance (uS/cm @25C)
2	DATE	Num	8	DATE7.		Date
11	DAY	Num	8	BEST12.	F12.	Day
15	DIS	Num	8			Distance from Mouth of River
1	GAGE	Char	8			USGS Gage Number
4	GHEIGHT	Num	8			Gage Height (feet)
10	MONTH	Num	8	BEST12.	F12.	Month
12	SASDATE	Num	8			SAS Date
13	SOURCE	Char	4			Collected By
8	TEMPBOT	Num	8			Bottom Temperature (degrees C)
7	TEMPSURF	Num	8			Surface Temperature (degrees C)
3	TIME	Num	8	TIME5.		Time
14	TYPE	Char	4			Moving, Fixed or Gage
9	YEAR	Num	8	BEST12.	F12.	Year

Data Set Name	PRH10	Observations	481621
Member Type	DATA	Variables	15
Engine	V9	Indexes	0
Created	Tuesday, April 12,	Observation Length	112
	2011 01:41:10 PM		
Last Modified	Tuesday, April 12.	Deleted Observations	<b>=</b> 0

2011 01:41:10 PM

Data Set Page Size 12288
Number of Data Set Pages 4419
First Data Page 1
Max Obs per Page 109
Obs in First Data Page 85
Number of Data Set Repairs 0

#	Variable	Type	Len	Format	Informat	Label
6	CONDBOT	Num	8			Bottom Conductance (uS/cm @25C)
5	CONDSURF	Num	8			Surface Conductance (uS/cm @25C)
2	DATE	Num	8	DATE7.		Date
11	DAY	Num	8	BEST12.	F12.	Day
15	DIS	Num	8			Distance from Mouth of River
1	GAGE	Char	8			USGS Gage Number
4	GHEIGHT	Num	8			Gage Height (feet)
10	MONTH	Num	8	BEST12.	F12.	Month
12	SASDATE	Num	8			SAS Date
13	SOURCE	Char	4			Collected By
8	TEMPBOT	Num	8			Bottom Temperature (degrees C)
7	TEMPSURF	Num	8			Surface Temperature (degrees C)
3	TIME	Num	8	TIME5.		Time
14	TYPE	Char	4			Moving, Fixed or Gage
9	YEAR	Num	8	BEST12.	F12.	Year

Data Set Name	WORK.PLATT10	Observations	35040
Member Type	DATA	Variables	15
Engine	V9	Indexes	0
Created	Thursday, June 30,	Observation Length	112
	2011 04:58:51 PM		
Last Modified	Thursday, June 30,	Deleted Observations	0
	2011 04:58:51 PM		
Protection		Compressed	NO
Data Set Type		Sorted	NO
Label			
Data Representation	WINDOWS_32		

# Engine/Host Dependent Information

wlatin1 Western (Windows)

Data Set Page Size 12288

Number of Data Set Pages 322

First Data Page 1

Max Obs per Page 109

Obs in First Data Page 86

Number of Data Set Repairs 0

Encoding

#	Variable	Type	Len	Format	Label
10	CONDBOT	Num	8		Bottom Conductance (uS/cm @25C)
9	CONDSURF	Num	8		Surface Conductance (uS/cm @25C)
3	DAY	Num	8		DAY
13	DIS	Num	8		
7	GHEIGHT	Num	8		Gage Height (feet)
2	MONTH	Num	8		MONTH
5	SASDATE	Num	8		
15	SOURCE	Char	4		
12	TEMPBOT	Num	8		Bottom Temperature (degrees C)
11	TEMPSURF	Num	8		Surface Temperature (degrees C)
6	TIME	Num	8	TIME5.	Time
14	TYPE	Char	4		
1	YEAR	Num	8		YEAR
4	date	Num	8	DATE7.	Date
8	gage	Char	8		USGS Gage Number

Data Set Name	RK12_10	Observations	91863
Member Type	DATA	Variables	16
Engine	V9	Indexes	0
Created	Tuesday, April 12, 2011 01:41:19 PM	Observation Length	120
Last Modified	Tuesday, April 12,	Deleted Observation	.s 0

