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RESULTS OF A NATIONAL SURVEY ADDRESSING
WHOLE EFFLUENT TOXICITY (WET) REQUIREMENTS

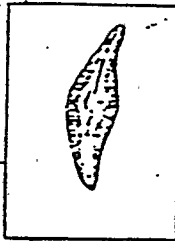
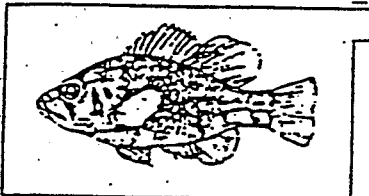


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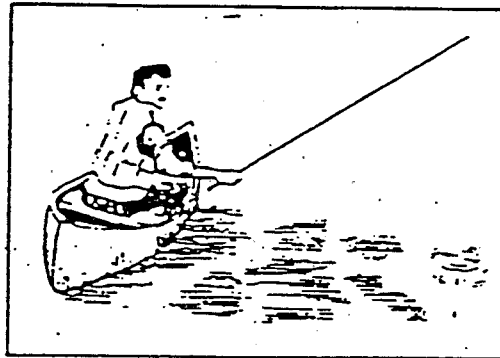
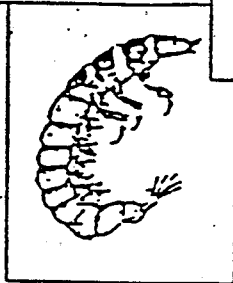
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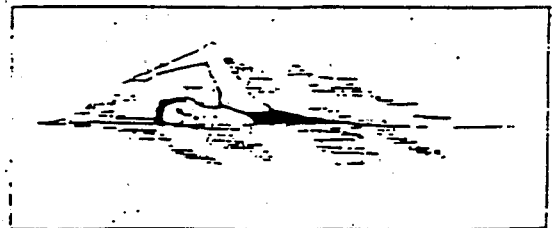
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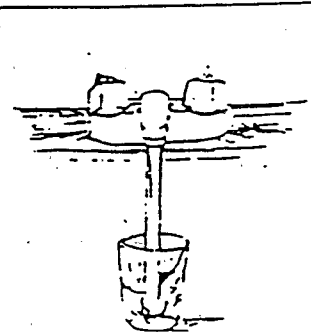
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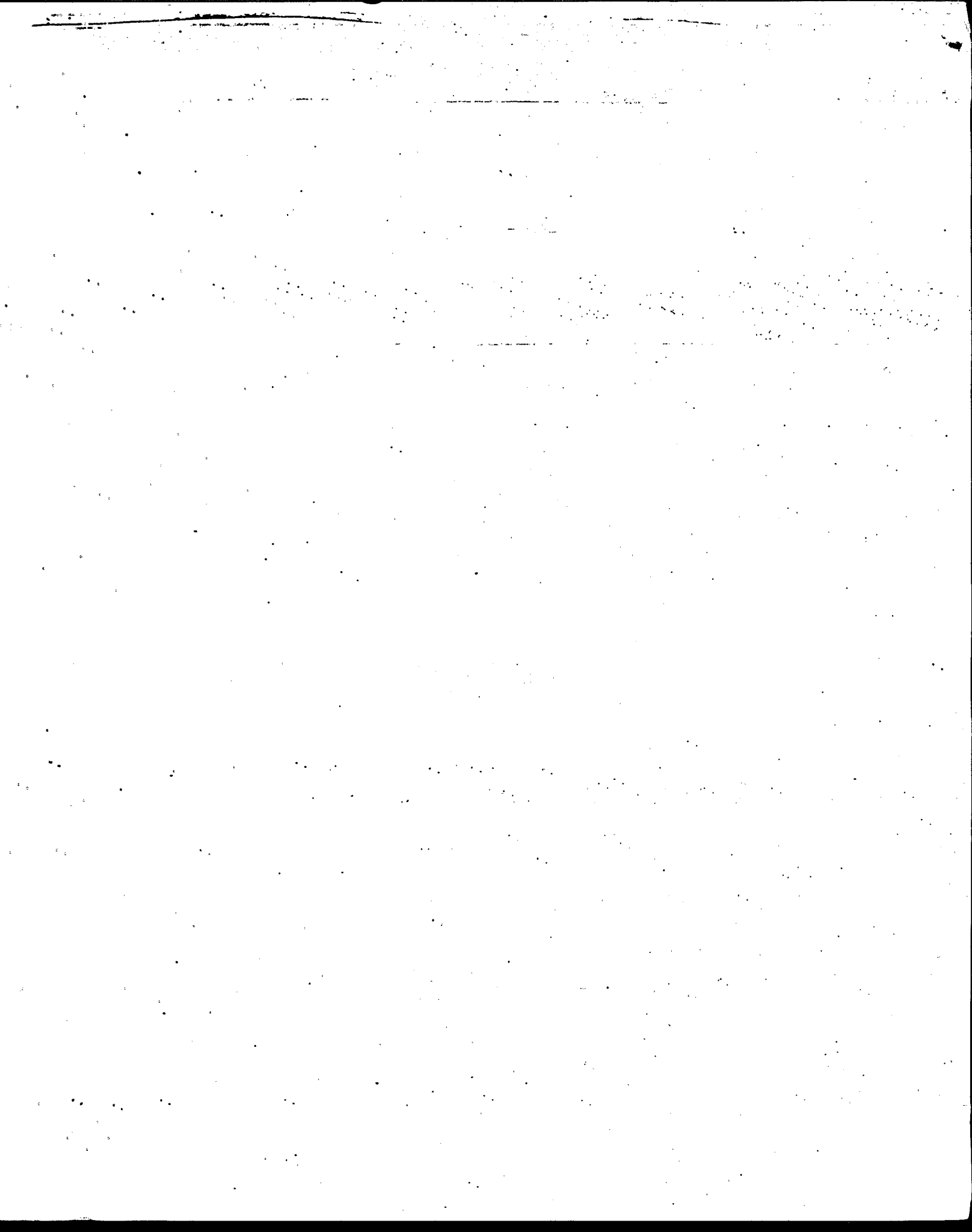


