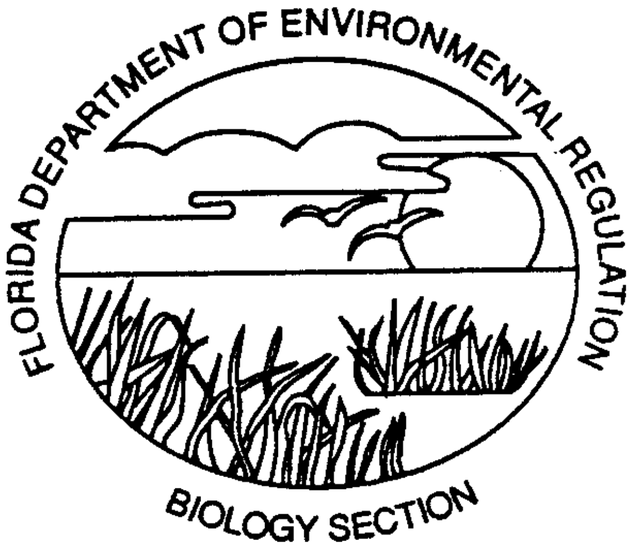


Bioassays of

Blackwater Bay

Robinson Point, Santa Rosa County, Florida

No NPDES Permit

Sampled 6/6/90

August 20, 1990

Biology Section
Division of Administrative and Technical Services

Bioassays of

Blackwater Bay

Robinson Point, Santa Rosa County, Florida

No NPDES Permit

Biology Section
Bureau of Laboratories
August 20, 1990

Introduction

Blackwater Bay, Robinson Point, Santa Rosa County, Florida, No NPDES permit, on 7 to 9 June, 1990.

In response to a request from the FDER Northwest District for a bioassay of waters in which a crab kill had occurred, the Biology Section performed two 48-hour static screening bioassays.

These toxicity tests were performed in accordance with methods described by Peltier and Weber, 1985, *Methods for Measuring the Acute Toxicity of Effluents to Aquatic Organisms*, 3rd Edition, and by the FDER Biology Section, 1985, *Quality Assurance Manual for Performing Acute Toxicity Tests*, 2nd Edition.

Results and Discussion

Two static acute bioassays using the test organisms, the bannerfin shiner, *Notropis leedsi,* and the mysid shrimp, *Mysidopsis bahia*, were performed on a sample from Blackwater Bay. The test results indicated that the sample was not toxic to either *N. leedsi* or *M. bahia.*

Conclusion

The sample from Blackwater Bay was not toxic to the test organisms on 6 June, 1990.

Table 1. Concentration Series and Volumes Used for These Static Bioassays.

Notropis leedsi (bannerfin shiner)

Concentration	Dilution Water	Sample	Total Volume
Control	500 ml	0 ml	500 ml
100.0%	0 ml	500 ml	500 ml

Mysidopsis bahia (mysid shrimp)

Control	500 ml	0 ml	500 ml
100.0%	0 ml	500 ml	500 ml

Table 2. Data recorded during the static screening bioassay of a sample from Blackwater Bay, Santa Rosa County, Florida on 7 to 9 June, 1990.

Facility: **None** | NPDES #: **None** | Facility Type: **None**
Location: Robinson Point , Blackwater Bay | Contact/District: Don Ray / Northwest
County: Santa Rosa | Test type: Static Screening
Sample Collection Date: **6/6/90** Time: 1305 | # tests: 2 | Receiving Water: Pensacola Bay
Test Beginning Date: 6/7/90 Time: 1100 | Chlorination Type: **Not Chlorinated**
Test Ending Date: 6/9/90 Time: 1100 | Dechlor Method: None | **Page 1 of 1**

Total Residual Cl2	mg/l	Method
Field:	-	-
Lab:	0.0	Hach
Lab:	-	-

Salinity (ppt)	
Control Water:	1.5
100% Sample:	1.5

Organism: ***Notropis leedsi*** Life stage: 20
LC50: - Binomial: - Moving Average: - Probit: -

	SURVIVAL			Dissolved Oxygen			pH			Temperature			Conductivity	
Concentrations	# at 0 hr	Live at 48 hr	Live at 96 hr	0 hour	24hour	48 hour	0 hour	24 hour	48 hour	0 hour	24 hour	48hour	0 hour	48 hour
Control	5	5	5	8.1	6.8	8.2	7.7	8.0	8.1	223.0	24.2	22.9	-	-
Control	5	5	5	8.1	6.6	8.1	7.7	8.0	8.1	-	-	-	2730	2870
100.0%	5	5	5	8.4	6.7	7.5	7.1	7.3	7.4	23.5	24.2	22.9	-	-
100.0%	5	5	5	8.4	6.6	7.4	7.4	7.3	7.4	-	-	-	2480	2540