Data Set Page Size 12288

Number of Data Set Pages 901

First Data Page 1

Max Obs per Page 102

Obs in First Data Page 79

Number of Data Set Repairs 0

#### Alphabetic List of Variables and Attributes

#### # Variable Type Len Format Informat Label

2011 01:41:19 PM

7	Battery	Num	8		Battery
12	COND	Num	8		Specific Conductance (uS/cm @ 25C)
9	DAY	Num	8		
16	DIS	Num	8		Distance from River Mouth (kilometers)
5	DO	Num	8		Bottom Dissolved Oxygen Level
1	Date	Num	8	DATE9. DATE9.	Date
6	Depth	Num	8		Depth
13	GAGE	Char	4		Gage Location ID
8	MONTH	Num	8		
11	SASDATE	Num	8		SAS Date
14	SOURCE	Char	5		Collected By
4	Salinity	Num	8		Salinity
15	TYPE	Char	4		Fixed Location
3	Temp	Num	8		Temperature (degree C)
2	Time	Num	8	TIME8. TIME8.	Time
10	YEAR	Num	8		

Data Set Name	RK21_10	Observations	168787
Member Type	DATA	Variables	14
Engine	V9	Indexes	0
Created	Tuesday, April 12,	Observation Length	104
	2011 01:41:19 PM		
Last Modified	Tuesday, April 12,	Deleted Observation	.s 0
	2011 01:41:19 PM		

Data Set Page Size 12288

Number of Data Set Pages 1443

First Data Page 1

Max Obs per Page 117

Obs in First Data Page 93

Number of Data Set Repairs 0

#### Alphabetic List of Variables and Attributes

#### # Variable Type Len Format Informat Label

14	Battery	Num	8			Battery
9	COND	Num	8			Specific Conductance (uS/cm @ 25C)
6	DAY	Num	8			
13	DIS	Num	8			Distance from River Mouth (kilometers)
1	Date	Num	8	DATE9.	DATE9.	Date
10	GAGE	Char	3			Gage Location ID
5	MONTH	Num	8			
8	SASDATE	Num	8			SAS Date
11	SOURCE	Char	5			Collected By
4	Salinity	Num	8			Salinity
12	TYPE	Char	4			Fixed Location
3	Temp	Num	8			Temperature (degree C)
2	Time	Num	8	TIME8.	TIME8.	Time
7	YEAR	Num	8			

Data Set Name RK24\_10 Observations 168591 Member Type Variables DATA 14 Engine V9 Indexes 0 Created Observation Length 104 Tuesday, April 12, 2011 01:41:22 PM Last Modified Tuesday, April 12, Deleted Observations 0

Data Set Page Size 12288
Number of Data Set Pages 1442
First Data Page 1
Max Obs per Page 117
Obs in First Data Page 93

Number of Data Set Repairs 0

Alphabetic List of Variables and Attributes

#### # Variable Type Len Format Informat Label

2011 01:41:22 PM

14	Battery	Num	8		Battery
9	COND	Num	8		Specific Conductance (uS/cm @ 25C)
6	DAY	Num	8		
13	DIS	Num	8		Distance from River Mouth (kilometers)
1	Date	Num	8 DATE9.	DATE9.	Date
10	GAGE	Char	3		Gage Location ID
5	MONTH	Num	8		
8	SASDATE	Num	8		SAS Date
11	SOURCE	Char	5		Collected By
4	Salinity	Num	8		Salinity
12	TYPE	Char	4		Fixed Location
3	Temp	Num	8		Temperature (degree C)
2	Time	Num	8 TIME8.	TIME8.	Time
7	YEAR	Num	8		

**ATKINS** 

Data Set Name	RK30_10	Observations	90956
Member Type	DATA	Variables	14
Engine	V9	Indexes	0
Created	Tuesday, April 12, 2011 01:41:25 PM	Observation Length	104
Last Modified	Tuesday, April 12,	Deleted Observation	ns O

Data Set Page Size 12288
Number of Data Set Pages 778
First Data Page 1
Max Obs per Page 117

Obs in First Data Page 93
Number of Data Set Repairs 0

#### Alphabetic List of Variables and Attributes

#### # Variable Type Len Format Informat Label

2011 01:41:25 PM

5	Battery	Num	8			Battery
10	COND	Num	8			Specific Conductance (uS/cm @ 25C)
7	DAY	Num	8			
14	DIS	Num	8			Distance from River Mouth (kilometers)
1	Date	Num	8	DATE9.	DATE9.	Date
11	GAGE	Char	4			Gage Location ID
6	MONTH	Num	8			
9	SASDATE	Num	8			SAS Date
12	SOURCE	Char	5			Collected By
4	Salinity	Num	8			Salinity
13	TYPE	Char	4			Fixed Location
3	Temp	Num	8			Temperature (degree C)
2	Time	Num	8	TIME8.	TIME8.	Time
8	YEAR	Num	8			