Natural Resources and
Environmental Protection Cabinet

Kentucky Division of Water
Bioassay Section
March 1995

Domestic
Use

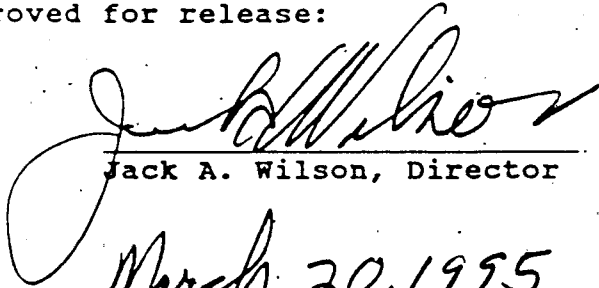




RESULTS OF A NATIONAL SURVEY ADDRESSING
WHOLE EFFLUENT TOXICITY (WET) REQUIREMENTS:

KENTUCKY DEPARTMENT FOR ENVIRONMENTAL PROTECTION
DIVISION OF WATER
BIOASSAY SECTION
14 REILLY ROAD
FRANKFORT, KENTUCKY 40601

This report has been approved for release:



Jack A. Wilson, Director

March 20, 1995
Date

**Results of a National Survey Addressing Whole Effluent
Toxicity (WET) Requirements**

**by
Charles A. Roth**

**Division of Water
Bioassay Section**

March 13, 1995

ACKNOWLEDGEMENT

I would like to thank Marshall Hyatt of EPA Region IV for his assistance in designing and distributing this survey. This effort would not have been possible without his input.

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INTRODUCTION

In August 1994, Kentucky with the assistance of EPA Region IV, distributed nationwide a whole effluent toxicity (WET) survey. The intent of this survey was to gain some knowledge of the way EPA Regions and states were implementing their WET programs.

The survey was designed as a series of questions regarding any WET requirements for a facility meeting the following basic permitting situations/conditions:

- major municipal POTW with approved pretreatment program.
- freshwater discharge to a Fish & Wildlife classified receiving stream, Tier 1 - no endangered species; no outstanding resource waters.
- no diffuser
- this facility's expiring permit contains no WET monitoring or limits. Their permit application contains historical WET data and the permit writer has concluded that reasonable potential to exceed state water quality standards now exists.

The survey then identified three different scenarios involving a POTW with a design flow of 2.2 mgd. Namely receiving stream critical low-flows of:

- 1) 0.0 mgd
- 2) 8.1 mgd
- 3) 3000 mgd

Participants were then asked to respond to questions describing their WET requirements for each of these situations. These questions addressed issues such as permit limits, compliance schedules, violations, test species and enforcement procedures.

This report is a summary of completed surveys received from all 50 states plus the District of Columbia. Again the intent of this survey was to provide an overall view of how WET programs are being implemented nationally and how consistent these programs are between states and EPA regions.

RESULTS OF THE SURVEY

Programs relating to WET testing are present in every state as well as the District of Columbia. The implementation of these programs varies, ranging from recently promulgating regulations for WET to well-defined WET strategies.

The manner in which effluent toxicity testing is incorporated into individual permits does vary from state to state and EPA region to region. WET requirements may be only a monitoring requirement in some states, while a permit limit in other states. Enforcement strategies also vary among states and regions. Furthermore, toxicity reduction evaluations (TREs) are a permit required response to effluent toxicity in some areas but are addressed outside the permit in others.

There is some consistency in the types of tests conducted and the test species used. Most states use EPA's acute and chronic toxicity testing manuals. The water flea (Ceriodaphnia dubia) and the fathead minnow Pimephales promelas are the most commonly utilized test species.

Several generalizations can be made from this study:
(Numbers include the District of Columbia)

- 27 states allow for some type of compliance schedule WET.
- 41 states consider each toxicity test failure a permit violation.
- 36 states use 7Q10 as the receiving stream low-flow measurement for determining the instream waste concentration (IWC).
- All states use Ceriodaphnia dubia and the fathead minnow as the required freshwater test species.
- 25 states allow for the testing of a most sensitive species.
- 39 states require multiple concentration tests.
- 38 states require additional tests after an initial failure.
- 34 states utilize the TRE as a permit required response to a toxic effluent.

When given a specific permitting situation for WET, the responses are summarized as follows:

1) Situation: POTW average design flow = 2.2 mgd
receiving stream 7Q10 = 0.0 mgd

- 7 states with acute limits
- 24 states with chronic limits
- 11 states with both acute & chronic limits
- 9 states with no WET limits or monitoring only

2) Situation: POTW average design flow = 2.2 mgd
Receiving stream 7Q10 = 8.1 mgd

- 6 states with acute limits
- 21 states with chronic limits
- 15 states with both acute & chronic limits
- 9 states with no WET limits or monitoring only

3) Situation: POTW average design flow = 2.2 mgd
Receiving stream 7Q10 = 3000 mgd

- 33 states with acute limits
- 3 states with chronic limits
- 4 states with both acute and chronic limits
- 11 states with no WET limits or monitoring only

A summary of WET requirements and conditions required by individual states are presented in the following tables and figures.

TABLE 1: States of EPA Region I

SURVEY.XLS

STATE EPA Issued	Low Flow	Compliance Schedule ?	Each Fail A Violation ?	If Monitoring Only When Limit ?	Multiple Conc. Required ?	Test Species	Sensitive Species	Add Tests After Fail ?	Permit Require TIE/TIE ?
REGION I									
CONNECTICUT	7Q10	Yes Up to 3 years.	Yes	If toxicity and TIE, then limit.	No Pass/Fail Definitive tests may be required to verify compliance	DP FM	Yes	Yes Retest within 30 days	Yes 2 consecutive or 3 annual violations.
MAINE	7Q10	No	Yes	NA	Yes	CD FM	Yes	No	No
MASSACHUSETTS		Only ME WQSids provide for schedule							TIE required through 308 Order or A.O.
NEW HAMPSHIRE									
VERMONT	7Q10	Yes If not in compliance then schedule is set.	Yes	If "reasonable potential" determined then limit.	Yes	CD FM	Yes In certain situations.	No May be required in TIE.	Yes
RHODE ISLAND	7Q10	No	No Presently no WET enforcement program	NA	Yes	CD FM	Yes	No	Yes

TABLE 1: Continued.