Organism: ***Mysidopsis bahia*** Age: Juveniles < 3mm
LC50: - Binomial: - Moving Average: - Probit: -

	SURVIVAL			Dissolved Oxygen			pH			Temperature			Conductivity	
Concentrations	# at 0 hr	Live at 24 hr	Live at 48 hr	0 hour	24 hour	48 hour	0 hour	24 hour	48 hour	0 hour	24 hour	48 hour	0 hour	48 hour
Control	5	5	5	6.8	6.3	7.6	8.4	8.0	8.0	22.8	24.3	22.9	-	-
Control	5	5	5	6.9	6.3	7.6	8.4	8.0	8.0	-	-	-	16550	18040
100%	5	5	5	7.9	6.2	7.5	8.3	7.4	7.5	23.2	24.3	23.0	-	-
100%	5	5	5	7.9	6.2	7.5	8.3	7.4	7.5	-	-	-	16770	18110

Total Residual Cl2	mg/l	Method
Field:	-	-
Lab:	0.0	Hach
Lab:	-	-

Salinity (ppt)	
Control Water (fish):	10.0
100% Sample:	10.0

DER Biology Section — Acute-bioassay Bench Sheet

Sample Source: Blackwater Bay
Address/City: Robinson PT
County: SANTA ROSA
Contact/District: Ray Donelan; Dow Ray NW
NPDES Permit #: _____ Outfall #: _____

Sample Collection: Date 6/6/90 Time 1305
Test Beginning: Date 6/7/90 Time 1100
Test Ending: Date 6/9/90 Time 1100
Test Organism: N Incedsi / Mysidopsis Bahia
Life Stage/Age: 20 days / < 3 days

Test Number: ___ of ___ Test Type: (Screening) | Definitive
(Static) | Static Renewal | Flow-through

Remarks: Crab Kill SAL < 1.5‰
mysids @ 10‰ N. Incedsi at 1.5‰
Sample adjusted with Sea Salts

Instrument Calibrations:

	pH	DO	Cond	Temp
0 hr	7@7;9@9	8.7@20°C	1384@23.9°C@	1378 22.8°@
24 hr	7@7;9@9	8.7@23°C	1372@23.6°	22.2@23.1
48 hr				

Conc.	Chamber #	Number Live 0	24	48	DO (mg/l) 0	24	48	pH 0	24	48	Temp. (°C) 0	24	48	Cond. (µmhos/cm) 0	24	48
Control	119	5	5	5	8.1	6.8	8.2	7.7	8.0	8.1	22.3	24.2	22.9			
Control	17	5	5	5	8.1	6.6	8.1	7.7	8.0	8.1				2730		2870
10‰ fish	190	5	5	5	8.4	6.7	7.5	7.1	7.3	7.4	23.5	24.2	22.9			
10‰ fish	118	5	5	5	8.4	6.6	7.4	7.1	7.3	7.4				2480		2540
Control	14	5	5	5	6.8	6.3	7.6	8.4	8.0	8.0	22.8	24.3	22.9	16550		13040
Control	41	5	5	5	6.9	6.3	7.6	8.4	8.0	8.0						
10‰ mysids	387	5	5	5	7.9	6.2	7.5	8.3	7.4	7.5	23.2	24.3	23.0	16720		13110
10‰ mysids	214	5	5	5	7.9	6.2	7.5	8.3	7.4	7.5						
Measured by:		MF	SW	SW	SW/MF	SW	SW	SW	SW	SW	MF	SW	SW	MF		SW
Recorded by:		MF	SW	SW	MF	SW	SW	MF	SW	SW	MF	SW	SW	MF		SW

Investigators' Signatures
Marshall Frieglath
Mike Wade

Reviewer

Water-quality Parameters

	Well Water	Cond. Water	Sample	Method	Measured by
Field Tot. Resid. Cl2:			NA		Donelan
Lab Tot. Resid. Cl2:	Cl Blank	CL4.1 0.0	0.0	Hach	MF
Alkalinity:					
Hardness:					
Total Ammonia:					