Data Set Name	RK31_10	Observations	92263
Member Type	DATA	Variables	14
Engine	V9	Indexes	0
Created	Tuesday, April 12,	Observation Length	104
	2011 01:41:26 PM		
Last Modified	Tuesday, April 12,	Deleted Observations	0
	2011 01:41:26 PM		

#### Engine/Host Dependent Information

Data Set Page Size 12288

Number of Data Set Pages 789

First Data Page 1

Max Obs per Page 117

Obs in First Data Page 93

Number of Data Set Repairs 0

#### Alphabetic List of Variables and Attributes

# Variable Type Len Format Informat Label

5	Battery	Num	8			Battery
10	COND	Num	8			Specific Conductance (uS/cm @ 25C)
7	DAY	Num	8			
14	DIS	Num	8			Distance from River Mouth (kilometers)
1	Date	Num	8	DATE9.	DATE9.	Date
11	GAGE	Char	4			Gage Location ID
6	MONTH	Num	8			
9	SASDATE	Num	8			SAS Date
12	SOURCE	Char	5			Collected By
4	Salinity	Num	8			Salinity
13	TYPE	Char	4			Fixed Location
3	Temp	Num	8			Temperature (degree C)
2	Time	Num	8	TIME8.	TIME8.	Time
8	YEAR	Num	8			

Data Set Name	WORK.RK23_08	Observations	74688
Member Type	DATA	Variables	14
Engine	V9	Indexes	0
Created	Friday, April 03,	Observation Length	104
	2009 11:26:07 AM		
Last Modified	Friday, April 03,	Deleted Observations	<b>3</b> 0
	2009 11:26:07 AM		

### # Variable Type Len Format Informat Label

14	Battery	Num	8			Battery
9	COND	Num	8			Specific Conductance (uS/cm @ 25C)
6	DAY	Num	8			
13	DIS	Num	8			Distance from River Mouth (kilometers)
1	Date	Num	8	DATE9.	DATE9.	Date
10	GAGE	Char	3			Gage Location ID
5	MONTH	Num	8			
8	SASDATE	Num	8			SAS Date
11	SOURCE	Char	5			Collected By
4	Salinity	Num	8			Salinity
12	TYPE	Char	4			Fixed Location
3	Temp	Num	8			Temperature (degree C)
2	Time	Num	8	TIME8.	TIME8.	Time
7	YEAR	Num	8			

Data	Set 1	Name	WORK . BOCA	04	Obs	ervations	280688
Member Engine Create		7	DATA 79 Thursday, May 2007 01:12:21	_		Variables Indexes Observation Length	10 0 80
Last M	odified	:	Thursday, May 2007 01:12:21	03,		Deleted Observatio	ns 0
	#	Variab:	le Type	Len	Format	Label	
	2	DATE	Num	8	DATE7.	Date	
	7	DAY	Num	8		Day	
	1	GAGE	Char	15		USGS Gage Number	
	4	GHEIGH:	r Num	8		Gage Height (feet)	
	6	MONTH	Num	8		Month	
	8	SASDATI	E Num	8		SAS Date	
	10	SOURCE	Char	4			
	3	TIME	Num	8	TIME5.	Time	