STATE	#1 POTW 2.2 MGD---7Q10=0.0MGD	#2 POTW 2.2 MGD---7Q10=8.1 MGD	#3 POTW 2.2 MGD---7Q10=3000MGD
*EPA issued:			
REGION 1			
CONNECTICUT	Acute Limit---NOAEL>100% Chronic protection based on 5% of the LC50. The NOAEL is assumed to be 1/3 LC50 (ACR=0.66). At IWC >5%--limit is NOAEL>100%. Toxicity is <90% survival where dilution is limited. "No Kill" at 100% eff. Compliance=no sig. mortality at conc. >or= IWCX20/3 up to 100%.	Acute Limit---NOAEL>100% Same as for situation #1. Most POTW's have limit of NOAEL>100%. >67%, or monitoring.	Acute Limit Actual allocation would determine limit. Unlikely to get >100:1--if diffuser then likely to get 100:1 dilution.
*MAINE	Acute/Chronic Limit	Acute/Chronic Limit	Acute Limit
*MASSACHUSETTS	LC50=100%; C-NOEC>=IWC(100%)	LC50=100%; C-NOEC>=IWC(21%)	LC50 >=50% 2/yr testing.
*NEW HAMPSHIRE	quarterly testing. SNC-Review last 6 tests by type: SNC If (1) >=3violations	and (2) results are <= 50%. A.O. for TRE	
VERMONT	Acute Limit	Acute Limit	Acute Limit
	If fail then: (1) priority pollutant metals analysis; (2) If cause is known, then report and fix; If cause unknown then TRE plan within 60 days. No specific language for formal enforcement action.		
RHODE ISLAND	Acute/Chronic Limit	Acute/Chronic Limit	Acute Limit

TABLE 3: States of Region III.

SURVEY3.XLS

STATE *EPA issued	Low Flow	Compliance Schedule ?	Each Fail A Violation ?	If Monitoring Only When Limit ?	Multiple Conc. Required ?	Test Species	Sensitive Species	Add. Tests After Fail ?	Permit Require IRE/TIE ?
REGION III									
DISTRICT OF COLUMBIA	7Q10-ch 1Q10-oc	YES 3 Years	Yes	Limit if monitoring indicates "reasonable potential" as defined by failing 2/4 tests.	Yes	CD DM/DP FM	Yes	Yes	Yes If fail twice in any one month.
DELAWARE	7Q10-ch 1Q10-oc	Yes	Yes	Based on "reasonable potential."	Yes If determined necessary by screening tests.	CD DM/DP FM	Yes	Yes	Yes If fail test and one (1) confirmation test.
MARYLAND	30Q5-ch Acute not based on stream flow	No	Yes	Based on "reasonable potential."	Yes	CD DM/DP FM	Yes	Yes	Yes If fail 2 tests in 12 months, then retest. If fail retest, then IRE.
PENNSYLVANIA	7Q10	Yes 3 Years	Yes	Based on "reasonable potential."	Yes	CD DM/DP FM	Yes	Yes	Yes
WEST VIRGINIA	7Q10	No	No	NA	Yes	CD DM/DP FM	Yes	Yes	Yes 2 fails for IRE.

TABLE 3: Continued.

SURVEY3B.XLS

STATE *EPA Issued	#1 POTW 2.2 MGD---7Q10=0.0MGD	#2 POTW 2.2 MGD---7Q10=8.1 MGD	#3 POTW 2.2 MGD---7Q10=3000MGD
REGION III			
DISTRICT OF COLUMBIA	Limit-based on NOEC--If "reasonable potential" is demonstrated. Defined as failing 2 out of 4 tests. Unit expressed as TUa or TUC. Testing frequency is quarterly for the life of the permit.		
DELAWARE	Chronic monitoring---NOEC	Acute/Chronic monitoring LC50/NOEC	Acute monitoring---LC50
	If initial test fails then 2 confirmation tests. If 1 confirmation test fails then TRE and possible limit.		
MARYLAND	Acute/Chronic monitoring LC50<100% : IC25<IWC(100%)	Acute/Chronic monitoring LC50<100% : IC25<IWC(22%)	Acute/Chronic monitoring LC50<100% : IC25<IWC
PENNSYLVANIA	Chronic Limit---TUC=1.0	Acute or Chronic limit---based on "reasonable potential" and statistical permit derivation analysis.	Acute limit---based on "reasonable potential" and statistical analysis
	If NOEC or LC50 > IWC then no more testing. If it is less than IWC then retest. If NOEC or LC50 < IWC for 2 consecutive tests then TRE.		
WEST VIRGINIA	Acute/Chronic limit---LC50/NOEC > 100%	Acute/Chronic limit---LC50/NOEC > IWC(22%)	Acute limit---LC50>=40%
VIRGINIA	Chronic limit---TUC	Acute or Chronic limit-based on "reasonable potential" analysis. TUa or TUC	Acute limit---TUa
	Quarterly testing--If 6 of 8 tests (75%) exceed WLA then TRE and WET limit.		

TABLE 4: States of Region IV.

SURVEY4.XLS

STATE	Low Flow	Compliance Schedule ?	Each Fall A Violation ?	If Monitoring Only When Limit ?	Multiple Conc. Required ?	Test Species	Sensitive Species	Addl. Tests After Fail ?	Permit Require TRE/TIE ?
REGION IV									
ALABAMA	7Q10-ch 1Q10-ac	No	Yes	NA	Yes-with application No-w/DMR	CD FM	No	No-Depl. can req. addl. tests if problems exist. Acute- 1/wk-4wks Chronic- 1/wk-2wks	No-Depl. can req. TRE if problems
*FLORIDA	7Q10	No	Yes	NA	Yes	CD FM	No	Yes-2 additional tests.	No-may be required under A.O.
GEORGIA	7Q10	Yes	Yes	NA		CD FM	Yes		
KENTUCKY	7Q10	Yes-1 year	Yes	NA	Yes	CD FM	Yes	Yes Accelerated testing-total of 6 tests.	Yes Depends on # and degree of test fails.
MISSISSIPPI	7Q10 7Q2-storm water	Yes	Yes	Monitoring 1st year if no data. Results compared to matrix to determine if limits applied.	Yes	CD FM	No	Yes Retest after fail	Yes 45 days after 2nd test fail

TABLE 4: Continued.

SURVEY4.XLS

NORTH CAROLINA	7Q10	No	Yes	NA	No But available	CD FM for acute	NA May request all species if more sensitive	Yes Quarterly testing goes to monthly or single fall-back to quarterly next pass	No IRE is considered logical response to noncompliance.
SOUTH CAROLINA	7Q10	Yes Up to 3 years	Yes	After 2 failures, may modify permit to include limit or Issue Consent Order.	No	CD	NA	Yes	Yes If test fails then IRE.
TENNESSEE	3Q20 1Q20	No	Yes-Acute No-Chronic permit limit is averaged.	NA	Yes	CD FM	No	Yes	Yes Sig. fail=4/5 NOEL or LC50. 2 consecutive sig. fails or 3 in 12 months=IRE. 2 years for completion

TABLE 4: Continued.

