

Northern Indiana Public Service Company

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August 22, 1980

Mr. Ronald L. Ballard, Chief Environmental Projects, Branch, #1 Office of the Nuclear Reactor Relations U.S. Nuclear Regulatory Commission Washington, D. C. 20545

RE: Docket No. 50-367

Dear Mr. Ballard:

Enclosed, herewith, are twenty-five (25) copies of the Spring, 1980 Quarterly Report on the Bailly Generating Station Nuclear-1 Ecological Monitoring Program. This is the 24th Quarterly Report on this work. The Spring, 1,980 Quarterly Report contains analyses and interpretation of data for April through June, 1980.

During this quarter, terrestrial sampling was conducted in the month of May. Sampling for acquatic parameters was conducted during April and June. Several of the parameters for various sampling locations have not completed laboratory analysis as of the date of this report. The analysis and interpretation of those samples will be included in subsequent reports on this work.

There continues to be no discernible effects to the environment due to the construction of Bailly Generating Station Nuclear-1.

Janvert Aurech April

JFP:gb

Enclosures



SPRING 1980 QUARTERLY REPORT
BAILLY NUCLEAR-1 SITE
ENCOMPASSING
APRIL-JUNE 1980

August 1980

Prepared for
NORTHERN INDIANA PUBLIC SERVICE COMPANY
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Hammond, Indiana 46325

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FOREWORD

Ecological Services of Texas Instruments Incorporated, under contract to Northern Indiana Public Service Company, is conducting an ecological monitoring program to determine and document existing ecological conditions in the immediate vicinity of the Bailly Nuclear-1 Generating Station site, Baillytown, Indiana. This ecological monitoring program will provide data necessary for assessing and minimizing the effects of plant construction on the local environment and will provide information for assessing any future changes.

This report, the 24th in a series of quarterly reports prepared for Northern Indiana Public Service Company by Texas Instruments, contains analyses and interpretation of data for April through June 1980. No collection of aquatics data was scheduled during May 1980 or of terrestrial data during April or June 1980. Statements contained in this report are based on data collected over a relatively short time period and should be viewed as preliminary.



EXECUTIVE SUMMARY

Terrestrial

The spring 1980 sampling program was accomplished on schedule during May 1980. No terrestrial sampling was scheduled for March or April 1980. May sampling included small mammal trapping; mammal observations on the site and along the 22-mile road route; avifauna surveys along transects, at aquatic locations, and along the 22-mile road route; amphibian and reptile surveys; a visual survey of foliar damage to plants; and soil sampling.

Fifteen species of mammals were reported on the Bailly study area during May 1980. Small mammal live-trapping accounted for five species, and the others were observed or their tracks or signs noted. Most populations reflected greater carry-over from winter than did those of the previous two springs. Cottontail rabbit sightings along the 22-mile road route were greater during 1980 than during 1979.

The May 1980 bird checklist included 92 species. Observations of many species were limited to only one or two individuals, presumably due to late migration. The open bog contained the greatest numbers of species during May 1980 transect counts. Sixteen aquatic species were among the 92 total.

All 13 amphibian and reptile species observed on the site during May 1980 have been recorded from the study area previously.

Flagging (SO₂ effects) was still evident on white pines along roadways, but an assessment of damage to deciduous trees could not be made because most were not foliated during May.

Soil samples were taken from 10 locations during May and are presently being analyzed.



Aquatic

Spring 1980 aquatic sampling was performed in April with the collection of fish, phytoplankton, periphyton, zooplankton, benthos, and water quality samples. Results for water quality, chlorophyll <u>a</u> (phytoplankton and periphyton), productivity (phytoplankton), and June sample collections will be included in the summer quarterly report.

April 1980 Lake Michigan phytoplankton densities were similar to those of April 1979. April biovolume values for lake phytoplankton were slightly lower in 1980 than in 1979, whereas pond be volume values were much higher in 1980. In the lake, blue-green algae and diatoms dominated total phytoplankton density, and diatoms and green algae dominated biovolume estimates. In the ponds, golden-brown algae and diatoms dominated densities while pennate diatoms and green algae were biovolume-dominant.

April 1980 peripayton densities were dominated by blue-green algae (mostly Lyngbya spp. and Pleurocapsa sp.) in both Lake Michigan and the ponds. Biovolume estimates were dominated by green algae in the lake, and by green algae and pennate diatoms in the ponds. Samples collected from artificial (ponds) and natural substrates (lake) yielded 44 diatom taxa from the ponds and 45 from Lake Michigan. Achnanthes minutissima, Fragilaria vaucheriae and Rhoicosphenia curvata were the most abundant diatoms in Lake Michigan, although the discharge station (10) was dominated by Stephanodiscus astrea and Nitzschia dissipata. Differences in dominant diatom species have been observed in past years and were considered as possible thermal discharge influences; however there was no thermal influence during the 1980 spring sampling period and the differences still occurred. This indicates that factors other than thermal influence may have caused the differences in periphyton community composition. The most numerous diatom taxa in the ponds were Achnanthes minutissima in Ponds B and C and Fragilaria capucina in Cowles Bog. The most numerous periphyton in the ponds were golden-brown algae (Pond C), blue-green algae (Pond 3), and green algae and diatoms (Cowles Bog).

A total of 38 zooplankton taxa were collected in Lake Michigan during April 1980, similar to the 42 taxa collected in April 1979 and more than the 21 taxa



collected in November 1979. Lake Michigan densities averaged 1100 organisms per cubic meter, similar to the average in April 1979 (1200 organisms per cubic meter). As in 1979, copepods dominated the collections (89 percent in 1979, 75 percent in 1980), with cyclopoid copepodites (immature form) constituting most of the copepods in 1980. The most abundant adult taxon observed during both 1979 and 1980 was <u>Diaptomus ashlandi</u>. The zooplankton densities were highest at stations 1, 4, and 10 (all nearfield stations), probably due to natural variation or habitat differences since there was no thermal discharge during 1980.

Zooplankton densities within the ponds were higher in April 1980 than in April 1979. Densities in ponds B and C averaged 67 and 102 organisms per liter, respectively, while Cowles Bog averaged 239 organisms per liter. Densities were approximately 10 times lower during April 1979 than in April 1980. However, similar dominant taxa were observed during both years and the differences in density were probably natural variation rather than power station influences.

Benthic invertebrate collections from Lake Michigan yielded 21 taxa in April 1980. Oligochaetes (Tubificidae) were the most numerous organisms, making up 55 percent of the total population. Amphipoda and Chironomidae followed Tubificidae in abundance. Total densities ranged from 29 to 3,250 organisms per square meter. Power station activities did not appear to influence distribution of the benthic community during April 1980, which would be expected since the power station did not discharge during the sampling period.

Average benthic invertebrate densities in the ponds were similar to those observed in April 1979. Lowest densities were observed in Pond C while the highest densities occurred in Pond B. Naididae (Oligochaeta) and Tubificidae (Oligochaeta) made up most of the total density in April 1980.

Fish were collected with gill nets and beach seines in the lake and with a backpack electrofishing unit in Pond B during April 1980. A total of 43 fish were collected from the lake, 5 with the beach seine and 38 with gill nets; 145 fish were collected during April 1979. The major difference between catches in the two years is the smaller number of alewife collected in 1980;



this discrepancy was probably not caused by the power station. The dominant species in April 1980 were rainbow smelt (beach seine) and alewife (gill net). Eleven of the 38 fish collected were salmonids including one young-of-the-year (46-millimeter length) coho salmon. Five black bullheads and 12 green sunfish were collected from Pond B during April 1980.

All fish collected were examined for disease and parasites. One coho salmon had a parasitic copepod and 5 of the 12 green sunfish collected from Pond B had a light-to-moderate infestation of black spot.

No fish eggs or larvae were collected during April 1980 by zooplankton sampling (at stations 1-10) or by epibenthic pump sampling (at stations 4 and 7).



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SECTION 1 TERRESTRIAL

1.1 DATES AND PURPOSES OF TERRESTRIAL SURVEYS

Spring 1980 terrestrial samples were taken in May as scheduled (Table 1.1) by the personnel listed in Table 1.2. Sampling locations are indicated in Figure 1.1.

Table 1.1
Terrestrial Ecology Sampling Status, June 1980

		May*			
	Sampling	Sampling	Ana	lyses	
Parameter	Locations	Schedu led	Completed	Continuing	
Vegetation					
General survey Quantitative analysis Qualitative analysis Aquatic macrophytes Foliar effects	5-mi radius 1-6,8 9-11 7 1-12	X	X		
Mamma 1s					
Small-mammal trapping Large-mammal observations Roadside counts General observations	1,3,4,6,8 1-11 22-mi route 1-12	X X X	X X X		
Avifauna					
Roadside counts Transect counts	22-mi route 1,3-6,8	X	X		
Reptiles and amphibians	1-8	Х	Х		
Invertebrates	1-8				
Soil conductivity	1-6,8-11	Х		X	

^{*}No sampling schedules for April or June.

Table 1.2

Dates and Purposes of Terrestrial Field Trips

Date	Personnel	Sampling Performed
5-8 and 18-22 May	Roy Greer, Ralph Feeny	Foliar effects Large-mammal observation Small-mammal trapping Roadside counts Avian transect counts Reptiles and amphibians Soils



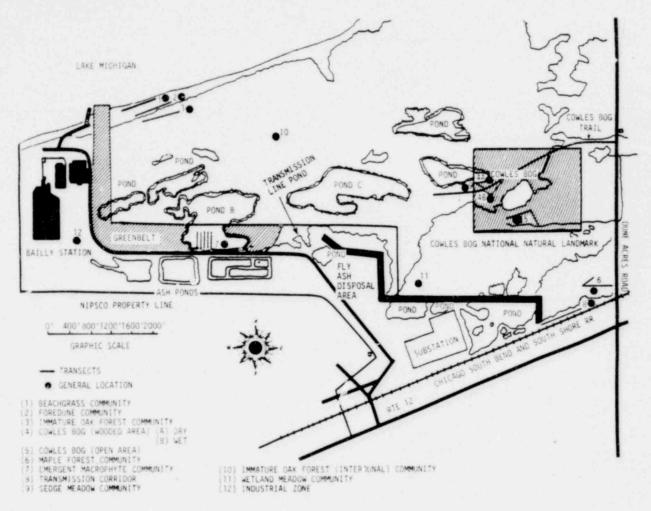


Figure 1.1. Terrestrial Sampling Locations in Vicinity of Bailly Study Area

1.2 RESULTS AND DISCUSSION

Spring 1980 data for mammals are in Tables 1.4 and 1.5. Bird data are in Tables 1.7 through 1.10, and herpetofauna data are in Table 1.12. Species checklists for May 1980 are Tables 1.3 (mammals), 1.6 (birds), and 1.11 (herpetofauna).

1.2.1 MAMMALS. During May 1980, 15 species of mammals were encountered on the Bailly study area (Table 1.3). Greater numbers of mammals were observed during May 1980 than during the past two springs, probably because of the milder 1979-80 winter and greater carryover of most small mammal species.



Table 1.3 Mammals Observed on the Bailly Study Area, May 1980

Common Name	Scientific Name			
Opossum	Didelphis marsupialis			
Short-tailed shrew	Blarina brevicauda			
Eastern mole	Scalopus aquaticus			
Eastern cottontail rabbit	Sylvilagus floridanus			
Eastern chipmunk	Tamias striatus			
Woodchuck	Marmota monax			
13-lined ground squirrel	Spermophilus tridecemilineatus			
Fox squirrel	Sciurus niger			
Red squirrel	Tamiasciurus hudsonicus			
White-footed mouse	Peromyscus leucopus			
Meadow vole	Microtus pennsylvanicus			
Meadow jumping mouse	Zapus hudsonius			
Muskrat	Ondatra zibethica			
Raccoon	Procyon lotor			
White-tailed deer	Odocoileus virginianus			

Table 1.4

Small Mammals Captured in Bailly Study Area, May 1980

No./100 Trapnights

Common Name	Beachgrass	Immature Oak Forest	Cowles Bog (wooded)	Maple Forest	Transmission Corridor
Short-tailed shrew	beachgrass		(wooded)	rorest	corridor
		0.3			
13-lined ground squirrel					0.3
White-footed mouse		2.0	1.0	1.3	0.7
Meadow vole	13.7				1.3
Meadow jumping mouse					0.3
Individuals/100 Trapnights	13.7	2.3	1.0	1.3	2.6
Total Species	1	2	1	1	4

1.2.1.1 <u>Beachgrass Community</u>. The spring 1980 meadow vole (<u>Microtus pennsylvanicus</u>) population appeared larger in this location than elsewhere on the study area (Table 1-4). Further, more meadow voles were trapped in this community during spring 1980 than during any previous survey during the 7-year monitoring period.

The 13-lined ground squirrel (Spermophilus tridecemlineatus) was sighted in this community for the first time during the monitoring period. This species generally prefers shortgrass habitats (e.g., lawns, golf courses) and is seen often in the industrial location. Tracks or signs of four other mammal species were observed also (Table 1.5); were using the beachgrass as a feeding area or as a passageway to the Lake Michigan beach.

1.2.1.2 Foredume. The four transient species observed in this location were those observed in the beachgrass community (Table 1.5). Shrubs and herbs generally exhibited effects of light browsing by white-tailed deer (Odocoileus virginianus); otherwise, this transition area has little usable habitat for mammals.

1.2.1.3 Immature Oak Forest. Two small mammals, the white-footed mouse (Peromyscus leucopus) and short-tailed shrew (Blarina brevicauda), were captured in Sherman live-traps in this location during May 1980 (Table 1.4). Captures of short-tailed shrew generally have been common on the Bailly study area, but the single capture in this location was the only one in May 1980.

Two mature, female white-tailed deer were observed in this location during an early morning survey on May 5. The red squirrel (<u>Tamiasciurus hudsonicus</u>) was the only other species sighted in this community, although tracks of the opossum (<u>Didelphis marsupialis</u>) and raccoon (<u>Procyon lotor</u>) were noted (<u>Table 1.5</u>).

1.2.1.4 <u>Cowles Bog (Wooded)</u>. The white-footed mouse was the only small mammal captured in the wooded bog during May 1980 (Table 1.4) All captures occurred in the wet portion of the wooded bog.

Eight other species were observed during large-mammal surveys in the wooded bog (Table 1-5). The eastern chipmunk (<u>Tamias striatus</u>) was active during the warmest hours of day. Two female white-tailed deer — probably the same individuals observed in the immature oak forest — were seen during late afternoon. For the second consecutive year, fox squirrel (<u>Sciurus niger</u>) sightings in this location were few compared to previous years of the study.



 ${\it Table 1.5}$ Mammals Observed in Sampling Locations, Bailly Study Area, May 1980

Common Name	Beachgrass	Foredune	Immature Oak Forest	Cowles Bog (wooded)	Cowles Bog (open)	Maple Forest	Emergent Macrophyte	Transmission Corridor
Opossum		*	*	*	*	1	*	*
Eastern mole				*				
Eastern cottontail rabbit	*	*		*				*
Eastern chipmunk				14		2		
Woodchuck				1				
Fox squirrel				2				
Red squirrel			1	3		2		
13-lined ground squirrel	1							
Muskrat							3	
Raccoon	*	*	*	*	*	*	*	*
White-tailed deer	*	*	2	2	*	*	*	*
Total Species	5	4	4	9	4	5	4	4

^{*}Tracks or other signs.



- 1.2.1.5 <u>Cowles Bog (Open)</u>. Signs of muskrat (<u>Ondatra zibethica</u>) activity were observed in the open bog for the first time since 1976. The study area's small muskrat population apparently fared better during the milder winter of 1979-80 than during the two previous winters. The three other mammals observed (Table 1-5) occur frequently in the open bog.
- 1.2.1.6 Maple Forest. As in May 1979, four white-footed mice were the only small-mammal captures in this location. The opossum was sighted during large-mammal surveys and tracks or signs of four other species were seen (Table 1-5).
- 1.2.1.7 Macrophyte Community. The muskrat was sighted in the macrophyte community during May 1980 and signs of three other species were noted. Sighting of the muskrat in this community, as well as in Cowles Bog, indicates a possible recovery of the population on the Bailly study area.
- 1.2.1.8 Transmission Corridor. Four of the five small mammal species captured on the Bailly study area during May 1980 were taken along the transmission corridor trapline (Table 1.4). The meadow jumping mouse (Zapus hudsonius) and 13-lined ground squirrel probably were captured in small numbers as in the past.

Signs of four large mammals were observed in this locale (Table 1.5). The periodically cleared transmission right-of-way offers excellent cottontail rabbit habitat when herbaceous vegetation begins to grow adjacent to brush pilings. Additionally, other wildlife seasonally utilize cleared areas within right-of-ways.

1.2.1.9 Road Route. Eleven cottontail rabbits were sighted along the 22-mile road route (Figure 1.2) in May 1980 as compared to five in May 1979. About one-half of the sightings during the May 1980 survey were subadult animals, indicating early nesting success for at least a portion of the study area's rabbit population. The July survey should reveal the spring 1980 reproductive success for the cottontail population in the study area. The results of the May road survey were:



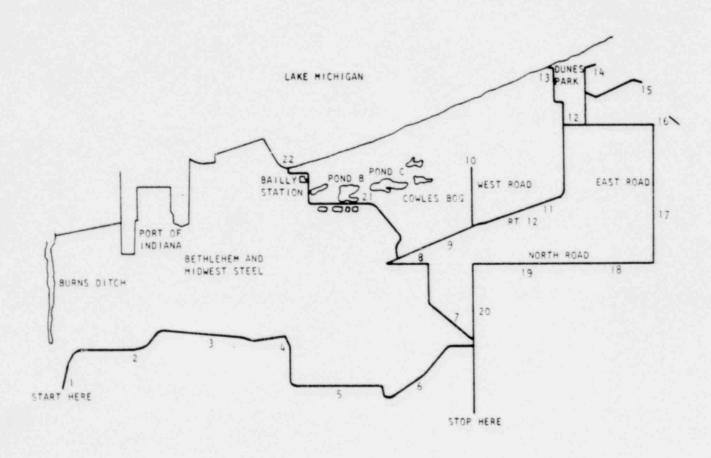


Figure 1.2 22-Mile Road Route, Bailly Study Area



Mile	Number Observed	Mile	Number Observed
0-1	0	11-12	1
1-2	0	12-13	0
2-3	1	13-14	0
3-4	0	14-15	0
4-5	0	15-16	1
5-6	0	16-17	0
6-7	2	17-18	0
7-8	1	18-19	0
8-9	2	19-20	0
9-10	0	20-21	2
10-11	1	21-22	0

Total = 11

1.2.2 BIRDS. Ninety-two bird species were observed in the Bailly study area during May 1980 as was the case in May 1979; eighty species were sighted during both springs. The list of species and the probable status of each in the study area is included in Table 1-6. Table 1-7 lists the bird species observed during transect surveys in each major sampling location, and data from the eight transects along Cowles Bog trail are in Table 1-8. Counts from each aquatic sampling location (Figure 1.2) are presented in Table 1-9. Results obtained from 3-minute stops along the 22-mile road route (Figure 1.3) are in Table 1-10.

Six bird species observed during the Bailly study area survey were not among the 167 bird species recorded by a Porter County May Day bird count that occurred on May 10, 1980. The species not included were Mallard (Anas platyrhynchos), Ring-necked Duck (Aythya colaris), Common Merganser (Mergus merganser), Common Goldeneye (Bucephala clangula) Eatern Bluebird (Sialia currucoides), and Pine Warbler (Dendroica pinus). Mr. Fred Kase, who directed the May Day count in the Cowles Bog area, submitted the data. Dr. Ken Brock of the Northwestern Indiana Bird Club was the count organizer.

1.2.2.1 Beachgrass Community. The Savannah Sparrow (Passerculus sand-wichensis) was the only bird species observed during transect surveys in the beachgrass community (Table 1.7). The comparatively small number of wildlife species in the beachgrass community is related to the lack of significant vegetation stratification and diversity.



Table 1.6

Bird Species Observed in Vicinity of Bailly Study Area, May 1980

-				*1	-	-
1 1	αm	mo	n	·N:	a m	0
141	U118	HIV		1.41	2111	

Scientific Name

Probable Status

Migrant

Common Loon Horned Grebe Pied-billed Grebe Great Blue Heron Green Heron Great Egret Canada Goose Mallard Blue-winged Teal Wood Duck Ring-necked Duck Common Merganser Common Goldeneye Broadwinged Hawk Ring-necked Pheasant Virginia Rail Sora American Coot Killdeer. Spotted Sandpiper Herring Gull Ring-billed Gull Rock Dove Mourning Dove Yellow-billed Cuckoo Screech Owl Common Nighthawk Chimney Swift Belted Kingfisher Common Flicker Red-bellied Woodpecker Red-headed Woodpecker Yellow-bellied Sapsucker Downy Woodpecker Eastern Kingbird Eastern Phoebe Eastern Wood Pewee Tree Swallow Bank Swallow Barn Swallow Blue Jay Common Crow Black-capped Chickadee Tufted Titmouse White-breasted Nuthatch House Wren Short-billed Marsh Wren

Gavia immer Podiceps auritus Podilymbus podiceps Ardea herodias Butorides virescens Casmerodius albus Branta canadensis Anas platyrhynchos Anas discors Aix sponsa Aythya collaris Mergus merganser Becephala clangula Buteo platypterus Phasianus colchicus Rallus limicola Porzana carolina Fulica americana Charadrius vociferus Actitis macularia Larus argentatus Larus delawarensis Columba livia Zenaidura macroura Coccyzus americanus Otus asio Chordeiles minor Chaetura pelagica Megaceryle alcyon Colaptes auratus enturus carolinus Melanerpes erythrocephalus Sphyrapicus yarius Dendrocopos pubescens Tyrannus tyrannnus Sayornis phoebe Contopus virens ridoprocne bicolor Riparia riparia Hirundo rustica Cyanocitta cristata Corvus brachyrhynchos Parus atricapillus Parus bicolor Sitta carolinensis roglodytes aedon

Migrant Summer resident Migrant Permanent resident Permanent resident Summer resident Summer resident Summer resident Summer resident Summer resident Migrant-winter resident Permanent resident Permanent resident Permanent resident Migrant Permanent resident Summer resident Summer resident Permanent resident Permanent resident Permanent resident Permanent resident Summer resident Permanent resident Summer resident Summer resident Summer resident Summer resident Summer resident Summer resident Permanent resident Permanent resident Permanent resident Permanent resident Permanent resident Summer resident Summer resident

Cistothorus platensis



Table 1.6 (Contd)

-	_	-	*1	
6	omn	non	Name	

Scientific Name

Probable Status

Gray Catbird Brown Thrasher American Robin Wood Thrush Hermit Thrush Grav-cheeked Thrush Veery Eastern Bluebird Blue-gray Gnatcatcher Ruby-crowned Kinglet Starling Yellow-throated Vireo Red-eved Vireo Warbling Vireo Black-and-white Warbler Orange-crowned Warbler Yellow Warbler Magnolia Warbler Yellow-rumped Warbler Chestnut-sided Warbler Pine Warbler Palm Warbler Ovenbird Northern Waterthrush Common Yellowthroat Yellow-breasted Chat Wilson's Warbler American Redstart House Sparrow Red-winged Blackbird Common Grackle Brown-headed Cowbird Scarlet Tanager Cardinal Rose-breasted Grosbeak Indigo Bunting American Goldfinch Rufous-sided Towhee Savannah Sparrow Chipping Sparrow Field Sparrow White-crowned Sparrow White-throated Sparrow Swamp Sparrow Song Sparrow

Dumetella carolinensis Toxostoma rufum Turdus migratorius Hylocichla mustelina Catharus guttata Catharus minima Catharus fuscescens Sialia sialia Polioptila caerulea Regulus calendula Sturnus vulgaris Vireo flavifrons Vireo olivaceus Vireo gilvus Mniotilta varia Vermivora celata Dendroica petechia Dendroica magnolia Dendroica coronata Dendroica pennsylvanica Dendroica pinus Dendroica palmarum Seiurus aurocapillus Seiurus noveboracensis Geothylypis trichas Icteria virens Wilsonia pusilla Setophaga ruticilla Passer domesticus Agelaius phoeniceus Quiscalus quiscula Molothrus ater Piranga olivacea Cardinalis cardinalis Pheueticus ludovicianus Passerina cyanea Spinus tristis Papilo erythrophthalmus Passerculus sandwichensis Spizella passerina Spizella pusilla Zonotrichia leucophrys Zonotrichia albicollis Melospiza georgiana Melospiza melodia

Summer resident Summer resident Summer resident Summer resident Migrant Migrant Summer resident Permanent resident Summer resident Migrant Permanent resident Summer resident Summer resident Summer resident Summer resident Migrant Summer resident Migrant Migrant Summer resident Summer resident Migrant Summer resident Migrant Summer resident Summer resident Migrant Summer resident Permanent resident Summer resident Summer resident Summer resident Summer resident Permanent resident Summer resident Summer resident Permanent resident Summer resident Summer resident Summer resident Summer resident Migrant Migrant Permanent resident Permanent resident

Total Species - 92



Total Species

Birds Observed along Transects in Six Sampling

Table 1.7

Species	Beach	grass B	Immatu A	re Oak		s Bog ded)		s Bog en) B	Maple A	Forest B		nission ridor B
Sora Rail								1				
Common Flicker								1				
Red-headed Woodpecker					1			1				
Tree Swallow							2					
Blue Jay			1	1	1	1			1	2		
Common Crow				1		2				1		
Black-capped Chickadee						1 .	1					
White-breasted Nuthatch			1						1			
Long-billed Marsh Wren								1.				
Short-billed Marsh Wren								2				
American Robin					2				1	3		1
Yellow-throated Vireo								1				
Red-eyed Vireo						2			2			
Warbling Vireo									1	2		
Palm Warbler			1		2		2					
Yellow Warbler							2					
Pine Warbler				2								
Common Yellowthroat								1				
Red-winged Blackbird							5	2				2
Common Grackle						1						. 1
American Goldfinch							2				2	
Savannah Sparrow		1										
White-throated Sparrow					2		2					
Swamp Sparrow								4				
Song Sparrow							1				1	
White-crowned Sparrow							1					
Total Individuals	0	1	3	4	8	7	18	14	6	8	3	4
Total Species	0	1	3	3	5	5	9	9	5	4	2	3
				-		2		7		6		5

1.2.2.2 Immature Oak Forest. Five bird species were observed from the two transects in this locale during May 1980 (Table 1.7). The Blue Jay (Cyanocitta cristata) was the only species observed on both transects. Two other species, the White-breasted Nathatch (Sitta carolinensis) and the Pine Warbler (Dendroica pinus), were associated with conifers that occur in this location.

1.2.2.3 Cowles Bog (Wooded). Nine species of birds were observed along the two transects in the wooded bog. The Blue Jay was the only species common to

4

both transects. Most of the species, observed in the wet portion of the wooded bog (transect A) including the White-throated Sparrow (Zonotrichia albicollis) and American Robin (Turdus migratorius), prefer moist habitats. Those species observed along transect B generally prefer drier habitats.

- 1.2.2.4 Cowles Bog Trail. During May 1980, 24 species of birds were observed along Cowles Bog Trail (Table 1.8). The Blue Jay was observed along five transects, while the Gray Catbird (<u>Dumetella carolinensis</u>) and the Wood Thrush (<u>Hylocichla mustelina</u>) were observed along three transects each. Five warblers and three vireos were among the species recorded. The greatest number of species was observed along Transect 4, which consistently has had comparatively large numbers of species.
- 1.2.2.5 <u>Cowles Bog (Open)</u>. Bird utilization of the open bog was substantial during May 1980, with 17 species observed (Table 1.7). The Red-winged Black-bird (<u>Agelaius phoeniceus</u>) was the only species observed on both transects. Scattered trees and shrubs were heavily utilized by many of the species present. Additionally, insect activity during May was most obvious in this sampling location, thus attracting many insectivorous birds (e.g., warblers and vireos).
- 1.2.2.6 <u>Maple Forest</u>. All six species of birds observed in the maple forest generally reside in forested habitat (Table 1-7). Three species Blue Jay, American Robin, and Warbling Vireo (<u>Vireo gilvus</u>) were observed on both transects. Sparse herbaceous ground cover and moist litter create optimum habitat for worm-eating species like the American Robin.
- 1.2.2.7 <u>Transmission Corridor</u>. Five bird species were observed on the transects along the transmission right-of-way. The ecotonal areas associated with this location provided suitable habitat for most of these species. The Song Sparrow (<u>Melospiza melodia</u>) and American Goldfinch (<u>Spinus tristis</u>) are typical occupants of open habitats.



Table 1.8

Abundance of Birds along Cowles Trail,
Bailly Study Area, May 1980

		Cov	Cowles Bog Trail Transects*						
Species	1	2	3	4	5	6	7	8	
Mailard		1							
Common Flicker		- 1	1						
Downy Woodpecker							1		
Blue Jay			- 2	1	1	4		1	
White-breasted Nuthatch							1	- 10	
Gray Catbird		1		2	1				
American Robin		- 1							
Ruby-crowned Kinglet					2				
Yellow-throated Vireo				1					
Red-eyed Vireo								2	
Warbling Vireo					1		1		
Yellow Warbler		2							
Chestnut-sided Warbler								2	
Ovenbird			100		-1				
Kentucky Warbler		2	2				100		
American Redstart							2		
Red-winged Blackbird Common Grackle	4							1	
Cardinal							2		
Swamp Sparrow			. 1	1					
Song Sparrow	2			2					
White-throated Sparrow	- 4								
Wood Thrush									
Veerv								1	
reery									
Total No. Individuals	7	7	6	10	6	E	7	7	
		5	0	8	6	5	5		

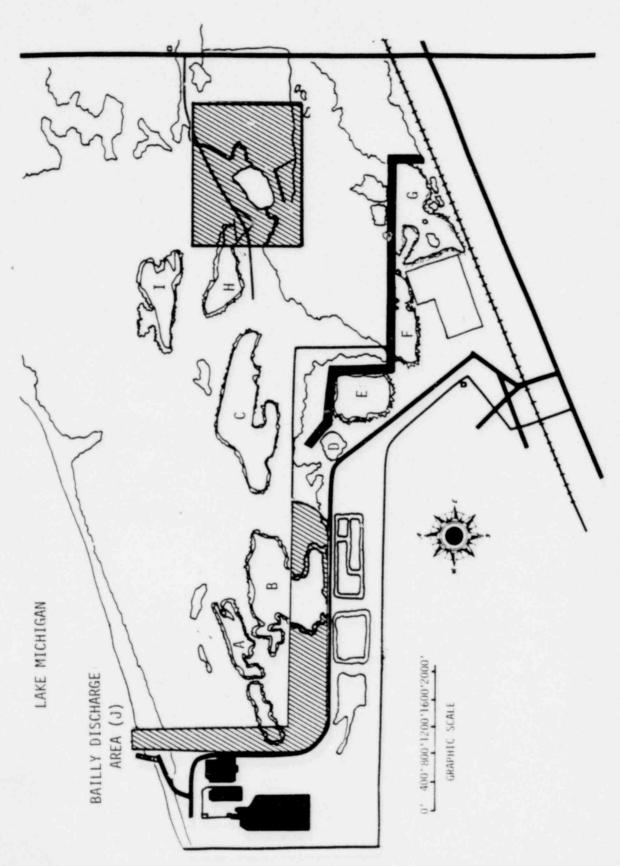
1.2.2.8 Aquatic Habitats. Aquatic locations A through J (Figure 1-3) were surveyed on several occasions during May 1980 to determine usage by water birds. Sixteen species of birds were reported (Table 1-9). Locations C, D, G, and J hosted similar numbers of species.

Comparatively few gulls were observed on Lake Michigan during the May survey, perhaps reflecting the low abundance of fish observed in aquatic sampling in the lake.

Several species of waterfowl were observed nesting on study area ponds during May. One Canada Goose (<u>Branta canadensis</u>) broad hatched during May, and a hen and three goslings were observed in Pond G. The two Common Loon (<u>Gavia immer</u>) observed on Pond C probably were migrants, although nesting was possible by this species and others not indicated in Table 1.9 as nesting.

1.2.2.9 Road Route Census. The May survey of the 22-mile road route revealed 49 species of birds (Table 1-10). The American Robin was the most frequently observed species, occurring at 13 of the 22 stops. Other frequent species included the Common Grackle (Quiscalus quiscula), Blue Jay, Starling (Sturnus





Aquatic Habitats (A through J) Sampled for Water Birds in the Bailly Study Area, 1980 Figure 1.3.



Table 1.9
Maximum Numbers of Birds Utilizing Aquatic Locations,
Bailly Study Area, May 1980

	Locations*									
Species	A	В	C	D	E	F	G	н	1	J
Common Loon			2							
Pied-billed Grebe		1								
Great Blue Heron										1
Great Egret			2							
Green Heron**			1							
Mute Swan**		1								
Canada Goose**						3	7***			
Mallard**					2		2			
Blue-winged Teal						8	4			
Hood Duck							2			
Common Merganser										2
American Coot			4			4	20			
Herring Gull										15
Ring-billed Gull										29
Belted Kingfisher										1
Killdeer**						-1				
Total Observations	0	2	9	0	2	16		0	0	48
Total Species	0	2	4	0	1	4	5	0	0	5

^{***}Hen and young (3)

vulgaris), and House Sparow (Passer domesticus). Generally, these species also were the most numerous.

- 1.2.3 AMPHIBIANS AND REPTILES. Thirteen species of herpetiles observed were during May 1980 (Table 1-11), which was slightly above average for the monitoring period. Despite cool morning temperatures, midday warming activated most of the species observed. Water levels in all of the sampling locations appeared lower than usual for this time of year.
- 1.2.3.1 <u>Lake Communities (Beachgrass-Foredune-Immature Oak)</u>. The American toad (<u>Bufo americanus</u>) was the only species observed in the lakefront communities (Table 1-12). The sandy soils of this location provide excellent burrowing habitat for the toad.
- 1.2.3.2 <u>Cowles Bog (Wooded)</u>. Four of the six species of herpetiles observed in the wooded bog were frogs (Table 1-12); all were commonly observed or heard. The terrestrial eastern box turtle (<u>Terrapene carolina</u>) and the blue racer (<u>Coluber constrictor</u>) we at the other species observed. The blue racer is



Table 1.10
Observations of Birds along 22-Mile Road Route, Bailly Study Area, May 1980

Species	No.	Frequency Observed
Green Heron	1	1
Great Blue Heron	1	1
Common Merganser	14	2
Mallard	1	1
Wood Duck	i	i
Killdeer	2	1
	37	
Herring Gull	51	,
Ring-billed Gull		2
Rock Dove	3	2 6 2 1 2 3 1 1 2 8 2
Mourning Dove	12	0
Common Flicker	2	2
Red-bellied Woodpecker		
Hairy Woodpecker	2	2
Downy Woodpecker	2 3 1 3 5	3
Eastern Phoebe		10.00
Barn Swallow	3	- 1
Tree Swallow	5	2
Blue Jay	19	8
Common Crow	4	2
Black-capped Chickadee	1	100
Tufted Titmouse	4	
White-breasted Nuthatch	3	2
House Wren	2	2
Gray Catbird	3 2 4 2	1 2 2 3
Brown Thrasher		
American Robin	41	13 2 7 1 2
Wood Thrush	2	2
Starling	23	7
Red-eyed Vireo	2	1
Palm Warbler	4	2
Parula Warbler	1	1
Yellow Warbler	1	1
Magnolia Warbler	1	1
Chestnut-sided Warbler	1	i
Ovenbird	1	1
Louisiana Waterthrush	1	1
	25	7
House Sparrow	25	2
Eastern Meadowlark	22	2 5
Red-winged Blackbird		10
Common Grackle	46	
Cardinal	14	6
Rose-breasted Grosbeak	1	
American Goldfinch	4 7 3 3 4 3	1 2 2 3 2 2 2 2
White-throated Sparrow	/	2
Chipping Sparrow	3	3
Field Sparrow	3	2
Swamp Sparrow	4	2
Song Sparrow	3	2
Tree Sparrow	4	3

Total = 49 species



Table 1.11 Amphibians and Reptiles Observed in Bailly Study Area, May 1980

Species

Common Name	Scientific Name
American toad	Bufo americanus
Cricket frog	Acris crepitans
Spring peeper	Hyla crucifer
Gray treefrog	Hyla versicolor
Bullfrog	Rana catesbeiana
Green frog	Rana clamitans
Wood frog	Rana sylvatica
Leopard frog	Rana pipiens
Painted turtle	Chrysemys picta
Eastern box turtle	Terrapene carolina
Northern water snake	Natrix sipedon
Common garter snake	Thamnophis sirtalis
Blue racer	Coluber constrictor

infrequently observed anywhere on the study area, whereas the eastern box turtle is commonly observed in the wooded bog.

- 1.2.3.3 <u>Cowles Bog (Open)</u>. Frogs were the only herpetiles observed in this location during May 1980 (Table 1-12). Bullfrogs (<u>Rana catesbeiana</u>) are typical of open marsh-like habitat like that available in the open bog. A large (more than 50 individual) chorus of spring peepers (<u>Hyla crucifer</u>) was observed calling from shrubs and trees along the dike at the southern edge of the open bog.
- 1.2.3.4 Maple Forest. No herpetiles were observed in the maple forest during May 1980, probably because the channel entering this location from the nearby pond was dry.
- 1.2.3.5 Emergent Macrophyte Community. Several argran choruses were heard in this location during May 1980 (Table 1-12). An American toad chorus of an estimated 50 individuals could be heard during mid-afternoon and evening hours. Several small choruses of the gray treefrog (Hyla versicolor) and spring peeper were occasionally heard calling. Painted turtles (Chrysemys picta) were



Table 1.12 Abundances of Amphibians and Reptiles, Bailly Study Area, May 1980

	Beachgrass	Foredune	Immature Oak Forest	Cowles Bog (wooded)	Cowles Bog (open)	Maple Forest	Emergent Macrophyte	Transmission Corridor
American toad	1							
Cricket frog								
Spring peeper								
Gray treefrog				*				
Bullfrog					15			
Green frog				15	7		10	
Wood frog				9				
Leopard frog								
Eastern box turtle				100				
Painted turt is							6	
Northern water snake							2	
Common garter snake								
Black racer				1				
No. Species	1	0	. 0	6	3	0	6	

^{*}Chorus (10-50 individuals)

observed basking on exposed logs during midday, and two northern water snakes (Natrix sipedon) were observed.

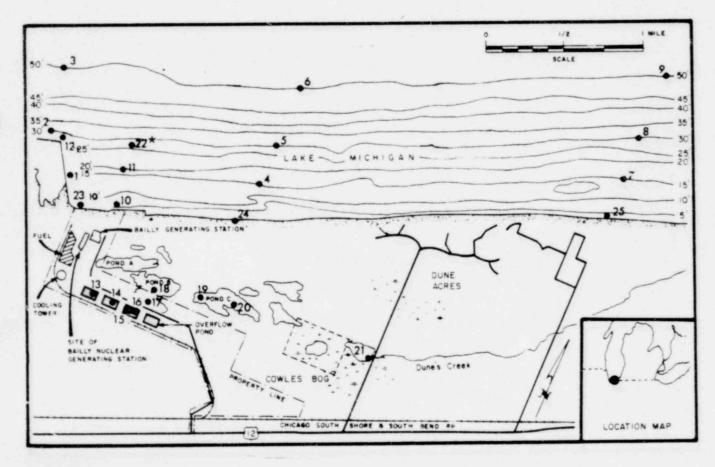
- 1.2.3.6 <u>Transmission Corridor</u>. One small, common garter snake (<u>Thamnophis sartalis</u>) was the only herpetile species observed in this location during May 1980 (Table 1-12).
- 1.2.4 FOLIAR DAMAGE. Older needles on white pine (Pinus strobus) along the Bailly entrance road still exhibited some flagging. New needles had not yet formed, and deciduous trees had not leafed.
- 1.2.5 SOIL CONDUCTIVITY. All soil samples for conductivity analysis were collected during May 1980, and results of the soils analysis will apper in the summer report.



SECTION 2 AQUATIC ECOLOGY

2.1 STATUS

Samples were collected under the direction of TI's Kendall Brown in April and June during the spring 1980 quarter. Sampling stations are indicated in Figure 2.1 as well as in Table 2.1 which also lists samples collected and sample status. Dates and purposes of all aquatic field trips during spring 1980 are listed in Table 2.2.



*Station 22 is a "floating" station located on the plume center line, 1000 feet from the discharge.

Figure 2.1. Aquatic Sampling Stations in Bailly Study Area



Table 2.1 Status of Laboratory Analyses for Bailly Study Area

			April			June	
	Sampling	Sampling	Ana	iyses	Sampling	Ana	lyses
Parameter	Station	Schedule	Complete	Continuing	Schedule	Complete	Continuing
Phytoplankton							
Identification, enumeration	1-10, 17-2	×	×		×		X
Productivity	1-10, 17-21	×		×	X		×
Chlorophyll <u>a</u>	1-10, 17-21	x		×	×		×
Zooplankton							
Identification, enumeration	1-10, 17-21	X	×		X		X
Periphyton							
Identification, enumeration	1,10,11,12,25	×	х		×		X
Chlorophyll <u>a</u>	1,10,11,12,25	X-		×	×		×
Benthos							
Identification, enumeration	1-10, 17-21	. x	×		x		X
Fish							
Gill netting	4.7	X		X	×		×
Beach seining	23,24,25	×		X	X		×
Pond electroshocking	17, 8				X		×
Food habits	1-10	X		X*	X		х*
Ichthyoplankton	1-10	х .	х		х		×
Water Quality							
General water quality	1-22	×		X	X		X
Aquatic nutrients	1-22	×		×	×		×
Trace elements	13-21	×		×	X		X
Indicators of contamination	13-21	×		X	×		Х
Sediments	17-21	X		×			
Aquatic Macrophytes	17-21				X		×

^{*}Since the objective of the food-habits study is to collect 50 specimens each of six taxa over the course of a year, analyses cannot be performed until all fish are collected.

Table 2.2

Dates and Purposes of All Aquatic Field Trips,
Bailly Study Area, Spring Quarter, 1980

Date	Personne1	Parameters Sampled			
7-9 and 27-30 Apr 1-2 May	Kendall Brown Ralph Feeny Jim Krueger	Phytoplankton Zooplankton Periphyton Benthos Fish Ichthyoplankton Water quality			
13-16 Jun 12-15 Jul	Kendall Brown Joe Strube Ralph Feeny Dave Mueller	Phytoplankton Zooplankton Periphyton Benthos Fish Ichthyoplankton Water quality Aquatic macrophytes			



.2 AQUATIC FLORA

2.2.1 METHODOLOGY. Duplicate 2-liter phytoplankton samples were collected with a 6-liter Van Dorn bottle at stations 1 through 10 in Lake Michigan and at stations 17 through 21 in the pond areas (Figure 2.1). All samples were collected from 1 meter below the surface. Before sampling, each 2-liter sample container was prepared with 20 milliliters of acid Lugol's solution, which is a narcotizing settling agent. After sampling, each container was supplemented with buffered formalin to a final concentration of 4 percent and 3 to 5 drops of liquid detergent to facilitate sedimentation. Before processing, each sample was allowed to settle for 48 hours; then 1800 milliliters of supernatant were siphoned off with a membrane-covered siphon. The remaining 200 milliliters were spun on a laboratory centrifuge at 2000 revolutions per minute for 15 minutes to further concentrate the organisms before the supernatant was filtered off the centrifuge tubes and the "bead" of phytoplankton transferred to 12-dram vials.

In the laboratory, concentrated phytoplankton samples (10 milliliters) were thoroughly mixed and three subsamples placed in Palmer cells. The algae in 12 fields (four per subsample) were identified, enumerated, and measured at 400% magnification. In instances where there was a scarcity of organisms in a sample, the total field count was extended to 24 fields. Biovolume (microliters per liter) was determined by attributing to the algae geometric shapes best suiting their morphology and calculating their appropriate volumes (Nauwerck 1963; Rodhe, Vollenweider, and Nauwerck 1958; Strickland 1960). Instead of developing an average volume per species based on a few representatives, dimensions of each organism enumerated were measured.

Phytoplankton productivity samples were taken at the same locations and sampling frequency used for collections for identification, enumeration, and biovolume measurements. Duplicate samples were collected from 1 meter below the surface at each station in a 6-liter Van Dorn bottle. Each collected sample was strained through a 333-micrometer mesh nitex net to remove zooplankters and large detrital material that could be labeled by the carbon- 14 material.

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The strained water of each sample was measured in a 2-liter flask to which four 1-milliliter aliquots of 5 microcuries NaH¹⁴CO₃ were added and thoroughly mixed. A time-zero sample consisting of two 0.5-milliliter subsamples was measured and placed in scintillation vials along with one drop of 6N sodium hydroxide. Two 50-milliliter subsamples also were removed and strained through Whatman GF/C filters at minimum vacuum pressure (less than 50 millimeters Hg differential across the filter) and the filters placed in scintillation vials. Duplicate clear and darkened 300-milliliter BOD bottles were filled with the remaining sample. After all samples had been prepared, they were suspended 1 meter below the surface at their stations for a maximum of 4 hours. Following incubation, the bottles were retrieved and the contents of each preserved by adding 1 milliliter of buffered formalin. Subsamples of 50 milliliters were removed from each bottle and filtered as previously described; each was placed in a labeled scintillation vial with enough tissue solubilizer to cover the filter pad. Activity counts were made with a liquid scintillation counter.

The following formula (APHA 1971) was used to calculate from the scintillation counts the phytoplankton productivity in milligrams of carbon fixed per liter for each replicate sample:

mg carbon fixed/1/4-hr period = (counting rate/total activity)
x (total sample volume/subsample volume) x mg/l initial
organic carbon (mg/l) x 1.064

where

Total activity = amount of potentially available carbon-14
at time zero

Counting rate = clear bottle counts minus darkened bottle counts

Total sample = 300 milliliters volume

Subsample volume = 50 milliliters

1.064 = correction for isotope effect

Phytoplankton chlorophyll \underline{a} samples were collected from the same water samples from which regular phytoplankton samples were extracted (stations 1 through 10 and 17 through 21). To prepare phytoplankton samples for chlorophyll \underline{a} analysis, a measured volume of water was filtered through a 0.45-micrometer filter pad stabilized with magnesium carbonate. The filter pad was then frozen



for shipment to the central laboratory, where it was extracted for 24 hours with acetone, ground for 30 seconds with a tissue grinder, centrifuged, and measured on a narrow-band spectrophotometer at 665- and 750-millimicron wavelengths before and after sample acidification. Periphyton samples were similarly processed using measured scrapings from natural (as available) or artificial substrates. All concentrations were calculated using the following equation (Vollenweider 1974):

Chlorophyll a (µg per sample) =
$$(D_b - D_a) [R/(R-1)] (V/1) (10^3/a_c)$$

= 11.9 x 2.43 $(D_b - D_a) (V/1)$

where

 D_a = optical density of sample after acidification - D_{665} - D_{750} (acidified)

 D_b = optical density of sample before acidification = D_{665} - D_{750} (unacidified)

a = specific absorption coefficient for chlorophyll <u>a</u> (in grams per centimeter) .

V = volume of solvent used to extract the sample
 (milliliters)

1 = path length in centimeters

 $R = D_b/D_a$ [for pure chlorophyll <u>a</u>, R = 84 (Talling and Driver 1963)]

To convert to micrograms per liter or micrograms per square centimeter, the chlorophyll <u>a</u> value was divided by number of liters filtered or number of square centimeters scraped.

Periphyton sampling was scheduled at five Lake Michigan stations (1, 10, 11, 12, and 25) and three pond stations (17, 19, and 21). Pond samples were collected using a modification of an artificial substrate sampler first described by Patrick, Hohn, and Wallace (1954), except at Station 17 where samples were collected from natural substrates (the artificial substrate was destroyed). This sampler suspends two racks of five glass slides each, with a surface area of 37.5 square centimeters per slide, just below the surface as a substrate for periphyton colonization. Colonization generally occurs in 2 to 4 weeks; thus, the "incubation" time per sampler was 1 month. Lake samples were scraped from natural substrates (as available) at each sampling station. The

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Table 2.3

Phytoplankton Density, Bailly Study Area,
April 1980 (Page 1 of 5)

NUMBER OF CELLS PER LITER

SITE SUMMARY

LS TAXA (1-6,10) (7-9) X S.E. ABX O UNIDENTIFIED ALGAE 7125.31 104468.06 55796.69 48671.37 1.0 UNIDENTIFIED ALGAE (LPIL) 7125.31 104468.06 55796.69 46671.37 1.0 UNIDENTIFIED ALGAE (LPIL) 7125.31 104468.06 55796.69 46671.37 1.0 CYABINGTA LGAE (LPIL) 1154993.00 2079934.00 1814934.00 265500.09 33.7 O CHARDOCACCLERE 1549934.00 2079934.00 1814934.00 265500.09 33.7 O CHARDOCACCLUS (LPIL) 0.0 95150.37 47575.19 47575.19 0.9 O GORPHOSPHAERIA LACUSTRIS 0.0 0.9 5150.37 47575.19 47575.19 0.9 O GORPHOSPHAERIA LACUSTRIS 0.0 0.9 2506.279 14031.39 14031.39 0.3 O SCILLATORIA CLINGTICAE 0.0 0.0 28062.79 14031.39 14031.39 0.3 O SCILLATORIA (LPIL) 321552.62 0.0 1257626.01 126776.31 1.0 O CHLOROCHTA 66809.56 141519.69 257626.01 257626.01 2.0 CHLOROCHTA 66809.56 141519.69 404809.12 263289.44 7.5 VOLVOCALES 0.0 1274700000003 (LPIL) 180180.31 91752.12 139930.19 48170.09 2.6 TETRASPORALES 180180.31 19.752.12 139930.19 48170.09 2.6 CHLOROCOCCLELES 567080.20 177977.71 35608.30 17630.59 0.7 CHLOROCOCCLELES 570800000000000000000000000000000000000			Nearfield	Farfield			
Section Sect	10	****	(1-6.10)	(7-9)			
NITIOENTIFIED ALGAE (LPIL) 7125.31 104468.00 1014434.00 265900.00 33.7 1.0	1.5	TAXA	(1 0,10)	(, ,,	×	S.E.	ABZ
O INTOENTIFIED ALGAE (LPIL) 7125.31 104468.00 265796.69 46671.37 1.0	0	UNIDENTIFIED ALGAE	7125.31	104468.06	55796.69	48671.37	1.0
0 CYANDPHYTA CHOROCOCCACEAE CHOCOCCCCUS (LPIL) CHOCOCCCCCCEAE CHOCOCCCCUS (LPIL) CHOCCCCCUS (LPIL) CHOCCCCCUS (LPIL) CHOCCCCCCUS (LPIL) CHOCCCCCCUS (LPIL) CHOCCCCCCUS (LPIL) CHOCCCCCCCUS (LPIL) CHOCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC	0	UNIDENTIFIED ALGAE (LPIL)	7125.31	104468.06			
CHROGOCCCACEAE CHROGOCCCUS (LPIL) CHROCOCCUS (LPIL) CHROCOCUS (LPIL) CHROCOCCUS (LPIL) CHROCOCCUS (LPIL) CHROCOCCUS (LPIL	0	CYANOPHYTA	1548934.00				
MICROCYSTIS (LPIL)	0					200000100	33.7
MICROCYSTIS (LPIL)	0	CHROOCOCCUS (LPIL)	81411.31	0.0	40705.66	40705.66	0.8
O GOMPHOSPHAERIA LACUSTRIS 630316.31 1956721.00 1293518.00 663202.31 24.0	0	MICROCYSTIS (LPIL)	0.0	95150.37			
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CHLORDENTIA 515653.62 0.0 257826.81 257826.81 4.8	0	OSCILLATORIA (LPIL)		0.0			7000
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ANKISTRODESHUS FALCATUS SCENEDESHUS QUADRICAUDA 14323.71 0.0 CHRYSOPHYTA 209648.69 137354.12 173501.37 36147.28 3.2 CHRYSONONADALES CHRYSONOCCUS (LPIL) CHRYSOCCUS (LPIL) SYNURA (LPIL) SYNURA (LPIL) SYNURA (LPIL) SYNURA (LPIL) STELEXOMONAS DICHOTOMA STELEXOMONAS DICHOTOMA 135417.50 STEPHANODISCUS BINDERANA 236713.94 42971.12 STEPHANODISCUS BINDERANA 236713.94 42971.12 STEPHANODISCUS BINDERANA 236713.94 42971.12 STEPHANODISCUS CUS LIPIL) STEPHANODISCUS CUS LIPIL) STEPHANODISCUS SINAGARAE 14287.17 6796.45 STERPHANODISCUS SINAGARAE 14287.	0	CHLOROCOCCALES				200000000000000000000000000000000000000	
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O SCENEDESHUS QUADRICAUDA 14323.71 0.0 7161.86 7161.86 0.1	0	ANKISTRODESMUS FALCATUS	53238.90	17977.71		Annual Control of the	
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O CHRYSOCOCCUS (LPIL) 1827.00 7015.70 4421.35 2594.35 0.1 O SYNURA (LPIL) 3654.01 0.0 1827.00 0.0 DINGERYON SOCIALE 62465.27 61606.58 62035.93 429.34 1.2 O STELEXOMONAS DICHOTOMA 135417.50 61716.19 98566.81 36850.66 1.8 O CHRYSOPHYTA (LPIL) 0.0 7015.70 3507.85 3507.85 0.1 O BACILLARIOPHYTA-CENTRIC 1206676.00 726069.50 966372.75 240303.25 18.0 EUPODISCALES	0	CHRYSOMONADALES					
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SYNURA (LPIL) 3654.01 0.0 1827.00 1827.00 0.0	0	CHRYSOCOCCUS (LPIL)	1827.00	7015.70			
0 DINOBRYON SOCIALE 62465.27 61606.58 62035.93 429.34 1.2 0 MONOSIGALES 62465.27 61606.58 62035.93 429.34 1.2 0 STELEXOMONAS DICHOTOMA 135417.50 61716.19 98566.81 36850.66 1.8 0 CHRYSOPHYTA (LPIL) 0.0 7015.70 3507.85 3507.85 0.1 0 BACILLARIOPHYTA-CENTRIC 1206676.00 726069.50 966372.75 240303.25 18.0 0 EUPODISCALES 966372.75 240303.25 18.0 0 MELOSIRA (LPIL) 467274.44 188601.62 327938.00 139336.37 6.1 0 STEPHANODISCUS BINDERANA 230713.94 42971.12 136842.50 93871.37 2.5 0 STEPHANODISCUS NIAGARAE 14287.17 6796.45 10541.81 3745.36 0.2 0 STEPHANODISCUS (LPIL) 121276.50 180763.75 151020.12 29743.62 2.8 0 EUPODISCALES (LPIL) 144187.12 7015.70 75601.37 68585.69 1.4 0 RHIZOSOLENIALES 75601.37 68585.69 1.4 0 BACILLARIOPHYTA-PENNATE 1160932.00 1314992.00 1237962.00 77030.00 23.0 0 FRAGILARIALES	0	SYNURA (LPIL)	3654.01	0.0		- Control of the Cont	
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O CHRYSOPHYTA (LPIL) O.0 7015.70 O BACILLARIOPHYTA-CENTRIC O EUPODISCALES O MELOSIRA (LPIL) O STEPHANODISCUS BINDERANA O STEPHANODISCUS NIAGARAE O STEPHANODISCUS NIAGARAE O STEPHANODISCUS (LPIL) O RHIZOSOLENIALES O RHIZOSOLENIALES O RHIZOSOLENIA ERIENSIS O RHIZOSOLENIA ERIENSIS O RHIZOSOLENIA ERIENSIS O RAGILARIOPHYTA-PENNATE O BACILLARIOPHYTA-PENNATE O FRAGILARIALES	0	MONOSIGALES					
O CHRYSOPHYTA (LPIL) O 3ACILLARIOPHYTA-CENTRIC O BACILLARIOPHYTA-CENTRIC O EUPODISCALES O MELOSIRA (LPIL) O STEPHANODISCUS BINDERANA O STEPHANODISCUS BINDERANA O STEPHANODISCUS NIAGARAE O STEPHANODISCUS HIAGARAE O STEPHANODISCUS (LPIL) O RHIZOSOLENIALES O RHIZOSOLENIALES O RHIZOSOLENIA ERIENSTS O RHIZOSOLENIA ERIENSTS O RAGILARIOPHYTA-PENNATE O BACILLARIOPHYTA-PENNATE O FRAGILARIALES O FRAGILARIALES	0	STELEXOMONAS DICHOTOMA	135417.50	61716.19	98566.81	36850.66	1.8
0 SACILLARIOPHYTA-CENTRIC 1206676.00 726069.50 966372.75 240303.25 18.0 EUPODISCALES 327938.00 139336.37 6.1 327938.00 139336.37 6.1 327938.00 139336.37 6.1 327938.00 139336.37 6.1 327938.00 139336.37 6.1 327938.00 139336.37 6.1 327938.00 139336.37 6.1 327938.00 139336.37 6.1 327938.00 139336.37 6.1 327938.00 139336.37 6.1 327938.00 139336.37 6.1 327938.00 139336.37 6.1 327938.00 93871.37 2.5 327938.00 136842.50 93871.37 2.5 327938.00 136842.50 93871.37 2.5 327938.00 136842.50 93871.37 2.5 327938.00 136842.50 93871.37 2.5 327938.00 12276.50 180763.75 15020.12 29743.62 2.8 327938.00 12276.50 180763.75 151020.12 29743.62 2.8 327938.00 12276.50 180763.75 151020.12 29743.62 2.8 327938.00 12276.50 180763.75 151020.12 29743.62 2.8 327938.00 12276.50 180763.75 151020.12 29743.62 2.8 327938.00 12276.50 180763.75 151020.12 29743.62 2.8 327938.00 12276.50 180763.75 151020.12 29743.62 2.8 327938.00 12276.50 180763.75 151020.12 29743.62 2.8 327938.00 12276.50 180763.75 151020.12 29743.62 2.8 327938.00 12276.50 180763.75 151020.12 29743.62 2.8 327938.00 12276.50 180763.75 151020.12 29743.62 2.8 327938.00 12276.50 180763.75 151020.12 29743.62 2.8 327938.00 12276.50 180763.75 151020.12 29743.62 2.8 327938.00 12276.50 180763.75 151020.12 29743.62 2.8 327938.00 12276.50 180763.75 151020.12 29743.62 2.8 327938.00 12276.50 180763.75 151020.12 29743.62 2.8 327938.00 122763.00 122763.00 122763.00 122762.	0	CHRYSOPHYTA (LPIL)	0.0	7015.70	3507.85	the second second second	
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0 STEPHANODISCUS BINDERANA 230713.94 42971.12 136842.50 93871.37 2.5 0 STEPHANODISCUS NIAGARAE 14287.17 6795.45 10541.81 3745.36 0.2 0 STEPHANODISCUS (LPIL) 121276.50 180763.75 151020.12 29743.62 2.8 0 EUPODISCALES (LPIL) 144187.12 7015.70 75601.37 68585.69 1.4 0 RHIZOSOLENIALES 0 RHIZOSOLENIA ERIENSYS 228938.19 299920.94 264429.56 35491.37 4.9 0 BACILLARIOPHYTA-PENNATE 1160932.00 1314992.00 1237962.00 77030.00 23.0 0 FRAGILARIALES	0	EUPODISCALES					
0 STEPHANODISCUS BINDERANA 230713.94 42971.12 136842.50 93871.37 2.5 0 STEPHANODISCUS NIAGARAE 14287.17 6796.45 10541.81 3745.36 0.2 0 STEPHANODISCUS (LPIL) 121276.50 180763.75 151020.12 29743.62 2.8 0 EUPODISCALES (LPIL) 144187.12 7015.70 75601.37 68585.69 1.4 0 RHIZOSOLENIALES 228938.19 299920.94 264429.56 35491.37 4.9 0 BACILLARIOPHYTA-PENNATE 1160932.00 1314992.00 1237962.00 77030.00 23.0 0 FRAGILARIALES	0		467274.44	188601.62	327938.00	139336.37	6.1
- 0 STEPHANODISCUS NIAGARAE 14287.17 6796.45 10541.81 3745.36 0.2 STEPHANODISCUS (LPIL) 121276.50 180763.75 151020.12 29743.62 2.8 0 EUPODISCALES (LPIL) 144187.12 7015.70 75601.37 68585.69 1.4 0 RHIZOSOLENIALES 228938.19 299920.94 264429.56 35491.37 4.9 0 BACILLARIOPHYTA-PENNATE 1160932.00 1314992.00 1237962.00 77030.00 23.0 FRAGILARIALES	0	STEPHANODISCUS BINDERANA	230713.94	42971.12			100
0 STEPHANODISCUS (LPIL) 121276.50 180763.75 151020.12 29743.62 2.8 0 EUPODISCALES (LPIL) 144187.12 7015.70 75601.37 68585.69 1.4 0 RHIZOSOLENIALES 228938.19 299920.94 264429.56 35491.37 4.9 0 BACILLARIOPHYTA-PENNATE 1160932.00 1314992.00 1237962.00 77030.00 23.0 0 FRAGILARIALES	_ 0	STEPHANODISCUS NIAGARAE	14287.17	6796.45	10541.81		
0 EUPODISCALES (LPIL) 144187.12 7015.70 75601.37 68585.69 1.4 0 RHIZOSOLENIALES 0 RHIZOSOLENIA ERIENSYS 228938.19 299920.94 264429.56 35491.37 4.9 0 BACILLARIOPHYTA-PENNATE 1160932.00 1314992.00 1237962.00 77030.00 23.0 0 FRAGILARIALES	0	STEPHANODISCUS (LPIL)	121276.50	180763.75			
0 RHIZOSOLENIALES 0 RHIZOSOLENIA ERIENSYS 228938.19 299920.94 264429.56 35491.37 4.9 0 BACILLARIOPHYTA-PENNATE 1160932.00 1314992.00 1237962.00 77030.00 23.0 0 FRAGILARIALES	0	EUPODISCALES (LPIL)	144187.12	7015.70	75601.37		77.7
0 BACILLARIOPHYTA-PENNATE 1160932.00 1314992.00 1237962.00 77030.00 23.0 FRAGILARIALES	0	RHIZOSOLENIALES					
0 BACILLARIOPHYTA-PENNATE 1160932.00 1314992.00 1237962.00 77030.00 23.0 FRAGILARIALES	0	RHIZOSOLENIA ERIENSTS	228938.19	299920.94	264429.56	35491.37	4.9
O FRAGILARIALES	0	BACILLARIOPHYTA-PENNATE	1160932.00	1314992.00			
0 ASTERIONELLA FORMOSA 501549.12 761049.56 631299.31 129750.19 11 7	0	FRAGILARIALES					- 100
	- 50	ASTERIONELLA FORMOSA	501549.12	761049.56	631299.31	129750.19	11.7
0 DIATOMA TENUE 1461.60 60619.98 31040.79 29579.19 0.6	0	DIATOMA TENUE	1461.60	60619.98	31040.79	29579.19	0.6

Table 2.3 (Page 2 of 5)



NUMBER OF CELLS PER LITER

SITE SUMMARY

SIT	E SUMMARY						
			Nearfield	Farfield			REL
LS	TAXA		(1-6, 12)	(7-9)	x	S.E.	ABZ
0	FRAGILARIA CROTONENSIS		177767.44	326887.62	252327.50	74560.06	4.7
0	FRAGILARIA (LPIL)		342563.12	47575.19	195069.12	147493.94	3.6
0	TABELLARIA FLOCCULOSA		0.0	60948.87	30474.44	30474.44	0.6
0	FRAGILARIALES (LPIL)		22837.54	0.0	11418.77	11418.77	0.2
0	NAVICULALES						
0	NAVICULA (LPIL)		4932.91	9975.44	7454.18	2521.27	0.1
0	PINNULARIA (LPIL)		2228.94	6796.45	4512.70	2283.75	0.1
0	CYMBELLA (LPIL)		4019.41	0.0	2009.70	2009.70	0.0
0	BACILLARIALES						
0	NITZCHIA (LPIL)		31351.37	7980.35	19665.86	11685.51	0.4
0	SURIRELLALES						
0	CYMATOPLEURA SOLEA		1827.00	0.0	913.50	913.50	0.0
0	BACILLARIOPHYTA-PENNATE (LPIL)		70394.44	33160.12	51777.28	18617.16	1.0
0	PYRRHOPHYTA-DINOPHYCEAE		3654.01	87148.06	45401.03	41747.03	0.8
0	PERIDINIALES						
0	PERIDINIUM INCONSPICUUM		3654.01	87148.06	45401.03	41747.03	0.8
0	CRYPTOPHYTA		772968.75	594799.44	683884.06	89084.62	12.7
0	CRYPTOMONODALES						
0	CRYPTOMONAS MARSSONII		4750.21	0.0	2375.11	2375.11	0.0
0	CRYPTOMONAS REFLEXA		12825.57	11181.26	12003.41	822.16	0.2
0	CRYPTOMONAS (LPIL)		38622.87	12387.09	25504.98	13117.69	0.5
0	RHODOMONAS MINUTA		684688.00	564215.44	624451.69	60236.28	11.6
0	CHROOMONAS (LPIL)		28428.18	7015.70	17721.94	10706.24	0.3
0	CYANOMONAS (LPIL)		3654.01	0.0	1827.00	1827.00	0.0
TOT	AL		5578035.00	5186281.00	5382158.00	195877.00	100.0
DIV	ERSITY (H PRIME)		2.47	2.64	2.56	0.08	
DIV	ERSITY (J PRIME)		0.71	0.75	0.73	0.02	
NUIT	BER OF TAXA		39	31	43		
ABO	VE COMPUTED USING SAMPLE IDS						
	11 12	21	22				
	31 32	41	42				
	51 52	61	62				
	101 102	71	72				
	81 82	91	92				



Table 2.3 (Page 3 of 5)

NUMBER OF CELLS PER LITER

SITE SUMMARY

LS TAXA Pond B Pond C Cowles Bog	x	S.E.	REL AB%
			AD/
0 CYANOPHYTA 430643.19 710010.19 1760720.00	967124.44	404910.19	8.7
0 CHROOCOCCACEAE			
0 AGMENELLUM (LPIL) 0.0 99973.69 0.0	33324.56	33324.56	0.3
0 OSCILLATORIACEAE			***
0 OSCILLATORIA (LPIL) 140587.94 0.0 790252.50	310280.12	243393.56	2.8
0 NOSTOCACEAE			
0 ANABAENA (LPIL) 290055.25 610036.50 941199.50	613763.75	187978.37	5.5
O RIVULARIACEAE			
O RAPHIDIOPSIS CURVATA 0.0 0.0 29268.62	9756.20	9756.20	0.1
0 CHLOROPHYTA 3485181.00 175776.00 526210.19	1395722.00	1049615.00	12.6
0 VOLVOCALES			
0 CHLANYDOMONAS (LPIL) 0.0 32228.36 0.0	10742.79	10742.79	0.1
0 CHLORGCOCCALES			
0 ANKISTRODESMUS FALCATUS 0.0 22198.10 0.0	7399.37	7399.37	0.1
0 00CYSTIS (LPIL) 16443.03 0.0 0.0	5481.01	5481.01	0.0
0 SCENEDESMUS ACUTUS 0.0 34859.25 0.0	11619.75	11619.75	0.1
0 SCENEDESMUS QUADRICAUDA 2083167.00 61496.94 0.0	714887.94	684369.75	6.4
0 SCENEDESMUS ECORNIS 111154.87 24993.42 0.0	45382.77	33668.21	0.4
0 SCENEDESHUS SPINOSUS 47355.95 0.0 0.0	15785.3	15785.32	0.1
0 PEDIASTRUM DUPLEX 1052354.00 0.0 0.0	350784.62	350784.62	3.2
0 TETRAEDRON CAUDATUM 7563.80 0.0 0.0	2521.27	2521.27	0.0
0 OEDOGONIALES			
0 OEDOGONIUM (LPIL) 30255.19 0.0 468297.81	166184.31	151309.00	1.5
0 ZYGNEMATALES			
0 MOUGEOTIA (LPIL) 119951.87 0.0 0.0	39983.96	39983.96	0.4
0 SPIROGYRA (LPIL) 0.0 0.0 . 52683.50	17561.16	17561.16	0.2
0 CLOSTERIUM MONILIFERUM 7563.80 0.0 0.0	2521.27	2521.27	0.0
0 CLOSTERIUM (LPIL) 0.0 0.0 5228.89	1742.96	1742.96	0.0
0 STAURASTRUM (LPIL) 9372.53 0.0 0.0	3124.18	3124.18	0.0
0 EUGLENOPHYTA 49493.53 268350.37 160845.81	159563.19	63181.78	1.4
0 EUGLENALES			
0 TRACHELOMONAS VOLVOCINA 0.0 34037.09 0.0	11345.70	11345.70	0.1
0 TRACHELOMONAS (LPIL) 49493.53 234313.31 160845.81	148217.50	53725.20	1.3
_ 0 CHRYSOPHYTA 2564043.00 18404576.0 58537.22	7009052.00	5743485.00	63.1
0 CHRYSOMONADALES			
0 CHRYSOCOCCUS (LPIL) 1821722.00 663969.75 58537.22	848076.31	517244.75	7.6
0 SYNCRYPTA (LPIL) 0.0 10523.55 0.0	3507.85	3507.85	0.0
0 DINOBRYON SERTULARIA 661256.75 1970450.00 0.0	877235.56	578979.94	7.9
0 DINCERTON DIVERGENS 0.0 13483.29 0.0	4494.43	4494.43	0.0
0 DINOSRYON (LPIL) 0.0 21047.09 0.0	7015.70	7015.70	0.1
0 OCHROMCNAS (LPIL) 0.0 15642420.0 0.0	5214140.00	5214140.00	47.0
0 EPIPYXIS UTRICULUS 22691.39 10523.55 0.0	11071.64	6556.17	0.1



Table 2.3 (Page 4 of 5)

NUMBER OF CELLS PER LITER

SITE SUMMARY

LS	TAXA	Pond B	Pond C	Cowles Bog	x	S.E.	REL AB%
0	KEPHYRION (LPIL)	58372.75	72184.87	0.0	43519.21	22121.89	0.4
0	BACILLARIOPHYTA-CENTRIC	0.0	0.0	204222.56	68074.19	68074.19	
0	EUPODISCALES						
0	MELOSIRA VARIANS	0.0	0.0	117074.44	39024.81	39024.81	0.4
0	MELOSIRA (LPIL)	0.0	0.0	87148.12	29049.37	29049.37	0.3
0	BACILLARIOPHYTA-PENNATE	343626.56	100138.06	3598820.00	1347528.00	1127838.00	12.1
0	FRAGILARIALES						
0	FRAGILARIA CROTONENSIS	0.0	0.0	204880.31	68293.44	68293.44	0.6
0	FRAGILARIA (LPIL)	40285.44	56235.19	2233622.00	776714.19	728468.44	7.0
0	SYNEDRA (LPIL)	0.0	0.0	188864.75	62954.91	62954.91	0.6
0	TABELLARIA FLOCCULOSA	47388.81	20224.92	0.0	22537.91	13728.77	0.2
0	ACHNANTHALES						
0	ACHNANTHES MINUTISSIMA ACHNANTH S (LPIL)	82872.87	0.0	0.0	27624.29	27624.29	0.2
0	NAVICULALE,	15127.59	0.0	0.0	5042.53	5042.53	0.0
0	NAVICULA (LPIL)						
0	NEIDIUM (LPIL)	0.0	0.0	368653.00	122884.31	122884.31	1.1
0	PINNULARIA (LPIL)	16443.03	0.0	29268.62	15237.21	8470.61	0.1
0	GOMPHONEMA (LPIL)	0.0	0.0	58537.22	19512.41	19512.41	0.2
0	AMPHORA (LPIL)	0.0	0.0	263417.50	87805.81	87805.81	0.8
0	EPITHEMIALES	0.0	0.0	17429.62	5809.87	5809.87	0.1
0	RHOPOLODIA GIBBA	0.0	0.0	FAE 77 00			
0	BACILLARIALES	0.0	0.0	58537.22	19512.41	19512.41	0.2
9	NITZCHIA (LPIL)	6577.21	8714.81				
0	SURIRELLALES	03//.61	0/14.01	0.0	5097.34	2622.31	0.0
0	SURIRELLA (LPIL)	7563.80	0.0	0.0	2527 27	2522 27	
0	BACILLARIOPHYTA-PENNATE (LPIL)	127367.75	14963.17	175611.69	2521.27 105980.81	2521.27	0.0
0	PYRRHOPHYTA-DINOPHYCEAE	0.0	195803.69	29268.62	75024.06	47592.14	1.0
0	PERIDINIALES	0.0	173003.07	27200.02	75024.00	60977.98	0.7
0	PERIDINIUM INCONSPICUUM	0.0	172125.69	29268.62	67131.37	53172.70	
0	PERIDINIUM CINCTUM	0.0	23677.98	0.0	7892.66	7892.66	0.6
0	CRYPTOPHYTA	113950.19	135655.06	0.0	83201.75	42070.07	0.1
0	CRYPTOMONODALES			***	03201.73	42070.07	0.7
_ 0	CRYPTOMONAS (LPIL)	52288.86	113950.25	0.0	55413.04	32931.67	0.5
0	RHODOMONAS MINUTA	17429.62	0.0	0.0	5809.87	5809.87	0.1
0	CHROOMONAS (LPIL)	44231.77	21704.81	0.0	21978.86	12769.35	0.2
TOT	AL .	6986934.00	19990256.0	4770/01 00			
	ERSITY (H PRIME)	2.41	1.31	6338621.00	11105270.0	4446433.00	100.0
	ERSITY (J PRIME)	0.65	0.34		1.99	0.34	
75/75/5	BER OF TAXA	28	25	0.62	0.54	0.10	
	Programme and the second	20	25	21	51		



Table 2.3 (Page 5 of 5)

NUMBER OF CELLS PER LITER

SITE SUMMA

ABOVE COMPUTED US THE SAMPLE IDS

171 191 211 172 192 212 181 201 182

E.

Table 2.4

Phytoplankton Biovolume, Bailly Study Area,
April 1980 (Page 1 of 5)

MICPOLITERS PER LITER

SITE SUMMARY

		Nearfield	Farfield	_		REL
1.5	TAXA	(1-6, 12)	(7-9)	×	S.E.	ABZ
0	UNIDENTIFIED ALGAE	0.00	0.00	0.00	0.00	0.0
0	UNIDENTIFIED ALGAE (LPIL)	0.00	0.00	0.00	0.00	0.0
0	CYANOPHYTA	0.07	0.03	0.05	0.02	1.2
0	CHROOCOCCACEAE					
0	CHROOCOCCUS (LPIL)	0.04	0.0	0.02	0.02	0.5
0	MICROCYSTIS (LPIL)	0.0	0.00	0.00	0.00	0.0
0	GOMPHOSPHAERIA LACUSTRIS	0.01	0.03	0.02	0.01	0.4
0	OSCILLATORIACEAE					
0	OSCILLATORIA LIMNETICA	0.0	0.00	0.00	0.00	0.1
0	CSCILLATORIA (LPIL)	0.02	0.0	0.01	0.01	0.2
0	LYNGBYA CONTORTA	0.00	0.0	0.00	0.00	0.1
0	CHLOROPHYTA	1.25	0.25	0.75	0.50	17.3
0	VOLVOCALES					
0	CHLAMYDOMONAS (LPIL)	0.55	0.24	0.40	0.16	9.1
0	TETRASPORALES					
0		0.00	0.01	0.01	0.00	0.2
0						
0	SPHAEROCYSTIS SCHROETERI	0.69	0.0	0.34	0.34	7.9
0		0.00	0.00	0.00	0.00	0.1
0	SCENEDESHUS QUADRICAUDA	0.00	0.0	0.00	0.00	0.0
0	CHRYSOPHYTA	0.06	0.07	0.06	0.01	1.5
0	The state of the s					
0	A COLUMN TO A COLU	0.02	0.0	0.01	0.01	0.2
0		0.00	0.00	0.00	0.00	0.0
0		0.01	0.0	0.00	0.00	0.1
0		0.03	0.07	0.05	0.02	1.1
0						
0		0.01	0.00	0.01	0.00	0.1
0		0.0	0.00	0.00	0.00	0.0
0	The state of the s	1.44	0.73	1.09	0.35	25.0
0						
0		0.57	0.25	0.41	0.16	9.5
0	The state of the s	0.11	0.02	0.06	0.04	1.4
. 0		0.32	0.07	0.19	0.13	4.5
0	*	0.21	0.16	9.18	0.02	4.3
0		0.10	0.00	0.05	0.05	1.2
0						
0	TOTAL SECTION AND ADDRESS OF THE PROPERTY OF T	0.13	0.23	0.18	0.05	4.1
0	E CONTRACTOR E CONTRACTOR E CONTRACTOR E	2.08	1.65	1.86	0.21	42.9
(55 E.S. 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1			
	TO TELL PROPERTY TO MINISTER	0.44	0.52	0.48		11.1
(DIATOMA TENUE	0.01	0.13	0.07	0.06	1.5

E.