4

8

Year

TYPE

YEAR

Char

Num

9

5

Data	Set Name	WOR	K.CH	ALL_2	Observations	3546
Member	Туре	DATA			Variables	37
Engine		V9			Indexes	0
Created	đ	Thursda	y, May	y 03,	Observation Length	296
		2007 01	:12:2	3 PM		
Last Mo	odified	Thursda	y, May	y 03,	Deleted Observations	0
		2007 01	:12:2	3 PM		
#	Variable	Type L	en	Format	Label	
24	ALK	Num	8	6.1	Alkalinity-CaCO3 (mg/l)	
26	CA	Num	8	6.1	Calcium Hardness (mg/l)	
13	CHLA	Num	8	7.1	Chlorophyll a (ug/l)	
14	CL	Num	8	7.1	Chloride (mg/l)	
17	COLOR	Num	8	5.	Color (CPU)	
3	D	Num	8		Day	
23	DAY	Num	8		Day	
18	DEPTH	Num	8			
37	DO	Num	8		Dissolved Oxygen (mg/l)	
19	DOC	Num	8		Dissolved Organic Carbon (mg/l	.)
31	F	Num	8	6.2	Fluroide (mg/l)	
32	FC	Num	8	5.	Fecal Coliform Bacteria (c/100	ml)
20	FE	Num	8		Iron (mg/l)	
33	FS	Num	8	5.	Fecal Strep. Bacteria (c/100 ml	.)
25	HARD	Num	8	5.	Hardness-CaCO3 (mg/1)	
11	IOC	Num	8	7.1	<pre>Inorganic Carbon (mg/l)</pre>	
2	M	Num	8		Month	
27	MG	Num	8	6.1	Magnesium Hardness (mg/l)	
22	MONTH	Num	8		Month	
4	N23	Num	8	6.3	Nitrite/Nitrate (mg/l)	
5	NH3	Num	8	6.3	Ammonia/Ammonium (mg/l)	
8	OP	Num	8	6.3	Orthophosphorus (mg/l)	
30	PH	Num	8			
15	SASDATE	Num	8		SAS Date	
9	SI	Num	8	6.2	Silica (mg/l)	
28	SO4	Num	8	6.1	Sulfate (mg/l)	
16	STATION	Num	8		Station Number	
34	TC	Num	8	5.	Total Coliform Bacteria (c/100	
36	TCOL	Num	8		Total Coliform Bacteria (c/100	ml)
29	TDS	Num	8	5.	Total Dissolved Solids (mg/l)	
35	TEMP	Num	8			
6	TKN	Num	8	6.2	Total Kjeldahl Nitrogen (mg/l)	
10	TOC	Num	8	7.1	Total Organic Carbon (mg/l)	
7	TP	Num	8	6.2	Total Phosphorus (mg/l)	
12	TURB	Num	8	4.1	turbidity (NTU)	
1	Y	Num	8		Year	
21	YEAR	Num	8		Year	

Data Set N	ame W	ORK.HYI	DROALI	Observations 2	2515
Member Type	DATA			Variables	13
Engine	v9			Indexes	0
Created		day, May 01:12:23	=	Observation Length	104
Last Modified		day, May 01:12:23	=	Deleted Observations	0
#	Variable	Туре	Len	Label	
7	COND	Num	8	Conductivity (mmho)	
3	DAY	Num	8	Day	
5	DEPTH	Num	8	Depth (meters)	
6	DO	Num	8	Dissolved Oxygen (mg/l)	
2	MONTH	Num	8	Month	
9	ORP	Num	8	Oxidation Reduction Potential	
8	PH	Num	8	рН	
10	SAL	Num	8	Salinity o/oo	
12	SASDATE	Num	8	SAS Date	
11	SAT	Num	8	Percent Oxygen Saturation	
4	STATION	Num	8	Station Number	
13	TEMP	Num	8	Temperature (C)	
1	YEAR	Num	8	Year	

#### SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT

IN RE:

DECLARATION OF WATER
SHORTAGE EMERGENCY RELATING
TO USE OF THE PEACE RIVER
TO AUGMENT THE PEACE RIVER/MANASOTA
REGIONAL WATER SUPPLY AUTHORITY'S RESERVOIR
AND AQUIFER STORAGE AND RECOVERY WELLFIELDS

# FIFTH MODIFICATION TO EXECUTIVE DIRECTOR ORDER NO. SWF 07-045

David L. Moore, Executive Director of the Southwest Florida Water Management District, a public corporation (DISTRICT), at District Headquarters, 2379 Broad Street, Brooksville, Florida, received evidence and information from District staff and representatives of the Peace River / Manasota Regional Water Supply Authority (AUTHORITY), regarding drought conditions causing a public water supply shortage within the AUTHORITY's Regional System and low water levels in its reservoir and both aquifer storage and recovery (ASR) wellfields, thereby creating a public health, safety and welfare emergency, and based upon such evidence and information finds and determines:

#### FINDINGS OF FACT

- Section 373.246, Florida Statutes (F.S.), requires each water management district to adopt a Water Shortage Plan (PLAN) as a means of assuring appropriate responses to droughts and other types of water shortage events.
- 2. Chapter 40D-21, Florida Administrative Code (F.A.C.), constitutes the DISTRICT's PLAN.
- 3. Part III of Chapter 40D-21, F.A.C., sets forth the emergency provisions of the PLAN.
- Within Part III of the PLAN, Rule 40D-21.331(3), F.A.C., specifies that, if the DISTRICT determines that conditions are rapidly deteriorating, or if the DISTRICT receives a request for emergency action, the DISTRICT shall ascertain if emergency actions are necessary to protect public health, safety, or welfare, considering such factors as whether the affected users can obtain water from other users or other sources on a

- temporary basis and whether there are recommendations from, and emergency actions taken by, a local government in the affected area.
- 5. Rule 40D-21.371(1), F.A.C., specifies that the Executive Director of the DISTRICT may issue orders containing response mechanisms deemed necessary to address such an emergency, and that these mechanisms may include authorizations to temporarily withdraw from a permitted source in a manner or for a purpose not expressly granted by the applicable Water Use Permit; and restrictions that involve apportioning, rotating, limiting, or prohibiting the use of water.
- 6. Rules 40D-21.391(1), (2) and (3), F.A.C., allow for emergency orders to be issued by the Executive Director without prior notice, subject to concurrence by the DISTRICT's Governing Board and proper notice to affected water users and local officials.
- 7. The AUTHORITY has been issued Water Use Permit No. 20010420.004 (PERMIT) authorizing withdrawals from the Peace River at the AUTHORITY's intake structure.
- 8. The AUTHORITY has requested emergency DISTRICT water shortage action which would allow it to continue taking withdrawals from the Peace River intake as specified in Executive Director Order No. SWF 07-045 and further modify the temporary change in diversion schedule previously authorized in the Fourth Modification to the Executive Director Order No. SWF 07-045 to continue to be consistent with the DISTRICT's proposed minimum flow schedule for the lower Peace River. Specifically, the AUTHORITY has requested:
  - a. That terms of this emergency order be extended beyond the previous October 26, 2008 expiration.
  - b. Continuation of the temporary modification to Special Condition #7A of the PERMIT as specified in the Second Modification to Executive Director Order No. SWF 07-045. This modification temporarily changes the low flow threshold for diversions to 90 cubic feet per second (cfs) based on the combined daily flow at the Peace River at Arcadia gauge (USGS gauge 02296750), Horse Creek near Arcadia (USGS gauge 02297310) and Joshua Creek at Nocatee (USGS gauge 02297100) for the previous day instead of the normal cut-off of 130 cfs at the Peace River at Arcadia (USGS gauge 02296750) only.
  - c. Further change to the temporary modification to Special Condition #7B of the PERMIT, replacing the diversion schedule previously specified in the Fourth Modification to Executive

Director Order No. SWF 07-045 with the following seasonally-adjusted, three-block schedule:

Dates	Maximum Diversion Shall Not Exceed:	Under These Conditions
	10 percent of the combined daily flow at the Arcadia, Horse Creek and Joshua Creek gauges for the previous day	Combined flow is between 90 cfs and 221 cfs
Block 1 (April 20 to June 25)	22.1 cfs (10 percent of the combined daily flow at 221 cfs) plus 26 percent of the combined daily flow above 221 cfs at the Arcadia, Horse Creek and Joshua Creek gauges for the previous day.	Combined flow is above 221 cfs
	14 percent of the combined daily flow at the Arcadia, Horse Creek and Joshua Creek gauges for the previous day	Combined flow is between 90 cfs and 330 cfs
Block 2 (October 27 to April 19)	46.2 cfs (14 percent of the combined daily flow at 330 cfs) plus 15 percent of the combined daily flow above 330 cfs at the Arcadia, Horse Creek and Joshua Creek gauges for the previous day.	Combined flow is above 330 cfs
	12 percent of the combined daily flow at the Arcadia, Horse Creek and Joshua Creek gauges for the previous day	Combined flow is between 90 cfs and 1370 cfs
Block 3 (June 26 to October 26)	1370 cfs (12 percent of the combined daily flow at 1370 cfs), plus 15 percent of the combined daily flow above 1370 cfs at the Arcadia, Horse Creek and Joshua Creek gauges for the previous day.	Combined flow is above 1370 cfs

- 9. As of September 4, 2008, the AUTHORITY had been able to withdraw a total of approximately 1.5 billion gallons of water from the river that would not have been otherwise available to meet regional demand since Executive Director Order No. SWF 07-045 was originally issued on August 13, 2007.
- 10. As of September 4, 2008, the AUTHORITY had combined total of approximately 750 million gallons of water stored in its reservoir and