SURVEY401.XLS

STATE *EPA issued:	#1 POTW 2.2 MGD---7Q10=0.0MGD	#2 POTW 2.2 MGD---7Q10=8.1 MGD	#3 POTW 2.2 MGD---7Q10=3000MGD
REGION IV			
ALABAMA	Chronic limit--no sig. difference at 100%.	Chronic limit--no sig. difference at 22%.	Acute limit--LC50>100%. If diffuser then IWC base on model. Limit <= 10% mortality at IWC at ZID.
*FLORIDA	Chronic limit--NOEC>=100%	Acute/Chronic limits LC50>100% ; NOEC>=21%	Acute limit LC50>100%
GEORGIA	Chronic limit--NOEC>=100%	Chronic limit--NOEC>=21%	No limit/monitoring?
KENTUCKY	Chronic limit--TUC=1.0 IC25>=100%	Chronic limit--TUC=4.76 IC25>=21%	Acute limit--TUC=1.0 LC50>=100%
MISSISSIPPI	Chronic limit IC25>=100%	Chronic limit IC25>=21%	Acute limit LC50>=IWC X 3 not to exceed 100%
NORTH CAROLINA	Chronic limit (IWC) Max limit=90%.	Chronic limit	Acute limit No diffuser limit=90%. Diffuser allowance for diffused conc. on case-by-case basis.
	For IWC>=1%--Chronic limit (NC chronic tests or NC phase II chronic procedure). No observed inhibition in reproduction or sig. mortality at IWC. For IWC<1%and>0.25%-48- hour Daphnid acute test. Limit--LC50>=100 X IWC. For IWC<=0.25%-24 hour minnow acute test. No sig. mortality pass/fail test.		

SURVEY4B.XLS

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TABLE 5: States of Region V.

SURVEYS.XLS

STATE	Low Flow	Compliance Schedule ?	Each-Fail A Violation ?	If Monitoring Only When Limit ?	Multiple Conc. Required ?	Test Species	Sensitive Species	Addl. Tests After Fail ?	Permit Require TIE/TIE ?
*EPA issued:									
REGION V									
ILLINOIS	7Q10	NA	NA	No limit only monitoring	Yes	CD FM SC-algae	Yes	Yes If 2 months fail	Yes If 2 months fail then possible TIE
OHIO	7Q10-ch 30Q10-oc	Yes 3 years	Yes	Once demonstrated WET is severe and consistent then TIE and limit.	Yes	CD FM	Yes	No Maybe required under A.O.	No Maybe required under A.O.
INDIANA	7Q10	NA	NA	If toxicity is demonstrated then WET limit and/or limits on additional toxicants.	No pass/fail Definitive as follow-up to screen fail.	CD FM	Yes	Yes Follow-up test after 1st fail.	Yes If fail any 2 tests.
MINNESOTA	7Q10	Yes 1 to 3 years	Yes	NA	Yes	CD FM	No	Yes 3 additional tests after 1st fail.	Yes If 2 or more fails.
WISCONSIN	7Q10/4	Yes 2 to 3 years.	Yes	If terrible toxicity problem then permit mod. for WET limit. If persistent toxicity then WET at reissuance.	Yes	CD DM/DP FM	No	Yes 2 retests at each fail.	Yes If persistent toxicity (fail permit test and 2 retests) then TIE before limit is effective.

[illegible]

TABLE 5: Continued.

SURVEYSB.XLS

STATE	#1 POTW 2.2 MGD---7Q10=0.0MGD	#2 POTW 2.2 MGD---7Q10=8.1 MGD	#3 POTW 2.2 MGD---7Q10=3000MGD
*EPA issued:			
REGION V			
	Acute monitoring	Acute monitoring	Acute monitoring
ILLINOIS			
	Dilution >= 100:1-acute(LC50); Dilution < 100:1-Chronic(NOEC). Chronic monitoring may be required at <100:1 dilution on case-by-case basis.		
	Frequency is 1/month for 6 months. If toxicity then additional requirements or limits (numerical for specific toxicants) may be imposed.		
	Can use biosurveys.		
OHIO			
	Monitoring-acute(.3TUa), chronic(1TUc).	Monitoring-acute(71%), chronic(21%).	Monitoring-acute(4097Ua), chronic(1364.61Uc).
	Acute criteria is .3TUa, chronic criteria is 1.0TUc. (acute-LC50; chronic-NOEC). WEI monitoring for 1 year(monthly-acute; quarterly-chronic). If WEI is severe and consistent then TRE by Director's Findings & Orders (F&O). 3 years compliance. Additional WEI monitoring in F&O or permit modification with WEI limits.		
INDIANA			
	Chronic monitoring-NOEC	Chronic monitoring-NOEC	Acute monitoring-LC50
	Frequency and duration depend upon WET tests submitted with application and/or facility history. Acute or chronic toxicity after permit issued then follow up tests. If any 2 tests fail then TRE. Reopener allows for WEI limits and/or limits for additional toxicants. Formal enforcement if TRE fails to solve problem.		
MINNESOTA			
	Chronic limit TUc=1 IC25 or NOAEL	Chronic limit TUc=1.05 IC25 or NOAEL	Acute limit TUa=1 LC50
	Frequency is 4 tests in 1st 6 months. If no toxicity then go to 1 per year. TRE considered formal enforcement action.		

TABLE 5: Continued.

SURVEYS.XLS

WISCONSIN	Would probably not allow a facility of this size to locate on this stream.	Acute/Chronic monitoring.	Acute/Chronic monitoring.	Acute/Chronic monitoring.
	If dilution <= 100:1 then acute and chronic monitoring.	Currently very few permits with limits.		
MICHIGAN	Acute/Chronic limit TUa=1.0; TUC=1.0	Acute/Chronic limit TUa=1.0; TUC=1.9(63%)	Acute limit TUa=1.0	
		Standards allow mixing with no more than 25% of low flow.		

STIX-POLYMERINS

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SURVEY.xls

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TABLE 10: States of EPA Region X.