Table 2.4 (Page 2 of 5)

MICROLITERS PER LITER

SITE SUMMARY

		Nearfield	Farfield			REL
1.5	YAXA	(1-6, 12)	(7-9)	×	S.E.	ABZ.
0	FRAGILARIA CROTONENSIS	0.34	0.27	0.30	0.04	7.0
0	FRAGILARIA (LPIL)	0.57	0.08	0.33	0.24	7.5
0	TABELLARIA FLOCCULOSA	0.0	0.30	0.15	0.15	3.4
0	FRAGILARIALES (LPIL)	0.02	0.0	0.01	0.01	0.2
0	NAVICULALES					
0	NAVICULA (LPIL)	0.02	0.02	0.02	0.00	0.5
0	PINNULARIA (LPIL)	0.02	0.02	0.02	0.00	0.4
0	CYMBELLA (LPIL)	0.00	0.0	0.00	0.00	0.0
0	BACILLARIALES					
0	NITZCHIA (LPIL)	0.42	0.19	0.31	0.12	7.0
0	SURIRELLALES					
0	CYMATOPLEURA SOLEA	0.10	0.0	0.05	0.05	1.2
0	BACILLARIOPHYTA-PENNATE (LPIL)	0.13	0.12	0.13	0.00	2.9
0	PYRRHOPHYTA-DINOPHYCEAE	0.03	0.23	0.13	0.10	2.9
0	PERIDINIALES					-
0	PERIDINIUM INCONSPICUUM	0.03	0.23	0.13	0.10	2.9
0	CRYPTOPHYTA	0.47	0.33	0.40	0.07	9.2
0	CRYPTOMONODALES					
0	CRYPTOMONAS MARSSONII	0.00	0.0	0.00	0.00	0.0
0	CRYPTOMONAS REFLEXA	0.10	0.07	0.08	0.02	1.9
0	CRYPTOMONAS (LPIL)	0.13	0.06	0.10	0.04	2.2
0	RHODOMONAS MINUTA	0.22	0.20	0.21	0.01	4.8
0	CHROOMONAS (LPIL)	0.01	0.00	0.01	0.01	0.2
0	CYANOMONAS (LPIL)	0.00	0.0	0.00	0.00	0.0
101	AL	5.40	3.30	4.35	1.05	100.0
DIV	ERSITY (H PRIME)	2.35	2.81	2.58	0.23	
DIV	ERSITY (J PRIME)	0.67	0.80	0.73	0.06	
HUR	BER OF TAXA	39	31	43		
ABC	VE COMPUTED USING SAMPLE TOS					

ABOVE COMPUTED USING SAMPLE IDS

11	12	21	22
31	32	41	42
51	52	61	62
101	102	71	72
81	82	91	92



Table 2.4 (Page 3 of 5)

HICROLITERS PER LITER

SITE SUMMARY

LS	TAXA	Pond B	Pond C	Cowles Bog	x	S.E.	REL ABX
0	CYANOPHYTA	0.00	0.00	0.08	0.03	0.03	0.2
0	CHROOCOCCACEAE						
0	AGMENELLUM (LPIL)	0.0	0.00	0.0	0.00	0.00	0.0
0	OSCILLATORIACEAE						
0	OSCILLATORIA (LPIL)	0.00	0.0	0.06	0.07	0.02	0.1
0	NOSTOCACEAE		717		0.01	0.02	0.1
0	ANABAENA (LPIL)	0.00	0.00	0.01	0.00	0.00	0.0
0	RIVULARIACEAE		0.00	0.01	0.00	0.00	0.0
0	RAPHIDIOPSIS CURVATA	0.0	0.0	0.01	0.00	0.00	0.0
0	CHLOROPHYTA	1,10	0.09	12.09	4.43	3.84	25.6
0	VOLVOCALES		0.07	12.07	4.43	3.04	25.0
0	CHLAMYDOMONAS (LPIL)	0.0	0.08	0.0	0.03	0.07	
0	CHLOROCOCCALES		0.00	0.0	0.03	0.03	0.1
0	ANKISTRODESMUS FALCATUS	0.0	0.00	0.0	0.00		
0	OOCYSTIS (LPIL)	0.01	0.0	0.0	0.00	0.00	0.0
0	SCENEDESMUS ACUTUS	0.0	0.00	0.0	0.00	0.00	0.0
0	SCENEDESHUS QUADRICAUDA	0.29	0.01	0.0	0.00	0.00	0.0
0	SCENEDESHUS ECORNIS	0.02	0.01		0.10	0.10	0.6
0	SCENEDESHUS SPINOSUS	0.00	0.01	0.0	0.01	0.01	0.1
0	PEDIASTRUM DUPLEX	0.00	20.00		0.00	0.00	0.0
0	TETRAEDRON CAUDATUM	0.01	0.0	0.0	0.08	0.08	0.5
0	DEDOGONIALES	0.01	0.0	0.0	0.00	0.00	0.0
0	OEDOGONIUM (LPIL)	0.10		100			
0	ZYGNEMATALES	0.10	0.0	0.66	0.25	0.20	1.5
0	MOUGEOTIA (LPIL)	0.34					
0	SPIROGYRA (LPIL)		0.0	0.0	0.11	0.11	0.7
0	CLOSTERIUM MONILIFERUM	0.0	0.0	9.88	3.29	3.29	the state of the s
0		0.03	0.0	0.0	0.01	0.01	0.1
0	CLOSTERIUM (LPIL)	0.0	0.0	1.55	0.52	0.52	3.0
0	STAURASTRUM (LPIL)	0.03	0.0	0.0	0.01	0.01	0.1
0	EUGLENOPHYTA	0.11	1.06	0.48	0.55	0.28	3.2
0	EUGLENALES						
0	TRACHELOMONAS VOLVOCINA	0.0	0.15	0.0	0.05	0.05	0.3
	TRACHELOMONAS (LPIL)	0.11	0.91	0.48	0.50	0.23	2.9
. 0	CHRYSOPHYTA	1.34	5.00	0.00	2.11	1.49	12.2
0	CHRYSOMONADALES						
0	CHRYSOCOCCUS (LPIL)	0.33	0.03	0.00	0.12	0.10	0.7
0	SYNCRYPTA (LPIL)	0.0	0.04	0.0	0.01	0.01	0.1
0	DINOBRYON SERTULARIA	0.98	4.31	0.0	1.76	1.31	10.2
0	DINOBRYON DIVERGENS	0.0	0.05	0.0	0.02	0.02	0.1
0	DINOBRYON (LPIL)	0.0	0.04	0.0	0.01	0.01	0.1
0	OCHROHONAS (LPIL)	0.0	0.49	0.0	0.16	0.16	0.9
0	EPIPYXIS UTRICULUS	0.03	0.02	0.0	0.02	0.01	0.1



Table 2.4 (Puge 4 of 5)

HICROLITERS PER LITER

REPHYBIOH (LPIL) 0.00	00 00 00 00 00 00 00 00 00 00 00 00 00	0.0 24.71 0.30 11.95 0.0 0.0	0.00	0.00	0.0
BACILLARIGFHYTA-CENTRIC EUPODISCALES HELOSIRA (LPIL) BACILLARIOPHYTA-PEHHATE FRAGILARIA (LPIL) SYNEDRA (LPIL) SYNEDRA (LPIL) TABELLARIA FLOCCULOSA ACHAMIHALES ACHAMIHALES ACHAMIHALES ACHAMIHALES ACHAMIHAES (LPIL) NAVICULALES HAVICULALES HEDIUM (LPIL) GORPHOMEMA (LPIL) FIRMULARIA (LPIL) GORPHOMEMA (LPIL)	0.00 0.00 0.00	0.24 24.71 1.95 0.0 0.0 0.0	0 0 0 0 0 0 0 0	0.08	
EUPODISCALES MELOSIRA (LPIL) BACILLARIOPHYTA-PEHHATE FRAGILARIALES FRAGILARIA (RPIL) SYNEDRA (LPIL) TABELLARIA FLOCCULOSA ACHIANTHALES ACHIANTHES MINUTISSIMA ACHIANTHES (LPIL) HAVICULALES HAVIRALARIA	0.0000000000000000000000000000000000000	24.71 0.30 1.95 2.77 0.0 0.0	9.02		0.5
BACILLARIOPHYTA-PERMATE FRAGILARIALES FRAGILARIA (LPIL) SYNEDRA (LPIL) TABELLARIA FLOCCULOSA ACHMANTHALES ACHMANTHES MINUTISSINA ACHMANTHES (LPIL) NAVICULALES NAVICULA (LPIL) PIRRULARIA (LPIL) SORPHORA (LPIL) GORPHORA (LPIL) GORPHORA (LPIL) FRRULARIA (LPIL)	\$1.0000 00 00 00 00 00 00 00 00 00 00 00 0	24.71 0.30 0.0 0.0 0.0	9.05	0 08	0
FRACILAPIALES FRACILARIA CROTOHENSIS FRACILARIA (LPIL) SYNEDRA (LPIL) TABELLARIA FLOCCULOSA ACHIANTHAES ACHIANTHES MINUTISSINA ACHIANTHES (LPIL) NAVICULALES NAVICULALES NAVICULA (LPIL) PIRRULARIA (LPIL) GORPHONEM (LPIL) GORPHONEM (LPIL) EPITHENIALES	0.000 000	0.30 0.00 0.00 0.00	0.10	7.87	52.23
FRAGILARIA CROTOHENSIS FRAGILARIA (LPIL) SYNEDRA (LPIL) TABELLARIA FLOCCULOSA ACHIANTHAES ACHIANTHES MINUTISSINA ACHIANTHES (LPIL) NAVICULALES NAVICULA (LPIL) PIRRULARIA (LPIL) GORPHONEM (LPIL) GORPHONEM (LPIL) GORPHONEM (LPIL) FRRULARIA (LPIL)	0.000 00 0	0.30 0.00 0.00 0.00 0.00	0.10		
HINDISSINA HINDISSINA HINDISSINA HINDI SSINA	70.00 00 00 00 00 00 00 00 00 00 00 00 00	0.00	I E F F	0.10	0.6
FIL) FLOCCULOSA HINUTISSINA (LPIL) PIL) (LPIL) (LPIL) (LPIL) (LPIL) PIL) PIL)	a 0 0 0 0	0.00	0.67	9.0	3.9
HINUTISSINA (LPIL) PPL) (LPIL) (LPIL) (LPIL) (LPIL) (LPIL) (LPIL) (LPIL)	0.00	0.0	0.92	0.92	5.3
HINUTISSINA (LPIL) PIL) (LPIL) (LPIL) PIL)	00 0	0.0	0.15	0.11	0.9
S HINUTISSIMA S (LPIL) (LPIL) LPIL) A (LPIL) A (LPIL) S	00 0	0.0			
S (LPIL) (LPIL) A (LPIL) A (LPIL) LPIL) S (LPIL) S (LPIL)	0.0	0.0	0.00	0.00	0.0
CPIL) LPIL) A CIPIL) A CIPIL) LPIL) S		0.51	0.00	00.00	0.
OPIC) COPIC) COP	•	0.51			
CPIC)	0.0	***	0.17	0.17	-
(IPIL)	0.0	0.19	0.22	0.13	-
(1611) 911)	0.0	18.44	6.15	6.15	35.
2017	0.0	0.19	0.06	90.0	0
	0.0	0.08	0.05	0.05	0
GIBBA	0.0	0.11	0.04	0.04	0
UPILI	0.00	0.0	0.39	0.39	cú
	0.0	0.0	0.01	0.01	0
(LPIL)	0.03	0.26	0.12	0.05	0
IOPHYCEAE	2.31	0.12	0.01	0.75	ě
				,	,
Icon	1.54	21.0	0.55	0.40	,
TURE CINCTURE	0.77	0.0	0.26	0.25	-
	0.49	0.0	0.25	0.14	-
CRIPTOHODOALES					
CRYPTOHOMAS (LPIL)	25.0	0.0	0.23	0.14	-
RHODOHOMAS HITHUTA	0.0	0.0	0.00	00.00	0
CIRROHOHAS (1PIL) 0.03	0.05	0.0	0.05	0.01	0
10TAL 5.03	9.08	37.73	17.28	5.0	100.0
DIVERSITY (H PRIME) 2.37	2.22	1.04	2.18	13	
() PRINE)	0.58	0.56	0.60	0.02	



Table 2.4 (Page 5 of 5)

SITE SUMMARY

slides (both sides) and substrate scrapings were placed in vials and preserved with 6-3-1 solution (six parts water: three parts ethanol: one part formalin). Two replicate slides per sample were quantitatively analyzed. Counts and biovolume estimates were made as described for the regular phytoplankton samples.

2.2.2 PHYTOPLANKTON RESULTS AND DISCUSSION

Density and Biovolume. Average April 1980 phytoplankton densities were 5382 cells per milliliter in Lake Michigan and 11,105 cells per milliliter in the interdunal ponds (Table 2.3 and Appendix A). Biovolume averaged 4.35 microliters per liter in Lake Michigan and 17.28 microliters per liter in the ponds (Table 2.4 and Appendix B). In the lake, average phytoplankton density and biovolume were lower than in April 1979 while the pond density and biovolume values were higher than those of April 1979. Summary data for the lake and ponds are presented in tables 2.5 and 2.6.

Dominant taxa in Lake Michigan (those representing as much as 4 percent of either density or biovolume) included Gomphosphaeria lacustris, Lyngbya contorta, Asterionella formosa, Fragilaria sp., Fragilaria crotonensis, Stephanodiscus sp., Stephanodiscus niagarae, Melosira sp., Nitzschia sp., Rhizosolenia eriensis, Rhodomonas minuta, Chlamydomonas sp., and Sphaerocystis schroeteri. The diatom taxa were the largest contributors to the density and biovolume estimates, comprising 68 percent of the total biovolume and 41 percent of the density; cryptophytes and blue-green algae also were important contributors to the total density. Lake Michigan samples yielded 43 taxa. Diversity (H') and evenness (J') for phytoplankton density were moderate (2.56 and 0.73, respectively) and similar to April 1979.

Highest phytoplankton densities were found near the discharge (stations 1 and 4) as well as at farfield Station 9. The highest biovolumes were found close to the discharge, at stations 1 and 2 (nearfield stations) and at Station 10 (discharge), due to high abundances of the diatom genera Fragilaria,

Stephanodiscus, and Nitzschia and the green alga Sphaerocystis schroeteri.

These high biovolumes cannot be attributed to power plant influences, since Bailly Station was off-line near the discharge area for several months prior to the sampling period. Additionally, the high biovolume of each taxon usually occurred in only one of the two replicate samples, indicating high variability



Table 2.5

Summary Data for Lake Michigan Phytoplankton,
Bailly Study Area, April 1980

Transect	Station	Density (No./mg)	Biovolume (με/ε)	No. Taxa	Dive H'	rsity J'
Nearfield (west of discharge)	1	9,397	7.89	21	2.73	0.73
	2	6,083	7.48	16	3.09	0.85
	3	4,431	2.82	20	2.96	0.78
Nearfield (east of discharge)	4	8,255	2.92	16	2.40	0.67
	5	3,187	3.19	16	1.38	0.35
	6	5,047	4.36	15	2.55	0.73
Farfield	7	3,108	3.22	13	2.56	0.81
	8	3,739	3.64	22	3.11	0.82
	9	8,712	3.03	18	2.24	0.61
Discharge	10	4,601	6.64	14	2.38	0.75

Table 2.6

Summary Data for Nearshore Ponds Phytoplankton,
Bailly Study Area, April 1980

Station	Density (No./m2)	Biovolume (µl/l)	No. Taxa	Dive H'	Diversity H' J'	
17	4,559	3.93	22	2.46	0.66	
18	9,415	6.14	19	2.35	0.65	
Pond B (17 & 18)	6,987	5.03	28	2.41	0.65	
19	13,468	9.66	19	1.62	0.42	
20	26,513	8.50	20	0.99	0.26	
Pond C (19 & 20)	19,990	9.08	25	1.31	0.34	
Cowles Bog (21)	6,339	37.73	21	2.26	0.62	
All Ponds	11,105	17.28	51	1.99	0.54	



at these stations. High biovolume estimates were also observed at three stations (stations 2, 4 and 10) near the discharge during April 1979 (Texas Instruments 1979). The high biovolumes near the discharge during both spring 1979, with thermal discharge, and spring 1980, without thermal discharge, indicates that factors other than the thermal discharge were primary influences on the phytoplankton community. Possible factors include shallow water and low circulation in the discharge area.

Samples collected from the interdunal ponds were dominated (as much as 4 percent of the density or biovolume) by Fragilaria sp., Pinnularia sp., Synedra sp., Anabaena sp., Chrysococcus sp., Dinobryon sertularia, Ochromonas sp. and Scenedesmus quadricauda. Golden-brown algae were density-dominant, while diatoms dominated biovolume estimates. Fifty-one taxa were collected during April 1980 in the interdunal ponds. Pond C exhibited higher density than did Pond B or the Cowles Bog area. Biovolume was the highest in Cowles Bog because of the presence of Pinnularia sp., a large diatom, which comprised 49 percent of the biovolume. The diversity and evenness indexes for density were moderate in Pond B and Cowles Bog and relatively low in Pond C (Table 2.3). These results are expected in small water bodies such as the interdunal ponds.

- 2.2.3 PERIPHYTON RESULTS AND DISCUSSION.
- 2.2.3.1 <u>Density and Biovolume</u>. Periphyton densities and biovolumes are shown in tables 2.7, 2.8, and 2.9. Relative abundances of the diatoms are shown in Table 2.10.

Growth on the natural substrates in Lake Michigan (stations 1, 10, 11, 12, and 25) had been ongoing for the entire year as opposed to the 4-week-exposed artificial substrates in the ponds. Differences between the two areas are as much related to the differences in colonization time and substrate type as to inherent differences between the lake and ponds. Therefore, discussions for the ponds and the lake are separate.

Total periphyton densities in Lake Michigan were highest at Station 11 (due to high abundances of the blue-greens <u>Pleurocapsa</u> sp. and <u>Lyngbya</u> sp.) and lowest at Station 25 (Table 2.9). There was no explanation for these density variations, although similar distributions were observed in November 1979 (Texas



Table 2.7
Periphyton Density, Bailly Study Area,
April 1980 (Page 1 of 4)

DENSITY IN NUMBER / SQUARE CENTIMETER
STATION REPORT

			Lake Michigan Stations					
	LS TAXA	1 25	10	11	12	X	S.E.	ABZ
	0 CYANOPHYTA	7359862.00	14748255.0	18548603.0	1370253.00	8405395.00	3635613.00	89.0
	O PLEUROCAPSACEAE							
	O PLEUROCAPSA (LPIL)	3320243.00	579210.00	3383099.00	0.0	1556510.00	894436.94	16.5
	O OSCILLATORIACEAE							
	O OSCILLATORIA (LPIL)	0.0	725271.50	141410.19	0.0	173336.31	140674.81	1.8
	0 LYNGBYA LIMNETICA	3361365.00	5666185.00	4402348.00	274050.62	2740789.00	1124734.00	29.0
	0 LYNGBYA (LPIL)	152789.31	3368846.00	7567306.00	1096202.00	2437028.00	1416733.00	25.8
	0 NOSTOCACEAE							
	O ANABAENA (LPIL)	25464.89	0.0	0.0	0.0	5092.98	5092.93	0.1
	O RIVULARIACEAE							
	O CALOTHRIX (LPIL)	0.0	4408745.00	3054460.00	0.0	1492641.00	938799.00	15.8
	O CHLOROPHYTA	2551580.00 93353.50	0.0	148763.44	273940.87	613527.56	486537.19	6.5
	0 ULOTRICHALES							
	O SCHIZONERIS (LPIL)	2551580.00 0.0	0.0	0.0	263910.62	563098.12	499740.50	6.0
-	0 ULOTRICHALES (LPIL)	0.0 0.0	0.0	148763.44	0.0	29752.69	29752.69	0.3
	O CHAETOPHORALES							
	O STIGEOCLONIUM (LPIL)	0.0 80735.31	0.0	0.0	0.0	16157.06	16157.06	0.2
Τ,	0 GEDGGONTALES							
	0 OEDOGONIUM (LPIL)	0.0 5004.40	0.0	0.0	0.0	1000.88	1000.68	0.0

一个

Table 2.7 (Page 2 of 4)

DENSITY IN NUMBER / SQUARE CENTIMETER

REL	X S.F.		ns	igan Station	Lake Mich			LS TAXA		
ABX	S.E.	X	12	11	10	1 25			1000	LJ
									LADOPHORALES	0
0.0	2189.83	3518.81	10030.25	0.0	0.0	0.0 7563.79		(L)	CLADOPHORA (LP)	0
4.5	337465.19	424311.31	1763788.00	250153.44	18686.23	40743.83 48135.21		NATE	ILLARIOPHYTA-PE	0
									RAGILARIALES	0
0.0	3946.33	3946.33	0.0	0.0	0.0	0.0 19731.64		DRMOSA	ASTERIONELLA FO	0
0.0	2630.89	2630.89	0.0	0.0	0.0	0.0 13154.43			DIATCMA VULGARE	0
									CHNANTHALES	0
0.0	2630.89	2630.89	0.0	0.0	0.0	0.0 13154.43		.)	COCCONEIS (LPI)	0
3.3	313952.19	313952.19	1569761.00	0.0	0.0	0.0		CURVATA	RHOICOSPHENIA (0
1.1	50536.87	101151.19	194027.75	250153.44	16686.23	40743.83 2144.74)	SNATE (LPIL)	ILLARIOPHYTA-PER	0
100.0	3477622.00	9443221.00	3407981.00	18947472.0	14766933.0	9952184.00 141538.69				ТОТА
	0.08	1.33	1.12	1.55	1.37	1.40			TY (H PRIME)	DIVE
	0.03	0.63	0.51	0.69	0.64	0.65			TY (J PRIME)	DIVE
						0.63				
		16	6	7	6	6 7			AXAT 70	NUMB
								MPLE TOS	OMPUTED USING SA	ABOV
						102 122	101 121	12 112 252	11 111 251	
		0.63	0.51	0.69	0.64	1.20 0.65 0.63 6 7		12 112	OF TAXA DMPUTED USING SA	DIVE



Table 2.7 (Page 3 of 4)

DENSITY IN NUMBER / SQUARE CENTIMETER

STATION REPORT Nearshore Ponds

			and the second				
		Pond B	Pond C	Cowles Bog			REL
LS	TAXA				X	S.E.	AB%
		17	19	21			
0	UNIDENTIFIED ALGAE	1417341.00	0.0	0.0	472447.00	472447.00	
0	UNIDENTIFIED ALGAE (LPIL)	1417341.00	0.0	0.0	472447.00	472447.00	
0	CYANOFHYTA	781156.25	525713.81	256922.56	521264.19	151349.56	32.2
0	CHROOCOCCACEAT						
0	MICROCYSTIS (LPIL)	0.0	0.0	256922.56	85640.81	85640.81	5.3
0	APHANOCAPSA (LPIL)	131279.06	85689.00	0.0	72322.69	38481.78	4.5
0	OSCILLATORIACEAE						
0	LYNGBYA LIMNETICA	649377.44	367073.37	0.0	338983.56	188128.44	20.9
0	NOSTOCACEAE						
0	ANABAENA (LPIL)	0.0	72951.44	0.0	24317.14	24317.14	1.5
0	CHLOROPHYTA	80821.62	42844.52	491181.31	204949.12	143535.31	12.7
0	CHLCROCOCCALES						
0	SCENEDESHUS QUADRICAUDA	22295.64	4631.84	0.0	8975.82	6792.80	0.6
0	CHAETOPHORALES						
0	STIGEOCLONIUM (LPIL)	58526.03	28949.01	259153.75	115542.87	72311.25	7.1
0	OEDOGONIALES						
0	DEDGGONIUM (LPIL)	0.0	4631.84	226889.06	77173.62	74869.62	4.8
0	ZYGNEMATALES						
0	MOUGEOTIA (LPIL)	0.0	4631.84	0.0	1543.95	1543.95	0.1
0	CHLOROPHYTA (LPIL)	0.0	0.0	5138.45	1712.82	1712.82	0.1
0	CHRYSOPHYTA	0.0	530345.62	0.0	176781.87	176781.87	
0	CHRYSONONADALES		230212102				
0	DINGBRYON SERTULARIA	0.0	3473.88	0.0	1157.96	1157.96	0.1
0	OCHROMONAS (LPIL)	0.0	18527.36	0.0	6175.79	6175.79	
0	EPIPYXIS (LPIL)	0.0	436343.25	0.0	162114.37	162114.37	
0	KEFNYRION (LPIL)	0.0	22001.24	0.0	7333.75	7333.75	0.5
0	BACILLARIOPHYTA-PENNATE	132681.50	132007.37	464278.19	242989.00	110644.75	
0	FRAGILARIALES	132001.30	132007.37	404270.17	242707.00	110044.73	13.0
0	FRAGILARIA PINNATA	0.0	13895.52	0.0	4631.84	4631.84	0.3
0	FR'GILARIA (LPIL)	0.0	0.0	297172.25	99057.37	99057.37	6.1
0	DION CIRCULARE	0.0	0.0	38148.84	12716.28	12716.28	0.8
0		0.0	0.0	3351.66	1117.22	1117.22	0.1
1.00	SYNEDRA (LPIL)				22956.39	11683.62	1.4
0	TABELLARIA FLOCCULOSA	30656.50	38212.69	0.0	22730.37	11003.02	1.4
- 0	ACHNARTHALES	100000 00		1712 00	46470 75	00017.04	
0		102025.00	45160.45	1712.82	49632.75	29043.84	3.1
0	NAVICULALES				707/7 70	707/7 70	
0	GOMPHICHEMA (LPIL)	0.0	0.0	98291.37	32763.79	32763.79	2.0
0	CYESELLA (LPIL)	0.0	0.0	2037.19	679.06	679.06	0.0
0	BACILLARIOPHYTA-, WNATE (LPIL)	0.0	34738.30	23564.12	19434.31	10238.61	1.2
0	CRYPTOPHYTA	0.0	0.0	1712.62	570.94	570.94	0.0
0	CRYPTOMONODALES			And State Law of the law			
0	CHROOMONAS (LPIL)	0.0	0.0	1712.82	570.94	570.94	0.0



Table 2.7 (Page 4 of 4)

DENSITY IN NUMBER / SQUARE CENTIMETER

Nearshore Ponds STATION REPORT

LS TAXA	Pond B	Pond C	Cowles Bog	×	S.E. AB%
1200	17	19	21		3.E. AD.
TOTAL	2411999.00	1230907.00	1214091.00	1618999.00	396529.69 100.0
DIVERSITY (H PRIME)	1.80	2.49	2.33	2.21	0.21
DIVERSITY (J PRIME)	0.77	0.69	0.72	0.73	0.02
NUMBER OF TAXA	7	15	12	24	

ABOVE COMPUTED USING SAMPLE IDS

171	172	191	192
211	212		



Table 2.8

Periphyton Biovolume, Bailly Study Area,
April 1980 (Page 1 of 4)

MICROLITERS PER LIT	ER	LIT	PER	TERS	MICROLI
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			Lake Mi	chigan Stat	ions			
LS	TAXA	1	10	11	12	×	S.E.	AB%
0	СУАНОРНУТА	25 0.16 0.0	1.45	1.38	0.64	0.60	0.33	4.4
0	PLEUROCAPSACEAE PLEUROCAPSA (LPIL)	0.05	0.01	0.05	0.0	0.02	0.01	0.2
0	OSCILLATORIACEAE OSCILLATORIA (LPIL)	0.0	0.03	0.01	0.0	0.01	0.01	0.1
0	LYNGBYA LIMNETICA	0.05	0.05	0.07	0.00	0.04	0.01	0.3
0	LYNGBYA (LPIL)	0.05	0.04	0.34	0.03	0.09	0.06	0.7
0	NOSTOCACEAE ANABAENA (LPIL)	0.00	0.0	0.0	0.0	0.00	0.00	0.0
0	RIVULARIACEAE CALOTHRIX (LPIL)	0.0	1.32	0.91	0.0	0.45	0.28	3.3
0	CHLOROPHYTA	34.37 16.50	0.0	0.09	6.98	11.59	6.45	84.8
0	ULOTRICHALES SCHIZOMERIS (LPIL)	34.37 0.0	0.0	0.0	1.55	7.18	6.80	52.6
0	ULOTRICHALES (LPIL)	0.0	0.0	0.09	0.0	0.02	0.02	0.1
0	CHAETOPHORALES STIGEOCLONIUM (LPIL)	0.0 0.03	0.0	0.0	0.0	0.01	0.01	0.0
0	OEDOGONIALES OEDOGONIUM (LPIL)	0.0	0.0	0.0	0.0	0.00	0.00	0.0



Table 2.8 (Page 2 of 4)

MICROLITERS PER LITER

				4 (1)	Lake Michiga	an Stations				REL
LS	TAXA			1 25	10	11	12	x	S.E.	ABZ
0	CLADOPHORALES									
0	CLADOPHORA (LP	IL)		0.0 16.47	0.0	0.0	5.42	4.38	3.20	32.0
0	BACILLARIOPHYTA-PE	HNATE		0.01 0.10	0.01	0.13	7.11	1.47	1.41	10.8
0	FRAGILARIALES									
0	ASTERIONELLA F	ORMOSA		0.0	0.0	0.0	0.0	0.00	0.00	0.0
0	DIATOMA VULGAR	E		0.0	0.0	0.0	0.0	0.01	0.01	0.1
0	ACHNANTHALES									
0	COCCONEIS (LPI	L)		0.0	0.0	0.0	0.0	0.00	0.00	0.0
0	RHOICOSPHENIA	CURVATA		0.0	0.0	0.0	7.06	1.41	1.41	10.3
0	BACILLARIOPHYTA-PE	NNATE (LPII	L)	0.01	0.01	0.13	0.06	0.04	0.03	0.3
TOT	AL			34.54 16.60	1.46	1.60	14.13	13.66	6.08	100.0
DIV	ERSITY (H PRIME)			0.05	0.59	1.56	1.13	0.71	0.28	
DIV	ERSITY (J PRIME)			0.02	0.19	0.71	0.53	0.34	0.13	
•				0.15						
NUM	BER OF TAXA			6 7	6	7	6	16		
ARO	VE COMPUTED USING S	AMDIE TOS								
ALIO	VE COMPONED USING S.	12	101	102						
	111 251	112 252	121	122						



Table 2.8 (Page 3 of 4)

MICROLITERS PER LITER

		Pond B	Pond C	Cowles Bog			
LS	TAXA				×		REL
		17	19	21	^	S.E.	AB%
0	UNIDENTIFIED ALGAE	0.06	0.0	0.0	0.02	0.00	
0	UNIDENTIFIED ALGAE (LPIL)	0.06	0.0	0.0	0.02	0.02	2.0
0	CYANOPHYTA	0.01	0.05	0.00	0.02	0.02	2.0
0	CHROOCOCCACEAE			0.00	0.02	0.02	6.3
0	MICROCYSTIS (LPIL)	0.0	0.0	0.00	0.00	0.00	0.1
0	APHANOCAPSA (LPIL)	0.00	0.04	0.0	0.01		1.6
0	OSCILLATORIACEAE		0.01	0.0	0.01	0.01	1.6
0	LYNGBYA LIMNETICA	0.01	0.01	0.0	0.01	0.00	0.6
0	HOSTOCACEAE				0.01	0.00	0.0
0	ANABAENA (LPIL)	0.0	0.00	0.0	0.00	0.00	0.0
0	CHLOROPHYTA	0.06	0.02	0.75	0.28	0.24	28.9
0	CHLOROCOCCALES	7677	0.00	0.75	0.20	0.24	20.9
0	SCENEDESMUS QUADRICAUDA	0.00	0.00	0.0	0.00	0.00	0.1
0	CHAETOPHORALES	7177		***	0.00	0.00	0.1
0	STIGEOCLONIUM (LPIL)	0.06	0.01	0.21	0.09	0.06	9.5
0	OEDOGONIALES			0.21	0.09	0.06	9.5
0	OEDOGONIUM (LPIL)	0.0	0.01	0.54	0.18	0.18	19.2
0	ZYGNEMATALES	777		0.54	0.10	0.10	19.2
0	MOUGEOTIA (LPIL)	0.0	0.00	0.0	0.00	0.00	0.1
0	CHLOROPHYTA (LPIL)	0.0	0.0	0.00	0.00	0.00	0.0
0	CHRYSOPHYTA	0.0	0.40	U.0	0.15		
0	CHRYSOMONADALES		7117	0.0	0.13	0.13	15.9
0	DINGBRYON SERTULARIA	0.0	0.01	0.0	0.00	0.00	0.3
0	OCHROMONAS (LPIL)	0.0	0.00	0.0	0.00	0.00	0.1
0	EPIPYXIS (LPIL)	0.0	0.39	0.0	0.13	0.13	13.5
0	KEPHYRION (LPIL)	0.0	0.00	0.0	0.00	0.00	0.0
0	BACILLARIOPHYTA-PENNATE	0.27	0.37	0.83	0.51	0.19	52.8
0	FRAGILARIALES		7.000	4144	0.51	0.17	26.0
0	FRAGILARIA PINNATA	0.0	0.09	0.0	0.03	0.03	3.1
0	FRAGILARIA (LPIL)	0.0	0.0	0.36	0.12	0.12	12.4
0	MERIDION CIRCULARE	0.0	0.0	0.15	0.05	0.05	5.1
0	SYNEDRA (LPIL)	0.0	0.0	0.07	0.92	0.02	2.5
0	TABELLARIA FLOCCULOSA	0.26	0.25	0.0	0.17	0.08	17.6
. 0	ACHHANTHALES				0.17	0.00	17.0
0	ACHNANTHES MINUTISSIMA	0.01	0.00	0.00	0.00	0.00	0.5
0	NAVICULALES				0.00	0.00	0.5
0	GOMPHONEMA (LPIL)	0.0	0.0	0.14	0.05	0.05	4.8
0	CYMBELLA (LPIL)	0.0	0.0	0.14	0.05	0.05	4.8
0	BACILLARIOPHYTA-PENNATE (LPIL)	0.0	0.02	0.03	0.02	0.03	2.0
0	CRYPTOPHYTA	0.0	0.0	0.00	0.00	0.00	2.0
0	CRYPTOHORIODALES				0.00	0.00	
0	CHROOMONAS (LPIL)	0.0	0.0	0.00	0.00	0.00	C
					0.00	0.00	U.



Table 2.8 (Page 4 of 4)

MICROLITERS PER LITER

STATION REPORT

LS TAXA	Pond B	Pond C	Cowles Bog		REL
13	17	19	21	×	S.E. ABZ
TOTAL	0.39	0.84	1.64	0.96	0.36 100.0
DIVERSITY (H PRIME)	1.01	1.92	2.38	1.77	0.41
DIVERSITY (J PRIME)	0.44	0.54	0.75	0.57	0.09
HUMBER OF TAXA	7	15	12	24	

ABOVE COMPUTED USING SAMPLE IDS 171 172 191 192 211 212



Table 2.9
Periphyton Summary Data, Bailly Study Area, April 1980

Station	Density (No./cm ²)	Biovolume (µ%/cm²)	No. Taxa	Dive	rsity J'
1	9,952,184	34.54	6	1.40	0.65
10	14,766,933	1.46	6	1.37	0.64
11	18,947,472	1.60	7	1.55	0.69
12	3,407,981	14,13	6	1.12	0.51
25	141,539	16.60	. 7	1.20	0.63
Lake Michigan Mean	9,443,221	13.66	16	1.33	0-63
17	2,411,999	0.39	7	1.80	0.77
19	1,230,907	0.84	15	2.49	0.69
21	1,214,091	1.64	12	2.33	0.72
Pond Mean	1,618,999	0.96	24	21	0.73

Instruments 1980a). Variable trends were also observed for biovolume, with the highest biovolume at Station 1 and the lowest at Station 10.

The most numerous taxa at the lake stations were the blue-green algae <u>Calothrix</u> sp., <u>Pleurocapsa</u> sp., and <u>Lyngbya</u> spp. The biovolume-dominant taxa were the green algae <u>Schizomeris</u> sp. and <u>Cladophora</u> sp.

The dominant diatom taxa at each of the lake stations were:

Stations 1 and 25: Fragilaria vaucheriae and Achnanthes minutissima

Station 10: Stephanodiscus astraea and Nitzschia dissipata

Station 11: Fragilaria vaucheriae

Station 12: Fragilaria vaucheria and Rhoicosphenia curvata

Station 10, the discharge station, was unique in having a lower relative abundance of <u>Fragilaria vaucheriae</u> which has been considered a cool water species (Lowe 1974). The low relative abundance of <u>Fragilaria vaucheriae</u> was



Table 2.10

Percent Relative Abundance of Periphyton Diatoms,
Bailly Study Area, April 1980

								Stati								
Taxon				2	4	8		2		1	-			2		
Centrales Cyclotella atomus Commencytiniana Coccilata			6.0	5.0	1.0											
C. Scellata C. sseudostalligara Cyclotalla so.			0.5	1.0												
Coseudostalligara Coslotalla so Malostra islandica Militallica Militallica Militallica	A.F		2.5	0.5 0.5 18.0			0.7		3.7	1.0	7.6				2.0	4.3
Stephanodiscus astraea . hentpschil . hisgarae Stephanodiscus sp.	1.0	1.0 2.0	48/2	1000					0.9	2,0	7.79					
7.855.61.85							2.2	1.0		2.0						2.2
Acheanthes Isncesista I. Timearts E. Numperica E. Nichocephals E. minutissime Acheanthes so.	10.0	21.5		4.5	4.0	4.2			50.2	77.5	77.6	56.5	23.9	17,1		0.9
Amphipleura pellucida Amphora ovalis A perpusilla				1.0		0.9	3.0						5.5			
Anomone's seriens	5,5	4.0	2.5				1.7	0.8	2.8	1,8	10.5	1.5	3.7	4.5		
Sparionella formosa Coccomets pediculus D acentula Lambella efficis 192478	7.6	1.5														0.4
S. microceptals							2.4	1.6.				1.4	0.9 2.8 1.3	1,8		
prostrata Sustoma tanue nu gare Lanotta curvata E Tenunta	8.0	1.0		8.5			0.7			3.8		2.4				107
1. Petilodis											1.8		1.8	3.9	1.0	11 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
regilaria capucina construens crotomensis leptostauron cinnata			2.0	3.0					7.4		2.9	14.0	14.2	14.5		
r vaucherta Frustolla rhomboldes Surpronema acuminatum	65.0	57.5	1.0	5.0 5.0	85.0	82.3	35.7	32.4	31.2	27.5			0.5			
a engustatum a officaceun a parvulum					2.0	0.9	4.0	7.6					2.5			7.8
Meridion circulare Nexticula cryptocephala			1.5		ξ¢	4.7	2.0						1.8		13.5	3.4
DUDU 8 rediose rhypopestals											0.5		1.8 1.8			
Tymoblephala Tripunctata Tripunctata Teritola Teritola 10 Hitschia amphibia			2.0	2,0		1.9						105	0.9			0.9
			18.0	42.5		1.3										
C PILIDATE C PILITOPHIA FORTICO A C STAND			1.5			2.4					6.7		3.3			
5 pales fittothis so Finnylaria so thologophemia survets thologophemia survets fittorial poemicenteror survetia poeta predri dell'actionia sina edell'aria flocculosa	100	1.5		5.0	2.6	2.2	7.3 49.6	58.2	1.9							1.0
Stauronets Shownicenteror Sprinella svata Symedra Delicatissima													0.9 0.8 15.1	4.4		11
enellaria flusculosa	1.3		1.0			7,7			5.9		2.5	13.5	0.9	9.5		11

also observed in April 1979 (Texas Instruments 1979a). Since the power station was off-line prior to and during the Spring 1980 sampling period, the low density of <u>Fragilaria vaucheriae</u> was probably not due to thermal effluent, but to some factors such as substrate composition or wave action.

Total periphyton density in the ponds was highest in Pond C during April 1980, although the differences were not large considering the natural variability of periphyton communities. Different groups of taxa were dominant (as much as 4 percent of total density or biovolume) in each of the ponds. The dominant taxa were:

Pond B

Unidentified algae
Lyngbya limnetica
Aphanocapsa sp.
Achnanthes minutissima
Stigeoclonium sp.
Tabellaria flocculosa

Pond C

Epipyxis sp.
Tabellaria flocculosa
Lyngbya limnetica
Anabaena sp.
Aphanocapsa sp.
Fragilaria pinnata

Cowles Bog

Meridion circulare
Stigeoclonium sp.
Fragilaria sp.
Gomphonema sp.
Microcystis sp.
Oedogonium sp.
Synedra sp.

The most numerous diatoms (from proportional counts) were <u>Tabellaria flocculosa</u> and <u>Achnanthes minutissima</u> in ponds B and C and <u>Fragilaria capucina</u> in Cowles Bog. There was no indication that the Bailly power station had any influence on periphyton in the ponds.

2.3 ZOOPLANKTON

Michigan and the nearshore interdunal ponds. At each lake station (1 through 10), four samples were collected by bottom-to-surface vertical tows of an 80-micrometer mesh, 0.5-meter-diameter plankton net. Each sample comprised a composite of four such tows combined into one 1-liter sample. Zooplankton samples were collected at the surface in the nearshore interdunal ponds (stations 17 through 21) with a 6-liter Van Dorn bottle. Each of the four replicate samples was concentrated to 1 liter. All samples were fixed to a final concentration of 4 percent buffered formalin.

Each sample, after being prepared with 5 milliliters of rose-bengal dye, was analyzed for quantity and identification of all mature and immature zooplank-



ters (excluding nauplii, rotifers, and protozoans) with dimensions greater than the plankton net's 80-micrometer mesh aperture.

2.3.2 RESULTS AND DISCUSSION. The numerical abundance of each zooplankton taxon collected in April 1980 is presented in Table 2.11 and Appendix E.

The total of 38 zooplankton taxa collected from Lake Michigan during April 1980 was similar to the 42 taxa collected in April 1979. Lake Michigan densities average 1100 organisms per cubic meter, which typically was less than the average in November 1979 (19,600 per cubic meter) and similar to April 1979 (1200 per cubic meter) (Texas Instruments 1979a and 1980a). As in 1979, copepods (Calanoida and Cyclopoida) dominated the collections (89 percent in 1979, 75 percent in 1980). Calonoid copepodites (immature forms) constituted the most numerous group during 1979 while cyclopoid copepodites were the most numerous in 1980. The most abundant adult form during both years was Diaptomus ashlandi.

Zooplankton densities were lower at the farfield stations (7, 8, and 9) than at the nearfield stations (1-6 and 10) due to high densities at Station 10 (Table 2-12). Station 10 also exhibited relatively high densities during April 1979 as did nearfield stations 1 and 4. Since high zooplankton abundances were observed at Station 10 during past years, as well as during 1980 when there was no discharge, factors other than thermal effluent probably are responsible for the high abundances there. Poor circulation of lake water in the area of Station 10 is a possible factor for high zooplankton abundance at Station 10.

Species diversity and evennes are similar at all stations.
All major species present in April 1979 also were present in April 1980.

Zooplankton densities in the ponds were higher in April 1980 than in April 1979. Densities in April 1980 averaged 67 organisms per liter in Pond B, 102 per liter in Pond C, and 239 organisms per liter in Cowles Bog in April 1980 (Table 2.13), as compared to 4, 7, and 50 organisms per liter in these respective locations during April 1979.

Table 2.11

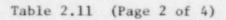
Zooplankton Density Bailly Study Area, April 1980 (Page 1 of 4)

ZOOPLANKTON DENSITY (No./cubic meter)

SITE SUMMANY

			Farfield '			REL
LS	TAXA	(1-6, 10)	(7-9)	×	S.E.	AB%
0	CHIDARIA (TOTAL)	1.21	0.28	0.74	0.47	0.1
0	HYDROZOA					
19	HYDRA (LPIL)	0.20	0.28	0.24	0.04	0.0
1	HYDRA (LPIL)	1.01	0.0	0.51	0.51	0.0
0	NEMATODA (TOTAL)	97.77	44.88	71.33	26.45	6.5
1	NEMATODA (LPIL)	97.77	44.88	71.33	26.45	6.5
0	OLIGOCHAETA (TOTAL)	67.05	4.44	35.75	31.31	3.3
0	HAIDIDAE					
1	CHAETOGASTER (LPIL)	1.58	0.0	0.79	0.79	
1	NAIDIDAE (LPIL)	44.06	4.44	24.25	19.81	2.2
. 1	OLIGOCHAETA (LPIL)	21.41	0.0	10.71	10.71	1.0
0	HIRUDINEA (TOTAL)	0.62	0.0	0.31	0.31	0.0
19	The state of the s	0.51	9.0	0.25	0.25	0.0
1	MIRUDINEA (LPIL)	0.12	0.0	0.06	0.06	0.0
0	APACHNIDA (TOTAL)	1.39	0.29	0.84	0.55	0.1
0	PROSTIGMATA					
19	HYDRACARINA (LPIL)	1.39	0.29	0.84	0.55	0.1
0	BOSMINIDAE	304.49	6.68	155.58	148.90	14.1
0	BOSMINIDAE (LPIL) CHYDORIDAE	77.90	2.98	40.44	37.46	3.7
1	ALONA RECTANGULA	1.21	0.0	0.61	0.61	0.1
1	ALONA COSTATA	1.01	0.0	0.51	0.51	
1	ALONA (LFIL)	1.01	0.0	0.51	0.51	100 20 000
1	CHYDORUS (LPIL)	15.08	0.0	7.54	7.54	
1	EURYCERCUS LAMELLATUS	10.45	0.0	5.22	5.22	
1	ALONELLA (LPIL)	0.08	0.0	0.04	0.04	0.0
0	DAPHNIDAE	77.75	7.7		7.7	
1	DAPHNIA PULEX	0.0	0.65	0.33	0.33	0.0
6	DAPHNIA (LPIL)	143.32	1.27	72.30	71.03	1000
1	DAPHNIA (LPIL)	54.19	1.77	27.98	26.21	2.5
0	MACROTHRICIDAE					
6	ILYOCRYPTUS (LPIL)	0.23	0.0	0.12	0.12	0.0
0	COPEFODA (TOTAL)	919.88	732.43	826.16	93.72	75.1
0	CALANOIDA (TOTAL)					
_ 1	DIAPTONUS OREGONENSIS	0.0	0.59	0.29	0.29	0.0
1	DIAPTONUS ASHLANDI	95.82	203.17	149.50	53.68	13.6
14	DIAPTONUS ASHLANDI	6.24	0.0	3.12	3.12	0.3
1	DIAPTOMUS PALLIDUS	1.39	0.0	0.69	0.69	0.1
1	DIAPTOMUS SICILIS	55.88	137.84	96.86	40.98	8.8
1	DIAPTONUS MINUTUS	8.79	12.74	10.77	1.97	1.0
1	DIAPTOMUS (LPIL)	0.08	0.0	0.04	0.04	0.0
1	LIMNOCALANUS MACRURUS	11.94	24.52	18.23	6.29	1.7
14	CALANOIDA (LPIL)	147.92	280.63	214.28		1000







ZOOPLANKTON DENSITY (No./cubic meter)

SIT	E SUMMARY					
311	E SUITERY			Nearfield	Farfield	
				(1-6, 10)		
LS	TAXA			(1-0, 10)	(7-9)	
0	CYCLOPOIDA (TOTAL)				
1	CYCLOPS BICUSPI	DATUS THOM	ASI	30.23	23.68	
1	CYCLOPS VERNALI	S		12.31	0.0	
1	EUCYCLOPS AGILI	5		3.03	0.0	
1	EUCYCLOPS PRIOR	IOPHORUS		5.17	0.0	
1	EUCYCLOPS SPERA			2.43	0.0	
1	TPOPOCYCLOPS PR	ASINUS MEX	ICANA	0.0	0.76	
14	CYCLOPOIDA (LPIL)			518.08	35.14	
1	CYCLOPOIDA (LPIL)	Contractor I		0.84	0.0	
0	HARPACTICOIDA (TO	TAL)				
1	HARPACTICOIDA (LF	IL)		7.77	9.03	
14	HARPACTICOIDA (LE	IL)		11.97	4.34	
0	AMPHIPODA (TOTAL)			1.72	0.37	
0	HAUSTORIIDAE					
1	PONTOPOREIA			0.08	0.0	
1	PONTOPOREIA AFF	INIS		0.15	0.0	
6	AMPHIPODA (LPIL)			1.49	0.37	
0	DIPTERA NEMATOCERA	(TOTAL)		16.13	0.0	
0	CERATOPOGONIDAE					
2	CERATOPOGONIDAE	LPIL)		1.01	0.0	
0	CHIRONOMIDAE					
2	CHIROHOMIDAE (LP)	(1.)		15.12	0.0	
TOT	AL			1410.27	789.37	
DIV	ERSITY (H PRIME)			2.55	2.38	
DIV	ERSITY (J PRIME)			0.69	0.72	
NUI	BER OF TAXA			35	18	
ABO	OVE COMPUTED USING S	AMPLE IDS				
	11	12	13	14		
	21	22	23	24		
	31	32	33	34		
	41	42	43	44		
	51	52	53	54		
	61	62	63	64		
	101	102	103	104		
	71	72	73	74		
	81	82	83	84		
	91	92	93	94		

		REL
×	S.E.	AB%
26.98	3.27	2.5
6.16	6.16	0.6
1.52	1.52	0.1
2.58	2.58	0.2
1.21	1.21	0.1
0.38	0.38	0.0
276.61	241.47	25.2
0.42	0.42	0.0
8.40	0.63	0.8
8.15	3.61	0.7
1.05	0.68	0.1
0.04	0.04	0.0
0.08	0.08	0.0
0.93	0.56	0.1
8.07	8.07	0.7
0.51	0.51	0.0
7.56	7.56	0.7
1099.82	310.45	100.0
2.47	0.08	
0.70	0.01	



Table 2.11 (Page 3 of 4)

ZOOPLANKTON DENSITY (No./cubic meter)

SITE	SUMMARY	Pond B	Pond C	Cowles Bog			
							REL AB%
LS	AXA				×	S.E.	AB/
0	NEMATODA (TOTAL)	552.08	6511.73	11833.32	6299.05	3258.35	4.6
	NEMATODA (LPIL)	552.08	6511.73	11833.32	6299.05	3258.35	4.6
	OLIGOCHAETA (TOTAL)	0.0	7659.71	3666.67	3775.46	2211.84	2.8
0	NAIDIDAE						
i	CHAETOGASTER (LPIL)	ù.0	347.22	0.0	115.74	115.74	0.1
i	HAIDIDAE (LPIL)	0.0	1618.05	3666.67	1761.57	1060.90	1.3
	OLIGOCHAETA (LPIL)	0.0	5694.44	0.0	1898.15	1898.15	1.4
0	ARACHNIDA (TOTAL)	20.83	239.77	0.0	86.87	76.69	0.1
٥	PROSTIGNATA					74 40	
ĭ	HYDRACARINA (TOTAL)	20.83	239.77	0.0	86.87	76.69	
0	CLADOCERA (TOTAL)	58604.11	33559.28	250.00	30804.46	16901.60	22.7
0	BOSKINIDAE					201 20	
ĭ	BOSMINIDAE (LPIL)	458.33	2555.93	0.0	1004.75	786.79	0.7
ô	CHYDORIDAE						
1	ALOHA	0.0	34.72	0.0	11.57	11.57	
i	ALONA RECTANGULA	187.50	1333.71	0.0	507.07	416.85	
i	ALONA AFFINIS	52.08	0.0	0.0	17.36	17.36	
î	ALONA COSTATA	52.08	0.0	0.0	17.36	17.36	
•	ALONA INTERMEDIA	41.67	0.0	0.0	13.89	13.89	
î	ALONA (LPIL)	0.0	239.77	0.0	79.92	79.92	
	ALONA (LPIL)	0.0	187.50	0.0	62.50	62.50	
1	CHYDORUS (LPIL)	57499.95	29117.37	166.67	28927.99	16550.96	
î	PLEUROXUS DENTICULATUS	229.17	20.83	0.0	83.33	73.16	
i	PLEUROXUS PROCURVUS	20.83	0.0	83.33	34.72	25.04	0.0
0	DAPHNIDAE						
6	DAPHNIA (LPIL)	41.67	0.0	0.0	13.89	13.89	
ĭ	DAPHNIA (LPIL)	20.83	0.0	0.0	6.94	6.94	0.0
0	SIDIDAE				1000		
6	DIAPHANOSOMA (LPIL)	0.0	69.44	0.0	23.15	23.15	
0	OSTRACODA (TOTAL)	125.00	3896.21	14166.66	6062.62	4195.71	
19	OSTRACODA (LPIL)	125.00	3104.16	14166.66	5798.61	4271.50	-
1	OSTRACODA (LPIL)	0.0	792.04	0.0	264.01	264.01	
0	COFEFODA (TOTAL)	7302.07	48692.09	208541.56	88178.56	61356.12	65.0
0	CALANOIDA (TOTAL)					40 41	
1	DIAPTOMUS PALLIDUS	145.83	0.0	0.0	48.61	48.61	
_14	CALANOIDA (LPIL)	583.33	5335.59	0.0	1972.98	1689.72	1.5
0	CYCLOPOIDA (TOTAL)				******	105 44	
1	CYCLOPS BICUSPIDATUS THOMASI	0.0	586.99	0.0	195.66	195.66	
14	CYCLOPS BICUSPIDATUS THOMASI	0.0	1916.67	0.0	638.89	638.89	
1	CYCLOPS VERNALIS	322.92	69.44	0.0	130.79	98.13	
i	EUCYCLOPS SPERATUS	0.0	69.44	0.0	23.15	23.15	
i	MESOCYCLOPS LEUKARTI	0.0	20.83	0.0	6.94	6.94	
14	CYCLOPOIDA (LPIL)	6020.83	36359.04	48874.97	30418.28	12722.54	22.4
	HARPACTICOIDA (TOTAL)						



Table 2.11 (Page 4 of 4)

ZOOPLANKTON DENSITY	(No./	cubic	meter)	
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SITE SUMMARY	Pond B	Pond C	Cowles Bog			
						REL
LS TAXA				×	S.E.	AB%
1 HARPACTICOIDA (LPIL)	208.33	1479.92	6791.66	2826.64	2016.21	2.1
	20.83	2854.16	152874.87	51916.62	50485.75	38.3
14 HARPACTICOIDA (LPIL)			0.0	6.94	6.94	
O EPHEMEROPTERA (TOTAL)	20.83	0.0	0.0	0.74	0.71	
O CAENIDAE						
13 CAENIDAE (LPIL)	20.83	0.0	0.0	6.94	6.94	
O DIPTERA HEMATOCERA (TOTAL)	93.75	955.05	208.33	419.04	270.04	0.3
O CHIRONOMIDAE						
2 CHIRONOMIDAE (LPIL)	93.75	955.05	208.33	419.04	270.04	0.3
TOTAL	66718.62	101513.69	238666.50	135632.94	52486.86	100.0
DIVERSITY (H PRIME)	0.92	2.17	1.66	1.58	0.36	
	0.30	0.65	0.63	0.52	0.11	
DIVERSITY (J PRIME)		21	8	28		
NUMBER OF TAXA	19	21	•			
ABOVE COMPUTED USING SAMPLE IDS						

BOVE	COMPUTED	USING	SAMPLE IDS		
		171	172	173	174
		181	182	183	184
		191	192	193	194
		201	202	203	204
		211	212	213	214



Table 2-12

Summary Data for Lake Michigan Zooplankton, Bailly Study Area, April 1980

Station	No. of Taxa	Density (No./m³)	Diversity (H [*])	Evenness (J^)
1	18	464	2.62	0.70
2	17	670	2.66	0.73
3	18	646	2.59	0.71
4	13	761	2.63	0.76
5	14	646	2.62	0.77
6	14	605	2.44	0.70
7	14	817	2.43	0.75
8	- 11	787	2.23	0.70
9	15	764	2.49	0.70
10	27	2967	2.47	0.62

Table 2.13
Summary Data for Mearshore Ponds Zooplankton,
Bailly Study Area, April 1980

No. of Taxa	Density (No./%)	Diversity (H´)	Evenness (J -)
14	88	0.80	0.27
15	45	1.04	0.33
19	67	0.92	0.30
20	135	2.04	0.62
13	68	2.29	0.67
21	102	2.17	0.65
8	239	1.66	0.63
28	136	1.58	0.52
	Taxa 14 15 19 20 13 21 8	Taxa (No./ε) 14 88 15 45 19 67 20 135 13 68 21 102 8 239	Taxa (No./ε) (H²) 14 88 0.80 15 45 1.04 19 67 0.92 20 135 2.04 13 68 2.29 21 102 2.17 8 239 1.66

(E)

Chydorus sp. (Cladocera) dominated the zooplankton community in Pond B, Chydorus sp. and Cyclopoida copepodites were most numerous in Pond C, and Harpacticoida copepodites were most numerous in Cowles Bog. Similar dominances were observed during April 1979.

Species diversity in Pond B was lower than the diversity in Pond C or Cowles Bog in April 1980, whereas during April 1979 all ponds had relatively uniform diversity. The major reason for the low diversity index in Pond B was the high abundance of one taxon (Chydorus sp.) and not a significant reduction in the number of taxa present. Chydorus sp. has been abundant in past years, and the resulting low diversity is probably a natural variation rather than a change caused by power station activities. No unusal results were observed in the zooplankton community during April 1980.

2.4 BENTHOS

2.4.1 METHODOLOGY. Benthic organisms were sampled at 10 Lake Michigan stations (1-10) and five nearshore pond stations (17-21). Duplicate samples at the lake stations were collected with a 9- x 9-inch Ponar grab sampler, and pond samples were collected with a 9- x 9-inch Ekman grab sampler. Organisms were removed under a 10X magnifying lens, preserved in 10 percent buffered formalin, and then identified to the lowest practical and positive taxonomic level.

RESULTS AND DISCUSSION. Results are summarized in tables 2.14, 2.15, and 2.16, while data for individual stations are presented in Appendixes F and G. Slightly more benthic invertebrate taxa were collected during April 1980 (21 taxa) than during April 1979 (17 taxa) (Texas Instruments 1979b). Total abundance ranged from 29 to 3250 organisms per square meter in 1980 (Table 2.15). The most numerous organisms were tubificid worms, making up 55 percent of the total population (Table 2.16), with highest Tubificidae abundance at Station 6. Tubificid worms have been the most numerous organisms collected in past years. Following Tubificidae in order of abundance were Amphipoda (Pontoporeia affinis) and Chironomidae (Cryptochironomus sp.).

Table 2.14

Benthic Invertebrate Density, Bailly Study Area, April 1980 (Page 1 of 5)

BENTHIC MACROINVERTEBRATE NUMERICAL ABUNDANCE (NO/SQ M)

SIT	E SUMMARY	Nearfield	Farfield				
		(1-6, 10)	(7-9)			REL	
LS	TAXA	(1 0, 10)	(, ,)	×	S.E.	YBX	
1.3	TANA				3.5.	AUS	
0	CNIDARIA (TOTAL)	3.21	0.0	1.60	1.60	0.4	
0	HYDEOZDA						
11	CORDYLOPHOPA LACUSTRIS NEMATODA (TOTAL) NEMATODA (LPIL) OLIGOCHAETA (TOTAL)	3.21	0.0	1.60	1.60	0.4	
-	NEMATODA (TOTAL)	8.55	0.0	4.27	4.27		
	NEMATODA (LPIL)	8.55	0.0	4.27		1.0	
	OLIGOCHAETA (TOTAL)	441.24	54.49	247.86	193.38		
	TUBIFICIDAE						
1	TUBIFICIDAE (LPIL)	441.24 2.14 2.14 1.07 1.07 22.44	54.49	247.86	193.36	35.2	
0	HIRUDINEA (TOTAL)	2.14	0.0	1.07	1.07	0.2	
1	HIRUDINEA (LPIL)	2.14	0.0	1.07	1.07	0.2	
0	GASTROPODA (TOTAL)	1.07	0.0	0.53	0.53	0.1	
5	GASTROPODA (LPIL)	1.07	0.0	0.53	0.53	0.1	
0	BIVALVIA (TOTAL)	22.44	16.03	19.23	3.21	4.3	
0	MYTILLIDAE	1.07 0.0 1.07 1.07					
2	MYTILUS (LPIL)	1.07	0.0	0.53	0.53	0.1	
1	MITILUS (LPIL)	0.0	3.21	1.69	1.60	0.4	
1	MODIDLUS (LPIL)	1.07	3.21	2.14	1.07	0.5	
5	MYTILLIDAE(LPIL)	1.07	0.0	0.53	0.53	0.1	
0	SPHAERIIDAE						
5			6.41	8.01	1.60		
2	PISIDIUM (LPIL)	1.07 8.55 0.0 123.°3	0.0	0.53	0.53		
1	PISIDIUM (LPIL)	8.55	0.0	4.27	4,27		
5	SPHAERIIDAE (LPIL)	0.0	3.21	1.60	1.00		
	AMPHIFODA (TOTAL)	123.03	28.85	76.39	47.54	17.0	
0							
1	PONTOPOREIA AFFINIS PONTOFOREIA (LPIL) EPHEMEROPIEPA (TOTAL)	25.64	0.0	12.02	12.02		
1	FONTOFOREIA (LPIL)	93.29	23.85 .	63.57		14.1	
0	EPHEMEROPTERA (TOTAL)	1.07	0.0	0.53	0.53	0.1	
0	EFHEMERIDAE						
10	HEXAGENIA LIMBATA	1.07	0.0	0.53	0.53		
0	TRICHOPIERA (TOTAL)	1.67	0.0	0.53	0.53		
2	EFHENERIDAE HEXAGENIA LIMBATA TRICHOPTERA (TOTAL) TRICHOPTERA (LPIL) DIPTERA NEMATOCERA (TOTAL)	1.07	0.0	0.53	0.53		
0	DIFTERA NEMATOCERA (TOTAL)	175.21	19.23	97.22	77.99	21.6	
0	CHIRONOMIDAE	2.55	4.1	2.4			
2	CHIRCHCHUS (LPIL)	8.55 141.03	6.41	7.43	1.07		
-		0.0	6.41	73.72 3.21	3.21	0.7	
7	CRYPTOCHIRCMOMUS (LPIL) FROCEADIUS (LPIL)	5.34	0.0	2.67	2.67		
2	PARACLABORELMA (LPIL)		0.0	5.01	8.01		
2	MONODIAMESA (LPIL)	2 14	0.0	1.07	1.07		
-	TRICHECLABIUS	1 07	0.0	0.53	0.53		
0	CHIPONOMIDAE (LPIL)	2.14 1.07 1.07	0.0	0.53	0.53		
4/11	CHARGIGIADAE (EFAE)	1.07	0.0	0.53	0.53	0.1	
TOT	AL.	779.91	118.59	449.25	330.66	100.0	
	ERSITY (H PRIME)	1.11	1.16	1.14	0.03		





S.E. ASX

0.15

0.61

21

Table 2.14 (Page 2 of 5)

BENTHIC MACROINVERTEBRATE NUMERICAL ABUNDANCE (NO/SQ M)

SITE SUMMARY				
			Nearfield	Farfield
LS TAXA			(1-6, 10)	(7-9)
DIVERSITY (J PRIME)			0.46	0.76
NUMBER OF TAXA			20	8
LOTTOM TYPE 0				
ABOVE COMPUTED USING	SAMPLE IDS			
11	12	21	22	
31	32	41	42	
51	52	61	62	
101	102	71	72	



Table 2.14 (Page 3 of 5)

BENTHIC MACROINVERTEBRATE HUMERICAL ABUNDANCE (NO/SQ M)

63	SITE SUMMARY						
		Lond B	Pond C	Cowles Bog			100
,	S TAXA				×	S.E.	A.D.Z.
	Ü	48.08	0.0	0.0	16.03	16.03	0.2
	1 SYCOR CIPTO	000		C	•		*
	DIATYHEIMINIHES (TOTAL)	0000		0.00	0 4	166	9 0
		9.61	0.0	9.62	6.41	10.0	0.1
	17	72.12		86.54	10		17.21
	NEMATODA (LPIL)	72.12	91.35	86.54	143		1.3
	10	6745.19		4682.69	7.5		77.7
	1 KAIDIDAE (LPIL)	6576.92	2437.50	2500.00	3838.14	1359.51	50.00
		-	à				
		168.27	1336.54	2162.69	1229.17	65.535	13.6
	H			0	*		0.1
	GLOSSIPHONI IDAE						
		0.0	4.31	0.0	1.60	1.60	0.0
	H					- 1	
		0.0	0.0	9.62	3.21	3.51	0.0
		. 16		*		9	0.0
		4	0	0	ri	1.0	0.0
Ĩ	9		634.61	384.61		4	5.5
	SPHAERIDAE						
	SPHAERIUM (28.85	96	259.62		89	2.0
TÎ	SPHAERIUM (0.0	533.46	0.0	79.		2.3
		0.0	0.0	67.31		101	0.3
		4.81	0.0	28.85			0.5
		9.62	*		- 4		0.5
		9.62		0.0			0.0
Ñ	OSTRACCOA	19.23	*	33.46			0.3
		19.23	4.81	33.46	20.63	9,75	0.3
	O COPEFURA (TOTAL)	4.31	*	0.0			0.0
		4.81	0.0	0.0	1.60	1.60	0.0
	RAFFACIICOIDA						
		0.0	4.81	0.0	1.60	1.00	0.0
Ti	15	0.0	39.65	173.08		ei.	365
	AS						
		0.0	9.65	173.08	06.09		6.0
	O AMPHIPODA (TOTAL)	105.77	4.	0.0	0.0	10	18
	0 HYALELLIDAE						
	1 HYALELLA AZTECA	105.77	14.42	0.0	40.05	33.12	0.0
	m	n.	4.4	29.6	8.0	9.9	9.0
	()	1					
10		62.50	14.42	29.65	20.02	16.83	0.0
	O ODOMATA (TOTAL)	0	- 10	0.0	0	0	0.0

Table 2.14 (Page 4 of 5)



BENTHIC MACROINVERTEER TE NUMERICAL ABUNDANCE (NO/SQ M)

SITE SUMMARY	Pond R	Pond C	Cowles Bog			
	rolld b	rond C	cowies bog			REL
LS TAXA				X	S.E.	XBX
0 COENAGRIONIDAE						
	4.81	0.0	0.0	1.60	1.60	0.0
O TRICHOPTERA (TOTAL)	14.42	9.62	0.0	8.01	4.24	0.1
O HYDROPTILIDAE						
2 ORTHOTRICHIA (LPIL)	4.81	0.0	0.0	1.60	1.60	0.0
O LEPTOCERIDAE						
2 OECETIS (LPIL)	9.62	9.62	0.0	6.41	3.21	0.1
O DIPTERA NEMATOCERA (TGTAL)	1264.42	355.77	826.92	815.70	262.37	12.5
O CERATOPOGONIDAE						
2 CERATOPOSONIDAE (LPIL)	38.46	76.92	567.31	227.56	170.23	3.5
O CHIROMOMIDAE						
2 CHIRONOMUS (LPIL)	115.38	14.42	9.62	45.47	34.48	0.7
2 CRYPIOCHIRONOMUS (LPIL)	4.81	0.0	0.0	1.60	1.60	0.0
2 CRICOTOPUS (LPIL)	4.61	0.0	0.0	1.60	1.60	0.0
2 TANYTAESUS (LPIL)	403.85	100.96	57.69	187.50	103.89	2.9
2 DICROTENDIPES (LPIL)	52.88	96.15	85.54	76.53	13.12	1.2
2 FOLYPEGILUM (LPIL)	9.62	4.81	19.23	11.22	4.24	0.2
2 ABLABESHYIA (LPIL)	76.92	19.23	28.85	41.67	17.85	0.6
2 PROCLADIUS (LPIL)	298.08	14.42	9.62	107.37	95.36	1.0
2 PHAENOPSECTPA (LPIL)	0.0	4.81	0.0	1.50	1.60	0.0
2 THIENEMANNIELLA (LPIL)	9.62	0.0	0.0	3.21	3.21	0.0
2 PSECTEGGLADIUS (LPIL)	221.15	14.42	28.85	88.14	66.64	1.4
2 PARATENDIPES (LPIL)	0.0	4.81	0.0	1.60	1.60	0.0
2 ENDOCHIPONOMUS (LPIL)	4.81	0.0	0.0	1.60	1.60	0.0
2 TRICHOCLADIUS	4.81	0.0	0.0	1.60	1.60	0.0
2 CHIROHOMIDAE (LPIL)	14.42	4.81	19.23	12.32	4.24	0.2
3 CHIPOMONIDAE (LPIL)	4.81	0.0	0.0	1.60	1.60	0.0
O DIPTERA BRACHYCERA (TOTAL)	9.62	4.81	9.62	8.01	1.60	0.1
O STRATIONVIDAE						
2 NENOLETUS	4.81	0.0	0.0	1.60	1.60	0.0
2 EUPARYFHUS	0.0	0.0	9.62	3.21	3.21	0.0
O TABANIDAE	0.0					
2 CHRYSOPS (LPIL)	4.81	4.81	0.0	3.21	1.60	0.0
O DIPTERA (TOTAL)	0.0	4.81	0.0	1.60	1.60	0.0
2 DIPTERA (LPIL)	0.0	4.81	0.0	1.60	1.60	0.0
2 DIFIERA (LPIL)	0.0	4.01	0.0	1.00		0.0
TOTAL	8418.25	4927.87	6230.75	6525.62	1010.32 1	02.0
DIVERSITY (H PRIME)	2.20	1.82	2.23	2.08	0.13	
DIVERSITY (J PRIME)	0.56	0.50	0.61	0.55	0.03	
MARBER OF TAXA	32	24	20	40		
BOTTOM TYPE 0	32					
COTTON TIPE						

Table 2.14 (Page 5 of 5)

BENTHIC MACROINVERTEBRATE NUMERICAL ABUNDANCE (NO/SQ M)

SITE SUMMARY

ABOVE COMPUTED USING SAMPLE IDS

171	172	181	183
191	192	201	202
211	212		



Table 2.15

Benthic Invertebrate Summary Data,
Bailly Study Area, April 1980

	Density	Diver	sity	No.
Station	(No./m ²)	(H-)	(1.)	Taxa
Lake				
1	38	0.79	0.50	4
2	558	2.16	0.80	9
3	1,394	1.90	0.63	12
4	221	0.80	0.40	4
5	548	1.52	0.59	8
6	3,250	1.46	0.64	8
7	125	1.56	0.87	5
8	202	1.43	0.90	4
9	29	0.50	0.50	3
10	337	0.46	0.20	5
Pond				
17	14,990	1.24	0.31	22
18	1,846	3.16	0.80	21
Pond B	2,418	2.20	0.56	32
19	5,865	2.01	0.54	17
20	3,990	1.64	0.45	18
Pond C	4,928	1.82	0.50	24
Cowles Bog	6,231	2.23	0.61	20

Table 2.16

Percent Relative Abundance of Major Benthic Invertebrate Groups,
Bailly Study Area, April 1980

	Taxon	Relative Abundance
Lake Stations (1-10)	Amphipoda	17
	Tubificidae	55
	Chironomidae	22
	Naididae	0
	Bivalvia	4
	Total % No. Taxa	98 21
Pond Stations (17-21)	Naididae	59
	Tubificidae	19
	Amphipoda	<1
	Ephemeroptera	<1
	Chironomidae	9
	Bivalvia	6
	Total % No. Taxa	93 40

The largest differences in benthic invertebrate abundances among the stations appears to be variations in catches of Tubificidae; highest tubificid abundances occurred at the deep-contour stations 3 and 6.

April 1980 nearshore pond densities (6500 organisms per square meter) were similar to those in 1979 (6500 organisms per square meter). Lowest densities were observed in Pond C and the highest densities were observed in Pond B. Naididae and Tubificidae made up most of the total density (Table 2.16). Naididae was most numerous taxon in all of the ponds (Table 2.16). Generally, the abundance and dominant taxa were similar to those found in 1979 with the largest differences being an increase in abundance of naidid worms in Cowles Bog. No differences in distribution were noted in the ponds or the lake that were attributable to the Bailly power station.

2.5 FISHERIES

- 2.5.1 METHODOLOGY. During spring 1980, 300-foot experimental gill nets having equal-size panels of 1- to 3.5-inch mesh (at 0.5-inch mesh intervals) were set at stations 4 and 7 (Figure 2.1). A 50-foot, 1/8-inch mesh seine was deployed at stations 23, 24, and 25, and a backpack electroshocker was used at stations 17 and 18 in Pond B. Catches are expressed as individuals per 300-foot net per night sampling period for the gill net, as number of individuals per haul per station for the beach seine, and as number per 20-minute sampling period for the electroshocker.
- 2.5.2 RESULTS AND DISCUSSION. Table 2.17 summarizes the catch for April 1980. No fish were collected by beach seine at Station 23, but this appears to be a normal occurrence since no fish were collected by beach seines in April samplings of 1977, 1978, or 1979 (Texas Instruments 1980b). Three rainbow smelt (Osmerus mordax) and 1 coho salmon (Onchorhynchus kisutch) were collected from Station 24 and 1 rainbow smelt was collected from Station 25.

April 1980 gill net sampling collected 38 fish, 28 of which were alewives (73 percent); 119 alewives were collected in May 1979. Of the 28 alewives collected in 1980, 24 (63 percent) were collected at nearfield Station 4 and 4 (10 percent) were collected at farfield Station 7. The following comparison of



Table 2.17

Results of Fisheries Sampling by Gill Net, Beach Seine, and Electroshocker,

Bailly Study Area, April 1980

			Scientific	Total	Length	Weight	Condition	Percentag	ge of To	tal Catch
tation	Date	Common Name	Name	No.	(mm)	(gm)	Factor	Station	Month	Gear
4	4/18	Alewife	Alosa pseudoharengus	24	197 187 206 210 199 195 199 203 212 198 210 199 220 214 212 114 192 203 196 208 192	54 52 63 58 54 54 57 64 58 68 68 68 55 57 58	0.706 0.795 0.721 0.626 0.736 0.728 0.685 0.705 0.745 0.734 0.691 0.733 0.694 0.714 3.037 0.735 0.657 0.757	85.7	63.2	Gill Net
					201	58 69	0.714			
		Brown trout	Salmo trutta	1	374	566	1.082	3.6	2.6	
		Chinook salmon	Oncorhyncus tshawytscha	3	680 321 669	3594 324 3311	1.143 0.976 1.106	10.7	7.9	
7 .	4/18	Alewife	Alosa pseudoharengus	4	205 195	71 54	0.824	40.0	0.5	Gill Net
					210	60	0.648			
		Coho salmon	Onchorhynchus kisutch	6	195 495	54 962	0.728	60.0	15.8	
					541 491 510 496	962 991 991	0.911 0.813 0.747 0.812			
24	4/18	Rainbow smelt	Osmerus mordax	3	491 54 56	991 0.8 0.8	0.837 0.508 0.456	75.0	60.0	Beach Seine
		Coho salmon	Onchorhynchus kisutch	1.	53 46	0.7	0.470	25.0	20.0	
25	4/18	Rainbow smelt	Osmerus mordax	1	63	1.2	2.084	100.0	20.0	Beach Seine
17A	4/22	Black bullhead	Ictalurus melas	3	117 118 125	25 24 26	1.561 1.461 1.331	75.0	15.0	Electroshocker
178	4/22	Black bullhead	Ictalurus melas	1	121	24	1.355	25.0	5.0	Electroshocker
18A	4/22	Black bullhes;	icte melas	4	121 127	17 23 28	1.350 1.298 1.367	50.0	20.0	Electroshocker
		1		4	117	23	1.436	50.0	20.0	
		Greennfish	Lepomis cyanellus		36 33	0.7	1.500	30.0	20.0	
188	4/22	Green sunfish	Lepomis cyanellus	8	39 34 30 32 37 36 31	0.9 0.6 0.5 0.5 0.8 0.8	1.517 1.527 1.852 1.526 1.579 1.715		40.0	Electroshocker
					29 89	12.2	1.230			
23	4/18	No catch								Beach Seine

(E)

mean lengths, weights, and condition factors indicates that alewives collected at the two locations were virtually identical:

Station	No. Examined	Mean Length (mm)	Mean Weight (gm)	Mean K-Factor
4	24	199	59	0.815
7	4	201	60	0.732

In addition to alewife, the April gill net catch included 3 chinook salmon (Oncorhyncus tshawytscha), 6 coho salmon (Onchorhyncus kisutch), 1 brown trout (Salmo trutta), and 3 rainbow smelt (Osmerus mordax); these species have been collected previously.

Electroshocking in Pond B captured 5 black Black bullhead and 12 green sunfish; these species also were collected in previous years.

All captured fish were examined for signs of overt ectoparasitism or lamprey scarring, which mostly occurs on salmonids. One coho salmon collected at Station 7 had a parasitic copepod, and 5 of the 12 green sunfish collected from Pond B had a light-to-moderate infestation of black spot.

The collection of fewer alewives during spring 1980 than during spring 1979 may have been due to natural variability or to the fact that no therral plume was present during spring 1980.

2.6 ICHTHYOPLANKTON

2.6.1 METHODOLOGY. Ichthyoplankton (fish eggs and larvae) were sampled in Lake Michigan in the Bailly study area at stations 1 through 10 (Figure 2-1) by two methods: zooplankton net and epibenthic pump. Ichthyoplankton collection with the zooplankton net was an adjunct to zooplankton sampling at stations 1 through 10. The epibenthic pump was used at stations 4 and 7; all of the demersal organisms in the vicinity of the pumping head were pumped into an 80-micrometer-mesh net suspended in the water column at the surface of the lake. Pumping velocity was high enough to minimize avoidance but low enough to minimize harm to the organisms.

2.6.2 RESULTS. Samples collected in April 1980 yielded no eggs or larvae.



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2.8

HOW TO READ TI COMPUTER PRINTOUTS

On the following two pages are detailed instructions for reading the TI computer printouts which appear in Appendixes A, B, C, D, and E.