- two ASR wellfields. This compares to a combined storage capacity of about 8.0 billion gallons, and represents an extremely low water supply condition.
- 11. As of September 4, 2008, the AUTHORITY was estimating that it would be able to increase total storage to about 1.1 billion gallons (an increase of 350 million gallons) prior to the expiration date of the Fourth Modification to this Order. This would still represent an extremely low water supply condition early in the annual dry season.
- 12. The AUTHORITY requests the emergency authorization described in Paragraph 8. above to continue capturing as much surface water as possible, in an environmentally responsible manner, in order to meet current demand and increase its stored reserves for later use when surface water diversions are not available. Capturing this surface water is an integral component of the projects being pursued by the AUTHORITY to bolster available supplies and maintain sufficient water quality in order to meet the public health, welfare and safety needs of its service area during the annual dry season, which runs from October through June.
- 13. DISTRICT staff has determined that several hydrologic factors, including designated water resource indicators in the PLAN, have not experienced sufficient improvement, compared to the conditions reported in Executive Director Order No. SWF 07-045. Specifically:
  - a. As of October 8, 2008, the 7-day average streamflow was substantially below normal throughout the Peace River watershed, compared to historical streamflow for that same time period. The Peace River (as measured at the Arcadia Station, 7-day average) was flowing at 330 cfs, which is equivalent to the 8th percentile, and a declining trend was expected to continue during the dry season.
  - b. As of September 30, 2008, the AUTHORITY's service area had been experiencing a rainfall deficit for more than two years. Despite normal rainfall during the past twelve months, the Northern Peace River basin has a 19.5-inch rainfall deficit over a 24-month period. Over this same time period, the Southern Peace River Basin has a 15.5-inch rainfall deficit and the Manasota Basin has a 22.3-inch rainfall deficit.
  - c. As of October 6, 2008, groundwater levels were trending downward in the AUTHORITY'S service area. The average level in

these counties was registering at the 28<sup>th</sup> percentile, which is considered on the low end of the "normal range" as specified in the PLAN.

- d. As of October 16, 2008, the Climate Prediction Center is predicting uncertain conditions (equal chances of below-normal, normal and above-normal rainfall) until December 2008, followed by below-normal rainfall from January 2009 to April 2009, and then a return to uncertain conditions through June 2009.
- 14. In combination with uncertain and below-normal rainfall predictions, the current water resource conditions and resulting water supply conditions, especially the low amount of storage in the AUTHORITY's two ASR wellfields, continue to constitute a threat to both public water supply and to public health, safety and welfare.

#### **ULTIMATE FINDINGS OF FACT**

- 15. The exercise of the non-emergency powers under subsections 373.175(1) and (2) and 373.246(1), F.S., and Part II of Chapter 40D-21, F.A.C., are not sufficient to protect the public heath, safety, or welfare, nor the drinking water supply of persons who depend upon the AUTHORITY.
- 16. In order to mitigate the effects of the long-term rainfall deficit on, and to make water available for immediate use as well as storage in the AUTHORITY's reservoir and two ASR wellfields, the AUTHORITY has requested that the DISTRICT authorize the AUTHORITY to take surface water diversions from the Peace River intake based on the DISTRICT's proposed minimum flows for the lower Peace River, which provides for a seasonally-adjusted withdrawal schedule based on the combined daily flow at the Peace River at Arcadia (USGS gauge 02296750), Horse Creek near Arcadia (USGS gauge 02297310) and Joshua Creek at Nocatee (USGS gauge 02297100) for the previous day.

#### **CONCLUSIONS OF LAW**

17. The Executive Director of the DISTRICT is duly authorized by subsections 373.119(2), 373.175(4) and 373.246(7), F.S., and Rule 40D-21.331(5), F.A.C., to declare a water shortage emergency and to issue emergency orders reciting the existence of an emergency and requiring that action be taken as deemed necessary to meet the emergency.

18. The PERMIT includes a condition authorizing the DISTRICT to modify the PERMIT in the event the DISTRICT declares a water shortage.