SURVEY10.XLS

STATE	Low Flow	Compliance Schedule ?	Each Fall A Violation ?	If Monitoring Only When Limit ?	Multiple Conc. Required ?	Test Species	Sensitive Species	Add. Tests After Fail ?	Permit Require TIE/TIE ?
*EPA issued:									
REGION X									
*ALASKA	7Q10-ch	Not in permit	Yes	NA	Yes	CD	No	Yes	Case-by-Case
	1Q10-ac	Compliance order				FM		6 biweekly tests.	If all 6 chronics fail
		If necessary.							or 1 shows acute toxicity.
*IDAHO	25%W,	Not in permit	Yes	NA	Yes	CD	No	Yes	Case-by-Case
	25%vol	Compliance order				FM		6 biweekly tests.	If all 6 chronics fail
	at 7Q10-c	If necessary.							or 1 shows acute toxicity.
	1Q10-a								
OREGON		SEE NEXT PAGE							
WASHINGTON		SEE NEXT PAGE							

TABLE 10: Continued.

SURVEY11.XLS

STATE	#1 POTW 2.2 MGD—7Q10=0.0MGD	#2 POTW 2.2 MGD—7Q10=8.1 MGD	#3 POTW 2.2 MGD—7Q10=3000MGD
*EPA issued:			
REGION X			
*ALASKA			
	Chronic limit NOEC=100%	Chronic limit NOEC=21%	Acute limit LC50.
	Frequency is quarterly. No enforcement policy for Wei As of 7/25/94 Region X has not issued any WWTP permits with WET limits		Alaska has no acute criteria for toxicity.
*IDAHO			
	Chronic limit NOEC=100%	Chronic limit NOEC=21%	Acute Limit LC50
OREGON			
	No permits with WET limits. All majors do include provisions for monitoring. If fail 2 consecutive tests then submit plan to meet water quality standards (may or may not be TRE). Require dye studies to determine dilution ratios to determine "reasonable potential". If toxicity then permit may be reopened to include limit. Chronic and acute tests—no statistically significant difference at IWC.		
WASHINGTON			
	Recently promulgated new regulations to implement WET		