Company -



```
HORTHERN INDIANA PUBLIC SERVICE COMPANY (49720)
            BAILLY GENERATING PLANT - Location
            BENTHIC MACROINVERTEBRATE NUMERICAL ABUNDANCE (NO/SQ MI- Parameter
            REPLICATE REPORT - Type of Report
Project -- PC TC GC LOC Task and Gear Codes

Forde 5 71 71 1 2 00 -- Location Code (for computer processing)
Code
                                 DURATION
                                                    TON SAMP VOL
                                                                           MINC
                                                                                   CURENT TEMP
Station ID-SID DATE TIME DIN UNITS C SO HD SP D UNITS C SECH H T SC DI CL SP DI AIR HAT BT TURBO COND DO PH SALN P
             indicates
                   Date Samples
                                                                                                                            REL - Relative
Station 1,
                   TAXA
                                                                                                          X
                                                                                                                     S.E.
                                                                                                                           AB%
Replicates 15
                                                                                                                                  Abundance
                          Collected
                                                       1
                                                                   2
104
                                                                                                                                  of Each
             O NEMATODA (TOTAL)
                                                       76.92
                                                                                                         38.46
                                                                                                                     38.46 4.7
                                                                   0.0
             1 NEMATODA (LPTL)
                                                       76.92
                                                                                                                                  Taxon
                                                                   0.0
                                                                                                         38.46
                                                                                                                      38.46 4.7
             O OLIGOCHAETA (TOTAL)
                                                      326.92
                                                                  192.31
                                                                                                        259.61
                                                                                                                     67.31 31.4
                                         Taxa listed
                 HAIDIDAE
                                         in phylo-
                 NAIDIDAE (LPIL)
                                                      250.00
                                                                   76.92
                                                                                                        163.46
                                                                                                                      86.54 19.8
                  TUSIFICIDAE
                                         genetic
                  TUBIFICIDAE (LPIL)
                                                       76.92
                                                                  115.38
                                                                                                         96.15
                                                                                                                      19.23 11.6
                                         order
                GASTROPCOA (TOTAL)
                                                       0.0
                                                                   76.92
                                                                                                         38.46
                                                                                                                      38.46 4.7
                 PHYSIDAE
                   PHISA (LPIL)
                                                        0.0
                                                                   76.92
                                                                                                         38.46
                                                                                                                      38.46
                                                                                                                           4.7
                BIVALVIA (TOTAL)
                                                       76.92
                                                                   76.92
                                                                                                         76.92
                                                                                                                      0.0
                                                                                                                            9.3
                 SCHAERIIDAE
                                                       76.92
                                                                   76.92
                                                                                                         76.92
                                                                                                                           9.3
                   SCHAERIUM (LPIL)
                                                                                                                      0.0
               ARACHITTA (TOTAL)
                                                        0.0
                                                                   19.23
                                                                                                          9.62
                                                                                                                      9.62 1.2
                 PROSTIGMATA
                   HIDRACARINA (LPIL)
                                                                   19.23
                                                                                                          9.62
                                                        0.0
                                                                                                                      9.62 1.2
             O ETHEREROPTERA (TOTAL)
                                                        0.0
                                                                  230.77
                                                                                                        115.38
                                                                                                                     115.38 14.0
                 CAENIDAE
                   CAENIS (LPIL)
                                                                  230.77
                                                                                                        115.38
                                                                                                                     115.38 14.0
            10
             O ODONATA (TOTAL)
                                                        0.0
                                                                   19.23
                                                                                                          9.62
                                                                                                                      9.62 1.2
                 COENAGRICHIDAE
Indicates
                                                                                                          9.62
            10
                 COSNACRIONIDAE (LPIL)
                                                       0.0
                                                                   19.23
                                                                                                                      9.62 1.2
          - 0 DIFTERA NEMATCCERA (TOTAL)
                                                      365.38
                                                                  192.31
                                                                                                        278.85
                                                                                                                     86.54 33.7
Summary
                  CHIRCHOMIDAE
Level
                    CHIRCHOTUS (LPIL)
                                                      211.54
                                                                    0.0
                                                                                                        105.77
                                                                                                                     105.77 12.8
                    TANYTARSUS (LPIL)
                                                       33.46
                                                                   57.69
                                                                                                         48.08
                                                                                                                      9.62 5.8
                    FOLTFEDILUM (LPIL)
                                                      19.23
                                                                                                          9.62
                                                                                                                      9.62 1.2
                                                                   0.0
                    ABLABESMIIA (LPIL)
                                                      19.23
                                                                   76.92
                                                                                                         48.08
                                                                                                                     28.85 5.8
                    FROCLADIUS (LPIL)
                                                       38.46
                                                                   57.69
                                                                                                         48.08
                                                                                                                      9.62 5.8
                    PARACHIRCNOMUS (LPIL)
                                                       19.23
                                                                    0.0
                                                                                                          9.62
                                                                                                                      9.62 1.2
                    PSECTROCLADIUS (LPIL)
                                                       19.23
                                                                    0.0
                                                                                                          9.62
                                                                                                                      9.62 1.2
                                                                  807.69
             TOTAL
                                                      846.15
                                                                                                        826.92
                                                                                                                     19.23 100.0
            DIVERSITY IN PRIME - Shannon Weaver
                                                       2.86
                                                                   3 01
                                                                                                          2.94
                                                                                                                      0.07
            DIVERSITY IJ FRIME - Evenness Index
                                                        0.63
                                                                    0.91
                                                                                                          0.87
                                                                                                                      0.04
             NUMBER OF TAXA
                                                        11
                                                                      10
                                                                                                           15 1
             BOTTOM TYPE
                                                                 Samples 1-4
                                                                                                     Mean of Al'
                                                                                                                     Standard Error
                                                                      DATE
                                                                                09/22/78
                                                                                                     4 Samples
                                                                                                                     of 4 Samples
                                                                      PAGE NO
                                                                                     20
                                                                      T600AQUA
                                                                                  9/28/77
```