#### ORDERED

- 19. A water shortage emergency is continuing for the AUTHORITY's reservoir and two ASR wellfields. The ongoing emergency is putting at risk the reliability of the drinking water supply for over 250,000 residents within portions of the AUTHORITY's service area, which includes the City of North Port and the counties of Charlotte, DeSoto, Sarasota and Manatee (Manatee County does not currently receive water from the AUTHORITY), including associated fire suppression systems, hospitals, schools, businesses and governmental and community facilities.
- 20. The PERMIT is hereby modified as follows:
  - a. In lieu of the low flow threshold provided in Special Condition #7A of the PERMIT, diversions are allowed whenever the previous day's combined daily flow at the Peace River at Arcadia (USGS gauge 02296750), Horse Creek near Arcadia (USGS gauge 02297310) and Joshua Creek at Nocatee (USGS gauge 02297100) is at least 90 cfs.
  - b. In lieu of the diversion schedule provided in Special Condition #7B of the PERMIT, the amount of diversion from the Peace River intake may follow the "Temporary Diversion Schedule" table shown in paragraph 8.c. above, effective immediately.
  - c. However, in lieu of Special Condition #7C of the PERMIT, in no case shall the diversion amount exceed the difference between the previous day combined daily flow at the Arcadia, Horse Creek and Joshua Creek gauges and 90 cfs.
- 21. This order shall remain in effect until public health, safety and welfare are restored regarding the reliability of the water supply for over 250,000 residents within portions of the AUTHORITY's service area, which includes the City of North Port and the counties of Charlotte, DeSoto, Sarasota and Manatee (Manatee County does not currently receive water from the AUTHORITY), including associated fire suppression systems, hospitals, schools, businesses and governmental and community facilities. This order is subject to modification or revocation by the Governing Board or Executive Director as conditions warrant.

- 22. In lieu of a formal letter, the AUTHORITY may use an e-mail communication to <a href="mailto:Lois.Sorensen@swfwmd.state.fl.us">Lois.Sorensen@swfwmd.state.fl.us</a> as a means of requesting any additional extension or other modification to this Order.
- 23. Except as provided in paragraphs 20. through 22., above, all other terms and conditions of Executive Director Order No. SWF 07-045 shall remain in full force and effect.

DONE AND ORDERED in Hernando County, Florida, as of October 23, 2008.

Filed this Day By: David L. I

Agency Clerk

(SEAL)

**Executive Director** 

Southwest Florida Water Management District

Approved as to Legal Form and Content

Attorney

#### NOTICE OF RIGHTS

Persons to whom this Executive Director Order is directed, or whose substantial interests are affected, may request pursuant to subsection 373.119(3), Florida Statutes (F.S.), to petition for an administrative hearing in accordance with Sections 120.569 and 120.57, F.S., and Chapter 28-106, Florida Administrative Code (F.A.C.). A request for a hearing must: 1) explain how the petitioner's or other person's substantial interests will be affected by the District's action; 2) state all material facts disputed by the petitioner or other person, or state that there are no disputed facts; and 3) otherwise comply with Chapter 28-106, F.A.C.

A request for hearing must be filed with and received by the Agency Clerk of the District at District Headquarters, 2379 Broad Street, Brooksville, Florida 34604-6899 within twenty-one (21) days of receipt of this notice. Receipt is deemed to be the fifth day after the date on which this notice is deposited in the United States mail. Failure to file a request for hearing within this time period shall constitute a waiver of any right you or any other person may have to request a hearing under Sections 120.569 and 120.57, F.S.

Mediation pursuant to Section 120.573, F.S., and Rule 28-106.111, F.A.C., to settle an administrative dispute regarding the District's action in this matter is not available prior to the filing of a request for hearing.

In accordance with subsection 120.569(1), F.S., the following additional administrative or judicial review may be available.

A party who is adversely affected by final agency action may seek review of the action in the appropriate District Court of Appeal pursuant to Section 120.68, F.S., by filing a Notice of Appeal pursuant to Rule 9.110, Florida Rules of Appellate Procedure, within thirty (30) days after the rendering of the final action by the District.

PURSUANT TO SUBSECTION 373.119(3), F.S., AND NOTWITHSTANDING ANY OTHER PROVISION UNDER CHAPTER 120, F.S., PERSONS TO WHOM THE ORDER IS DIRECTED SHALL COMPLY THEREWITH IMMEDIATELY, AND THE TIMELY FILING OF A PETITION SHALL NOT STAY SUCH PERSON'S OBLIGATION TO MAINTAIN SUCH COMPLIANCE DURING THE PENDENCY OF ANY ADMINISTRATIVE PROCEEDING.