Figure 1: States Which Allow for WET Compliance
Schedules

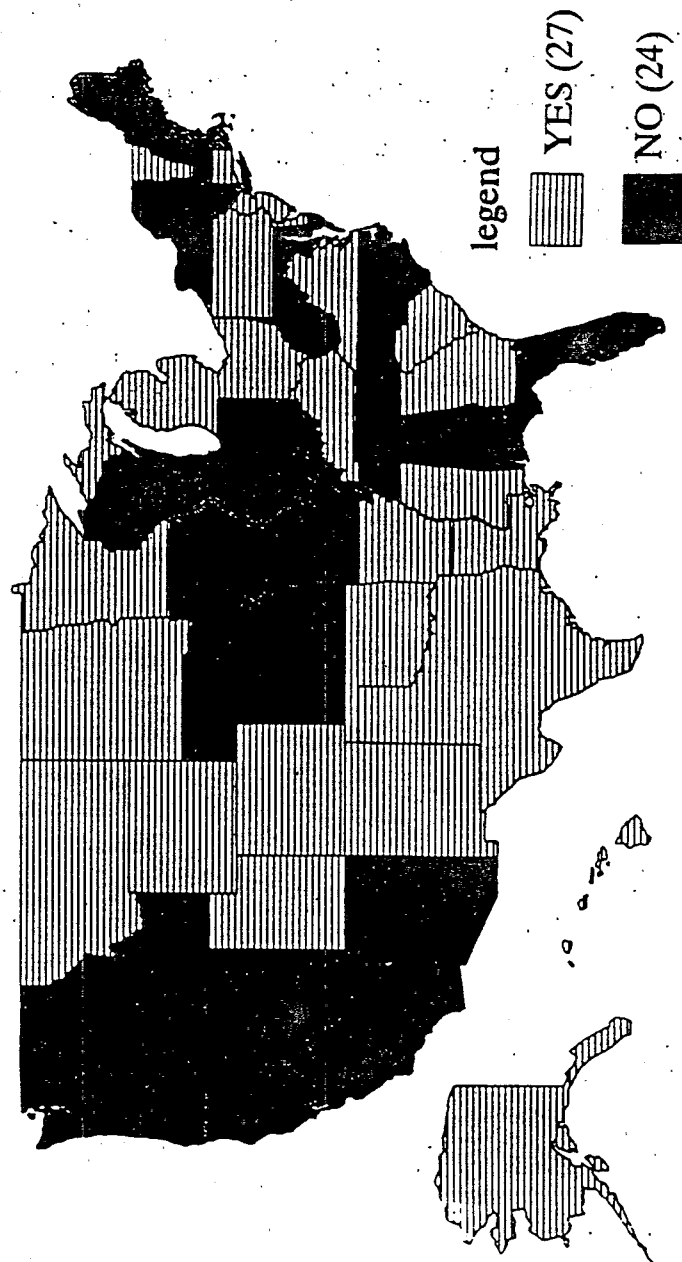


Figure 2: States Where Each Toxicity Test
Fail is a Permit Violation

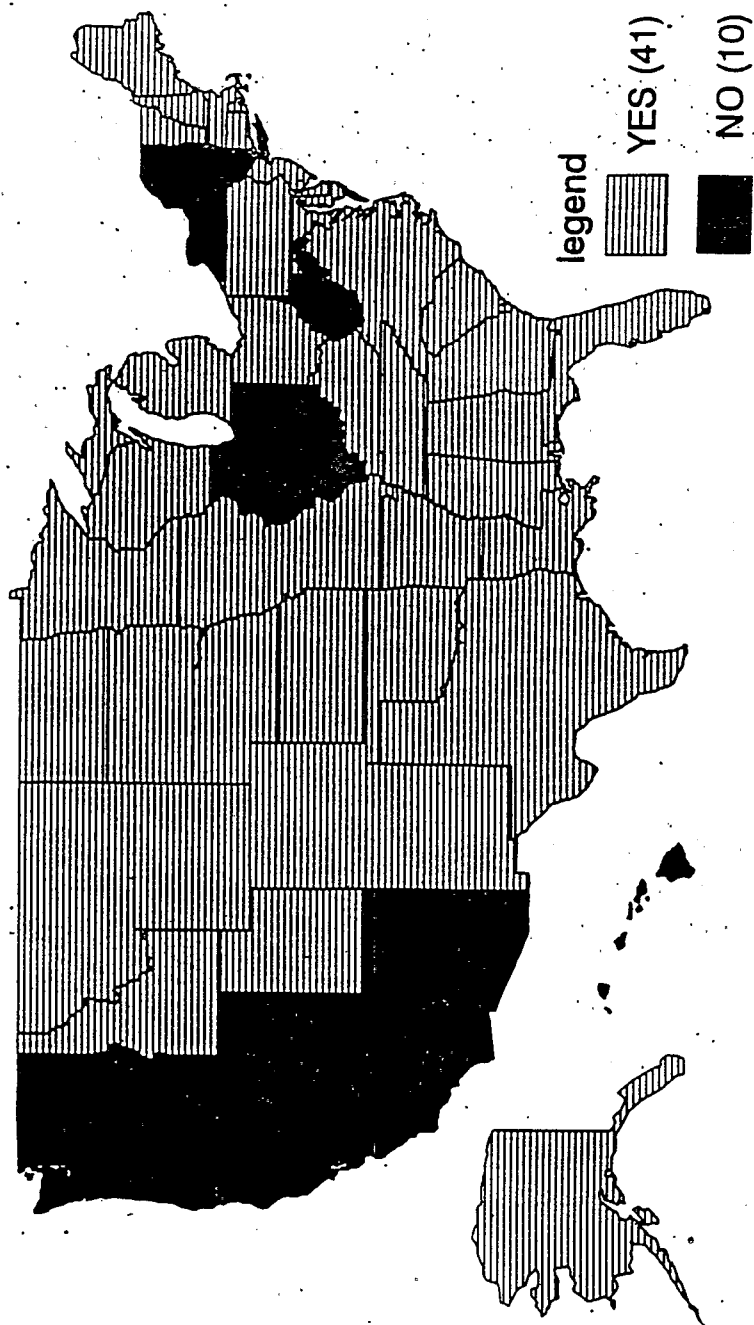


Figure 3: States With WET Limits for a 2.2 MGD POTW
and a 0.0 MGD Receiving Stream