TI Project Number

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S.
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Type of Report:
                               TI Project No.
                                                                                Replicate = 1 station
HORTHERN INDIANA PUBLIC SERVICE COMPANY (49720)
                                                                                Station/within site =
                                                                                multiple stations with-
BAILLY GENERATING PLANT - Site
                                                                                in an area of interest
                                                                                (e.g., Pond B, Lake
BENTHIC MACROINVERTEBRATE NUMERICAL ABUNDANCE (NO/SQ M) - Parameter
                                                                                Michigan, etc.)
REPLICATE REPORT -
                                                                                 PC = Project Code: 5 = NIPSCo
PC TC GC LOC
                                                                                 TC GC = Task Code/Gear Code:
-5 71 71 1 1 00
                                                                                 51 51 = Zooplankton/Net
-SID
       DATE
                                                                                56 56 = Phytoplankton/Van Dorn
                   SID = Station ID:
  181 6/14/78
                                                                                66 66 = Periphyton/Substrate
                   11 = Station 1, Replicate 1
  182 6/14/78
                                                                                71 71 = Benthos/Ponar or Ekman
                      = Station 1, Replicate 2
       TAXA
                                              LS = Life Stage
   OLIGOCHAETA (TOTAL)
                                               0 = Summary Level
     NAIDIDAE
                                               1 = Adult
     NAIDIDAE (LPIL)
                                               2 = Larvae
   BIVALVIA (TOTAL)
     SPHAERIIDAE
                                               3 = Pupae
       SPHAERIUM (LPIL)
                                               4 = Egg
   BIVALVIA (LPIL)
                                               5-20 - Zooplankton
   EPHENEROPTERA (TOTAL)
                                                                            Benthos
     CAENIDAE
                                                        Nestling
                                                                           Immature
       CAENIS (LPIL)
                                                        Immature
                                                                           Juvenile
   DIPTERA NEMATCCERA (TOTAL)
                                                        Juveni le
                                                                           Ephippium
     CERATOFOGONIDAE
     CERATOFOGONIDAE (LPIL)
                                                        No Code
                                                                        8 Statoblast
     CHIRCHOTTIDAE
                                                        Trocophore
                                                                        9
                                                                           Nauplius
       CHIRCHOTUS (LPIL)
                                                                           Nymph
                                                        Ephippium
                                                                        10
       CRYPTOCHIRONCHUS (LPIL)
       TANYTARSUS (LPIL)
                                                        Statoblast
                                                                           Colony
       DICROTENDIPES (LPIL)
                                                        Nauplius
                                                                        12 Undetermined
       ABLABESMYIA (LPIL)
       FRCCLADIUS (LPIL)
                                                        Nymph
       PSECTROCLADIUS (LPIL)
                                                        Copepodid
     CHIRONOMIDAE (LPIL)
                                                        Protozoa
                                                        Zooi
DIVERSITY (H FRIME) - Shannon-Weaver Index
                                                        Postlarvae
DIVERSITY (J PRIME) - Evenness Index
                                              18
                                                        Colony
MUMICER OF TAXA
                                              19
                                                        Undetermined
BOTTOM TYPE
                                              20
                                                        Mixed
ABOVE COMPUTED USING SAMPLE 103
              181
                       182
```



APPENDIX A

PHYTOP ANKTON DENSITY REPLICATE REPORTS, BAILLY STUDY AREA, APRIL 1980

BAILLY GENERATING PLANT

PHYTOPLANKTON DENSITY

NUMBER OF CELLS PER LITER

REPLICATE REPORT

PC TC GC LOC 5 56 56 0 0 00

					DUR	ATI	MOI			TOW	SAMI	P VO	L		WI	CMD		CUR	ENT	TE	Eh,7							
SI	0	DATE	TIME	E D/	N UNI	TS	C	50	MD	SP D	UNI	TS C	SECH	WT	SC	DI	CL	SP	DI	AIR	WAT	BT	TURBO	COND	DO	PH	SALN	P
	11	4/16/8	0 1334	. 0	0.	0	0	1.0	4.6	0.0 0	2	.0 4	0.5	6 0	7	2	5	0.0	0	7.2	0.0	0	0.0	0	0.0	0.0	0.0	0
	12	4/16/8	0 1334	+ 0	0.	0	0	1.0	4.6	0.0 0	2	.0 4	0.5	6 0	7	2	5	0.0	0	7.2	0.0	0	0.0	0	0.0	0.0	0.0	0
					100	3																					REL	L
LS		TAXA																					×			S.E.	AB2	1
										1			2															
0	CY	ANOPHYT	A							0	.0	99	44752	.00								4	972376	.00	4972	376.00	52.	. 9
0		CHROOCO	CCACE	AE																								
0		CHROC	coccus	5 (1	PIL)					0	.0	10	65509	.00									532754	.50	532	754.50	5.	.7
0		GOMPH	HOSPHAR	ERIA	LACL	ISTE	RIS			0	.0	88	79243	.00								4	439621	.00	4439	521.00	47.	. 2
0	CH	(LOROPH)	TA							328860	. 75	1	77584	.87									253222	.81	756	637.94	2.	. 7
0		VOLVOCA	LES																									
0		CHLAN	TYDOMON	NAS	(LPIL	. 3				0	.0	1	77584	.87									88792	.44	88	792.44	. 0.	. 9
0		TETRASE	PORALES	S																								
0		ELAKA	TOTHE	IX (LPIL)				246645	.56		0	. 0									123322	.75	123	322.75	1.	. 3
0		CHLOROG	COCCAL	ES																								
0		ANKIS	STRODE:	SMUS	FALC	TATE	JS			82215	.19		0	.0									41107	.59	41	107.59	5 Differ	-
0	CH	RYSOPHY	TA							0	.0	3	55169	.75									177584	.87	1775	584.87	7 1.	. 9
0		MONOSIO	BALES																									
0		STELE	XONON	AS D	ICHOT	OH	A				.0	3	55169	. 75									177584	100000000000000000000000000000000000000	-	584.87	1	
0	B	ACILLARI	COPHYTA	A-CE	NTRIC				2	219809	.00	14	82833	.00								1	851321	.00	3684	488.00	19.	. 7
0		EUPODIS	CALES																									
0		MELOS	SIRA (LPIL	.)					657721	.50	5	06116	.87									581919	.19	75	302.3	6.	. 2
0		STEP	ICOMAN	SCUS	BIN	BER	AHA			328860	.75		0	.0									164430	. 37	1644	430.3		4.00
0		STEFF	IANODI	SCUS	S NIAC	SAR	AE			82215	.19		0	.0									41107	.59		107.5		718
0		EUPODI:	SCALES	(LF	IL)					904367	.06	4	43962	.19									674164	.62	230	202.44	7.	. 2
0		RHIZOSO	DLENIA	LES																								
0		PHIZO	DSOLEH	IA E	ERIENS	SIS				246645	.56	5	32754	.62									389700	.06		054.50		.1
0	B	ACILLAR!	COPHYT	A-PE	ENNATE	E				657721	.50	25	74979	.00								1	616350	.00	958	628.75	17.	. 2
0		FRAGIL	ARIALE	S																								
0		ASTE	RIONEL	LA F	FORMO:	SA				82215	100000000000000000000000000000000000000		43094										662654			439.3		
0		FRAG	ILARIA	CRO	DTONE	451	S				.0	11	54301										577150		1000	150.50		
0		FRAGIL	ARIALE	5 (1	LPIL)					411075	.94		0	.0									205537	. 94	205	537.90	. 2.	.2
_ 0		NAVICU	LALES																									
0		NAVI	CULA (LPI.	_)					. 0	.0		88792	.44									44396	.22	44	396.2	2 0.	. 5
0		BACILL	ARIALE	S																								
0		NITZ	CHIA (LPI	L)					0	.0		88792	.44									44396	.22		396.2		.5
0	B	ACILLAR	IOPHYT	A-PI	ENNAT	E (LPIL	L		164430	.37			.0									82215		570.00	215.19		. 9
0	C	RYPTOPH	YTA							164430	.37	8	387924	.37									526177	.37	361	747.00	5.	.6
0		CRALLO	ADDINOTA	LES																				The state of the s				Lau
0		CRYP	AMONO	SRI	EFLEX	A					1.0		88792										44396			396.27		.5
_ 0		CRYP	AHOMOT	5 1	LPIL)						.0		88792	.44									44396	.22	44	396.2	2 0.	.5
-																												
														AND 18 1981														

DATE 07/14/80 PAGE NO 1 T600AQUA 9/28/77

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BAILLY GENERATING PLANT

PHYTOPLANKTON DENSITY

NUMBER OF CELLS PER LITER

11

REPLICATE REPORT

LS	TAXA		
		1	2
0	RHODOMONAS MINUTA	82215.19	621547.06
0	CHROOMONAS (LPIL)	82215.19	88792.44
TOTAL		3370818.00	15423234.0
DIVER	SITY (H PRIME)	3.09	2.37
DIVER	SITY (J PRIME)	0.86	0.61
NUMBE	R OF TAXA	12	15
ABOVE	COMPUTED USING SAMPLE IDS		

12

DATE	07/14/86
PAGE NO	2
T600AQUA	9/28/77

- X S.E. AB%

351881.12 269665.94 3.7
85503.81 3288.62 0.9

9397026.00 6026208.00 100.0
2.73 0.36
0.73 0.13
21

BAILLY GENERATING PLANT

PHYTOPLANKTON DENSITY

NUMBER OF CELLS PER LITER

REPLICATE REPORT

PC TC GC LOC 5 56 56 0 0 00

5	56 56 0 0 0	0																											
				DURA	2000			TO		SAMP					MI			-	PENT		EMP						-		
SI				M. 1-4-1	-	SD	HD			UNIT											MA		BT TU	70.00	100000000000000000000000000000000000000		3000	SALI	55 (5)
	21 4/16/80			0.0		1.0	200	0.0	100	77.7		1.		-	7		- 30	0.0		100000000000000000000000000000000000000	0.			0.0			0.0	1.000,100,100	0 0
	22 4/16/80	1343	0	0.0	0	1.0	9.1	0.0	Q	2.	0 4	1.	0 6	0	7	2	5	0.0	0	7.2	0.	.0	0	0.0		0.0	0.0		
																								-					EL
LS	TAXA												-											X			S.E.	AL	BZ
							142		1				2														***		
0	CYANOPHYTA						1	3022	88.	00			0.0										651	144.	.00	651	144.00	0 10	3.1
0	OSCILLATO																												
0	OSCILL		(L	PIL)				3022			-		0.0										100000	144.		10-79-75	144.00		0.7
0	CHLOROPHYTA	-170						1446	98.	75	2.0	8413	5.7	5									214	417.	. 25	69	718.50	0 3	3.5
0	VOLVOCALI								ŭ.																				
0	CHLATIY			LPIL)				723	49.	37	1	4206	7.8	7									107	208.	.62	34	859.25	5 J	1.8
0	CHLOROCO				al a																								
0	ANKIST		US I	FALCA	TUS			723				4206											1000000	208.	0.000.000		859.25		1.8
0	CHRYSOPHYTA								0.	0	3	5516	9.6	9									177	584.	.81	177	584.8	1 2	2.9
0	MONOSIGA																						100 000 000						
C	STELEX			and the same of the	1.0				0.	77	-	5516												584.			584.81	70 1	2.9
0	BACILLARIO		CEN	TRIC			4	2324	36.	00	177	2612	3.0	0									2979	279.	.00	1253	156.00	0 49	9.0
0	EUPODISC	The state of the state of the state of																											
0	MELOSI	RA (LP	IL)					0490			4	9723		-									25 22 75	151.			913.69		2.7
0	STEPHAN	NODISC	US I	BINDER	RANA		2	6045	4.00	7.7			0.0										1302				288.00		1.4
0	STEPHAN	NODISC	US I	NIAGAR	FAE				0.		-	4206	-	T									-	033.			033.94		1.2
0	STEPHAN	NODISC	US	(LPIL)				0.			4206	0.00	200										033.	5 (5) (5)		033.94	3 3	1.2
0	EUPODISCA	ALES (FLI	L)				2170	48.	12	50	6827	1.5	0									392	659.	.81	175	611.69	9 6	6.5
0	RHIZOSOLE	ENTALE	S																										
0	RHIZOSO	DLENIA	ER	IENSI:	5			3617	46.	87	3	7647	9.7	5										113.			366.44	35 - 115	6.1
0	BACILLARIO	PHYTA-	PEN	NATE			1	4759	26.	00	7	1033	9.3	7									1093	132.	.00	382	793.3	1 18	8.0
0	FRAGILAR	IALES																											
0	ASTERIO	ONELLA	FO	RMOSA				8971	32.	19	5	5827	1.5	0									732	701.	.81	164	430.31	1 12	2.0
0	HAVICULA	LES																											
0	CYMBELI	LA (LP	ILI					723	49.	37			0.0										36	174.	.69	36	174.69	9 0	0.6
0	BACILLAR	IALES																											
0	NITZCH	IA (LP	IL)					3617	46.	67	- 1	7103	3.9	4									216	390.	.37	145	356.44	+ 3	3.6
_ 0	BACILLARIO	PHYTA-	PENI	NATE (LPI	L)		1446	98.	75	- 1	7103	3.9	4									107	866.	.31	36	832.41	1 1	1.8
0	CRYPTOPHYTA	A						9405	41.	87	9	9447	5.1	2									967	508.	.50	26	966.62	2 15	5.9
0	CRYPTOHON	NODALE	S																										
0	CRYPTO	MONAS	REF	LEXA					0.	0	14	1206	7.8	7									71	033.	.94	71	033.94	+ 1	1.2
0	RHODOHO	ONAS M	UHI	TA				9405	41.	87	85	5240	7.2	5									896	474.	.56	44	067.31	1 14	.7
TOTA	AL						е	0958	86.	00	40	7023	2.0	0									6083	059.	.00	2012	827.00		0.0
DIVI	ERSITY (H PE	RIME)							2.	87			3.3	1										3.	.09		0.22		
_DIV	ERSITY (J PE	RIME)							0.	80			0.8	9										0.	.85		0.05	5	
-NUM	BER OF TAXA									12			1	3											16				

DATE 07/14/80 PAGE NO 3

BAILLY GENERATING PLANT

PHYTOPLANKTON DENSITY

NUMBER OF CELLS PER LITER

REPLICATE REPORT

LS TAXA

1

ABOVE COMPUTED USING SAMPLE IDS 21 22

DATE 07/14/80 PAGE NO 4 T600AQUA 9/28/77 REL S.E. ABX

BAILLY GENERATING PLANT

PHYTOPLANKTON DENSITY

NUMBER OF CELLS PER LITER

REPLICATE REPORT

PC TC GC LOC 5 56 56 0 0 00

					DURAT	TION			TOM	SAMP	VO	L.		M]	DI		CUR	ENT	TE	MP							
SI	D	DATE	TIME	D/N	UNITS	S C	SD	MD	SP D	UNITS	C	SECH I	T	SC	DI	CL	SP	DI	AIR	WAT	BT	TURBD	COND	DO	PH	SALN	P
	31	4/16/80	1351	. 0	0.0	0	1.0	15.2	0.0 0	2.0	4	1.0	6 0	7	2	5	0.0	0	7.2	0.0	0	0.0	0	0.0	0.0	0.0	0
	32	4/16/80	1351	0	0.0	0	1.0	15.2	0.0 0	2.0	4	1.0	6 0	7	2	5	0.0	0	7.2	0.0	0	0.0	0	0.0	0.0	0.0	0
																						-				RE	-
LS		TAXA																				X			S.E.	AB	7.
									1			2															
0	CY	PANOPHYTA						- 2	2006050	.00	3	99894.	69								1	1202972	.00	803	077.6	2 27	.1
0		CHROOCOC	CACEA	E																							
0		CHROOG	COCCUS	(LP	ILI				0	. 0	3	99894.	69									199947	. 31	199	947.3	1 4	.5
0		OSCILLAT	ORIAC	EAE																							
0		OSCILI	ATORI	A (L	PIL)				2006050	.00		0.	0									1003025			025.0		.6
0	CH	HLOROPHYT	ГА						240726	.00		99973.	53									170349	.81	70	376.1	9 3	.8
0		VOLVOCAL	ES																								
0		CHLAM	COMON	IAS (LPIL)				80242	.00		49986.	84									65114	.42	15	127.5	8 1	.5
C		TETRASPO	PALES	5																							
0		ELAKAT	TOTHRI	XIL	PIL)				160484	.00		0.	0									80242	.00	80	242.0	0 1	.8
0		CHLOROCO	CCALE	S																							
0		ANKIST	RODES	MUS	FALCA	rus			0	. 0		49986.										24993	.42		993.4	TO 1000	.6
0	CH	HRYSOPHY1	TA.						461391	.50	2	99920.	94									380656	.19	80	735.25	5 8	.6
0		CHRYSOMO	HADAL	ES																							
0		MALLAN			575.5				80242	.00		0.										40121	5 5 5		121.00		.9
0		DINOBE	S HOYS	OCIA	LE				300907	.50		49986.	84									175447	.12	125	460.3	1 4	.0
0		MONOSIGA	LLES																								
0		STELE	KOMONA	s di	CHOTO	14			80242		750	49934.										165088			846.00	T T	. 7
0	BA	ACILLARIO	PHYTA	-CEN	ITRIC				802420	.00	7	99789.	19									801104	.56	1	315.4	1 18	. 1
0		EUPODISC																									
0		MELOSI	IRA (L	PILI					361089	.00		0.										180544		-	544.51		.1
0		STEPHA	HODIS	cus	BINDER	RANA			-	. 0		99947.	-									99973			973.6		. 3
0		STEPHA	ANODIS	cus	(LPIL)			0	.0		99973.	274-270									49986			986.8		.1
0		EUPODISC	CALES	(LPI	(1.)				160484	.00	1	49960.	44									155222	.19	5	261.78	B 3	.5
0		RHIZOSOI																									
0		RHIZOS	SOLENI	A ER	PIENSIS	5			280847			49907.	200									315377	2.36.3		530.4		.1
0	BA	ACILLARIO	DPHYTA	-PEN	HATE				565706	.12	15	74584.	00								1	1070145	.00	504	438.9	4 24	.2
_ 0		FRAGILAR																					40				
0		ASTER							401210		-70.00	24677.										812943	3 (20)		733.4		7
0		FRAGII	LARIA	CROT	ONENS:	15			0	.0	3	49907.	87									174953	.94	174	953.94	4 3	.9
0		NAVIGULA	STATE OF THE PARTY																								
0		PINNUI							40121			0.										20060			060.5	-	.5
0		ACILLARIO	W. L. A. S. L. W. L.	1-PEN	MATE	LPI	L)		124375			0.										62187			187.5		.4
0	CE	RYPTOPHYT	OUTGO						561694	.00	10	49723.	00									805708	.50	244	014.5	0 18	.2
0		CRYPTOMO																									
_ 0		CRYPTO	DITIONAS	S (LF	IL)				0	. 0		49986.	84									24993	.42	24	993.4	2 0	.6
-																											

DATE 07/14/80 PAGE NO 5 T600AQUA 9/28/77

BAILLY GENERATING PLANT

PHYTOPLANKTON DENSITY

NUMBER OF CELLS PER LITER

REPLICATE REPORT

60						REL
LS	TAXA			X	S.E.	AB%
		1	2			
0	RHODOMONAS MINUTA	521573.00	949749.87	735661 44	214088.44	16.6
0	CHROOMONAS (LPIL)	40121.01	49986.84	45053.93	4932.91	1.0
TOTAL		4637986.00	4223879.00	4430932.00	207053.50	100.0
DIVER	SITY (H PRIME)	2.87	3.05	2.96	0.09	
DIVER	SITY (J PRIME)	0.75	0.80	0.78	0.02	
NUMBE	R OF TAXA	14	14	20		
ABOVE	COMPUTED USING SAMPLE IDS					

DATE 07/14/80 PAGE NO 6 T600AQUA 9/28/77

BAILLY GENERATING PLANT

PHYTOPLANKTON DENSITY

NUMBER OF CELLS PER LITER

STATION REPORT

F							REL
LS	TAXA				X	S.E.	AB%
		1	2	3			
0	CYANOPHYTA	4972376.00	651144.00	1202972.00	2275497.00	1357816.00	34.3
0	CHROOCOCCACEAE						
0	CHROOCOCCUS (LPIL)	532754.50	0.0	199947.31	244233.94	155378.87	3.7
0	GOMPHOSPHAERIA LACUSTRIS	4439621.00	0.0	0.0	1479873.00	1479873.00	22.3
0	OSCILLATORIACEAE						
0	OSCILLATORIA (LPIL)	0.0	651144.00	1003025.00	551389.62	293812.81	8.3
0	CHLOROPHYTA	253222.81	214417.25	170349.81	212663.25	23939.44	3.2
0	VOLVOCALES						
0	CHLAMYDOMONAS (LPIL)	88792.44	107208.62	65114.42	87038.44	12183.15	1.3
0	TETRASPORALES						
0	ELAKATOTHRIX (LPIL)	123322.75	0.0	80242.00	67854.87	36134.95	1.0
0	CHLOROCOCCALES						
0	ANKISTRODESMUS FALCATUS	41107.59	107208.62	24993.42	57769.88	25153.25	0.9
0	CHRYSOPHYTA	177584.87	177584.81	380656.19	245275.25	67690.44	3.7
0	CHRYSOMONADALES						
0	MALLAMONAS (LPIL)	0.0	0.0	40121.00	13373.66	13373.66	0.2
0	DINOBRYON SOCIALE	0.0	0.0	175447.12	58482.37	58482.37	0.9
0	MONOSIGALES						
0	STELEXOMONAS DICHOTOMA	177584.87	177584.81	165088.06	173419.25	4165.59	2.6
0	BACILLARIOPHYTA-CENTRIC	1851321.00	2979279.00	801104.56	18/7234.00	628918.25	28.3
0	EUPODISCALES						
0	MELOSIRA (LPIL)	581919.19	773151.25	180544.50	511871.62	174619.25	7.7
0	STEPHANODISCUS BINDERANA	164430.37	1302288.00	99973.62	522230.62	390472.25	7.9
0	STEPHANODISCUS HIAGARAE	41107.59	71033.94	0.0	37380.51	20590.23	0.6
0	STEPHANODISCUS (LPIL)	0.0	71033.94	49986.81	40340.25	21065.35	0.6
0	EUPODISCALES (LPIL)	674164.62	392659.81	155222.19	407348.87	149985.69	6.1
0	RHIZOSOLENIALES						
0	RHIZOSOLENIA ERIENSIS	389700.06	369113.31	315377.37	358063.56	22155.04	5.4
0	BACILLARIOPHYTA-PENNATE	1616350.00	1093132.00	1070145.00	1259875.00	178360.62	19.0
0	FRAGILARIALES						
0	ASTERIONELLA FORMOSA	662654.56	732701.81	812943.50	736099.94	43417.93	11.1
0	FRAGILARIA CROTONENSIS	577150.50	0.0	174953.94	250701.44	170859.50	3.8
0	FRAGILARIALES (LPIL)	205537.94	0.0	0.0	68512.62	68512.62	1.0
. 0	NAVICULALES						
0	NAVICULA (LPIL)	44396.22	0.0	0.0	14798.74	14798.74	0.2
0	PINNULARIA (LPIL)	0.0	0.0	20060.50	6686.83	6686.83	0.1
0	CYMBELLA (LPIL)	0.0	36174.69	0.0	12058.23	12058.23	0.2
0	BACILLARIALES						
0	NITZCHIA (LPIL)	44396.22	216390.37	0.0	86928.81	65987.25	1.3
0	BACILLARIOPHYTA-PENNATE (LPIL)	82215.19	107866.31	62187.53	84089.62	13219.59	1.3
0	CRYPTOPHYTA	526177.37	967508.50	805708.50	766464.75	128903.50	11.5
_ 0	CRYPTOMONODALES						

DATE 07/14/80 PAGE NO 7 T600AQUA 9/28/77

BAILLY GENERATING PLANT

PHYTOPLANKTON DENSITY

NUMBER OF CELLS PER LITER

STATION REPORT

LS	TAXA						
				1	2	3	
0	CRYPTOMONAS REFI	EXA		44396.22	71033.94	0.0	
0	CRYPTOMONAS (LP)	(L)		44396.22	0.0	24993.42	
0	RHODOMONAS MINUT	A		351881.12	896474.56	735661.44	
0	CHROOMONAS (LPI)	.)		85503.81	0.0	45053.93	
TOTAL				9397026.00	6083059.00	4430932.00	
DIVER	SITY (H PRIME)			2.73	3.09	2.96	
DIVER	SITY (J PRIME)			0.73	0.85	0.78	
NUMBE	R OF TAXA			21	16	20	
ABOVE	COMPUTED USING SAN	IPLE IDS					
	11	12	21	22			
	31	32					

DATE	07/14/80
PAGE NO	8
T600AQUA	9/28/77

REL

S.E. ABX 20718.23 0.6

12849.91 0.3 161542.94 10.0

24694.75 0.7 1460098.00 100.0

0.11

0.03

X

38476.72 23129.88

661339.00 43519.25

6637005.00

0.79

27

BAILLY GENERATING PLANT

PHYTOPLANKYON DENSITY

NUMBER OF CELLS PER LITER

REPLICATE REPORT

PC TC GC LOC 5 56 56 0 0 10

				DURAT	HOI			TOW	SAM	P VO	L		MI	CND		CUR	ENT	TE	MP							
SIC	DATE	TIME	D/N	UNITS	C	SD	MD	SP I	UNI	TS C	SECH	WT						700000	HAT	BT	TURBD		DO		SALN	
4	1 4/16/80	1324	0	0.0	0	1.0	4.6	0.0			0.5					0.0		7.2	I COMPANIE OF	0		1		0.0		
4	2 4/16/80	1324	0	0.0	0	1.0	4.6	0.0	2	.0 4	0.5	6 0	7	2	5	0.0	0	7.2	0.0	0	0.0	0	0.0	0.0		-
																					-				RE	1000
LS	TAXA																				X			S.E.	AB	7.
100											2												1000			
0	CYANOPHYTA								0.0	92	81770.	.00								4	640885	.00	4640	885.00	56	.2
0	OSCILLAT	ORIACI	EAE																			200	2012			1
0	LYNGBY		TORT	A					0.0	1.000	81770									100	640885			885.00		-
0	CHLOROPHYT							263088	3.50	4	51197.	.06									357142	.75	94	054.25	4	. 3
0	VOLVOCAL	-																					-			
0	CHLAMY			LPIL)				197316	.37	1	28913.	.44									163114	.87	34	201.47	7 2	.0
0	CHLOROCO								55																	
0	ANKIST							65772			64456.										65114	-		657.69	3.	.8
0	SCENED		QUA	DRICAL	ЛA				0.0		57826										128913			913.44		.6
0	CHRYSOPHYT							328866	1.62	7	73480	.87									551170	. 75	222	310.12	6	.7
0	CHRYSOMO																									
0	SYNURA		- C					65772				.0									32886			886.06		.4
0	DINOER		OCIA	LE					0.0	7	73480	.87									386740	.44	386	740.44	. 4	.7
0	MONOSIGA																									
0	STELEX	Carried of the Figure 2	and the said	and all and and	1A		0.0	263088				.0									131544			544.25		.6
C	BACILLARIO		-CEN	TRIC				1446986	5.00	5	80110	.50								1	013548	.25	433	437.75	12	. 3
0	EUPODISC																									
0	MELOSI	ALCOHOL: N. ORG						52617				. 0									263088		-	J86		.2
0	STEPHA							52617				.0									263088			088.50		.2
0	STEPHA				,			6577		- 1	93370										129571	1750 TO 1500 T	- LOCATE	799.00		. 6
0	EUPODISC	The second second	-	L)				6577	2.12		0	. 0									32886	.06	32	886.06	0	.4
0	RHIZOSOL		The state of the s							1.0											701071	**				_
0	RHIZOS				5			26308			86740										324914		200	825.94	5 75	.9
0	BACILLARIO			NATE				70376	1.69	6	63904	. 37									683833	.00	19	928.66	0	. 3
0	FRAGILAR																				F2001F	6.5				~
0	ASTERI		200					52617		1757	15653										520915			261.5		. 3
0	BACILLARIO				LPI	L)		177584		1	48250										162917			886.06		.0
_ 0	PYRRHOPHYT		THYO	CEAE				6577	2.12		0	. 0									32886	.00	34	000.00	5 U	.4
0	PERIDINI		*****	HEDYCI				4577				^									32886	06	72	886.06		.4
0	PERIDI	DATE OF THE PARTY	THEO	NSPICE	חטרו			6577 85503		10	95764	.0									975400			363.19		
0	CRYPTOFHYT							05503	1.02	10	75/04	.00									7/5400	.01	120	303.1	, 11	.0
0	RHODOL			T.A.				85503	7 62	10	95764	00									975400	93	120	363.19	9 11	a
0	KHODOL	CAMUI	HINO	IA				03303	1.02	10	73/04	.00									7/3400	.01	120	303.1	,	.0
TOT	VI.							366350	5.00	120	46221	0								А	254863	.00	4591	358.00	100	.0
7.70	RSITY (H F	PRIME							3.20	120		.61										.40		0.80		-
ma	RSITY (J F								0.87		_	.48									-	.67		0.1		
O L VI																										
													~													

DATE 07/14/80 PAGE NO 9

BAILLY GENERATING PLANT

PHYTOPLANCTON DENSITY

NAMER OF CELLS PER LITER

REPLICATE REPORT

TAXA 57

NUMBER OF TAXA

ABOVE COMPUTED USING SAMPLE 105

13

9/28/77 DATE PAGE NO T600AQUA

S.E. ABZ

BAILLY GENERATING PLANT

PHYTOPLANKTON DENSITY

NUMBER OF CELLS PER LITER

REPLICATE REPORT

PC TC GC LOC 5 56 56 0 0 10

DURATION							
AND DATE THE DOLLMITTO C		AMP VOL	WIND CUREN		ST TURBO COND	DO PH	SALN P
SID DATE TIME D/N UNITS C		NITS C SECH W T	7 2 5 0.0		0.0	The state of the s	0.0 0
	1.0 9.1 0.0 0		7 25 5 0.0	75		0.0 0.0	0.00
52 4/16/80 1310 0 0.0 0	1.0 9.1 0.0 0	2.0 4 1.0 6 0	7 23 3 0.0	0 7.2	0.0	0.0 0.0	REL
LS TAXA					×	S.E.	AB%
	1	2					
0 CYANOPHYTA	2466456.00	0.0			.233228.00	1233228.00	38.7
O CHROOCOCCACEAE							
O GOMPHOSPHAERIA LACUSTRIS	2466456.00	0.0			1233228.00	1233228.00	
0 CHLOROPHYTA	164430.31	0.0			82215.12	82215.12	2.6
0 VOLVOCALES							
O CHLAMYDOMONAS (LPIL)	98658.19	0.0			49329.09	49329.09	1.5
0 CHLORGCOCCALES							
O ANKISTRODESMUS FALCATUS	65772.12				32886.06	32886.06	
0 CHRYSOPHYTA	197316.37	0.0			98658.19	98658.19	3.1
0 CHRYSOMONADALES							
O MALLAMONAS (LPIL)	32886.09				16443.04	16443.04	
O CHRYSOCOCCUS (LPIL)	32886.09	0.0			16443.04	16443.04	0.5
0 MONOSIGALES					45770.30	/F770 10	
O STELEXOMONAS DICHOTOMA	131544.25				65772.12	65772.12	
O BACILLARIOPHYTA-CENTRIC	937253.19	0.0			468626.56	468626.56	14.7
0 EUPODISCALES					279531.69	279531.69	8.8
O MELOSIRA (LPIL)	559063.37				16443.04	16443.04	
O STEPHANODISCUS NIAGARAE	32886.09				32886.06	32886.06	
0 STEPHANODISCUS (LPIL)	65772.12	0.0			32000.00	32000.00	1.0
RHIZOSOLENIALES	270577 (2				139765.81	139765.81	4.4
O RHIZOSOLENIA ERIENSIS	279531.62				720205.00	720205.00	
O BACILLARIOPHYTA-PENNATE O FRAGILARIALES	1440410.00	0.0			720203.00	720203.00	
O ASTERIONELLA FORMOSA	822152.06	0.0			411076.00	411076.00	12.9
O DIATONA TENUE	26308.87				13154.43	13154.43	
O FRAGILARIA CROTONENSIS	559063.44				279531.69	279531.69	
0 SURIRELLALES	337003.44	0.0			277332.07	2	
- 0 CYMATOPLEURA SOLEA	32886.09	0.0			16443.04	16443.04	0.5
O CRYPTOPHYTA	1167455.00				583727.50	583727.50	
0 CRYPTOMONODALES	1107133100						7507
O RHODOMONAS MINUTA	1101683.00	0.0			550841.50	550841.50	17.3
O CYANOMONAS (LPIL)	65772.12				32886.06	32886.06	
21010100103 1 21 227							
TOTAL	6373316.00	0.0			3186658.00	3186658.00	
DIVERSITY (H PRIME)	2.77	0.0			1.38	1.38	
_DIVERSITY (J PRIME)	0.69	0.0			0.35	0.35	
-NUMBER OF TAXA	16	0			16		

DATE 07/14/80 PAGE NO 11

BAILLY GENERATING PLANT

PHYTOPLANKTON DENSITY

NUMBER OF CELLS PER LITER

REPLICATE REPORT

LS TAXA

ABOVE COMPUTED USING SAMPLE IDS

51 52

6

DATE

07/14/80

PAGE NO 12 T600AQUA 9/28/77 REL X S.E. ABZ

BAILLY GENERATING PLANT

PHYTOPLANKTON DENSITY

NUMBER OF CELLS PER LITER

REPLICATE REPORT

PC TC GC LOC 5 56 56 0 0 10

				DURAT	TON			TOW	SA	MP V	not.			WI	IND		CUR	ENT	TE	EMP							
SII	DATE	TIME I	D/N	the sections.		SD	MD		2000	-	75.70		н т			CL			AIR	WAT	BT	TURBO	COND	DO	PH	SALE	N P
	1 4/16/80		TO 100			100000000000000000000000000000000000000	-	0.0 0	-			1.0							7.2		0	0.0	0	0.0	0.0	0.0	0 0
	2 4/16/80							0.0 0				1.0					0.0		7.2	0.0	0	0.0	0	0.0	0.0	0.0	0 0
			T.	70.0	. T																	-					EL
LS	TAXA																					X			S.E.	AE	B%
								1				2	_														
1.00	UNIDENTIFI							128255				0.	1.500									64127			127.8		1.3
0	UNIDENTIFI		AE	(LPIL	1			128255				0.										64127		190.10	127.8	2.	4.6
0	CYANOPHYTA							2479611	.00			0.	0								10	234505	.00	1639	005.0	0 24	*.0
0	OSCILLATO		-																			239805	00	1970	805.0	0 24	4.6
0	OSCILL		(L	PILI			-	2479611			10	0. 9423.	-									160215			208.0	-	3.6
0	CHLOROPHYT	and the same						171007	.50		10	7463.	13									100513	.02		200.0		
0	CHLANY		e (128255	40			3141.	27									95698	44	32	2557.2	1 1	1.9
0	CHLOROCO		-	LPIL				120293	.07		0	3141.	61									750 70		3.	221.6	•	
0	ANKIST			FALCAT	THS			42751	. 91		12	6282.	50									84517	.19	41	765.2	9 1	1.7
0	BACILLARIO				100			696856				1095.									12	263975	CONTRACTOR OF THE PARTY OF THE	567	7119.5	0 25	5.0
0	EUPODISC			*****																				-			
0	MELOSI		IL)					312088	.87	1	45	2248.	00								ě	882168	.44	570	079.5	6 17	7.5
0	STEPHAN	E-1000)			256511	.44		12	6282.	50								1	191396	.94	65	114.4	7 3	3.8
0	EUPODISC	The second second second	PROPERTY					85503	.81			0.	0									42751	.91	42	2751.9	1 (0.8
0	RHIZOSOLI	ENTALE	S																								
0	RHIZOS	OLENIA	ER	IENSI!	5			42751	.91		25	2565.	00								1	147658	.44	-	906.5		2.9
0	BACILLARIO	PHYTA-	PEN	NATE			1	1342408	.00	1	76	7954.	00								1!	555181	.00	212	2773.0	0 30	8.0
0	FRAGILAR	IALES																									
0	ASTERI	ONELLA	FO	RMOSA			1	1239805			-	5130.										872467			7337.3		7.3
0	FRAGIL	ARIA CI	TOR	ONENS:	IS			0	.0	1	13	6542.	.00									568271	.00	568	3271.0	0 11	1.3
0	BACILLAR	IALES																									
0	NITZCH	IA (LP	IL)					42751				0.	7									21375		100000	375.9		0.4
0	BACILLARIO		PEN	NATE	LPI	L)		59852				6282.										93067	7.00		3214.9		1.8
0	CRYPTOPHYT		91					855038	.19		63	1412.	62									743225	.37	111	1812.7	5 14	4.7
0	CRYPTOMO		-																								
0	CRYPTO	A. C. C. C. C. C. C. C.			I			85503				0.	1000									42751			570.6		0.8
_ 0	CRYPTO		2.000						.0			3141.													631.5		3.3
0	RHODOM	ONAS M	UMI	IA				769534	.37		50	8271.	3/									668902	.67	100	031.5	0 1:	3.3
TOTA	AL							5673166	.00	4	41	9882.	00								50	046524	.00	626	642.0	0 100	0.0
DIVE	ERSITY (H P	RIME)						2	.48			2.	62									2	.55		0.0		
DIV	ERSITY (J P	RIME)						0	.67			0.	79									0	.73		0.0	6	
NUNE	BER OF TAXA								13				10										15				

_ABOVE COMPUTED USING SAMPLE IDS - 61 62

> DATE 07/14/80 PAGE NO 13

.

BAILLY GENERATING PLANT

PHYTOPLANKTON DENSITY

NUMBER OF CELLS PER LITER

REPLICATE REPORT

DATE 07/14/60 PAGE NO 14 T600AQUA 9/28/77

BAILLY GENERATING PLANT

PHYTOPLANKTON DENSITY

NUMBER OF CELLS PER LITER

STATION REPORT

							REL
LS	TAXA				×	S.E.	AB%
		4	5	6			
0	UNIDENTIFIED ALGAE	0.0	0.0	64127.84	21375.95	21375.95	0.4
0	UNIDENTIFIED ALGAE (LPIL)	0.0	0.0	64127.84	21375.95	21375.95	0.4
0	CYANOPHYTA	4640885.00	1233228.00	1239805.00	2371306.00	1134791.00	43.1
0	CHROOCOCCACEAE			***********			
0	COMPHOSPHAERIA LACUSTRIS	0.0	1233228.00	0.0	411076.00	411076.00	7.5
0	OSCILLATORIACEAE						
0	OSCILLATORIA (LPIL)	0.0	0.0	1239805.00	413268.31	413268.31	7.5
0	LYNGBYA CONTORTA	4640885.00	0.0	0.0	1546961.00	1546961.00	
0	CHLOROPHYTA	357142.75	62215.12	180215.62	206524.50	80447.50	
0	VOLVOCALES	337142.73	00013.10	100213.02	200321.30		3.0
0	CHLAMYDOMONAS (LPIL)	163114.87	49329.09	95698.44	102714.12	33033.90	1.9
0	CHLOROCOCCALES	103114.07	47367.07	73070.44	100/14.10	33033.70	
0	ANKISTRODESMUS FALCATUS	65114.43	32886.06	84517.19	60839.23	15057.12	1.1
0	SCENEDESMUS QUADRICALDA	128913.44	0.0	0.0	42971.14	42971.14	
0	CHRYSOPHYTA	551170.75	98658.19	0.0	216609.62	169687.62	
0	CHRYSOMONADALES	5511/0./5	90050.19	0.0	210007.02	107007.02	3.7
0			16443.04	0.0	5481.01	5481.01	0.1
-	MALLAMONAS (LPIL)	0.0		170.70.70	5481.01	5481.01	
0	CHRYSOCOCCUS (LPIL)	0.0	16443.04	0.0			
0	SYNURA (LPIL)	32886.06	0.0	0.0	10962.02	10962.02	
0	DINOBRYON SOCIALE	386740.44	0.0	0.0	128913.44	128913.44	2.3
0	MONOSIGALES				(5777 10	***** **	
0	STELEXOHONAS DICHOTOMA	131544.25	65772.12	0.0	65772.12	37973.55	
0	BACILLARIOPHYTA-CENTRIC	1013548.25	468626.56	1263975.00	915383.25	234785.60	16.7
0	EUPODISCALES						
0	MELOSIRA (LPIL)	263088.50	279531.69	882168.44	474929.50	203674.75	75.7
0	STEPHANODISCUS BINDERANA	263088.50	0.0	0.0	87696.12	87696.12	
0	STEPHANOUISCUS NIAGARAE	0.0	16443.04	0.0	5481.01	5481.01	
0	STEPHANODISCUS (LPIL)	129571.12	32886.06	191396.94	117951.37	46125.51	
0	EUPODISCALES (LPIL)	32686.06	0.0	42751.91	25212.66	12924.04	0.5
0	RHIZOSOLENIALES						
0	RHIZOSOLENIA ERIENSIS	324914.44	139765.81	147658.44	204112.87	60443.73	
0	BACILLARIOPHYTA-PENNATE	683833.00	720205.00	1555161.00	986406.31	284581.06	17.9
0	FRAGILARIALES						
_ 0	ASTERIONELLA FORMOSA	520915.44	411076.00	872467.56	601486.31	139151.31	10.9
0	DIATOMA TENUE	0.0	13154.43	0.0	4384.81	4384.81	0.1
0	FRAGILARIA CROTONENSIS	0.0	279531.69	568271.00	282600.87	164052.87	5.1
0	BACILLARIALES						
0	NITZCHIA (LPIL)	0.0	0.0	21375.96	7125.32	7125.32	0.1
C	SURIRELLALES						
ü	CYMATOPLEURA SOLEA	0.0	16443.04	0.0	5481.01	5481.01	0.1
0	BACILLARIOPHYTA-PENNATE (LPIL)	162917.56	0.0	93067.56	85328.37	47189.17	1.6
. 0	PYRRHOPHYTA-DINOPHYCEAE	32886.06	0.0	0.0	10962.02	10962.02	0.2
64	and the second s						

DATE PAGE NO

T600AQUA

07/14/80

9/28/77

15

BAILLY GENERATING PLANT

PHYTOPLANKTON DENSITY

NUMBER OF CELLS PER LITER

STATION REPORT

									REL
LS	TAXA						X	S.E.	AB%
				4	5	6			
0	PERIDINIALES								
0	PERIDINIUM INCOM	NSPICUUM		32886.06	0.0	0.0	10962.02	10962.02	0.2
0	CRYPTOPHYTA			975400.81	583727.50	743225.37	767451.19	113713.31	24.0
0	CRYPTOMONODALES								
0	CRYPTOMONAS MARS	SSONII		0.0	0.0	42751.91	14250.63	14250.63	0.3
0	CRYPTOMONAS (LP)	IL)		0.0	0.0	31570.64	10523.54	10523.54	0.2
0	RHODOMONAS MINU	TA .		975400.81	550841.50	668902.87	731715.06	126519.62	13.3
0	CYANOMONAS (LPI	L)		0.0	32886.06	0.0	10962.02	10962.02	0.2
TOT	AL			8254863.00	3186658.00	5046524.00	5496015.00	1480226.00	100.0
DIV	ERSITY (H PRIME)			2.40	1.38	2.55	2.11	0.37	
DIV	ERSITY (J PRIME)			0.67	0.35	0.73	0.58	0.12	
NUH	BER OF TAXA			16	16	15	29		
ABO	VE COMPUTED USING SAM	IPLE IDS							
	41	42	51	52					
	61	62							

DATE 07/14/80 PAGE NO 16 T600AQUA 9/28/77

BAILLY GENERATING PLANT

PHYTOPLANKTON DENSITY

NUMBER OF CELLS PEP LITER

REPLICATE REPORT

PC TC SC LOC . 56 56 0 0 20

	77.7			DURAT	TON			TOW	SA	HP V	OL		WI.	CND		CUR	ENT	TE	MP							
SID	DATE	TIME	D/N	UNITS	C	SD	MD	SP D	UN	ITS (C SECH	WT	SC	DI	CL	SP	DI	AIR	WAT	BT	TURBD	COND	00	PH	SALN	P
101	4/16/80	1105	0	0.0	0	1.0	1.5	0.0 0		2.0	4 0.2	6 0	7	2	5	0.0	0	7.2	0.0	0	0.0	0	0.0	0.0	0.0	0
102	4/16/80	1105	0	0.0	0	1.0	1.5	0.0 0		2.0	4 0.2	6 0	7	2	5	0.0	0	7.2	0.0	0	0.0	0	0.0	0.0	0.0	0
																					-				REL	
LS	AXAT							1			2										X			S.E.	AB%	
0 0	H1.GROPHYTA							246645		21	923571									25	85108.	00	13384	62.00	34.	5
0	VELVOCALE							240043	. 50	-	,,,,,,,									-	03103.					
0	CHLAMYE		S II	LPIL)				164430	.37	1 3	584714	.37								3	74572.	.37	2101	142.00	8.	1
0	CHLOROCOG		200																							
0	SPHAERO	DCYSTI	5 50	CHROET	ERI			0	.0	2	338857	.00								11	69428.	.00	11694	428.00	25.	4
0	ANKIST	RODESM	IUS I	FALCAT	rus			82215	.19		0	0.0									41107.	.59	411	107.59	0.	9
0 C	HRYSOPHYTA	A						0	.0		334122	.50								1	67061.	.25	1670	061.25	3.	6
0	MONOSIGAL	LES																								
0	STELEX				1A			0			334122										67061.			061.25		
0 B	ACILLARIO	PHYTA-	CEN	TRIC				925582	.25		668245	.00								8	27413.	.62	1591	168.62	18.	0
0	EUPODISCA																									
0	MELOSIF		3.00					328860			501183										15022.			161.50		-
0	STEPHAN							164430				0.0									82215.	T		215.19		
0	STEPHAN	Comment of the same of		(LPIL))			411075	. 94			0.0								2	05537.	. 94	2055	537.94	4.	5
0	RHIZOSOLE		277																							_
0	RHIZOSO				5			82215			167061	100									24638.			23.03		
13	ACILLARIO			NATE			-	2055379	.00	,	417653	1.12								12	36516.	.00	8180	362.94	26.	4
0	FRAGILAR										****										67061.	25	2426	061.25	3.	
0	ASTERIO	market at mo-		Contract of the				2055379	.0	9	334122	0									27689.		10276			-
0 0	FRAGIL				LDTI				.00		83530									77.0	41765.			765.31	-	-
	RYPTOPHYTA		PER	MAIL	LP1L	,		1068797			501183	11/10/10/10									784990.		1	306.62	100000	
0	CRYPTOMON		2					1000777	.00		JULIU.										04770.		2030			•
0	CRYPTO			TE)				164430	37			0.0									82215.	.19	822	215.19	1.	8
0	RHODOMO	the second second	000000000000000000000000000000000000000	DE				904367			417653	1									61010.			356.94		-
0	CHROOM								.0		83530									100	41765.			765.31		
TOTAL								757/02		61	844768									44	01085	00	2674	47 00	100.	0
TOTAL	SITY (H P	DIME					-	+357402	. 34	4		.42								40		.38	2430	0.04		0
	SITY (J P								. 74			.76										.75		0.01		
ALC: 10 (2) (40 (5)	R OF TAXA	1.10							9			9									-	14		0.01	7.17	

ABOVE COMPUTED USING SAMPLE IDS 101 102

DATE 07/14/80 PAGE NO 17 T600AQUA 9/28/77

BAILLY GENERATING PLANT

PHYTOPLANKTON DENSITY

NUMBER OF CELLS PER LITER

STATION REPORT

LS	TAXA	
		10
0	CHLOROPHYTA	1585108.00
0	VOLVOCALES	
0	CHLAMYDOMONAS (LPIL)	374572.37
0	CHLOROCOCCALES	
0	SPHAEROCYSTIS SCHROETERI	1169428.00
0	ANKISTRODESMUS FALCATUS	41107.59
0	CHRYSOPHYTA	167061.25
0	MONOSIGALES	
0	STELEYOMONAS DICHOTOMA	167061.25
0	BACILLARIOPHYTA-CENTRIC	827413.62
0	EUPODISCALES	
0	MELOSIRA (LPIL)	415022.25
0	STEPHANODISCUS BINDERANA	82215.19
0	STEPHANODISCUS (LPIL)	205537.94
0	RHIZOSOLENIALES	
0	RHIZOSOLENIA ERIENSIS	124638.19
0	BACILLARIOPHYTA-PENNATE	1236516.00
0	FRAGILARIALES	
0	ASTERIONELLA FORMOSA	167061.25
0	FRAGILARIA (LPIL)	1027689.50
0	BACILLARIOPHYTA-PENNATE (LPIL)	41765.31
0	CRYPTOPHYTA	784990.37
0	CRYPTOMONODALES	
0	CRYPTOMONAS (LPIL)	82215.19
0	RHODOMONAS MINUTA	661010.06
0	CHROOMONAS (LPIL)	41765.31
TOT	AL	4601085.00
DIV	ERSITY (H PRIME)	2.38
DIV	ERSITY (J PRIME)	0.75
NUM	BER OF TAXA	14
ABO	VE COMPUTED USING SAMPLE IDS	

102

101

-		REL	
×	S.E.	AB%	
1585108.00	-1.00	34.5	
374572.37	-1.00	8.1	
1169428.00	-1.00	25.4	
41107.59	-1.00	0.9	
167061.25	-1.00	3.6	
167061.25	-1.00	3.6	
827413.62	-1.00	18.0	
415022.25	-1.00	9.0	
82215.19	-1.00	1.8	
7.5537.94	-1.00	4.5	
124638.19	-1.00	2.7	
1236516.00	-1.00	26.9	
167061.25	-1.00	3.6	
1027689.50	-1.00	22.3	
41765.31	-1.00	0.9	
784990.37	-1.00	17.1	
82215.19	-1.00	1.8	
661010.06	-1.00	14.4	
41765.31	-1.00	0.9	
4601085.00	-1.00	100.0	
2.38	-1.00		
0.75	-1.00		
14			

DATE 07/14/80 PAGE NO 16 T600AGUA 9/28/77

BAILLY GENERATING PLANT

PHYTOPLANKTON DENSITY

NUMBER OF CELLS PER LITER

STATION REPORT

				X			REL
LS	TAXA				X	S.E.	AB%
		3	6	10			
0	UNIDENTIFIED ALGAE	0.0	21375.95	0.0	7125.31	7125.31	0.1
0	UNIDENTIFIED ALGAE (LPIL)	0.0	21375.95	0.0	7125.31	7125.31	0.1
0	CYANOPHYTA	2275497.00	2371306.00	0.0	1548934.00	774960.81	27.8
0	CHROOCOCCACEAE						
0	CHROCCOCCUS (LPIL)	244233.94	0.0	0.0	81411.31	81411.31	1.5
0	GOMPHOSPHAERIA LACUSTRIS	1479873.00	411076.00	0.0	630316.31	441042.56	11.3
0	DSCILLATORIACEAE						
0	OSCILLATORIA (LPIL)	551389.62	413268.31	0.0	321552.62	165646.62	5.8
0	LYNGBYA CONTORTA	0.0	1546961.00	0.0	515653.62	515653.62	9.2
0	CHLOROPHYTA	212663.25	206524.50	1585108.00	663098.56	458508.12	12.0
0	VOLVOCALES						
0	CHLAMYDOMONAS (LPIL)	87038.44	102714.12	374572.37	188108.31	93341.75	3.4
0	TETRASPORALES						
0	ELAKATOTHRIX (LPIL)	67854.87	0.0	0.0	22618.29	22618.29	0.4
0	CHLOROCOCCALES	1905 4000 7000					
0	SPHAEROCYSTIS SCHROETERI	0.0	0.0	1169428.00	369809.31	389809.31	7.0
0	ANKISTRODESMUS FALCATUS	57767.83	60839.23	41107.59	53238.90	6130.02	
0	SCENEDESMUS QUADRICAUDA	0.0	42971.14	0.0	14323.71	14323.71	
0	CHRYSOPHYTA	245275.25	216609.62	167061.25	209648.69	22845.12	
0	CHRYSOMONADALES						
0	MALLAMONAS (LPIL)	13373.66	5481.01	0.0	6284.89	3881.51	0.1
0	CHRYSOCOCCUS (LPIL)	0.0	5481.01	0.0	1827.00	1827.00	-
0	SYNURA (LPIL)	0.0	10962.02	0.0	3654.01	3654.01	0.1
0	DINOBRYON SOCIALE	58482.37	128913.44	0.0	62465.27	37267.35	1.1
0	MONOSIGALES				-	*********	
0	STELEXOMONAS DICHOTOMA	173419.25	65772.12	167061.25	135417.50	34871.04	2.4
0	BACILLARIOPHYTA-CENTRIC	1877234.00	915383.25	827413.62	1206676.00	336238.81	-
0	EUPODISCALES	10111231100	723303.23	007423.00	1200070.00	330230.02	
0	MELOSIRA (LPIL)	511871.62	474929.50	415022.25	467274.44	28218.79	8.4
0	STEPHANGDISCUS BINDERANA	522230.62	87696.12	82215.19	230713.94	145766.87	
0	STEPHANODISCUS NIAGARAE	37380.51	5481.01	0.0	14287.17	11654.57	
0	STEPHANODISCUS (LPIL)	40340.25	117951.37	205537.94	121276.50	47717.43	
0	EUPODISCALES (LPIL)	407348.87	25212.66	0.0	144187.12	131781.94	
0	RHIZOSOLENIALES	407340.07	EJE1E.00	0.0	144107.12	131/01.74	2.0
- 0	RHIZOSOLENIA ERIENSIS	358063.56	204112.87	124638.19	228938.19	68517.81	4.1
0	BACILLARIOPHYTA-PENNATE	1259875.00	986406.31	1236516.00	1160932.00	87523.19	
0	FRAGILARIALES	1237073.00	700400.31	1236310.00	1100732.00	0/363.17	20.0
0	ASTERIONELLA FORMOSA	736099.94	601486.31	167061.25	501549.12	171699.12	9.0
0	DIATOMA TENUE	0.0	4384.81	0.0	1461.60	1461.60	
0	FRAGILARIA CROTONENSIS	250701.44	282600.87	0.0	177767.44	89359.44	3.2
0	FRAGILARIA (LPIL)	0.0	0.0	1027689.50	342563.12	342563.12	
	TRAULIMIA ILLILI	0.0	0.0	101/007.30	346303.16	346303.16	0.7
0	FRAGILARIALES (LPIL)	68512.62	0.0	0.0	22837.54	22837.54	0.4

DATE 07/14/80 PAGE NO 19 T600AQUA 9/28/77

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BAILLY GENERATING PLANT

PHYTOPLANKTON DENSITY

NUMBER OF CELLS PER LITER

ABOVE COMPUTED USING SAMPLE IDS 11

31

51

101

12

32

52

102

21

41

61

22 42 62

STATION REPORT

							REL
LS	TAXA				×	S.E.	AB%
		3	6	10			
0	NAVICULALES						
C	NAVICULA (LPIL)	14798.74	0.0	0.0	4932.91	4932.91	0.1
0	PINNULARIA (LPIL)	6686.83	0.0	0.0	2228.94	2228.94	0.0
0	CYMBELLA (LPIL)	12058.23	0.0	0.0	4019.41	4019.41	0.1
0	BACILLARIALES						
0	NITZCHIA (LPIL)	86928.81	7125.32	0.0	31351.37	27864.7%	0.6
0	SURIRELLALES						
0	CYMATOPLEURA SOLEA	0.0	5481.01	0.0	1827.00	1827.00	0.0
0	BACILLARIOPHYTA-PENNATE (LPIL)	84089.62	85328.37	41765.31	70394.44	14319.03	1.3
0	PYRRHOPHYTA-DINOPHYCEAE	0.0	10962.02	0.0	3654.01	3654.01	0.1
0	PERIDINIALES						
C.	PERIDINIUM INCONSPICUUM	0.0	10962.02	0.0	3654.01	3654.01	0.1
0	CRYPTOPHYTA	766464.75	767451.19	784990.37	772968.75	6017.54	13.9
0	CPYPTOMONODALES						
0	CRYPTOMONAS MARSSONII	0.0	14250.63	0.0	4750.21	4750.21	0.1
0	CRYPTOHONAS REFLEXA	38476.72	0.0	0.0	12825.57	12825.57	0.2
0	CRYPTOMONAS (LPIL)	23129.88	10523.54	82215.19	38622.87	22097.87	0.7
0	RHODOMONAS MINUTA	661339.00	731715.06	661010.06	684688.00	23513.70	12.3
0	CHROOMONAS (LPIL)	43519.25	0.0	41765.31	28428.18	14223.11	0.5
0	CYANOMONAS (LPIL)	0.0	10962.02	0.0	3654.01	3654.01	0.1
TOT	AL	6637005.00	5496015.00	4601085.00	5578035.00	589148.50	100.0
DIV	ERSITY (H PRIME)	2.93	2.11	2.38	2.47	0.24	
DIV	ERSITY (J PRIME)	0.79	0.58	0.75	0.71	0.06	
HUI	BER OF TAXA	27	29	14	39		

DATE 07/14/80 PAGE NO T600AQUA 9/28/77

BAILLY GENERATING PLANT

PHYTOPLANKTON DENSITY

NUMBER OF CELLS PER LITER

REPLICATE REPORT

PC TC GC LOC 5 56 56 0 1 00

				DUP \	HOIT			TOW	SAMP	VO	L		WI	DM		CUR	ENT	TE	MP							
SID	DATE	TIME	D/N	UNITS	5 C	SD	WD	SP D	UNIT	S C	SECH	WT	SC	DI	CL	SP	DI	AIR	WAT	BT	TURBD	COND	DO	PH	SALN	P
7	1 4/16/80	1135	0	0.0	0	1.0	4.6	0.0 0	2.	0 4	0.5	6 0	7	25	0	0.0	0 0	7.2	5.5	0	0.0	0	0.0	0.0	0.0	0
7	2 4/16/80	1135	0	0.0	0	1.0	4.6	0.0 0	2.	0 4	0.5	6 0	7	2	5	0.0	0	7.2	5.5	0	0.0	0	0.0	0.0	0.0	0
																					-				REL	
LS	TAXA																				X			S.E.	AB%	
								1			2															
0	CHLOROPHYT	A						0	. 0	1	38121	.50									69060	.75	690	060.75	5 2.	2
0	VOLVOCAL	ES																								
0	CHLAMY	DOMON	AS (LPIL)					.0	1	38121	.50									69060			060.75		
0	CHRYSOPHYT							179557	. 94		0	. 0									89778	.94	897	778.94	. 2.	9
0	MONOSIGA	LES																								
0	STELEX				14			179557				. 0									89778		-	778.94	-	
	BACILLARIO		-CEN	TRIC				837937	.12	12	66114	.00								1	052025	.00	2140	188.44	4 33.	9
0	EUPODISC																									
0	MELOSI								.0		14364										207182			182.3		
0	STEPHA							119705			38121										128913.			208.0		-
0	STEPHA		CO. L. S. S. S.	(LPIL)			478821	. 25	1	38121	.50									308471	.37	1703	349.8	7 9.	9
0	RHIZOSOL																									
0	RHIZOS	an man and	~~		5			239410	7 70 00	-	75506										407458			147.8	700.00	
35	BACILLARIO		2.000	NATE			1	215008	.00	19	10681	.00								1	562844	.00	3478	336.50	50.	3
0	FRAGILAR						1.2																-			
0	ASTERI						1	107274		- 0	66850	77 (1977)								100	037062			211.50		
0	FRAGIL		CROT	ONENS	IS			0	. 0	9	20810	.37									460405	.19	4604	405.1	9 14.	8
0	NAVICULA										- 1															_
0	NAVICU		the second second					59852	.66		0	. 0									29926	. 33	299	926.3	3 1.	0
0	BACILLAR																									
0	NITZCH							47882				.0									23941			941.0	-	-
	BACILLARIO		-PEN	MATE	LEPI	LJ		100 Table 100 Ta	.0		23020	0.700.000									11510			10.1		
2.	CRYPTOPHYT							299263	.25	3	68324	.00									333793	.62	345	530.3	7 10.	,
0	CRYPTOMO			** *																	27020	24	271	220 0		-
0	CRYPTO			-					.0		46040	0.00									23020	TOTAL TOTAL		020.20		
0	RHODON	IONAS	MINU	IA				299263	.25	3	22283	.50									310773	.37	11:	210.1	2 10.	U
_TOTA							2	531764		36	83237									3	107500		5757		0 100.	0
	RSIJY (H P							_	. 38			.74										.56		0.1		
	RSITY (J F	The same of the N						0	.79		0	.83									0	.81		0.0	2	
NUMB	ER OF TAXA								8			10										13				

ABOVE COMPUTED USING SAMPLE IDS 71 72

DATE 07/14/6^ PAGE NO 21 T600AQUA 9/28/77

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BAILLY GENERATING PLANT

PHYTOPLANKTON DENSITY

NUMBER OF CELLS PER LITER

REPLICATE REPORT

PC TC GC LOC 5 56 56 0 1 00

5	56	56 0 1	00																								
					DURA	TION			TOM	SAMP		_			DAI		F-100	THE	2.7	MP							
S	D	DATE	TIM	IE D/N	UNIT:	5 C	SD	MD	SP D	UNIT	SC	SECH	WT	SC	DI		. SP	DI		WAT	BT	TURBE	COND	DO	PH	SALI	H P
185	81	4/16/8	0 112	5 0	0.0	0	1.0	9.1		2.	0 4	1.0	6 0	7	2	700	0.0	0		5.0	0			0.0	0.0	0.0	0 0
	82	4/16/8	0 112	5 0	0.0	0	1.0	9.1	0.0 0	2.	0 4	1.0	6 0	7	2	5	0.0	0	7.2	5.0	0	0.0	0 0	0.0	0.0		0 0
																										0.000	EL
LS		TAXA																				,	X		S.E.	AE	B%
									1			2															
0		AHOPHYT	7.7						570902	.25	1	68376	. 75									369639	9.50	201	262.7	5	9.9
0		CHROOCO																									
0			CYSTI		IL)				570902	.25		0	.0									285451	1.12	285	451.1	2	7.6
0		OSCILLA		commenced and																						_	
0			CONTRACTOR OF THE PARTY.	IA LI	MNETI	CA				.0	-	68376										84188			188.3		2.3
0	-	ILOROPHY							40778	.73	1	26282	.56									83530	0.62	42	751.9	1 2	2.2
0		VOLVOCA																								_	
0					LPIL)				0	.0	1	26282	.56									63141	1.28	63	141.2	8	1.7
0		CHLOROC																								_	
0			A Prince of	SMUS	FALCA	rus			40778	1000			.0									20389		-	389.3	7	0.5
0	200.00	RYSOPHY							285451	.12	1	68376	. 75									226913	3.94	58	537.1	9 6	6.1
0		CHRYSON																									
0			ococc		T-100 TO					1.0		42094										21047			047.0		0.6
0			RYON		ILE				285451			847.88	7 7 7									184819			631.3		4.9
0		RYSOPHY	707.00		.TOTO					.0		42094	- m									21047			047.0		0.6
0	1995	CILLARI		Man Albania	HRIC				897131	. 94	4	63036	.06									680084	4.00	217	047.9	4 10	8.2
0		EUPODIS							AAOFAA	00			. 0									224283		- 24	283.0		6.0
0		- 19 0000 000000	IRA (NIAGA				448566				.0									20389			389.3		0.5
0					LPIL	3000			81557	37.00.00		84188	777									82872		-	315.4		2.2
0		EUPODIS				,				.0		42094										21047			047.0	-	0.6
0		RHIZOSO	307.757		,							42074	.14									2104	1.07		047.0	,	0.0
0				THE RESERVE OF THE PARTY OF THE	PIENSI				326229	0.7		36753	En									331491	1 42		261.8		8.9
0	0.4	CILLARI				,			1631147			62825										446986			161.0		8.7
0	40.70	FRAGILA			HAIL				1031141	.00	10	02023	.00								•	440 700	0.00	104	101.0	0 30	3. 7
0				The same of the same	ORMOSA			47	1060247	00	7	15601	10									887924	4 06	172	322.8	7 21	3.7
0		DIATO			MIIOSA				203893			26282										165088			805.5		4.4
0					ONENS	rs				.0		68376										84188			188.3		2.3
0			LARIA			13			285451		•		.0									142725			725.5		3.8
0					CULOS	Λ.				.0	2	52565										126282			282.5		3.4
0		HAVICUL	Access 1400	· · LOC	COLOS	•						36303										receou			-05		
0			ILARIA	(10)	(1)				40778	. 73		0	.0									20389	9.37	20	389.3	7 (0.5
0	BA	CILLARI	The second second			LPT			40778				.0									20389	D. T. W. T.		389.3		0.5
0	****	RRHOPHY		(Alex) E 22 C	STATE OF THE PARTY				The second second	.0		42094										21047			047.0		0.6
0	100	PERIDIN		THE PERSON						Series I														-			7.00
0					NSPIC	JUM			0	0.0		42094	.19									21047	7.09	21	047.0	9 (0.6
-																										(Pall	

DATE 07/14/80 PAGE NO 9/28/77 T600AQUA

BAILLY GENERATING PLANT

PHYTOPLANKTON DENSITY

NUMBER OF CELLS PER LITER

REPLICATE REPORT

LS TAXA				
		1	2	
0 CRYPTOPH	ATA	937910.87	883977.94	
0 CRYPTO	MONODALES			
0 RH00	OMONAS MINUTA	937910.87	841883.75	
O CHRO	OMONAS (LPIL)	0.0	42094.19	
TOTAL		4363316.00	3114965.00	
DIVERSITY (H	PRIME)	3.05	3.17	
DIVERSITY (J	PRIME)	0.83	0.81	
NUMBER OF TA	XA	13	15	
ABOVE COMPUT	ED USING SAMPLE IDS			

B1 B2

DATE

		REL
×	S.E.	AB%
910944.37	26966.47	24.4
889897.31	48013.56	23.8
21047.09	21047.09	0.6
3739140.00	624175.50	100.0
3.11	0.06	
0.82	0.01	
22		

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T600AQUA

BAILLY GENERATING PLANT

PHYTOPLANKTON DENSITY

NUMBER OF CELLS PER LITER

REPLICATE REPORT

PC TC GC LOC 5 56 56 0 1 00

		DURA	FION			TOW	SAMP	VOL			WIND		CU	JRENT	T	EMP							
SII	DATE TIME O			SO	MD	SP D	UNIT	S C	SECH W	T	SC DI	CL	SP	P DI	AIR	HAT	BT	TURBD	COND	DO	PH	SALN	P
	1 4/16/80 1105	0 0.0	0	1.0	15.2				1.0 6		7 2		0.	.0 0		5.5	0	0.0		13.2	0.0	0.0	0
	2 4/16/80 1105	0 0.0	0	1.0	15.2	0.0 0	2.1	0 4	1.0 6		7 2	5	0.	.0 0	7.2	5.5	0	0.0	0	13.2	0.0	0.6	0
																		-				REI	L
LS	TAXA																	X			S.E.	AB2	1.
19.0						1			2														
0	UNIDENTIFIED ALGA	AE				56564.	07	57	0244.5	0								313404	.25		840.19		.6
0	UNIDENTIFIED ALG	AE (LPIL)			56564.	07	57	0244.5	0								313404	.25	-	840.19		.6
0	CYANOPHYTA					0.	0	1174	0328.0								50	370164	.00	5870	164.00	67	.4
0	CHROCCOCCACEAE																						
0	GGMPHOSPHAER	IA LACUS	TRIS			0.	0		0328.0								50	370164	.00		164.00		-
0	CHLOROPHYTA					141410.	12	40	2525.5	0								271967	.81	130	557.69	3	.1
. 0	VOLVOCALES																						
0	CHLANYDOMONA!	S (LPIL)				84846.	06	20	1262.7	5								143054	. 37	58	208.34	. 1	.6
0	TETRASPORALES																						
0	ELAKATOTHRIX	(LPIL)				56564.	07	13	4175.1	9								95369	.62	38	805.56	1	.1
0	CHLOROCOCCALES																						
0	ANKISTRODESM	US FALCA	TUS			0.			7087.5	-								33543			543.76		.4
0	CHRYSOPHYTA					56564.	07	13	4175.1	9								95369	.62	38	865.56	, 1	. 1
0	MONOSIGALES							- 1.															
0	STELEXOMONAS		MA			56564.	-	100.0	14175.1									95369			805.56		.1
0	BACILLARIOPHYTA-	CENTRIC				523217.	50	36	8981.6	9								446099	.56	77	117.8	7 5	.1
0	EUPODISCALES																			***			-
0	MELOSIRA (LP		a la la			268679.			0.0									134339		-	339.6		.5
0	STEPHANODISC)			0.	0	30	11894.1	2								150947	.06	150	947.06	, 1	. 7
0	RHIZOSOLENIALE																				700 Y		
0	RHIZOSOLENIA		5			254538.			7087.5	780								160812			725.31		.8
0	BACILLARIOPHYTA-	PENNATE				692909.	.69	117	77386.0	0							. 4	935147	.61	242	238.13	2 10	. /
0	FRAGILARIALES						***											750769	ar.	774	773.25		.1
0	ASTERIONELLA					494935.			1389.0	-								358162 16771			771.90		.2
0	DIATONA TENU		**			0.	.0		3543.8 72138.6	77								436069			069.3		.0
0	FRAGILARIA CI					113128		01	0.0									56564		0.000	564.00		.6
32	TABELLARIA F					84846			50315.7									67580			265.18		.8
- 0	PYRRHOPHYTA-DINO		CLPIL	•		480,794			0.0	-								240397			397.2!		.8
0	PERIDINIALES	PHICEAE				400,94	.50		0.0									240371	. 63	640	371.63	, .	. 0
0	PERIDINIUM I	NECHERTO	10.94			480794	64		0.0									240397	25	240	397.25		.8
0	CRYPTOPHYTA	III CHISPIC	OUT			509076	1000	57	70244.4									539660			584.0		.2
0	CRYPTOMONODALE	e.				307070		31	0244.4									237000		30	234.0		
0	CRYPTOMONAS					0	0		7087.5	6								33543	.78	33	543.78	9 0	.4
0	CRYPTOHONAS					28282			0.0									14141	-		141.0		.2
0	RHODONONAS M	Committee of the commit				480794		50	3156.8									491975			181.2		.6
	KIIOOUIKIINA II					100774		-	2230.0										-				-

DATE 07/14/80 PAGE NO 24 T600AQUA 9/28/77 NORTHERN INDIANA PUBLIC SERVICE COMPANY (49720) BAILLY GENERATING PLANT PHYTOPLANKTON DENSITY NUMBER OF CELLS PER LITER REPLICATE REPORT REL LS TAXA X S.E. AB% 1 2 TOTAL 2460535.00 14963873.0 8712204.00 6251669.00 100.0 DIVERSITY (H PRIME) 3.06 2.24 0.82 1.42 DIVERSITY (J PRIME) 0.85 0.37 0.61 0.24 HUMBER OF TAXA 12 14 18 ABOVE COMPUTED USING SAMPLE IDS 91 92 DATE 07/14/80 PAGE NO 25

T600AQUA

9/28/77

BAILLY GENERATING PLANT

PHYTOPLANKTON DENSITY

NUMBER OF CELLS PER LITER

STATION REPORT

					and the second second		REL
LS	TAXA				×	S.E.	ABZ
		7	8	9			
0	UNIDENTIFIED ALGAE	0.0	0.0	313404.25	104468.06	104468.06	2.0
0	UNIDENTIFIED ALGAE (LPIL)	0.0	0.0	313404.25	104468.06	104468.06	2.0
0	CYANOPHYTA	0.0	369639.50	5870164.00	2079934.00	1898116.00	40.1
0	CHROOCOCCACEAE						
0	MICHOCYSTIS (LPIL)	0.0	285451.12	0.0	95150.37	95150.37	1.8
0	GOMPHOSPHAERIA LACUSTRIS	0.0	0.0	5870164.00	1956721.00	1956721.00	37.7
0	OSCILLATORIACEAE						
0	OSCILLATORIA LIMNETICA	0.0	84188.37	0.0	28062.79	28062.79	0.5
0	CHLOROPHYTA	69060.75	83530.62	271967.81	141519.69	65357.66	2.7
0	VOLVOCALES						
0	CHLAMYDOMONAS (LPIL)	69060.75	63141.28	143054.37	91752.12	25707.97	1.8
0	TETRASPORALES						
0	ELAKATOTHRIX (LPIL)	0.0	0 0	95369.62	31789.87	31789.87	0.6
0	CHLOROCOCCALES						
0	ANKISTRODESMUS FALCATUS	0.0	20389.37	33543.78	17977.71	9758.04	0.3
0	CHRYSOPHYTA	89778.94	226913.94	95369.62	137354.12	44808.96	2.6
0	CHRYSOMONADALES				- 17		
0	CHRYSOCOCCUS (LPIL)	0.0	21047.09	6.0	7015.70	7015.70	0.1
0	DINOBRYON SOCIALE	0.0	184819.75	0.0	61606.58	61606.58	1.2
0	MONOSIGALES						1000
0	STELEXOMONAS DICHOTOMA	89778.94	0.0	95369.62	6,716.19	30900.27	1.2
0	CHRYSOPHYTA (LPIL)	0.0	21047.09	0.0	7015.70	7015.70	0.1
0	BACTLLARIOPHYTA-CENTRIC	1052025.00	680084.00	446099.56	726069.50	176420.31	14.0
0	EUPODISCALES						
0	MELOSIRA (LPIL)	207182.31	224283.00	134339.62	188601.62	27576.46	3.6
0	STEPHANODISCUS BINDERANA	128913.37	0.0	0.0	42971.12	42971.12	0.8
0	STEPHANODISCUS NIAGARAE	0.0	20389.37	0.0	6796 45	6796.45	0.1
0	STEPHANODISCUS (LPIL)	308471.37	82872.87	150947.06	180763.75	66809.25	3.5
0	EUPODISCALES (LPIL)	0.0	21047.09	0.0	7015.70	7015.70	0.1
0	RHIZOSOLENIALES						
0	RHIZOSOLENIA ERIENSIS	407458.44	331491.62	160812.87	299920.94	72929.25	5.8
0	BACILLARIOPHYTA-PENNATE	1562844.00	1446986.00	935147.81	1314992.00	192844.75	25.4
0	FRAGILARIALES			100000000000000000000000000000000000000			
0	ASTERIONELLA FORMOSA	1037062.44	887924.06	358162.25	761049.56	205992.87	14.7
0	DIATONA TENUE	0.0	165088.06	16771.90	60619.98	52457.95	1.2
0	FRAGILARIA CROTONENSIS	460405.19	84188.37	436069.31	326887.62	121552.75	6.3
0	FRAGILARIA (LPIL)	0.0	142725.56	0.0	47575.19	47575.19	0.9
0	TABELLARIA FLOCCULOSA	0.0	126282.56	56564.06	60948.87	36520.50	1.2
0	NAVICULALES		220202130		00710107	30320.30	***
0	NAVICULA (LPIL)	29926.33	0.0	0.0	9975.44	9975.44	0.2
0	PINNULARIA (LPIL)	0.0	20389.37	0.0	6796.45	6796.45	0.1
0	BACILLARIALES				0.10.10	01.701.13	

DATE 07/14/80 PAGE NO 26 T600AQUA 9/28/77 •

NORTHERN INDIANA PUBLIC SERVICE COMPANY (49720)

BAILLY GENERATING PLANT

PHYTOPLANKTON DENSITY

NUMBER OF CELLS PER LITER

STATION REPORT

					*		REL
LS	TAXA				×	S.E.	AB%
		7	8	9			
0	NITZCHIA (LPIL)	23941.06	0.0	0.0	7980.35	7980.35	0.2
0	BACILLARIOPHYTA-PENNATE (LPIL)	11510.13	20389.37	67580.87	33160.12	17400.20	0.6
0	PYRRHOPHYTA-DINOPHYCEAE	0.0	21047.09	240397.25	87148.06	76865.06	1.7
0	PERIDINIALES						
0	PERIDINIUM INCONSPICUUM	0.0	21047.09	240397.25	87148.06	76865.06	1.7
0	CRYPTOPHYTA	333793.62	910944.37	539660.44	594799.44	168874.69	11.5
0	CRYPTOMONODALES						
. 0	CRYPTOMONAS REFLEXA	0.0	0.0	33543.78	11181.26	11181.26	0.2
0	CRYPTOMONAS (LPIL)	23020.26	0.0	14141.02	12387.09	6702.99	0.2
0	RHODOMONAS MINUTA	310773.37	889897.31	491975.62	564215.44	171036.12	10.9
0	CHROOMONAS (LPIL)	0.0	21047.09	0.0	7015.70	7015.70	0.1
TOT	TAL	3107500.00	3739140.00	8712204.00	5186281.00	1772365.00	100.0
DIV	VERSITY (H PRIME)	2.56	3.11	2.24	2.64	0.25	
DIV	PRSITY (PRIME)	0.81	0.82	0.61	0.75	0.07	
NU	BER OF TAXA	13	22	18	31		
ABO	OVE COMPUTED USING SAMPLE IDS						
	71 72 8	1 82					
83.1	91 92						

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BAILLY GENERATING PLANT

PHYTOPLANKTON DENSITY

NUMBER OF CELLS PER LITER

STATION REPORT

LS	TAXA	
		9
0	UNIDENTIFIED ALGAE	104468.06
0	UNIDENTIFIED ALGAE (LPIL)	104468.06
0	CYANOPHYTA	2079934.00
0	CHROOCOCCACEAE	
0	MICROCYSTIS (LPIL)	95150.37
G	GOMPHOSPHAERIA LACUSTRIS	1956721.00
0	OSCILLATORIACEAE	
0	OSCILLATORIA LIMNETICA	28062.79
0	CHLOROPHYTA	141519.69
0	VOLVOCALES	
0	CHLAMYDOMONAS (LPIL)	91752.12
0	TETRASPORALES	
0	ELAKATOTHRIX (LPIL)	31789.87
0	CHLOROCOCCALES	
0	ANKISTRODESHUS FALCATUS	17977.71
0	CHRYSOPHYTA	137354.12
0	CHRYSOMONADALES	
0	CHRYSOCOCCUS (LPIL)	7015.70
0	DINOBRYON SOCIALE	61606.58
0	MONOSIGALES	
0	STELEXOMONAS DICHOTOMA	61716.19
0	CHRYSOPHYTA (LPIL)	7015.70
0	BACILLARIOPHYTA-CENTRIC	726069.50
0	EUPODISCALES	
0	MELOSIRA (LPIL)	188601.62
0	STEPHANODISCUS BINDERANA	42971.12
0	STEPHANODISCUS NIAGARAE	6796.45
0	STEPHANODISCUS (LPIL)	180763.75
0	EUPODISCALES (LPIL)	7015.70
0	RHIZOSOLENIALES	
0	RHIZOSOLENIA ERIENSIS	299920.94
0	BACILLARIOPHYTA-PENNATE	1314992.00
0	FRAGILARIALES	
0	ASTERIONELLA FORMOSA	761049.56
0	DIATOMA TENUE	60619.98
0	FRAGILARIA CROTONENSIS	326887.62
0	FRAGILARIA (LPIL)	47575.19
0	TABELLARIA FLOCCULOSA	60948.87
0	NAVICULALES	
0	NAVICULA (LPIL)	9975.44
0	PINNULARIA (LPIL)	6796.45
0	BACILLARIALES	

		REL
×	S.E.	AB%
	- 7771	
104468.06	-1.00	2.0
104468.06	-1.00	2.0
2079934.00	-1.00	40.1
95150.37	-1.00	
1956721.00	-1.00	37.7
28062.79	-1.00	
141519.69	-1.00	2.7
91752.12	-1.00	1.8
31789.87	-1.00	0.6
17977.71	-1.00	0.3
137354.12	-1.00	2.6
7015.70	-1.00	0.1
61606.58	-1.00	1.2
61716.19	-1.00	1.2
7015.70	-1.00	
726069.50	-1.00	14.0
188601.62	-1.00	
42971.12	-1.00	
6796.45	-1.00	
180763.75	-1.00	
7015.70	-1.00	0.1
299920.94	-1.00	
1314992.00	-1.00	25.4
761049.56	-1.00	14.7
60619.98	-1.00	1.2
326887.62	-1.00	6.3
47575.19	-1.00	0.9
60948.87	-1.00	1.2
9975.44	-1.00	0.2
6796.45	-1.00	0.1

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BAILLY GENERATING PLANT

PHYTOPLANKTON DENSITY

NUMBER OF CELLS PER LITER

STATION REPORT

LS	TAXA		
-			9
0	NITZCHIA (LPIL)		7980.35
0	BACILLARIOPHYTA-PENNATE (LPIL)		331().12
0	PYRRHOPHYTA-DINOPHYCEAE		87148.06
0	PERIDINIALES		
0	PERIDINIUM INCONSPICUUM		87148.06
0	CRYPTOPHYTA		594799.44
0	CRYPTOMONODALES		
0	CRYPTOMONAS REFLEKA		11181.26
0	CRYPTOMONAS (LPIL)		12387.09
0	RHODOMONAS MINUTA		564215.44
0	CHROOMONAS (LPIL)		7015.70
TOT	AL		5186281.00
DIV	ERSITY (H PRIME)		2.64
DIV	ERSITY (J PRIME)		0.75
NUT	BER OF TAXA		31
ABO	VE COMPUTED USING SAMPLE IDS		
	71 72	81	82
	91 92		

		REL	
×	S.E.	ABZ	
7980.35	-1.00	0.2	
33160.12	-1.00	0.6	
87148.06	-1.00	1.7	
87148.06	-1.00	1.7	
594799.44	-1.00	11.5	
11181.26	-1.00	0.2	
12387.09		0.2	
564215.44	-1.00	10.9	
7015.70	-1.00	0.1	
5186281.00	-1.00	100.0	
2.64	-1.00		
0.75	-1.00		
31			

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BAILLY GENERATING PLANT

PHYTOPLANKTON DENSITY

NUMBER OF CELLS PER LITER

REPLICATE REPORT

PC TC GC LOC 5 56 56 1 1 00

				DURAT	TON			TON	SAMP	VOI	0		ш	ND		CUR	RENT		TEMP								
SI	D DATE	TIME	D/N	-	-	SD	ND		UNITS			H T			CL				A	T B	T TU	RBD	COND	00	PH	SALN	P
	71 4/20/80	- A	1000	0.0	1.00	1.0	1.0	0.00	2.0			22				3759			8 16.			0.0		8.9	0.0	0.0	0
1 (20)	72 4/20/80			0.0		1.0	-	0.0 0			1.0							17.	8 16.	0	0	0.0	0	8.9	0.0	0.0	0
100							-				77.7	-						-				-				RE	L
LS	TAXA																					X			S.E.	AB	7.
								1			2																
0	CYANOPHYTA	4						0	.0	56	62351.	87									281	175	.94	281	175.9	. 6	.2
0	OSCILLAT	TORIAC	EAE																								
0	OSCIL	LATORI	AIL	PILI				0	.0	56	62351.	87										175		100000000000000000000000000000000000000	175.94		.2
0	CHLOROPHYT	TA					3	207047	.00	127	74663.	00									2240	855	.00	966	192.00	0 49	.2
0	CHLOROCO	CCALE	S																								
0	SCENE	PESMUS	QUA	DRICAU	DA			783476		119	99683.										1991				396.50	200	. 7
0	SCENE	DESMUS	ECO	RNIS				181531			0.	0									2.5	765		-	765.56		.0
0	SCENE							60510	-			0										255			255.19	2 - 2	.7
0	TETRA		CAUD	ATUM				30255	.19		0.	0									15	127	.59	15	127.5	9 0	. 3
0	OEDOGON:	2000 C. C.																									_
0	OEDOGO		(LPI	L)				121020	.75		0.	0									60	510	.37	605	510.3	, 1	. 3
0	ZYGNEMAT							100																			
0	MOUGE							the second second	. 0	- 3	37490.	-										745			745.06	-	.4
0				LIFERU	R1			30255			0.	-										127	50,000 (17)		127.5	5	. 3
0	STAUR	The second second	(LP	IL)					.0	- 1.2	37490.	-										745			745.06		.4
0	EUGLENOPH	The state of the s						90765	.56		74980.	25									82	872	.87	/1	392.66	, 1	.8
0	EUGLENA										74.000										0.0	070		71	002 44		.8
0		Marie Company	IAS (LPIL)				90765			74980.										1495	872			392.66 767.94		.8
0	CHRYSOPHY							816890	.06	21	74426.	00									1475	650	.00	6/0	101.7	v 32	. 0
0	CHRYSOMO							272224			04.707	00									400	499	01	6265	203.12	2 15	7
0	CHRYS		100 - 30 m	20 20 20 20				272296		-27-77-6	24703. 12233.	122 370										030			202.75		-
0	DINOB							90765		10.	0.										100000	382			382.78		.0
0	KEPHY								.0		37490	100										745			745.06		.4
0	BACILLARIO							429623			24940.											282		-	341.44		.2
0	FRAGILA			HAIL				427023	.02		.4740.	13									36,	LUL.					-
0				CULOSA				157326	94		0.	0									78	663.	44	786	63.44	. 1	.7
0	ACHNANTA	7	LUC	COLOGA				137300				•															
0	14.444.000.000.000.000		MINI	TISSIM	14			181531	12	14	49960	50									165	745.	.81	157	785.31	1 3	.6
0	ACHNA			2000000				60510			0.											255		302	255.19		.7
o	SURIREL																				-						
0	The second of the second of the	ELLA (LPIL)				30255	.19		0	J									15	127.	.59	151	127.59	9 0	. 3
0	BACILLARIO				LPI	.)			.0	- 7	4900.										37	490.	.12	374	90.12	2 0	.8
0	CRYPTOPHY	TA						0	.0	2.	430.	87									131	215.	.44	1313	215.44	. 2	.9
0	CRYPTOM	LAGOMO	ES																								
_ 0	CRYPTO	OMONAS	(LP	IL)				0	.0	13	12470.	37									56	235.	.19	562	235.19	1	.2
-																											

DATE 07/14/80 PAGE NO 32 T600AQUA 9/28/77

BAILLY GENERATING PLANT

PHYTOPLANKTON DENSITY

NUMBER OF CELLS PER LITER

REPLICATE REPORT

						REL
LS	TAXA			×	S.E.	AB%
		1	2			
0	RHODOMONAS MINUTA	0.0	37490.12	18745.06	18745.06	0.4
0	CHROGMONAS (LPIL)	0.0	112470.37	56235.19	56235.19	1.2
TOTAL		4544321.00	4573789.00	4559055.00	14734.00	100.0
DIVER	SITY (H PRIME)	2.22	2.70	2.46	0.24	
DIVER	SITY (J PRIME)	0.58	0.73	0.66	0.07	
NUMBE	R OF TAXA	14	13	22		

ABOVE COMPUTED USING SAMPLE IDS 171 172

> DATE 07/14/80 PAGE NO 33 T600AQUA 9/28/77

BAILLY GENERATING PLANT

PHYTOPLANKTON DENSITY

NUMBER OF CELLS PER LITER

REPLICATE REPORT

PC TC GC LOC 5 56 56 1 1 00

SID					DURAT	TOIL			TOM		SAMP	AOF			WI	ND		CURI	ENI		EMP								
210	DATE	7	TIME	D/N	UNITS	C	SD	WD	SP	D	UNITS	C	SECH	HT	SC	DI	CL	SP	DI	AIR	WAT	BT	TURBD	CON	D	DO	PH	SALN	P
181	4/20/8	30 1	1025	0	0.0	0	1.0	1.0	0.0	0	2.0	1 4	1.0	8 0						178.1		0	0.0		0	9.1	0.0	0.0	0
182	4/20/8	30 1	1025	0	0.0	0	1.0	1.0	0.0	0	2.0	4	1.0	8 0	4	1	5	0.0	c	17.8	15.5	0	0.0		0	9.1	0.0		
																							-					RE	-
LS	AXAT																						X				S.E.	AB	Z
										1			2																
	CYANOPHYT									0.0		116	0221	.00									80110	.50		5801	10.50) 6	.2
0	NOSTOCA																												
0	ANABA		A CLF	IL)				100		0.0			0221									10.07	80110				10.50		.2
	CHLOROPH							8	05708	3.0	0	140	1932	.00								41	729507	.00		33275	75.00	50	.2
0	CHLOROG																						7000/			704			
0	OOCYS								6577	77	770			.0									32886				86.06		.3
0					RICAU	UA			15706			-14	2449	-								-	174755				44.25		.4
0	SCENE								26308			**		.0									64456			-	56.72		. 7
0			and the same of	-	IOSUS				20941	0.0		10	8913	200									04708	T. T. T. T.			08.00		-
0	PEDIA		1200	IUPLI				4	20941	0.0	U		0	. 0								21	104700	.00		1047	00.00		. 4
0	ZYGNEMA			DTI					36174		0		0570	07									221158	75		1405	87.87	, ,	. 3
	EUGLENOPH	10000	200 000	PIL						0.0		- 77	2228	1 300 300									16114			-3	14.18	70	.2
0 -	EUGLENA									0.0		,	2220	. 30									10114	.10		101	14.10	, ,	
0				5 (1	PILI					0.0		2	2228.	34									16114	18		161	14.18		.2
0 0	CHRYSOPHY		JITOPAA	3 (1	PILI			7	09128	777			3570										32429				41.00		-
0	CHRYSON	n cab.	DALE					,	07120	0.0	•	41,	3310.	.00								30	,32427			3444	.44.00	30	
0	CHRYS			750	111			2	82820	0.0	0	306	1693	00								29	944946	.00		1167	46.50	31	. 3
0				7.7	ARIA			-	13154	3705.3			7421										89483				38.75		.3
0	KEPH)								13154	10.15	-		4456										98000				43.76		.0
	BACILLARI								22362				6316										59970	700			45.75		.8
0	FRAGILA																												
0	FRAGI			LPII	1					0.0		16	1141.	.81									80570	.87		805	70.87	. 0	.9
0					ULOSA					0.0		1000	2228.										16114	.18		161	14.18	. 0	.2
0	NAVICUL	ALE	ES																										
0	MEIDI	MUI	(LP)	L					6577	2.1	2		0.	.0									32886	.06		328	86.06	0	.3
0	BACILLA	RIA	LES																										
. 0	NITZO	HIA	4 (LF	ILI					2630	8.8	5		0.	.0									13154	.42		131	54.42		.1
0 8	BACILLARI	IOPH	HYTA-	PENI	IATE (LPIL	.)		13154	4.2	5	30	2946.	56									17245			100000000000000000000000000000000000000	01.12		. 3
0 0	CRYPTOFHY	TA								0.0		19	3370.	.06									96685	.00		966	85.00	1	.0
0	CRYPTON	10110	DOALE	S																									
0	CRYPT	0.000		2000						0.0		- 2	6685										48342				42.53	0.003	.5
0	RHODO									0.0			2228.										16114				14.18		.2
0	CHROC	10110	NAS (LPI	.)					0.0		6	4456.	.73									32228	. 36		322	28.36	0	. 3
TOTAL	L							11	37199			745	7632									94	14813		1	9571		100.	.0
-DIVER	RSITY (H	PRI	IME)							2.1	6		2.	.55									2	. 35			0.19		

DATE 07/14/80 PAGE NO 34 NORTHERN INDIANA PUBLIC SERVICE COMPANY (49720) BAILLY GENERATING PLANT PHYTOPLANKTON DENSITY NUMBER OF CELLS PER LITER REPLICATE REPORT REL S.E. ABZ TAXA DIVERSITY (J PRIME) 0.62 0.67 0.65 0.02 NUMBER OF TAXA 19 14 ABOVE COMPUTED USING SAMPLE IDS 181 182 DATE 07/14/80

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T600AQUA

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9/28/77

BAILLY GENERATING PLANT

PHYTOPLANKTON DENSITY

NUMBER OF CELLS PER LITER

STATION REPORT

				57		REL
LS	TAXA			x	S.E.	AB%
		17	18			
0	CYANOPHYTA	281175.94	580110.50	430643.19	149467.25	6.2
0	OSCILLATORIACEAE					
0	OSCILLATORIA (LPIL)	281175.94	0.0	140587.94	140587.94	2.0
0	HOSTOCACEAE					
0	ANABAENA (LPIL)	0.0	580110.50	290055.25	290055.25	4.2
0	CHLOROPHYTA	2240855.00	4729507.00	3485181.00	1244326.00	49.9
0	CHLOROCOCCALES					
0	OOCYSTIS (LPIL)	0.0	32886.06	16443.03	16443.03	0.2
0	SCENEDESMUS QUADRICAUDA	1991579.00	2174755.00	2083167.00	91588.00	29.8
0	SCENEDESMUS ECORNIS	90765.56	131544.25	111154.87	20389.34	1.6
0	SCENEDESHUS SPINOSUS	30255.19	64456.72	47355.95	17100.77	0.7
0	PEDIASTRUM DUPLEX	0.0	2104708.00	1052354.00	1052354.00	15.1
0	TETRAEDRON CAUDATUM	15127.59	0.0	7563.80	7563.80	0.1
0	DEDOGONIALES	757777				
0	OEDOGONIUM (LPIL)	60510.37	0.0	30255.19	30255.19	0.4
0	ZYGNEMATALES					
0	MOUGEOTIA (LPIL)	18745.06	221158.75	119951.87	101206.81	1.7
0	CLOSTERIUM MONILIFERUM	15127.59	0.0	7563.80	7563.80	0.1
0	STAURASTRUM (LPIL)	18745.06	0.0	9372.53	9372.53	0.1
0	EUGLENOPHYTA	82872.87	16114.18	49493.53	33379.35	0.7
0	EUGLENALES					
0	TRACHELOMONAS (LPIL)	82872.87	16114.18	49493.53	33379.35	0.7
0	CHRYSOPHYTA	1495658.00	3632429.00	2564043.00	1068385.00	36.7
0	CHRYSOMONADALES		3032 11.7102			
0	CHRYSOCOCCUS (LPIL)	698499.81	2944946.00	1821722.00	1123223.00	26.1
0	DINGERYON SERTULARIA	733030.56	589483.00	661256.75	71773.75	9.5
0	EPIPYXIS UTPICULUS	45382.78	0.0	22691.39	22691.39	0.3
0	KEPHYRION (LPIL)	18745.06	98000.44	58372.75	39627.69	6.8
0	BACILLARIOPHYTA-PENNATE	327282.19	359970.94	343626.56	16344.37	4.9
0	FRAGILARIALES	327202147	337774.77			
0	FRAGILARIA (LPIL)	0.0	80570.87	40285.44	40285.44	0.6
0	TABELLARIA FLOCCULOSA	78663.44	16114.18	47388.81	31274.63	0.7
0	ACHNANTHALES	70003.44	10117.10	17300.01	31011103	
0	ACHNANTHES MINUTISSIMA	165745.81	0.0	82872.87	82872.87	1.2
0	ACHNANTHES (LPIL)	30255.19	0.0	15127.59	15127.59	0.2
0	NAVICULALES	30233.17				
0	NEIDIUM (LPIL)	0.0	32886.06	16443.03	16443.03	0.2
0	BACILLARIALES	0.0	32000.00	10113.03	20443.03	0.2
0	NITZCHIA (LPIL)	0.0	13154.42	6577.21	6577.21	0.1
0	SURIRELLALES	0.0	13134.46	03/7.21	0371.61	0.1
0	SURIRELLA (LPIL)	15127.59	0.0	7563.80	7563.80	0.1
0	BACILLARIOPHYTA-PENNATE (LPIL)		217245.37	127367.75	89877.62	1.8
. 0	DAGILLARIUPHITA-PERMATE (LPIL)	3/470.12	21/245.3/	12/30/./5	07077.02	1.0

DATE

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BAILLY GENERATING PLANT

PHYTOPLANKTON DENSITY

NUMBER OF CELLS PER LITER

STATION REPORT

LS	TAXA				
			17	18	
0	CRYPTOPHYTA		131215.44	96685.00	
0	CRYPTOMONODALES				
0	CRYPTOMONAS (LPIL)		56235.19	48342.53	
0	RHODOMONAS MINUTA		18745.06	16114.18	
0	CHROGMONAS (LPIL)		56235.19	32228.36	
TOT	AL		4559055.00	9414813.00	
DIV	ERSITY (H PRIME)		2.46	2.35	
DIV	ERSITY (J PRIME)		0.66	0.65	
NUM	BER OF TAXA		22	19	
ABO	VE COMPUTED USING SAMPLE IDS				
	171 172	181	182		

DATE	07/14/80
PAGE NO	37
T600AQUA	9/28/77

REL S.E. AB% 17265.22 1.6 113950.19 52738.86 3946.33 0.7 17 29.62 1315.44 0.2 44231.77 22003.41 0.6 6986934.00 2427879.00 100.0 0.06 2.41 0.65 0.01 28

BAILLY GENERATING PLANT

PHYTOPLANKTON DENSITY

NUMBER OF CELLS PER LITER

STATION REPORT

LS	TAXA		
		18	
0	CYANOPHYTA	430643.19	
0	OSCILLATORIACEAE		
0	OSCILLATORIA (LPIL)	140587.94	
0	NOSTOCACEAE		
0	ANABAENA (LPIL)	290055.25	
0	CHLOROPHYTA	3485181.00	
0	CHLOROCOCCALES		
0	OOCYSTIS (LPIL)	16443.03	
0	SCENEDESMUS QUADRICAUDA	2083167.00	
0	SCENEDESMUS ECORNIS	111154.87	
0	SCENEDESHUS SPINOSUS	47355.95	
0	PEDIASTRUM DUPLEX	1052354.00	
0	TETRAEDRON CAUDATUM	7563.80	
0	OEDOGONIALES		
0	OEDOGONIUM (LPIL)	30255.19	
0	ZYGNEMATALES		
0	MOUGEOTIA (LPIL)	119951.87	
0	CLOSTERIUM MONILIFERUM	7563.80	
0	STAURASTRUM (LPIL)	9372.53	
0	EUGLENOPHYTA	49493.53	
0	EUGLENALES		
C	TRACHELOMONAS (LPIL)	49493.53	
0	CHRYSOPHYTA	2564043.00	
0	CHRYSOMONADALES		
0	CHRYSOCOCCUS (LPIL)	1821722.00	
0	DINOBRYON SERTULARIA	661256.75	
0	EPIPYXIS UTRICULUS	22691.39	
0	KEPHYRION (LPIL)	58372.75	
0	BACILLARIOPHYTA-PENNATE	343626.56	
0	FRAGILARIALES		
0	FRAGILARIA (LPIL)	40285.44	
0	TABELLARIA FLOCCULOSA	47388.81	
0	ACHNANTHALES.		
. 0	ACHNANTHES MINUTISSIMA	82872.87	
0	ACHNANTHES (LPIL)	15127.59	
0	NAVICULALES		
0	NEIDIUM (LPIL)	16443.03	
0	BACILLARIALES		
0	NITZCHIA (LPIL)	6577.21	
0	SURIRELLALES		
0	SURIRELLA (LPIL)	7563.80	
. 0	BACILLARIOPHYTA-PENNATE (LPIL)	127367.75	
-			

		REL
×	S.E.	AB%
430643.19	-1.00	6.2
140567.94	-1.00	2.0
290055.25	-1.00	4.2
3485181.00	-1.00	49.9
16443.03	-1.00	0.2
2083167.00	-1.00	29.8
111154.87	-1.00	1.6
47355.95	-1.00	0.7
1052354.00	-1.00	15.1
7563.80	-1.00	0.1
30255.19	-1.00	0.4
139951.87	-1.00	1.7
7563.80	-1.00	0.1
9372.53	-1.00	0.1
49493.53	-1.00	0.7
49493.53	-1.00	
2564043.00	-1.00	36.7
1821722.00	-1.00	
661256.75	-1.00	
22691.39	-1.00	0.3
58372.75	-1.00	0.8
343626.56	-1.00	4.9
40285.44	-1.00	0.6
47388.81	-1.00	0.7
82872.87	-1.00	1.2
15127.59	-1.00	0.2
16443.03	-1.00	0.2
6577.21	-1.00	0.1
7563.86	-1.00	0.1
127367.75	-1.00	1.8

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BAILLY GENERATING PLANT

PHYTOPLANKTON DENSITY

NUMBER OF CELLS PER LITER

STATION REPORT

LS	TAXA		
23	1000		18
0	CRYPTOPHYTA		113950.19
0	CRYPTOMONODALES		
0	CRYPTOMONAS (LPIL)		52288.86
0	RHODOMONAS MINUTA		17429.62
0	CHROOMONAS (LPIL)		44231.77
тот	TAL		6986934.00
DIV	VERSITY (H PRIME)		2.41
DIV	VERSITY (J PRIME)		0.65
NUT	BER OF TAXA		28
ABO	OVE COMPUTED USING SAMPLE IDS		
	171 172	181	182

		REL
×	S.E.	AB%
113950.19	-1.00	1.6
52288.86	-1.00	0.7
17429.62	-1.00	0.2
44231.77	-1.00	0.6
6986934.00	-1.00	100.0
2.41	-1.00	
0.65	-1.00	
28		

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DURATION

BAILLY GENERATING PLANT

PHYTOPLANKTON DENSITY

NUMBER OF CELLS PER LITER

REPLICATE REPORT

PC TC GC LOC 5 56 56 1 2 00

				DUNKA	. T.Cu.			104		WILL AN			PL L	mu		COME	CLER		CLIE								
SI	-			UNITS	-	50	MD	SP		NITS C										-	TURBO	100	-	DO	PH	SALN !	-
1		-	1.75	100		1.0	1970	0.0	20	7-20-00-00-00-00-00-00-00-00-00-00-00-00-		- 200			-	-		178.1		-	0.0		- 75	8.5		0.0	75
1	2 4/20/80	1055	0	0.0	0	1.0	1.0	0.0	0	2.0 4	1.0	8 0	4	1	5	0.0	0	17.8	19.5	0	0.0		0	8.5	0.0		-
																					-					REL	
LS	TAXA																				×				S.E.	ABZ	
								70000	1		2										00067			***			
0	CYANOPHYTA							39989	14.81	100	0	. 0									99947	.37		1999	47.37	1.5	>
0	CHROOCOCI		Contractor					70000													00047	**		1000	47.37	1.	
0	CHLOROPHYT	Age of the same of	LLI	L)				39989			-	.0									99947			100			-
0	VOLVOCAL	77						32496	07.00		42699	.12									03033	.06		200	66.03	1.	*
0	CHLAMY	2000						2499	N 43	en 1 - 1	24.044	E 0									25980	00		0	86.58	0.	•
0	CHLOROCO			CATE				544	13.43	S	26966	.50									25700	.00		4	00.30	0.	-
0	ANKIST		The same of the same	EALCAT	THE				0.0		53933	14									26966	E0.		24.0	66.58	0.	
0	SCENED			Andrew Control of the					0.0		61799										80899				99.69		_
0	SCENED				JUA			9997				.0									49986	-			86.84	-	-
0	EUGLENOPHY		ECO	Histo				22494			34832										79886				53.91		-
0	EUGLENAL	-						2547	10.09		34036	.61									1 7000	. / 2		450	33.71		•
0	TRACHE	THE R. P. LEWIS CO., LANSING, MICH.	AS V	OI VOC	TAZA			2499			26966	E 9									25980	00		0	86.58	0.	2
0	TRACHE				M12 (07 (07)			19994			07/166										53906				40.50		_
0	CHRYSOPHYT			L. YE.				542093			13582										17259			29036			
0	CHRYSOMO		ES				•	, ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		,,,	13000	. 00								***				2,030			*
0	CHRYSO		-	PYLL				10497	23.00		66298	12									08010	56		2417	12.44	6.	0
0	DINOER							30491			70809									-	10002	-			93.00		-
0	DINGBR			and the same of					0.0		-3933									-	26966				66.58		100
0	OCHROM		700 700	-			11	117209			5576	0.0010								89	83817			21682			-
0	KEPHYR		7.77					14996			26966									-	88463				96.96		-
0	BACILLARIO	The Control of the Control	2000					2459			30899										65416				17.25		150
0	FRAGILAR		27.755.75									-															
0	FRACIL	ARIA	(LPI	L)				2249	0.81		0	. 0								1	12470	.37		1124	70.37	0.	8
0	TABELL	ARIA	FLOC	CULOS	A				0.0		49508	.69									40449	.84		404	49.84	0.	3
0	BACILLARIO	PHYTA	-PEN	NATE	LPI	Lì		249	93.43		0	.0									12496	.71		124	96.71	0.	1
0	PYRRHOPHYT	A-DIN	OPHY	CEAE				999	73.62	1	07866	.25								1	03919	.94		39	46.31	0.	8
0	PERIDINI	ALES																									
0	PERIOI	NIUM	INCO	NSPIC	UUM			749	30.25	1	07866	.25									91423	.25		164	43.00	0.	7
0	PERIDI	NIUM	CINC	TUM				249	93.43	1	0	. 0									12496	.71		124	76.71	0.	1
0	CRYPTOPHYT	A						999	73.62	1	34832	.87								1	17403	. 25		174	29.62	0.	9
0	CRYPTOMO	HODAL	ES																								
0	CRYPTO							749	80.25	1	0786t	. 31									91423	.25		164	43.03	0.	7
0	CHROOM	ONAS	(LPI	LI				249	93.43		26966	.58									25980	.00		9	86.58	0.	2
TOT	AL.						16	66206			14706									134	67660			31529		100.	0
-DIV	ERSITY (H P	RIME							1.62		1	.62									1	.62			0.00)	

DATE

PAGE NO

07/14/80

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TEMP

TOW SAMP VOL

NORTHERN INDIANA PUBLIC SERVICE COMPANY (49720) BAILLY GENERATING PLANT PHYTOPLANKTON DENSITY NUMBER OF CELLS PER LITER

REPLICATE REPORT

LS TAXA

DIVERSITY (J PRIME) NUMBER OF TAXA

ABOVE COMPUTED USING SAMPLE IDS 191 192

1	2
0.42	0.43
15	14

DATE 07/14/80 PAGE NO 9/28/77 T600AQUA

REL S.E. ABZ 0.01 0.42

BAILLY GENERATING PLANT

PHYTOPLANKTON DENSITY

NUMBER OF CELLS PER LITER

REPLICATE REPORT

PC TC GC LOC 5 56 56 1 2 00

5 5	0 50 1 2 (10																											
				DURAT	1000			TO		SAMP	2000			7.77	DHI		100000000	ENT			MP								
SIC		2 200		UNITS	0.000	50	CM	SP	- 77	UNITS												770	TURBO	CO	MD			-	3 (2)
200	1 4/20/80			0.0		1.0		0.0				1.0			1						19.5	0	-	3.	0		0.0		
20	2 4/20/80	1055	> 0	0.0	0	1.0	1.0	0.0	0	2.0	4	1.0	8 0	4	1	5	0.0	0	17.	8	19.5	0	0.0	0	0	8.7	0.0		
																								-				RE	10000
LS	TAXA											10.00											,	X			S.E.	AB	1%
	CYLLIABILYT								1			2															77 0		
0	CYANOPHYTA								0.	0	244	+0147	.00									1	22007	3.00		12200	73.00	, 4	1.6
0	NOSTOCAC										~												20007			10000	77 0		
0	CHLOROPHY	2000	LPILI					1262	0.			40147	1000										22007			12200		20 11 102	1.6
0	VOLVOCAL							1202	02.	30	20	9155	.50										16771	9.00		414	36.47	. 0	1.6
0	CHLAM		140 /	I DTI				420	0/-	10	-	34859	25										38476	4 79		74	17.47		0.1
0	CHLOROCO			TLIF)				420	74.	7.4		34037	. 45										304/6	0.12		30	17.41		
0				FALCAT	2117				0.	0		34859	25										17429	0 62		176	29.62		0.1
0	SCENE		er rem		03				0.	-	- 7	39437	7.00										69718	E . M. M. M.			18.50		1.3
0	5577 E.1879			DRICAL	m A			841	1.00		1.		.0										4209				94.19		0.2
0	EUGLENOPH		, 40k	DKICAC	,UA			3998			31	13733											356814				80.75		1.3
0	EUGLENAI							3770	74.	13	31	13:33	. 25										23001.	4.00		430	00.75	, ,	. 3
0			V PAL	OLVOCI	ALAT			841	AA.	37		0	.0										42094	4 19		420	94.19		1.2
0	TRACHE							3157		-	31	13733											314719				86.56		2.1
0	CHRYSOPHY	-	100				26	10778				06032											291920				04.00		1.6
0	CHRYSOMO	CANAL STREET	ES				_																						
0	CHRYS	200000000000000000000000000000000000000		PTL)				1683	76.	75	87	71481	.25										519929	9.00		3515	52.25	. 2	2.0
0	SYNCR							420	A CONTRACTOR OF	-	-		.0									-	2104	C. 10.00.00.00.		-	47.09	100	1.1
0	DINOB		the same and the same and the	The more and more				8839	10 202		177	77821										1	33089				21.50		5.0
0	DINOB							841					.0										42094				94.19		0.2
0	OCHRON	MONAS	(LPI	L)			22	28150		TO 100	178	87024										22	301024				08.00		.1
0	EPIPY	The same of the same	and the second					420			-		.0										2104				47.09		1.1
0	KEPHY	RION	LPIL)				420	94.	19	6	59718	.50										55906	6.34		138	12.15	5 0	2.0
0	BACILLARIO	OPHYTA	A-PEN	NATE					0.	0	6	69718	.50										3485	9.25		348	59.25		1.1
0	BACILLA	RIALES	5																										
0	NITZCI	HIA (LPIL)						0.	0	- 1	34859	.25										1742	9.62		174	29.62	2 0	1.0
0	BACILLARIO	OPHYTA	A-PEN	MATE (LPI	L)			0.	0	1	34859	.25										17429	9.62		174	29.62	2 0	1.0
_ 0	PYRRHOPHY	TA-DI	NOPHY	CEAE				3662	19.	37	20	09155	.50									- 3	28768	7.44		785	31.94	. 1	1.1
0	PERIDIN	IALES																											
0	PERID	INIUM	INCO	NSPICE	JUM			3662	19.	37	13	39437	.00										252828	8.19		1133	91.19	9 1	0.1
0	PERID	INIUM	CINC	TUM					0.	0		69718	.50										3485	9.25		348	59.25	. 0	1.0
0	CRYPTOPHY	TA						1683	76.	75	13	39437	.00										153906	6.87		144	69.87	7 0	0.6
0	CRYPTOM	ONODA	LES																										
0	CRYPT	CAMOMC	SILP	IL)				1683	76.	75	10	04577	.75									- 1	13647	7.25		318	99.50	0	1.5
0	CHROO	MONAS	(LPI	L)					0.	0	1	34859	.25										17429	9.62		174	29.62	0	1.0
-TOT	AL.						2	51384	80.	0 2	786	87280	.0									26	512880	0.0		13744	00.00	100	.0

DATE 07/14/80 PAGE NO 42 NORTHERN INDIANA PUBLIC SERVICE COMPANY (49720)
BAILLY GENERATING PLANT
PHYTOPLANKTON DENSITY
NUMBER OF CELLS PER LITER
REPLICATE REPORT

12	AXA	,	,
DIVERSITY	(H PRIME)	0.71	1.28
DIVERSITY	(J PRIME)	0.19	0.33
NUMBER OF	TAXA	13	15

ABOVE COMPUTED USING SAMPLE IDS 201 202

DATE	07/14/80
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T600AQUA	9/28/77

- REL AB%
0.99 0.29
0.26 0.07
20

BAILLY GENERATING PLANT

PHYTOPLANKTON DENSITY

NUMBER OF CELLS PER LITER

STATION REPORT

						REL
LS	TAXA			X	S.E.	AB%
		19	20			
0	CYANOPHYTA	199947.37	1220073.00	710010.19 51	0062.81	3.6
0	CUROOCOCCACEAE					
0	AGMENELLUM (LPIL)	199947.37	0.0	99973.69	9973.69	0.5
0	NOSTOCACEAE					
0	ANABAENA (LPIL)	0.0	1220073.00		0036.50	3.1
0	CHLOROPHYTA	183833.06	167719.00	175776.00	8057.03	0.9
0	VOLVOCALES					
0	CHLAMYDOMONAS (LPIL)	25980.00	38476.72	32228.36	6248.36	0.2
0	CHLOROCOCCALES					
0	ANKISTRODESMUS FALCATUS	26966.58	17429.62	22198.10	4768.48	0.1
0	SCENEDESMUS ACUTUS	0.0	69718.50		4859.25	0.2
0	SCENEDESMUS QUADRICAUDA	80899.69	42094.19	61496.94	9402.75	0.3
0	SCENEDESHUS ECORNIS	49986.84	0.0	24993.42 2	4993.42	0.1
0	EUGLENOPHYTA	179886.75	356814.00	268350.37	8463.62	1.3
0	EUGLENALES					
0	TRACHELOMONAS VOLVOCINA	25980.00	42094.19	34037.09	8057.09	0.2
0	TRACHELOMONAS (LPIL)	153906.81	314719.81		0406.50	1.2
0	CHRYSOPHYTA	12517259.0	24291920.0	18404576.0 588	7330.00	92.1
0	CHRYSOMONADALES					
0	CHRYSOCOCCUS (LPIL)	808010.56	519929.00	663969.75 14	4040.75	3.3
0	SYNCRYPTA (LPIL)	0.0	21047.09	10523.55	0523.55	0.1
0	DINOBRYON SERTULARIA	2610002.00	1330899.00	1970450.00 63	9551.50	9.9
0	DINOBRYON DIVERGENS	26966.58	0.0	13483.29	3483.29	0.1
0	DINOBRYON (LPIL)	0.0	42094.19	21047.09 2	1047.09	0.1
0	OCHROMONAS (LPIL)	8983817.00	22301024.0	15642420.0 665	8603.00	78.3
0	EPIPYXIS UTRICULUS	0.0	21047.09	10523.55	0523.55	0.1
0	KEPHYRION (LPIL)	88463.50	55906.34	72184.87	6278.58	0.4
0	BACILLARIOPHYTA-PENNATE	165416.94	34859.25	100138.06 6	5278.84	0.5
0	FRAGILARIALES					
0	FRAGILARIA (LPIL)	112470.37	0.0	56235.19 5	6235.19	0.3
0	TABELLARIA FLOCCULOSA	40449.84	0.0	20224.92 2	0224.92	0.1
0	BACILLARIALES					
0	NITZCHIA (LPIL)	0.0	17429.62	8714.81	8714.81	0.0
. 0	BACILLARIOPHYTA-PENNATE (LPIL)	12496.71	17429.62	14963.17	2466.46	0.1
0	PYRRHOPHYTA-DINOPHYCEAE	103919.94	287687.44	195803.69	1883.75	1.0
0	PERIDINIALES					
0	PERIDINIUM INCONSPICUUM	91423.25	252828.19	172125.69	0702.44	0.9
0	PERIDINIUM CINCTUM	12496.71	34859.25	23677.98 1	1181.27	0.1
0	CRYPTOPHYTA	117403.25	153906.87		8251.81	0.7
0	CRYPTOMONODALES					-
0	CRYPTOMONAS (LPIL)	91423.25	136477.25	113950.25 2	2527.00	0.6
0	CHROOMONAS (LPIL)	25980.00	17429.62	21704.81	4275.19	0.1

DATE

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BAILLY GENERATING PLANT PHYTOPLANKTON DENSITY NUMBER OF CELLS PER LITER STATION REPORT REL S.E. AB% 1.5 TAXA 19 20 19990256.0 6522610.00 100.0 TOTAL 13467660.0 26512880.0 1.31 0.32 0.99 DIVERSITY (H PRIME) 1.62 0.08 0.34 DIVERSITY (J PRIME) 0.42 0.26 NUMBER OF TAXA 19 20 25 ABOVE COMPUTED USING SAMPLE IDS 201 202 191 192 DATE 07/14/80 PAGE NO 9/28/77 T600AQUA

NORTHERN INDIANA PUBLIC SERVICE COMPANY (49720)

BAILLY GENERATING PLANT

PHYTOPLANKTON DENSITY

MARKE OF CELLS PER LITER

STATION REPORT

TAXA	
	50
CYANGHITTA	710010.19
CHROCCOCCACEAE	
AGMENELLIM (LPIL)	99973.69
HOSTOCACEAE	
ANABARMA (LPIL)	610036.56
CHICTORNITA	175776.00
VOLVOCALES	
CHLANTDONOHAS (LPIL)	32226.36
AINTERPORTERING FALCATUS	22196.16
SCENEDE SIRIS / - 113	34659.25
SCENEDE STREET SCHOOL	61496.94
	24993,42
KUGLEHOPHYTA	26.6350.37
EUGLEHALES	
TEACHELONGHAS VOLVOCINA	34037.09
TRACHELONORAS (LPIL)	734313, 31
CHRYSOFHYTA	18464576.0
CHELTSONOHABALES	
CHRYSOCOCOUS (LPIL)	663969.75
SynChypta (LPIL)	19523.55
DINCERYON SERTULARIA	1970455,00
DINOBAYON DIVERGENS	13463,29
DINGESTON (LPIL)	21067.09
OCHROMONIAS (LPIL)	15642425.0
EPIPTXIS UTRICULUS	10523.55
KENINGION (LPIL)	72164.67
BACTLLABIOPHYTA - PERBIATE	100136.66
PRASTLANTALES	
FRAGILABIA (LPIL)	56235,19
TABELLAWIA FLOCCILIOSA	20224.92
BACILLABIALES	
HITZCHIA (LPIL)	6714,63
BACTLLABIOPHYTA PERBIATE LLPIL	16963.17
PYREHOFITY TA - D THOPHYCE AE	19567.69
PERIOTHIALES	
PERIBIHIN INCONSPICIEN	172125.69
PERTURNIUM CINCTUM	23677.98
CHYPTOPHYTA	135655.04
CHYPTGRORDBALES	
CHYPTOTOMS (LPIL)	1115556.25

MET. ABZ	3.6	0.5	1.0	5.0	0.1	0.8	0.3	0.1		0.2	27.1	92.1		0.1	9.9	0.1	0.1	76.3	0.1	00	5.0	0.1	0.0	0.1	1.0	6.0	0.3	0.7	9.0	0.1
5.6.	-1.00	-1.60	-1.00	-1.60	-1.00	1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.60	-1.00	-1,00	-1.00	-1.00	-1.00	1,00	-1.66	-1.00	1.00	-1.00	-1.60	-1.00	-1.60	-1.00	-1.00	-1.00
. ×	710010.19	99973.69	610036.50	32220.36	22196.10	34659.25	61496.94	24.56692	266350.37	\$4037.09	234313.31	16464576.6	66.5969,75	10523.55	1970459.00	13463.29	21047.09	15642420.0	10523.55	160135.06	56235.19	20, 92,05	6714.61	14963.17	195801.69	172125.69	23677.98	135655.96	113950.25	21704.61

DATE PAGE 140 14.00AGUA

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BAILLY GENERATING PLANT

PHYTOPLANKTON DENSITY

NUMBER OF CELLS PER LITER

STATION REPORT

LS TAXA

20

TOTAL 19990256.0 DIVERSITY (H PRIME) 1.31 DIVERSITY (J PRIME) 0.34 NUMBER OF TAXA 25

ABOVE COMPUTED USING SAMPLE IDS

191 192 201 202

> 07/14/80 DATE PAGE NO 47 T600AQUA 9/28/77

REL X S.E. AB%

19990256.0 -1.00 100.0 -1.00 1.31 0.34 -1.00

25

BAILLY GENERATING PLANT

PHYTOPLANKTON DENSITY

NUMBER OF CELLS PER LITER

REPLICATE REPORT

PC TC GC LOC 5 56 56 1 3 00

10.0					DURAT	ION			TOW	SAMP	VO	L.		WI	CIM		CURI	ENT	T	EMP								
SID	DATE	TIM	E D	/N	UNITS	C	SD	MD	SP D	UNITS	S C	SECH	WT	SC	DI	CL	SP	DI	AIR	WAT	BT	TURBO	CON	D	DO	PH	SALN	4 P
21	1 4/20/8	0 132	7	0	0.0	0	1.0	1.0	0.0 0	2.0	0 4	1.0	8 0	4	1	5	0.0	0	17.8	19.0	0	0.0		0	12.0	0.0	0.0	0
21	2 4/20/8	0 132	7	0	0.0	0	1.0	1.0	0.0 0	2.0	0 4	1.0	8 0	4	1	5	0.0	0	178.1	90.1	0	0.0	1	0	12.0	0.0	0.0	0 0
																						-					RE	L
LS	TAXA																					X	(S.E.	AB	3%
									1			2																
0	CYANOPHYT	A						1	639042	.00	18	82399	.00								1	760720	.00		1216	78.50	0 27	7.8
0	OSCILLA	TORIA	CEA	E																								
0	OSCIL	LATOR	IA	(LP	IL)			1	580505	.00		0	. 0									790252	.50		7902	52.50	0 12	2.5
0	NOSTOCA	CEAE																										
0	ANABA	ENA (LPI	LI					0	.0	188	82399.	.00								1.0	941199	.50		9411	99.50	0 14	.8
0	RIVULAR	TACEA	E																									
C	RAPHI	DIOPS	IS	CUR	VATA				58537	.23		0	.0									29268	1.62		292	68.6	2 0	0.5
U	CHLOROPHY	TA						1	041962	.69	- 1	10457	.77								. !	526210	.19		5157	52.44	4 8	3.3
0	OEDOGON	ITALES																										
0	OEDOG	MUINO	1 (L	PIL)				936595	.69		0.	.0									468297	.81		4682	97.8	1 7	7.4
0	ZYGNEMA	TALES																										
0	SPIRO	GYRA	(LP	IL)					105367	.00		0.	.0									52683	.50		526	83.50	0 0	0.8
0	CLOST	ERIUM	1 (L	PIL	1				0	. 0	1	10457	.77									5228	.89		52	28.89	9 0	0.1
0	EUGLENOPH	ATY							286832	.37		34859	.25								- 1	160845	.81		1259	86.56	6 2	2.5
0	EUGLENA	LES																										
0	TRACH	ELOMO	MAS	IL	PIL)				286832	.37		34859	25								- 3	160845	.81		1259	86.56	5 2	2.5
1.00	CHRYSOPHY	TA							117074	.44		0.	. 0									58537	.22		585	37.22	2 0	1.9
0	CHRYSON	IONADA	LES																									
0	CHRYS	ocacc	US	(LP	IL)				117074			0.										58537			-	37.22		1.9
75	BACILLARI	OPHYT	A-C	ENT	RIC				234148	.94	1	74296.	25									204222	.56		299	26.34	4 3	3.2
0	EUPODIS	CALES																										
0	MELOS	IRA V	ARI	ANS					234148	.94		0.										117074				74.44		1.8
0	19.795.000.00	IRA (-							0	-	74296										87148	100			48.12		1.4
0	BACILLARI	OPHYT	A-P	ENN	ATE			6	409822	.00	78	37819.	.00								35	598820	.00		28110	01.00	56	.8
0	FRAGILA																											
0	0.1210.00	O Branch Constitution for	3 17557	-	NENSI	S			409760	.62		0.	1 200									204880				80.31	T	5.2
0	FRAGI	LARIA	(L	PIL)			3	804919	.00		52325									23	233622	.00		15712			5.2
0	SYNED	RA (L	PIL	.)					321954	.75		55774.	.79								1	188864	.75		1330	89.94	• 3	5.0
0	NAVICUL	100,000,000,000																										
0	NAVIO								702446			34859.										368653				93.75		5.8
0		UM (L							58537			-	.0									29268	The same of the sa			68.62	-).5
0	PINNL	ILARIA	(1	PIL)				117074	.44		0.	0									58537	.22		585	37.22	2 0).9
0		IONEMA)				526835			0.									1	263417				17.50		1.2
0		RA (L		.)					0	. 0	-	34859	25									17429	.62		174	29.62	2 0	1.3
0	EPITHEN									San V																		
. 0	RHOPO	LODIA	GI	BBA					117074	.44		0.	.0									58537	.22		585	37.22	2 0	1.9

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BAILLY GENERATING PLANT

PHYTOPLANKTON DENSITY

NUMBER OF CELLS PER LITER

REPLICATE REPORT

LS	TAXA			
		1	2	
0	BACILLARIOPHYTA-PENNATE (LPIL)	351223.37	0.0	
0	PYRRHOPHYTA-DINOPHYCEAE	58537.23	0.0	
0	PERIDINIALES			
0	PERIDINIUM INCONSPICUUM	58537.23	0.0	
TOT	AL	9787(15.00	2889828.00	
DIV	ERSITY (H PRIME)	3.01	1.50	
DIV	ERSITY (J PRIME)	0.74	0.50	
NUM	BER OF TAXA	17	8	

ABOVE COMPUTED USING SAMPLE IDS 211 212

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-		REL	
×	S.E.	AB%	
175611.69	175611.69	2.8	
29268.62	29268.62	0.5	
29268.62	29268.62	0.5	
6338621.00	3448793.00	100.0	
2.26	0.76		
0.62	0.12		
21			

BAILLY GENERATING PLANT

PHYTOPLANKTON DENSITY

NUMBER OF CELLS PER LITER

STATION REPORT

LS	TAXA	
		21
0	CYANOPHYTA	1760720.00
0	OSCILLATORIACEAE	
0	OSCILLATORIA (LPIL)	790252.50
0	NOSTOCACEAE	
0	ANABAENA (LPIL)	941199.50
ű	RIVULARIACEAE	
0	RAPHIDIOPSIS CURVATA	29268.62
0	CHLOROPHYTA	526210.19
0	OEDOGONIALES	
0	OEDOGONIUM (LPIL)	468297.81
0	ZYGNEMATALES	
0	SPIROGYRA (LPIL)	52683.50
0	CLOSTERIUM (LPIL)	5228.89
0	EUGLENOPHYTA	160845.81
0	EUGLENALES	
0	TRACHELOMONAS (LPIL)	160845.81
0	CHRYSOPHYTA	58537.22
0	CHRYSOMONADALES	
0	CHRYSOCOCCUS (LPIL)	58537.22
0	BACILLARIOPHYTA-CENTRIC	204222.56
0	EUPODISCALES	
0	MELOSIRA VARIANS	117074.44
0	MELOSIRA (LPIL)	87148.12
0	BACILLARIOPHYTA-PENNATE	3598820.00
0	FRAGILARIALES	
0	FRAGILARIA CROTONENSIS	204880.31
0	FRAGILARIA (LPIL)	2233622.00
0	SYNEDRA (LPIL)	188864.75
0	HAVICULALES	
0	HAVICULA (LPIL)	368653.00
0	NEIDIUM (LPIL)	29268.62
0	PINNULARIA (LPIL)	58537.22
0	GOMPHONEMA (LPIL)	263417.50
0	AMPHORA (LPIL)	17429.62
0	EPITHEMIALES	
0	RHOPOLODIA GIBBA	58537.22
0	BACILLARIOPHYTA-PENNATE (LPIL)	175611.69
0	PYRRHOPHYTA-DINOPHYCEAE	29268.62
0	PERIDINIALES	
0	PERIDINIUM INCONSPICIUM	29268.62
TO	TAL	6338621.00
DI	VERSITY (H PRIME)	2.26

		REL
×	S.E.	AB%
1760720.00	-1.00	27.8
790252.50	-1.00	12.5
941199.50	-1.00	14.8
29268.62	-1.00	0.5
526210.19	-1.00	8.3
468297.81	-1.00	7.4
52683.50	-1.00	0.8
5228.89	-1.00	0.1
160845.81	-1.00	2.5
160845.81	-1.00	2.5
58537.22	-1.00	0.9
58537.22	-1.00	0.9
204222.56	-1.00	3.2
117074.44	-1.00	1.8
87148.12	-1.00	1.4
3598820.00	-1.00	56.8
204880.31	-1.00	3.2
2233622.00	-1.00	35.2
188864.75	-1.00	3.0
368653.00	-1.00	5.8
29268.62	-1.00	0.5
58537.22	-1.00	
263417.50	-1.00	4.2
17429.62	-1.00	0.3
58537.22	-1.00	0.9
175611.69	-1.00	
29268.62	-1.00	0.5
29268.62	-1.00	0.5
6338621.00	-1.00	100.0
2.26	-1.00	

DATE PAGE NO

07/14/80

BAILLY GENERATING PLANT

PHYTOPLANKTON DENSITY

NUMBER OF CELLS PER LITER

STATION REPORT

LS TAXA

DIVERSITY (J PRIME)

0.62 21

NUMBER OF TAXA

ABOVE COMPUTED USING SAMPLE IDS 211 212

DATE 07/14/80 PAGE NO 51 T600AQUA 9/28/77 X S.E. AB%

0.62 -1.00 21

BAILLY GENERATING PLANT

PHYTOPLANKTON DENSITY

NUMBER OF CELLS PER LITER

STATION REPORT

LS	TAXA		
		21	
0		1760720.00	
0	OSCILLATORIACEAE		
0		790252.50	
0		0/1100 FA	
0	ANABAENA (LPIL)	941199.50	
0	7.5.2.5.5.5.5.5.5.5.5.5.5.5.5.5.5.5.5.5.	*****	
0	RAPHIDIOPSIS CURVATA	29268.62	
0		526210.19	
0	OEDOGONIALES		
0	OEDOGONIUM (LPIL)	468297.81	
0	ZYGNEMATALES		
0	SPIROGYRA (LPIL)	52683.50	
0	CLOSTERIUM (LPIL)	5228.89	
0	EUGLENOPHYTA	160845.81	
0	EUGLENALES		
0	TRACHELOMONAS (LPIL)	160845.81	
	CHRYSOPHYTA	58537.22	
0	CHRYSOMONADALES		
0	CHRYSOCOCCUS (LPIL)	58537.22	
0		204222.56	
0	AND NOTE OF THE PARTY OF THE PA		
0		117074.44	
0	MELOSIRA (LPIL)	87148.12	
- 63	BACILLARIOPHYTA-PENNATE	3598820.00	
0			
0	The state of the s	204880.31	
0		2233622.00	
0		188864.75	
0			
0	NAVICULA (LPIL)	368653.00	
0		29268.62	
0	PINNULARIA (LPIL)	58537.22	
0		263417.50	
. 0		17429.62	
0			
0		58537.22	
0		175611.69	
	PYRRHOPHYTA-DINOPHYCEAE	29268.62	
0			
0	PERIDINIUM INCONSPICUUM	29268.62	
TOT	TAL	6338621.00	
-DIV	VERSITY (H PRIME)	2.26	

		REL
×	S.E.	AB%
1760720.00	-1.00	27.8
790252.50	-1.00	12.5
941199.50	-1.00	14.8
29268.62	-1.00	
526210.19	-1.00	8.3
468297.81	-1.00	7.4
52683.50	-1.00	
5228.89	-1.00	0.1
160845.81	-1.00	2.5
160845.81	-1.00	2.5
58537.22	-1.00	0.9
58537.22	-1.00	0.9
204222.56	-1.00	3.2
11.7974.44		1.8
87148.12	-1.00	
3598820.00	-1.00	56.8
204880.31	-1.00	
2233622.00	-1.00	
188864.75	-1.00	3.0
368653.00	-1.00	5.8
19268.62	-1.00	0.5
5537.22	-1.00	0.9
263417.50	-1.00	4.2
17429.52	-1.00	0.3
58537.22	-1.00	
175611.69	-1.00	2.8
29268.62	-1.00	0.5
29268.62	-1.00	0.5
6338621.00		100.0
2.26	-1.00	

DATE 07/14/80 PAGE NO 52

BAILLY GENERATING PLANT

PHYTOPLANKTON DENSITY

NUMBER OF CELLS PER LITER

STATION REPORT

TAXA LS

DIVERSITY (J PRIME) HUMBER OF TAXA

21 0.62 21

ABOVE COMPUTED USING SAMPLE IDS

07/14/80 53 9/28/77 PAGE NO T600AQUA

REL S.E. ABZ

-1.00 0.62



APPENDIX B

PHYTOPLANKTON BIOVOLUME REPLICATE REPORTS, BAILLY STUDY AREA, APRIL 1980

BAILEY GENERATING PLANT

PHYTOPLANT TON BIOVOLUME

HICROLITETT THE LITER

.... LICATE REPORT

FC TC GC LOC 5 56 56 0 0 00

					DURAT	ION			TOP	4	SAMP	VO	L			HIN	10		CUR	ENT	TE	EMP							
51	O	DATE	TIME	D/N	UNITS	C	SD	MD	SP	0	UNIT	S C	SEC	H W	T	SC I	I	CL	SP	DI	AIR	HAT	BT	TURBD	COND	DO	PH	SALN	P
	11	4/16/80	1334	0	0.0	0	1.0	4.6	0.0	0	2.	0 4	0	5 6	0	7	2	5	0.0	0	7.2	0.0	0	0.0	0	0.0	0.0	0.0	0
	12	4/16/80	1334	0	0.0	0	1.0	4.6	0.0	0	2.	0 4	0	5 6	0	7	2	5	0.0	0	7.2	0.0	0	0.0	0	0.0	0.0	0.0	0
																								-				REL	L
LS		TAXA																						X			S.E.	AB2	1.
										1				2															
0	CY	ANOPHYTA								0.	0			0.68	В									0	. 34		0.34	4 4.	. 3
0		CHROOCOC	CACEA	E																									
0		CHROOC	occus	(LP	IL)					0.	0			0.56	6									0	.28		0.28	3 3.	.5
0		GOMPHO	SPHAE	RIA	LACUST	RIS				0.	0			0.13	3									0	.06		0.00	0 .	.8
0	CH	HLOROPHYT	A							0.	04			0.74	4									0	.39		0.35	5 5.	. 0
0		VOLVOCAL	ES																										
0		CHLAMY	HOMOD	AS (LPIL)					0.	0			0.74	4									0	.37		U. T	7 4	19
0		TETRASPO	PALES																										
0		ELAKAT	OTHRI	X IL	PIL)					0.	04			0.0										0	.02		0.02	2 0.	. 3
0		CHLOROCO	CCALE	S																									
0		ANKIST	RODES	MUS	FALCAT	US				0.	00			0.0										0	.00		0.00	0.	.0
0	CH	RYSOPHYT	ГА							0.	0			0.02	2									0	.01		0.0	1 0.	.1
0		MONOSIGA	LES																										3
0		STELEX	AMONA	S DI	CHOTON	1A				Ü.	0			0.00	2									0	.01		0.0	1 0.	. 1
0	BA	CILLARIO	PHYTA	-CEN	TRIC					5.	03			2.06	6									3	.54		1.48	3 44.	. 9
0		EUPODISC	CALES																										
0		MELOSI	TRA EL	PILI						0.	48			1.59	9									1	.03		0.5	5 13.	. 1
0		STEPHA	NOOTS	CUS	BINDER	AHA				0.	56			0.0											.28		0.28	3 3.	. 5
0		STEPHA	ANCDIS	CUS	NIAGAR	AE				3.	14			0.0											.57		1,000 100 1000	7 19.	100
0		EUPODISC	CALES	(LPI	L)					0.	78			0.30	0									0	.54		0.24	6.	. 9
0		PHIZOSOL	ENTAL	ES						-				-															
0		PHIZOS	OLENI	A ER	IENSIS	5				0.	07			0.17	7									0	.12		0.0	5 1.	.5
0	B/	ACILLARIO	PHYTA	-PEN	NATE					0.	69			5.50											.09			39.	0.00
0		FRAGILAR	RIALES											-															
0		ASTERI	CONELL	A FO	RMOSA					0.	00			1.14	4									0	.57		0.5	7 7.	.2
0		FRAGIL	LARIA	CROT	OHENSI	S				C.	0			2.9	9									1	.50		1.50	0 19.	. 0
0		FRAGILAR	PIALES	LLP	IL)					0.	32			0.0											.16		0.16		.0
. 0		NAVICULA	ALES																										
0		NAVICE	JLA (L	PILI						0.	0			0.4	2									0	.21		0.2	1 2	.7
0		BACILLAR	RIALES											7.00	٠									7.0					13
0		NITZCH	HIA (L	PIL)						0.	0			0.9	4									0	.47		0.4	7 6.	. 0
0	BA	ACILLARIO	PHYTA	-PEN	NATE (LPI	.)			0.	36			0.0											.18		0.1		. 3
0		RYPTOPHYT	COLUMN TANKS				17			0.	20			1.0											.51		0.5		.4
0		CRYPTON		ES																									-7
0		CRYPTO			LEXA					0.	0			0.7	9									0	.40		0.40	5	. 0
. 0		CRYPTO								0.	- T			0.1											.06		0.00		.7
					577																								
														-															

DATE 07/15/80 PAGE NO 1 T600AQUA 9/28/77

BAILEY GENERATING PLANT

PHYTOPLANKTON BIOVOLUME

HICROLITERS PER LITER

REPLICATE REPORT

						REL
LS	TAXA			X	S.E.	AB%
		1	2			
0	RHODOMONAS MINUTA	0.01	0.07	0.04	0.03	0.5
0	CHROOMONAS (LPIL)	0.0	0.03	0.02	0.02	0.2
TOTAL		5.77	10.01	7.89	2.12	100.0
DIVER	RSITY (H PRIME)	2.13	3.11	2.62	0.49	
DIVER	RSITY (J PRIME)	0.61	0.80	0.71	0.09	
NUMBI	ER OF TAXA	11	15	21		

ABOVE COMPUTED USING SAMPLE IDS
11 12

DATE 07/15/80 PAGE NO 2 T600AQUA 9/28/77

BAILEY GENERATING PLANT

PHYTOPLANKTON BIOVOLUME

MICROLITERS PER LITER

REPLICATE REPORT

PC TC GC LOC 5 56 56 0 0 00

				DURAT	HOIT			TOW	SI	MP VC	L		MI	ND		CURE	ENT	TE	MP							
SIE	DATE	TIME	D/N	UNITS	C	SD	MD	SP	U U	IITS C	SECH	WT	SC	DI	CL	SP	DI	AIR	WAT	BT	TURBD	COND	DO	PH	SALN	P
2	1 4/16/80	1343	0			1.0	9.1	0.0	0	2.0 4	1.0	6 0	7		5	0.0	0	7.2	0.0	0	0.0	0	0.0	0.0	0.0	0
2	2 4/16/60	1343	0	0.0	0	1.0	9.1	0.0	0	2.0 4	1.0	6 0	7	2	5	0.0	0	7.2	0.0	0	0.0	0	0.0	0.0		
																					-				RE	
LS	TAXA								2.5.												X			S.E.	AB	7.
0	CYANOPHYTA								0.13		2	. 0										.06		0.0		1.9
0	OSCILLAT		EAE						0.13		U	. 0									0	.00		0.0		. 7
0	OSCILL		71/20/20/20/20	DYL				- 11	0.13			. 0										.06		0.0		1.9
0	CHLOPOPHYT	Control of the Control	A IL	PILI					1.03		-	.09										.56		0.4		.5
0	VOLVOCAL								1.03			.09										. 50		0.4	' '	
0	CHLAMY		IAS 6	(PTL)					1.02		0	.07									0	.55		0.4	7 7	.3
0	CHLOROCO			LI IL,					1.02			.07												0.4		
0	ANKIST		1070	FALCA	THE			300	0.01		0	.01									0	.01		0.0	0 0	1.1
0	CHRYSOPHYT		1103	IALCA	UJ				0.0			.01										.01		0.0		1.1
0	MONOSIGA																									-
0	STELEX		S DI	сното	14				0.0		0	.01									0	.01		0.0	1 0	1.1
0	BACILLARIO	NAME OF TAXABLE PARTY.		The same of the same					1.74			. 30										.52		0.7		
0	EUPODISC																									-
0	MELOSI	RA (I	PIL						1.17		0	. 31									0	.74		0.4	3 9	9.9
0	STEPHA	HODIS	cus	BINDE	ANA				0.35		0	.0									0	.18		0.1	8 2	. 3
0	STEPHA	MODIS	CUS	NIAGA	RAE				0.0		2	. 36									1	.18		1.1	8 15	8.6
0	STEPHA	NODIS	cus	(LPIL)				0.0		0	.26									0	.13		0.1	3 1	. 7
0	EUPODISC	ALES	(LPI	L)					0.09		0	.22									0	.15		0.0	7 2	.1
0	RHIZOSOL	ENIA	ES																							
0	RHIZOS	OLENI	A ER	IENSI:	S				0.13		0	.15									0	.14		0.0	1 1	.9
0	BACILLARIO	PHYTA	A-PET	INATE					6.78		0	1.62									3	.70		3.0	8 49	.4
0	FRAGILAR	PIALES	5																							
0	ASTERI	CONELI	A FC	ORMOSA					0.86		0	1.45									0	.65		0.2	1 8	3.7
0	NAVICULA	LES																								
0	CYMBEL)					0.05		0	.0									0	.03		0.0	3 0	1.3
0	BACILLAR																									
0	NITZCH		4000			la .			5.63			.07										.85		2.7		3.1
. 0	BACILLARIO		A-PEI	MATE	(LPI	L)			0.24			.10										.17		0.0		2.3
0	CRYPTOFHYT								0.13		1	.14									0	.64		0.5	1 8	1.5
0	CRYPTOM		0.00									1.														
0	CRYPTO		To LAKE SHIP						0.0		- 15	.02										.51		0.5		8.
0	RHODON	10NAS	MINI	JTA					0.13		(1.12									0	.13		0.0	1 1	1.7
TOT	AL								9.81		5	.16									7	.48		2.3	2 100	0.0
DIV	ERSITY (H F	PRIME)						2.13		2	.54									2	.34		0.2	1	
VIG.	ERSITY (J	PRIME)						0.59			1.69									0	.64		0.0	5	
- HUITI	BER OF TAXA	A							12			13										16				

PAGE NO 3

BAILEY GENERATING PLANT

PHYTOPLANKTON BIOVOLUME

MICROLITERS PER LITER

REPLICATE REPORT

LS TAT

1

2

DATE

ABOVE COMPUTED USING SAMPLE IDS

21 22

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BAILEY GENERATING PLANT

PHYTOPLANKTON BIOVOLUME

HICROLITERS PER LITER

PEPLICATE REPORT

PC TC GC LOC 5 56 56 0 0 00

				HOI			TOH	SAMP				MIN	u		CURE	14.1	16	MP							
DATE	TIME	D/H	UNITS	C	SD	MD	SP D	UNITS	C	SECH	W T	SC D	I (WAT	BT	TURBD	COND	DO	PH	SALN	P
1 4/16/8	1351	0	0.0	0	1.0	15.2	0.0 0	2.0	1 4	1.0	6 0	7	2 5	5	0.0	0	7.2	0.0	0	0.0	0	0.0	0.0	0.0	0
2 4/16/80	1351	0	0.0	0	1.0	15.2	0.0 0	2.0	4	1.0	6 0	7	2 5	5	0.0	0			0	0.0	0	0.0	0.0	0.0	0
																				-			100.00	RE	L
TAXA																				X			S.E.	AB	7.
							1			2															
CYANOPHYTA	1						0.	.01		0.	21									0	.11		0.10	0 3	8.8
CHROOCOG	CACEA	E																							
CHROOK	coccus	(LP	IL)				0.	. 0		0.	21									0	.10		0.10	0 3	1.7
OSCIL	ATORI	A (L	PIL)				0.	.01		0.	0									0	.00		0.00	0 0	1.1
	-2017						0.	40		0.	13									0	.27		0.13	3 9	.4
VOLVOCAL	.ES																								
CHLAM	DONON	AS (LPIL)				0.	. 35		0.	13									0.	.24		0.11	1 8	.5
TETRASPO	PALES																								
ELAKA	OTHRI	X (L	PIL)				0.	.05		0.	0									0	.02		0.0	2 0	1.9
The second second		-																							
		MUS I	FALCAT	US			0.	. 0		0.	00									0	.00		0.00	0 0	1.1
CHRYSOPHY	A						0.	.53		0.	08									0	.30		0.2	2 10	.8
CHRYSOM	HADALI	ES																							
7 (1) 1 (2) (2)			-				0.	.23		0.	0									0	.12		0.12	2 4	.1
DINOB	EYON 5	OCIA	LE				0.	.28		0.	06									0	.17		0.13	1 6	.1
MONOSIG	ALES																								
STELE	AHONO	S DI	СНОТОМ	IA.			0.	.01		0.	02									0	.02		0.00	0 0	1.6
mental and the second and		-CEI.	INIC				0.	.85		0.	72									0	.78		0.0	7 27	.8
										-										-			(30) 70 (40)	7	1.4
											-									_			0.1	_	8.8
							279.25	100		1000,000													0.0	2 0	.7
			L)				0.	.28		0.	09									0	.19		0.10	0 6	.6
		-																							
											CO. C. C.										N. Carrier		2000	T	1.4
			NATE				0.	.89		0.	96									0	.93		0.0	3 32	.8
The second secon																									
																								5 THE	7
		CROTI	ONENSI	5			0.	. 0		0.	28									0	.14		0.14	4 4	. 9
										-											5.000.00		100000000000000000000000000000000000000	5 1 1 1000	.1
The contract of the contract o		-PEN	HATE (LPIL	.)			-			~														.8
	100 mm						0.	.23		0.	63									0	.43		0.20	15	.2
CRYPIC	MONAS	(LP	IL)				0.	. 0		0.	24									0	.12		0.18	2 4	.2
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DATE

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BATLEY GENERATING PLANT

PHYTOPLANKTON BIOVOLUME

MICROLITERS PER LITER

REPLICATE REPORT

						REL
1.5	TAXA			×	S.E.	AB%
		1	2			
0	RHODOMONAS MINUTA	0.18	0.33	0.25	0.07	9.0
0	CHROOMONAS (LPIL)	0.05	0.06	0.06	0.00	2.0
TOTAL		2.91	2.72	2.82	0.09	100.0
DIVER	SITY (H PRIME)	3.42	3.25	3.33	0.08	
DIVER	SITY (J PRIME)	0.90	0.85	0.87	0.02	
NUMBE	R OF TAXA	14	14	20		

ABOVE COMPUTED USING SAMPLE IDS 31 32

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MAILEY GENERATING PLANT

PHYTOPLANKTON BIOVOLUME

MICROLITERS PER LITER

STATION REPORT

							REL
LS	TAXA				X	S.E.	ABZ
		1	2	3			
0	CYANOPHYTA	0.34	0.06	0.11	0.17	0.09	2.8
0	CHROGCOCCACEAE						
0	CHROOCOCCUS (LPIL)	0.28	0.0	0.10	0.13	0.08	2.1
0	GOMPHOSPHAERIA LACUSTRIS	0.06	0.0	0.0	0.02	0.02	0.3
0	OSCILLATORIACEAE						
0	OSCILLATORIA (LPIL)	0.0	0.06	0.00	0.02	0.02	0.4
0	CHLOROPHYTA	0.39	0.56	0.27	0.41	0.08	6.7
0	VOLVOCALES						
0	CHLAMYDOMONAS (LPIL)	0.37	0.55	0.24	0.39	0.09	6.4
0	TETRASPORALES						
0	ELAKATOTHRIX (LPIL)	0.02	0.0	0.02	0.01	0.01	0.2
0	CHLOROCOCCALES						
0	ANKISTRODESMUS FALCATUS	0.00	0.01	0.00	0.00	0.00	0.1
0	CHRYSOPHYTA	0.01	0.01	0.30	0.11	0.10	1.8
0	CHRYSOMONADALES						
0	MALLAMONAS (LPIL)	0.0	0.0	0.12	0.04	0.04	0.6
0	DINOBRYON SOCIALE	0.0	0.0	0.17	0.06	0.06	0.9
0	MONOSIGALES						
C	STELEXOMONAS DICHOTOMA	0.01	0.01	0.02	0.01	0.00	0.2
0	BACILLARIOPHYTA-CENTRIC	3.54	2.52	0.78	2.28	0.81	37.6
0	EUPODISCALES						
0	MELOSIRA (LPIL)	1.03	0.74	0.24	0.67	0.23	11.1
0	STEPHANODISCUS BINDERANA	0.28	0.18	0.11	0.19	0.05	3.1
0	STEPHANODISCUS NIAGARAE	1.57	1.18	0.0	0.92	0.47	15.1
0	STEPHANODISCUS (LPIL)	0.0	0.13	0.02	0.05	0.04	0.6
0	EUPODISCALES (LPIL)	0.54	0.15	0.19	0.29	0.12	4.8
0	RHIZOSOLENIALES			1112000			
0	RHIZOSOLENIA ERIENSIS	0.12	0.14	0.24	0.17	0.04	2.7
0	BACILLARIOPHYTA-PENNATE	3.09	3.70	0.93	2.57	0.84	42.4
0	FRAGILARIALES						
0	ASTERIONELLA FORMOSA	0.57	0.65	0.51	0.58	0.04	9.5
0	FRAGILARIA CROTONENSIS	1.50	0.0	0.14	0.54	0.48	9.0
0	FRAGILARIALES (LPIL)	0.16	0.0	0.0	0.05	0.05	0.5
0	NAVICULALES	0.10	0.0	0.0	0.05	0.03	0.1
0	NAVICULA (LPIL)	0.21	0.0	0.0	0.07	0.07	1.2
0	PINNULARIA (LPIL)	0.0	0.0	0.14	0.07	0.07	0.8
0					0.03		
0	CYMBELLA (LPIL)	0.0	0.03	0.0	0.01	0.01	0.1
	BACILLARIALES	0.47	0.05			0.00	10 7
0	NITZCHIA (LPIL)	0.47	2.85	0.0	1.11	0.88	18.3
0	BACILLARIOPHYTA-PENHATE (LPIL)	0.18	0.17	0.14	0.16	0.01	2.7
0	CRYPTOPHYTA CRYPTOMONODALES	0.51	0.64	0.43	0.52	0.06	8.7
			DATE	07/15/80			
			DACE NO				

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BAILEY GENERATING PLANT

PHYTOPLANKTON BIOVOLUME

HICROLITERS PER LITER

AXA

STATION REPORT

13

0	CRYPTOMONAS REF	LEXA		0.40	
0	CRYPTOHONAS (LP	IL)		0.06	
0	RHODOMONAS KINU	ITA		0.94	
0	CHROOMONAS (LPI	L)		0.02	
TOTAL				7.89	
DIVER	SITY (H PRIME)			2.62	
DIVER	SITY (J PRIME)			0.71	
FRATE	R OF TAXA			21	
ABOVE	COMPUTED USING SA	MPLE IOS			
	11	12	21	22	
	31	32			

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3

0.0

0.12

0.25

0.06

28.5

3.33

0.87

20

2

0.51

0.0

0.13

0.0

7.48

2.34

0.64

16

REL × S.E. ABZ. 0.30 0.15 5.0 0.03 1.0 0.06 0.14 0.06 2.3 0.02 0.4 0.02 6.06 1.63 100.0 2.76 0.30 0.07 0.74 27

BAILEY GENERATING PLANT

PHYTOPLANKTON BIOVOLUME

MICROLITERS PER LITER

REPLICATE REPORT

PC TC 6C LOC 5 56 56 0 0 10

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SIC	DATE	TIME DA			SD	HD	SP D				W T						WAT	BT	TURBO	COND	00	PH	SALN	p
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- 4	2 4/16/80	1324 0	0.0	0	1.0	4.6	0.0 0	2.0	4	0.5	6 0	7 :		0.	0 0	7.2	0.0	0	0.0	0	0.0	0.0	0.0	0
																			-				REL	
LS	-TAXA																		X			S.E.	AB%	
							1			2														
200	CYANOPHYTA						0.	. 0		0.	09								0.	.04		0.04	1.	5
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	CHI OROPHYTA							.62		0.	200									.59		0.02		
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0		ESMUS QUI					0	0		0.										01		0.01		-
0	CHRYSOPHYTA	A					0.	13		0.	14								0.	14		0.00	4.	6
0	CHRYSONO	NADALES																						
0	SYNURA	(LPIL)					0	.12		0.	0								0	.06		0.06	2.	0
0	DINOBR	YON SOCI	ALE				0.	. 0		0.	14								0.	.07		0.07	2.	3
0	MONOSIGAL	LES																						
0	STELEX	OMONAS D	ICHOTOM	IA			0.	.02		0.	0								0.	.01		0.01	0.	3
0	BACILLARIO	PHYTA-CE	ITRIC				1.	. 31		0.	28								0.	.80		0.52	27.	2
0	EUPODISCA																							
0		RA (LPIL						.70		0.										35		0.35	12.	0
0		HODISCUS						.41		0.										.21		0.21		
0		HODISCUS		е.				.03		0.	W. W.									.04		0.01		
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0	FRAGILARI		004004					**															• • •	_
0		ONELLA FO						.38		0.										.43		0.05		
	BACILLARIO			LPIL	, ,			.46		0.										36		0.10		
. 0	PERIDINIA		TLEAE				0.	.48		0.	U								0.	24		0.24	8.	3
0		NIUM INCO	MISPICII	1114				48		0.	0									24		0.24	8.	*
100	CRYPTOPHYTA		DHOFICO	OH				30		0.										32		0.02	100	-
0	CRYPTOMON						0.	. 30		0.	33								0.	36		0.02	10.	0
0		OHAS MIN	ATL				0.	30		0.	33								0.	32		0.02	10.	8
TOTA	L						3	.69		2.	16								2	.92		0.77	100.	0
17.77.0.1	RSITY (H PE	RIME)						.12		2.										95		0.17		
	RSITY (J P	The same of the sa						.84		0.									-	.84		0.00		

DATE 07/15/80 PAGE NO 9 NORTHERN INDIANA PUBLIC SERVICE COMPANY (49720) BAILEY GENERATING PLANT PHYTOPLANKTON BIOVOLUME HICROLITERS PER LITER REPLICATE REPORT LS TAXA S.E. ABZ 1 13 NUMBER OF TAXA 10 16

ABOVE COMPUTED USING SAMPLE IDS 41 42

> DATE 07/15/90 PAGE NO 10 T600AQUA 9/28/77

REL

BAILEY GENERATING PLANT

PHYTOPLANKTON BIOVOLUME

MICROLITERS PER LITER

PEPLICATE REPORT

FC TC GC LOC 5 56 56 0 0 10

			DURAT	TION			TOW	SAMP V	DL		MIND		CUR	ENT	TE	MP							
SID	DATE	TIME DA	N UNITS	C	SD	MD	SP D		C SECH W	Т		CL	-		100	WAT	BT	TURBO	COND	00	PH	SALN F	3
5	1 4/16/80	1310 0	0.0	0	1.0	9.1	0.0 0	2.0	4 1.0 6	0	7 2	5	0.0	0	7.2	0.0	0	0.0	0	0.0	0.0	0.0	0
5	2 4/16/80	1310 0	0.0	0	1.0	9.1	0.0 0		4 1.0 6			5	0.0			0.0	0	0.0				0.0 0	0
									-									-				REL	
15	TAXA																	×			S.E.	AB%	
							1		2														
0 (CYANOPHYTA						0	.01	0.0									0	.01		0.03	0.2	2
0	CHROOCOC	CACEAE																					
0	COMPHO	SPHAERIA	LACUST	RIS			0	.01	0.0	Ė.,								0	.01		0.01	0.2	2
0 (CHLOPOPHYT	A					0	.26	0.0									0	.13		0.13	4.0)
0	VOLVOCAL	ES																					
0	CHLAMY	DOMONAS	(LPIL)				0	.25	0.0									0	.13		0.13	4.6)
0	CHLOROCO	CCALES																					
0		RODESMUS	FALCAT	rus			-	.00	0.0										.00		0.00		
25 1	CHRYSOPHYT						0	.11	0.0									0	.06		0.06	1.6	3
0	CHRYSOMO																						
0		ONAS (LP						.10	0.0	l ' '								0	. 05		0.05		5
0		coccus (LPIL)				0	.00	0.0									0	.00		0.00	0.0	2
0	MONOSIGA																						
0		OHONAS D		1A				.01	0.0									-	.01		0.01		_
	BACILLARIO	0.000	HTRIC				1	.29	0.0									0	.65		0.65	20.3	5
0	EUPODISC	The state of the s																					
0		RA (LPIL						.65	0.0										. 32		0.32		7
0		HODISCUS		-				. 32	0.0									-	.16		0.16		77
0		MODISCUS	(LPIL)			0	.03	0.0									0	.01		0.01	0.4	٠
0	PHIZOSOL																						
0		OLENIA E		5				. 30	0.0									100	. 15		0.15	5	
	BACILLARIO	and the same of the same	HHATE				4	. 31	0.0									2	.15		2.15	67.6	>
0	FRAGILAR						1.0																
0		ONELLA F	ORMOSA				-	.48	0.0										.74		0.74	-	77
0		A TENUE						.13	0.0										.07		0.07		
0		ARIA CRO	TONENS	15			0	.81	0.0									0	.40		0.40	12.6	>
0	SURIRELL																		~.				
. 0		PLEURA S	OLEA					.88	0.0										.94		0.94		7
	CRYPTOPHYT						0	.39	0.0	,								0	.20		0.20	6.2	4
0	CRYPTOMO							**															
0		IOHAS MIN						. 38	0.0									100	.19		0.19		
0	CYANOR	IONAS (LP	IL)				0	.01	0.0	•								0	.01		0.01	0.2	2
TOTA								.38	0.0										.19		-	100.0)
	RSITY (H P							.88	0.0									-	.44		1.44		
	RSITY (J P	100000000000000000000000000000000000000					0	.72	0.0									0	. 36		0.36)	
- HUMB	BER OF TAXA							16		0									16				

DATE 07/15/80 PAGE NO 11

BAILEY GENERATING PLANT

PHYTOPLANKTON BIOVOLUME

MICROLITERS PER LITER

REPLICATE REPORT

15 TAXA

1

2

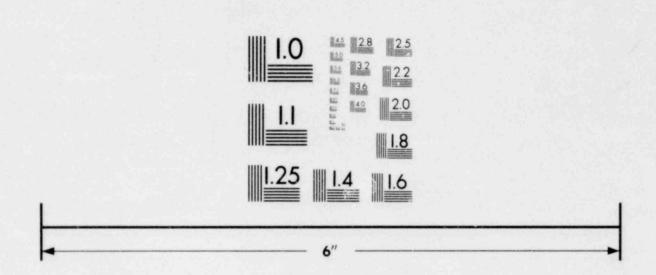
ABOVE COMPUTED USING SAMPLE IDS 51 52

> DATE 07/15/80 PAGE NO T600AQUA 9/28/77

REL S.E. AB%

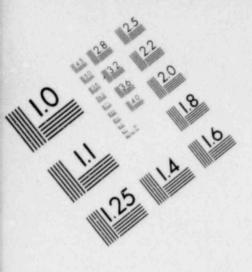
1.0 1.1 1.25 1.4 1.6

IMAGE EVALUATION TEST TARGET (MT-3)



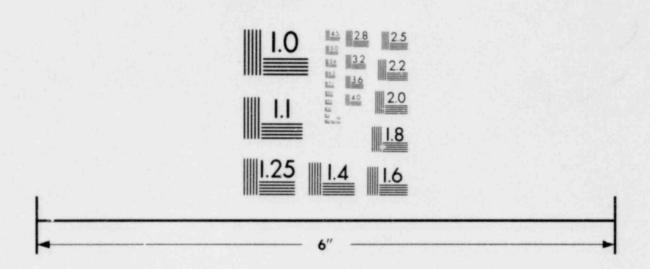
STATE OF THE STATE

SIM VIIII SZIIIII



|| 1.0 || 1.1 || 1.25 || 1.4 || 1.8 || 1.8

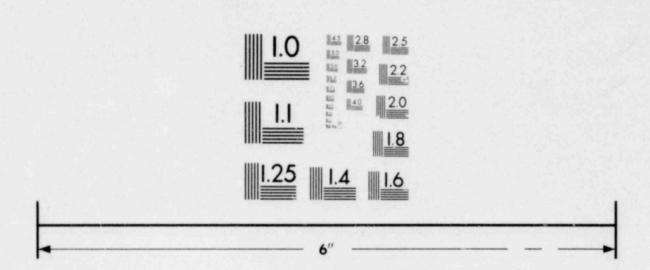
IMAGE EVALUATION TEST TARGET (MT-3)



STATE OF THE STATE

| 10 | 11 | 125 | 123 | 18 | 18

IMAGE EVALUATION TEST TARGET (MT-3)



STATE OF THE STATE

91 VIIII GZ.

BAILEY GENERATING PLANT

PHYTOPLANKTON BIOVOLUME

MICROLITERS PER LITER

REPLICATE REPORT

PC TC GC LOC 5 56 56 0 0 10

2 20 20 0 0 10																								
	الدائد السيفا	DURAT	100,000,000			TOM		MP VO				CMD		CURI			MP			4.11				
	TIME D/N		0.000	SD	MD	SP			SECH					SP		AIR	HAT	-	TURBD	-	. 55.025	7.75	SALN	170
61 4/16/80 1		0.0			15.2	0.0			1.0			2		0.0		7.2		0	0.0	0	0.0		0.0	
62 4/16/80 1	1310 0	0.0	0	1.0	15.2	0.0	0	2.0 4	1.0	6 0	7	2	5	0.0	0	7.2	0.0	0	0.0	0	0.0	0.0	0.0	
LS TAXA																			~				REL	70
LS TAXA							1		2										×			S.E.	AB%	
O UNIDENTIFIED	ALGAE						0.00			. 0									0	00		0.00	0.	0
O UNIDENTIFIED							0.00			.0										00		0.00		-
O CYANOPHYTA	ALUAL	CLILI					0.14			.0									11,000,110	07		0.07		
O OSCILLATOR	TACEAE						0.14			. 0									٠.			0.01	•	-
O OSCILLAT		PTII					0.14		0	. 0									0.	07		0.07	1.	6
O CHLOPOPHYTA							0.35		-	.12										24		0 12		
O VOLVOCALES	3																							
0 CHLAMYDO		LPIL)					0.35		0	.11									0.	23		0.12	5.	. 3
O CHLOROCOCO																								
0 ANKISTRO	DESMUS	FALCAT	บร				0.00		0	.01									0.	01		0.00	0.	. 1
0 BACILLARIOPH	TYTA-CEN	TRIC					0.78		1	.89									1.	34		0.56	30.	.6
0 EUPODISCAL	ES																							
0 MELOSIRA	(LPIL)						0.26		1	.49									0.	87		0.62	20.	. 0
0 STEPHANO	DISCUS	(LPIL)	ĺ				0.47		0	.17									0.	32		0.15	7.	. 3
O EUPODISCAL	ES (LPI	LI					0.03		0	.0									0.	02		0.02	0.	.4
0 RHIZOSOLEN	ITALES																							
0 PHIZOSOL	ENIA ER	IENSIS					0.02		0	.23										13		0.10	2.	. 9
0 BACILLARIOPH	HYTA-PEN	NATE					2.15		2	.55									2.	35		0.20	53.	. 9
O FRAGILARIA	LES																							
0 ASTERION	IELLA FO	RMOSA					0.97		0	.48									100	73			16.	
0 FRAGILAR	RIA CROT	ONENSI	S				0.0		2	.02									1.	01		1.01	23.	. 2
0 BACILLARIA	0.40.34 - 35.7																							
0 NITZCHIA	the second second						0.98			.0									100.0	49		0.49		
0 BACILLARIOPH	IYTA-PEN	NATE (LPIL	1			0.20			.04										12		0.08		
O CRYPTOPHYTA							0.33		0	.40									0.	36		0.03	8.	.4
O CRYPTCHONO																								
O CRYPTOMO							0.07		-	. 0										03		0.03		
O CRYPTOMO							0.0			.20									100	10		0.10	1 1000	-
0 RHODOMON	IAS MINU	TA					0.27		0	.20									0.	23		0.03	5.	. 3
TOTAL							3.75			.96										36		1,000 1 71 1 100 100	100.	. 0
DIVERSITY (H PRI							2.86			. 32									1750-7	59		0.27		
DIVERSITY (J PRI	(ME)						0.77		0	.70										74		0.04		
NUMBER OF TAXA							13			10										15				

ABOVE COMPUTED USING SAMPLE IDS

61 62

DATE 07/15/80 PAGE NO 13

BAILEY GENERATING PLANT

PHYTOPLANKTON BIOVOLUME

MICROLITERS PER LITER

STATION REPORT

							REL
LS	TAXA				×	S.E.	AB%
		4	5	6			
0	UNIDENTIFIED ALGAE	0.0	0.0	0.00	0.00	0.00	0.0
0	UNIDENTIFIED ALGAE (LPIL)	0.0	0.0	0.00	0.00	0.00	0.0
0	CYANOPHYTA	0.04	0.01	0.07	0.04	0.02	1.1
0	CHROOCOCCACEAE						
0	GOMPHOSPHAERIA LACUSTRIS	0.0	0.01	0.0	0.00	0.00	0.0
0	OSCILLATORIACEAE						
0	OSCILLATORIA (LPIL)	0.0	0.0	0.07	0.02	0.02	0.7
0	LYNGBYA CONTORTA	0.04	0.0	0.0	0.01	0.01	0.4
0	CHLOROPHYTA	0.59	0.13	0.24	0.32	0.14	9.2
0	VOLVOCALES						
0	CHLAMYDOMONAS (LPIL)	0.58	0.13	0.23	0.31	0.14	8.9
0	CHLOROCOCCALES						
0	ANKISTRODESMUS FALCATUS	0.01	0.00	0.01	0.00	0.00	0.1
0	SCENEDESMUS QUADRICAUDA	0.01	0.0	0.0	0.00	0.00	0.1
0	CHRYSOPHYTA	0.14	0.06	0.0	0.06	0.04	1.8
C	CHRYSOMONADALES						
0	MALLAMONAS 'LPIL)	0.0	0.05	0.0	0.0	0.02	0.5
0	CHRYSOCOCCUS (LPIL)	0.0	0.00	0.0	0.00	0.00	0.0
0	SYNURA (LPIL)	0.06	0.0	0.0	0.02	0.02	0.6
0	DINOBRYON SOCIALE	0.07	0.0	0.0	0.02	0.02	0.7
0	MONOSIGALES						
0	STELEXOMONAS DICHOTOMA	0.01	0.01	0.0	0.01	0.00	0.1
0	BACILLARIOPHYTA-CENTRIC	0.80	0.65	1.34	0.93	0.21	
0	EUPODISCALES				7.47		
0	MELOSIRA (LPIL)	0.35	0.32	0.87	0.52	0.18	14.8
0	STEPHANODISCUS BINDERANA	0.21	0.0	0.0	0.07	0.07	2.0
0	STEPHANODISCUS NIAGARAE	0.0	0.16	0.0	0.05	0.05	1.5
0	STEPHANODISCUS (LPIL)	0.04	0.01	0.32	0.12	0.10	3.5
0	EUPODISCALES (LPIL)	0.01	0.0	0.02	0.01	0.01	0.3
0	RHIZOSOLENIALES						
0	RHIZOSOLENIA ERIENSIS	0.19	0.15	0.13	0.16	0.02	4.5
0	BACILLARIOPHYTA-PENNATE	0.80	2.15	2.35	1.77	0.49	
0	FRAGILARIALES	0.00	2.13	2.33	****	0.47	20.0
0	ASTERIONELLA FORMOSA	0.43	0.74	0.73	0.63	0.10	18.2
0	DIATOMA TENUE	0.0	0.07	0.0	0.02	0.02	0.6
0	FRAGILARIA CROTONENSIS	0.0	0.40	1.01	0.47	0.29	13.5
0	BACILLARIALES	0.0	0.40	1.01	0.47	0.27	13.5
0	NITZCHIA (LPIL)	0.0	0.0	0.49	0.16	0.16	4.7
0	SURIPELLALES	0.0	0.0	0.47	0.10	0.10	4.7
0	CYMATOPLEURA SOLEA	0.0	0.94	0.0	0.31	0.31	9.0
0	BACILLARIOPHYTA-PENNATE (LPIL)	0.36	0.0	0.12	0.16	0.11	4.6
0	PYRRHOPHYTA-DINOPHYCEAE	0.24	0.0	0.12	0.16	0.11	2.3
U	FIRRIOFILIA-DINOFILICEAE	0.24	0.0	0.0	0.08	0.00	2.3
			DATE	07/15/80			
			DACE NO	15			

PAGE NO

T600AQUA

9/28/1

BAILEY GENERATING PLANT

PHYTOPLANKTON BIO"DLUME

61

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MICROLITERS PER LITER

STATION REPORT

					REL
I.S TAXA				×	S.E. AB%
	4	5	6		
0 PERIDINIALES					
O PERIDINIUM INCONSPICUUM	0.24	0.0	0.0	0.08	0.08 2.3
0 CRYPTOPHYTA	0.32	0.20	0.36	0.29	0.05 8.4
0 CRYPTOMONODALES					
O CRYPTOMONAS MARSSONII	0.0	0.0	0.03	0.01	0.01 0.3
O CRYPTOMONAS (LPIL)	0.0	0.0	0.10	0.03	0.03 1.0
O RHODUMONAS MINUTA	0.32	0.19	0.23	0.25	0.04 7.1
O CYAHOMONAS (LPIL)	0.0	0.01	0.0	0.00	0.00 0.1
TOTAL	2.92	3.19	4.36	3.49	0.44 100.0
DIVERSITY (H PRIME)	2.95	1.44	2.59	2.33	0.46
DIVERSITY (J PRIME)	0.84	0.36	0.74	0.64	0.15
NUMBER OF TAXA	16	16	15	29	
ABOVE COMPUTED USING SAMPLE IDS					
41 42 51	52				

DATE 07/15/80 PAGE NO 16 9/28/77 T600AQUA

BAILEY GENERATING PLANT

PHYTOPLANKTON BIOVOLUME

MICROLITERS PER LITER

REPLICATE REPORT

PC TC GC LOC 5 56 56 0 0 20

3 30 30 0 0 0 0	-					-							-										
	TION	-		TOM		SAMP	-	7		2.77	IND		CUR			MP							
SID DATE TIME D/N UNIT		SD	MD	SP		UNITS							SP		AIR		-	-	COND	00	PH		
		1.0		0.0	-	-		0.2			2	5	0.0	-		0.0	0	0.0	0	0.0			
102 4/16/80 1105 0 0.0	0	1.0	1.5	0.0	0	2.0	4	0.2	6 0	7	2	5	0.0	0	7.2	0.0	0	0.0	0	0.0	0.0	0.0 C	_
LS TAXA																		×			S.E.	AB%	
					1			2															
0 CHLOROPHYTA					0.4	3		5.	64									3	.03		2.60	0 45.7	7
0 VOLVOCALES																							
O CHLAMYDOMONAS (LPIL)					0.4	2		1.	50									0	. 96		0.54	4 14.5	5
0 CHLOROCOCCALES																							
O SPHAEROCYSTIS SCHROE	TERI				0.0			4.	13									2	.07		2.07	7 31.1	1
O ANKISTRODESMUS FALCA	TUS				0.0	1		0.	0									0	.00		0.00	0.0	٥
0 CHRYSOPHYTA					0.0			0.	01									0	.01		0.01	1 0.1	1
0 MONOSIGALES																							
O STELEXOMONAS DICHOTO	MA				0.0			0.	01									0	.01		0.0	1 0.1	1
O BACILLARIOPHYTA-CENTRIC					1.4	0		0.	82									1	.11		0.29	9 16.7	7
0 EUPODISCALES																							
0 MELOSIRA (LPIL)					0.2	8		0.	79									0	.53		0.25	5 8.0	0
O STEPHANODISCUS BINDE	RANA				0.1	3		0.	0									0	.06		0.00	6 1.0	0
O STEPHANODISCUS (LPIL)				0.8	9		0.	0									0	.45		0.45	6.	7
0 RHIZOSOLENIALES																							
O RHIZOSOLENIA ERIENSI	5				0.0	9		0.	04									0	.07		0.0	3 1.0	0
O BACILLARIOPHYTA-PENNATE					3.4	3		0.	36									1	. 90		1.5	3 28.6	5
0 FRAGILARIALES																							
O ASTERIONELLA FORMOSA					0.0			0.	22									0	.11		0.1	1 1.7	7
O FRAGILARIA (LPIL)					3.4	3		0.	0									1	.72		1.72	2 25.9	,
O BACILLARIOPHYTA-PENNATE	(LPIL)			0.0			0.	14									0	.07		0.07	7 1.0	0
0 CRYPTOPHYTA					0.9	4		0.	25									0	.59		0.35	5 8.5	9
O CRYPTOMONODALES																							
O CRYPTOMONAS (LPIL)					0.6	2		0.	0									0	.31		0.31	1 4.7	7
O RHODOMONAS MINUTA					0.3	2		0.	21									0	.26		0.00	6 3.9	9
O CHROOMONAS (LPIL)					0.0			0.	04									0	.02		0.0	2 0.3	3
.TOTAL					6.2	0		7.	08									6	.64		0.44	4 100.0	0
DIVERSITY (H PRIME)					2.1	1		1.	79									1	. 95		0.16	6	
DIVERSITY (J PRIME)					0.6	7		0.	57									0	.62		0.0	5	
HUMBER OF TAXA						9			9										14			F .	

ABOVE COMPUTED USING SAMPLE IDS 101 102

> DATE 07/15/80 PAGE NO 17 T600AQUA 9/28/77

BAILEY GENERATING PLANT

PHYTOPLANKTON BIOVOLUME

MICROLITERS PER LITER

STATION REPORT

15	TAXA	
		10
0	CHLOROPHYTA	3.03
0	VOLVOCALES	
0	CHLAMYDOMONAS (LPIL)	0.96
0	CHLOROCOCCALES	
0	SPHAEROCYSTIS SCHROETERI	2.07
0	ANKISTRODESHUS FALCATUS	0.00
0	CHRYSOPHYTA	0.01
0	MONOSIGALES	
0	STELEXOMONAS DICHOTOMA	0.01
0	BACILLARIOPHYTA-CENTRIC	1.11
0	EUPODISCALES	
0	MELOSIRA (LPIL)	0.53
0	STEPHANODISCUS BINDERANA	0.06
0	STEPHANODISCUS (LPIL)	0.45
0	RHIZOSOLENIALES	
0	PHIZOSOLENIA ERIENSIS	0.07
0	BACILLARIOPHYTA-PENNATE	1.90
0	FRAGILARIALES	
0	ASTERIONELLA FORMOSA	0.11
0	FRAGILARIA (LPIL)	1.72
0	BACILLARIOPHYTA-PENNATE (LPIL)	0.07
0	CRYPTOPHYTA	0.59
0	CRYPTOMONODALES	
0	CRYPTOMONAS (LPIL)	0.31
0	RHODOMONAS MINUTA	0.26
0	CHROOMONAS (LPIL)	0.02
TOT	AL	6.64
VIC	ERSITY (H PRIME)	1.95
DIV	ERSITY (J PRIME)	0.62
IUH	BER OF TAXA	14

102

ABOVE COMPUTED USING SAMPLE IDS 101

-		REL
X	S.E.	AB%
3.03	-1.00	45.7
0.96	-1.00	14.5
2.07	-1.00	
0.00	-1.00	0.0
0.01	-1.00	0.1
0.01	-1.00	0.1
1.11	-1.00	16.7
0.53	-1.00	8.0
0.06	-1.00	1.0
0.45	-1.00	6.7
0.07	-1.00	1.0
1.90	-1.00	28.6
0.11	-1.00	1.7
1.72	-1.00	25.9
0.07	-1.00	1.0
0.59	-1.00	8.9
0.31	-1.00	4.7
0.26	-1.00	3.9
0.02	-1.00	0.3
6.64	-1.00	100.0
1.95	-1.00	
0.62	-1.00	
14		

DATE PAGE NO

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07/15/80

BAILEY GENERATING PLANT

PHYTOPLANKTON BIOVOLUME

MICROLITERS PLR LITER

STATION REPORT

							REL
.5	TAXA				×	S.E.	AB%
		3	6	10			
0	UNIDENTIFIED ALGAE	0.0	0.00	0.0	0.00	0.00	0.0
0	UNIDENTIFIED ALGAE (LPIL)	0.0	0.00	0.0	0.00	0.00	0.0
0	CYANOPHYTA	0.17	0.04	0.0	0.07	0.05	1.3
0	CHROOCOCCACEAE						
0	CHROOCOCCUS (LPIL)	0.13	0.0	0.0	0.04	0.04	0.8
0	GOMPHOSPHAERIA LACUSTRIS	0.02	0.00	0.0	0.01	0.01	0.1
0	OSCILLATORIACEAE						
0	OSCILLATORIA (LPIL)	0.02	0.02	0.0	0.02	0.01	0.3
0	LYNGBYA CONTORTA	0.0	0.01	0.0	0.00	0.00	0.1
0	CHLOROPHYTA	0.41	0.32	3.03	1.25	0.89	23.2
0	VOLVOCALES						
0	CHLAMYDOMONAS (LPIL)	0.39	0.31	0.96	0.55	0.21	10.3
0	TETRASPORALES						
0	ELAKATOTHRIX (LPIL)	0.01	0.0	0.0	0.00	0.00	0.1
0	CHLOROCOCCALES						
0	SPHAEROCYSTIS SCHROETERI	0.0	0.0	2.07	0.69	0.69	12.8
0	ANKISTRODESMUS FALCATUS	0.00	0.00	0.00	0.00	0.00	0.1
0	SCENEDESHUS QUADRICAUDA	0.0	0.00	0.0	0.00	0.00	0.0
0	CHRYSOPHYTA	0.11	0.06	0.01	0.06	0.03	1.1
0	CHRYSOMONADALES						
0	MALLAMONAS (LPIL)	0.04	0.02	0.0	0.02	0.01	0.3
0	CHRYSOCOCCUS (LPIL)	0.0	0.00	0.0	0.00	0.00	0.0
0	SYNURA (LPIL)	0.0	0.02	0.0	0.01	0.01	0.1
0	DINOBRYON SOCIALE	0.06	0.02	0.0	0.03	0.02	0.5
0	MONOSIGALES						
0	STELEXONONAS DICHOTOMA	0.01	0.01	0.01	0.01	0.00	0.1
0	BACILLARIOPHYTA-CENTRIC	2.28	0.93	1.11	1.44	0.42	26.7
0	EUPODISCALES						
0	MELOSIRA (LPIL)	0.67	0.52	0.53	0.57	0.05	10.6
0	STEPHANODISCUS BINDERANA	0.19	0.07	0.06	0.11	0.04	2.0
0	STEPHANODISCUS NIAGARAE	0.92	0.05	0.0	0.32	0.30	6.0
0	STEPHANODISCUS (LPIL)	0.05	0.12	0.45	0.21	0.12	3.8
0	EUPODISCALES (LPIL)	0.29	0.01	0.0	0.10	0.10	1.9
0	RHIZOSOLENIALES			***			
0	RHIZOSOLENIA ERIENSIS	0.17	0.16	0.07	0.13	0.03	2.4
0	BACILLAPIOPHYTA-PENHATE	2.57	1.77	1.90	2.08	0.25	
0	FRAGILARIALES	2.37		1.70	2.00	0.23	30.3
0	ASTERIONELLA FORMOSA	0.58	0.63	0.11	0.44	0.17	8.2
0	DIATOMA TENUE	0.0	0.02	0.0		0.01	0.1
0	FRAGILARIA CROTONENSIS	0.54	0.47	0.0	0.34	0.17	6.3
0	FRAGILARIA (LPIL)	0.0	0.0	1.72	0.57	0.57	10.6
0	FRAGILARIALES (LPIL)	0.05	0.0	0.0	0.02	0.02	0.3
U	FRAGILARIALES (LPIL)	0.05	0.0	0.0	0.02	0.02	0.5
			DATE	07/15/80			
			PAGE NO	19			
			T600AQUA	9/28/77			

BAILEY GENERATING PLANT

PHYTOPLANKTON BIOVOLUME

MICPOLITERS PER LITER

STATION REPORT

							REL
15	TAXA				X	S.E.	AB%
(in		3	6	10			
0	NAVICULALES						
0	NAVICULA (LPIL)	0.07	0.0	0.0	0.02	0.02	0.4
0	PINNULARIA (LPIL)	0.05	0.0	0.0	0.02	0.02	0.3
0	CYMBELLA (LPIL)	0.01	0.0	0.0	0.00	0.00	0.1
0	BACILLARIALES						
0	HITZCHIA (LPIL)	1.11	0.16	0.0	0.42	0.35	7.8
0	SURIRELLALES						
0	CYMATOPLEURA SOLEA	0.0	0.31	0.0	0.10	0.10	1.9
0	BACILLARIOPHYTA-PENNATE (LPIL)	0.16	0.16	0.07	0.13	0.03	2.4
0	PYRRHOPHYTA-DINOPHYCEAE	0.0	0.08	0.0	0.03	0.03	0.5
0	PERIDINIALES						
0	PERIDINIUM INCONSPICUUM	0.0	0.08	0.0	0.03	0.03	0.5
0	CRYPTOPHYTA	0.52	0.29	0.59	0.47	0.09	8.7
0	CRYPTOMONODALES						
0	CRYPTOMONAS MARSSONII	0.0	0.01	0.0	0.00	0.00	0.1
0	CRYPTOHONAS REFLEXA	0.30	0.0	0.0	0.10	0.10	1.9
0	CRYPTOMONAS (LPIL)	0.06	0.03	0.31	0.13	0.09	2.5
0	RHODOMONAS MINUTA	0.14	0.25	0.26	0.22	0.04	4.0
0	CHROOMONAS (LPIL)	0.02	0.0	0.02	0.01	0.01	0.3
0	CYANOHONAS (LPIL)	0.0	0.00	0.0	0.00	0.00	0.0
TOT	AL	6.06	3.49	6.64	5.40	9.97	100.0
DIV	ERSITY (H PRIME)	2.76	2.33	1.95	2.35	0.23	
DIV	ERSITY (J PRIME)	0.74	0.64	0.62	0.67	0.04	
NUH	BER OF TAXA	27	29	14	39		

ABOVE COMPUTED USING SAMPLE IDS 11 12

11 12 21 22 31 32 41 42 51 52 61 62 101 102

> DATE 07/15/80 PAGE NO 20 T600AQUA 9/28/77

BAILEY GENERATING PLANT

PHYTOPLANKTON BIOVOLUME

HICROLITERS PER LITER

REPLICATE REPORT

PC TC GC LOC 5 56 56 0 1 00

3 36 36 0 1 00	JRATION			TOW	SAMP	VOI			WIN	m		CUR	ENT	TE	MP						
SID DATE TIME D/N UT	ALCOHOL: A CONTRACT OF THE PERSON OF THE PER	SD	MD	SP I	1.000		SECH	u T			-		-	AIR		DT	TURBD	COND	DO	PH	SALN P
	0.0	1.0	11.00	0.0			o =		7 2			0.0	1000	7.2	1,000,000,000	0	0.0		70.00	0.0	0.0 0
	0.0	1.0	4.6				0.5		7			0.0			5.5	0	0.0	0			0.0 0
72 4710700 1133 0	0.0 0	1.0	4.0	0.0		U 4	0.5	0 0	,		9	0.0	U	1.6	3.3	U	0.0		0.0	0.0	REL
LS TAXA																	×			S.E.	AB%
					1		2														
0 CHLOROPHYTA					0.0			76									0.	38		0.38	11.8
0 VOLVOCALES																					
O CHLAMYDOMONAS (LP)	IL1				0.0		0.	76									0.	38		0.38	11.8
0 CHRYSOPHYTA					0.01		0.	0									0.	01		0.01	0.2
0 MONOSIGALES																					
O STELEXOMONAS DICHO	70 (To Company of the Company of th			7	0.01		0.	0									100.00	01		0.01	
O BACILLARIOPHYTA-CENTR	C				1.86		1.	02									0.	94		0.08	29.2
0 EUPODISCALES																					
MELOSIRA (LPIL)					0.0		1,000,110	27									100.10	14		0.14	
O STEPHANODISCUS BIN					0.05		0.	120 000										05		0.00	
O STEPHANODISCUS (1)	PIL)			. (.56		0.	16									0.	36		0.20	11.1
0 RHIZOSOLENIALES																					
O PHIZOSOLENIA EPTER	700				1.26		1000	54									100	40		0.350.00.000.00	12.3
9 BACILLARIOPHYTA-PENNAT	TE.				80.2		1.	24									1.	66		0.42	51.6
O FRAGILARIALES																					
O ASTERIONELLA FORMO					28.0		0.										100	69			21.5
O FRAGILARIA CPOTONE	ENSIS			(0.0		0.	64									0.	32		0.32	9.9
0 NAVICULALES																					
0 HAVICULA (LPIL)				(1.12		0.	0									0,	06		0.06	1.9
0 BACILLARIALES																					
0 NITZCHIA (LPIL)		. %			.13		0.											.57		0.57	
O BACILLARIOPHYTA-PENNAT	E (LPI	L)			0.0		0.	330 750										.02		0.02	
O CHYPTOPHYTA				(1.12		0.	35									0.	.23		0.12	7.2
O CRYPTOMONODALES																					
O CRYPTOMONAS (LPIL)			-	0.0		0.											12		0.18	
C RHODOMONAS MINUTA				(0.12		0.	11									0.	11		0.00	3.5
TOTAL					5.07		3.	37									3.	.22		0.15	5 100.0
DIVERSITY (H PRIME)				- 2	2.27		2.	90									2.	59		0.31	1
DIVERSITY (J PRIME)				(.76		0.	87									0.	82		0.06	5
NUMBER OF TAXA					8			10										13			

ABOVE COMPUTED USING SAMPLE IDS 71 72

DATE 07/15/80 PAGE NO 21 T600AQUA 9/28/77

BAILEY GENERATING PLANT

PHYTOPLANKTON BIOVOLUME

MICROLITERS PER LITER

REPLICATE REPORT

PC TC GC LOC 5 56 56 0 1 06

	DURATION	TOW SAMP VOL		MIND	C	URENT	TE	MP						
SI	D DATE TIME D/N UNITS C SD WE	SP D UNITS C	SECH W T	SC DI	CL S	P DI	AIR	WAT	BT	TURBO	COND	DO	PH	SALN P