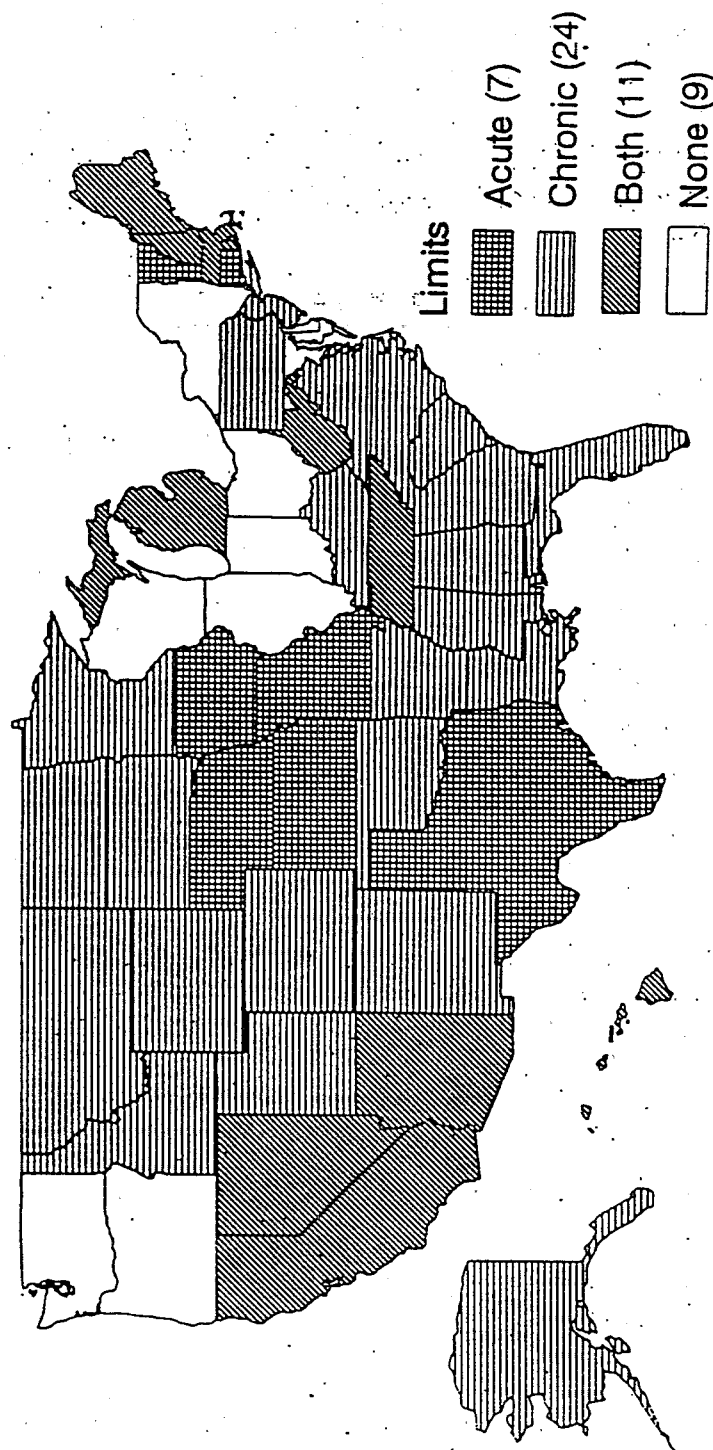
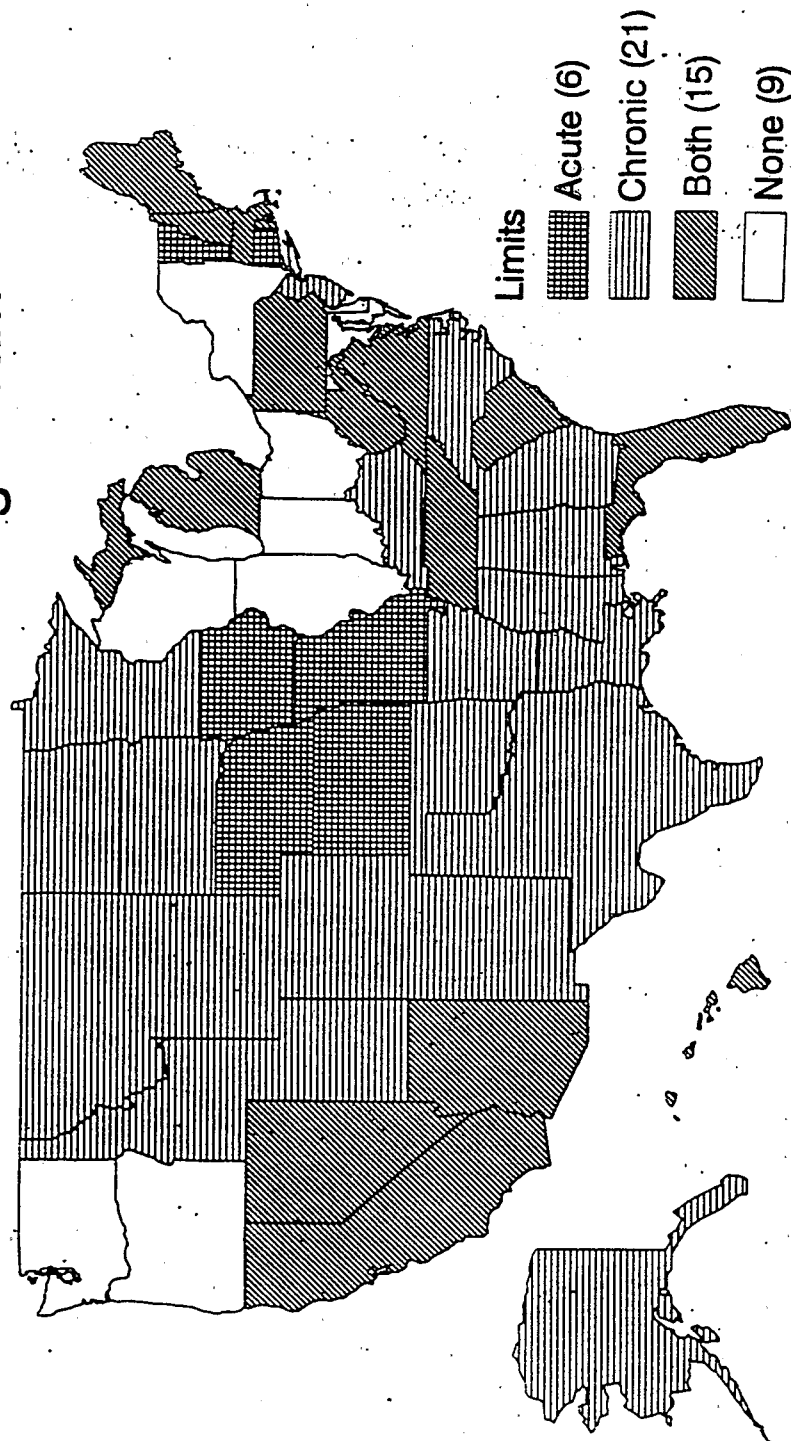
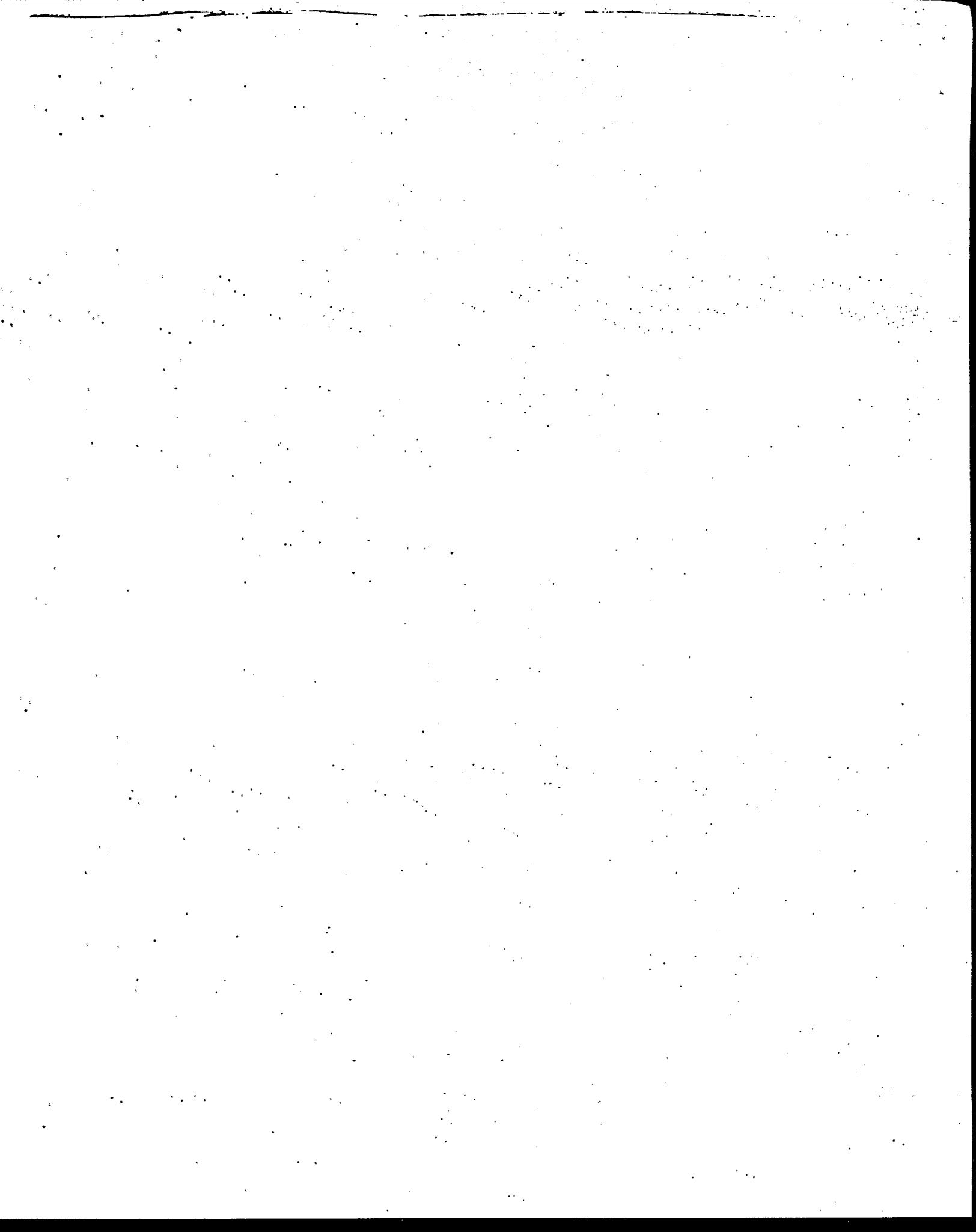