	81 4/16/80 1125 0 0.0 0 1.0 9.	1 6.0 0 2.0 4	1.0 6 0	7 2	5 0	.0 0	7.2	5.0	0	0.0	0	0.0	0.0	0.0 0
	82 4/16/80 1125 0 0.0 0 1.0 9.	1 0.0 0 2.0 4	1.0 6 0	7 2	5 0	.0 0	7.2	5.0	0	0.0	0	0.0	0.0	0.0 0
										-				REL
1.5	TAXA									X			S.E.	AB%
		1	2											
0	СУАНОРНУТА	0.01	0.03							0.	.02		0.01	0.6
0	CHROOCOCCACEAE													
0	MICROCYSTIS (LPIL)	0.01	0.0							0.	.01		0.01	0.2
0	OSCILLATORIACEAE													
0	OSCILLATORIA LIMNETICA	0.0	0.03							175.2	.01		0.01	
0	CHLOROPHYTA	0.00	0.32							0.	.16		0.16	4.5
0	VOLVOCALES													
. 0	CHLAMYDOMONAS (LPIL)	0.0	0.32							0.	.16		0.16	4.5
0	CHIDOOCOCCALES													
0	ANKISTRODESHUS FALCATUS	0.00	3.0								.00		0.00	
0	CHRYSOPHYTA	0.34	0.35							0.	.20		0.15	5.4
0	CHRYSOMONADALES													
0	CHRYSOCOCCUS (LPIL)	0.0	0.00							1350.7	.00		0.00	
0	DINOBRYON SOCIALE	0.34	0.05							100	.20		0.15	-
0	CHRYSOPHYTA (LPIL)	0.0	0.00								.00		0.00	
0	BACILLARIOPHYTA-CENTRIC	1.46	0.23							0.	.84		0.62	23.2
0	EUPODISCALES	0.69	0.0								34		0.34	9.4
0	MELOSIRA (LPIL)	0.69	0.0								.20		0.20	
	STEPHANODISCUS NIAGARAE	0.39	0.0								.07		0.04	
0	STEPHANODISCUS (LPIL) EUPODISCALES (LPIL)	0.03	0.11								01		0.04	
0	RHIZOSOLENIALES	0.0	0.02							0.	.01		0.01	0.2
0	RHIZOSOLENIA ERIENSIS	0.35	0.10							0	.23		0.13	6.2
0	BACI! ADIOPHYTA-PERMATE	2.00	2.05								.02		0.03	
0	FR GILARIALES	2.00	2.05							٤.	.02		0.0.	33.1
0	ASTERIONELLA FORMOSA	0.71	0.50							0	.61		0.11	16.7
0	DIATOMA TENUE	0.55	0.17								36		0.19	
0	FRAGILARIA CROTONENSIS	0.0	0.12								.06		0.06	
0	FRAGILARIA (LPIL)	0.50	0.0							10000	.25		0.25	
0	TABELLARIA FLOCCULOSA	0.0	1.26								.63		0.63	-
0	HAVICULALES	0.0	2.20										0.0.	
0	PINNULARIA (LPIL)	0.14	0.0							0	07		0.07	1.9
0	BACILLARIOPHYTA-PENNATE (LPIL)	0.09	0.0								.05		0.05	
0	PYRRHOPHYTA-DINOPHYCEAE	0.0	0.13								.06		0.06	
0	PERIDINIALES													
. 0	PERIDINIUM INCONSPICUUM	0.0	0.13							0	.06		0.06	1.8
62.7														

DATE 07/15/80 PAGE NO 22 T600AQUA 9/28/77

BAILEY GENERATING PLANT

PHYTOPLANKTON BIOVOLUME

MICROLITERS PER LITER

REPLICATE REPORT

15	TAXA		
		1	2
0	СЧРТОРНУТА	0.32	0.31
0	CRYPTOMONODALES		
0	RHODOMONAS MINUTA	0.32	0.29
0	CHROOMONAS (LPIL)	0.0	0.02
TOT	AL	4.14	3.13
DIV	PERSITY (H PRIME)	3.21	2.80
DIV	PERSITY (J PRIME)	0.87	0.72
HUI	BER OF TAXA	13	15
ABO	OVE COMPUTED USING SAMPLE IDS		
	81 82		

DATE	07/15/80
PAGE NO	23
T600AQUA	9/28/77

S.E. ABX

0.31 8.8

0.02 8.5 0.01 0.3

0.51 100.0

0.21

0.08

0.32

0.31

0.01

3.64

0.79

22

BAILEY GENERATING PLANT

PHYTOPLANKTON BIOVOLUME

MICROLITERS PER LITER

PEPLICATE REPORT

PC TC GC LOC 5 56 56 0 1 00

				DURAT	1200			TOP		SAMP				MI			CUR	Mar. 2. 17. 18.	TE	MP							
SID	DATE					SD	MD	SP	D			SECH					SP	DI	AIR	TAM		TURBD			700	SALN	- 70
	4/16/80			0.0			15.2					1.0		7			0.0			5.5	0			13.2			
92	2 4/16/80	110	5 0	0.0	0	1.0	15.2	0.0	0	2.0	4	1.0	6 0	7	5	5	0.0	0	7.2	5.5	0	0.0	(13.2	0.0	1000	
																						-			1-1	RE	77.
S	TAXA																					X			S.E.	AB	1.
					2.5				1			2															
1000	JNIDENTIFI								0.0	5		-	02										.01		0.01		. 3
12.	MIDENTIFI		LGAE	(LPIL)	(0.0				02										.01		0.0		. 3
	CYANOPHYTA								0.0			0.	17									0	.08		0.08	3 2	.7
0	CHROOCOC	ST 5000000	III.																				Name of the last				
6	GOMPHO		ERIA	LACUST	RIS				0.0				17									1000	.08		0.08		.7
55	CHLOROPHYT								3.1	6		0.	26									0	.21		0.0	5 6	. 9
0	VOLVOCAL	-		and the																							-
0	CHLAMY			LPIL)					0.1	5		0.	20									0	.17		0.02	2 5	.7
0	TETRASPO																					100					
0	ELAKAT		212	PIL)					0.0	1		0.	05									0	.03		0.0	2 1	.1
0	CHLOROCO																					3.1					
0	ANKIST	Treatment and	SHUS	FALCAT	US				0.0				01										.00		0.00	9	.1
	CHRYSOPHYT								0.0	1		0.	0									0	.01		0.0	1 0	.2
0	MONOSIGA																										
0	STELEX				IA				0.0	-		0.	-									100	.01		0.0		.2
3 7	BACILLARIO		A-CEN	IRIC					0.6	6		0.	16									0	.41		0.25	5 13	.4
0	EUPODISC																										
0	MELOSI		200000000000000000000000000000000000000						0.5			0.	22.00										.28		0.28		.1
0	STEPHA			(LPIL)					0.0			0.	12									0	.06		0.06	5 2	.0
0	RHIZOSOL																										
0	RHIZOS		more united						0.1	T-			04										.07		0.0		.4
193	BACILLARIO			NATE					1.3	/		1.	16									1	.27		0.10	0 41	. /
0	FRAGILAR																										
0	ASTERI	Park 1100 201	and a second	RMOSA					0.3				17										.26		0.0		.6
	DIATON		The state of the s						0.0				03										.02		0.0		.5
	FRAGIL								0.0				85										.43		0.4		
0	TABELL								0.5			0.											.27		0.2		.8
	BACILLARIO				LPIL	.)			0.4			0.											.30		0.10		. 7
	PYRRHOPHYT		HOPHY	CEAE					1.2	4		0.	0									G	.62		0.6	2 20	.4
0	PERIDINI		****																								
0	PERIDI		INCO	NSPICU	UM.				1.2			0.										-	.62		0.6		
	CRYPTOPHYT								0.2	9		0.	59									0	.44		0.1	5 14	. 4
0	CRYPTOHO																										
0	CRYPTO								0.0			0.											.21		0.2		.8
0	CRYPTO			-					0.1			0.	- T										.06		0.00	77 - 1277	.0
0	RHODOM	UNAS	HINU	14					0.1	/		0.	17									0	.17		0.0	0 5	.6
													DATE			0.7	/15/	80									
																07	/ 15/	00									

PAGE NO T600AQUA

9/28/77

HORTHERN	INDIANA	PUBLIC	SERVICE	COMPANY	(49720)
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BAILEY GENERATING PLANT

PHYTOPLANKTON BIOVOLUNE

HICROLITERS PER LITER

REPLICATE REPORT

LS TAXA			
1000	1	2	
TOTAL	3.72	2.34	
DIVERSITY (H PRIME)	2.79	2.90	
DIVERSITY (J PRIME)	0.78	0.78	
HUMBER OF TAXA	12	13	
ABOVE COMPUTED USING SAMPLE IDS			
91 92			
		DATE	07/15/80
		PAGE NO	25

Х	S.E.	AB%
3.03	0.69	100.0
2.84	0.06	
0.78	0.00	
18		

9/28/77

T600AQUA

REL

BAILEY GENERATING PLANT

PHYTOPLANKION BIOVOLUME

HICROLITERS PER LITER

STATION REPORT

							REL
LS	TAXA	_			X	S.E.	AB%
0	UNIDENTIFIED ALGAE	7	8	9	0.00	0.00	0.1
0	UNIDENTIFIED ALGAE (LPIL)	7.75					
0	CYANOPHYTA	0.0	0.0	0.01	0.00	0.00	0.1
0	CHROOCOCCACEAE	0.0	0.02	0.08	0.03	0.02	1.0
0			0.01			0.00	
	MICROCYSTIS (LPIL)	0.0	0.01	0.0	0.00	0.00	0.1
0	GOMPHOSPHAERIA LACUSTRIS	0.0	0.0	0.08	0.03	0.03	0.8
0	OSCILLATOPIACEAE						
0	OSCILLATORIA LIMNETICA	0.0	0.01	0.0	0.00	0.00	0.1
0	CHLOROPHYTA	0.38	0.16	0.21	0.25	0.07	7.6
0	VOLVOCALES					1	
0	CHLAMYDOMONAS (LPIL)	0.38	0.16	0.17	0.24	0.07	7.3
0	TETRASPORALES						
0	ELAKATOTHRIX (LPIL)	0.0	0.0	0.03	0.01	0.01	0.3
0	CHLOROCOCCALES						
0	ANKISTRODESMUS FALCATUS	0.0	0.00	0.00	0.00	0.00	0.0
0	CHRYSOPHYTA	0.01	0.20	0.01	0.07	0.06	2.1
0	CHRISOMONADALES						
0	CHRYSOCOCCUS (LPIL)	0.0	0.00	0.0	0.00	0.00	0.0
0	DINOBRYON SOCIALE	0.0	0.20	0.0	0.07	0.67	2.0
0	MONOSIGALES						
0	STELEXONONAS DICHOTOMA	0.01	0.0	0.01	0.00	0.00	0.1
0	CHRYSOPHYTA (LPIL)	0.0	0.00	0.0	0.00	0.00	0.0
0	BACILLARIOPHYTA-CENTRIC	0.94	0.84	0.41	0.73	0.16	22.2
0	EUPODISCALES						
0	MELOSIRA (LPIL)	0.14	0.34	0.28	0.25	0.06	7.6
0	STEPHANODISCUS BINDERANA	0.05	0.0	0.0	0.02	0.02	0.5
0	STEPHANODISCUS NIAGARAE	0.0	0.20	0.0	0.07	0.07	2.0
0	STEPHANODISCUS (LPIL)	0.36	0.07	0.06	0.16	0.10	4.9
0	EUPODISCALES (LPIL)	0.0	0.01	0.0	0.00	0.00	0.1
0	RHIZOSOLENIALES						
0	RHIZOSOLENIA ERIENSIS	0.40	0.23	0.07	0.23	0.09	7.0
0	BACILLARIOFHYTA-PENHATE	1.66	2.02	1.27	1.65	0.22	50.1
0	FRAGILARIALES						
0	ASTERIONELLA FORMOSA	0.69	0.61	0.26	0.52	0.13	15.8
0	DIATOMA TENUE	0.0	0.36	0.02	0.13	0.12	3.8
0	FRAGILARIA CROTONENSIS	0.32	0.06	0.43	0.27	0.11	8.1
0	FRAGILARIA (LPIL)	0.0	0.25	0.0	0.98	0.08	2.5
0	TABELLARIA FLOCCULOSA	0.0	0.63	0.27	0.30	0.18	9.1
0	NAVICULALES						
0	NAVICULA (LPIL)	0.06	0.0	0.0	0.02	0.02	0.6
0	PINNULARIA (LPIL)	0.0	0.07	0.0	0.02	0.02	0.7
0	BACILLARIALES						
			DATE	07/15/80			
			the same of the same	22			

PAGE NO

T600AQUA

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9/28/77

BAILEY GENERATING PLANT

PHYTOPLANKTON BIOVOLUME

MICROLITERS PER LITER

71 91

72 92

81

82

STATION REPORT

						REL
LS TAXA				×	S.E.	ABZ.
	7	8	9			
O HITZCHIA (LPIL)	0.57	0.0	0.0	0.19	0.19	5.7
O BACILLARIOPHYTA-PENHATE (LPIL)	0.02	0.05	0.30	0.12	0.09	3.7
O PYRRHOPHYTA-DINOPHYCEAE	0.0	0.06	0.62	0.23	0.20	6.9
0 PERIDINIALES						
O PERIDINIUM INCONSPICUUM	0.0	0.06	0.62	0.23	0.20	6.9
O CRYPTOPHYTA	0.23	0.32	0.44	0.33	0.06	10.0
0 CRYPTOHONODALES						
O CRYPTOMONAS REFLEXA	0.0	0.0	0.21	0.07	0.07	2.1
O CRYPTOMONAS (LPIL)	0.12	0.0	0.06	0.06	0.03	1.8
O RHODOMONAS MINUTA	0.11	0.31	0.17	0.20	0.06	6.0
0 CHROOMONAS (LPIL)	0.0	0.01	0.0	0.00	0.00	6.1
TOTAL	3.22	3.64	3.03	3.30	0.18	100.0
DIVERSITY (H PRIME)	2.59	3.00	2.84	2.81	0.12	
DIVERSITY (J PRIME)	0.82	0.79	0.78	0.80	0.01	
HUMBER OF TAXA	13	22	18	31		
ABOVE COMPUTED USING SAMPLE IDS						

07/15/80 DATE PAGE NO 27 9/28/77 T600AQUA

BAILEY GENERATING PLANT

PHYTOPLANKTON BIOVOLUME

MICROLITERS PER LITER

STATION REPORT

LS	TAXA	
		9
0	UNIDENTIFIED ALGAE	0.00
0	UNIDENTIFIED ALGAE (LPIL)	0.00
0	CYANOPHYTA	0.03
0	CHROOCOCCACEAE	
0	MICROCYSTIS (LPIL)	0.00
0	GOMPHOSPHAERIA LACUSTRIS	0.03
0	OSCILLATORIACEAE	
0	OSCILLATORIA LIMNETICA	0.00
0	CHLOROPHYTA	0.25
0	VOLVOCALES	
0	CHLAMYDOMONAS (LPIL)	0.24
0	TETRASPORALES	
0	ELAKATOTHRIX (LPIL)	0.01
0	CHLOROCOCCALES	
0	ANKISTRODESMUS FALCATUS	0.00
0	CHRYSOPHYTA	0.07
0	CHRYSOT NADALES	
0	CHRY COCCUS (LPIL)	0.00
0	DINODE YON SOCIALE	0.07
0	MONOSIGALES	
0	STELEXOMONAS DICHOTOMA	0.00
0	CHRYSOPHYTA (LPIL)	0.00
0	BACILLARIOFHYTA-CENTRIC	0.73
0	EUPODISCALES	
0	MELOSIRA (LPIL)	0.25
0	STEPHANODISCUS BINDERANA	0.02
0	STEPHANODISCUS NIAGARAE	0.07
0	STEPHANODISCUS (LPIL)	0.16
0	EUPODISCALES (LPIL)	0.00
0	RHIZOSOLENIALES	
0	RHIZOSOLENIA ERIENSIS	0.23
0	BACILLARIOPHYTA-PENNATE	1.65
0	FRAGILARIALES	
0	ASTERIONELLA FORMOSA	0.52
0	DIATOMA TEMUE	0.13
0	FRAGILARIA CROTONENSIS	0.27
0	FRAGILARIA (LPIL)	0.08
0	TABELLARIA FLOCCULOSA	0.30
0	NAVICULALES	
0	NAVICULA (LPIL)	0.02
0	PINMULARIA (LPIL)	0.02
0	BACILLARIALES	
0	BACILLARIALES	

		REL
X	S.E.	AB%
0.00	-1.00	0.1
0.00	-1.00	0.1
0.03	-1.00	1.0
0.00	-1.00	0.1
0.03	-1.00	0.8
0.00	-1.00	0.1
0.25	-1.00	7.6
0.24	-1.00	7.3
0.01	-1.00	0.3
0.00	-1.00	0.0
0.07	-1.00	2.1
0.00	-1.00	0.0
0.07	-1.00	2.0
0.00	-1.00	
0.00	-1.00	0.0
0.25	-1.00	7.6
0.02	-1.00	0.5
0.07	-1.00	2.0
0.16	-1.00	4.9
0.00	-1.00	
0.23	-1.00	7.0
1.65	-1.00	50.1
0.52	-1.00	
0.13	-1.00 -1.00	3.8
0.27		8.1
0.08	-1.00	2.5
0.30	-1.00	9.1
0.02	-1.00	
0.02	-1.00	0.7

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BAILEY GENERATING PLANT

PHYTOPLANKTON BIOVOLUME

MICROLITERS PER LITER

STATION REPORT

LS	TAXA	
		9
0	NITZCHIA (LPIL)	0.19
0	BACILLARIOPHYTA-PENNATE (LPIL)	0.12
0	PYRRHOPHYTA-DINOPHYCEAE	0.23
0	PERIDINIALES	
0	PERIDINIUM INCONSPICUUM	0.2
0	CRYPTOPHYTA	0.33
0	CRYPTOMONODALES	
0	CRYPTOMONAS REFLEXA	0.07
000	CRYPTOMONAS (LPIL)	0.06
0	RHODOMONAS MINUTA	0.20
0	CHROOMONAS (LPIL)	0.00
TOT	AL	3.30
DIV	ERSITY (H PRIME)	2.81
DIV	ERSITY (J PRIME)	0.80
HUM	BER OF TAXA	31
ABO	VE COMPUTED USING SAMPLE IDS	
	71 72 81	82
	91 92	

0.19	-1.00	5.7	
0.12	-1.00	3.7	
0.23	-1.00	6.9	
0.23	-1.00	6.9	
0.33	-1.00	10.0	
0.07	-1.00	2.1	
0.06	-1.00	1.8	
0.20	-1.00	6.0	
0.00	-1.00	0.1	
3.30	-1.00	100.0	
2.81	-1.00		
0.80	-1.00		
31			

S.E. AB%

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BAILEY GENERATING PLANT

PHYTOPLANKTON BIOVOLUME

HICROLITERS PER LITER

REPLICATE REPORT

PC TC GC LOC 5 56 56 1 1 00

		DURATION		TOW	SAMP	101		LITTE		CUREUT	**	TAKES.							
SI	D DATE TIME D/N	accompany to the contract of	SD WI				шт	MIND	CI	SP DI		MP	RT :	TIPEN	COND	DO	PH	SALN P	
100	71 4/20/80 1025 0			0 0.0 0		4 1.0			1000	0.0 0	The state of the s		0	0.0	-	8.9		0.0 0	
	72 4/20/80 1025 0		1.0 1.			4 1.0				0.0 0			0	0.0	100	8.9	0.0	0.0 0	
	72 47 207 00 1023 0	0.0	1.0	0.00	2.0	4 1.0	0 0		,	0.0 0	17.0	10.0	•	0.0		0.,	0.0	REL	
LS	TAXA													X			S.E.	AB%	
				1		2								~				7.67	
0	CYANOPHYTA				.0		.01							0.	00		0.00	0.1	
0	OSCILLATORIACEAE														-		0.00		
0	OSCILLATORIA (LI	PTI)		0	. 0	0	.01							0.	00		0.00	0.1	
0	CHLOROPHYTA				.08		.62							1,750.7	85		0.23		
0	CHLOROCOCCALES																-		
0	SCENEDESMUS QUAL	DRICAUDA		0	.44	0	. 35							0.	39		0.04	10.0	
0	SCENEDESHUS ECO				.07		. 0							0.	03		0.03	0.8	
0	SCENEDESMUS SPIN	NOSUS			.00		. 0							0.	00		0.00	-	
0	TETRAEDRON CAUD	A TOTAL STREET PRO-			.03		. 0							75.0	02		0.02		
0	OEDOGONIALES																100		
0	OEDOGONIUM (LPI	L)		0	.41	0	.0							0.	21		0.21	5.3	
0	ZYGNEMATALES																		
0	MOUGEOTIA (L'IL)		0	. 0	0	.15							0.	07		0.07	1.9	
0	CLOSTFRIUM MONI				.12		. 0								06		0.06		
0	STAURASTRUM (LP	STORY CONTRACTOR			.0		.13								06		0.06		
0	EUGLENOPHYTA				.02		.28							0.	15		0.13		
0	EUGLENALES			Section 1		1, 1,000													
0	TRACHELOMONAS (LPI')		0	.02	0	.28							0.	15		0.13	3.7	
0	CHRYSOPHYTA			0	.24		.04							100	64		1.40		
0	CHRYSOMONADALES																70.7		
0	CHRYSOCOCCUS (LI	PILI		0	.05	0	.20							0.	13		0.08	3 2	
0	DINOBRYON SERTU			0	.07		.84							1.	46		1.38	and the second second	
0	EPIPYXIS UTRICU			0	.12	0	. 0							0.	06		0.06	1.5	
0	KEPHYRION (LPIL			0	. 0		.00							0.	00		0.00		
0	BACILLARIOPHYTA-PEN				.62		.06								84		0.78		
0	FRAGILARIALES																70.17		
0	TABELLARIA FLOCE	CULOSA		1	.44	0	. 0							0.	72		0.72	18.3	
. 0	ACHNANTHALES														-			-	
0	ACHNANTHES MINU	TISSIMA		0	.01	0	.01							0.	01		0.00	0.2	
0	ACHNANTHES (LPI)				.00	199.	. 0								00		0.00	-	
0	SURIRELLALES													4.					
0	SURIRELLA (LPIL)		0	.16	0	. 0							0.	08		0.08	2.1	
0	BACILLARIOPHYTA-PEN)		.0	-	.05								03		0.03		
0	CRYPTOPHYTA				.0		.89								44		1000 1000	11.3	
0	CRYPTOHONODALES						-								100				
0	CRYPTOMONAS (LP)	11.)		0	. 0	0	.80							0	40		0.40	10.2	
	CRITICIONAS (EF.													٠.			0.40	10.6	
									200.000	The second second									

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BAILEY GENERATING PLANT

PHYTOPLANKTON BIOVOLUME

HICROLITERS PER LITER

PEPLICATE REPORT

						KEL
LS	TAXA			X	S.E.	AB%
		1	2			
0	RHODOMONAS MINUTA	0.0	0.01	0.01	0.01	0.2
0	CHROOMONAS (LPIL)	0.0	0.07	0.04	0.04	0.9
TOTAL		2.96	4.90	3.93	0.97	100.0
DIVER	RSITY (H PRIME)	2.44	2.08	2.26	0.18	
DIVER	RSITY (J PRIME)	0.64	0.56	0.60	0.04	
HUMBE	ER OF TAXA	14	13	22		

ABOVE COMPUTED USING SAMPLE IDS 171 172

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BAILEY GENERATING PLANT

PHYTOPLANKTON BIOVOLUME

MICROLITERS PER LITER

REPLICATE REPORT

FC TC GC LOC 5 56 56 1 1 00

TOW SAMP VO SP D UNITS C 0.0 0 2.0 4 0.0 0 2.0 4	SECH W T 1.0 8 0		CL SP DI 5 0.0 0	AIR WAT		DO PH SALI	N P
0.0 0 2.0 4	1.0 8 0						14 1
					0 0.0 0	9.1 0.0 0.0	
0.0 0 2.0 4	1 0 0 0			17.8 15.5	7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7		0 0
	1.0 0 0	4 1	5 0.0 0	17.0 15.5	0 0.0 0		EL
					~		B%
					^	3.E. AL	D/.
					0.00	0.00	0.1
0.0	0.01				0.00	0.00	0.1
0.0	0.01				0.00	0.00	0.1
						1.00 0.00 0.00	1.9
2.23	0.44						
0.03	0.0				0.02	0.02	0.3
							3.2
							0.3
							0.1
					0.51		8.2
0.91	0.31				0.61	0.30	9.9
					0.07		1.1
0.0	0.13				0.07	0.07	1.1
0.56	1.51				1.03	0.48 1	6.9
0.51	0.55				0.53	0.02	8.6
0.05	0.96				0.50	0.46	8.2
0.00	0.00				0.00	0.00	0.0
6.73	0.48				3.60	3.13 5	8.7
0.0	0.11				0.05	0.05	0.9
0.0	0.04				0.02	0.02	0.3
1.84	0.0				0.92	0.92 1	5.0
4.71	0.0				2.35		8.4
0.18	0.33				0.26		4.2
0.0	0.16				0.08	0.08	1.3
0.0	0.12						0.9
0.0	0.00						0.0
0.0	0.04				0.02	0.02	0.3
9.54	2.73				6.14	3.40 10	0.0
2.20	2.76				2.48	0.28	
	0.56 0.51 0.05 0.00 6.73 0.0 0.0 1.84 4.71 0.18 0.0 0.0 0.0 0.0 9.54	0.0 0.01 0.0 0.01 2.25 0.44 0.03 0.0 0.27 0.12 0.03 0.0 0.0 0.01 1.01 0.0 0.91 0.31 0.0 0.13 0.0 0.13 0.56 1.51 0.51 0.55 0.05 0.96 0.00 0.00 6.73 0.48 0.0 0.11 0.0 0.11 0.0 0.04 1.84 0.0 4.71 0.0 0.18 0.33 0.0 0.16 0.0 0.12 0.0 0.00 0.00 0.10 0.00 0.11 0.0 0.04 1.84 0.0 0.04	0.0 0.01 0.0 0.01 2.25 0.44 0.03 0.0 0.27 0.12 0.03 0.0 0.0 0.01 1.01 0.0 0.91 0.31 0.0 0.13 0.0 0.13 0.56 1.51 0.51 0.55 0.05 0.96 0.00 0.00 6.73 0.48 0.0 0.11 0.0 0.04 1.84 0.0 4.71 0.0 0.18 0.33 0.0 0.16 0.0 0.12 0.0 0.00 0.00 0.00 0.00 0.00 0.00 0.00	0.0 0.01 0.0 0.01 2.25 0.44 0.03 0.0 0.27 0.12 0.03 0.0 0.0 0.01 1.01 0.0 0.91 0.31 0.0 0.13 0.0 0.13 0.56 1.51 0.51 0.55 0.05 0.96 0.00 0.00 6.73 0.48 0.0 0.11 0.0 0.04 1.84 0.0 4.71 0.0 0.04 1.84 0.0 4.71 0.0 0.18 0.33 0.0 0.16 0.0 0.12 0.0 0.00 0.0 0.00 0.0 0.00 0.0 0.00 0.0 0.00 0.0 0.00 0.0 0.00 0.0 0.12 0.0 0.00 0.0 0.00 0.0 0.00 0.0 0.00 0.0 0.00 0.0 0.00 0.0 0.00 0.0 0.00	0.0 0.01 0.0 0.01 2.25 0.44 0.03 0.0 0.27 0.12 0.03 0.0 0.0 0.01 1.01 0.0 0.91 0.31 0.0 0.13 0.0 0.13 0.56 1.51 0.51 0.55 0.05 0.96 0.00 0.00 6.73 0.48 0.0 0.11 0.0 0.04 1.84 0.0 4.71 0.0 0.18 0.33 0.0 0.16 0.0 0.12 0.0 0.00 0.0 0.00 0.0 0.00 0.0 0.00 0.0 0.00 0.0 0.00 0.0 0.00 0.0 0.12 0.0 0.00 0.0 0.00 0.0 0.00 0.0 0.00 0.0 0.00	0.0 0.01 0.00 0.0 0.01 0.00 2.25 0.44 1.35 0.03 0.0 0.02 0.27 0.12 0.20 0.03 0.0 0.02 0.0 0.01 0.00 1.01 0.0 0.51 0.91 0.31 0.61 0.0 0.13 0.07 0.56 1.51 1.03 0.51 0.55 0.53 0.05 0.96 0.50 0.00 0.00 0.00 6.73 0.48 3.60 0.0 0.04 0.02 1.84 0.0 0.92 4.71 0.0 0.08 0.0 0.16 0.08 0.0 0.00 0.00 0.0 0.00 0.00 0.0 0.04 0.02 9.54 2.73 6.14	1 2 0.0 0.01 0.00 0.00 0.0 0.01 0.00 0.00 2.25 0.44 1.35 0.90 2 0.03 0.0 0.02 0.02 0.02 0.27 0.12 0.20 0.07 0.02 0.02 0.02 0.0 0.01 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.07

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BAILEY GENERATING PLANT

PHYTOPLANKTON BIOVOLUME

MICROLITERS PER LITER

PEPLICATE REPORT

LS TAXA

DIVERSITY (J PRIME) NUMBER OF TAXA 0.64

0.73 14 0.68 19 S.E. AB%

0.04

ABOVE COMPUTED USING SAMPLE IDS 181 182

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BAILEY GENERATING PLANT

PHYTOPLANKTON BIOVOLUME

MICROLITERS PER LITER

STATION REPORT

LS	TAXA			
		17	18	
0	CYANOPHYTA	0.00	0.00	
0	OSCILLATORIACEAC			
0	OSCILLATORIA (LPIL)	0.00	0.0	
0	NOSTOCACEAE			
0	ANABAENA (LPIL)	0.0	0.00	
0	CHLOROPHYTA	0.85	1.35	
0	CHLOROCOCCALES			
0	OOCYSTIS (LPIL)	0.0	0.02	
0	SCENEDESMUS QUADRICAUDA	0.39	0.20	
0	SCENEDESMUS ECORNIS	0.03	0.02	
0	SCENEDESHUS SPINOSUS	0.00	0.00	
0	PEDIASTRUM DUPLEX	0.0	0.51	
0	TETRAEDRON CAUDATUM	0.02	0.0	
0	OEDOGONIALES			
0	OEDOGONIUM (LPIL)	0.21	0.0	
0	ZYGNEMATALES			
0	MOUGEOTIA (LPIL)	0.07	0.61	
0	CLOSTERIUM MONILIFERUM	0.06	0.0	
0	STAURASTRUM (LPIL)	0.06	0.0	
0	EUGLENOPHYTA	0.15	0.07	
0	EUGLENALES			
0	TRACHELOMONAS (LPIL)	0.15	0.07	
0	CHRYSOPHYTA	1.64	1.03	
0	CHRYSOMONADALES			
0	CHRYSOCOCCUS (LPIL)	0.13	0.53	
0	DINOBRYON SERTULARIA	1.46	0.50	
0	EPIPYXIS UTRICULUS	0.06	0.0	
0	KEPHYRION (LPIL)	0.00	0.00	
0	BACILLARIOPHYTA-PENNATE	0.84	3.60	
0	FRAGILARIALES			
0	FRAGILARIA (LPIL)	0.0	0.05	
0	TABELLARIA FLOCCULOSA	0.72	0.02	
0	ACHNANTHALES			
0	ACHMANTHES MINUTISSIMA	0.01	0.0	
0	ACHNANTHES (LPIL)	0.00	0.0	
0	NAVICULALES			
0	NEIDIUM (LPIL)	0.0	0.92	
0	BACILLARIALES			
0	NITZCHIA (LPIL)	0.0	2.35	
0	SURIRELLALES			
0	SURIRELLA (LPIL)	0.08	0.0	
0	BACILLARIOPHYTA-PENNATE (LPIL)	0.03	0.26	

DATE

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T600AQUA

07/15/80

9/28/77

-		REL	
X	S.E.	AB%	
0.00	0.00	0.1	
0.00	0.00	0.0	
0.00	0.00	0.0	
1.10	0.25	21.8	
0.01	0.01	0.2	
0.29	0.10	5.9	
0.02	0.01	0.5	
0.00	0.00	0.1	
0.25	0.25	5.0	
0.01	0.01	0.2	
0.15	0.10	2.1	
0.34	0.27	6.8	
0.03	0.03	0.6	
0.03	0.03	0.6	
0.11	0.04	2.1	
0.11	0.04	2.1	
1.34	0.30	26.6	
0.33	0.20	6.5	
0.98	0.48	19.5	
0.03	0.03	0.6	
0.00	0.00	0.0	
2.22	1.38	44.1	
0.03	0.03	0.5	
0.37	0.35	7.4	
0.00	0.00	0.1	
0.00	0.00	0.0	
0.46	0.46	9.1	
1 .	1.18	23.4	
0.04	0.04	0.8	
0.14	0.11	2.8	

BAILEY GENERATING PLANT

PHYTOPLANKTON BIOVOLUME

HICROLITERS PER LITER

171

STATION REPORT

LS	TAXA		
		17	18
0	CRYPTOPHYTA	0.44	0.08
0	CRYPTOMONODALES		
0	CRYPTOMONAS (LPIL)	0.40	0.06
0	RHODOMONAS MINUTA	0.01	0.00
0	CHROOMONAS (LPIL)	0.04	0.02
TOT	AL	3.93	6.14
DIV	ERSITY (H PRIME)	2.26	2.48
DIV	ERSITY (J PRIME)	0.60	0.68
HUM	BER OF TAXA	22	19
ABO	EVE COMPUTED USING SAMPLE IDS		

181

182

172

DATE 07/15/80 37 7600AUA 9/28/77

REL S.E. AB% 0.26 0.18 5.2 0.23 0.17 4.6 0.00 0.1 0.00 0.03 0.01 0.5 1.10 100.0 5.03 2.37 0.11 0.04 0.64 28

BAILEY GENERATING PLANT

PHYTOPLANKTON BIOVOLUME

MICROLITERS PER LITER

STATION REPORT

CYANOPHYTA	18
	0.00
OSCILLATORIACEAE	0.00
	0.00
	0.00
	0.00
	1.10
	1.10
	0.01
	0.29
	0.02
	0.00
	0.25
	0.01
	0.01
	0.10
	0.10
	0.34
	0.03
	0.03
	0.11
	0.11
	0.11
	1.34
	*
	0.33
	0.98
	0.03
	0.00
	2.22
	0.03
	0.37
	0.37
	0.00
	0.00
	0.00
	0.46
	0.40
	1.18
	1.10
	0.04
	0.14
	OSCILLATORIA (LPIL) NOSTOCACEAE ANABAENA (LPIL) CHLOROPHYTA CHLOROCCOCCALES OOCYSTIS (LPIL) SCENEDESMUS QUADRICAUDA SCENEDESMUS ECORNIS SCENEDESMUS SPINOSUS PEDIASTRUM DUPLEX TETRAEDRON CAUDATUM OEDOGONIALES OEDOGONIUM (LPIL) ZYGNEMATALES MOUGEOTIA (LPIL) CLOSTERIUM HONILIFERUM STAURASTRUM (LPIL) EUGLENOPHYTA EUGLENALES TRACHELOMONAS (LPIL) CHRYSOPHYTA CHRYSOMONADALES CHRYSOCOCCUS (LPIL) DINOBRYON SERTULARIA EPIPYXIS UTRICULUS KEPHYRION (LPIL) BACILLARIOPHYTA-PENNATE FRAGILARIA EFIRAMIALES ACHMANTHES MINUTISSIMA ACHMANTHES MINUTISSIMA ACHMANTHES (LPIL) NAVICULALES NEIDIUM (LPIL) BACILLARIALES NITZCHIA (LPIL) SURIRELLALES SURIRELLA (LPIL) BACILLARIOPHYTA-PENNATE (LPIL) BACILLARIOPHYTA-PENNATE (LPIL)

_		REL	
×	S.E.	AB%	
0.00	-1.00	0.1	
0.00	-1.00	0.0	
0.00	-1.00	0.0	
1.10	-1.00	21.8	
0.01	-1.00	0.2	
0.29	-1.00	5.9	
0.02	-1.00	0.5	
0.00	-1.00	0.1	
0.25	-1.00	5.0	
0.01	-1.00	0.2	
0.10	-1.00	2.1	
0.34	-1.00	6.8	
0.03	-1.00	0.6	
0.03	-1.00	0.6	
0.11	-1.00	2.1	
0.11	-1.00	2.1	
1.34	-1 00	26.6	
0.33	-1.00	6.5	
0.98	-1.00		
0.03	-1.00	0.6	
0.00	-1.00	0.0	
2.22	-1.00	44.1	
0.03	-1.00	0.5	
0.37	-1.00	7.4	
0.00	-1.00	0.1	
0.00	-1.00	0.0	*
0.46	-1.00	9.1	
1.18	-1.00	23.4	
0.04	-2.00	0.8	
0.14	-1.00	2.8	

DATE 07/15/80 PAGE NO 38 T600AQU' 9/28/77

BAILEY GENERATING PLANT

PHYTOPLANKTON BIOVOLUME

MICROLITERS PER LITER

STATION REPORT

LS	TAXA		
			18
0	CRYPTOPHYTA		0.26
0	CRYPTOMONODALES		
0	CRYPTOMONAS (LPIL)		0.23
0	RHODOHONAS MINUTA		0.00
0	CHROOMONAS (LPIL)		0.0
TOT	TAL		5.0
DIV	VERSITY (H PRIME)		2.3
DIV	VERSITY (J PRIME)		0.64
HUI	BER OF TAXA		28
ABO	OVE COMPUTED USING SAMPLE IDS		
	171 172	181	182

DATE	07/15/80
PAGE NO	39
T600AQUA	9/28/77

-		REL
X	S.E.	AB%
0.26	-1.00	5.2
0.23	-1.00	4.6
0.00	-1.00	0.1
0.03	-1.00	0.5
5.03	-1.00	100.0
2.37	-1.00	
0.64	-1.00	
28		

BAILEY GENERATING PLANT

PHYTOPLANKTON BIOVOLUME

MICROLITERS PER LITER

PEPLICATE REPORT

PC TC GC LOC 5 56 56 1 2 00

DATE TIME D/N U 4/20/80 1055 0	0.0 0		MD 1.0			C SEC	ныт	SC DI	CL	CURENT SP DI		EMP	BT	TURBO	COND	DO	PH	SALN P	
4/20/80 1055 0 4/20/80 1055 0	0.0 0						13 PR 6			OF DI									
4/20/80 1055 0		4.0			2.0	4 3	0 8 0		5	0.0 0	178 1	9.5	0	0.0			0.0	0.0 0	
	0.0	1.6								0.0 0			0	0.0		8.5			
TAVA		1.0	1.0	0.0 0	2.0	7 1.	0 0 0	, ,	,	0.0 0	17.0	17.3		0.0		0.3	0.0	REL	
														×			S.E.	AB%	
1000				1			2											no.	
ANOPHYTA					00									0.	00		0.00	0.0	
CHROOCOCCACEAE																			
AGMENELLUM (LPIL)				0.	00		0.0							0.	00		0.00	0.0	
LOPOPHYTA				0.	09		0.09							0.	09		0.00	0.9	
VOLVOCALES																			
CHLANYDOMONAS (LF	IL)			0.	06		0.07							0.	07		0.00	0.7	
CHLOROCOCCALES																			
ANKISTRODESMUS FA	LCATUS			0.	0		0.01							0.	.00		0.00	0.0	
SCENEDESMUS QUADR	ICAUDA			0.	0		0.01										0.01		
SCENEDESHUS ECORN	IIS			0.	03		0.0							-	100000				
GLEHOPHIIA				0.	70		0.56							0.	76		0.20	7.9	
EUGLENALES																			
TRACHELOMONAS VOL	VOCINA			0.	12										- 100				
TRACHELOMONAS (LF	(JIC)			0.	84												-	-	
RYSOPHYTA				6.	84		5.88							6.	36		0.48	65.8	
CHRYSOMONADALES																			
CHRYSOCOCCUS (LPI	(L)			0.	07														
DINOBRYON SERTULA	RIA			6.	39		- A - A -											1,300,000,000,000	
DINGBRYON DIVERGE	NS			0.			E. 11 18:00										2000		
OCHROMONAS (LPIL)				0.	30.									100.7					
KEPHYRION (LPIL)	**			0.															
CILLARIOPHTTA-PENNA	115			0.	16		0.33							0.	.25		0.09	2.5	
					00									^	04		0.00		
The state of the s				-											1.000				
	the second second			7.00	-									1					
		.,		-	70.0														
	AE			1.	04		1.74							1.	. 19		0.03	10.5	
DEDIDINIALES	DICHM				0.0		7/4								61		0 37	14 4	
DEDIDINIUM CINCO	PICUUII			0										-					
VETOCUYTA				0.													790 700		
COVETONOLINES				0.	61		0.50							0.	46		0.10	4.4	
CHAIL FOLIMINATION FF.					24		0 54							0	10		0 16	4 1	
							-												
CHROCHORAS (CPIL)				0.	0.5		0.03							0.			0.00	0.0	
				10	15		9.17							. 0	66		0.40	100.0	
TTY (H PRIME)					-		F . T . C . T												
	AGHENELLUM (LPIL) LOROPHYTA VOLVOCALES CHLANYUOMONAS (LE CHLOROCOCCALES ANKISTRODESMUS FA SCENEDESMUS QUADR SCENEDESMUS ECORN GLEMOPHYTA EUGLENALES TRACHELOMONAS (LE TRACHELOMONAS (LE TRACHELOMONAS (LE TRACHELOMONAS (LE DINOBRYON SERTULA DINOBRYON SERTULA DINOBRYON DIVERGE OCHROMONAS (LPIL) KEPHYRION (LPIL) CILLARIOPHYTA-PENNA FRAGILARIA (LPIL) TABELLARIA (LPIL) CILLARIOPHYTA-DINOPHYCE PERIDINIUM CINC; O CRYPTOMONAS (LPIL) CHROOMONAS (LPIL)	CHROOCOCCACEAE AGHENELLUM (LPIL) LOROPHYTA VOLVOCALES CHLANYUOMONAS (LPIL) CHLOROCOCCALES ANKISTRODESMUS FALCATUS SCENEDESHUS GUADRICAUDA SCENEDESHUS ECORNIS GLENOPHYTA EUGLENALES TRACHELOMONAS VOLVOCINA TRACHELOMONAS (LPIL) RYSOPHYTA CHRYSOCOCCUS (LPIL) DINOBRYON SERTULARIA DINOBRYON DIVERGENS OCHROMONAS (LPIL) KEPHYRION (LPIL) CILLARIOPHYTA-PENNATE FRAGILARIALES FRAGILARIA (LOIL) TABELLARIA FLOCCULOSA CILLARIOPHYTA-PENNATE (LPIL) RRHOPHYTA-DINOPHYCEAE PERIDINIALES PERIDINIUM CINC'UM YPTOFHYTA CRYPTOMONOBAS (LPIL) CHROOMONAS (LPIL) CHROOMONAS (LPIL)	CHROOCOCCACEAE AGHENELLUM (LPIL) LOROPHYTA VOLVOCALES CHLANYDOMONAS (LPIL) CHLOROCOCCALES ANKISTRODESMUS FALCATUS SCENEDESMUS QUADRICAUDA SCENEDESMUS ECORNIS GLEMOPHYTA EUGLENALES TRACHELOMONAS VOLVOCINA TRACHELOMONAS (LPIL) RYSOPHYTA CHRYSOTIONADALES CHRYSOTIONADALES CHRYSOCOCCUS (LPIL) DINOBRYON SERTULARIA DINOBRYON DIVERGENS OCHROMONAS (LPIL) KEPHYRION (LPIL) KEPHYRION (LPIL) TABELLARIA FLOCCULOSA CILLARIOPHYTA-PENNATE (LPIL) RRHOPHYTA-DINOPHYCEAE PERIDINIUM INCOMSPICUUM PERIDINIUM CINCOUM YPTOFHYTA CRYPTOMONDALES CRYPTOMONDALES CRYPTOMONDALES CRYPTOMONDALES CRYPTOMONDALES	CHROOCOCCACEAE AGHENELLUM (LPIL) LOROPHYTA VOLVOCALES CHLANYDOMONAS (LPIL) CHLOROCOCCALES ANKISTRODESMUS FALCATUS SCENEDESMUS QUADRICAUDA SCENEDESMUS ECORNIS GLEMOPHYTA EUGLEHALES TRACHELOMONAS VOLVOCINA TRACHELOMONAS (LPIL) RYSOPHYTA CHRYSONONADALES CHRYSOCOCCUS (LPIL) DINOBRYON SERTULARIA DINOBRYON DIVERGENS OCHROMONAS (LPIL) KEPHYRION (LPIL) CILLARIOPHYTA-PENNATE FRAGILARIA (LOIL) TABELLARIA FLOCCULOSA 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CHRYSOPHYTA CHRYSOMONADALES CHRYSOCOCCUS (LPIL) DINOBRYON SERTULARIA DINOBRYON DIVERGENS OCHROMONAS (LPIL) CILLARIOPHYTA-PENNATE FRAGILARIA (LPIL) TABELLARIA FLOCCULOSA CILLARIOPHYTA-PENNATE (LPIL) CILLARIOPHYTA-PENNATE (LPIL) CILLARIOPHYTA-PENNATE (LPIL) CILLARIOPHYTA-PENNATE (LPIL) TABELLARIA FLOCCULOSA CILLARIOPHYTA-PENNATE (LPIL) CREMOPHYTA-DINOPHYCEAE PERIDINIUM INCOMSPICUMM PERIDINIUM CINCTUM CRYPTOMONAS (LPIL) CRYPTOMONAS (LPIL) CRYPTOMONAS (LPIL) CHROOMONAS (LPIL) CHROOMONAS (LPIL) CHROOMONAS (LPIL) CHROOMONAS (LPIL) CHROOMONAS (LPIL) COMBERCATION OCONA COMBERCATION OCONA CRYPTOMONAS (LPIL) CHROOMONAS (LPIL) COMBERCATION OCONA COMBERCATION OCONA CRYPTOMONAS (LPIL) CHROOMONAS (LPIL) COMBERCATION OCONA COMBERCATION OCONA COMBERCATION OCONA COMBERCATION OCONA OCONA OCONA COMBERCATION OCONA O	CHROOCOCCACEAE AGMENELLUM (LPIL) LOPOPHYTA VOLVOCALES CHLANYUOMONAS (LPIL) CHLOROCOCCALES ANKISTRODESMUS FALCATUS SCENEDESMUS GUADRICAUDA SCENEDESMUS ECORNIS GLENOPHYTA EUGLENALES TRACHELOMONAS VOLVOCINA TRACHELOMONAS (LPIL) CHRYSONONADALES CHRYSONONADALES CHRYSOCOCCUS (LPIL) DINOBRYON SERTULARIA DINOBRYON DIVERGENS OCHPOMONAS (LPIL) CILLARIOPHYTA-PENNATE FRAGILARIALES FRAGILARIA (LPIL) TABELLARIA FLOCCULOSA CILLARIOPHYTA-PENNATE (LPIL) TRHOPHYTA-DINOPHYCEAE PERIDINIUM INCOMSPICUMM PERIDINIUM INCOMSPICUMM PERIDINIUM CINCYUM O.75 YPTOTHYTA CRYPTOMONDALES CRYPTOMONDALES CRYPTOMONDALES CRYPTOMONDAS (LPIL) CHROOMONAS (LPIL) O.03	CHROCCCCACEAE AGHENELLUM (LPIL)	CHROCOCCCACEAE AGHENELLUH (LPIL) LOPOPHYTA VOLVOCALES CHLAHYDOMONAS (LPIL) CHLOROCOCCALES ANKISTRODESHUS FALCATUS SCENEDESHUS QUADRICAUDA SCENEDESHUS ECORNIS GLEHOPHYTA U.03 U.03 U.03 U.05 SCENEDESHUS ECORNIS U.03 U.06 U.01 SCENEDESHUS ECORNIS U.07 U.07 U.01 U.05 U.07 U.01 U.07 U.07 U.01 U.07 U	CHROQCOCCACEAE AGHENELLUM (LPIL) LOPOPHYTA VOLVOCALES CHLANYUOMONAS (LPIL) CHOROCOCCALES CHLANYUOMONAS (LPIL) SCENEDESHUS FALCATUS ANKISTRODESHUS FALCATUS ANKISTRODESHUS GUADRICAUDA COLO SCENEDESHUS ECORNIS CHENDESHUS COUNTAIN COUNTAIN CHENDESHUS COUNTAIN COUNTAIN CHENDESHUS COUNTAIN COUNTAIN CHENDESHUS COUNTAIN COUNTAI	CHRODCOCCACEAE AGHENELLUM (LPIL) LOPOPHYTA AGIENELLUM (LPIL) CHLAMYDOMONAS (LPIL) CHLAMYDOMONAS (LPIL) CHLAMYDOMONAS (LPIL) CHLAMYDOMONAS (LPIL) CHLAMYDOMONAS (LPIL) CHLAMYDOMONAS (LPIL) SCENEDESHUS GUADRICAUDA CENEDESHUS GUADRICAUDA CO.0 CACHENDESHUS ECORNIS CHENDEYTA CO.0 CACHENDESHUS ECORNIS CHENDEYTA CO.0 CACHENDESHUS ECORNIS CHENDEYTA CHE	CHRODCOCCACEAE AGHENELLUN (LPIL) 0.00 0.0 LOPOPHYTA 0.09 0.09 VOLVOCALES CHLANYDONONAS (LPIL) 0.06 0.07 CHLANYDONONAS (LPIL) 0.06 0.07 CHLANYDONONAS (LPIL) 0.00 0.01 SCENEDESHUS FALCATUS 0.0 0.01 SCENEDESHUS GUADRICAUDA 0.0 0.01 SCENEDESHUS ECORNIS 0.03 0.0 GLENDPHYTA 0.96 0.56 EUGLEINALES TRACHELONONAS VOLVOCINA 0.12 0.11 TRACHELONONAS (LPIL) 0.84 0.45 RYSOPHYTA 6.84 5.88 CHRYSORONADALES CRYPTONONADALES CRYPTONONADALES CRYPTONONADALES CRYPTONONAS (LPIL) CHROONIONAS (LPIL) 0.03 0.03 LO.15 LO.24 0.54 CHROONIONAS (LPIL) 0.03 0.03 LO.15 LO.25 LO.26 LO.27 LO.27 LO.28 LO.29 LO.29 LO.20 LO.2	CHRODCOCCACEAE AGHENELLUM (LPIL)	CHRODCOCCACEAE AGHENELLUN (LPIL) 0.00 0.0 LOPOPHYTA 0.09 0.09 VOLVOCALES CHLANYDONONAS (LPIL) 0.06 0.07 CHLANYDONONAS (LPIL) 0.06 0.07 CHLOROCCCCALES ANKISTRODESHUS FALCATUS 0.0 0.01 SCENEDESHUS QUADRICAUDA 0.0 0.01 SCENEDESHUS ECORNIS 0.03 0.0 GLENOPHYTA 0.96 0.56 EUGLEINALES TRACHELOHONAS VOLVOCINA 0.12 0.11 TRACHELOHONAS (LPIL) 0.84 0.45 RYSOPHYTA 6.84 5.08 CHRYSORIONADALES CHRYSORIONADALES CHRYSORIONADALES CHRYSORIONADALES CHRYSORIONAS (LPIL) 0.07 0.01 DINORRYON SERTULARIA 6.39 5.48 DINORRYON SERTULARIA 6.39 5.48 DINORRYON SERTULARIA 6.39 5.48 DINORRYON OLVERGENS 0.0 0.18 OCHROHONAS (LPIL) 0.37 0.21 KEPHYRION (LPIL) 0.37 0.21 KEPHYRION (LPIL) 0.01 0.00 CILLARIOPHYTA-PENNATE 0.16 0.33 FRAGILARIA (LOIL) 0.09 0.0 TABELLARIA FLOCCULOSA 0.0 0.33 CILLARIOPHYTA-PENNATE (LPIL) 0.07 0.0 RRHOPHYTA-DINOPHYCEAE 1.84 1.74 PERIDINIUM INCONSPICUM 1.08 1.74 PERIDINIUM CINCIUM 0.75 0.0 CRYPTOMONAS (LPIL) 0.24 0.54 CRYPTOMONAS (LPIL) 0.03 0.03	CHRODCOCCACEAE AGHENELLUM (LPIL) AGHENELLUM (LPIL) CHOPOPHITA O.09 O.00 CHLOROCOCCALES AIRKISTRODESHUS FALCATUS O.00 SCENEDESHUS FALCATUS O.00 SCENEDESHUS GUADRICAUDA O.00 O.01 SCENEDESHUS ECORNIS O.03 O.00 GLEHOPHYTA O.96 O.56 UGLEHOROMAS VOLVOCINA O.12 TRACHELOHOMAS (LPIL) O.84 O.84 O.85 CHRYSONOMADALES CHRYSONOMADALES CHRYSONOMADALES CHRYSONOMADALES CHRYSONOMON SERTULARIA O.07 O.10 OLHODRYON SERTULARIA O.39 O.40 OHOROMON SULVERENS O.00 OHOROMONAS (LPIL) O.37 O.21 O.01 CHLLARIOPHYTA-PENNATE O.16 O.33 O.7 TABELLARIA (LOFIL) O.09 O.0 TABELLARIA FLOCCULOSA O.0 O.0 TABELLARIA FLOCCULOSA O.0 O.0 TABELLARIA FLOCCULOSA O.0 O.0 TABELLARIA FLOCCULOSA O.0 O.0 TABELLARIA HOCKULOSA O.0 O.0 CILLARIOPHYTA-PENNATE (LPIL) O.07 O.0 O.0 TABELLARIA HOCKULOSA O.0 O.7 O.0 O.7 O.0 O.7 O.7 O.0 O.7 O.7	CHRODCOCCACEAE AGHENELLUM (LPIL) AGHENELLUM (LPIL) O.00 O.09 O.09 O.09 O.09 O.09 O.09 O.07 CHLOROCOCCALES CHLAMYDOMONAS (LPIL) O.06 O.07 CHLOROCOCCALES ANKISTRODESHUS FALCATUS O.00 SCENEDESHUS GUADRICAUDA O.01 SCENEDESHUS ECORNIS O.03 O.01 O.01 SCENEDESHUS ECORNIS O.05 O.06 O.07 CHOROCOCCALES O.01 SCENEDESHUS ECORNIS O.03 O.01 O.01 SCENEDESHUS ECORNIS O.05 O.06 O.07 CHOROCOCCALES O.01 O.01 SCENEDESHUS ECORNIS O.09 O.01 O.01 IRACHELOMONAS VOLVOCINA O.12 O.11 O.12 TRACHELOMONAS VOLVOCINA O.12 O.11 O.12 TRACHELOMONAS (LPIL) O.84 O.85 CHRYSOHONADALES CHRYSOHONADALES CHRYSOCOCCUS (LPIL) O.07 O.01 O.04 OLNOBERYON SERTULARIA O.39 OCHOPOTONAS (LPIL) O.07 OCHOPOTONAS (LPIL) O.07 OCHOPOTONAS (LPIL) O.07 O.01 O.09 OCHOPOTONAS (LPIL) O.01 O.00 CHLARIOPHYTA-PENNATE O.16 O.33 O.25 FRAGILARIALES FRAGILARIA (LOIL) TABELLARIA FLOCULOSA O.0 O.33 O.17 TABELLARIA FLOCULOSA O.0 O.33 O.17 TABELLARIA FLORUMYTA-PENNATE (LPIL) O.07 O.03 TRADIALARIA (LOIL) TABELLARIA FLORUMYTA-PENNATE (LPIL) O.07 O.03 TRADIALARIA (LOIL) O.07 O.03 TRADIALARIA (LOIL) O.07 O.03 CHLORIUM (LOIL) O.07 O.05 CRYPTOHONDALES CRYPTOHONDALES CRYPTOHONDALES CRYPTOHONDALES CRYPTOHONDALES CRYPTOHONDALES 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O.08 CREPHONINDERYCALE O.09 O.09 O.07 O.09 O.09	CHROCOCCACEAE AGIGHELLUM (LPIL)

DATE 07/15/80 PAGE NO 40 NORTHERN INDIANA PUBLIC SERVICE COMPANY (49720)
BAILEY GENERATING PLANT

PHYTOPLANKTON BIOVOLUME

MICROLITERS PER LITER

REPLICATE REPORT

LS TAXA

DIVERSITY (J PRIME) NUMBER OF TAXA

ABOVE COMPUTED USING SAMPLE IDS 91 192

1 2 0.51 0.51 14

DATE 07/15/80 PAGE NO 41

T600AQUA

9/28/77

X S.E. ABX

0.51 0.00

5-

BAILEY GENERATING PLANT

PHYTOPLANKTON BIOVOLUME

MICROLITERS PER LITER

PEPLICATE REPORT

FC TC GC LOC 5 56 56 1 2 00

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0	CHE	YSOPH	ATY								2.5	53		4.	73									3	.63			1.10	42	.7
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0		SYNCE	PYPI	A (PIL)					0.1	18		0.	0									0	.09			0.09	1.	. 0
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0		DINO	BRYC	11 11	PIL)					0.1	17		0.	0									0	.09			0.09	1 1	. 0
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0			200000	10000		NSPICE	JUM				2.3			770.0	00									-	.66			0.66		
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0		PTOPH									0.8	35		0.	25									0	.55			0.30	6.	. 5
0		RYPTO																												
0		CRYP									0.8				24										.54			0.31		.4
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гот	AI										7.	00		9.	10									8	.50			0.60	100.	. 0

DATE 07/15/80 PAGE NO 42

BAILEY GENERATING PLANT

FHYTOPLANKTON BIOVOLUME

HICROLITERS PER LITER

REPLICATE REPORT

				REL
TAXA			X	S.E. AB%
	1	2		
DIVERSITY (H PRIME)	2.73	2.22	2.48	0.25
DIVERSITY (J PRIME)	0.74	0.57	0.65	0.08
HUMBER OF TAXA	13	15	20	
ABOVE COMPUTED USING SAMPLE IDS				
201 202				

DATE 07/15/80 PAGE NO 43 T600AQUA 9/28/77

BAILEY GENERATING PLANT

PHYTOPLANKTON BIOVOLUME

MICROLITERS PER LITER

STATION REPORT

15	TAXA	Sec. 12. 4		
0	СУАНОРНУТА	19	20	
0	CHROCOCCACEAE	0.00	0.01	
0	AGMENELLUM (LPIL)	0.00	0.0	
0	NOSTOCACEAE	0.00	0.0	
0	ANABAENA (LPIL)	0.0	0.01	
0	CHLOROPHYTA	0.09	0.10	
0	VOLVOCALES	0.09	0.10	
0	CHLAMYDOMONAS (LPIL)	0.07	0.08	
0	CHLOROCOCCALES	0.07	0.05	
0	ANKISTRODESHUS FALCATUS	0.00	0.00	
0	SCENEDESHUS ACUTUS	0.0	0.00	
0	SCENEDESHUS QUADRICAUDA	0.01	0.01	
0	SCENEDESHUS ECORNIS	0.01	0.0	
0	EUGLEHOPHYTA	0.76	1.35	
0	EUGLENALES	0.70	1.33	
0	TRACHELOMONAS VOLVOCINA	0.12	0.18	
0	TRACHELOMONAS (LPIL)	0.64	1.18	
0	CHRYSOPHYTA	6.36	3.63	
0	CHRYSOMONADALES	0.30	3.63	
0	CHRYSOCOCCUS (LPTL)	0.04	0.03	
0	SYNCRYPTA (LPIL)	0.0	0.09	
0	DINOBRYON SERTULARIA	5.93	2.69	
0	DINOBRYON DIVERGENS	0.09	0.0	
0	DINOBRYON (LPIL)	0.0	0.09	
0	OCHROMONAS (LPIL)	0.29	0.67	
0	EPIPYXIS UTRICULUS	0.0	0.04	
0	KEPHYRION (LPIL)	0.00	0.00	
0	BACILLARIOPHYTA-PENNATE	0.25	0.03	
0	FRAGILARIALES			
0	FRAGILARIA (LPIL)	0.04	0.0	
0	TABELLARIA FLOCCULOSA	0.17	0.0	
0	BACILLARIALES			
0	NITZCHIA (LPIL)	0.0	0.01	
. 0	BACILLARIOPHYTA-PENNATE (LPIL)	0.03	0.02	
0	PYRRHOPHYTA-DINOPHYCEAE	1.79	2.83	
0	PERIDINIALES			
0	PERIDINIUM INCONSPICUUM	1.41	1.66	
0	PERIDINIUM CINCTUM	0.38	1.17	
0	CRYPTOPHYTA	0.42	0.55	
0	CRYPTOHONODALES			
0	1 CRYPTOMONAS (LPIL)	0.39	0.54	
. 0	CHROOMONAS (LPIL)	0.03	0.01	

		REL
X	S.E.	AB%
0.00	0.00	0.0
0.00	0.00	0.0
0.00	0.00	0.0
0.09	0.00	1.0
0.08	0.01	8.0
0.00	0.00	0.0
0.00		
0.01		0.1
0.01	0.01	0.1
1.06	0.29	11.6
0.15	0.03	1.6
0.91		10.0
5.00	1.36	55.0
0.03		0.4
0.04	0.04	
4.31		47.5
0.05	0.05	0.5
0.04	0.04	
0.49		5.4
0.02	0.02	0.2
0.00		0.0
0.14	0.11	1.5
0.02		0.2
0.08	0.08	0.9
0.00		0.0
0.03	0.01	0.3
2.31	0.52	25.4
1.54		16.9
0.77	0.40	8.5
0.49	0.07	5.4
0.47	0.08	5.2
0.02	0.01	

DATE 07/15/80 PAGE NO 44 T600AQUA 9/28/77

BAILEY GENERATING PLANT

PHYTGPLANKTON BIOVOLUME

HICROLITERS PER LITER

STATION REPORT

LS TAXA				
1000		19	20	
TOTAL		9.66	8.50	
DIVERSITY (H PRIME)		1.97	2.48	
DIVERSITY (J PRIME)		0.51	0.65	
NUMBER OF TAXA		19	20	
ABOVE COMPUTED USING SAMPLE IDS				
191 192	201	202		
			DATE	07/15/80
			PAGE NO	45
			T600AQUA	9/28/77

S.E. AB%

0.58 100.0 0.26 0.07

9.08

2.22 0.58 25

BAILEY GENERATING PLANT

PHYTOPLANKTON BIOVOLUME

MICROLITERS PER LITER

STATION REPORT

LS	TAXA	
	1808	20
0	CYANOPHYTA	0.00
0	CHROOCOCCACEAE	0.00
0	AGMENELLUM (LPIL)	0.00
0	NOSTOCACEAE	0.00
0	ANABAENA (LPIL)	0.00
0	CHLOPOPHYTA	0.09
0	VOLVOCALES	
0	CHLAMYDOMONAS (LPIL)	0.08
0	CHLOROCOCCALES	
0	ANKISTRODESMUS FALCATUS	0.00
0	SCENEDESHUS ACUTUS	0.00
0	SCENEDESMUS QUADRICAUDA	0.01
0	SCENEDESHUS ECORNIS	0.01
0	EUGLENOPHYTA	1.06
0	EUGLENALES	
0	TRACHELOMONAS VOLVOCINA	0.15
0	TRACHELOMONAS (LPIL)	0.91
0	CHRYSOPHYTA	5.00
0	CHRYSOMONADALES	
0	CHRYSOCOCCUS (LPIL)	0.03
0	SYNCRYPTA (LPIL)	0.04
0	DINOBRYON SERTULARIA	4.31
0	DINOBRYON DIVERGENS	0.05
0	DINOBRYON (LPIL)	0.04
0	OCHROMONAS (LPIL)	0.69
0	EPIPYXIS UTRICULUS	0.02
0	KEPHYRION (LPIL)	0.00
0	BACILLARIOPHYTA-PERNATE	0.14
0	FRAGILARIALES	
0	FRAGILARIA (LPIL)	0.02
0	TABELLARIA FLOCCULOSA	5.08
0	BACILLARIALES	
0	NITZCHIA (LPIL)	0.00
0	BACILLARIOPHYTA-PENHATE (LPIL)	0.03
0	PYRRHOPHYTA-DINOPHYCEAE	2.31
0	PERIDINIALES	
0	PERIDINIUM INCONSPICUUM	1.54
0	PERIDINIUM CINCTUM	0.77
C	CRYPTOFHYTA	0.49
0	CRYPTOMONODALES	
0	CRYPTOMGNAS (LPIL)	0.47
0	CHROOMONAS (LPIL)	0.02

×	S.E.	REL ABZ
^	J. L.	AU.
0.00	-1. 0	0.0
0.00	-1.00	0.0
0.00	-1.00	
0.09	-1.00	1.0
0.08	-1.00	0.0
0.00	-1.00	0.0
0.00	-1.00 -1.00	0.0
0.01	-1.00	0.1
0.01	-1.00	
1.06	-1.00	11.6
0.15	-1.00	1.6
0.91	-1.00	
5.00	-1.00	55.0
0.03	-1.00	
0.04	-1.00	
4.31	-1.00	
0.05	-1.00	0.5
0.04	-1.00	0.5
0.49	-1.00	
0.02	-1.00	0.2
0.00	-1.00	1.5
0.14	-1.00	1.5
0.02	-1.00 -1.00	0.2
0.08	-1.00	0.9
0.00	-1.00	
0.03	-1.00	
2.31	-1.00	25.4
1.54	-1.00	
0.77	-1.00	
0.49	-1.00	5.4
0.47	-1.00	
0.02	-1.00	0.2

DATE 07/15/80 PAGE NO 46 T600AQUA 9/28/77

BAILEY GENERATING PLANT

PHYTOPLANKTON BIOVOLUME

MICROLITERS PER LITER

STATION REPORT

ra 1	AXA	
		20
TOTAL		9.0
DIVERSITY	(H PRIME)	2.2
DIVERSITY	(J PRIME)	0.5
INMBER OF	TAXA	21

ABOVE COMPUTED USING SAMPLE IDS 191 192 201 202

> DATE 07/15/80 PAGE NO 47 T600AQUA 9/28/77

25

- REL X S.E. ABX 9.08 -1.00 100.0

2.22 -1.00 0.58 -1.00 25

BAILEY GENERATING PLANT

PHYTOPLANKTON BIOVOLUME

MICROLITERS PER LITER

REPLICATE REPORT

PC TC GC LOC 5 56 56 1 3 00

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	12 4/20/80							0.0												90.1				12.0			
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LS	TAXA																					×			S.E.	AB	-
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0	OSCILLA																						.06		0.04	0.	-
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0	BACILLARIO			401,100					0.0	1		0	48									0	1.24		0.24		.6
0	EUPODISCA	LES		-					-																7.00		-
0	MELOSIA	A (LPI							0.0			0	.48									0	1.24		0.24	. 0.	. 6
0	BACILLAPION			TE				4	7.3	12			.10										.71		22.61		
0	FRAGILARI	ALES																									
0	FRAGILA	RIA CRO	NOTO	ENSI	S				0.5	9		0	. 0									0	.30		0.30	0.	. 8
0	FRAGILA	RIA (LE	IL)						2.4	4		1	.46									1	. 95		0.49	5.	. 2
0	SYNEDRA	(LPIL)						5.2	9		0	.25									2	.77		2.5	2 7.	. 3
. 0	NAVICULAL	ES																									
0	HAVICUL	A (LPI	11						0.7	4		0	.28									0	.51		0.23	3 1.	.4
0	NEIDIUM	(LPIL)						0.3	8		0	. 0									0	1.19		0.19	9 0.	.5
0	PINNULA	RIA (LE	IL)					3	6.8	8		0.	. 0									18	1.44		18.44	48.	. 9
0	COMPHON	HEMA (LE	ILI						0.3	9		0	.0									0	1.19		0.19	9 0.	. 5
0	AMPHORA	(LPIL)						0.0			0	.10									0	.05		0.0		.1
0	EFITHEMIA	LES																									
0	RHOPOLO	DIA GIE	BBA						0.2	1		0.	. 0									0	1.11		0.11	0.	. 3
. 0	BACILLARIOR	HYTA-PE	ALHIA	TE (LPIL)			0.3	9		0	.0									0	.20		0.20	0.	. 5

DATE 07/15/80 PAGE NO 48 T600AQUA 9/28/77

211 212

BAILEY GENERATING PLANT

PHYTOPLANKTON BIOVOLUME

HICROLITERS TER LITER

REPLICATE REPORT

			_
LS TAXA			x
	1	2	
O PYRRHOPHYTA-DINOPHYCEAE	0.25	0.0	0.12
0 PERIDINIALES			
O PERIDINIUM INCONSPICUUM	0.25	0.0	0.12
TOTAL	69.67	5.78	37.73
DIVERSITY (H PRIME)	1.97	1.91	1.94
DIVERSITY (J PRIME)	0.49	0.64	0.56
NUMBER OF TAXA	16	8	20
ABOVE COMPUTED USING SAMPLE IDS			

DATE 07/15/80 PAGE NO 49 T600AQUA 9/28/77 S.E. ABZ

0.12 0.3

0.12 0.3

31.94 100.0

0.03

0.07

BAILEY GENERATING PLANT

PHYTOPLANKTON BIOVOLUME

MICROLITERS PER LITER

STATION REPORT

15	TAXA	
		21
	СУАНОРНУТА	0.08
0	TOTAL ENTENDED	
0	OSCILLATORIA (LPIL) NOSTOCACEAE	0.06
0		0.01
0		0.01
0	RIVULARIACEAE RAPHIDIOPSIS CURVATA	0.03
0		0.01
0		12.09
0	The state of the s	0.44
0	Management that was a	0.66
0	SPIROGYRA (LPIL)	9.88
0		1.55
0		0.48
0	LUGLENALES	0.40
0	TRACHELOMONAS (LPIL)	0.48
0		0.00
0		0.00
0		0.00
0		0.24
0		
0	MELOSIRA (LPIL)	0.24
0		24.71
0	FRAGILARIALES	
0	FRAGILARIA CROTONENSIS	0.30
0		1.95
0	STNEDRA (LPIL)	2.77
0	NAVICULALES	
0	NAVICULA (LPIL)	0.51
0	HEIDIUM (LPIL)	0.19
0		18.44
0	GOMPHONEMA (LPIL)	0.19
0	AMPHORA (LPIL)	0.05
0	EPITHEMIALES	
0	RHOPOLODIA GIBBA	0.11
0	BACILLARIOFHYTA-PENNATE (LPIL)	0.20
0	PYRRHOPHYTA-DINOPHYCEAE	0.12
0	PERIDINIALES	
0	PERIDINIUM INCONSPICUUM	0.12
TOT		37.73
	ERSITY (H PRIME)	1.94
DIV	ERSITY (J PRIME)	0.56

		REL
×	S.E.	ABX
0.08	-1.00	0.2
0 06	-1.00	0.2
0.01	-1.00	0.0
0.01	-1.00	0.0
12.09	-1.00	32.1
0.66	-1.00	1.7
9.88	-1.00	26.2
1.55	-1.00	4.1
0.48	-1.00	1.3
0.48	-1.00	1.3
0.00	-1.00	0.0
0.00	-1.00	0.0
0.24	-1.00	0.6
0.24	-1.00	0.6
24.71	-1.00	65.5
0.30		0.8
1.95	-1.00	5.2
2.77	-1.00	7.3
0.51	-1.00	1.4
0.19	-1.00	0.5
18.44		48.9
0.19	-1.00	0.5
0.05	-1.00	0.1
0.11	-1.00	0.3
0.20		0.5
0.12	-1.00	0.3
0.12	-1.00	0.3
37.73		100.0
1.94	-1.00	
0.56	-1.00	

DATE 07/15/80 PAGE NO 50

BAILEY GENERATING PLANT

PHYTOPLANKTON BIOVOLUME

MICROLITERS PER LITER

STATION REPORT

LS TAXA

21

NUMBER OF TAXA

20

ABOVE COMPUTED USING SAMPLE IDS 212 211

07/15/80 DATE

PAGE NO 51 T600AQUA 9/28/77 S.E. ABZ

REL

20

BAILEY GENERATING PLANT

PHYTOPLANKTON BIOVOLUME

HICROLITERS PER LITER

STATION REPORT

LS	TAXA	
		21
-	СУАНОРНУТА	0.08
	OSCILLATORIACEAE	
0		0.06
- 5	NOSTOCACEAE	
0		0.01
0	11 8 1 8 8 1111 8 110 8 116	3.42
0		0.01
0		12.09
0		
0		0.66
0	E-2 3-1 3-1 3-1 3-1 3-1 3-1 3-1 3-1 3-1 3-1	
0	SPIROGYRA (LPIL)	9.88
0	CLOSTERIUM (LPIL)	1.55
0	EUGLEHOPHYTA	0.48
0		
0	TRACHELOMONAS (LPIL)	0.48
0	CHRYSOPHYTA	0.00
0		
0	CHRYSOCOCCUS (LPIL)	0.00
0	BACILLARIOPHYTA-CENTRIC	0.24
0		
0	MELOSIRA (LPIL)	0.24
0	BACILLARIOPHYTA-PENNATE	24.71
0	111111111111111111111111111111111111111	
0	The state of the s	0.30
0		1.95
0	SYNEDRA (LPIL)	2.77
	NAVICULALES	
0	HAVICULA (LPIL)	0.51
0	NEIDIUM (LPIL)	0.19
0	PINNULARIA (LFIL)	18.44
0	GOMPHONEMA (LPIL)	0.19
0	AMPHORA (LPIL)	0.05
	EPITHEMIALES	
0	RHOPOLODIA GIBBA	0.11
0	BACILLARIOPHYTA-PENHATE (LPIL)	0.20
	PYRRHOPHYTA-DINOPHYCEAE	0.12
0	PERIDINIALES	
0	PERIDINIUM INCONSPICUUM	0.12
TOT	AL	37.73
DIV	ERSITY (H PRIME)	1.94
DIV	ERSITY (J PRIME)	0.56

_		REL	
x	S.E.	AB%	
0.08	-1.00	0.2	
0.06	-1.00	0.2	
0.01	-1.00	0.0	
0.01	-1.00	0.0	
12.09	-1.00	32.1	
0.66	-1.00	1.7	
9.88	-1.00		
1.55	-1.00	4.1	
0.48	-1.00	1.3	
0.48	-1.00	1.3	
0.00	-1.00	0.0	
0.00	-1.00	0.0	
0.24	-1.00	0.6	
0.24	-1.00	0.6	
24.71	-1.00	65.5	
0.30	-1.00	0.8	
	-1.00	5.2 7.3	
2.77	-1.00	7.3	
0.51	-1.00	1.4	
0.19	-1.00	0.5	
18.44	-1.00	48.9	
0.19	-1.00	0.5	
0.05	-1.00		
0.11	-1.00	0.3	
0.20	-1.00	0.5	
0.12	-1.00	0.3	
0.12	-1.00	0.3	
37.73		100.0	
1.94	-1.00		
0.56	-1.00		

DATE 07/15/80 PAGE NO 52

BAILEY GENERATING PLANT

PHYTOPLANKTON BIOVOLUME

HICROLITERS PER LITER

STATION REPORT

LS TAXA

HUMBER OF TAXA

ABOVE COMPUTED USING SAMPLE IDS 211 212

07/15/30 DATE PAGE NO 53 T600AQUA 9/28/77

20

REL S.E. AE%

20



APPENDIX C

PERIPHYTON DENSITY REPLICATE REPORTS, BAILLY STUDY AREA, APRIL 1980

BAILEY GENERATING PLANT

PERIPHYTON DENSITY

DENSITY IN NUMBER / SQUARE CENTIMETER

REPLICATE REPORT

FC TC GC LOC 5 66 66 0 0 10

SID DATE TIME D/N UNITS C SD WD SP D UNITS C SECH W T SC DI CL SP DI AIR WAT BT TURBO COND DO	PH SALN P
	0.0 0.0 0
11 -:/19/60 0 0 0.0 0 0.0 4.6 0.0 0 0.0 0 0.0 0 0 0 0 0 0 0 0 0 0 0	
12 4/19/60 0 0 0.0 0 0.0 4.6 0.0 0 0.0 0.0 0 0 0 0 0 0 0 0 0 0 0 0	0.0 0.0 0
	REL
LS TAXA X	S.E. A3%
1 2	
0 CYANDPHYTA 1578821.00 13140903.0 7359862.00 5781	041.00 74.0
O PLEUROCAPSACEAE	
O PLEUROCAPSA (LPIL) 0.0 7640487.00 3820243.00 3820	243.00 33.4
O OSCILLATORIACEAE	
0 LYNGBYA LIMNETICA 1222314.00 5500416.00 3361365.00 2139	051.00 33.6
0 LYMGBYA (LPIL) 305578.69 0.0 152789.31 152	789.31 1.5
O NOSTOCACEAE	
O ANABAEMA (LPIL) 50929.79 0.0 25464.89 25	64.89 0.3
O CHLCROPHYTA 2801136.00 2302025.00 2551580.00 240	555.50 25.6
0 ULOTRICHALES	
O SCHIZOMERIS (LPIL) 2601136.00 2302025.00 2551580.00 249	555.50 25.6
0 BACILLARIOPHYTA-PENNATE 40743.83 40743.83 40743.83	0.0 0.4
O BACILLARIOPHYTA-PENNATE (LPIL) 40743.83 40743.83 40743.83	0.0 0.4
TOTAL 4420699.00 15483670.0 9952184.00 5531	85.00 100.0
DIVERSITY (H PRIME) 1.33 1.46 1.40	0.07
DIVERSITY (J PRIME) 0.57 0.73 0.65	0.08
NUMBER OF TAXA 5 4 6	

ABOVE COMPUTED USING SAMPLE IDS

DATE 07/14/80 PAGE NO 1 T600AQUA 9/28/77

10

BAILEY GENERATING PLANT

PERIPHYTON DENSITY

DENSITY IN NUMBER / SQUARE CENTIMETER

ABOVE COMPUTED USING SAMPLE IDS

11 12

STATION REPORT

1.5	TAXA		
			1
0	CYANOPHYTA		7359862.00
0	PLEUROCAPSACEAE		
0	PLEUROCAPSA (LPIL)		3820243.00
0	OSCILLATORIACEAE		
6	LYNGBYA LIMMETICA		3361365.00
0	LYNGBYA (LPIL)		152789.31
0	NOSTOCACEAE		
0	ANABAENA (LPIL)		25464.89
0	CHLOROPHYTA		2551580.00
0	ULOTRICHALES		
0	SCHIZOMERIS (LPIL)		2551580.00
0	BACILLARIOPHYTA-PENNATE		40743.83
0	BACILLARIOPHYTA-PENNATE	(LPIL)	40743.83
TOT	AL		9952184.00
DIV	ERSITY (H PRIME)		1.40
DIV	ERSITY (J PRIME)		0.65
HUN	BER OF TAXA		6

. *		REL	
×	S.E.	ABZ	
7359862.00	-1.00	74.0	
3820243.00	-1.00	38.4	
3361365.00	-1.00	33.8	
152789.31	-1.00	1.5	
25464.89	-1.00	0.3	
2551580.00	-1.00	25.6	
2551580.00	-1.00	25.6	
40743.83	-1.00	0.4	
40743.83	-1.00	0.4	
9952184.00	~1.00	100.0	
1.40	-1.00		
0.65	-1.00		
4			

DATE 07/14/80 PAGE NO 2 T600AQUA 9/28/77

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BAILEY GENERATING PLANT

PERIPHYTON FENGITY

DENSITY IN NUMBER / SQUARE CENTIMETER

REPLICATE REPORT

PC TU GC LOC 5 46 66 0 0 20

				DURA	TION			TOH	SA	MP 1	VOL			Į,	IND		CUR	THE	T	EMP								
SID	DATE	TIME	D/N	UNIT	SC	SD	MD	SP D	UN	ITS	CS	ECH	WT	50	DI	CL	SP	DI	AIR	HAT	BT	TURBD	COHO	DO	PH	SALN	P	
10	1 4/20/80	0	0	0.0	0	0.0	1.5	0.0 0		0.0	0	0.0	0 0	0	0	0	0.0	0 0	0.0	0.0	0	0.0	0	0.0	0.0	0.0	0	
10		0	0	0.0	0	0.0	1.5	0.0 0		0.0	0	0.0	0 0	0	0	0	0.0	0	0.0	0.0	0	0.0	0	0.0	0.0	0.0		
																						-				RE		
LS	TAXA																					X			S.E.	AB	%	
								1				2																
0	CYANOPHYTA						22	755392	.0		6741	119	.00								14	748255.	0	80071	36.00	99	. 9	
0	PLEUROCA	PSACE	AE																									
0	PLEURO	CAPSA	(LP	IL)			1	158420	.00			0.	. 0								. 1	579210.	00	5792	10.00	3	. 9	
0	OSCILLAT	ORIAC	EAE																									
0	DSCILL	ATCRI	ALL	PIL)				450543	.00			0	.0									725271.	50	7252	71.50	4	. 9	
0	LYNGBY	A LIP	WET	CA			11	332370	.0			0	.0								5	666185.	00	56661	85.00	38	.4	
0	LYNGBY	A (LF	ILI				2	115575	.00	4	4622	318	.00								3	368846.	00	12534	71.00	22	.8	
0	RIVULARI	ACEAE																										
0	CALOTH	RIX (LPIL)			6	698690	.00		2118	801	00								40	408745	00	22899	744.00	29	.9	
0	PACILLARIO	PHYTA	-PEI	NATE				20146	.44		17	226	.04									18686.	23	14	60.20	0	.1	
0	BACILLARIO	PHYTA	-PEN	NATE	CLPI	L)		20146	.44		17	226	04									16686.	23	14	60.20	0	.1	
TOTA	L						22	775520	. 0		6758	346	.00								14	766933.	0	80085	557.00	100	.0	
	RSITY (H P	RIME)							.82				92									1.	37		0.45	,		
	RSITY (J P								.70				.58									0.	64		0.06			
75.700.07	ER OF TAXA								6				3										6					

TOVE COMPUTED USING SAMPLE IDS

DATE 07/14/80 PAGE NO 3 T600AQUA 9/28/77

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BAILEY GENERATING PLANT

PERIPHYTON DENSITY

DENSITY IN NUMBER / SQUARE CENTIMETER

ABOVE COMPUTED USING SAMPLE IDS

101 102

STATION REPORT

LS	TAXA	
		10
0	CYANOPHYTA	14748255.0
0	PLEUROCAPSACEAE	
0	PLEUROCAPSA (LPIL)	579210.00
0	OSCILLATORIACEAE	
0	OSCILLATORIA (LPIL)	725271.50
0	LYNGBYA LIMNETICA	5666185.00
0	LYNGBYA (LPIL)	3368846.00
0	RIVULARIACEAE .	
0	CALOTHRIX (LPIL)	4408745.00
0	BACILLARIOPHYTA-PENNATE	18686.23
0	BACILLARIOPHYTA-PENNATE (LPIL)	18686.23
TOT	AL	14766933.0
DIV	ERSITY (H PRIME)	1.37
DIV	ERSITY (J PRIME)	0.64
NUIT	BER OF TAXA	6

-		REL	
×	S.E.	ABX	
14748255.0	-1.00	99.9	
579210.00	-1.00	3.9	
725271.50	-1.00	4.9	
5666185.00	-1.00	38.4	
3368846.00	-1.00	22.8	
4408745.00	-1.00	29.9	
18686.23	-1.00	0.1	
18686.23	-1.00	0.1	
14766933.0	-1.00	100.0	
1.37	-1.00		
0.64	-1.00		
6			

DATE 07/14/80 PAGE NO 4 T600AQUA 9/28/77

BAILEY GENERATING PLANT

PERIPHYTON DENSITY

DENSITY IN NUMBER / SQUARE CENTIMETER

REPLICATE REPORT

PC TC GC LOC 5 66 66 0 0 30

- 27	00 00 0 0 3	O.																									
				DURAT	ION			TON	SA	MP V	OL			u	IND		CUR	ENT	T	EMP							
SI	D DATE	TIME	D/N	UNITS	C	SD	MD	SP I) UN	ITS	C S	ECH I	W T	SC	DI	CL	SP	DI	AIR	WAT	BT	TURBD	COND	DO	PH	SALN	P
1	11 4/19/80	0	0	0.0	0	0.0	3.7	0.0 (0	0.0	0	0.0	0 0	0	0	0	0.0	0	0.0	0.0	0	0.0	0	0.0	0.0	0.0	0
4	12 4/19/80	0	0	0.0	0	0.0	3.7	0.0)	0.0	0	0.0	0 0	0	0	0	0.0	0	0.0	0.0	0	0.0	0	0.0	0.0	0.0 REL	
LS	TAXA																					Х			S.E.	ABZ	
643									1			2															
0	CYANOPHYTA						18	779264	+.0	18	3317	968.	0								18	548608.	0	2306	48.00	97.	9
0	PLEUROCAI	PSACE	AE																								
0	PLEURO	CAPSA	(LP	IL)			1	300973	3.00		5465	225.	00								3	38,099.	00	20821	26.00	17.	9
0	OSCILLATO	ORIAC	EAE																								
0	OSCILL	ATORI	ALL	PIL)				282820	3.37			0.	0									141410.	19	1414	10.1	9 0.	7
0	LYNGBY	A LIM	NETI	CA				(0.0	8	38046	696.	00								44	402348.	00	44023	48.00	23.	2
0	LYNCBY	A ILP	IL)				11	086556	3.0	4	1048	054.	00								75	567306.	00	35192	52.00	39.	9
0	RIVULARI	ACEAE																									
0	CALOTH	RIX (LPIL)			6	108920	0.00			0.	0								31	054460.	00	30544	60.00	16.	1
0	CHLOROPHYTA							297526	.87			0.	0								- 1	148763.	44	1487	63.40	. 0.	8
0	ULOTRICH	Of the same of	LPI	L)				297526	.87			0.	0								1	148763.	44	1487	63.40	0.	8
0	BACILLARIO	PHYTA	-PEN	NATE				282820	37		2174	486.	50								- 1	250153.	44	326	66.9	1.	3
0	BACILLARIO	PHYTA	-PEN	NATE (LPIL	.)		282820	3.37		2170	486.	50									250153.	44	326	66.94	1.	3
TOT	AL						19	359552	0.5	18	35354	408.	0								189	947472.	0	4120	72.00	100.	0
DIV	ERSITY (H PE	RIME)						1	1.52			1.	58									1.	55		0.0	5	
DIV	ERSITY (J PE	RIME)						0	.59			0.	79									0.	69		0.10)	
NUM	BER OF TAXA								6				4										7				

ABOVE COMPUTED USING SAMPLE IDS 111 112

DATE 07/14/80 PAGE NO 5 T600AQUA 9/28/77

**

BAILEY GENERATING PLANT

PERIPHYTON DENSITY

DENSITY IN HAMBER / SQUARE CENTIMETER

ABOVE COMPUTED USING SAMPLE IDS

111 112

STATION REPORT

LS	TAXA	
		11
0	CYANOPHYTA	18548608.0
0	PLEUROCAPSACEAE	
0	PLEUROCAPSA (LPJL)	3383099.00
0	OSCILLATORIACEAE	
0	OSCILLATORIA (LPIL)	141410.19
0	LYNGBYA LIMNETICA	4402348.00
0	LYNGBYA (LPIL)	7567306.00
0	RIVULARIACEAE	
0	CALOTHRIX (LPIL)	3054460.00
0	CHLOROPHYTA	148763.44
0	ULOTRICHALES	
0	ULOTRICHALES (LPIL)	148763.44
0	BACILLARIOPHYTA-PENNATE	250153.44
0	BACILLARIOPHYTA-PENNATE (LPIL)	250153.44
TOT	AL	18947472.0
DIV	ERSITY (H PRIME)	1.55
DIV	ERSITY (J FRIME)	0.69
NUM	BER OF TAXA	7

-		REL	
X	S.E.	ABZ	
18548608.0	-1.00	97.9	
3383099.00	-1.00	17.9	
141410.19	-1.00	0.7	
4402348.00	-1.00	23.2	
7567306.00	-1.00	39.9	
3054460.00	-1.00	16.1	
148763.44	-1.00	0.8	
148763.44	-1.00	0.8	
250153.44	-1.00	1.3	
250153.44	-1.00	1.3	
18947472.0	-1.00	100.0	
1.55	-1.00		
0.69	-1.00		

DATE 07/14/80 PAGE NO 6 T600AQUA 9/28/77

BAILEY GENERATING PLANT

PERIPHYTON DENSITY

DENSITY IN NUMBER ! SQUARE CENTIMETER

REPLICATE REPORT

FC TC GC LOC 5 66 66 0 0 40

	00 00 0 0 4	U																									
				DURAT	HOI			TOP	4	SAMP	VOI	L		- 1	OMIL		CUR	ENT	TE	P							
SI	D DATE	TIME	D/N	UNITS	C	SD	WD	SP	D	UNIT	SC	SECH	W	50	DI	CL	SP	DX	AIR	WAT	BT	TURED	COND	DO	PH	SALN	P
1	21 4/19/80	0	0	0.0	0	0.0	6.1	0.0	0	0.	0 0	0.0	0 () (0 0	0	0.0	0	0.0	0.0	0	0.0	0	0.0	0.0	0.0	0
1	22 4/19/80	0	0	0.0	0	0.0	6.1	0.0	0	0.	0 0	0.0	0 () (0 0	0	0.0	0	0.0	0.0	0	0.0	0	0.0	0.0	0.0 REI	
LS	TAXA																					×			S.E.	AB	
									1			2															
0	CYANOPHYTA								0.0	0	274	40506	.00								13	370253.	00	13702	53.00	40	.2
0	OSCILLAT	CRIAC	EAE																								
0	LYNGBY	A LIM	NETI	CA					0.0	0	54	48101	.31								- 1	274050.	62	2740	50.62	8	.0
0	LYNGBY	A (LP	IL)						0.0	0	219	92405	.00								10	196202.	00	10962	202.00		
0	CHLOROPHYT	A						54459	93.	19		3288	.61								- 2	273940.	87	2706	52.25	8	.0
0	ULOTRICH	ALES																									
9	SCHIZO	MERIS	(LP	ILI				52782	11.	31		0	.0								- 6	263910.	62	2639	210.63	7	.7
0	CLADOPHO	RALES																									
0	CLADOF	HORA	(LPI	L)				1677	71.8	89		3288	.61									10030.	25	67	41.64	0	. 3
0	BACILLARIO	FHYTA	-PEN	NATE			3	07813	35.0	00	44	49442	.87								17	763788.	00	13143	546.00	51	.8
0	ACHNANTH	ALES																									
0	RHOICO	SPHEN	IA C	URVATA	l .		2	92028	32.0	00	21	19240	.44								15	569761.	00	13505	20.00	46	. 1
0	BACILLARIO	PHYTA	-PEM	NATE (LPIL	.)		15785	3.0	06	23	30202	.44								3	194027.	75	361	74.69	5	. 7
тот	AL						3	62272	6.0	00	319	3236	.00								34	07931.	00	2147	45.00	100	.0
DIV	ERSITY (H P	RIME)							0.8	39		1	. 36									1.	12		0.23	5	
DIV	ERSITY (J F	RIME)							0.4	44		0	.58									0.	51		0.07	7	
NUN	BER OF TAXA									4			5										6				

ADOVE COMPUTED USING SAMPLE IDS 121 122

> DATE 07/14/80 PAGE NO 7 T600AQUA 9/28/77

.

BAILEY GENERATING PLANT

PERIPHYTON DENSITY

DENSITY IN NUMBER / SQUARE CENTIMETER

ABOVE COMPUTED USING SAMPLE IDS

121 122

STATION REPORT

LS	TAXA		
		12	
0	CYANOPHYTA	1370253.00	
0	OSCILLATORIACEAE		
0	LYNGBYA LIMNETICA	274050.62	
0	LYNGBYA (LPIL)	1096202.00	
0	CHLOROPHYTA	273940.87	
0	ULOTRICHALES		
0	SCHIZOMERIS (LPIL)	263910.62	
0	CLADOPHORALES		
0	CLADOPHORA (LPIL)	10030.25	
0	BACILLARIOPHYTA-PENNATE	1763788.00	
0	ACHNANTHALES		
0	RHOICOSPHENIA CURVATA	1569761.00	
0	BACILLARIOPHYTA-PENNATE (LPIL)	194027.75	
TOT	AL	3407981.00	
DIV	ERSITY (H PRIME)	1.12	
DIV	ERSITY (J PRIME)	0.51	
HUIT	BER OF TAXA	6	

_		PEL
×	S.E.	AB%
1370253.00	-1.00	40.2
274050.62	-1.00	8.0
1096202.00	-1.00	32.2
273940.87	-1.00	8.0
263910.62	-1.00	7.7
10030.25	-1.00	0.3
1763788.00	-1.00	51.8
1569761.00	-1.00	46.1
194027.75	-1.00	5.7
3407931.00	-1.00 1	00.0
1.12	-1.00	
0.51	-1.00	
6		

DATE 07/14/80 PAGE NO 8 T600AQUA 9/28/77

V

BAILEY GENERATING PLANT

PERIPHYTON DENSITY

DENSITY IN NUMBER / SQUARE CENTIMETER

REPLICATE REPORT

FC TC GC LOC 5 66 66 0 0 50

23. 6	00 00 0 0 50																								
			DURAT	HOIT			TOW	SAMP	VO	L		L.	IND		CUR	RENT	TE	MP							
SI	DATE TIM	E D/N	UNITS	C	50	MD	512 0	UNIT	5 0	SECH	WI	SC	DI	CL	SP	DI	AIR	WAT	BT	TURBO	COND	DO	PH	SALN F	P
2!	51 4/20/80	0 0	0.0	0	0.0	0.5	0.0 0	0.0	0 0	0.0	0 0	0	0	0	0.0	0 0	0.0	0.0	0	0.0	0	0.0	0.0	0.0	0
25	52 4/20/80	0 0	0.0	0	0.0	0.5	0.0 0	0.0	0 0	0.0	0 0	0	0	0	0.0	0 0	0.0	0.0	0	0.0	0	0.0	0.0	0.0 C	-
LS	TAXA																			×			S.E.		
-	1,000,00						1			2															
0	CHLOROPHYTA						15127	.59	1	71579	.44									93353.	50	782	25 .87	7 66.0	0
0	CHAETOPHORAL	ES					-		-																
0	STIGEOCLON		LPIL)				0	.0	1	61570	.69									80785.	31	807	35.3	57.1	1
0	DEDOSONIALES									e altitude (n. libri	0.000														
0	DEDOGONIUM	(LPI	L)				0	.0		10008	.80									5004.	40	50	104 31	0 3.5	5
0	CLADOPHORALE	S																							
0	CLADOPHORA	(LPI	L)				15127	.59		0	. 0									7563.	79	75	63.79	9 5.3	3
0	BACILLARIOFHYT	A-PEN	NATE				92080	. 94		4289	.49									48185.	21	570	95.70	2 34.1	0
0	FRAGILARIALE	5																							
0	ASTERIONEL	LA FO	RMOSA				39463	.29		0	. 0									19731.		77.1	33.60		32
0	DIATOMA VU	LGARE					26308	.86		0	. 0									13154.	41	1.51	54.4	3 9.3	3
0	ACHNANTHALES																								
0	COCCONEIS	D 200 - 200 - 200					26308				. 0									13154.	0.00		154.4		
0	BACILLARIOPHYT	A-PEN	HATE (LPIL	.)		0	.0		4289	.49									2144.	74	21	144.74	4 1.5	5
TOT	AL.						107208	.50	1	75868	.87									141538.		343		9 100.0	0
DIVE	ERSITY (H PRIME)					1	. 92			.48										20		0.78		
-	ERSITY (J PRIME)					0	. 96		0	.30									0.	63		0.33	5	
NUM	BER OF TAXA							4			3										7				

ABOVE COMPUTED USING SAMPLE IDS 251 252

DATE 07/14/80 PAGE NO 9 T600AQUA 9/28/77

BAILEY GENERATING PLANT

PERIPHYTON DENSITY

DENSITY IN NUMBER / SQUARE CENTIMETER

ABOVE COMPUTED USING SAMPLE IDS 251

STATION REPORT

LS	TAXA		
		25	
0	CHLOROPHYTA	93353.50	
0	CHAETOFHORALES		
0	STIGEOCLONIUM (LPIL)	80785.31	
0	DEDOGONIALES		
0	OEDOGONIUM (LPIL)	5004.40	
0	CLADOPHORALES		
0	CLADOPHORA (LPIL)	7563.79	
0	BACILLARIOPHYTA-PENNATE	48185.21	
0	FRAGILARIALES		
0	ASTERIONELLA FORMOSA	19731.64	
0	DIATOMA VULGARE	13154.43	
0	ACHNANTHALES		
0	COCCONEIS (LPIL)	13154.43	
0	BACILLARIOPHYTA-PENNATE (LPIL)	2144.74	
TOT	AL	141538.69	
DIV	ERSITY (H PRIME)	1.20	
DIV	ERSITY (J PRIME)	0.63	
NUM	BER OF TAXA	7	

252

-		REL	
X	S.E.	ABX	
93353.50	-1.00	66.0	
80785.31	-1.00	57.1	
5004.40	-1.00	3.5	
7563.79	-1.00	5.3	
48185.21	-1.00	34.0	
19731.64	-1.00	13.9	
13154.43	-1.00	9.3	
13154.43	-1.00	9.3	
2144.74	-1.00	1.5	
141538.69	-1.00	100.0	
1.20	-1.00		
0.63	-1.00		
7			

07/14/80 DATE PAGE NO 10 T600AQUA 9/28/77

BAILEY GENERATING PLANT

PERIPHYTON DENSITY

DENSITY IN NUMBER / SQUARE CENTIMETER

SITE SUMMARY

LS		TAXA			
	ev	AMBRITATA			0
0	-	ANOPHYTA PLEUPOCAPSACEAE			0405395.00
0		PLEUROCAPSA (I	DTI 1		1556510.00
0		DSCILLATORIACEA			1555510.00
0		OSCILLATORIA			173336.31
0		LYNGBYA LIMNET			2740789.00
0		LYNGBYA (LPIL			2437028.00
0		NOSTOCACEAE			2437020.00
0		ANABAENA (LPII)		5092.98
0		RIVULARIACEAE			3072.70
0		CALOTHRIX (LP)	11.1		1492641.00
0	CH	LOROPHYTA			613527.56
0		ULOTRICHALES			013507.50
0		SCHIZOMERIS (PIL)		563098.12
0		ULOTRICHALES (LE			29752.69
0		CHAETOPHORALES			
0		STIGEOCLONIUM	(LPIL)		16157.06
0		DEDOGONIALES	1 30 3 50		210000000
0		DEDOGONIUM (LE	IL)		1000.88
0		CLADOPHORALES			
0		CLADOPHORA (LF	IL)		3518.81
0	BA	CILLAPIOPHYTA-PE	NIVATE		424311.31
0		FRAGILARIALES			
0		ASTERIONELLA F	CRMOSA		3946.33
0		DIATOHA VULGAR	E		2630.89
0	- 7	ACHNANTHALES			
0		COCCONEIS (LP)	L)		2630.89
0		PHOICOSPHENIA	CURVATA		313952.19
c	BA	CILLARIOPHYTA-PE	HNATE (LPIL)	101151.19
TOT	AL				9443221.00
DIV	ERS:	ITY (H PRIME)			1.33
100000	20000	ITY (J PRIME)			0.63
NUM	BER	OF TAXA			16
ASJ	VE (COMPUTED USING S	AMPLE IDS		
		11	12	101	102
		111	112	121	122
		251	252		

x	S.E.	REL
^	J.L.	KUA
8405395.00	-1.00	89.0
1556510.00	-1.00	16.5
173336.31		1.8
2740789.00		29.0
2437028.00	-1.00	25.8
5092.98	-1.00	0.1
1492641.00	-1.00	15.8
613527.56	-1.00	6.5
563098.12	-1.00	6.0
29752.69	-1.00	0.3
16157.06	-1.00	0.2
1000.88	-1.00	0.0
3518.81	-1.00	0.0
424311.31	-1.00	4.5
3946.33	-1.00	0.0
2630.89	-1.00	0.0
2630.89	-1.00	0.0
313952.19	-1.00	3.3
101151.19	-1.00	1.1
9443221.00	-1.00	100.0
1.33	-1.00	-
0.63	-1.00	
16		

DATE 07/14/80 PAGE NO 14 T600AQUA 9/28/77

BAILEY GENERATING PLANT

PERIPHYTON DENSITY

DENSITY IN NUMBER / SQUARE CENTIMETER

ABOVE COMPUTED USING SAMPLE IDS

171 172

REPLICATE REPORT

PC TC GC LOC 5 66 66 1 0 10

								-							_		2000	Acres areas								
				DURAT				TO		SAMP	7.7				IND			ENT		MP					and the same	
SID	DATE	TIME	D/N	UNITS	S C	SD	ND	SP	D	UNITS		2ECH	и т		-		. SP		AIR	WAT	BI	TURBO		-	FH	SALN I
171	4/20/80	0	0	0.0		0.0	1.0	0.0	0	0.0	k	1.0	0 0	0			0.0	0	0.0	0.0	0	0.0	0	0.0	0.0	0.00
172	4/20/80	0	0	0.0	0	0.0	1.0	0.0	0	0.0	0	0	0 0	0	0	0	0.0	0	0.0	0.0	0	0.0	0	0.0	0.0	0.0 0
																						-				REL
LS	TAXA																					X			S.E.	ABZ
									1			2														
0 (MIDENTIFIE	D AL	GAE				- 2	6897	62.	00	14	44921.	.62								14	417341	.00	12724	20.00	58.8
0 1	MIDENTIFIE	D AL	SAE	(LPIL))		2	6897	62.	00	14	44921.	.62								1	417341	.00	12724	20.00	58.8
0 0	YANOPHYTA						1	2836	17.	00	27	78695.	50									781156	.25	5024	60.75	32.4
0	CHRODCOCO	CACEA	E																							
0	APHANO	CAPSA	CLP	IL)				2625	58.	12		0.	.0								1	131279	.06	1312	79.06	5.4
0	OSCILLATO	DRIAC	EAE																							
0	LYNGBYA	LIM	NETI	CA			3	0210	59.	37	27	78695	.50									649877	.44	3711	81.94	26.9
0 0	HLOROPHYTA								0.		-	1643.										80821	.62	808	21.62	3.4
0	CHLOROCOG	CALE	S						100			name in an a														
0	SCENEDE			DRICAL	JDA				0.	0	4	4591.	28									22295	.64	222	95.64	0.9
0	CHAETOPHO		-						-				-													711
0	STIGEOG			LPIL)					0.	0	11	17052.	06									58526	.03	585	26.03	2.4
0 F	ACILLARIO		-					758		7	-	39512.										132681			31.3	
0	FRAGILARI										-													1000		-
	TABELLA			CHLOSA					0.	0	6	1313.	01									30656	.50	306	56.50	1.3
0	ACHNANTHA			00000							-															
0	ACHNANT		MINU	TISSIF	1A			758	50.	12	12	28199.	87								3	102025	.00	261	74.8	4.2
*****											***													34178	nr 01	
TOTAL							9	0492	200		11	74773.									2.	111999		16.776		100.0
-	SITY (H PR	Personal Co.							200	26			35										.80		0.55	
	SITY (J PE	(IME)							0.	63		0.	91									0	.77		0.10	
NUMBE	R OF TAXA									4			6										7			

DATE 07/14/80 PAGE NO 15 T600ACUA 9/28/77

BAILEY GENERATING PLANT

PERIPHYTON DENSITY

DENSITY IN NUMBER / SQUARE CENTIMETER

ABOVE COMPUTED USING SAMPLE IDS

171 172

STATION REPORT

LS	TAXA	
		17
0	UNIDENTIFIED ALGAE	1417341.00
0	UNIDENTIFIED ALGAE (LPIL)	1417341.00
0	CYANOPHYTA	781156.25
0	CHROCCOCCACEAE	
0	APHANOCAPSA (LPIL)	131279.06
0	OSCILLATORIACTAE	
0	LYNGBYA LIMNETICA	649877.44
0	CHLOROPHYTA	80821.62
0	CHLOROCOCCALES	
0	SCENEDESMUS QUADRICAUDA	22295.64
0	CHAETOPHORALES	
0	STIGEOCLONIUM (LPIL)	58526.03
0	BACILLARIOFHYTA-PENNATE	132681.50
0	FRAGILARIALES	
0	TABELLARIA FLOCCULOSA	30656.50
0	ACHNANTHALES	
0	ACHNANTHES MINUTISSIMA	102025.00
TOT	AL	2411999.00
DIV	ERSITY (H FRIME)	1.80
DIA	ERSITY (J PRIME)	0.77
NUN	BER OF TAXA	7

-			W.C.F.	
X		S.E.	ABZ	
1417341.00		-1.00	58.8	
1417341.00		-1.00	58.8	
781156.25		-1.00	32.4	
131279.06		-1.00	5.4	
649877.44	-	-1.00	26.9	
80821.62		-1.00	3.4	
22295.64		-1.00	0.9	
58526.03		-1.00	2.4	
132681.50		-1.00	5.5	
30656.50		-1.00	1.3	
102025.00		-1.00	5	
2411999.00		-1.00	100.0	
1.80		-1.00		
0.77		-1.00		
7				

DATE 07/14/80 PAGE NO 16 T600AQUA 9/28/77

BAILEY GENERATING PLANT

PERIPHYTON DENSITY

DENSITY IN NUMBER / SQUARE CENTIMETER

REPLICATE REPORT

PC TC GC LOC 5 66 66 1 0 20

					D	URAT	ION			TOW		SAMP	VOL			W	IND		CUP	ENT	TE	EMP						
51	D	DATE	TIME	D/	N U	NITS	C	SD	MD	SP	0	NITS	C	SECH	WT	SC	DI	CL	SP	DI	AIR	WAT	BT	TURBO	COND	DO	PH	SALN
1	91	4/20/80						0.0	1.0	0.0	0	0.0	0	0.0	0 0	0	0	0	0.0	0	0.0	0.0	0	0.0	0	0.0	0.0	0.0
1	192	4/20/80	0	0		0.0	0	0.0	1.0	0.0	0	0.0	0	0.0	0 0	0	0	0	0.0	0	0.0	0.0	0	0.0	0	0.0	0.0	0.0
																								-				REL
LS		TAXA																						×			S.E.	AB2
0	cv	ANOPHYTA								52108	2 0		51	2 30345										525713	61	6	631.84	42
0	1990.00.0	CHROOCOCI		E						20100			-	10010	.07									,,,,,			03210	
0		AFHANO	CAPSA	IL	PIL)				6947	7.5	5	10	1900	.44									85689	.00	16	211.44	7.
0		OSCILLATI	ORIAC	EAE																								
0		LYNGBY	A LIN	MET	ICA					40528	6.0	5	32	8360	.69								1	367073	. 37	38	212.69	29.
0	- 1	NOSTOCACI																										
0		ANABAE	7.00	PIL	.)					4631	8.4	1	9	79584	.56									72951		2000	633.00	
0	CHI	LOROPHYT	A							1852	7.3	5	6	7161	.69									42844	.52	24	317.16	3.
0		CHLOROCO																										
0		SCENED			JADR	ICAU	DA				0.0			9263	.68									4631	.84	4	631.8	. 0.
0		CHAETOFH	200	275																								
0		STIGEO		UM	(LP	IL)					0.0		5	7898	.02									28949	.01	28	949.0	2.
0	- 1	DEDOGONIA	0.000												_													
0	11.	DEDOGO		(LP	IL)					926	3.6	3		0	.0									4631	.84	4	631.84	0.
0		ZYGNEMAT			12					100000000000000000000000000000000000000	_ 1																	
0		MOJGEO.		FbI	L)					926	24.77				.0									4631	CROSE 220		631.80	
0		RYSOPHYTA								71330	3.4	+	34	7387	.87									530345	.62	182	957.75	43.
0	(CHRYSOMO										67												3473	00		473.88	
0		DINOBR		10000	-70-					694				0													263.68	9 (0)
0		OCHROM								2779		501		9263										18527 486343			062.25	-
C		EPIPYX:								65540				7281										22001		1980	157.96	
0		KEPHYR:			10001071	**				2315				3901										132007		- 250	105.75	
0	1000000	CILLARIO		2 2 3	PILIA.	15				14011	3.1		16	2401	.02									132001	. 31	0	103.7:	, 10.
0		FRAGILAR:			SIA T						0.0			7791	n.c									13895	E2	2.7	895.5	1.
0		TABELL								3358			-	2844										38212		100,00	631.84	7
0		ACHNANTH		FLU	cco	LUSA				3330	0.0	2	- 1	12.044	. 23									30212	.07	-4	031.0	
0	,	ACHNAN		MIN	HTT	ести				6252	9 61		2	7791	0.4									45160	45	17	369.40	3.
- 0	BAG	CILLARIO	A 10 A 100 APR 1			-		.)		4400			-	5475	0.00									34738	-		263.68	
TOT	CAT								-	139301	0 0		104	8795	nn								11	230907	00	160	112.00	100
		ITY (H F	THE						-		2.2		100		.73								4.		.49	100	0.24	
		ITY (J P									0.6				.76										.69		0.0	
		OF TAXA									13				12										15		0.0	
1401	MILK	OF THAM									4.1				4.0													

ABOVE COMPUTED USING SAMPLE IDS

BAILEY GENERATING PLANT

PERIPHYTON DENSITY

DENSITY IN NUMBER / SQUARE CENTIMETER

REPLICATE REPORT

DATE 07/14/80 PAGE NO 18 T600AQUA 9/28/77

BAILEY GENERATING PLANT

PERIPHYTON DENSITY

DENSITY IN NUMBER / SQUARE CENTIMETER

STATION REPORT

LS	AXAT	
		19
0	CYANOPHYTA	525713.81
0	CHRCCCOCCACEA'	
0	AFHANOCAPSA (L)	05589.00
0	OSCILLATORIACEAE	
0	LYNGBYA LINNETICA	367:73.37
0	NOSTOCACEAE	
0	ANABAENA (LPIL)	72951.44
0	CHLOROPHYTA	42844.52
0	CHLOROCOCCALES	
0	SCENEDESMUS QUADRICAUDA	4631.84
0	CHAETOFHORALES	
0	STIGEOCLONIUM (LPIL)	28949.01
0	DEDOGONIALES	
0	OEDOGONIUM (LPIL)	4631.84
0	ZYGNEMATALES	
0	MOUGEOTIA (LPIL'	4631.84
0	CHRYSOPHYTA	530345.62
0	CHRYSOMONADALES	
0	DINOBRYON SERTULARIA	3473.88
0	OCHROMONAS (LPIL)	18527.36
0	EPIPYXIS (LPIL)	486343.25
0	KEPHYRION (LPIL)	22001.24
0	BACILLARIOPHYTA-PENNATE	132007.37
0	FRAGILARIALES	
U	FRAGILARIA PINNATA	13895.52
0	TABELLARIA FLOCCULOSA	38212.69
0	ACHNANTHALES	
0	ACHNANTHES MINUTISSIMA	45160.45
0	BACILLARIOPHYTA-PENNATE (LPIL)	34738.80
TOT	AL	1230907.00
DIV	ERSITY (H PRIME)	2.49
DIV	ERSITY (J PRIME)	0.69
-NUN	SER OF TAXA	15
ABO	VE COMPUTED USING SAMPLE IDS	

191 192

-		REL
X	S.E.	ABX
525713.81	-1.00	42.7
85689.00	-1.00	7.0
367073.37	-1.00	29.8
72951.44	-1.00	20 - 1
42844.52	-1.00	3.5
4631.84	-1.00	0.4
28949.01	-1.00	2.4
4631.84	-1.00	0.4
4631.84	-1.00	0.4
530345.62	-1.00	43.1
3473.68	-1.00	0.3
18527.36	-1.00	1.5
486343.25	-1.00	39.5
22001.24	-1.00	1.8
132007.37	-1.00	10.7
13890.52	-1.00	1.1
38212.69	-1.00	3.1
45160.45	-1.00	3.7
34738.60	-1.00	2.8
1230907.00	-1.00	100.0
2.49	-1.00	
0.69	-1.00	
15		

DATE 07/14/80 PAGE NO 19 T600AGUA 9/28/77

BAILEY GENERATING PLANT

PERIPHYTON DENSITY

DENSITY IN NUMBER / SQUARE CENTIMETER

REPLICATE REPORT

PC TC GC LOC 5 66 66 1 0 30

DURATION	1	TOW	SAMP VO	L		MINE)	CUR	ENT	TE	MP						
SID DATE TIME D/N UNITS C	50 H	D SP D	UNITS C	SECH	WT	SC DI	CI	SP	DI	AIR	MAT	BT	TURED	COND	00	PH	SALN P
211 4/20/80 0 0 0.0 0	0.0 1	.0 0.0 0	0.0 0	0.0	0 0	0 0	0	0.0	0	0.0	0.0	0	0.0	0	0.0	0.0	0.00
212 4/20/80 0 0 0.0 0	0.0 1	.0 0.0 0		0.0		0 0	0	0.0	0	0.0	0.0	0	0.0	0	0.0	0.0	0.0 0
													-				REL
LS TAXA													X			S.E.	AB%
		1		2													
0 CYANOPHYTA		513845.1	9	0.	0							5	56922.	.56	256	22.56	21.2
O CHROOCOCCACEAE																	
0 MICROCYSTIS (LPIL)		513845.1	9	0.	0							2	56922.	.56	256	922.56	21.2
0 CHLOROPHYTA		739936.9	14 2	42425.	69							4	91181.	.31	248	55.62	40.5
0 CHAETOFHORALES																	
0 STIGEOCLONIUM (LPIL)		404224.8	7 1	14082.	69							2	59153.	. 75	1450	171.06	21.3
0 OEDOGONIALES																	
O OEDOGONIUM (LPIL)		325435.1	9 1	28343.	00							2	26889.				18.7
O CHLOROPHYTA (LPIL)		10276.9	700	0.	170								5138.				0.4
O BACILLAPIOPHYTA-PENNATE		430259.5	6 4	98296.	87							4	64278.	.19	340	18.66	38.2
O FRAGILARIALES																	
0 FRAGILARIA (LPIL)		325435.2	70.00	68909.									97172.			263.00	
O MERIDION CIRCULARE		27405.0		48892.									33148.			743.76	
O SYNEDRA (LPIL)		5481.0	1	1222.	31								3351.	.66	21	129.35	0.3
0 ACHNANTHALES																	
O ACHNANTHES MINUTISSIMA		3425.6	3	0.	0								1712.	.82	17	712.82	0.1
O NAVICULALES																	
O GOMPHONEMA (LPIL)		37681.9	-	58900.	777								98291.	3.77	-70	09.45	
O CYMBELLA (LPIL)		0.0		4074.	-								2037.			37.19	
O BACILLARIOPHYTA-PENNATE (LPI	(L)	30830.7	-	16297.									23564.			:66.59	
0 CRYPTOFHYTA		3425.6	3	0.	0								1712.	.82	17	712.82	0.1
O CRYPTOMONODALES																	
0 CHROOMCNAS (LPIL)		3425.6	3	0.	0								1712.	.82	17	712.82	0.1
TOTAL		1687461.0	0 7	40722.	56							12	14091.	.00	473		100.0
DIVERSITY (H FRIME)		2.3	6	2.	30									. 33		0.03	
DIVERSITY (J PRIME)		0.6		0.	77									.72		0.04	
-NUMBER OF TAXA		1	1		8									12			

ABOVE COMPUTED USING SAMPLE IDS 211 212

DATE 07/14/80 PAGE NO 20 T600AQUA 9/28/77

-

BAILEY GENERATING PLANT

PERIPHYTON DENSITY

DENSITY IN NUMBER / SQUARE CENTIMETER

ABOVE COMPUTED USING SAMPLE IDS

211 212

STATION REPORT

LS	TAXA	
		21
0	CYANOFHYTA	256922.56
0	CHROOCOCCACEAE	
0	MICROCYSTIS (LPIL)	256922.56
0	CHLOROPHYTA	491181.31
0	CHAETOPHORALES	
0	STIGEOCLONIUM (LPIL)	259153.75
0	DEDOGONIALES	
0	OEDOGONIUM (LPIL)	226889.06
0	CHLOROPHYTA (LPIL)	5138.45
0	BACILLARIOPHYTA-PENNATE	464278.19
0	FRAGILARIALES	
0	FRAGILARIA (LPIL)	297172.25
0	MERIDION CIRCULARE	38148.84
0	SYNEDRA (LPIL)	3351.66
0	ACHNANTHALES	
0	ACHNANTHES MINUTISSIMA	1712.82
0	NAVICULALES	
0	GOMPHONEMA (LPIL)	98291.37
0	CYMBELLA (LPIL)	2037.19
0	BACILLARIOPHYTA-PENNATE (LPIL)	23564.12
0	CRYPTOPHYTA	1712.82
0	CRYPTOMONODALES	
0	CHROOMONAS (LPIL)	1712.82
TOT	AL.	1214091.00
DIV	ERSITY (H PRIME)	2.33
DIV	ERSITY (J PRIME)	0.72
HUH	BER OF TAXA	12

X	S.E.	ABX	
256922.56	-1.00	21.2	
256922.56	-1.00	21.2	
491131.31	-1.00	40.5	
259153.75	-1.00	21.3	
226889.06	-1.00	18.7	
5138.45	-1.00	0.4	
464278.19	-1.00	38.2	
297172.25	-1.00	24.5	
38148.84	-1.00	3.1	
3351.66	-1.00	0.3	
1712.82	-1.00	0.1	
98291.37	-1.00	8.1	
2037.19	-1.00	0.2	
23564.12	-1.00	1.9	
1712.82	-1.00	0.1	
1712.82	-1.00	0.1	
1214091.00	-1.00	100.0	
2.33	-1.00		
0.72	-1.00		
12			

REL

DATE 07/14/80 PAGE NO 21 T600AQUA 9/28/77

BAILEY GENERATING PLANT

PERIPHYTON DENSITY

DENSITY IN NUMBER / SQUARE CENTIMETER

SITE SUMMARY

0 ACHNANTHES MINUTISSIMA 49632.75 -1.00 3.1 0 NAVICULALES 0 GOMPHONEMA (LPIL) 32763.79 -1.00 2.0 0 CYMBELLA (LPIL) 679.06 -1.00 0.0 0 BACILLARIOFHYTA-PENNATE (LPIL) 19434.31 -1.00 1.2						
1	10	TAVA		*		
O INDENTIFIED ALGAE	13	TAXA		Α.	3.5.	Ab/4
O INIDENTIFIED ALGAE (LPIL)	•	IBITOCHETTETED ALCAE		6724A7 00	7 00	00.0
CYANDENIVIA 521264.19 -1.00 32.2	- 2		The state of the s			200 100 100 100 100 100 100 100 100 100
CHROCOCCACAEAE						
NICEDCYSTIS (LPIL)	-	The state of the s	521264.19	521264.19	-1.00	32.2
O APHANDEAPSA (LPIL) 72322.69 72322.				Table 1		
OSCILLATORIAGEAE Characteria Character						
0 LYMEGYA LINNETICA 338983.56 -1.00 20.9 0 NOSTOCACEAE 24317.14 -1.00 1.5 0 ANABARHA (LPIL) 24317.14 -1.00 1.5 0 CHLOROPHYTA 204949.12 -1.00 12.7 0 CHARTOPHORALES 8975.82 -1.00 0.6 0 CHARTOPHORALES 115542.87 -1.00 7.1 0 GEOCONILUM (LPIL) 115542.87 -1.00 7.1 0 GEOCONILUM (LPIL) 77173.62 77173.62 -1.00 4.8 0 ZYGHEMATALES 77173.62 -1.00 0.1 -1.00 4.8 0 ZYGHEMATALES 1543.95 -1.00 0.1 -1.00 0.1 0 CHOROPHYTA (LPIL) 1712.82 1712.82 -1.00 0.1 0 CHOROPHYTA (LPIL) 1712.82 1712.82 -1.00 0.1 0 CHOROPHYTA (LPIL) 157.79 -1.00 0.1 -1.00 0.1 0 CHOROPHYTA (LPIL) 6175.79 -1.00 0.4 -1.00 0.4 0 CHOROPHYTA (LPIL) 7333.75 -1.00 0.5 <td< td=""><td>-</td><td></td><td>72322.69</td><td>72322.69</td><td>-1.00</td><td>4.5</td></td<>	-		72322.69	72322.69	-1.00	4.5
NOSTOCACEAE 1.00						
ANADARM (LPIL)		LYNGBYA LIMNETICA	338983.56	338983.56	-1.00	20.9
CHLOROPHYTA 204949.12 -1.00 12.7	0	NOSTOCACEAE				
O CHLOROCOCCALES O SCENEDESHUS QUADRICAUDA O STISECCIONIUM (LPIL) O STISECCIONIUM (LPIL) O GEOGOGNIALES O OEDOGONIALES O OEDOGONIUM (LPIL) O OEDOGONIALES O OUGOGONIUM (LPIL) O OEDOGONIUM	0	ANABAENA (LPIL)	24317.14	24317.14	-1.00	1.5
SCENEDESMUS QUADRICAUDA 8975.62 8975.82 -1.00 0.6	0	CHLOROPHYTA	204949.12	204949.12	-1.00	12.7
O CHAETOPHORALES O STISCOCIONIUM (LPIL) O CODOGONIALES O OEDOGONIUM (LPIL) O CEDOGONIUM (LPIL) O CEDOGONIUM (LPIL) O CEDOGONIUM (LPIL) O CHOROPHYTA (LPIL) O CHICROPHYTA (LPIL) O CHICROPHONIAS (LPIL) O CHICROPHYTA (LPIL) O CHICROPHONIAS (LPIL) O CHICROPHYTA (LPIL) O CHICROPHONIAS (LPIL) O CONTROLLARIA FLOCCULOSA O CONTROLLARIA (LPIL)	0	CHLOROCOCCALES				
STIGEOCLONIUM (LPIL) 115542.87 115542.87 -1.00 7.1	0	SCENEDESHUS QUADRICAUDA	8975.82	8975.82	-1.00	0.6
0 OEDOCONIALES 77173.62 -1.00 4.8 0 OEDOCONIUM (LPIL) 77173.62 -1.00 4.8 0 ZYGHEMATALES 1543.95 -1.00 0.1 0 CHOROPHYTA (LPIL) 1712.82 176781.87 -1.00 0.1 0 CHRYSOPHYTA 176781.87 -1.00 0.1 0.0,9 0 CHRYSOMONADALE 1157.96 -1.00 0.1 0.9 0 OLORORIVAN SERTULARIA 1157.96 -1.00 0.1 0.1 0 CHERIONAS (LPIL) 6175.79 16175.79 -1.00 0.4 0 CHERIONAS (LPIL) 162114.37 -1.00 0.4 0.5 0 KEPHYRION (LPIL) 7333.75 -1.00 0.5 0.5 0 BACILLARIONATA 4631.84 -1.00 0.5 0.5 0 FRAGILARIALES 242989.00 -1.00 0.5 0.5 0 FRAGILARIA PINNATA 4631.84 -1.00 0.3 0.3 0 FRAGILARIA PINNATA 4631.84 -1.00 0.3 0.6 0 SYNEDRA (LPIL) 1117.22 1117.22 -1.00 0.6 0 SYNEDRA (LPIL) 1117.22 11117.22 -1.00 0.0 0 ACHMANTHALES	0	CHAETOPHORALES				
O OEOOGONIUM (LPIL) 77173.62 77173.62 77173.62 -1.00 4.8	0	STIGEOCLONIUM (LPIL)	115542.87	115542.87	-1.00	7.1
O OEOOGONIUM (LPIL) 77173.62 77173.62 77173.62 -1.00 4.8	0	OEDOGONIALES				
O ZYGNEMATALES 1543.95		OEDOGONIUM (LPIL)	77173.62	77173.62	-1.00	4.8
NOUSEOTIA (LPIL)	0					1000
0 CHECROPHYTA (LPIL) 1712.82 1712.62 -1.00 0.1 0.7 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1			1543.95	1543.95	-1.00	0.1
CHRYSOPHYTA	100					
O CHRYSOMONADALE O DINOBEYON SERTULARIA 1157.96 -1.00 0.1 C OCHROMONAS (LPIL) 6175.79 -1.00 0.4 EPIPYXIS (LFIL) 162114.37 -1.00 10.0 KEPHYPION (LPIL) 7333.75 -1.00 0.5 D BACILLARIOPHYTA-PENNATE 242989.00 -1.00 15.0 FRAGILARIA PINNATA 4631.84 -1.00 0.3 O FRAGILARIA PINNATA 4631.84 -1.00 0.3 O FRAGILARIA PINNATA 99057.37 -1.00 6.1 O MERIDION CIRCULARE 12716.28 12716.28 -1.00 0.8 O SYNEDRA (LPIL) 1117.22 1117.22 -1.00 0.1 O TADELLARIA FLOCCULOSA 22956.39 -1.00 1.4 O ACHMANTHALES O ACHMANTHALES O ACHMANTHALES O ACHMANTHALES O ACHMANTHALES O GOMPHONEMA (LPIL) 32763.79 -1.00 2.0 O CYMBELLA (LPIL) 32763.79 -1.00 2.0 O CYMBELLA (LPIL) 679.06 679.06 -1.00 0.0 O BACILLARIOPHYTA-PENNATE (LPIL) 19434.31 -1.00 1.2				176781.87	1000	10.9
0 DINOBRYON SERTULARIA 1157.96 -1.00 0.1 0 CORRONOMAS (LPIL) 6175.79 -1.00 0.4 1 EPIPYXIS (LFIL) 162114.37 -1.00 0.4 0 KEPHYRION (LPIL) 7333.75 162114.37 -1.00 0.5 0 BACILLARIOPHYTA-PENNATE 242989.00 -1.00 0.5 0 FRAGILARIA PINNATA 4631.84 -1.00 0.3 0 FRAGILARIA PINNATA 12716.28 12716.28 -1.00 0.8 0 SYNEDRA (LPIL) 1117.22 1117.22 -1.00 0.8 0 SYNEDRA (LPIL) 1117.22 1.00 0.1 0 ACHNANIHALES 22956.39 22956.39 -1.00 1.4 0 ACHNANIHALES 49632.75			***************************************			***
C OCHRONOMAS (LPIL) 6175.79 -1.00 0.4 EPIPYXIS (LFIL) 162114.37 -1.00 10.0 C KEPHYRION (LPIL) 7333.75 7333.75 -1.00 0.5 D BACILLARIOPHYTA-PENNATE 242989.00 242989.00 -1.00 15.0 FRAGILARIA PINNATA 4631.84 4631.84 -1.00 0.3 O FRAGILARIA PINNATA 4631.84 4631.84 -1.00 0.3 O FRAGILARIA (LPIL) 99057.37 -1.00 6.1 O MERIDION CIRCULARE 12716.28 12716.28 -1.00 0.8 O SYNEDRA (LPIL) 1117.22 -1.00 0.1 O TADELLARIA FLOCCULOSA 22956.39 -1.00 1.4 O ACHNANTHALES 0			1157.96	1157.96	-1.00	0.1
EPIPYXIS (LFIL)					200 - 200 - 200	
0 KEPHYRION (LPIL) 7333.75 -1.00 0.5 0 BACILLARIOPHYTA-PENNATE 242989.00 -1.00 15.0 0 FRAGILARIALES -1.00 15.0 0 FRAGILARIA PINNATA 4631.84 -1.00 0.3 0 FRAGILAPIA (LPIL) 99057.37 -1.00 6.1 0 MERIDION CIRCULARE 12716.28 12716.28 -1.00 0.8 0 SYNEDRA (LPIL) 1117.22 -1.00 0.1 0 TABELLARIA FLOCCULOSA 22956.39 -1.00 0.1 0 ACHNANTHALES 22956.39 -1.00 1.4 0 ACHNANTHES MINUTISSIMA 49632.75 49632.75 -1.00 3.1 0 NAVICULALES 32763.79 -1.00 2.0 0 CYHBELLA (LPIL) 679.06 679.06 -1.00 0.0 0 BACILLARIOFHYTA-PENNATE (LPIL) 19434.31 -1.00 1.2	6					
0 BACILLARIOPHYTA-PENNATE 242989.00 -1.00 15.0 0 FRAGILARIALES 4631.84 -1.00 0.3 0 FRAGILARIA PINNATA 4631.84 -1.00 0.3 0 FRAGILARIA (LPIL) 99057.37 -1.00 6.1 0 MERIDION CIRCULARE 12716.28 12716.28 -1.00 0.8 0 SYNEDRA (LPIL) 1117.22 1117.22 -1.00 0.1 0 TABELLARIA FLOCCULOSA 22956.39 22956.39 -1.00 1.4 0 ACHNANTHALES 49632.75 49632.75 -1.00 3.1 0 MAVICULALES GOMPHONEMA (LPIL) 32763.79 -1.00 2.0 0 CYMBELLA (LPIL) 679.06 -1.00 0.0 0 BACILLARIOPHYTA-PENNATE (LPIL) 19434.31 -1.00 1.2						
0 FRAGILARIALES 0 FRAGILARIA PINNATA 4631.84 -1.00 0.3 0 FRAGILARIA PINNATA 99057.37 -1.00 6.1 0 MERIDION CIRCULARE 12716.28 12716.28 -1.00 0.8 0 SYNEDRA (LPIL) 1117.22 -1.00 0.1 0 TABELLARIA FLOCCULOSA 22956.39 -1.00 1.4 0 ACHNANTHALES 22956.39 -1.00 1.4 0 ACHNANTHES MINUTISSIMA 49632.75 49632.75 -1.00 3.1 0 NAVICULALES 9601FHCNEMA (LPIL) 32763.79 -1.00 2.0 0 CYMBELLA (LPIL) 679.06 -1.00 0.0 0 BACILLARIOFHYTA-PENNATE (LPIL) 19434.31 -1.00 1.2		The state of the s				100,000
0 FRAGILARIA PINNATA 4631.84 -1.00 0.3 0 FRAGILAPIA (LPIL) 99057.37 -1.00 6.1 0 MERIDION CIRCULARE 12716.28 12716.28 -1.00 0.8 0 SYNEDRA (LPIL) 1117.22 -1.00 0.1 0 TABELLARIA FLOCCULOSA 22956.39 -1.00 1.4 0 ACHNANTHALES 22956.39 -1.00 1.4 0 ACHNANTHES MINUTISSIMA 49632.75 49632.75 -1.00 3.1 0 NAVICULALES 49632.75 -1.00 3.1 0 GONTFHONEMA (LPIL) 32763.79 -1.00 2.0 0 CYMBELLA (LPIL) 679.06 -1.00 0.0 0 BACILLARIOFHYTA-PENNATE (LPIL) 19434.31 -1.00 1.2	-		242404.00	242707.00	-1.00	15.0
0 FRAGILAPIA (LPIL) 99057.37 -1.00 6.1 0 MERIDION CIRCULARE 12716.28 12716.28 12716.28 -1.00 0.8 0 SYNEDRA (LPIL) 1117.22 1117.22 -1.00 0.1 0 TABELLARIA FLOCCULOSA 22956.39 22956.39 -1.00 1.4 0 ACHNANTHALES 49632.75 49632.75 49632.75 -1.00 3.1 0 NAVICULALES 0 GONTHICNEMA (LPIL) 32763.79 32763.79 -1.00 2.0 0 CYMBELLA (LPIL) 679.06 679.06 -1.00 0.0 0 BACILLARIOFHYTA-PENNATE (LPIL) 19434.31 -1.00 1.2			6477 06	6671 06	1 00	0.7
0 HERIDION CIRCULARE 12716.28 12716.28 -1.00 0.8 0 SYNEDRA (LPIL) 1117.22 1117.22 -1.00 0.1 0 TABELLARIA FLOCCULOSA 22956.39 22956.39 -1.00 1.4 0 ACHNANTHALES 0 ACHNANTHES MINUTISSIMA 49632.75 49632.75 -1.00 3.1 0 NAVICULALES 0 GOUTHONNEMA (LPIL) 32763.79 32763.79 -1.00 2.0 0 CYMBELLA (LPIL) 679.06 679.06 -1.00 0.0 0 BACILLARIOFHYTA-PENNATE (LPIL) 19434.31 -1.00 1.2		The state of the s				-
0 SYNEDRA (LPIL) 1117.22 -1.00 0.1 0 TABELLARIA FLOCCULOSA 22956.39 -1.00 1.4 0 ACHNANTHALES 0 ACHNANTHES MINUTISSIMA 49632.75 -1.00 3.1 0 NAVICULALES 0 GOMPHONEMA (LPIL) 32763.79 -1.00 2.0 0 CYMBELLA (LPIL) 679.06 -1.00 0.0 0 BACILLARIOFHYTA-PENNATE (LPIL) 19434.31 -1.00 1.2						
0 TABELLARIA FLOCCULOSA 22956.39 -1.00 1.4 0 ACHNANTHALES 0 ACHNANTHES MINUTISSIMA 49632.75 -1.00 3.1 0 NAVICULALES 0 GOMPHONEMA (LPIL) 32763.79 -1.00 2.0 0 CYMBELLA (LPIL) 679.06 679.06 -1.00 0.0 0 BACILLARIOFHYTA-PENNATE (LPIL) 19434.31 -1.00 1.2						
O ACHNANTHALES O ACHNANTHES MINUTISSIMA 49632.75 -1.00 3.1 O NAVICULALES O GOMPHONEMA (LPIL) 32763.79 -1.00 2.0 O CYMBELLA (LPIL) 679.06 679.06 -1.00 0.0 O BACILLARIOPHYTA-PENNATE (LPIL) 19434.31 -1.00 1.2						
0 ACHNANTHES MINUTISSIMA 49632.75 -1.00 3.1 0 NAVICULALES 0 GOMPHONEMA (LPIL) 32763.79 -1.00 2.0 0 CYMBELLA (LPIL) 679.06 679.06 -1.00 0.0 0 BACILLARIOPHYTA-PENNATE (LPIL) 19434.31 -1.00 1.2			22956.39	22956.39	-1.00	1.4
0 NAVICULALES 0 GOMPHONEMA (LPIL) 32763.79 -1.00 2.0 0 CYMBELLA (LPIL) 679.06 -1.00 0.0 0 BACILLARIOPHYTA-PENNATE (LPIL) 19434.31 -1.00 1.2	-				1 4 4 4	
0 GOMFHONEMA (LPIL) 32763.79 -1.00 2.0 0 CYMBELLA (LPIL) 679.06 -1.00 0.0 0 BACILLARIOFHYTA-PENNATE (LPIL) 19434.31 -1.00 1.2	_		49632.75	49632.75	-1.00	3.1
0 CYMBELLA (LPIL) 679.06 -1.00 0.0 0 BACILLARIOFHYTA-PENNATE (LPIL) 19434.31 -1.00 1.2						1
0 BACILLARIOFHYTA-PENNATE (LPIL) 19434.31 -1.00 1.2	100					
	0	CYMBELLA (LPIL)	679.06		100	0.0
0 CRYPTORIUTA 570 94 -1 00 0 0	0	BACILLARIOFHYTA-PENNATE (LPIL)	19434.31			
0 CRIFIORITA 2.00 0.0	0	CRYPTOPHYTA	570.94	570.94	-1.00	0.0
O CRYPTOMONODALES	0	CRYPTOMONODALES				
_ 0 CHROOMONAS (LPIL) 570.94 570.94 -1.00 0.0	_ 0	CHROOMONAS (LPIL)	570.94	570.94	-1.00	0.0

DATE 07/14/80 PAGE NO 24 T600AQUA 9/28/77

BAILEY GENERATING PLANT

PERTURYTON DENSITY

DENSITY IN NUMBER / SQUARE CENTIMETER

SITE SUMMARY

LS TAXA

2.21

0.73

24

TOTAL 1618999.00 DIVERSITY (H PRIME) DIVERSITY (J FRIME) NUMBER OF TAXA

ABOVE COMPUTED USING SAMPLE IDS

171 172 191 192 211 212

REL S.E. ABX 1618999.00 -1.00 100.0

2.21 -1.00 0.73 -1.00 24

DATE 07/14/80 PAGE NO 25 T600AQUA 9/28/77



APPENDIX D

PERIPHYTON BIOVOLUME REPLICATE REPORTS, BAILLY STUDY AREA, APRIL 1980

BAILEY GENERATING PLANT

PERIPHYTON BIOVOLUME

MICROLITERS PER LITER

REPLICATE REPORT

FC TC GC LOC 5 66 66 0 0 10

				DURAT	HOT			TOP		SAMP	VOI			1.1	IND		cum	ENT	7.5	MP							
671		TTME	0.01			cn	LIP										100000				-	THEFT	COLID	20	PULL		
SI				UNITS		SD	MD	SP		UNITS					DI	CL	-		AIR	WAT		TURBD	COND	DO	PH	SALN P	
	11 4/19/80		7	0.0	C	0.0	4.6					0.0	-25-5		9	0	0.0		0.0	0.0	0		0	0.0		0.0 0	
	12 4/19/80	0	0	0.0	0	0.0	4.6	0.0	0	0.0	0	0.0	0 0	0	0	0	0.0	0	0.0	0.0	0	0.0	0	0.0	0.0	0.0 0 REL	
LS	AXAT																					X			S.E.		
									1			2															
0	CYANOPHYTA								0.1	12		0	.19									0.	16		0.03	0.4	
0	PLEUROCA	PSACE	AE																								
0	PLEURO	CAPSA	(LP	ILI					0.0	0		0	.11									0.	05		0.05	0.2	-
0	OSCILLAT	ORIAC	EAE																								
0	LYNGBY	A LIM	NETI	CA					0.0	02		0	.08									0.	05		0.03	0.2	
0	LYNGBY	A ILP	IL)						0.1	10		0	. 0									0.	05		0.05	0.1	
0	NOSTOCAC	EAE																									
0	ANABAE	NA (L	PILI						0.0	00		0	. 0									0.	00		0.00	0.0	1
0	CHLOROPHYT	A						3	37.7	73		31	.01									34.	37		3.36	99.5	
0	ULOTRICH	ALES																									
0	SCHIZO	MERIS	(LP	ILI				3	37.7	73		31	.01									34.	37		3.36	99.5	į.
0	BACILLARIO	PHYTA	-PEN	HATE					0.0	2		0	.01									0.	01		0.00	0.0	į.,
0	BACILLARIO	PHYTA	-PEN	NATE (LPII	.)			0.0	20		0	.01									0.	01		0.00	0.0	1
TOT	AL								37.8	37		31	.21									34.	54		3.33	3 100.0	,
DIV	ERSITY (H P	RIME							0.0	14		0	.06									0.	05		0.03	1	
DIV	ERSITY (J P	RIME)							0.0	2		0.	.03									0.	02		0.00	1	
NUM	BER OF TAXA									5			4										6				

ABOVE COMPUTED USING SAMPLE IDS 11 12

DATE 07/23/80 PAGE NO 1 T600AQUA 9/28/77

:

BAILEY GENERATING PLANT

PERIPHYTON BIOVOLUME

MICROLITERS PER LITER

ABOVE COMPUTED USING SAMPLE IDS

11 12

STATION REPORT

LS	TAXA	
		1
0	CYANOPHYTA	0.16
0	PLEUPOCAPSACEAE	
0	PLEUROCAPSA (LPIL)	0.05
0	OSCILLATORIACEAE	
0	LYNGBYA LIMNETICA	0.05
0	LYNGBYA (LPIL)	0.05
0	NOSTOCACEAE	
0	ANABAENA (LPIL)	0.00
0	CHLOROPHYTA	34.37
0	ULOTRICHALES	
0	SCHIZOMERIS (LPIL)	34.37
0	BACILLARIOPHYTA-PERNATE	0.01
0	BACILLARIOPHYTA-PENNATE (LPIL)	0.61
TOT	AL	34.54
DIV	ERSITY (H PRIME)	0.05
DIV	ERSITY (J PRIME)	0.02
HUIT	BER OF TAXA	-6

*		REL	
X	S.E.	ABZ	
0.16	-1.00	0.4	
0.05	-1.00	0.2	
0.05	-1.00	0.2	
0.05	-1.00	0.1	
0.00	-1.00	0.0	
34.37	-1.00	99.5	
34.37	-1.00	99.5	
0.01	-1.00	0.0	
0.01	-1.00	0.0	
34.54	-1.00	100.0	
0.05	-1.00		
0.02	-1.00		

DATE 07/23/80 PAGE NO 2 T600AQUA 9/28/77

BAILEY GENERATING PLANT

PERIPHYTON BIOVOLUME

MICROLITERS PER LITER

PEPLICATE REPORT

PC TC GC LOC 5 66 66 0 0 20

				DURAT	ION			TO	M	SAMP	VOI	L		W	ONI		CUF	THE	TE	MP							
SI	DATE	TIME	D/N	UNITS	C	SD	MD	SP	D	UNITS	C	SECH	WT	SC	DI	CL	SP	DI	AIR	WAT	BT	TURBD	COND	DO	PH	SALN	P
1	01 4/20/80	0	0	0.0	0	0.0	1.5	0.0	0	0.0	0	0.0	0 0	0	0	0	0.0	0 0	0.0	0.0	0	0.0	0	0.0	0.0	0.0	0
1	02 4/20/80	0	0	0.0	0	0.0	1.5	0.0	0	0.0	0	0.0	0 0	0	0	0	0.0	0 0	0.0	0.0	0	0.0	0	0.0	0.0	0.0	
LS	TAXA																					×			S.E.	REL AB%	
									1			2															
0	CYANOPHYTA								2.	.22		0	.69									1.	45		0.76	99.	5
0	PLEUROCA	PSACE	AE																								
0	PLEURO	CAPSA	(LP	IL)					0.	.03		0	. 0									0.	01		0.01	0.	9
0	OSCILLATO	ORIAC	EAE																								
0	OSCILL	ATORI	A (L	PILI					0.	.06		0	. 0									0.	03		0.03	1.	9
0	LYNGBY	A LIM	NETI	CA					0.	.11		0	. 0									0.	05		0.05	3.	7
0	LYNGBY	A ELP	IL)						0.	.03		0	.06									0.	04		0.01	2.	9
0	RIVULARI	ACEAE																									
0	CALOTHI	RIX (LPIL)					2.	.00		0	.63									1.	32		0.68	90.	0
0	BACILLARIO	PHYTA	-PEH	NATE					0.	.00		0	.01									0.	01		0.00	0.	5
0	BACILLARIO	PHYTA	-PEN	NATE (LPIL	.)			0.	.00		0	.01									0.	01		0.00	0.	5
TOT	NL.								2.	.22		0	.70									1.	46		0.76	100.	0
DIV	RSITY (H F	RIME)							0.	.66		0	.52									0.	59		0.07	,	
DIVE	RSITY (J F	SIME)							0.	.26		0	.33		×							0.	29		0.03	,	
HURT	SER OF TAXA									6			3										6				

ABOVE COMPUTED USING SAMPLE IDS
101 102

DATE 07/23/80 PAGE NO 3 T600AQUA 9/28/77

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BAILEY GENERATING PLANT

PERIPHYTON BIOVOLUME

MICROLITERS PER LITER

ABOVE COMPUTED USING SAMPLE IDS 101

STATION REPORT

LS	TAXA	
		10
0	CYANOPHYTA	1.45
0	PLEUROCAPSACEAE	
0	PLEUROCAPSA (LPIL)	0.01
0	OSCILLATORIACEAE	
0	OSCILLATORIA (LPIL)	0.03
0	LYNGBYA LIMNETICA	0.05
0	LYNGBYA (LPIL)	0.04
0	RIVULARIACEAE	
0	CALOTHRIX (LPIL)	1.32
0	BACILLARIOPHYTA-PENNATE	0.01
0	BACILLARIOPHYTA-PENNATE (LPIL)	0.01
TOT	AL	1.46
DIV	PERSITY (H PRIME)	0.59
DIV	ERSITY (J PRIME)	0.29
NUI	BER OF TAXA	6

102

×	3.E.	AB%	
1.45	-1.00	99.5	
0.01	-1.00	0.9	
0.03	-1.00	1.9	
0.05	-1.00	3.7	
0.04	-1.00	2.9	
1.32	-1.00	90.0	
0.01	-1.00	0.5	
0.01	-1.00	0.5	
1.46	-1.00	100.0	
0.59	-1.00		
0.29	-1.00		
6			

DATE 07/23/80 PAGE NO T600AQUA 9/28/77

BAILEY GENERATING PLANT

PERIPHYTON BIOVOLUME

MICFOLITERS PER LITER

REPLICATE REPORT

PC TC GC LOC 5 66 66 0 0 30

2 00 00 0 0																	
	DURATION		TOW	SAMP VO	L	MIND		CURE	ENT	TE	MP						
SID DATE TIME D/N	UNITS C	SD WD	SP D	UNITS C	SECH W T	SC DI	CL	SP	DI	AIR	WAT	BT	TURBD	COND	DO	PH	SALN P
111 4/19/80 0 0	0.0 0	0.0 3.7	7 0.0 0	0.0 0	0.000	0 0	0	0.0	0	0.0	0.0	0	0.0	0	0.0	0.0	0.0 0
112 4/19/30 0 0	0.0 0	0.0 3.7	7 0.0 0	0.0 0	0.0 0 0	0 0	0	0.0	0	0.0	0.0	0	0.0	0	0.0	0.0	0.0 0 REL
LS TAXA													X			S.E.	AB%
			1		2												
0 CYANOPHYTA			2.	.23	0.53								1.	38		0.85	86.2
0 PLEUROCAPSACEAE																	
0 PLEUROCAPSA (LP	IL)		0.	.01	0.08								0.	05		0.03	2.9
O OSCILLATORIACEAE																	
O OSCILIATORIA (L	PIL)		0.	.02	0.0								0.	01		0.01	0.6
0 LYNGBYA LIMNETI	CA		0.	.0	0.14								0.	07		0.07	4.3
0 LYMGBYA (LPIL)			0.	37	0.31								0.	34		0.03	21.3
0 RIVULARIACEAE																	
O CALOTHRIX (LPIL)		1.	82	0.0								0.	91		0.91	57.1
0 CHLOROPHYTA			0.	17	0.0								0.	09		0.09	5.4
0 ULOTRICHALES																	
0 ULOTRICHALES (LPI	L)		0.	17	0.0								0.	09		0.09	5.4
O BACILLARIOPHYTA-PEN	HATE		0.	11	0.16								0.	13		0.02	8.4
O BACILLARIOPHYTA-PEN	HATE (LPIL)		11	0.16								0.	13		0.02	8.4
TOTAL			2.	51	0.69								1.	60		0.91	100.0
DIVERSITY (H PRIME)			1.	30	1.83								1.	56		0.26	
DIVERSITY (J PRIME)			0.	50	0.91								0.	71		0.20)
NUMBER OF TAXA				6	4									7			

ABOVE COMPUTED USING SAMPLE IDS
111 112

DATE 07/23/80 PAGE ND 5 T600AQUA 9/28/77

BAILEY GENERATING PLANT

PERIPHYTON BIOVOLUME

HICROLITERS PER LITER

ABOVE COMPUTED USING SAMPLE IDS

111 112

STATION REPORT

LS	TAXA		
		11	
0	CYANOPHYTA	1.38	
0	PLEUROCAPSACEAE		
0	PLEUROCAPSA (LPIL)	0.05	
0	OSCILLATORIACEAE		
0	OSCILLATORIA (LPIL)	0.01	
0	LYNGBYA LIMNETICA	0.07	
0	LYNGBYA (LPIL)	0.34	
0	RIVULARIACEAE		
0	CALOTHRIX (LPIL)	0.91	
0	CHLOROPHYTA	0.09	
0	ULOTRICHALES		
0	ULOTRICHALES (LPIL)	0.09	
0	BACILLARIOFHYTA-PENNATE	0.13	
0	BACILLARIOPHYTA-PENNATE (LPIL)	0.13	
TOT	AL	1.60	
DIV	ERSITY (H PRIME)	1.56	
DIV	ERSITY (J PRIME)	0.71	
HUH	DER OF TAXA	7	

-		REL
×	S.E.	ABZ
1.38	-1.00	86.2
0.05	-1.00	2.9
0.01	-1.00	0.6
0.07	-1.00	4.3
0.34	-1.00	21.3
0.91	-1.00	57.1
0.09	-1.00	5.4
0.09	-1.00	5.4
0.13	-1.00	8.4
0.13	-1.00	8.4
1.60	-1.00	100.0
1.56	-1.00	
0.71	-1.00	

DATE 07/23/80 PAGE NO 6 T600AQUA 9/28/77

BAILEY GENERATING PLANT

PERIPHYTON BIOVOLUME

MICROLITERS PER LIVER

REPLICATE REPORT

PC TC GC LOC 5 66 6 0 0 40

				DURAT	ION			TO	W	SAMP	VO	L		L	IND		CUF	ENT	TE	MP							
SI	DATE	TIME	D/N	UNITS	C	SD	MD	SP	D	UNIT	S C	SECH	WI	50	DI	CL	SP	DI	AIR	HAT	BT	TURBD	COND	DO	PH	SALN	P
1	21 4/19/80	0	0	0.0	0	0.0	6.1	0.0	0	0.	0 0	0.0	0 0) 0	0	0	0.0	0	0.0	0.0	0	0.0	0	0.0	0.0	0.0	0
1:	22 4/19/80	0	0	0.0	0	0.0	6.1	0.0	0	0.	0 0	0.0	0 () (.0	0	0.0	0	0.0	0.0	0	0.0	0	0.0	0.0	0.0 REL	
LS	TAXA																					×			S.E.	AB2	
									1			2															
0	CYANOPHYTA								0.	0		0	.07									0.	04		0.04	0.	. 3
0	OSCILLATO	DRIAC	EAE																								
0	LYNGBY	A LIM	NETI	CA					0.	0		0	.01									0.	00		0.00	0.	. 0
0	LYNGBY	A (LP	IL)						0.	0		0	.06									0.	03		0.03	5 0.	. 2
0	CHLOROPHYTA	Λ.							9.	58		4	.38									6.	98		2.60	49.	4
0	ULOTRICH/	ALES																									
0	SCHIZO	TERIS	(LP	IL)					3.	1.1		0	.0									1.	55		1.55	11.	.0
0	CLADOPHOR	PALES																									
0	CLADOPE	IORA	(LPI	L)					6.	47		4	.38									5.	42		1.05	38.	4
0	BACILLARIO	ATYHE	-PEN	NATE					13.	17		1	.05									7.	11		6.06	50.	4
0	ACHNANTH/	ALES																									
0	RHOICOS	SPHEN	IA CI	URVATA					13.	13		0	.99									7.	06		6.07	50.	. 0
0	BACILLARIO	PHYTA	-PEN	NATE (LPIL	.)			0.				.07									0.	06		0.01		
TOTA	IL.								22.	75		5	.50									14.	13		8.63	100	0
DIVE	PSITY (H PE	(IME)							1.	38		0	.87									1.	13		0.25	;	
DIVI	ERSITY (J PR	(BMI							0.	69		0	.38									0.	53		0.16		
NUITE	BER OF TAXA									4			5										6				

ABOVE COMPUTED USING SAMPLE IDS
121 122

DATE 07/23/80 PAGE NO 7 T600AQUA 9/28/77

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BAILEY GENERATING PLANT

PERIPHYTON BIOVOLUME

MICROLITERS PER LITER

ABOVE COMPUTED USING SAMPLE IDS

121 122

STATION REPORT

LS	TANA	
		12
0	CYANOPHYTA	0.04
0	OSCILLATORIACEAE	
0	LYNGBYA LIMNETICA	0.00
0	LYNGBYA (LPIL)	0.03
0	CHLOROPHYTA	6.93
0	ULOTRICHALES	
0	SCHIZOMERIS (LPIL)	1.55
0	CLADOPHORALES	
0	CLADOPHORA (LPIL)	5.42
0	BACILLARIOPHYTA-PENNATE	7.11
0	ACHNANTHALES	
0	RHOICOSPHENIA CURVATA	7.06
0	BACILLARIOPHYTA-PENNATE (LPIL)	0.06
TOT	AL	14.13
DIV	PERSITY (H PRIME)	1.13
DIV	ERSITY (J PRIME)	0.53
HUM	BER OF TAXA	6

		REL
X	S.E.	AB%
0.04	-1.00	0.3
0.00	-1.00	0.0
0.03	-1.00	0.2
6.98	-1.00	49.4
1.55	-1.00	11.0
5.42	-1.00	38.4
7.11	-1.00	50.4
7.06	-1.00	50.0
0.06	-1.00	0.4
14.13	-1.00	100.0
1.13	-1.00	
0.53	-1.00	
4		

DATE 07/23/80 PAGE NO 8 T600AQUA 9/28/77

BALLEY GENERATING PLANT

PERIPHYTON BIONOLUME

MICROLITERS PER LITER

REPLICATE REPORT

PC TC GC LOC 5 66 66 0 0 50

	ALN P	0.00	0.00	REL	ABZ.		4.66		0.2		0.0		99.5	9.0		0.1	9.0		0.1	0.0	100.0			
			0.0		S.E.		16.44		0.03		00.0		16.47	0.10		0.02	90.0		0.02	00.0			0.12	
			0.0		S		1						7								1			
		0																						
	Ü						.50		0.03		0.00		24	10		20	90.0		02	00.0	9	24	15	7
	TURBD	0.0	0.0		×		16.		0		0		16.47	0		0	0		0	0	16.	0	0.15	
		0	0																					
C.		0.0																						
TEMP																								
	AIR																							
ENT	DI	0	0																					
CUR	SP DI	0.0	0.0																					
		0																						
0																								
MIN	SC DI	0	0																					
	_																							
	7	-	m				90.0		0.05		0.00		0	00.0		0	0		0	0.00	90	42	0.26	m
	CH	0.	0.			ev	0		o.		0		0	0		0	0.0		0	0	0	0	0	
7	SE	0	0.0 0 0.0																					
100	SC	0 0	0 0																					
SAMP	III	0.	0.0																					
S	5						32,94		0.0		0.0		72.94	20		0.4	0.13		0.3	0.0	14	90	0.03	4
3	0	0	0			-	32		0		0		72	0		0	0		0	0	33	0	0	
TOM			0.00																					
	MD	0.5	0.5																					
	SD	0.	0.0																					
-																				(1)				
LIO	0 5	0	0																	E				
DURATION	TIME D/N UNITS C	0.0	0.0						STIGEOCLONIUM (LPIL)		-		-	BACILLARIOPHYTA-PERBATE		ASTERIONELLA FORMOSA				BACILLARIOPHYTA-PEHNATE (LPIL)				
	Z	0	0						=		PII		PIL	#13		FOR	BE		IL	ENA				
	0 3	0	0					ES	101		-	S	=	A-F	5	LA	LGA		(LP	A-F		_	_	
	TIM						_	CHAETOPHORALES	LON	DEDUCONIALES	DEDOGONIUM (LPIL)	CLADOPHORALES	CLADOPHORA (LPIL)	HALL	FRAGILARIALES	HEL	DIATOHA VULGARE	ACHINANTHALES	COCCONEIS (LPIL)	HYT		DIVERSITY (H PRIME	DIVERSITY (J PRIME)	
							CHLOROPHYTA	DPHC	SEOC	THE	1090	SHOP	1400	IOI	LARI	ERIC	10:17	THY	COME	SIOF		+ PF	J PF	XX
	DATE	4/20/80	4/20/80		TAXA		100	ET	TI	900	DEDL	OON	LAI	LA	GI	STE	YI	HIVE	1000	LAR		1)	,	1
	-	5	4				LOF	CH	123	DEC	-	CLA	0	CIL	FRA	4	-	ACI	0	CIL		III	III	10
	0	251	252				5							BA						BA	AL	Eus	EKS	BER
	SI	cu	CU		LS		0	0	0	0	0	0	0	0	0	0	0	0	0	0	TOTAL	DIV	DIV	NUMBER OF TAXA
									R												L			

ABOVE COMPUTED USTNG SAMPLE IDS 251 252

9/28/77 DATE PAGE NO T600AQUA

BAILEY GENERATING PLANT

PERIPHYTON BIOVOLUME

MICROLITERS PER LITER

STATION REPORT

LS	TAXA		
		25	
0	CHLOROPHYTA	16.50	
0	CHAETOPHOPALES		
0	STIGEOCLONIUM (LPIL)	0.03	
0	OEDOGONIALES		
0	OEDOGONIUM (LPIL)	0.00	
0	CLADOPHORALES		
0	CLADOPHORA (LPIL)	16.47	
0	BACILLARIOPHYTA-PENNATE	0.10	
0	FRAGILARIALES		
0	ASTERIONELLA FORMOSA	0.02	
0	DIATOMA VULGARE	0.06	
0	ACHNANTHALES		
0	COCCONEIS (LPIL)	0.02	
0	BACILLARIOPHYTA-PENHATE (LPIL)	0.00	
TOT	AL	16.60	
DIV	ERSITY (H PRIME)	0.24	
DIV	ERSITY (J PRIME)	0.15	
NUIT	BER OF TAXA	7	

-		REL	
×	S.E.	ABZ	
16.50	-1.00	99.4	
0.03	-1.00	0.2	
0.00	-1.00	0.0	
16.47	-1.00	99.2	
0.10	-1.00	0.6	
0.02	-1.00	0.1	
0.06	-1.10	0.4	
0.02	-1.00	0.1	
0.00	-1.00	0.0	
16.60	-1.00	100.0	
0.24	-1.00		
0.15	-1.00		
7			

DATE 07/23/80 PAGE NO 10 T600AQUA 9/28/77

ABOVE COMPUTED USING SAMPLE IDS

251 252

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NORTHERN	ALSA TEREST	DUBLIC	SERVICE	COMPANY	1607201
THE PART PROPERTY OF	Trail There are	F-000 E-1-6	SCHATCE	COLL WIST	1 471601

BAILEY GENERATING PLANT

PERIPHYTON BIOVOLUME

HICROLITERS PER LITER

SITE SUMMARY

LS	TAXA			
				0
-	CYANOPHYTA			0.60
0	PLEUROCAPSACEAE			
0	PLEUROCAPSA (L	PIL)		0.02
0	OSCILLATORIACEAE			
0	OSCILLATORIA (LPIL)		0.01
0	LYNGBYA LIMNET	ICA		0.04
0	LYNGBYA (LPIL)			0.09
0	NOSTOCACEAE			
0	ANABAENA (LPIL	1		0.00
0	RIVULARIACEAE			
0	CALOTHRIX (LPI	L)		0.45
0	CHLOROPHYTA			11.59
0	ULOTRICHALES			
0	SCHIZOMERIS (L	PIL)		7.18
0	ULOTRICHALES (LP	IL)		0.02
0	CHAETOPHOPALES			
0	STICFOCLONIUM	(LPIL)		0.01
0	OEDOGONIALES			
0	OEDOGONIUM (LP	IL)		0.00
0	CLADOPHORALES			
0	CLADOPHORA (LP	IL)		4.38
0	BACILLARIOPHYTA-PE			1.47
0	FRAGILARIALES			
0	ASTERIONELLA F	ORMOSA		0.00
0	DIATOM'S VULGAR	E		0.01
0	ACHNANTHALES			21122
0	COCCONEIS (LPI	1.1		0.00
0	RHOICOSPHENTA			1.41
0	BACILLARIOPHYTA-PE	NHATE (LPI	.)	0.04
тот	AL			13.66
DIV	ERSITY (H PRIME)			0.71
	ERSITY (J PRIME)			0.34
	BER OF TAXA			16
ABO	VE COMPUTED USING S	AMPLE IDS		
	11	12	101	102
	111	112	121	122
	251	252		

252

251

		REL
×	S.E.	ABX
0.60	-1.00	4.4
0.02	-1.00	0.2
0.01	-1.00	0.1
0.04	-1.00	0.3
0.09	-1.00	0.7
0.00	-1.00	0.0
0.45	-1.00	3.3
11.59	-1.00	84.8
7.18	-1.00	52.6
0.02	-1.00	0.1
0.01	-1.00	0.0
0.00	-1.00	0.0
4.38	-1.00	32.0
1.47	-1.00	10.8
0.00	-1.00	0.0
0.01	-1.00	0.1
0.00	-1.00	0.0
1.41	-1.00	10.3
0.04	-1.00	0.3
13.66	-1.00	100.0
0.71	-1.00	
0.34	-1.00	
16		

07/23/80 DATE PAGE NO 14 9/28/77 T600AQUA

HORTHERN INDIANA PUBLIC SERVICE COMPANY (49720)

BAILEY GENERATING PLANT

РЕРІГРИТТОН ВІОУОСИЛЕ

MICROLITERS PER LITER

REPLICATE REPORT

	-
	COND
	TURED
	18
	MAT
	AIR
	DI
	SP DI
	7
	MIND SC DI CL
	-
	SAMP VOL
	VOL
	SAMP VOL
	SP D
	9
	SD
	TIME DAN UNITS C
6C LOC	DATE
PC TC 6	SIO

		SALN P	0.00	0.00	REL	AB7.		14.8	14.8	2.1		0.0		2.1	14.8		0.5		14.2	68.4		65.6		2.7	100.0			
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24			180	/80		4		UNIDENTIFIED ALGAE	UNIDENTIFIED ALGAE (LPIL	YTA	CHROOCOCCACEAE	APHANOCAPSA (LPIL)	OSCILLATORIACEAE	LYNGBYA LIMMETICA	HYTA	CHLOROCOCCALES	SCENEDESHUS QUADPICAUDA	CHAETOPHORALES	STIGEOCLONIUM (LPIL	BACILLARIOPHYTA-PERNATE	FRAGILARIALES	TABELLARIA FLOCCULOSA	ACHNANTHALES	ACHHANTHES MINUTISSIMA		H PR	J PR	AXA
*		DATE	4/20/80	4/20/80		TAXA		DENT	DENT	CYANDPHYTA	IROO	APH	SCILL	LYN	CHLOROPHYTA	HOR	SCE	HAET	SII	LLLA	PAGI	TAB	CHIMA	ACH		17 (1	TY C.	DF T
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ABOVE COMPUTED USING SAMPLE IDS

07/23/80 15 9/28/77 DATE PAGE NO T600AQUA

BAILEY GENERATING PLANT

PERIPHYTON BIOVOLUME

MICROLITERS PER LITER

STATION REPORT

LS	TAXA	
		17
0	UNIDENTIFIED ALGAE	0.06
0	UNIDENTIFIED ALGAE (LPIL)	0.06
0	CYANOPHYTA	0.01
0	CHROOCOCCACEAE	
0	APHANOCAPSA (LPIL)	0.00
0	OSCILLATORIACEAF	
0	LYNGBYA LIMNETICA	0.01
0	CHLOROPHYTA	0.06
0	CHLOROCOCCALES	
0	SCENEDESHUS CUADRICAUDA	0.00
0	CHAETOFHORALES	
0	STIGE OCLONIUM (LPIL)	0.06
0	BACILLAR JPHYTA-PENNATE	0.27
0	FRAGIL RIALES	
0	TABE LARIA FLOCCULOSA	0.26
0	ACHHANTHALES	
0	ACHNANTHES MINUTISSIMA	0.01
TOT	AL	0.39
DIV	ERSITY (H PRIME)	1.01
DIV	PERSITY (J PRIME)	0.44
NUH	BER OF TAXA	7

ABOVE COMPUTED USING SAMPLE IDS

171 172

DATE 07/23/80 PAGE NO 16 T600AQUA 9/28/77

		REL	
X	S.E.	ABZ	
0.06	-1.00	14.8	
0.06	-1.00	14.8	
0.01	-1.00	2.1	
0.00	-1.00	0.0	
0.01	-1.00	2.1	
0.06	-1.00	14.8	
0.00	-1.00	0.5	
0.06	-1.00	14.2	
0.27	-1.00	68.4	
0.26	-1.00	65.6	
0.01	-1.00	2.7	
0.39	-1.00	100.0	
1.01	-1.00		
0.44	-1.00		
7			

NORTHERN INDIANA PUBLIC SERVICE COMPANY (49720)

BAILEY GENERATING PLANT

PERIPHYTON BIOVOLUME

MICROLITERS PER LITER

REPLICATE REPORT FC TC 6C LOC 5 66 66 1 0 20

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TEMP	AIR 4	0.	0																																		
		0																																			
DENI	SP DI	0	0																																		
2		0 0																																			
WIND	SC DI	0	0																																		
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		1.0																																			
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ng								PILI		ICA					ADRI		STIGEOCLONIUM (LPIL)	113		(1)			DINOBRYON SERTULARIA	117	-	-	BACILLARIOPHYTA-PERRATE		MATA	TABELLARIA FLOCCULOSA	ACHUANTHES MINITISSIMA	TAIN	HIN				
	TIME D/N		0				E	APHANOCAPSA (LPIL)	CEAE	LYNGBY LIMMETICA		ANABAENA (LPIL)		5	2 90	5	LUM	OFDOGONTUM (LPTL)		MOUGEOTIA (LPIL)		ES	SERTI	OCHROMONAS (LPIL)	EPIPYXIS (LPIL)	KEPHYRION (LPIL)	1-PE		FRAGILARIA PINNATA	FLO	HTES	1	1-1-1				
	TIM						ACE	APS	RIA	ITI .	AE	17 C		CALL	SHU	PAL	TON	ITUM	LES	IA		ADAL	NO	MAS	1) 5	NO	HYTA	ALES	FIA	RIA	HEG	ATAN			(H PRIME)	() PRIME)	
	w	180	1/80	*		YTA	COCC	ANOC	LATO	GBY	CACE	BAEN	HYTA	0000	NEDE	OPHC	GEOC	NOSON	MATAI	GEOT	HYTA	OHON	OBRY	ROHO	PYXI	HYRI	PIOF	LARI	GILA	ELLA	THALL	TOTAL	KTO		H PR	J PR	TAVA
	DATE	4/50/80	4/20/80	TAYA		CYANDFHYTA	CHROCCOCCACEAE	APH	DSCILLATORIACEAE	LYN	NOSTOCACEAE	AHA	CHLOROPHYTA	CHLOROCOCCALES	SCE	CHAETOPHOGALES	STIGEOCLON	OFD	ZYGNEMATALES	MOU	CHRYSOPHYTA	CHRYSOMODALES	DIN	OCH	EPI	KEP	ILLA	FRAGILARIALES	FRA	TABELLARIA	ACH	X 1 1 A	TEE				
1			192			CYA	U		0		Z		CHL	U		U	0	2	7		CHR	U					BAC	4		A		DAC	Date	TOTAL	DIVERSITY	DIVERSITY	THE PERSON
1		50	C.																																ALC:		

. ABOVE COMPUTED USING SAMPLE IDS

07/23/80 DATE PAGE NO

BAILEY GENERATING P ANT

PERIPHTTON BIOVOLUME

MICROLITERS PER LITER

REPLICATE REPORT

DATE 07/23/80 PAGE NO 18 T600AQUA 9/28/77

BAILEY GENERATING PLANT

PERIPHYTON BIOVOLUME

MICROLITERS PER LITER

STATION REPORT

LS	TAXA	
		19
0	СУАНОРНУТА	0.05
0	CHROOCOCCACEAE	
0	APHANOCAPSA (LPIL)	0.04
0	OSCILLATORIACEAE	
0	LYNGBYA LIMNETICA	0.01
0	NOSTOCACEAE	
0	ANABAENA (LPIL)	0.00
0	CHLOPOPHYTA	0.02
0	CHLOROCOCCALES	
0	SCENEDESHUS QUADRICAUDA	0.00
0	2111213111223	
0	STIGEOCLONIUM (LPIL)	0.01
0	OEDOGONIALES	
0	OEDOGONIUM (LPIL)	0.01
0	ZYGNEMATALES	
0	MOUGEOTIA (LPIL)	0.00
0		0.40
0	CHRYSOMONADALES	
0	DINOBRYON SERTULARIA	0.01
0		0.00
0	EPIPYXIS (LPIL)	0.59
0	KEPHYRION (LPIL)	0.00
0	BACILLARIOPHYTA-PENNATE	0.37
0	FRAGILARIALES	
0	FRAGILARIA PINHATA	0.09
0	TABELLARIA FLOCCULOSA	0.25
0	ACHNANTHALES	
0	ACHNANTHES MINUTISSIMA	0.00
0	BACILLARI(PHYTA-PENNATE (LPIL)	0.02
тот	AL	0.84
DIV	ERSITY (H PRIME)	1.92
DIV	ERSITY (J PRIME)	0.54
HUH	BER OF TAXA	15

192

ABOVE COMPUTED USING SAMPLE IDS 191

-		REL
X	5.E.	ABZ
0.05	-1.00	6.5
0.04	-1.00	5.3
0.01	-1.00	1.0
0.00	-1.00	0.1
0.02	-1.00	2.5
0.00	-1.00	0.1
0.01	-1.00	1.3
0.01	-1.00	0.6
0.00	-1.00	0.5
0.40	-1.00	47.4
0.01	-1.00	1.0
0.00	-1.00	0.3
0.39	-1.00	46.0
0.00	-1.00	0.1
0.37	-1.00	43.6
0.09	-1.00	10.8
0.25	-1.00	29.6
0.00	-1.00	0.4
0.02	-1.00	2.8
0.84		100.0
1.92	-1.00	
0.54	-1.00	
15		

DATE 07/23/80 PAGE NO 19 T600AQUA 9/28/77

BAILEY GENERATING PLANT

PERIPHYTON BIOVOLUME

MICROLITERS PER LITER

REPLICATE REPORT

0.0 0.0 0.0 0.0 AIR SP DI 0.0 0 CURENT 700 SC DI 0 0 SAMP VOL UNITS C SECH W T 0.0 0 0.0 0 0 0.0 60.0 0.25 0.29 0.25 2 0.0 0.0 0.0 0.01 0.01 0.32 0.00 0.42 00.0 0.02 00.0 SP D 0.0 0 TOF 1.0 0.0 BACILLARIOPHYTA-PENNATE (LPIL) DURATION DATE TIME D/N UNITS C 4/20/80 0 0 0.0 0 4/20/80 0 0 0.0 0 ACHMANTHALES ACHMANTHES MINUTISSIMA STIGEOCLONIUM (LPIL) BACILLARIOPHYTA-PENNATE MICROCYSTIS (LPIL) HERIDION CIRCULARE DEDOGONIUM (LPIL) FRAGILARIA (LPIL) GOMPHONEMA (LPIL) CHROOMONAS (LPIL) CYMBELLA (LPIL) CHLOROPHYTA (LPIL) SYNEDRA (LPIL) CRYPTOMONODALES CHAETOPHORALES CHROOCOCCACEAE FRAGILARIALES DEDOGONIALES NAVICULALES CHLOPOPHYTA CRYPTOPHYTA FC TC GC LOC 5 66 66 1 0 30 4/20/80 CYANOPHYTA TAXA SID 211 212 0 0000000000000000000000

8.9

0.07

0.09

0.36

0.0 8.4 8.4

0.00

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33.2 53.9

0.30

0.54

2.0

0.14

0.14

100.0 0.1

00.0

0.00

0.25

1.64 2.38 0.75

1.42 2.63 0.88

1.86 2.14 0.62 11

DIVERSITY (H PRIME) DIVERSITY (J PRIME)

HUMBER OF TAXA

SALN P 0.0 0 0.0 0 REL ABZ

0.0

0.0

BT TURBD COND 0 0.0 0

TEMP

0.0

9.59

00.0

0.41

0.00

12.5

0.21

0.2

00.0

0.00

S.E.

ABOVE COMPUTED USING SAMPLE IDS

07/23/80 9/28/77 DATE PAGE NO TEODAGUA

BAILEY GENERATING PLANT

PERIPHYTON BIOVOLUME

HICROLITERS PER LITER

STATION REPORT

LS	TAXA	
		21
0	CYANOPHYTA	0.00
0	CHROOCOCCACEAE	
0	MICROCYSTIS (LPIL)	0.00
0	CHLOROPHYTA	0.75
0	CHAFTOPHORALES	
0	STIGEOCLONIUM (LPIL)	0.21
0	OEDC INTALES	
0	OEDOSCHIUM (LPIL)	0.54
0	CHLOROPHYTA (LPII.)	0.00
0	BACILLARIOPHYTA-PENNATE	0.88
0	FRAGILARIALES	
0	FRAGILARIA (LPIL)	0.36
0	MERIDION CIRCULARE	0.15
0	SYNEDRA (LPIL)	0.07
0	ACHNANTHALES	
0	ACHNANTHES MINUTISSIMA	0.00
0	NAVICULALES	
0	GOMPHONEMA (LPIL)	0.14
0	CYMBELLA (LPIL)	0.14
0	BACILLARIOPHYTA-PENNATE (LPIL)	0.03
0	CRYPTOPHYTA	0.00
0	CRYPTOHONODALES	
0	CHROOMONAS (LPIL)	0.00
TOT	AL	1.64
DIV	ERSITY (H PRIME)	2.38
DIV	ERSITY (J PRIME)	0.75
NUM	BER OF TAXA	12

212

ABOVE COMPUTED USING SAMPLE IDS 211

-		REL
X	S.E.	ABZ
0.00	-1.00	0.2
0.00	-1.00	0.2
0.75	-1.00	45.8
0.21	-1.00	12.5
0.54	-1.00	33.2
0.00	-1.00	0.1
0.88	-1.00	53.9
0.36	-1.00	21.7
0.15	-1.00	8.9
0.07	-1.00	4.4
0.00	-1.00	0.0
0.14	-1.00	8.4
0.14	-1.00	8.4
0.03	-1.00	2.0
0.00	-1.00	0.1
0.00	-1.00	0.1
1.64	-1.00	100.0
2.38	-1.00	
0.75	-1.00	
12		

DATE 07/23/80 PAGE NO T600AQUA 9/28/77

BAILEY GENERATING PLANT

PERIPHYTON BIOVOLUME

MICROLITERS PER LITER

SITE SUMMARY

LS	TAXA	
		1
	UNIDENTIFIED ALGAE	0.02
0	The second secon	0.02
0		0.02
0	The state of the s	
0	MICROCYSTIS (LPIL)	0.00
0	Contract and American	0.01
0		
0	LYNGBYA LIMNETICA	0.01
0	NOSTOCACEAE	
0	ANABAENA (LPIL)	0.00
0	CHLOROPHYTA	0.28
0	CHLOROCOCCALES	
0	SCENEDESHUS QUADRICAUDA	0.00
0	CHAETOPHORALES	
0	STIGEOCLOHIUM (LPIL)	0.09
0	DEDOGONIALES	
0	OEDOGONIUM (LPIL)	0.18
0	ZYGNEMATALES	
0	MOUGEOTIA (LPIL)	0.00
0	CHLOROPHYTA (LPIL)	0.00
0	CHRYSOPHYTA	0.13
0	CHRYSOMONADALES	
0	DINOBRYON SERTULARIA	0.00
0	OCHROMONAS (LPIL)	0.00
0	EPIPYXIS (LPIL)	0.13
0	KEPHYRION (LPIL)	0.00
0	BACILLARIOPHYTA-PENNATE	0.51
0	FRAGILARIALES	
0	FRAGILARIA PINNATA	0.03
0	FRAGILARIA (LPIL)	0.12
0	MERIDION CIRCULARE	0.05
0	SYNEDRA (LPIL)	0.02
0	FABELLARIA FLOCCULOSA	0.17
. 0	ACHNANTHALES	
0	ACHHANTHES MINUTISSIMA	0.00
0	NAVICULALES	
0	GOMPHONEMA (LPIL)	0.05
0	CYMBELLA (LPIL)	0.05
0	BACILLARIOPHYTA-PENNATE (LPIL)	0.02
0	CRYPTOPHYTA *	0.00
0	CRYPTOMONODALES	
. 0	CHROOMONAS (LPIL)	0.00

		REL
X	S.E.	AB%
0.02	-1.00	2.0
0.02	-1.00	2.0
0.02	-1.00	2.3
0.00	-1.00	0.1
0.01	-1.00	1.6
0.01	-1.00	0.6
0.00	-1.00	0.0
0.28	-1.00	28.9
0.00	-1.00	0.1
0.09	-1.00	9.5
0.18	-1.00	19.2
0.00	-1.00	0.1
0.00	-1.00	0.0
0.13	-1.00	13.9
0.00	-1.00	0.3
0.00	-1.00	0.1
0.13	-1.00	13.5
0.00	-1.00	0.0
0.51	-1.00	52.8
0.03	-1.00	3.1
0.12	-1.00	12.4
0.05	-1.00	5.1
0.02	-1.00	2.5
0.17	-1.00	17.6
0.00	-1.00	0.5
0.05	-1.00	4.8
0.05	-1.00	4.8
0.02	-1.00	2.0
0.00	-1.00	0.0
0.00	-1.00	0.0

DATE 07/23/80 PAGE NO 24 T600AQUA 9/28/77

BAILEY GENERATING PLANT

PERIPHYTON BIOVOLUME

MICROLITERS PER LITER

SITE SUMMARY

LS TAXA

1
TOTAL 0.96
DIVERSITY (H PRIME) 1.77
DIVERSITY (J PRIME) 0.57
NUMBER OF TAXA 24

ABOVE COMPUTED USING SAMPLE IDS

171 172 191 192 211 212

> DATE 07/23/80 PAGE NO 25 T600AQUA 9/28/77

- X S.E. ABX

0.96 -1.00 100.0
1.77 -1.00

-1.00

0.57



APPENDIX E

ZOOPLANKTON DENSITY REPLICATE REPORTS, BAILLY STUDY AREA, APRIL 1980

BAILEY GENERATING PLANT

ZOOPLANKTON __NSITT

REPLIC TE REPORT

9C TC 6C LOC 5 51 51 0 0 00

,	21 21 0 0 00		The same of			The same and			161								
	DURATION		2.00	SAMP VOL		MIND		CURENT		MP							
51		MD		TOTAL STATE OF THE PARTY OF THE	SECH W T			SP DI		TAM	1000	TURBD	COND		PH	SALH F	
	11 4/17/80 1143 0 0.0 0 4.6		0.00		0.5 8 0	3 5	-	0.0 0	-		0	0.0	0		0.0	0.0	_
	12 4/17/80 1143 0 0.0 0 4.6	100000	0.00	1000 100 100 100 100	0.5 8 0		-		15.6		0	0.0	0	1000000	0.0	0.0	
	13 4/17/80 1143 0 0.0 0 4.6		0.00		0.5 8 0	3 2	-		15.6	100	0	0.0		0.0	0.0	0.0	_
10	14 4/17/80 1143 0 0.0 0 4.6	4.6	0.0 0	3.6 3	0.5 8 0	3 2	6	0.0 0	15.6	10.0	0	0.0	0	0.0	0.0	0.0	
The St																REL	
LS	TAXA											X			S.E.	AB%	
			1		2		3		4								
0	CNIDARIA (TOTAL)		7.1	4	0.0		0.0)	0.	.0		4.	79		1.79	0.4	*
0	HYDRUZOA																
19	HYDRA (LPIL)		7.1		0.0		0.0		0.				79		1.79	C CONTRACTOR	
0	NEMATODA (TOTAL)		195.2		169.84	2	63.8	39	226.			213.			20.29		_
1	NEMATODA (LPIL)		195.2		169.84		63.8		226.	19		213.			20.29		3
0	OLIGOCHAETA (TOTAL)		52.3	8	0.0		30.5	6	0.	.0		20.			12.77	4.5	5
1	OLIGOCHAETA (LPIL)		52.3	8	0.0		30.5	6	0.	0		20.	73		12.77	4.5	5
0	HIRUDINEA (TOTAL)		7.1	4	0.0		11.1	1	0.	0		4.	56		2.76	1.0	0
19	HIRUDINEA (LPIL)		7.1	4	0.0		11.1	1	0.	0		4.	56		2.76	1.0	0 .
0	CLADOCERA (TOTAL)		57.1	4	31.75		55.5	6	73.	81		54.	56		8.65	11.7	7
0	BOSHINIDAE																
1	BOSMINIDAE (LPIL)		9.5	2	1.59		5.5	6	28.	57		11.	31		5.98	2.4	4
0	CHYDORIDAE																
1	EURYCERCUS LAMELLATUS		4.7	6	0.0		0.0)	0.	0		1.	19		1.19	0.3	3
0	DAPHNIDAE		100														
6	DAPHNIA (LPIL)		42.8	6	30.16		50.0	00	45.	24		42.	06		4.24	9.1	1
0	COPEPODA (TOTAL)		211.9		103.17		61.1		180.	95		164.			22.89		
0	CALANOIDA (TOTAL)						-										
1	DIAPTOMUS ASHLANDI		4.7	6	12.70		19.4	4	14.	29		12.	80		3.04	2.8	8
1	DIAPTOMUS SICILIS		7.1		12.70		16.6			52		11.			2.06		
i	DIAPTOMUS MINUTUS		2.3		0.0		0.0		21.			5.			5.19		
i	LIMNOCALANUS MACRURUS		42.8		7.94		16.6			76		18.	-		8.64	-	70.
14	CALANOIDA (LPIL)		80.9		44.44		58.3		66.			62.			7.64		
0	CYCLOPOIDA (TOTAL)		00.7				30.3										
1	CYCLOPS BICUSPIDATUS THOMASI		14.2	9	4.76		5.5		14.	29		9	72		2.64	2.1	
i	CYCLOPS VERNALIS		2.3		0.0		0.0		0.				60		0.60		-
14	CYCLOPOIDA (LPIL)		33.3		15.87		25.0		45.			29.			6.24		
0	HARPACTICOIDA (TOTAL)		33.3	•	15.07		23.0		40.						0.6		
- 1	HARPACTICOIDA (LPIL)		19.0	5	0.0		13.8	0	0.	0			23		4.87	7 1.6	A
14	HARPACTICOIDA (LPIL)		4.7	7	4.76		5.5			76		1000	96		0.20		
0	AMPHIPODA (TOTAL)		7.1		0.0		2.7		0.	0.00			48		1.69		-
6	AMPHIPODA (LPIL)		7.1		0.0		2.7			0			48		1.69		-
0	DIPTERA NEMATOCERA ()OTAL)		4.7		1.59		2.7		0.				28		1.00		
0	CHIRONOMIDAE		4.7	,	1.54		2.1	0	0.			٤.	20		1.00	0.:	-
2	CHIRONOMIDAE (LPIL)		4.7		1.59		2.7	70	0.	•			28		1 0	0.5	=
2	CHIROMONIDAE (LPIL)		4.7	•	1.59		6.1	0	U.	U		2.	20		1.00	0.3	,
- TOT	AL		542.8	5	306.35	5	27.7	78	480.	95		464.	48		54.33	3 100.0	0
								11		7							

DATE 07/14/80 PAGE NO 1

NORTHERN	INDIANA	PUBLIC	SERVICE	COMPANY	(49720
BATIEY G	ENEDATIN	DI ANT			

ZOOPLANKTON DENSITY

REPLICATE REPORT

LS TAXA					×	S.E. ABX
	1	2	3	4		
DIVERSITY (H PRIME)	3.11	2.21	2.62	2.54	2.62	0.19
DIVERSITY (J PRIME)	0.75	0.64	0.69	0.73	0.70	0.02
NUMBER OF TAXA	18	11	14	11	18	
ABOVE COMPUTED USING SAMPLE IDS						
11 12 13	14					

DATE PAGE NO T600AQUA 07/14/80 9/28/77

BAILEY GENERATING PLANT

ZOOPLANKTON DENSITY

PEPLICATE REPORT

PC TC GC LOC 5 51 51 0 0 00

1	DURATION	70		AMP VO	11		LIT	ND		CUID	ENT	TI	EMP							
SID	DATE TIME D/N UNITS C SD	ND SP				CH H T			CI		10000	AIR		BT	TURBD	COND	DO	PH	SALN P	
	4/17/80 1057 0 0.0 0 9.1	9.1 0.0				.5 8 0					0	16.7		0	(a) 200 (a) (a)	0	0.0		0.00	
	4/17/80 1057 0 0.0 0 9.1	9.1 0.0				.5 8 0			-		0	-	7.5	0			0.0		0.00	
	4/17/80 1057 0 0.0 0 9.1	9.1 0.0				.5 8 0			6		0	16.7		0		1.000	0.0	0.0	0.00	
24	4/17/80 1057 0 0.0 0 9.1	9.1 0.0	1000	7.00		.5 8 0	100	2	6	0.0			7.5				0.0	1000	0.00	
	W. 2.7. 00 2.057 0 0.0 0 7.1	7.4 0.0			, ,					0.0		10.7			0.0	٠	0.0	0.0	REL	
LS	TAXA														×			S.E.	ABX	
1			1			2			3			4			^					
O NE	HATODA (TOTAL)		61.57			90.14			63.				.06		72	79		4 62	10.9	
	MATODA (LPIL)		61.57			90.14			63.	-		1,000	.06			79			10.9	
	IGOCHAETA (TOTAL)		3.62			2.82			0.0	-			.63		3.	2.2		1.17		
	IGOCHAETA (LPIL)		3.62			2.82			0.0				.63		3.			1.17		
	RUDINEA (TOTAL)		0.0			0.0			4.1			1	.0		1.			1.06		
	RUDINEA (LPIL)		0.0			0.0			4.			0.			1.			1.06		
100.00	ADOCERA (TOTAL)		7.24			14.08			42.			11.			18.			7.97		
	BOSMINIDAE											***				**				
	BOSMINIDAE (LPIL)		0.0			5.63			21.1	13		5	.63		Α.	10		4.54	1.2	
	CHYDORIDAE					3.03														
1 1	CHYDORUS (LPIL)		0.0			0.0			4.5	23		0.	.0		1.	06		1.05	0.2	
	EURYCERCUS LAMELLATUS		0.0			0.0			0.0				.82			70		0.70	-	
	DAPHNIDAE								-											
6	DAPHNIA (LPIL)		7.24			0.0		1	16.9	90		2.	82		6.	74		3.70	1.0	
0	MACROTHRICIDAE																	3		
1 6	ILYOCRYPTUS (LPIL)		0.0			8.45			0.0	0		0.	. 0		2.	11		2.11	0.3	
0 00	PEPODA (TOTAL)	6	19.31			11.27			88.7			577.			574.				85.7	
0	CALAHOIDA (TOTAL)																			
1 1	DIAPTOMUS ASHLANDI	1	44.87			92.96		19	90.1	14		197.	.18		156.	29		24.08	23.3	
1	DIAPTOMUS SICILIS	1	15.90		4	7.89		13	35.2	21		101.	41		100.				14.9	
1	DIAPTOMUS MINUTUS		39.84			2.82			16.9			8.			17.			8.14	1 100 10 10 100	
3	LIMNOCALANUS MACRURUS		47.08			11.27			8.4			8.			18.			9.45		
14	CALANOIDA (LPIL)	2	10.06		20	8.45		2	74.6	65		185.	92		219.			19.11		
. 0	CYCLOPOIDA (TOTAL)																			
1	CYCLOPS BICUSPIDATUS THOMASI		21.73			8.45			33.8	80		,22.	54		21.	63		5.19	3.2	
1	CYCLOPS VERNALIS		0.0			0.0			4.2			0.			1.			1.06		
. 14	CYCLOPOIDA (LPIL)		25.35		1	33.80			21.1	13		42.	25		30.			4.68	700,000	
_ 0	HARPACTICOIDA (TOTAL)							44.0												
1	HARPACTICOIDA (LPIL)		0.0			2.82			4.2	23		11.	.27		4.	58		2.40	0.7	
14	HARPACTICOIDA (LPIL)		14.49			2.82			0.0			0.				33		1.00	0.6	
TOTAL		6	91.75		51	8.31		79	98.5	59		670.	42		669.	77		57.75	100.0	
DIVERS	ITY (H FRIME)		2.79			2.52			2.6	57.30			66		2.			0.06		
DIVERS	ITY (J PRIME)		0.81			0.70			0.7				.72			73		0.03		
NUMBER	OF TAXA		11			12			1	14			13			17		-		
-																				
							-		1001000	-										

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BAILEY GENFRATING PLANT

ZOOPLANKTON DENSITY

REPLICATE REPORT

ABOVE COMPUTED USING SAMPLE IDS

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07/14/80 9/28/77 DATE PAGE NO TEODAQUA

PAILEY GENERATING PLANT

ZL 'ANKTON DENSITY

REPLICATE REPORT

PC TC GC LOC 5 51 51 0 6 00

	DURATION	TOW	SAMP VO		WIND		CURENT	**	МР						
51		5 5550		SECH W T						DT	TIMEN	COLED	200	PH	SALN P
	31 4/17/80 1005 0 0.0 0 15.2 1									0			-	0.0	0.00
	32 4/17/80 1005 0 0.0 0 15.2 1				3 2					0	10000			0.0	0.0 6
	33 4/17/80 1005 0 0.0 0 15.2 19									0				0.0	0.00
	34 4/17/80 1005 0 0.0 0 15.2 15														
	34 4/1//00 1005 0 0.0 0 15.2 1:	0.0 0	11.9 3	1.0 0 0	3 6	0	0.0 0	12.0	0.0	9	0.0	U	0.0	0.0	REL
LS	TAXA										-				
12	IAXA					-					X			S.E.	ABZ
0	HEHITONA ATOTALA	1		2		3		4							
. 0	NEMATODA (TOTAL)		.15	7.56		64.8	-	12.			25.			13.19	
1	NEMATODA (LPIL)		.15	7.56		64.8		12.			25.			13.19	
0	OLIGOCHAETA (TOTAL)	0	.0	0.0		8.1	0	0.	.0		2.	.03		2.03	0.3
0	NAIDIDAE					4									
1	CHAETOGASTER (LPIL)		. 0	0.0		8.1	-	0.			-	03		2.03	
0	CLADOCERA (TOTAL)	21	.18	18.91		21.6	1	22.	69		21.	10		0.30	3.3
0	BOSMINIDAE														
1	BOSMINIDAE (LPIL)	3	.03	0.0		5.4	0	5.	.04		3.	37		1.24	0.5
0	CHYDORIDAE														
1	CHYDORUS (LPIL)		.0	0.0		2.7			52			31		0.75	
1	EURYCERCUS LAMELLATUS	0	.0	0.0		0.0		2.	52		0.	63		0.63	0.1
. 0	DAPHNIDAE														
6	DAPHNIA (LPIL)	0	.0	18.91		0.0		12.	61		7.	.88		4.73	1.2
1	DAPHNIA (LPIL)	18	.15	0.0		13.5	1	0.	.0		7.	91		4.67	7 1.2
0	COPEPODA (TOTAL)	541	.51	650.42	7	713.0	8	468.	91		593.	48		54.59	91.9
0	CALANOIDA (TOTAL)														
1	DIAPTOMUS ASHLANDI	145	.21	181.51	2	202.50	8	98.	32		156.	91		22.84	24.3
1	DIAPTONUS SICILIS	105	.88	79.41	1	10.7	4	100.	84		99.	22		6.91	15.4
1	DIAPTOMUS MINUTUS	0	.0	3.78		21.6	1	5.	04		7.	61		4.79	1.2
1	DIAPTOMUS (LPIL)	0	.0	0.0		2.7	0	0.	0		0.	68		0.68	0.1
1	LIMHOCALANUS MACRURUS	12	.10	18.91		29.7	1	15.	13		18.	96		3.84	2.9
14	CALLHOIDA (LPIL)	211	.76	264.71	2	251.20	0	194.	12		230.	45		16.52	35.7
. 0	CYCLOPOIDA (TOTAL)														
1	CYCLOPS BICUSPIDATUS THOMASI	30	.25	34.03		43.2	2	20.	17		31.	92		4.77	7 4.9
14	CYCLOPOIDA (L'IL)		.0	64.29		40.5		32.			34.			13.28	
1	CYCLOPOIDA (LPIL)		.25	0.0		0.0		0.				56		7.56	
0	HARPACTICOIDA (TOTAL)	-													-
_ 1	HARPACTICOIDA (LPIL)	6	.05	0.0		10.8	0	2	52		4	.84		2.34	0.7
14	HARPACTICOIDA (LPIL)	-	.0	3.78		0.0	-	0.			19.70	95		0.95	
0	AMPHIPODA (TOTAL)		.03	0.0		5.4		. 0.			1000	11		1.31	
0	HAUSTORIIDAE		.03	0.0		3.4	•	٠.				**		4.34	0.3
1	PONTOPOREIA		.03	0.0		0.0		0.	0			76		0.76	0.1
î	PONTOPOREIA AFFINIS	_	.0	0.0		5.4		0.	-		-	35		1.35	10000
0	DIPTERA NEMATOCERA (TOTAL)		.05	0.0		0.0		0.			-	51		1.51	
0	CHIRONOMIDAE	0	.03	0.0		0.0		0.			4.	21		1.51	0.2
	CHIRONOMIDAE (LPIL)		. 05	0.0		0.0									
- 2	CHIRCHOTIDAE (LPIE)	0	.03	0.0		0.0		, 0.			1.	51		1.51	0.2
				DATE		07/	16 /60								

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BAILEY GENERATING PLANT

ZOOPLANKTON DENSITY

REPLICATE REPORT

LS TAXA					x	S.E. ABZ
	1	2	3	4		
TOTAL	589.92	676.89	813.02	504.20	646.01	65.89 100.0
DIVERSITY (H PRIME)	2.55	2.39	2.86	2.56	2.59	0.10
DIVERSITY (J PRIME)	0.71	0.72	0.73	0.69	0.71	0.01
HUHBER OF TAXA	12	10	15	13	18	
ABOVE COMPUTED USING SAMPLE IDS						
31 32 33	34					
		DATE	07/14/80			
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T600AQUA

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BATLEY GENERATING PLANT

ZOOPLANKTON DENSITY

STATION REPORT

					-		REL
LS	TAXA				×	S.E.	ABZ
		1	2	3		1 1 1 1 1 1 1	
0	CHIDARIA (TOTAL)	1.79	0.0	0.0	0.60	0.60	0.1
0	HYDROZOA						
19	HYDRA (LPIL)	1.79	0.0	0.0	0.60	0.60	0.1
0	NEMATODA (TOTAL)	213.79	72.79	25.79	104.12	56.49	
1	NEMATODA (LPIL)	213.79	72.79	25.79	104.12	56.49	17.5
0	OLIGOCHAETA (TOTAL)	20.73	3.02	2.03	8.59	6.08	1.4
0	NAIDIDAE						
1	CHAETOGASTER (LPIL)	0.0	0.0	2.03	0.68	0.68	0.1
1	OLIGOCHAETA (LPIL)	20.73	3.02	0.0	7.92	6.47	1.3
0	HIRUDINEA (TOTAL)	4.56	1.06	0.0	1.87	1.38	0.3
19	HIRUDINEA (LPIL)	4.56	0.0	0.0	1.52	1.52	0.3
1	HIRUDINEA (LPIL)	0.0	1.06	0.0	0.35	0.35	0.1
0	CLADOCERA (TOTAL)	54.56	18.71	21.10	31.46	11.57	5.3
0	BOSMINIDAE						
1	BOSMINIDAE (LPIL)	11.31	8.10	3.37	7.59	2.31	1.3
0	CHYDORIDAE						
1	CHYDORUS (LPIL)	0.0	1.06	1.31	0.79	0.40	0.1
1	EURYCERCUS LAMELLATUS	1.19	0.70	0.63	0.84	0.16	0.1
0	DAPHNIDAE						
6	DAPHNIA (LPIL)	42.06	6.74	7.88	18.89	11.59	3.2
1	DAPHNIA (LPIL)	0.0	0.0	7.91	2.64	2.64	9.4
0	MACROTHRICIDAE						
6	ILYOCRYPTUS (LPIL)	0.0	2.11	0.0	0.70	9.70	0.1
0	COPEPODA (TOTAL)	164.29	574.19	593.48	443.99	139.96	74.8
0	CALANOIDA (TOTAL)						
1	DIAPTOMUS ASHLANDI	12.80	156.29	156.91	108.66	47.93	18.3
1	DIAPTOMUS SICILIS	11.51	100.10	99.22	70.28	29.39	
1	DIAPTOMUS MINUTUS	5.95	17.00	7.61	10.19	3.44	1.7
1	DIAPTOMUS (LPIL)	0.0	0.0	0.68	0.23	0.23	0.0
1	LIMNOCALANUS MACRURUS	18.06	18.81	18.96	18.61	0.28	3.1
14	CALAHOIDA (LPIL)	62.60	219.77	230.45	170.94	54.26	28.8
0	CYCLOPOIDA (TOTAL)						
1	CYCLOPS BICUSPIDATUS THOMASI	9.72	21.63	31.92	21.09	6.41	3.6
1	CYCLOPS VERNALIS	0.60	1.06	0.0	0.55	0.31	0.1
14	CYCLOPOID ((LPIL)	29.86	30.63	34.39	31.63	1.40	5.3
_ 1	CYCLOPOIDA (LPIL)	0.0	0.0	7.56	2.52	2.52	0.4
- 0	HARPACTICOIDA (TOTAL)	***					
1	HARPACTICOIDA (LPIL)	8.23	4.58	4.84	5.89	1.18	1.0
14	HARPACTICOIDA (LPIL)	4.96	4.33	0.95	3.41	1.25	0.6
0	AMPHIPODA (TOTAL)	2.48	0.0	2.11	1.53	0.77	0.3
0	HAUSTORIDAE	2.40	0.0		1.22	0.77	0.3
1	PONTOPOREIA	0.0	0.0	0.76	0.25	0.25	0.0
i	PONTOPOREIA AFFINIS	0.0	0.0	1.35	0.45	0.45	0.1
	AMPHIPODA (LPIL)	2.48	0.0	0.0	0.83	0.83	0.1
= 6	ALL HALLOWA TEFACT	2.40	0.0	0.0	0.03	0.03	0.1
			DATE	07/14/80			
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BAILEY GENERATING PLANT

ZOOPLANKTON DENSITY

STATION REPORT

						PEL
LS TAXA				×	S.E.	ABZ
	1	2	3			
O DIPTERA NEMATOCERA (TOTAL)	2.28	0.0	1.51	1.26	0.67	0.2
0 CHIROHOMIDAE						
2 CHIRONOMIDAE (LPIL)	85.5	0.0	1.51	1.26	0.67	0.2
TOTAL	464.48	669.77	646.01	593.42	64.83	100.0
DIVERSITY (H PRIME)	2.62	2.66	2.59	2.62	0.02	
DIVERSITY (J PRIME)	0.70	0.73	0.71	0.72	0.01	
NUMBER OF TAXA	16	17	18	24		
ABOVE COMPUTED USING SAMPLE IDS						
11 12 1	3 14					
21 22 2	3 24					
31 32 3	3 34					

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BAILEY GENERATING PLANT

ZOOPLANKTON DENSITY

REPLICATE REPORT

PC TC GC LOC 5 51 51 0 0 10

				DURAT	HOIT			TOH	SAMP	VO	L		HI	CIM		CUR	ENT	T	EMP							
SI	D DATE	TIME	D/N	UNITS	C	SD	MD	SP D	UNITS	C	SECH	H T	SC	DI	CL	SP	DI	AIR	WAT	BT	TURBD	COND	DO	PH	SALN	P
	41 4/17/80	1218	0	0.0	0	4.6	4.6	0.0 0	3.6	3	0.5	8 0	3	2	6	0.0	0	16.7	11.0	0	0.0	0	0.0	0.0	0.0	0
	42 4/17/80	1218	0	0.0	0	4.6	4.6	0.0 0	3.6	3	0.5	8 0	3	2	6	0.0	0	16.7	11.0	0	0.0	0	0.0	0.0	0.0	0
Market S	43 4/17/80	1218	0	0.0	0	4.6	4.6	0.0 0	3.6	3	0.5	8 0	3	2	6	0.0	0	16.7	11.0	0	0.0	0	0.0	0.0	0.0	0
	44 4/17/80	1218	0	0.0	0	4.6	4.6	0.0 0	3.6	3	0.5	8 0	3	2	6	0.0	0	16.7	11.0	0	0.0	0	0.0	0.0	0.0	0
																					-				RE	L
LS	TAXA																				X			S.E.	AB	7.
								1			2				3			4								
0	NEMATODA (TOTAL)					86 .	.67		143	.33		14	2.3	36		127	.27		124.	91		13.27	16	.4
1	NEMATODA (86.	.67		143	. 33		14	2.3	56		127	.27		124.	91		13.27		.4
0	OLIGOCHAET		TAL					3.	. 33		6.	.67			3.4	7		4	.55		4.	.50		0.77	0	1.6
0	NAIDIDAE																									
1	CHAETO			PIL)				0.	. 0		0	. 0			3.4	7		0	.0		0.	.87		0.87		1.1
1	OLIGOCHAET							3.	. 33		6	.67			0.0)			.55		_	.64		1.39		1.5
0	CLADOCERA	0.00000000	LI					6.	.67		13.	. 33		1	0.4	2		4	.55		8.	.74		1.95	1	.1
0	BOSMINID																									
1	BOSHINIO		PILI					3.	. 33		6.	.67			6.9	94		4	.55		5.	.37		0.87	0	1.7
0	DAPHNIDA																									
6	DAPHNI		-						. 33		6.	.67			3.4	7			.0			.37		1.36		1.4
0	COPEFODA (510.	.00		546	67		70	14.8	6		731	.82		623.	.34		55.63	8 81	. 9
0	CALANOID	A 10 10 10 10 10 10 10 10 10 10 10 10 10																								
1	DIAPTO							150.	7.120.000		180			35.35	12.6			240			200.			21.6		.4
1	DIAPTO			-				93.	. 33		100.	.00		16	4.1	.7		-	.73		92.	56		6.98	12	2.2
1	DIAPTO	1000	-					10.	.00		16.	67			8.6	-		100	.0		18.			10.50	2	.5
1	LIMMOC			CRURUS	3			10.			16.				4.3	939			.18		17.			2.94	0	. 3
14	CALANOID							166.	.67		180	.00		51	5.2	8		304	.55		216.	.62		31.05	28	1.4
0	CYCLOPOII			The second																						
1	CYCLOPS	S BIC	USPI	DATUS	HOHT	IASI		43.	. 33		23.	.33		4	8.6	1		40	. 91		39.	.05		5.48	5	.1
14	CYCLOPOII	DA (L	PIL)					36.	.67		26.	67		3	1.2	5		45	.45		35	01		4.04	4	1.6
0	HARPACTIO		1 - 7 - 5 - 5																							
1	HARPACTIO	COIDA	(LP	IL)				0.	.0		3.	. 33			0.0)		9	.09		3.	.11		2.14	0	1.4
TOT	AL			*				606.	.67		710.	00		86	1.1	1		868	.18		761			63.20		.0
	ERSITY (H P							-	.66			69			2.7	1000			.44		_	.63		0.00		
75.75	ERSITY (J P								.77		0.	75			0.7	-		0	.74		0.	.76		0.0	1	
_HUM	BER OF TAXA								11			12			1	1			10			13				

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ABOVE COMPUTED USING SAMPLE IDS

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BAILEY GENERATING PLANT

ZOOPLANKTON DENSITY

REPLICATE REPORT

PC TC GC LOC 5 51 51 0 0 10

				DURAT	HOIT			TON	SAMP I	VOL			HI	OH		CURI	ENT	TE	MP								
SIC	DATE	TIME	D/N	UNITS	3 C	SD	MD	SP D	UNITS	C	SECH	HT	SC	DI	CL	SP	DI	AIR	HAT	BT	TURBD	COND	DO	PH	SAL	NP	
5	1 4/17/80	1250	0	0.0	0	9.1	9.1	0.0 0	7.1	3	1.0	8 0	3	2	6	0.0	0	14.4	8.5	0	0.0	0	0.0	0.0	0.	0 0	
5	2 4/17/80	1250	0	0.0	0	9.1	9.1	0.0 0	7.1	3	1.0	8 0	3	2	6	0.0	0	14.4	8.5	0	0.0	0	0.0	0.0	0.	0 0	
5	3 4/17/80	1250	0	0.0	0	9.1	9.1	0.00	7.1	3	1.0	8 0	3	2	6	0.0	0	14.4	8.5	0	0.0	0	0.0	0.0	0.1	0 0	
5	4 4/17/80	1250	0	6.0	0	9.1	9.1	0.00	7.1	3	1.0	8 0	3	2	6	0.0	0	14.4	8.5	0	0.0	0	0.0	0.0	0.1	0 0	
																									RI	EL	
LS	TAXA																				X			S.E.	A	BX	
1000								1			2				3			4									
0	HEMATODA (TOTAL)					50.	70		69	.72			76.1	06		38.	03		58.	63		8.73	3	9.1	
1	HEMATODA (LPIL)						50.	70		69	.72			76.	06		38.	03		58.	63		8.73	3	9.1	
0	OLIGOCHAET	A (TO	TAL)					0.	0		0	. 0			0.	0		6.	34		1.	58		1.58	3	9.0	
1	OLIGOCHAET	A ILP	ILI					0.	0		0.	. 0			0.	0		6.	34		1.	58		1.58	8	0.2	
0	CLADOCERA	(TOTA	LI					8.	45		19.	.01			5.	63		25.	35		14.	61		4.59	9	2.3	
0	BOSMINIO																										
1	BOSMINID	AE (L	PIL)					2.	82		6.	. 34			0.1	0		9.	51		4.	67		2.07	7	0.7	
0	CHYDORID																										
1	ALONEL	LA (L	PIL)					2.	82		0.	. 0			0.	0		0.	0		0.	70		0.70	0	0.1	
0	DAPHNIDA	E																									
6	DAPHNI	900						0.	0		12.	.68			0.	0		15.	85		7.	13		4.17		1.1	
1	DAPHNI	A ILP	IL)					2.	82		0.	. 0			5.0	63		0.	0		2.	11		1.35		0.3	
0	COPEPODA (TOTAL)					535.	21		538.	.73		6	05.6	63		602.	11		570.	42		19.34	4 8	8.3	
0	CALANOID	A (TO	TAL)																								
1	DIAPTO							121.	13		142.	.61			38.			183.			146.			13.30		2.7	
1	DIAPTO	MUS S	ICIL	IS				121.	-		129.			7900	29.			136.	-		129.			3.11	1 2	0.0	
1	DIAPTO	MUS H	INUTI	US				50.				.17			36 . 6			0.			22.			12.50		3.5	
1	LIMNOC	ALANU	S MAG	CRURUS	3			11.	-		12.				19.			19.			15.	-		2.16		2.4	
14	CALANOID		- The second sec					197.	18		171.	13		2	30.	99		190.	14		197.	36		12.49	9 3	0.5	
0	CYCLOPOI	DA (T	OTAL)																							
1	CYCLOP			DATUS	THOP	MASI		22.			28.				16.			38.			26.			4.58		4.1	
14	CYCLOPOI							11.	27		47.	54			33.6	30		31.	69		31.	07		7.48	3 (4.8	
0	HARPACTI			TO THE PARTY OF																							
14	HARPACTI	COIDA	(LP	IL)				0.	_		3.	17			0.0				17		4.	58		0.91	1 1	0.2	
0	DIPTERA NE		ERA I	TOTAL	. 1			0.	0		0.	0			0.0	0		3.	17		U.	79		0.79	9 1	0.1	
0	CHIRCHOM																										
2	CHIRONOM	IDAE	(LPI	L)				0.	0		0.	0			0.0	0		3.	17		0.	79		0.79	9	0.1	
TOTA								594.	37		627.	46		6	87.	32		675.	00		646.	04		21.53		0.0	
	RSITY (H P								58		-	68			2.5				66			62		0.03			
DIVE	RSITY (J P	RIME						0.	74		0.	77			0.	81		0.	74		0.	77		0.02	2		
NUMB	ER OF TAXA								11			11				9			12			14					

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BAILEY GENERATING PLANT

ZOOPLANKTON DENSITY

REPLICATE REPORT

PC TC GC LOC 5 51 51 0 0 10

	21 21 0 0 1			DURAT	TYON			TOW	SAMP	WOI	6		417	ND		CUR	CHT	TE	HP							
51	D DATE	TTME	D/M	UNITS		SD	WD	SP D	Carried Co.	-	SECH	U T	200	DI		-		AIR	WAT	BT	TURBD	COND	DO	PH	SALN	P
a contract	61 4/17/80	200000	-	0.0	-	15.2	191909			-	1.0		3		100	0.0	100	14.4	Decision of the Control of the Contr	0	0.0	0	0.0		0.0	7
	62 4/17/80		-	0.0		15.2	15.2				1.0		3	2	-	0.0		14.4		0	0.0	0	0.0		0.0	
	63 4/17/80		-	0.0	-	-	15.2	0.0 0			1.0	-	3		-	0.0		14.4	6.0	0	0.0	0	0.0		0.0	
	64 4/17/80	-	-	0.0	750			0.00			1.0					0.0		14.4	1000	0	0.0	ō	20.00	0.00	0.0	-
	04 4/1//00	1344		0.0		13.6	13.6	0.0 0	**.	, ,	1.0	0 0	,		0	0.0			0.0	•	0.0		0.0	0.0	REL	