Figure 4: States With WET Limits for a 2.2 MGD POTW
and an 8.1 MGD Receiving Stream





KENTUCKY WHOLE EFFLUENT TOXICITY SURVEY

Dear Colleague:

We have been implementing both acute and chronic WET limits in our NPDES permits for several years. A number of municipalities in our state have filed a petition with EPA Administrator Browner requesting fundamental changes in the NPDES regulations regarding chronic WET. To better respond to that petition and assist us in understanding how our program (particularly for POTWs) compares with others in the rest of the country, we request your help in completing the following survey. We have structured the survey so that it will take at most 1 hour to compile and complete. We will send a summary of the results to all those that complete it. Please submit your responses by Wednesday, August 10, to:

Charlie Roth
Division of Water
KY Dept. for Environmental Protection
14 Reilly Road
Frankfort, KY 40601
(502) 564-3410 - phone
(502) 564-4245 - fax

Do not hesitate to call if you have any questions. Thank you in advance for your assistance and time.

PERMIT ISSUING AUTHORITY: _____

The following are the basic permitting situations/assumptions that the survey is based on:

- Major Municipal POTW w/ approved pretreatment program
- freshwater discharge to a fish & wildlife-classified receiving stream, Tier 1 - no endangered species; no outstanding resource waters
- no diffuser
- this facility's expiring NPDES permit contains no WET monitoring or limits. The permit application contains historical WET data and the permit writer has concluded that reasonable potential to exceed State WQS now exists.

General Question: Please designate what "receiving stream critical low-flow" in general means for your state (i.e. 7Q10, 1Q10, etc) _____

PLEASE PROVIDE THE ACTUAL PERMIT LIMIT/MONITORING PAGE(S) AND REQUIREMENTS THAT YOU WOULD USE IN EACH OF THE FOLLOWING SITUATIONS

Situation #1: POTW design flow is 2.2 MGD
Receiving stream critical low-flow to protect
aquatic life is 0 MGD.

1. would the permit contain: (circle all that apply)

an acute WET limit. (go to a. below)
a chronic WET limit. (go to a. below)
acute WET monitoring only (go to c. below)
chronic WET monitoring only (go to c. below)
no WET monitoring/limit (please explain)

a. would a compliance schedule for the WET limit be given?

YES How long? _____ (go to b. below)

NO (go to b. below)

b. is each WET test failure a permit violation?

YES (go to 2)

NO (go to 2)

c. if acute or chronic WET monitoring only is required,
when (if ever) would a limit be imposed?

(go to 2)

2. Are multiple dilutions required?

YES/NO

3. What test species are required? (circle all that apply)

Ceriodaphnia
Daphnia magna/pulex
fathead minnow
Other:

a. Does the permit allow for testing to be conducted on only
the more sensitive test species at some point during the
permit term?

YES/NO/NA

4. Does the permit require additional WET tests after a WET test
failure?

YES/NO

5. Does the permit require that a TIE/TRE be conducted? (provide
language if not already done above)

YES/NO

6. In KY, the sequence is: permit contains chronic WET limit-
if WET test is failed, that's a violation & permit requires additional
chronic WET tests-if additional failures occur, permit requires
TIE/TRE-formal enforcement action occurs if TIE/TRE doesn't resolve
problem. Please describe on the back your sequence & where formal
enforcement action (if any) would occur.

Situation #2: POTW design flow is 2.2 MGD
Receiving stream critical low-flow to protect
aquatic life is 8.1 MGD.

1. would the permit contain: (circle all that apply)
 - an acute WET limit (go to a. below)
 - a chronic WET limit (go to a. below)
 - acute WET monitoring only (go to c. below)
 - chronic WET monitoring only (go to c. below)
 - no WET monitoring/limit (please explain)
- a. would a compliance schedule for the WET limit be given?
 - YES How long? _____ (go to b. below)
 - NO (go to b. below)
- b. is each WET test failure a permit violation?
 - YES (go to 2)
 - NO (go to 2)
- c. if acute or chronic WET monitoring only is required,
when (if ever) would a limit be imposed?
(go to 2)
2. Are multiple dilutions required?
YES/NO
3. What test species are required? (circle all that apply)
 - Ceriodaphnia
 - Daphnia magna/pulex
 - fathead minnow
 - Other:
- a. Does the permit allow for testing to be conducted on only
the more sensitive test species at some point during the
permit term?
YES/NO/NA
4. Does the permit require additional WET tests after a WET test
failure?
YES/NO
5. Does the permit require that a TIE/TRE be conducted? (provide
language if not already done above)
YES/NO
6. In KY, the sequence is: permit contains chronic WET limit-
WET test is failed, that's a violation & permit requires additional
chronic WET tests-if additional failures occur, permit requires
TIE/TRE-formal enforcement action occurs if TIE/TRE doesn't resolve
problem. Please describe on the back your sequence & where formal
enforcement action (if any) would occur.

Situation #3

POTW design flow is 2.2 MGD
Receiving stream critical low-flow to protect
aquatic life is 3000 MGD.

1. would the permit contain: (circle all that apply)
 - an acute WET limit (go to a. below)
 - a chronic WET limit (go to a. below)
 - acute WET monitoring only (go to c. below)
 - chronic WET monitoring only (go to c. below)
 - no WET monitoring/limit (please explain)
- a. would a compliance schedule for the WET limit be given?
 - YES How long? _____ (go to b. below)
 - NO (go to b. below)
- b. is each WET test failure a permit violation?
 - YES (go to 2)
 - NO (go to 2)
- c. if acute or chronic WET monitoring only is required, when (if ever) would a limit be imposed?
(go to 2)
2. Are multiple dilutions required?
YES/NO
3. What test species are required? (circle all that apply)
 - Ceriodaphnia
 - Daphnia magna/pulex
 - fathead minnow
 - Other:
- a. Does the permit allow for testing to be conducted on only the more sensitive test species at some point during the permit term?
YES/NO/NA
4. Does the permit require additional WET tests after a WET test failure?
YES/NO
5. Does the permit require that a TIE/TRE be conducted? (provide language if not already done above)
YES/NO
6. In KY, the sequence is: permit contains chronic WET limit-1: WET test is failed, that's a violation & permit requires additional chronic WET tests-if additional failures occur, permit requires TIE/TRE-formal enforcement action occurs if TIE/TRE doesn't resolve problem. Please describe on the back your sequence & where formal enforcement action (if any) would occur.