LS	TAXA																				×			S.E.	AB%	
								1			2				3			4			18.75			2000		
0	HEHATODA (TOTAL)					5.	04		9.	.08		1	3.4	15		10.	50		9.	52		1.75	1.	6
1	NEMATODA (I	LPIL)						5.	04		9.	.08		1	3.4	15		10.	50		9.	52		1.75	1.	6
0	OLIGOCHAET	A ITO	TAL)					6.	72		0.	.0			1.6	8		0.	0		2.	10		1.59	0.	3
0	NAIDIDAE																									
1	CHAETO	GASTE	RIL	PILI				1.	68		0.	.0			0.0)		0.	0		0.	42		0.42	0.	1
1	NAIDIDAE	(LPI	L)					5.	04		0.	. 0			1.6	8		0.	0		1.	68		1.19	0.	3
0	CLAD TERA	ATOTA	L)					18.	49		33.	.28		2	3.4	5		21.	01		21.	55		4.21	3.	6
0	BOSMINID	AE																								
1	BOSMINID	AE (L	PIL)					1.	68		18.	15			0.0)		8.	40		7.	06		4.12	1.	2
0	CHYDORIDA	AE																								
1	CHYDORI	US (L	PILI					0.	0		3.	.03			0.0)		0.	0		0.	76		0.76	0.	1
0	DAPHNIDA	E																								
1	DAPHNI	A ILP	IL)					16.	81		12.	10		1	3.4	5		12.	-		13.	77. 2		1.06	70.	200
0	COPEPODA (TOTAL)					578.	15		647.	.39		43	10.2	25		630.	25		571.	51		49.33	94.	5
0	CALANOIDA	A (TO	TAL)																							
1	DIAPTO			O'THE STATE OF THE				168.	0.75		196.			25.00	14.0	5755		0.			129.	-		44.15		
14	DIAPTO							0.			0.				0.0			224.			56.	-		56.20		-
1	DICPTOR		A. W. A. W.	- m				53.	1000		81.				5.3			50.			57.			8.14		
1	DIAPTO	177.15	000000000000000000000000000000000000000					15.	-		0.				5.0			8.			7.	-		3.17		777
1	LIMNOC			CRURUS	3			16			24.			-	6.8			16.			18.			1.85		-
14	CALANOIDA		-					231.	.93		265.	.22		15	4.6	2		247.	90		225.	17		24.54	37.	2
0	CYCLOPOI			2																						
1	CYCLOPS			PUTAC	THO	MASI		43.			33.				5.3			46.			42.			3.00		-
14	CYCLOPOI							26.	89		42.	.35			8.4	0		33.	61		27.	82		7.20	9.	6
. 0	HARPACTIO	200225	DUFFE!																							
1	HARPACTIO							21.				0			0.0				10		-	99		5.31		-
14	HARPACTIO	COIDA	(LP	IL)				0.	.0		3.	.03			0.0)		0.	0		0.	76		0.76	0.	1
TOT	41							608.	40		689.	75		4E	8.8	12		661.	76		604.	4.0		E1 64	100.	•
	ERSITY (H P	THE I						-	58			43			2.4				35			44		0.05		
100000000000000000000000000000000000000	ERSITY (J P	A Company of the Comp						100	70			70			0.7	2.000		1000	68		-	70		0.01		
100000000000000000000000000000000000000	BER OF TAXA	ATTIC 1						-	13			11			-	0			11			14		0.01		
11011	OLI OI TANA														•											

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BAILEY GENERATING PLANT

ZOOPLANKTON DENSITY

STATION REPORT

							REL	
LS	TAXA				×	S.E.	AB%	
		4	5	6				
0	NEMATODA (TOTAL)	124.91	58.63	9.52	64.35	33.43	9.6	
1	HEMATODA (LPIL)	124.91	58.63	9.52	64.35	33.43	9.6	
0	OLIGOCHAETA (TOTAL)	4.50	1.58	2.10	2.73	0.90	0.4	
0	NAIDIDAE							
1	CHAETOGASTER (LPIL)	0.87	0.0	0.42	0.43	0.25	0.1	
2	NAIDIDAE (LPIL)	0.0	0.0	1.68	0.56	0.56	0.1	
1	OLIGOCHAETA (LFIL)	3.64	1.58	0.0	1.74	1.05	0.3	
0	CLADOCERA (TOTAL,	8.74	14.61	21.55	14.97	3.70	2.2	
0	BOSMINIDAE							
1	BOSMINIDAE (LPIL)	5.37	4.67	7.06	5.70	0.71	0.8	
0	CHYDORIDAE							
1	CHYDORUS (LPIL)	0.0	0.0	0.76	0.25	0.25	0.0	
1	ALONELLA (LPIL)	0.0	0.70	0.0	0.23	0.23	0.0	
0	DAPHNIDAE							
6	DAPHNIA (LPIL)	3.37	7.13	0.0	3.50	2.06	0.5	
1	DAPHNIA (LPIL)	0.0	2.11	13.74	5.28	4.27	0.8	
0	COPEPODA (TOTAL)	623.34	570.42	571.51	588.42	17.46	87.7	
0	CALANOIDA (TOTAL)	77.00.70	40,000,000					
1	DIAPTOMUS ASHLANDY	200.89	146.39	129.83	159.04	21.46	23.7	
14	DIAPTOMUS ASHLANDI	0.0	0.0	56.20	18.73	18.73	2.8	
1	DIAPTOMUS SICILIS	92.56	129.23	57.82	93.20	20.62	70.00	
1	DIAPTOMUS MINUTUS	18.82	22.62	7.14	16.20	4.66		
1	LINNOCALANUS MACRURUS	17.29	15.67	18.66	17.20	0.86	2.6	
14	CALANOIDA (LPIL)	216.62	197.36	225.17	213.05	8.22		
0	CYCLOPOIDA (TOTAL)			7.7.7.7				
1	CYCLOPS BICUSPIDATUS THOMASI	39.05	26.50	42.14	35.90	4.78	5.4	
14	CYCLOPOIDA (LPIL)	35.01	31.07	27.82	31.30	2.08	-	
0	HARPACTICOIDA (TOTAL)				*****			
1	HARPACTICOIDA (LPIL)	3.11	0.0	5.99	3.03	1.73	0.5	
14	HARPACTICOIDA (LPIL)	0.0	4.58	0.76	0.78	0.46		
0	DIPTERA NEMATOCERA (TOTAL)	0.0	0.79	0.0	0.26	0.26	0.0	- 1
0	CHIROHOMIDAE	**	****	***	0.10	4.20		
2	CHIROHOMIDAE (LPIL)	0.0	0.79	0.0	0.26	0.26	0.0	
	CHIROMONIA (EFIE)	V	0.77	0.0	0.20	0.20	0.0	
TOT	AL	761.49	646.04	604.68	670.74	46.92	100.0	
LDIV	ERSITY (H PRIME)	2.63	2.62	2.44	2.56	0.06		
DIV	ERSITY (J PRIME)	0.76	0.77	0.70	0.74	0.02		
HUI	BER OF TAXA	13	14	14	17			
-								

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41	42	43	44
51	52	53	54
61	62	63	64

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BAILEY GENERATING PLANT

ZOOPLANKTON DENSITY

REPLICATE REPORT

PC TC GC LOC 5 51 51 0 0 20

				DURAT	ION			TOH	SAM	P VO	L		HI	ND		CUR	ENT	TE	EMP							
51	O DATE	TIME	D/N	UNITS	C	SD	MD	SP D	UNI	TS C	SECH	WT	SC	DI (-		AIR	HAT	BT	TURBD	COND	DO	PH	SAL	N P
1	01 4/17/80	1932	0	0.0	0	3.5	3.5	0.0 0			0.0		3		-	0.0		15.6		0	0.0	0	0.0	0.0		0 0
1	02 4/17/80	1932	0	0.0	0	3.5	1000	0.00			0.0		3	-		0.0	-	15.6	0.0	0	0.0	0			-	0 0
9 1	03 4/17/80	1932	0	0.0		3.5		0.0 0		80.00	0.0	1.000	3	100		0.0	- 27	15.6	0.0	0	0.0		0.0	77.77		0 0
1	04 4/17/80			0.0		3.5		0.00			0.0	-	3			0.0	0	15.6	0.0	0	0.0	0		0.0		0 0
																					-				2001000	EL
LS	TAXA																				×			S.E.		8%
								1			2				3			4								
0	CHIDARIA (1	TOTAL)					0	.0		12	.13		. (0.0)		0.	.0		3	.03		3.0	5	0.1
0	HYDROZOA																									
1	HYDRA (250					0.	-			.13			0.0			0.	.0			.03		3.0	3	0.1
0	NEMATODA (1							189.				.65		182	2.9	9		66.	.54		124			35.4	1	4.2
1	NEMATODA (1	LPIL)						189.	.23		60	.65		182	2.9	9		66.	54		124	. 85		35.4	1	4.2
0	OLIGOCHAETA	A (TO	TAL)					160.	.12		133	.43		182	2.9	9		282.	.80		189	.83		32.60	0	6.4
0	NAIDIDAE																									
1	CHAETO	SASTE	RIL	PIL)				14.	.56		0	. 0		(0.0	1		0.	.0		3	.64		3.64		0.1
1	HAIDIDAE	(LPI	LI					43.	.67		133	.43		133	3.0	8		216.	26		131	.61		35.24		4.4
1	OLIGOCHAETA	LLP	ILI					101.	.89		0	. 0		45	9.9	1		66.	54		54	.59		21.10	3	1.8
0	ARACHNIDA (TOTA	LI					0.	. 0		0	. 0			0.0			16.	64		4	.16		4.16	5	0.1
0	PROSTIGMA	ATA																								
19	HYDRACA	ARINA	(LP	IL)				0.	. 0		0	. 0			0.0			16.	64		4.	.16		4.20	5	0.1
0	CLADOCERA (TOTA	L)					669.	.58		885	.49		1048	3.0	3		865.	.04		867	.04		77.5	1 2	9.2
0	BOSHINIDA	1E																								
1	BOSMINIDA	E IL	PIL)					131.	.00		218	. 34		249	9.5	3		282.	.80		220	.42		32.56	3	7.4
0	CHYDORIDA	1E																								
. 1	ALONA F	PECTA	NGUL	4				14.	.56		0	. 0		0	0.0			0.	.0		3	.64		2.04		0.1
1	ALONA C	OSTA	TA					0.	. 0		12	.13			0.0			0.	.0		3	.03		3.0	3	0.1
1	ALONA (LPIL)					0.	.0		12	.13		0	0.0			0.	.0		3	.03		3.0	3	0.1
1	CHYDORU	JS (L	PIL)					43.	67		0	. 0		83	3.1	8		49.	91		44	.19		17.0	9	1.5
1	EURYCER	CUS	LAME	LLATUS				14.	.56		24	.26		33	3.2	7		49.	91		30	.50		7.5	1	1.0
0	DAPHNIDAE																									
6	DAPHNIA	(LP	IL)					465.	.79		0	. 0		682	2.0	5		462.	43		407	.57		144.4	7 1	3.7
1	DAPHNIA	LLP	IL)					0.	.0		618	.63		0	0.0			0.	0		154	.66		154.66	5	5.2
. 0	COPEPODA (1	TOTAL)					1644.	.83		1637	. 55		1813	3.2	7		1813.	27		1727	.23		49.70) 5	8.2
0	CALANOIDA	(TO	TAL)																							
_ 1	DIAPTON	IUS A	SHLAN	40 I				29.	11		0	.0		0	0.0			49.	91		19	.75		12.17	7	0.7
1	DIAPTON	IUS P	ALLI	US				0.	.0		0	. 0		16	6.6	4		0.	.0		4.	16		4.16	5	0.1
1	DIAPTON	1US 5	ICIL	IS.				0.	.0		0	. 0		16	6.6	4		0.	0		4.	.16		4.16	5	0.1
14	CALANOIDA	(LP	IL)					72.	.78		0	. 0		83	5.1	8		83.	18		59	.78		20.08	3	2.0
0	CYCLOPOID	A (T	DTAL)																						
1	CYCLOPS	BIC	USPI	DATUS	THOM	ASI		0.	0		84	. 91		33	1.2	7		16.	64		33.	.70		18.37	7	1.1
1	CYCLOPS	VER	NALIS	3				29.	11		0	. 0		83	5.1	8		33.	27		36	.39		37.26	5	1.2
1	EUCYCLO	PS A	GILIS	5				0.	0		36	.39		0	0.0			0.	0		9	10		9.10)	0.3
_ 1	EUCYCLO	PS P	RICHO	PHORU	5			0.	0		12	.13		0	0.0			49.	91		15	.51		11.8	2	0.5
-															715											

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BAILEY GENERATING PLANT

ABOVE COMPUTED USING SAMPLE IDS 101

103

104

102

ZOOPLANKTON DENSITY

REPLICATE REPORT

						-		REL
LS	TAXA					×	S.E.	AB%
		1	2	3	4			
1	EUCYCLOPS SPERATUS	29.11	0.0	0.0	0.0	7.28	7.28	0.2
14	CYCLOPOIDA (LPIL)	1441.05	1479.86	1547.10	1497.19	1491.30	21.99	50.3
0	HARPACTICOIDA (TOTAL)							
1	HARPACTICOIDA (LPIL)	0.0	24.26	0.0	33.27	14.38	8.51	0.5
14	HARPACTICOIDA (LPIL)	43.67	0.0	33.27	49.91	31.71	11.11	1.1
0	AMPHIPODA (TOTAL)	14.56	0.0	0.0	0.0	3.64	3.64	0.1
6	AMPHIPODA (LPIL)	14.56	0.0	0.0	0.0	3.64	3.64	0.1
0	DIPTERA NEMATOCERA (TOTAL)	43.67	60.65	16.64	66.54	46.87	11.19	1.6
0	CERATOPOGONIDAE							
2	CERATOPOGONIDAE (LPIL)	0.0	12.13	0.0	0.0	3.03	3.03	0.1
0	CHIRONOMIDAE							
2	CHIROHOMIDAE (LPIL)	43.67	48.52	16.64	66.54	43.84	10.32	1.5
TO	AL	2721.98	2789.91	3243.91	3110.83	2966.66	125.42	100.0
DI	ERSITY (H PRIME)	2.47	2.21	2.51	2.68	2.47	0.10	
DI	ERSITY (J PRIME)	0.60	0.57	0.64	0.67	0.62	0.02	
HUH	BER OF TAXA	17	15	15	16	27		

07/14/80 DATE PAGE NO 14 T600AQUA 9/28/77

BAILEY GENERATING PLANT

ZOOPLANKTON DENSITY

STATION REPORT

LS	TAXA	
		10
0	CHIDARIA (TOTAL)	3.03
0	HYDROZOA	
1	HYDRA (LPIL)	3.03
0	NEMATODA (TOTAL)	124.85
1	NEMATORA (LPIL)	124.85
0	OLIGOCHAETA (YOTAL)	189.83
0	MAIDIDAE	
1	CHAETOGASTER (LPIL)	3.64
1	NAIDICAE (LPIL)	131.61
1	OLIGOCHAETA (LPIL)	54.59
0	ARACHNIDA (TOTAL)	4.16
0	PROSTIGMATA	
19		4.16
0	CLADOCERA (TOTAL)	867.04
0	BOSMINIDAE	
1	BOSMINIDAE (LPIL)	220.42
0	CHYDORIDAE	
1	ALONA RECTANGULA	3.64
1	ALONA COSTATA	3.03
1	ALONA (LPIL)	3.03
1	CHYDORUS (LPIL)	44.19
1	EURYCERCUS LAMELLATUS	30.50
0	DAPHNIDAE	
6	DAPHNIA (LPIL)	467.57
1	DAPHNIA (LPIL)	154.66
0	COPEPODA (TOTAL)	1727.23
0	CALANOIDA (TOTAL)	
1	DIAPTOMUS ASHLANDI	19.75
1	DIAPTOMUS PALLIDUS	4.16
1	DIAPTOMUS SICILIS	4.16
14	CALAHOIDA (LPIL)	59.78
0	CYCLOPOIDA (TOTAL)	
1	CYCLOPS BICUSPIDATUS THOMASI	33.70
1	CYCLOPS VERNALIS	36.39
1	EUCYCLOPS AGILIS	9.10
	EUCYCLOPS PRIOHOPHORUS	15.51
1	EUCYCLOPS SPERATUS	7.28
	CYCLOPOIDA (LPIL)	1491.30
0		
1	HARPACTICOIDA (LPIL)	14.38
14		31.71
1000	AMPHIPODA (TOTAL)	3.64
6	AMPHIPODA (LPIL)	3.64
	DIPTERA NEMATOCERA (TOTAL)	46.87
-		

-		REL
×	S.E.	ABX
3.03	-1.00	0.1
3.03	-1.00	0.1
124.85	-1.00	
124.85	-1.00	4.2
189.83	-1.00	
3.64	-1.00	0.1
131.61	-1.00	4.4
54.59	-1.00	1.8
4.16	-1.00	0.1
4.16	-1.60	
867.04	-1.00	29.2
220.42	-1.00	7.4
3.64	-1.00	0.1
3.03	-1.00	0.1
3.03	-1.00 -1.00	0.1
44.19	-1.00	1.5
30.50	-1.00	1.0
407.57	-1.00	
154.66	-1.00	5.2
1727.23	-1.00	58.2
19.75	-1.00	0.7
4.16	-1.00	0.1
4.16	-1.00	0.1
59.78	-1.00	2.0
33.70	-1.00	1.1
36.39	-1.00	1.2
9.10	-1.00	0.3
15.51	-1.00 -1.00	0.5
7.28	-1.00	0.2
1491.30	-1.00	50.3
14.38	-1.00	0.5
31.71	-1.00	1.1
3.64	-1.00	0.1
3.64	-1.00	0.1
46.87	-1.00	

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BAILEY GENERATING PLANT

ZOOPLANKTON DENSITY

STATION REPORT

		-		REL
LS TAXA		×	S.E.	ABX
	10			
O CERATOPOGONIDAE				
2 CERATOPOGONIDAE (LPIL)	3.03	3.03	-1.00	0.1
0 CHIROHOMIDAE				
2 CHIROHOMIDAE (LPIL)	43.84	43.84	-1.00	1.5
TOTAL	2966.66	2966.66	-1.00 1	00.0
DIVERS. (H PRIME)	2.47	2.47	-1.00	
DIVERSITY (J PRIME)	6.62	0.62	-1.00	
NUMBER OF TAXA	27	27		
ABOVE COMPUTED USING SAMPLE IDS				
101 102 103	104			

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BAILEY GENERATING PLANT

COOPLANKTON DENSITY

STATION REPORT

							REL
LS	TAXA				×	S.E.	AB%
		3	6	10		210,51	
0	CNIDARIA (TOTAL)	0.60	0.0	3.63	1.21	0.93	0.1
0	HYDROZOA					A 7.7.7	
19	HYDRA (LPIL)	0.60	0.0	0.0	0.20	0.20	0.0
1	HYDRA (LPIL)	0.0	0.0	3.03	1.01	1.01	0.1
0	NEMATODA (TOTAL)	104.12	64.35	124.85	97.77	17.75	6.9
1	NEMATODA (LPIL)	104.12	64.35	124.85	97.77	17.75	6.9
0	OLIGOCHAETA (TOTAL)	8.59	2.73	189.83	67.05	61.41	4.8
0	MAIDIDAE	****			*****		
1	CHAETOGASTER (LPIL)	0.68	0.43	3.64	1.58	1.03	0.1
1	NAIDIDAE (LPIL)	0.0	0.56	131.61	44.06	43.78	3.1
1	OLIGOCHAETA (LPIL)	7.92	1.74	54.59	21.41	16.68	1.5
	HIRUDINEA (TOTAL)	1.67	0.0	0.0	0.62	0.62	0.0
19		1.52	0.0	0.0	0.51	0.51	0.0
1	HIRUDINEA (LPIL)	0.35	0.0	9.0	0.12	0.12	0.0
0	APACHNIDA (TOTAL)	0.0	0.0	4.16	1.39	1.39	0.1
0	PROSTIGMATA		4.4	4			
19	HYDRACARINA (LPIL)	0.0	0.0	4.16	1.39	1.39	0.1
0	CLADOCERA (TOTAL)	31.46	14.97	867.04	304.49	281.31	
0	BOSMINIDAE	31.40	14.77	007.04	304.47	201.31	
1	BOSMINIDAE (LPIL)	7.59	5.70	220.42	77.90	71.26	5.5
<u> </u>	CHYPORIDAE	1.37	3.70	220.42	77.70	74.60	3.3
1	ALONA RECTANGULA	0.0	0.0	3.64	1.21	1.21	0.1
î	ALONA COSTATA	0.0	0.0	3.03	1.01	1.01	0.1
1	ALONA (LPIL)	0.0	0.0	3.03	1.01	1.01	0.1
•	CHYDORUS (LPIL)	0.79	0.25	44.19	15.08	14.56	1.1
•	EURYCERCUS LAMELLATUS	0.84	0.0	30.50	10.45	10.03	0.7
;	ALONELLA (LPIL)	0.0	0.23	0.0	0.08	0.08	0.0
•	DAPHNIDAE	0.0	0.23	0.0	0.00	0.00	0.0
6	DAPHNIA (LPIL)	18.89	3.50	407.57	143.32	132.20	10.2
1	DAPHNIA (LPIL)	2.64	5.28	154.66	54.19	50.24	3.8
0	MACROTHRICIDAE	6.04	3.20	154.00	34.17	30.24	3.0
6	ILYOCRYPTUS (LPIL)	0.70	0.0	0.0	0.23	0.23	0.0
0	COPEPODA (TOTAL)	443.99	588.42	1727.23	919.88	405.82	
0	CALANOIDA (TOTAL)	443.77	300.42	1/2/.23	717.00	405.02	09.2
	DIAPTOMUS ASHLANDI	108.66	159.04	19.75	95.82	40 70	
_14	DIAPTONUS ASHLANDI	0.0	18.73	0.0	6.24	40.72	6.8
						6.24	0.4
1	DIAPTOMUS PALLIDUS	0.0	0.0	4.16	1.39	1.39	0.1
1	DIAPTOMUS SICILIS	70.28	93.20	4.16	55.88	26.69	4.0
1	DIAPTOMUS MINUTUS	10.19	16.20	0.0	8.79	4.73	- CT. (7 CT)
1	DIAPTOMUS (LPIL)	0.23	0.0	0.0	0.08	0.08	0.0
1	LIMNOCALANUS MACRURUS	18.61	17.20	0.0	11.94	5.98	0.8
14	CALANOIDA (LPIL)	170.94	213.05	59.78	147.92	45.72	10.5
0	CYCLOPOIDA (TOTAL)	41.45	75.00	77 70	** **		
- 1	CYCLOPS BICUSPIDATUS THOMASI	21.09	35.90	33.70	30.23	4.61	2.1
100							

DATE

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BAILEY GENERATING PLANT

ZOOPLANKTON DENSITY

STATION REPORT

						-		REL
LS	TAXA					×	S.E.	AB%
		3	6	10				
1	CYCLOPS VERNALIS	0.55	0.0	36.39		12.31	12.04	0.9
1	EUCYCLOPS AGILIS	0.0	0.0	9.10		3.03	3.03	0.2
1	EUCYCLOPS PRIUNOPHORUS	0.0	0.0	15.51		5.17	5.17	0.4
1	EUCYCLOPS SPERATUS	0.0	0.0	7.28		2.43	2.43	0.2
14	CYCLOPOIDA (LPIL)	31.63	31.30	1491.30		518.08	486.61	36.7
1	CYCLOPOIDA (LPIL)	2.52	0.0	0.0		0.84	0.84	0.1
0	HARPACTICOIDA (TOTAL)							
1	HARPACTICOIDA (LPIL)	5.89	3.03	14.38		7.77	3.41	0.4
14	HARPACTICOIDA (LPIL)	3.41	0.78	31.71		11.97	9.90	0.8
0	AMPHIPODA (TOTAL)	1.53	0.0	3.64		1.72	1.05	100000
0	HAUSTORIIDAE						737	
1	PONTOPOREIA	0.25	0.0	0.0		0.08	0.08	0.0
1	PONTOPOREIA AFFINIS	0.45	0.0	0.0	,	0.15	0.15	
6	AMPHIPODA (LPIL)	0.63	0.0	3.64		1.49	1.10	
0	DIPTERA NEMATOCERA (TOTAL)	1.26	0.26	46.87		16.13	15.37	
0	CERATOPOGONIDAE			1,000				
2	CERATOPOGONIDAE (LPIL)	0.0	0.0	3.03		1.01	1.01	0.1
0	CHIRONOMIDAE			3.03		****	****	
2	CHIRONOMIDAE (LPIL)	1.26	0.26	43.84		15.12	14.36	1.1
TOT	AL	593.42	670.74	2966.66		1410.27	778.51	100.0
DIV	PERSITY (H PRIME)	2.62	2.56	2.47		2.55	0.05	
DIV	ERSITY (J PRIME)	0.72	0.74	0.62		0.69	0.04	
NUI	BER OF TAXA	24	17	27		35		
ABO	VE COMPUTED USING SAMPLE IDS							

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BAILEY GENERATING PLANT

ZOOPLANKTON DENSITY

REPLICATE REPORT

PC TC GC LOC 5 51 51 0 1 00

					DURAT	HOIT			TOW	SAMP	VOL			MT	ND		CUR	ENT	TE	MP							
51	0	DATE	TIME	D/N	UNITS		SD	ND	SP D	-			H T		DI	CL	-	DI		HAT	BT	TURBD	COND	DO	PH	SALN	P
	71	4/17/80	1511	0	0.0	0	4.6	4.6	0.0 0			0.5	29. 3	3			0.0	100	12.2	-	0	0.0	0	0.0	0.0	0.0	0
	72	4/17/80	1544	0	0.0	375	4.6		0.0 0	2000	- 770	0.5		3		_	0.0	/ 77	12.2		0		0	0.0		0.0	0
	73	4/17/80	1511	0	0.0		4.6	4.6				0.5		3	-	-	0.0			5.5	0	0.0	0	0.0	-	0.0	0
	74	4/17/80			0.0	0	4.6		0.0 0	195 35.15	-	0.5		3	100	100	0.0	0	12.2	5.5	0		0	0.0	2.2	0.0	0
									200					-	-					-		-		7.17		RE	L
LS		AXA																				×			S.E.	AB	Z.
									1			2				3			4								
0		IDARIA (100000	. 1					0	. 0		0	. 0			0.0)		3.	. 33		0.	83		0.83	5 0	.1
0		HYDROZOA											_														
19		HYDRA							0	-			.0			0.0				33			83		0.83		.1
0	200	MATODA (138				.46		77.7	21.5	7.770		80.			94.			22.46		100
1	7710.00	MATODA (138			_	.46		-	21.5			80.			94.			22.46		.6
0	70.00	IGOCHAET		TAL					3	.47		0	. 0			0.0)		0.	.0		0.	87		0.87	0	.1
0		MAIDIDAE																									
1		NAIDIDAE							-	.47		0				0.0			0.			-	87		0.87		.1
0	70700	ACHNIDA	4 4 4 4 4 4	F)					0	. 0		0	. 0			3.4	17		0.	0		0.	87		0.87	0	.1
0		PROSTIGM										-					-						87				
19		ADOCERA			ILI				0	.83		0	.0			0.0			0.	33		1900	31		3.29		.1
0	-	BOSHINID	A STATE OF STATE	L)					13	.03		U.	. 0			0.0	,		3.	. 33		4.	31		3.2	, 0	. >
,		BOSHINIO		DTI					3	4.7		•	.0			0.0			*	33		,	70		0.98		. 2
		DAPHNIDA		PILI					,	.41		0	. 0			0.0	,		3.	33		* .	,,,		0. 40		
1		DAPHNI		T1)					10	42			.0			0.0			0.	0		9	60		2.60		. 3
0	co	PEPODA (-					625	1000		946				11.3			590.			715.	0.00		80.28		-
0		CALANOID							063	.00		740			,,				370.				0.5		00.2	,	
1		DIAPTO							177	0.8		219	23		14	9.3	11		213.	33		189.	74		16.38	23	5.
i		DIAPTO							79			242				1.5			103.			136.			36.20		. 7
1		DIAPTO	and the same of th						24			3			-	5.1			0.			18.			10.4		. 2
i		LINNOC							27			26				8.6	10.00		16.			29.			6.70		. 7
14		CALANOID							260	A POST CONTRACT OF THE PARTY OF		403				31.2			213.			289.			40.6		.5
0		CYCLOPOI		-)										-								-				
1		CYCLOP	more a a	****		THOM	MASI		17	.36		11.	54		2	8.0	33		10.	.00		14.	93		2.5	5 1	.8
1		TROPOC	YCLOP	S PK	ASINUS	ME)	KICANA		0	.0		0	. 0			3.4	7		0.	0		0.	87		0.8	7 0	.1
14		CYCLOPOI	DA (L	PIL)			or management		38.	.19		38	46		3	31.2	25		33.	33		35.	31.		1.79	9 4	. 3
**																											
TOT		****							781			984				6.3			676.			817.			64.00	-	1
59,750.5		ITY (H P	NATIONAL CONTRACTOR						100	61		77.	.12			2.6	1.00		-	34		-	43		0.13	-	
100		ITY (J P	n							.75		0.	.71			0.7	-		0.	74			75		0.0		
NUM	DER	OF TAXA								11			8			1	U			9			14				

ABOVE COMPUTED USING SAMPLE IDS

71 72 73 74

DATE 07/14/80 PAGE NO 19 T600AQUA 9/28/77

BAILEY GENERATING PLANT

ZOOPLANKTON DENSITY

REPLICATE REPORT

PC TC GC LOC 5 51 51 0 1 00

				DURAT	-			TOM	SAME	ov vo	L		MI	CM		CUR	ENT	TE	MP							
510	DATE			UNITS	C	SD	MD	SP D	UNIT	S C	SECH	HT	SC	DI	CL	SP	DI	AIR	HAT	BT	TURBO	COND	DO	PH	SALN	1 P
81				0.0	0	9.1	9.1	0.0	7.	1 3	0.5	8 0	3	2	6	0.0	0	11.1	5.6		0.0	0	0.0	0.0	0.0	0 0
82	4/17/80	1515	0	0.0	0	9.1	9.1	0.0 0	7.	1 3	0.5	8 0	3	2	6	0.0	0	11.1	5.6	0	0.0	0	0.0	0.0	0.0	0 0
83	4/17/80	1515	0	0.0	0	9.1	9.1	0.0 0	7.	1 3	1.2	8 0	3	2	6	0.0	0	11.1	5.6	0	0.0	0	0.0	0.0	0.0	0 0
84	4/17/80	1515	0	0.0	0	9.1	9.1	0.0 0	7.	1 3	1.2	8 0	3	2	6	0.0	0	11.1	5.6		0.0	0	0.0	0.0	0.0	0 0
																					-				RE	EL
LS	TAXA																				×			S.E.	AS	3%
								1			2				3			4								
0 11	EMATODA (TOTAL)					38	.03		38	.03		2	5.3	35		19.	01		30.	11		4.7	5 3	3.8
1 N	EMATODA (LPIL)						38	.03		38	.03		2	5.3	35		19.	01		30.	11		4.7	5 3	3.8
0 C	LADOCERA	(TOTA	L)					12	.68		16	. 90		1	0.6	87		6.	34		11.	70		2.1	9 1	1.5
0	BOSMINID	AE																								
1	BOSMINID	AE IL	PILI					0	.0		16	. 90			3.6	62		3.	17		5.	92		3.75	5 0	8.6
0	DAPHNIDA	E																								
1	DAPHNI	A PUL	EX					4	.23		0	. 0			3.6	52		0.	0		1.	96		1.14	4 0	0.2
6	DAPHNI	A (LP	ILI						.45		0	. 0			3.6	52		3.	17		3.	81		1.74	4 0	0.5
0 0	OPEPODA (TOTAL)					861	.97		802	.82		73	8.8	33		576.	76		745.	09		61.4	9 94	4.7
0	CALANOID	A (TO	TALI																							
1	DIAPTO	MUS A	SHLAN	IDI				211	.27		223	. 94		17	0.2	22		123.	59		182.	26		22.6	7 23	5.2
1	DIAPTO	HUS S	ICIL	IS				198	.59		207	.04		16	2.9	98		180.	63		187.	31		9.80	0 23	3.8
1	DIAPTO	MUS H	INUT	JS				0	.0		0	. 0			0.0)		3.	17		0.	79		0.7	9 0	0.1
1	LIMNOC	ALAHU	S MAG	CRURUS				16	.90		25	. 35		1	4.4	19		22.	18		19.	73		2.4	7 2	2.5
14	CALANOID	A ILP	IL)					384	.51		270	.42		35	4.9	93		202.	82		303.	17		41.2	7 38	8.5
0	CYCLOPOI	DA (T	OTAL)																						
1	CYCLOP	S BIC	USPI	DATUS	THOM	IASI		8	.45		29	.58			3.6	52		12.	68		13.	58		5.6	4 1	1.7
14	CYCLOPOI	DA (L	PIL)					42	.25		46	.48		3	2.6	0		31.	69		38.	25		3.6	4 4	4.9
TOTAL								912	.68		857	. 75		77	5.0	05		602.	11		786.	70		67.75	8 100	3.0
DIVER	SITY (H P	RIME)						2	.16		2	. 38			2.0	8		2.	31		2.	23		0.0	7	
DIVER	SITY (J P	RIME)						0	.68		0	.79			0.6	52		. 0.	70		0.	70		0.04	4	
NUMBER	R OF TAXA								9			8			1	0			10			11				

ABOVE COMPUTED USING SAMPLE IDS 81

82 83

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BAILEY GENERATING PLANT

ZOOPLANKTON DENSITY

REPLICATE REPORT

PC TC GC LOC 5 51 51 0 1 00

2 21 21 0 1 00	The second secon			AND DESCRIPTION OF THE PARTY OF			
DURATION	TOW SAMP V		WIND CURENT	TEMP			
SID DATE TIME DIN UNITS C SD WD		C SECH H T	SC DI CL SP DI		T TURBO COND		ALH P
91 4/17/80 1433 0 0.0 0 15.2 15.		3 1.5 8 0	3 2 6 0.0 0	8.9 5.5	0.0 0	707 202	
92 4/17/80 1433 0 0.0 0 15.2 15.		3 1.5 8 0	3 2 6 0.0 0	8.9 5.5	0 0.0 0		0.00
93 4/17/80 1433 0 0.0 0 15.2 15.		3 1.5 8 0	3 2 6 0.0 0	8.9 5.5	0 0.0 0		0.00
94 4/17/80 1433 0 0.0 0 15.2 15.	2 0.0 0 11.9	3 1.5 8 0	3 2 6 0.0 0	8.9 5.5	0 0.0 0	70 T T T T T T T T T T T T T T T T T T T	0.0 0 REL
LS TAXA					×		AB%
	1	2	3	4			
0 NEMATODA (TOTAL)	10.50	12.61	2.80	13.35	9.81	2.41	1.3
1 NEMATODA (LPIL)	10.50	12.61	2.80	13.35	9.81	2.41	1.3
O DLIGOCHAETA (TOTAL)	2.63	2.52	22.41	22.24	12.45	5.70	1.6
0 MAIDIDAE							
1 NAIDIDAE (LPIL)	2.63	2.52	22.41	22.24	12.45	5.70	1.6
O CLADOCERA (TOTAL)	5.25	2.52	8.40	0.0	4.04	1.81	0.5
0 BOSMINIDAE					4 1		2.3
1 BOSMINIDAE (LPIL) 0 DAPHNIDAE	0.0	2.52	2.80	0.0	1.33	0.77	0.2
1 DAPHNIA (LPIL)	5.25	0.0	5.60	0.0	2.71	1.57	0.4
O COPEPODA (TOTAL)	651.26	617.65	778.71	898.66	736.57	64.21	96.4
O CALANOIDA (TOTAL)							
1 DIAPTONUS OREGONENSIS	2.63	0.0	0.0	4.45	1.77	1.09	0.2
1 DIAPTOMUS ASHLANDI	278.36	199.16	210.08	262.48	237.52	19.40	31.1
1 DIAPTOMUS SICILIS	63.03	115.97	112.04	66.73	89.44	14.22	11.7
1 DIAPTOMUS MINUTUS	23.63	12.61	22.41	17.80	19.11	2.51	2.5
1 LIHNOCALANUS MACRURUS	23.63	7.56	19.61	44.49	23.82	7.69	3.1
14 CALANOIDA (LPIL)	215.34	219.33	263.31	298.07	249.01	19.64	32.6
O CYCLOPOIDA (TOTAL)							
1 CYCLOPS BICUSPIDATUS THOMASI	39.39	20.17	61.62	48.94	42.53	8.73	5.6
1 TROPOCYCLOPS PRASINUS MEXICANA	0.0	0.0	5.60	0.0	1.40	1.40	0.2
14 CYCLOPOIDA (LPIL)	5.25	35.29	11.20	75.63	31.85	15.97	4.2
O HARPACTICOIDA (TOTAL)							
1 HARPACTICOIDA (LPIL)	0.0	0.0	72.83	35.59	27.10	17.40	3.5
14 HARPACTICOIDA (LPIL)	0.0	7.56	0.0	44.49	13.01	10.64	1.7
0 AMPHIPODA (TOTAL)	0.0	0.0	0.0	4.45	1.11	1.11	0.1
6 AMPHIPODA (LPIL)	0.0	0.0	0.0	4.45	1.11	1.11	0.1
TOTAL	669.64	635.29	812.32	938.70	763.99	69.72	100.0
DIVERSITY (H PRIME)	2.22	2.33	2.68	2.73	2.49	0.13	
DIVERSITY (J PRIME)	0.64	0.67	0.72	0.76	0.70	0.03	
NUMBER OF TAXA	11	11	13	12	15		

ABOVE COMPUTED USING SAMPLE IDS

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BAILEY GENERATING PLANT

ZOOPLANKTON DENSITY

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12 11						~		REL
LS	TAXA					×	S.E.	ABX
		7	8	9				
0	CNIDARIA (TOTAL)	0.83	0.0	0.0		0.28	0.28	0.0
0	HYDROZOA							
19	HYDRA (LPIL)	0.83	0.0	0.0		0.28	0.28	0.0
0	NEMATODA (TOTAL)	94.72	30.11	9.81		44.88	25.60	5.7
1	NEMATODA (LPIL)	94.72	30.11	9.81		44.88	25.60	5.7
0	OLIGOCHAETA (TOTAL)	0.87	0.0	12.45		4.44	4.01	0.6
0	HAIDIDAE							
1	NAIDIDAE (LPIL)	0.87	0.0	12.45		4.44	4.01	0.6
0	ARACHNIDA (TOTAL)	0.87	0.0	0.0		0.29	0.29	0.0
0	PROSTIGNATA							
19	HYDRACARINA (LPIL)	0.87	0.0	J.0		0.29	0.29	0.0
0	CLADOCERA (TOTAL)	4.31	11.70	4.04		6.68	2.51	0.8
0	BOSMINIDAE							
1	BOSMINIDAE (LPIL)	1.70	5.92	2.33		2.98	1.47	0.4
0	DAPHNIDAE							
1	DAPHNIA PULEX	0.0	1.96	0.0		0.65	0.65	0.1
6	DAPHNIA (LPIL)	0.0	3.81	0.0		1.27	1.27	0.2
1	DAPHNIA (LPIL)	2.60	0.0	2.71		1.77	0.89	0.2
0	COPEPODA (TOTAL)	715.63	745.09	736.57		732.43	8.75	92.8
0	CALANOIDA (TGTAL)							
1	DIAPTONUS OREGONENSIS	0.0	0.0	1.77		0.59	0.59	0.1
1	DIAPTOMUS ASHLANDI	189.74	182.26	237.52		203.17	17.31	25.7
1	DIAPTOMUS SICILIS	136.76	187.31	89.44		137.84	28.26	17.5
1	DIAPTOMUS MINUTUS	18.32	0.79	19.11		12.74	5.98	1.6
1	LIMNOCALANUS MACRURUS	29.99	19.73	23.82		24.52	2.98	3.1
14	CALANOIDA (LPIL)	289.71	303.17	249.01		280.63	16.28	35.6
0	CYCLOPOIDA (TOTAL)							
1	CYCLOPS BICUSPIDATUS THOMASI	14.93	13.58	42.53		23.68	9.43	3.0
1	TROPOCYCLOPS PRASINUS MEXICANA	0.87	0.0	1.40		0.76	0.41	0.1
14	CYCLOPOIDA (LPIL)	35.31	38.25	31.85		35.14	1.85	4.5
0	HARPACTICOIDA (TOTAL)	700 - 700						
1	HARPACTICOIDA (LPIL)	0.0	0.0	27.10		9.03	9.03	1.1
14	HARPACTICCIDA (LPIL)	0.0	0.0	13.01		4.34	4.34	0.5
0	AMPHIPODA (TOTAL)	0.0	0.0	1.11		0.37	0.37	0.0
6	AMPHIPODA (LPIL)	0.0	0.0	1.11		0.37	0.37	0.0
. 7		***	***					
TOT	TAL	817.23	786.90	763.99		789.37	15.42	100.0
	PERSITY (H PRIME)	2.43	2.23	2.49		2.38	0.08	200.0
	VERSITY (J PRIME)	0.75	0.70	0.70		0.72	0.02	
100000000000000000000000000000000000000	IBER OF TAXA	14	11	15		18	0.00	
		**	**		,			

ABOVE COMPUTED USING SAMPLE IDS

71 72 73 74 61 62 63 64 91 92 93 94

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BAILEY GENERATING PLANT

ZOOPLAPKTOH DENSITY

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NORTHERN INDIANA PUBLIC 5 'TO COMPANY (49720)

BAILEY GENERATING PLANT

ZOOPLANKTON DENSITY

STATION REPORT

LS	TAXA				
				9	
0	CHIDARIA (TOTAL)			0.28	
0	HYDROZOA				
19	HYDRA (LPIL)			0.28	
100	HEMATODA (TOTAL)			44.88	
1	NEMATODA (LPIL)			44.88	
0	OLIGOCHAETA (TOTAL)			6.44	
0	NAIDIDAE				
1	NAIDIDAE (LPIL)			4.44	
0	ARACHNIDA (TOTAL)			0.29	
0	FROSTIGMATA				
19	HYDRACARINA (LP	IL)		0.29	
0	CLADOCERA (TOTAL)			6.68	
0	BOSMINIDAE			5000	
1	BOSMINIDAE (LPIL)			2.98	
0	DAPHNIDAE				
1	DAPHNIA PULEX			0.65	
. 6	DAPHNIA (LPIL)			1.27	
1	DAPHNIA (LPIL)			1.77	
777	COPEPODA (TOTAL)	*		732.43	
0	CALANOIDA (TOTAL)			736.43	
1	DIAPTOMUS OREGO			0.59	
1	DIAPTONUS ASHLAI			203.17	
1	DIAPTOMUS SICIL	1000			
77.		T-170. 5		137.84	
1	DIAPTOMUS MINUTE			12.74	
1	LINHOCALANUS MAI	LRURUS		24.52	
14	CALANGIDA (LPIL)			280.63	
0	CYCLOPOIDA (TOTAL	White the same of		** **	
1	CYCLOPS BICUSPIO			23.68	
1	TROPOCYCLOPS PR	The second second	CICANA	0.75	
14	CYCLOPOIDA (LPIL)			35.14	
0	HARPACTICOIDA (TO	A			
1	HARPACTICOIDA (LP	55.5		9.03	
14	HARPACTICOIDA (LP	IL)		4.34	
0	AMPHIPODA (TOTAL)			0.37	
6	AMPHIPODA (LPIL)			0.37	
тот	AL			789.37	
	ERSITY (H PRIME)			2.38	
	ERSITY (J PRIME)			0.72	
	BER OF TAXA			18	
ABO	VE COMPUTED USING SAN	MPLE IDS			
	71	72	73	74	
	81	82	83	84	
-	91	92	93	94	
	71	76	73	74	

0.28	-1.00	0.0
0.28	-1.60	
44.88	-1.00	5.7
44.88	-1.00	
4.44	-1.00	0.6
4.44		0.6
0.29	-1.00	0.0
0.29	-1.00	
6.68	-1.00	0.8
2.98	-1.00	0.4
0.65	-1.00	0.1
1.27	-1.00	0.2
1.77	-1.00	
732.43	-1.00	92.8
0.59		0.1
203.17		25.7
137.84		17.5
12.74	-1.00	1.6
24.52		
280.63	-1.00	35.6
23.68	-1.00	
0.76	-1.00	
35.14	-1.00	4.5
9.03	-1.00	1.1
4.34	-1.00	
0.37	-1.00	
0.37	-1.00	0.0
789.37		100.0
2.38	-1.00	
0.72	-1.00	
18		

S.E. ABX

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BAILEY GENERATING PLANT

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BAILEY GENERATING PLANT

ZOOPLANKTON DENSITY

REPLICATE REPORT

PC TC GC LOC 5 51 51 1 1 00

				DURAT	TION			TOM	SAMP	VOL			HI	ND		CUR	ENT		TEMP							
310	DATE	TIME	D/N	UNITS	S C	SD	HD	SP D	UNITS	C 5	SECH	N T			CL				KAT	BT	TURBO	COND	DO	PH	SALN	P
171	4/20/80	1025	0	0.0	0	1.0	1.0	0.0 0	0.0	3	1.0	8 0	N	1	5	0.0	0	17.	8 16.0	0	0.0	0	8.9	0.0	0.0	0
172	4/20/80	1025	0	0.0	0	1.0	1.0	0.0 0	0.0	3	1.0	8 0	4	1	5	0.0	0	17.	8 16.0	0	0.0	0	8.9	0.0	0.0	0
173	4/20/80	1025	0	0.0	0	1.0	1.0	0.0 0	0.0	3	1.0	8 0	4	1	5	0.0	0	17.	8 16.0	0	9.0	0	8.9	0.0	0.0	0
179	4/20/80	1025	0	0.0	0	1.0	1.0	0.0 0	0.0	3	1.0	8 0	4	1	5	0.0	0	17.	8 16.0	0	0.0	0	8.9	0.0	0.0	0
																					-				REL	
LS	TAXA																				X			S.E.	AB%	
								1			2				3			1.0	4							
0 N	EMATODA (TOTAL)					0.	0	1	666.	67		8	33.	33		41	6.67		729.	.17	3	355.80	0.	8
1 N	EMATODA (LPIL)						0.	0	1	666.	67		8	33.	33		41	6.67		729.	.17		355.80	0.	8
0 C	LADOCERA	(TOTA	LI					104166.	56	25	333.	32		862	49.8	87	1	10208	3.25		79458.	.25	184	79.77	7 89.	8
0	BOSMINID	AE																								
1	BOSMINID	AE IL	PIL)					833.	33		333.	33		8	33.	33		1	0.0		500.	.00	2	204.12	2 0.	6
0	CHYDORID	AE																								
1	ALONA	RECTA	HGUL	A				416.	67		166.	67		4	16.6	67		-	0.0		250.	.00	1	102.06	0.	3
1	ALONA	AFFIN	IS					416.	67		0.	0			0.0	0			0.0		104.	.17	1	104.17	7 0.	1
1	ALONA	COSTA	TA					0.	0		0.	0		4	16.6	67		1	0.0		104.	.17	1	104.17	7 0.	1
1	CHYDOR							102499.	94	24	499.	99		837	49.	94		10208	3.25		78208.		184	128.66	88.	4
1	PLEURO	XUS D	ENTI	CULATE	JS			0.	0		0.	0		8	33.	33			0.0		208.	. 33	2	208.33	3 0.	2
0	DAPHNIDA	-																								
6	DAPHNI	A (LP	IL)					0.	0		333.	33			0.0	0		1	0.0		83.	. 33		83.33	3 0.	1
	STRACODA							0.	0	2	.000.	00			0.0	0		-1	0.0		250.	.00	- 2	250.00	0.	3
	STRACODA		100					0.	0	1	000.	00			0.0				0.0		250.	.00	2	250.00	0 0.	3
0 C	OPEPODA (11249.	99	4	333.	33		708	83.3	33		874	9.99		7854.	.16	14	452.72	2 6.	9
0	CALAHOID																									
11.00000	CALANOID							0.	0		166.	67			0.0	0		1	0.0		41.	.67		41.67	7 0.	0
0	CYCLOPOI	TOTAL PARTY																								
1	CYCLOP	S VER	NALI:	5				416.	67		0.	0		8	33.	33		83	3.33		520.	.83	1	199.46	6 0.	6
14	CYCLOPOI	70 712 1 75						10416.	66	4	166.	66		62:	50.0	00		750	0.00		7083.	. 33	13	306.59	9 8.	0
0	HARPACTI		-																							
1	HARPACTI			-				416.			0.				0.0				6.67		208.		3	120.28	8 0.	2
0 D	IPTERA NE		ERA	TOTAL	. 1			416	67		333.	33			0.0	0		1	0.0		187.	.50	1	109.58	8 0.	2
0	CHIROHOM	77.10																								
2	CHIRONOM	IDAE	(LPI	L)				416.	67		333.	33			0.0	0		-	0.0		187.	.50	1	109.58	8 0.	2
TOTAL								115833.	06	32	666.			9416			1	11124	9.87		88479.	.00	191	79.25	5 100.	0
	SITY (H P								67			34			0.7				0.49		700	.80		0.19		
Lancas Contractor	SITY (J P							0.	22		0.	42			0.2	24		1	0.21		0.	.27		0.05	5	
NUMBE	R OF TAXA								8			9				8			5			14				

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ZOOPLANKTON DENSITY

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PC TC GC LOC 5 51 51 1 1 00

			Di	URAT	TON			TON		MP V	101				ND		CURE	CACT		EMP							
ST	D DATE TIM	F D			2000	SD	WD	SP D	-		C SE	CH	шт				-		-	WAT	BT	TURBD	COND	DO	PH	SALN	
	81 4/20/80 102			0.0		1.0	-	0.0 0			3 1	-	750				0.0			15.5	0	The state of the s	CONE	7,000	7.25		10 L
	82 4/20/80 102			0.0		1.0		0.0 0			3 1		-		i	_		-	17.8		0					-	
	83 4/20/80 102			0.0	200	1.0	1.0	0.0 0		2000	3 1		100				0.0		17.8	-	0	0.0	ì			100	-
	84 4/20/80 102		5	0.0	77	1.0	1000000000	0.0 0		7. (2.75)	3 1				1		0.0	970		15.5	0	-			25.00	100000000000000000000000000000000000000	770
	04 4/20/00 102	9 0		0.0	•	1.0	1.0	0.0 0		0.0	, ,	. 0	0 0	*		2	0.0		17.0	13.3		0.0		7.1	0.0	REL	770
LS	TAXA																					×			S.E.		
								1				2				3			4								
	NEMATODA (TOTA							500	.00		6	66.	67		33	3.3	3		0	. 0		375.	00		142.3	2 0.	8
1	NEMATODA (LPIL	.)							.00		6	66.	67		33	3.3	3		0	.0		375.	00		142.3	2 0.	8
0	ARACHNIDA (TOT	ALI						0	0.0		1	66.	67			0.0			0	. 0		41.	67		41.6	7 0.	1
0	PROSTIGMATA																										
1	HYDRACARIN		OTA	L)				0	1.0		1	66.	67			0.0			0	. 0		41.	67		41.6	7 0.	1
0	CLADOCERA (TOT	ALI						31333	. 32		376	66.	65		3899	9.9	8		42999	.98		37749.	98	2	420.50	0 84.	0
0	BOSMINIDAE																					200					
1	BOSMINIDAE (LPIL	. 3					166	.67		6	66.	67		66	6.6	7		166	.67		416.	67		144.3	4 0.	9
0	CHYDORIDAE ALONA RECT	ANC						***														105			70 7		
1		A						333				0.				6.6			0	-		125.			79.7	T 1000	
	ALONA INTE		1000000					0			***	0.			-	3.3				.0		83.	-		83.3		-
	PLEUROXUS							30333	OTTO MICHELLA		363	00.	955 970		3783	0.0	-		42666			36791.	-		541.6		-
	PLEUROXUS	-		-	3			166				0.				-			-	.0		41.	-		107.5		-
7	DAPHNIDAE	PRUC	URVI	03				100	.67			u.	U			0.0			0	. 0		41.	01		41.6	7 0.	
,	DAPHNIA IL	DTI						0				66.	47			0.0			0			41.	4.7		41 4		
0	COPEPODA (TOTA		Ε.					5499				33.			699	~ ~ ~			5666	0.00		6749.			771.3		0.50
0	CALANDIDA (T							3477	. 77		00	33.	36		077	7.7	,		3000	.00		0.47.	77		//1.3	0 15.	U
1	DIAPTOMUS			g.				333	**			66.	67		160		7		0			291.	67		142.3	2 0.	4
14	CALANOIDA (L			3				1500			-	00.			100				500			1125.	-		239.3		
0	CYCLOPOIDA (1300	.00		15	ou.	00		100	0.0	U		500	.00		iles.	00		637.30	ο ε.	3
ĭ	CYCLOPS VE							333	**		1	66.	67			0 0			0	0		125.	0.0		79.7	9 0.	
14	CYCLOPOIDA (3166				33.	-		5666				5166			4958.				9 11.	
0	HARPACTICOID			1.1				3100	.01		30	33.			500	0.0			3100	.00		4730.	33		013.7	,	
i	HARPACTICOID	220	200	- T				0	. 0		6	66.	67		16	6.6	7		0	. 0		208.	**		157.7	5 0.	5
14	HARPACTICOID			7					.67			0.			-	0.0				. 0		41.			41.6		100
11 70 70	EPHEMEROPTERA	100	25/48/95					7500000	.67			0.				0.0			-	.0		41.			41.6		-
_ 0	CAENIDAE												*									***			****		-
13	CAENIDAE (LP	IL)						166	.67			0.	0			0.0			0	. 0		41.	67		41.6	7 0.	1
TOTA	AL							37499	. 97		473	33.	30		4633	3.3	0		48666	.65		44958.	30	2	31.6	3 100.	0
	ERSITY (H PRIME)							.20			1.			200	1.0				.63		1.			0.1		
DIV	ERSITY (J PRIME)							. 33			0.				0.3	-		-	.27		0.			0.0		
100	BER OF TAXA								12			1775 (20)	11				-			5			15		-	700	

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BAILEY GENERATING PLANT

ZOOPLANKTON DENSITY

REPLICATE REPORT

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BAILEY GENERATING PLANT

ZOOPLANKTON DENSITY

STATION REPORT

							REL
LS	TAXA				X	S.E.	AB%
		17	18				
0	NEMATODA (TOTAL)	729.17	375.00		552.08	177.08	0.8
1	NEMATODA (LPIL)	729.17	375.00		552.08	177.08	0.8
0	ARACHNIDA (TOTAL)	0.0	41.67		20.83	20.83	0.0
0	PROSTIGMATA						
1	HYDRACARINA (TOTAL)	0.0	41.67		20.83	20.83	
0	BOSMINIDAE	79458.25	37749.98		58604.11	20854.13	87.6
1 0	BOSMINIDAE (LPIL) CHYDORIDAE	500.00	416.67		458.33	41.67	0.7
1	ALONA RECTANGULA	250.00	125.00		187.50	62.50	0.3
1	ALONA AFFINIS	104.17	0.0		52.08	52.08	0.1
1	ALONA COSTATA	104.17	0.0		52.08	52.08	0.1
1	ALONA INTERMEDIA	0.0	83.33		41.67	41.67	0.1
1	CHYDORUS (LPIL)	78208.25	36791.66		57499.95	20708.30	
1	PLEUROXUS DENTICULATUS	208.33	250.00		229.17	20.83	
1	PLEUROXUS PROCURVUS	0.0	41.67		20.83	20.83	-
. 0	DAPHNIDAE				Trime		
6	DAPHNIA (LPIL)	63.33	0.0		41.67	41.67	0.1
1	DAPHNIA (LPIL)	0.0	41.67		20.83	20.83	
0	OSTRACODA (TOTAL)	250.00	0.0		125.00	125.00	
19		250.00	0.0		125.00	125.00	0.2
0	COPEPODA (TOTAL)	7854.16	6749.99		7302.07	552.08	10.9
0	CALANOIDA (TOTAL)						
1	DIAPTOMUS PALLIDUS	0.0	291.67		145.83	145.83	0.2
14	CALANOIDA (LPIL)	41.67	1125.00		583.33	541.67	0.9
0	CYCLOPOIDA (TOTAL)						
1	CYCLOPS VERNALIS	520.83	125 00		322.92	197.92	0.5
14	CYCLOPOIDA (LPIL)	/083.33	4958.33		6020.83	1062.50	9.0
0	HARPACTICOIDA (TOTAL)						
1	HARPACTICOIDA (LPIL)	208.33	208.33		208.33	0.00	0.3
14	HARPACTICOIDA (LPIL)	0.0	41.67		20.83	20.83	0.0
0	EPHEMEROPTERA (TOTAL)	0.0	41.67		20.83	20.83	0.0
0	CAENIDAE						
13	CAENIDAE (LPIL)	0.0	41.67		20.83	20.83	0.0
0	DIPTERA NEMATOCERA (TOTAL)	187.50	0.0		93.75	93.75	0.1
_ 0	CHIROHOMIDAE						
5	CHIRONOMIDAE (LPIL)	187.50	0.0		93.75	93.75	0.1
TO	TAL	88479.00	44958.30		66718.62	21760.35	
DI	VERSITY (H PRIME)	0.80	1.04		0.92	0.12	
	VERSITY (J PRIME)	0.27	0.33		0.30	0.03	
HU	MBER OF TAXA	14	15		19		
			DATE	07/14/80			
-			DACE				

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BATLEY GENERATING PLANT

ZOOPLANKTON DENSITY

STATION REPORT

LS	TAXA		
H7.		18	
0	NEMATODA (TOTAL)	552.08	
1	NEMATODA (LPIL)	552.08	
0	ARACHNIDA (TOTAL)	20.83	
0	PROSTIGMATA		
1	HYDRACARINA (TOTAL)	20.83	
0	CLADOCERA (TOTAL)	58604.11	
0	BOSMINIDAE		
1	BOSMINIDAE (LPIL)	458.33	
0	CHYDORIDAE		
1	ALONA RECTANGULA	187.50	
1	ALONA AFFINIS	52.08	
1	ALONA COSTATA	52.08	
1	ALONA INTERMEDIA	41.67	
1	CHYDORUS (LPIL)	57499.95	
1	PLEUROXUS DENTICULATUS	229.17	
1	PLEUROXUS PROCURVUS	20.83	
0	DAPHNIDAE		
6	DAPHNIA (LPIL)	41.67	
1	DAPHNIA (LPIL)	20.83	
0	OSTRACODA (TOTAL)	125.00	
19	OSTRACODA (LPIL)	125.00 '	
0	COPEPODA (TOYAL)	7302.07	
0	CALANOIDA (TOTAL)		
1	DIAPTOMUS PALLIDUS	145.83	
14	CALANOIDA (LPIL)	583.33	
0	CYCLOPOIDA (TOTAL)		
1	CYCLOPS VERNALIS	322.92	
14	CYCLOPOIDA (LPIL)	6020.83	
0	CYCLOPOIDA (LPIL) HARPACTICOIDA (TOTAL) HARPACTICOIDA (LPIL)		
1	HARPACTICOIDA (LPIL)	208.33	
14	HARPACTICOIDA (LPIL)	20.83	
0	EPHEMEROPTERA (TOTAL)	20.83	
0			
13	CAENIDAE (LPIL) DIPTERA NEMATOCERA (TOTAL)	20.83	
0		93.75	
_ 0	CHIRONOMIDAE		
5	CHIRONOMIDAE (LPIL)	93.75	
TOT	41	66718.62	
	ERSITY (H PRIME)	0.92	
-	ERSITY (J PRIME)	0.30	
100000000000000000000000000000000000000	BER OF TAXA	19	
1401	DER OF TRAM	The state of the s	

× 1000		REL
X	S.E.	ABZ
552.08	-1.00	
552.08	-1.00	
20.83	-1.00	0.0
20.83	-1.00	
58604.11	-1.00	87.8
458.33	-1.00	0.7
187.50	-1.00	0.3
52.08	-1.00	0.1
52.08	-1.00	0.1
41.67	-1.00	0.1
57499.95	-1.00	86.2
229.17	-1.00	
20.83	-1.00	0.0
41.67	-1.00	
20.83	-1.00	
125.00	-1.00	
125.00	-1.00	
7302.07	-1.00	10.9
145.83	-1.00	
583.33	-1.00	0.9
322.92	-1.00	0.5
6020.83	-1.00	9.0
208.33	-1.00	0.3
20.83	-1.00	0.0
20.83	-1.00	0.0
20.63	-1.00	0.0
93.75	-1.00	0.1
93.75	-1.00	0.1
66718.62	-1.00	100.0
0.92	-1.00	
0.30	-1.00	
19		

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BAILEY GENERATING PLANT

ZOOPLANKTON DENSITY

REPLICATE REPORT

PC TC GC LOC 5 51 51 1 2 00

				DURAT	TION			TOW		SAMP	VOI	L		WI	ND		CUR	ENT		TEMP								
51	D DATE	TIME	D/N	UNITS	3 C	SD	MD	SP I		UNITS			HT			CL				WAT	BT	TURBI	0 0	COND	DO	PH	SALN	P
1	91 4/20/80	1055	0	0.6	9	1.0	1.0	0.0			_	1.0			1		0.0	VTR0.25		8 19.5		1.5		0	8.5	0.0	0.0	
1	92 4/20/80	1055	0	0.0	0	1.0	1.0	0.0	0			1.0	-		1	-	0.0	1980		8 19.5				0	8.5		0.0	
1	93 4/20/80	1055	0	0.0	0	1.0	1.0	0.0	0	0.0	3	1.0	8 0	4	1	5	0.0	0	17.	8 19.5	5 0			0	100000000000000000000000000000000000000		0.0	0
1	94 4/20/80	1055	0	0.0	0	1.0	1.0	0.0	0			1.0		4	1	5	0.0	0		3 19.5			7.5	0		0.0	0.0	2 3
																											RE	L
L3	TAXA)	X			S.E.	AB	3%
								5 3	1			2				3				4								
0	NEMATODA (TOTAL	7					1342	7.2	4	1	17222	.21			0.0	0		194	4.44		81.48	8.47		42	33.65	5 6	0.0
1	NEMATODA (LPIL)						1342	7.2	4	1	17222	.21			0.1	0		194	4.44		8148	8.47		42	33.65	5 6	0.0
0	OLIGOCHAET	A (TO	TAL)						0.0		4	8333	.30			0.0	0		111	1.11		1236	1.10		119	93.5	9 9	1.6
0	HAIDIDAE																											
1	CHAETO	SASTE	R (LI	PILI					0.0			2777	.78			0.0	0			0.0		694	4.44		6	94.44	. 0	1.5
1	HAIDIDAE	(LPI	LI						0.0			0	.0			0.0	0		111	1.11		27	7.78		2	77.78	8 0	2.0
1	OLIGOCHAETA	A (LP	ILI					1	0.0		4	5555	.52			0.0	0			0.0		11388	3.88		113	88.88	8 8	3.4
0	ARACHNIDA	TOTA	L)					191	8.1	8		0	. 0			0.0	0			0.0		479	9.54		4	79.54	4 0	1.4
0	PROSTIGM																											
1	HYCRACI		D2 10 000	TAL)				191				0	. 0			0.0	0			0.0		479	9.54		4	79.54	+ 0	1.4
G	CLADOCERA		LI					14386	3.2	5	1	6111	.10		616	66.6	66		2416	6.15		47576	5.91		323	105.84	4 35	5.2
0	BOSMINIDA	27																										
1	BOSMINIDA	200 200	PIL)					383	6 . 3!	5		0	.0		16	66.6	67		27	7.78		1070	0.20		9	23.82	2 0	8.0
0	CHYDORIDA	AE																										
1	ALONA								0.0				.0			0.0			27	7.78		6	9.44			69.44	4 0	1.1
1	ALONA F	200000000000000000000000000000000000000	Campage and	A				383					. 0		50	00.0				0.0		1084				24.96		8.0
1	ALONA (53 W.L.					191	TO CHEST	70			. 0			0.0	200			0.0			9.54			79.54	T	1.4
1	CHYDORU	15 (L	PIL)					13427	2.3	7	1	5555	.54		550	00.0	00		2361	1.09		44734	4.75	i	300	174.89	9 33	5.1
0	SIDIDAE																											
6	DIAPHAN		Action to The	PILI					0.0			555	A 1700 CT			0.0	77.1			0.0			8.89		1	38.89		1.1
0	OSTRACODA		-					383				3333				0.0	20.			0.00			7.42			351.6		8.1
19	OSTRACODA (The state of the s	1.50						0.0			3333				0.0				0.0			3.33			33.3		0.6
1	OSTRACODA I							3836		5			. 0			0.0				0.00		1584	4.09			954.39		1.2
0	COPEFODA (1							18798	1.3	1	- 1	9999	. 98		816	66.6	56		3722	2.19		6334	2.54		419	72.26	5 46	.9
1 0	CALANGIDA																											
1 14	CALANOIDA							2301	8.1	3		1111	.11		83	33.3	33		388	8.89		7213	2.86		53	313.39	9 5	5.3
0	CYCLOFOID																											
_ 1	CYCLOPS	The state of the s	200000		THOM	IASI		191				-	. 0			0.0				1.11			7.32			67.25	5 5	0.6
1	CYCLOPS			2					0.0			555				0.0	-			0.0			8.89			138.8		1.0
1 1	EUCYCLO								0.0			555				0.0				0.0			8.89		1	138.89		1.0
1	MESOCYC			CARTI					0.0				.0		- 77	66.6				0.0			1.67			41.6		0.0
14	CYCLOPOID							15537	2.3	7	1	1666	.66		716	66.6	56		2916	6.64		5084	3.08		351	164.68	37	7.6
0	HARPACTIO			William St.																					200			
1 1	HARPACTIO		27 312 5					767	2000			1111				0.0				5.55		-	9.84			93.0		2.2
14	HARPACTIC							Carrier S	0.0			5000				0.0				0.0			0.00		1000	50.00		1.9
- 0	DIPTERA NEN	TATOC	ERA !	TOTAL	. 1			1918	5.18	5		1111	.11			0.0	3		27	7.78		826	5.77	1	4	33.68	8 0	1.6
-																												

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ZOOPLANKTON DENSITY

REPLICATE REPORT

LS TAXA					×	S.E.	AB%
	1	2	3	4			
0 CHIRONOMIDAE							
2 CHIRONOMIDAE (LPIL)	1918.18	1111.11	0.0	277.78	826.77	433.68	0.6
TOTAL	352944.44	106110.56	14333.32	67222.12	135152.56	74993.62	100.0
DIVERSITY (H PRIME)	1.98	2.49	1.59	2.11	2.04	0.19	
DIVERSITY (J PRIME)	0.55	0.70	0.61	0.61	0.62	0.03	
NUMBER OF TAXA	12	12	6	11	20		
ABOVE COMPUTED USING SAMPLE IDS							
191 192 193	194						

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BAILEY GENERATING PLANT

ZOOPLANKTON DENSITY

REPLICATE REPORT

PC TC GC LOC 5 51 51 1 2 00

	DURATION		TOW	erun un				com			FMD							
SI				SAMP VOI	TT	MIND		CUR	TO 5 5 5 1		EMP		TIMOR	COLE	200	DIA		
11000		MD	SP D		SECH W T						WAT		TURBD	COND	DO	PH	SALN	-
100		100000000000000000000000000000000000000	0.0 0		1.0 8 0	4 1	1000	0.0		17.8		0	0.0	0		100000	0.0	-
1 2	02 4/20/80 1055 0 0.0 0 1.0		0.0 0		1.0 8 0	4 1				17.8		0	0.0	0	-			1000
A	03 4/20/80 1055 0 0.0 0 1.0	1.0	0.0 0		1.0 8 0	4 1		0.0		17.8		0	0.0	0				-
2	04 4/20/80 1055 0 0.0 0 1.0	1.0	0.0 0	0.0 3	1.0 8 0	4 1	5	0.0	0	17.8	19.5	0	0.0	0	6.7	0.0	0.0 REL	700
LS	TAXA												×			S.E.	AB2	_
1			1		2		3			4								
0	NEMATODA (TOTAL)		1000.		333.33		666.			1500			4875.			37.8		
1	NEMATODA (LPIL)		1000.		333.33	-	666.	-		1500	W. 100. 100.		4875	1000		37.81		1,350
0	OLIGOCHAETA (TOTAL)		333.	33	0.0	10	666.	66		833	. 33		2958.	.33	25	75.14	4 4.	4
0	NAIDIDAE																	
1	NAIDIDAE (LPIL)		333.	33	0.0	100	666.	66		833	. 33		2958.	.33	25	75.14	4.	4
0	CLADOCERA (TOTAL)		12333.	32	9499.99	40	666.	64		15666	.66		19541.	.65	71	53.53	3 28.	8
0	BOSMINIDAE																	
1	BOSMINIDAE (LPIL)		4833.	33	2000.00	7	333.	33		2000	.00		4041.	.66	12	84.48	6 .	0
0	CHYDORIDAE																	
1	ALONA RECTANGULA		666.	67	666.67	4	000.	00		1000	.00		1583.	.33	8	109.38	3 2.	3
6	ALONA (LPIL)		0.	0	500.00		666.	67		333	. 33		375	.00	1	42.32	2 0.	6
1	CHYDORUS (LPIL)		6833.	33	6333.33	286	666.	65		12166	.66		13499.	99	52	25.02	19.	9
1	PLEUROXUS DENTICULATUS		0.	0	0.0		0.	0		166	.67		41.	67		41.67	7 0.	1
0	OSTRACODA (TOTAL)		0.	0	0.0	21	333.	32		166	.67		5375	.00	53	19.5	7.	9
19	OSTRACODA (LPIL)		0.	0	0.0	21	333.	32		166	.67		5375	.00	53	19.59	7 .	9
0	COPEPODA (TOTAL)		43999.	98	8499.99	466	666.	63		26999	.99		34041.	64	67	68.10	50.	2
0	CALANOIDA (TOTAL)																	
. 14	CALAMOIDA (LPIL)		5166.	66	2000.00	3	333.	33		3333	. 33		3458.	33	6	50.41	1 5.	1
0	CYCLOPOIDA (TOTAL)																	
1	CYCLOPS BICUSPIDATUS THOMASI		135.	33	166.67		0.1	0		166	.67		416.	67	3	08.07	7 0.	6
14	CYCLOPS BICUSPIDATUS THOMASI		0.	0 1	5333.33		0.1	0		0	. 0		3833.	33	38	33.3	5 5.	6
14	CYCLOPOIDA (LPIL)		36833.	32	0.0	279	999.	98		22666	.66		21874.	99	78	54.98	32.	2
0	HARPACTICOIDA (TOTAL)																	
14	HARPACTICOIDA (LPIL)		666.	67	1000.00	15	333.	32		833	. 33		4458	33	36	25.64	6.	6
0	DIPTERA NEMATOCERA (TOTAL)		1166.	67	833.33	21	000.	00		333	.33		1083.	33	3	50.26	1.	6
. 0	CHIRONOMIDAE		100000000							707				100				
2	CHIRONOMIDAE (LPIL)		1166.	67	833.33	20	000.	00		333	\3		1083.	.33	- 3	50.26	1.	6
TOT	AL		58833.	30 2	9166.63	137	999.	75		45499	. 6.7		67874.	87	241	49.21	1 100.	0
	ERSITY (H PRIME)		1.		2.11		2.				.17		2.			0.24		
40.00.0	ERSITY (J PRIME)		0.		0.66		0.	-			.59			67		0.0		
-	BER OF TAXA			10	9			11			13			13		0.0		

ABOVE COMPUTED USING SAMPLE IDS

201 202 203 204

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BAILEY GENERATING PLANT

ZOOPLANKTON DENSITY

STATION REPORT

						REL
LS	TAXA			X	S.E.	ABX
	HEMITORA (TOTAL)	19 8148.47 8148.47 12361.10	20			
0	NEMATODA (TOTAL)	8148.47	4875.00	6511.73	1636.74	6.4
0	NEMATODA (LPIL)	8148.47	4875.00	6511.73	1636.74	6.4
0	OLIGOCHAETA (TOTAL)	12361.10	2958.33	7659.71	4701.38	7.5
1	CHAETOGASTER (LPIL)	694.44	0.0	347.22	347.22	0.3
1	NAIDIDAE (LPIL)	277.78	2958.33	1618.05	1340.28	1.6
1	OLIGOCHAETA (LPIL)	11388.88	0.0	5694.44	5694.44	5.6
ō	ARACHNIDA (TOTAL)	479.54	0.0	239.77	239.77	0.2
0	PROSTIGMATA					*
1	HYDRACARINA (TOTAL)	479.54	0.0	239.77	239.77	0.2
0	CLADOCERA (TOTAL)	47576.91	19541.65	33559.28	14017.63	
0	BOSHTNIDAE	********	*1512.05	3337		
1		1070.20	4041.66	2555.93	1485.73	2.5
0	CHYDORIDAE					
1	ALONA	69.44	0.0	34.72	34.72	0.0
1	ALONA RECTANGULA	1084.09	1583.33	1333.71	249.62	1.3
1	ALONA (LPIL)	479.54	0.0	239.77	239.77	0.2
6	ALONA (LPIL)	0.0	375.00	187.50	187.50	0.2
1	CHYDORUS (LPIL)	44734.75	13499.99	29117.37	15617.38	28.7
1	PLEUROXUS DENTICULATUS	0.0	41.67	20.83	20.83	100000000000000000000000000000000000000
0	SIDIDAE	-				
6	DIAFHANOSOMA (LPIL)	138.89	0.0	69.44	69.44	0.1
0	OSTRACODA (TOTAL)	2417.42	5375.00	3896.21	1478.79	3.8
19	OSTRACODA (LPIL) OSTRACODA (LPIL) CCPEPODA (TOTAL)	833.33	5375.00	3104.16	2270.83	3.1
1	OSTRACODA (LPIL)	1584.09	0.0	792.04	792.04	0.8
0	CCPEFODA (TOTAL)	63342.54	34041.64	48692.09	14650.45	48.0
0	CALAHOIDA (TOTAL)					
14	CALANOIDA (LPIL)	7212.86	3458.33	5335.59	1877.27	5.3
0	CYCLOFOIDA (TOTAL)					
1	CYCLOPS BICUSPIDATUS THOMASI	757.32	416.67	586.99	170.33	0.6
14	CYCLOPS BICUSPIDATUS THOMASI	0.0	3833.33	1916.67	1916.67	1.9
1	CYCLOPS VERNALIS	138.89	0.0	69.44	69.44	0.1
1	EUCYCLOPS SPERATUS	138.89	0.0	69.44	69.44	0.1
1	MESOCYCLOPS LEUKARTI	41.67	0.0	20.83	20.83	0.0
14	CYCLOPOIDA (LPIL)	50843.08	21874.99	36359.04	14484.05	35.8
. 0	HARPACTICOIDA (TOTAL)					
1	HARPACTICOIDA (LPIL)	2959.84	0.0	1479.92	1479.92	1.5
14	HARPACTICOIDA (LPIL)	1250.00	4458.33	2854.16	1604.16	2.8
770	DIPTERA NEMATOCERA (TOTAL)	826.77	1083.33	955.05	128.28	0.9
0	CHIRONOMIDAE					
5	CHIROHOMIDAE (LPIL)	826.77	1083.33	955.05	128.28	0.9
TOT		135152.56	67874.87	101513.69	33638.84	100.0
	ERSITY (H PRIME)	2.04	2.29	2.17	0.13	
40.000	ERSITY (J PRIME)	0.62	0.67	0.65	0.03	

DATE 07/14/80 PAGE NO 38 NORTHERN INDIANA PUBLIC SERVICE COMPANY (49720) BAILEY GENERATING PLANT ZOOPLANKTON DENSITY STATION REPORT REL S.E. AB% LS TAXA 19 HUMBER OF TAXA 13 21 ABOVE COMPUTED USING SAMPLE IDS 191 193 194 201 202 203 204 DATE 07/14/80 PAGE NO 39 T600AQUA 9/28/77

1

BAILEY GENERATING PLANT

ZOOPLANKTON DENSITY

STATION REPORT

LS TAXA			ž	S.E.	REL ABZ
		20	•	3.6.	ADA
O NEMATODA (TO	OTAL)	6511.73	6511.73	-1.00	6.4
1 NEMATODA (LI	PIL)	6511.73	6511.73	-1.50	6.4
O OLIGOCHAETA	(TOTAL)	7659.71	7659.71	-1.00	7.5
6 NAIDIDAE					
1 CHAETOG	ASTER (LPIL)	347.22	347.22	-1.00	0.3
1 NAIDIDAE	(LPIL)	1618.05	1618.05	-1.00	1.6
1 OLIGOCHAETA	(LPIL)	5694.44	5694.44	-1.00	5.6
O APACHNIDA (TOTAL)	239.77	239.77	-1.00	0.2
O PROSTIGMA	TA				
1 HYDRACAR	RINA (TOTAL)	239.77	239.77	-1.00	0.2
O CLADOCERA (TOTAL)	33559.28	33559.28	-1.00	33.1
0 BOSMINIDA	E				
1 BOSMINIDA	E (LPIL)	2555.93	2555.93	-1.00	2.5
O CHYDORIDA	E				
1 ALONA		34.72	34.72	-1.00	0.0
1 ALONA PI	ECTANGULA	1333.71	1333.71	-1.00	1.3
1 ALONA (LPIL)	239.77	239.77	-1.00	0.2
6 ALONA (LPIL)	187.50	187.50	-1.00	0.2
1 CHYDORUS	S (LPIL)	29117.37	29117.37	-1.00	28.7
1 PLEUROXI	US DENTICULATUS	20.83	20.03	-1.00	0.0
O SIDIDAE					
6 DIAPHANO	OSOMA (LPIL)	69.44	69.44	-1.00	0.1
O OSTRACODA (1	TOTAL)	3896.21	3896.21	-1.00	3.8
19 OSTRACODA (LPIL)	3104.16	3104.16	-1.00	3.1
1 OSTRACODA (I	LPIL)	792.04	792.04	-1.00	0.8
O COPEPODA (TO	DTAL)	48692.09	48692.09	-1.00	48.0
0 CALANOIDA					
14 CALAHOIDA		5335.59	5335.59	-1.00	5.3
O CYCLOPOID	A (TOTAL)				
	BICUSPIDATUS THOMASI	586.99	586.99	-1.00	0.6
	BICUSPIDATUS THOMASI	1916.67	1916.67	-1.00	1.9
	VERNALIS	69.44	69.44	-1.00	0.1
	PS SPERATUS	69.44	69.44	-1.00	0.1
	LOPS LEUKARTI	20.83	20.83	-1.00	0.0
14 CYCLOPOID	A (LPIL)	36359.04	36359.04	-1.00	35.8
The state of the s	DIDA (TOTAL)				
	DIDA (LPIL)	1479.92	1479.92	-1.00	1.5
The second secon	DIDA (LPIL)	2854.16	2854.16	-1.00	2.8
	ATOCERA (TOTAL)	955.05	955.05	-1.00	0.9
O CHIRONOMI					
2 CHIRONOMIC	DAE (LPIL)	955.05	955.05	-1.00	0.9
TOTAL		101513.69	101513.69	-1.00	100.0
_DIVERSITY (H PR	IME)	2.17	2.17	-1.00	
-DIVERSITY (J PR		0.65	0.65	-1.00	

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BAILEY GENERATING PLANT

700PLANKTON DENSITY

STATION REPORT

LS TAXA

NUMBER OF TAXA

ABOVE COMPUTED USING SAMPLE IDS

191 192 193 194 201 202 203 204

20 21

DATE 07/14/60 PAGE NO 41 T600AQUA 9/28/77 REL X S.E. AB%

21

BAILEY GENERATING PLANT

ZOOPLANKTON DENSITY

PEPLICATE REPORT

PC TC GC LOC 5 51 51 1 3 00

2 21 21 1 2 27																						
	BURATION			TOM	SAMP		Tarabana and and and		MI	CM		CUR			TEMP							
SID DATE TIME D/N		SD	MD	SP D	UNITS	_		-	SC	DI	CL	SP	DI	AIR		BT	TURBD	COHO		PH	SALN	
211 4/20/80 1327 0	0.0 0	1.0	1.0	0.00			1.0	-	4	1	5	0.0	0		3 19.0	0	0.0	_	12.0		(300 v.m.)	100
212 4/20/80 1327 0	0.0 0	1.0	1.0	0.0 0	0.0	3	1.0	8 0	4	1	5	0.0	0	17.4	19.0	0	0.0	0	12.0	0.0	0.0	0
213 4/20/80 1327 0	0.0 0	1.0	1.0	0.00	0.0	3	1.0	8 0	4	1	5	0.0	0	17.6	19.0	0	0.0	0	12.0	0.0	0.0	0
214 4/20/80 1327 0	0.0	1.0	1.0	0.0 0	0.0	3	1.0	8 0	4	1	5	0.0	0	17.6	3 19.0	0	0.0	0	12.0	0.0	0.0	0
																	-				REL	L
LS TAXA																	X			S.E.	AB2	Z.
				1			5				3			4								
O NEMATODA (TOTAL)				36666.	65		333.	. 33		79	99.	99		233	3.33		11833.	32	84	435.48	8 5.	.0
1 NEMATODA (LPIL)				36666.	65		333.	. 33		79	99.	99		233	3.33		11833.	32	84	435.46	8 5.	.0
O OLIGOCHAETA (TOTAL)				13333.	33		166	.67		6	66.6	67		500	0.00		36 3.	67	37	223.90	0 1.	.5
0 NAIDIDAE																						
1 NATDIDAE (LPIL)				13333.	33		166.	.67		6	66.6	67		500	0.00		3666.	67	32	223.90	0 1.	. 5
O CLADOCERA (TOTAL)				0.	0		833.	. 33			0.0	0		166	.67		250.	00		198.37	7 0.	.1
O CHYDORIDAE																						
1 CHYDORUS (LPIL)				0.	0		666.	.67			0.0	0		(0.0		166.	67	1	166.67	7 0.	.1
1 PLEUROXUS PROCURY	/US			0.	0		166.	.67			0.0	0		166	6.67		83.	33		48.11	1 0.	. 0
O OSTRACODA (TOTAL)				36666.	65		2666.	.67		126	66.6	66		4666	.66		14166.	66	71	804.91	1 5.	. 9
19 OSTRACODA (LPIL)				36666.	65		2666.	.67		126	66.6	66		4666	.66		14166.	66	71	804.91	1 5.	. 9
O COPEPODA (TOTAL)				703333.	06		8833.	.32		979	99.6	87		23999	9.99	:	208541.	56	166	076.50	0 87.	.4
O CYCLOPOIDA (TOTAL)																						
14 CYCLOPOIDA (LPIL)				163333.	25		2666	67		246	66.6	65		4833	3.33		48874.	97	38	472.52	2 20.	.5
O HARPACTICOIDA (TOTA	AL)																					
1 HARPACTICOIDA (LPT)	.)			23333.	32		333.	.33		26	66.6	67		833	5.33		6791.	60	5!	536.65	5 2.	8.
14 HARPACTICOIDA (LP.)	1)			516666.	50		5833.	.33		7066	66.	56		18333	3.33	1	152874.	87	122	074.12	2 64.	.1
O DIPTERA NEMATOCERA	(JATO)			0.	0		0.	. 0		6	66.6	67		166	.67		208.	33	1	157.75	5 0.	.1
O CHIRONOMIDAE																						
2 CHIRONOMIDAE (LPIL)			0.	0		0.	.0		66	66.6	67		166	.67		208.	33		157.75	5 0.	.1
TOTAL				789999.	62	1	2833.	31	1	199	99.7	75		31833	3.32	1	238666.	50	185	254.44	100	. 0
DIVERSITY (H PRIME)				1.	36		1.	97			1.5	59		1	.71		1.	66		0.13	3	
DIVERSITY (J PRIME)				0.	58		0.	70			0.6	61		(0.61		0.	63		0.03	5	
NUMBER OF TAXA					5			7				6			7			6				

214

ABOVE COMPUTED USING SAMPLE IDS 211 212 213

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BAILEY GENERATING PLANT

ZOOPLANKTON DENSITY

STATION REPORT

LS	TAXA		
			21
0	The state of the s		11833.32
1	NEMATODA (LPIL)		11833.32
0	OLIGOCHAETA (TOTAL)		3666.67
0	NAIDIDAE		
1	NAIDIDAE (LPIL)		3666.67
0	CLADOCERA (TOTAL)		250.00
0	CHYDORIDAE		
1	CHYDORUS (LPIL)		166.67
1	PLEUROXUS PROCURVUS		83.33
0	OSTRACODA (TOTAL)		14166.66
19	OSTRACODA (LPIL)		14166.66
0	COPEPODA (TOTAL)		208541.56
0	CYCLOPOIDA (TOTAL)		
14	CYCLOPOIDA (LPIL)		48874.97
0	HARPACTICOIDA (TOTAL)		
1	HARPACTICOIDA (LPIL)		6791.66
14	HARPACTICOIDA (LPIL)		152874.87
0	DIPTERA NEMATOCERA (TOTAL)		208.33
0	CHIROHOMIDAE		
2	CHIROHOMIDAE (LPIL)		208.33
TO	AL		238666.50
DIV	PERSITY (H PRIME)		1.66
DIV	PERSITY (J PRIME)		0.63
NUI	BER OF TAXA		8
ABO	VE COMPUTED USING SAMPLE IDS		
	211 212	213	214

-		REL	
×	S.E.	AB%	
11833.32	-1.00	5.0	
11833.32	-1.00	5.0	
3666.67	-1.00	1.5	
3666.67	-1.00	1.5	
250.00	-1.00	0.1	
166.67	-1.00	0.1	
83.33	-1 00	0.0	
14166.66	-1.00	5.9	
14166.66	-1.00	5.9	
208541.56	-1.00	87.4	
48874.97	-1.00	20.5	
6791.66	-1.00	2.8	
152874.87	-1.00	64.1	
208.33	-1.00	0.1	
208.33	-1.00	0.1	
238666.50	-1.00	100.0	
1.66	-1.00		
0.63	-1.00		
8			

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BAILEY GENERATING PLANT

ZOOPLANKTON DENSITY

STATION REPORT

LS	TAXA		
			21
0	NEMATODA (TOTAL)		11833.32
1	NEMATODA (LPIL)		11833.32
0	OLIGOCHAETA (TOTAL)		3666.67
0	NAIDIDAE		
1	NAIDIDAE (LPIL)		3666.67
0	CLADOCERA (TOTAL)		250.00
0	CHYDORIDAE		
1	CHYDORUS (LPIL)		166.67
1	PLEUROXUS PROCURVUS		83.33
0	OSTRACODA (TOTAL)		14166.66
19	OSTRACODA (LPIL)		14166.66
0	COPEPODA (TOTAL)		208541.56
0	CYCLOPOIDA (TOTAL)		
14	A.D. D.		48874.97
0	HARPACTICOIDA (TOTAL)		
1	HARPACTICOIDA (LPIL)		6791.66
14	HARPACTICOIDA (LPIL)		152874.87
0	DIPTERA NEMATOCERA (TOTAL)		208.33
0	CHIROHOMIDAE		
5	CHIROHOMIDAE (LPIL)		208.33
TOT	TAL		238666.50
DIV	VERSITY (H PRIME)		1.66
DIV	VERSITY (J PRIME)		0.63
HUI	BER OF TAXA		8
ABC	OVE COMPUTED USING SAMPLE IDS		
	211 212	213	214

-		REL
×	S.E.	AB%
11833.32	-1.00	
11833.32	-1.00	5.0
3666.67	-1.00	1.5
3666.67	-1.00	1.5
250.00	-1.00	0.1
166.67	-1.00	0.1
83.33	-1.00	0.0
14166.66	-1.00	5.9
14166.66	-1.00	5.9
208541.56		87.4
48874.97	-1.00	20.5
6791.66	-1.00	2.8
152874.87	-1.00	64.1
208.33	-1.00	0.1
208.33	-1.00	0.1
238666.50	-1.00	100.0
1.66	-1.00	
0.63	-1.00	
8		

DATE 07/14/80 PAGE NO 44 T600AQUA 9/28/77



APPENDIX F

BENTHIC MACROINVERTEBRATE REPLICATE REPORTS, BAILLY STUDY AREA, APRIL 1930

HORTHERN INDIANA PUBLIC SERVICE COMPANY (49720)

BAILEY GENERATING PLANT

£ BENTHIC MACROINVERTEBRATE NUMERICAL ABUNDANCE (110/59

REPLICATE REPORT

SC LOC 71 0 0 00 PC TC 5

1800 TEMP SP DI 0.0 299 MIND SC DI 3 2 -00 SAMP VOL UNITS C SECH W T 0.1 6 0.5 8 0 0.1 6 0.5 8 0 SP D 0.0 0 SD 46.0 DATE TIME D/M UNITS C 4/17/80 1143 0 0.0 0 4/17/80 1143 0 0.0 0

5ALM P 0.0 0.0 0.0 PFL AEX 100.0 0.0 0.0 29.62 0.50 0.0 0 0 9.62 9.62 38.45 0.0 0.0 × AIR HAT 15.6 10.0 15.6 10.0 2 19.23 57.69 1.58 1.00 19.23 19.23 0.0 19.23 19.23 19.23 0.0 0.0 10.0 0.00 46.0 46.0 DIPTERA NEMATOCERA (TOTAL) PARACLADOPELMA (LPIL) FONTOPOREIA AFFINIS TUBIFICIDAE (LPIL) OLIGOCHAETA (TOTAL) TUBIFICIDAE HIRUDINEA (TOTAL) HIRUDINEA (LPIL) AMPHIPODA (TOTAL) TOTAL
DIVERSITY (H PRIME)
DIVERSITY (J PRIME)
HUNGER OF TAXA
60TTOM TYPE 0 HAUSTORIIDAE CHIROHOMIDAE SID 11 12 оононооноок

ABOVE COMPUTED USING SAMPLE IDS

DATE PAGE NO T600AQUA

07/14/80 7778/77

BAILEY GENERATING PLANT

BENTHIC MACROINVERTEBRATE NUMERICAL ABUNDANCE (NO/SQ M)

REPLICATE REPORT

5 71 71 0 0 00

DURATION	TOW SAMP VOL	WIND CURENT TEMP		
SID DATE TIME D/N UNITS C SO HD	SP D UNITS C SECH W T	SC DI CL SP DI AIR HAT	BT TURBO COND DO FH SALK	\$3
21 4/17/80 1057 0 0.0 0 91.0 91.	0 0.0 0 0.1 6 0.5 8 0	3 6 6 0.0 0 16.7 7.5	0 0.0 0 0.0 0.0 0.0	0
22 4/17/80 1057 0 0.0 0 91.0 91.	0.00 0.16 0.580	3 6 6 0.0 0 16.7 7.5	0 0.0 0 0.0 0.0 0.0	0
			- CE	1
LS TAXA			X S.E. 49	2
	1 2			
O NEMATODA (TOTAL)	19.23 0.0		9.62 9.62 1	-7
1 NEMATODA (LPIL)	19.23 0.0		9.62 9.62 1	7
O OLIGOCHAETA (TOTAL)	57.69 57.69		57.69 0.0 10	.3
O TUBIFICIDAE				
1 TUBIFICIDAE (LPIL)	57.69 57.69		57.69 0.0 10	
6 BIVALVIA (TOTAL)	0.0 19.23		. 9.62 9.62 1	. 7
0 MYTILLIDAE				
5 MYTILLIDAE(LPIL)	0.0 19.23		9.62 9.62 1	
O AMPHIPODA (TOTAL)	76.92 173.08		125.00 43.08 22	.4
0 HAUSTORIIDAE				
1 PONTOPOREIA AFFINIS	76.92 173.08		125.00 48.03 22	
O DIPTERA NEMATOCERA (TOTAL)	480.77 230.77		355.77 125.00 63	.8
O CHIRONOMIDAE				
2 CHIRCHOMUS (LPIL)	38.46 38.46			. 9
2 CRYPTOCHIRONOMUS (LPIL)	346.15 153.85		250.00 96.15 44	. 5
2 FROCLADIUS (LPIL)	0.0 38.46			1.4
2 PARACLADOPELMA (LPIL)	57.69 0.0		28.65 28.85 5	
2 MONODIAHESA (LPIL)	38.46 0.0		19.23 19.23 3	.4
TOTAL	634.61 480.77		557.69 76.92 100	.0
DIVERSITY (H PRIME)	2.12 2.19		2.16 0.04	
DIVERSITY (J PRIME)	0.75 0.85		0.80 0.05	
NUMBER OF TAXA	7 6		9	
EOTION TYPE 0				

ABOVE COMPUTED USING SAMPLE IDS 21 22

DATE 07/14/80 PAGE NO 2 T600AQUA 9/28/77

BAILEY GENERATING PLANT

BENTHIC MACROINVERTEBRATE NUMERICAL ABUNDANCE (NO/SQ M)

REPLICATE REPORT

PC TC GC LOC 5 71 71 0 0 00

DURATION	TOW SAMP VOL	WIND CURENT TEMP	
SID DATE TIME D/N UNITS C SD WD	SP D UNITS C SECH W	T SC DI CL SP DI AIR WAT BY TURED CO	NID DO FIL SAUN P
31 4/17/80 1005 0 0.0 0 15.2 15.	2 0.0 0 0.1 6 1.0 8	0 3 6 6 0.0 0 12.8 8.0 0 0.0	0 0.0 0.0 0.0 0
32 4/17/80 1005 0 0.0 0 15.2 15.	0.00 0.16 1.08	0 3 6 6 0.0 0 12.8 8.0 0 0.0	0 0.0 0.0 0.0 0
			Pat
LS TAXA		X	S.E. ABX
	1 2		
O OLIGOCHAETA (TOTAL)	942.31 519.23	730.77	211.54 52.4
O TUBIFICIDAE			
1 TUBIFICIDAE (LPIL)	942.31 519.23	730.77	211.54 52.4
O HIRUDINEA (TOTAL)	0.0 19.23		9.62 0.7
1 HIRUDINEA (LPIL)	0.0 19.23	9.62	9.62 0.7
0 BIVALVIA (TOTAL)	19.23 19.23	19.23	0.0 1.4
O MYTILLIDAE			
1 MODIBLUS (LPIL)	19.23 0.0	9.62	9.62 0.7
O SPHAERIIDAE			
5 PISIDIUM (LPIL)	0.0 19.23	9.62	9.62 0.7
O AMPHIFODA (TOTAL)	192.31 153.85	173.08	19.23 12.4
0 HAUSTORIIDAE			
1 PONTOPOREIA AFFINIS	192.31 0.0	°6.15	96.15 6.9
1 FONTOPOPEIA (LPIL)	0.0 153.85	76.92	70,92 5.5
O TRICHOPTERA (TOTAL)	0.0 19.23	9.62	9.62 0.7
2 TRICHOPTERA (LPIL)	0.0 19.23	9.62	9.62 0.7
O DIPTERA HEMATOCERA (TOTAL)	673.08 230.77	451.92	221.15 32.4
0 CHIRONOHIDAE			
2 CHIRONOMUS (LPIL)	38.46 19.23	28.65	9.62 2.1
2 CRYPTOCHIRONOMUS (LPIL)	519.23 192.31	355.77	163.46 25.5
2 PROCLADIUS (LPIL)	19.23 19.23	19.23	0 0 1.4
2 PARACLADOPELMA (LPIL)	76.92 0.0	33.46	38.46 2.8
2 TRICHOCLADIUS	19.23 0.0	9.62	9.62 0.7
TOTAL	1826.92 961.54	1394.23	432.69 100.0
DIVERSITY (H PRIME)	1.87 1.93	1.90	0.03
DIVERSITY (J PRIME)	0.62 0.64	0.63	0.01
NUMBER OF TAXA	8 8	12	
BOTTOM TYPE 0			

ABOVE COMPUTED USING SAMPLE IDS 31 32

DATE 07/14/80 PAGE NO 3 T600AQUA 9/28/77

BAILEY GENERATING PLANT

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21 22

BENTHIC MACROINVERTEBRATE NUMERICAL ABUNDANCE (NO/59 M)

STATION REPORT

							TOL L
LS	TAXA				X	S.E.	X83
1		1	2	3			
0	NEMATODA (TOTAL)	0.0	9.62	0.0	3.21	3.21	0.5
1	MEMATODA (LPIL)	0.0	9.62	0.0	3.21	3.21	
0	OLIGOCHAETA (TOTAL)	9.62	57.69	730.77	266.03	232.79	40.1
0	TUBIFICIDAE						
1	TUBIFICIDAE (LPIL)	9.62	57.69	730.77	266.03	232.79	40.1
0	HIRUDINEA (TOTAL)	9.62	0.0	9.62	6.41	3.21	1.0
1	HIRUDINEA (LPIL)	9.62	0.0	9.62	6.41	3.21	1.0
0	BIVALVIA (TOTAL)	0.0	9.62	19.23	9.62	5.55	1.4
0	MYTILLIDAE						
1	MODIDLUS (LPIL)	0.0	0.0	9.62	3.21	3.21	0.5
5	MYTILLIDAE(LPIL)	0.0	9.62	0.0	3.21	3.21	0.5
0	SPHAERIIDAE						
5	PISIDIUM (LPIL)	0.0	0.0	9.62	3.21	3.21	0.5
0	AMPHIPODA (TOTAL)	9.62	125.00	173.08	102.56	48.50	15.5
0	HAUSTORIIDAE						
1	PONTOPOREIA AFFINIS	9.62	125:00	96.15	76.92	34.67	11.6
1	PONTOPOREIA (LPIL)	0.0	0.0	76.92	25.64	25.64	3.9
0	TRICHOPTERA (TOTAL)	0.0	0.0	9.62	3.21	3.21	0.5
2	TPICHOPTERA (LPIL)	0.0	0.0	9.62	3.21	3.21	0.5
0	DIPTERA NEMATOCERA (TOTAL)	9.62	355.77	451.92	272.44	134.31	41.1
0	CHIRONOMIDAE						
2	CHIRONOMUS (LPIL)	0.0	38.46	28.85	22.44	11.56	3.4
2	CRYPTOCHIRONOMUS (LPIL)	0.0	250.00	355.77	201.92	105.48	
2	PROCLADIUS (LPIL)	0.0	19.23	19.23	12.82	6.41	1.9
2	PARACLADOFELMA (LPIL)	9.62	28.85	38.46	25.64	8.48	3.9
2	MONODIANESA (LPIL)	0.0	17.23	0.0	6.41	6.41	1.0
2	TRICHOCLADIUS	0.0	0.0	9.62	3.21	3.21	0.5
TOT		38.46	557 40	1394.23	663.46	394.93	100.0
	PERSITY (H PRIME)	0.79	2.16	1.90	1.62	0.42	
			0.80	0.63	0.64		
300.000	PEPSITY (J PRIME)	0.50	9.80	12		0.09	
3000	BER OF TAXA	4	9	16	15		
601	TON TYPE 0						

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BAILEY GENERATING PLANT

BENTHIC MACROINVERTEBRATE NUMERICAL ABUNDANCE (NO/SQ M)

REPLICATE REPORT

PC TC GC LOC 5 71 71 0 0 10

				DURAT	ION			TOW	SAF	P V	OL			W	IND		CUR	ENT		TEMP							
SID	DATE	TIME	D/N	UNITS	C	SD	MD	SP D	UNI	TS	C SE	CH I	T	SC	DI	CL	SP	DI	AIR	MAT	BT	TURBD	CCND	DO	FH	SALK	D
4	1 4/17/80	1218	0	0.0	0	46.0	46.0	0.0 0		.1	6 0	.5	9 0	3	2	6	0.0	0	16.	7 11.0		0.0	0	0.0	0.0	0.0	0
4	2 4/17/80	1218	0	0.0	0	46.0	46.0	0.0 0	0	.1	6 0	.5	8 0	3	2	6	0.0	0	16.	7 11.0	0	0.0	0	0.0	0.0	0.0	
LS	TAXA																					×			S.E.	REL	
								1				2															
0 (OLIGOCHAETA	A (TOT	TAL)					230	.77			0.1	0									115.	33		115.38	52.	2
0	TUBIFICI	DAE																									
1	TUBIFICI	DAE (1	PIL)				230	.77			0.0	0									115.	38		115.36	52.	2
0	AMPHIFODA (TOTAL	.)					19	.23			0.0	0									9.	62		9.62	4.	.3
0	HAUSTORI	IDAE																									
1	PONTOPO	OREIA	(LP)	(1)				19	.23			0.1	0									9.	62		9.61	4.	3
0 1	DIPTERA NEI	MATOCE	RA (TOTAL	.)			192	.31			0.0	0									96.	15		96.15	43.	5
0	CHIRONOM	IDAE																									
2	CRYPTOO	CHIROL	OHUS	(LPI	LI			134	.62			0.1	0									67.	31		57.31	30.	4
2	PARACLA	ADOPEL	MA (LPIL				57	.69			0.0	3									28.	85		28.85	13.	0
TOTA	t							442	. 31		,	0.0)							~		221.	15		21.15	100.	0
DIVE	RSITY (H PE	RIME)							.59			0.0										0.	80		0.80		
DIVE	RSITY (J PE	RIME)						0	.80			0.0)									0.	40		0.40)	
NUMB	ER OF TAXA								4				0										4				
BOTT	OM TYPE	0)																								

ABOVE COMPUTED USING SAMPLE IDS
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BAILEY GENERATING PLANT

BENTHIC MACROINVERTEBRATE NUMERICAL ABUNDANCE (NO/SQ M)

REPLICATE REPORT

FC TC GC 1.0C 5 71 71 0 0 10

	DURATION	TOW SAMP VOL	MIMO	CURENT TEMP			
SI	D DATE TIME D/N UNITS C SD WD	SP D UNITS C SEC	HWT SC DI CI	SP DI AIR WAT	BT TURED COND	DO PH S	ALH P
	51 4/17/80 1250 0 0.0 0 91.0 91.	0 0.0 0 0.1 6 1.	080 326	0.0 0 14.4 8.5	0 0.0 0	0.0 0.0	0.00
100	52 4/17/80 1250 0 0.0 0 91.0 91.	0 0.0 0 0.1 6 1.	080 326	0.0 0 14.4 8.5	0 0.0 0	0.0 0.0	0.00
							REL
LS	TAXA				X	S.E.	AB34
		1	2				
0	OLIGOCHAETA (TG:AL) TUBIFICIDAE	57.69	9.23		38.46	19.23	7.0
0		27.40	0.07		70.07	70 . 7	- 0
1	TUBIFICIDAE (LPIL)		9.23		38.46	19.13	7.0
0	GASTROPODA (TOTAL)		9.23		9.62	9.62	1.8
5	GASTROPODA (LPIL)		9.23		9.62	9.62	1.8
0	BIVALVIA (TOTAL)	38.46	0.0		19.23	19.23	3.5
0	MYTILLIDAE	** **			0.78	0.40	
0	MYTILUS (LPIL) SPHAERIIDAE	19.23	0.0		9.62	9.62	1.0
2	PISIDIUM (LPIL)	19.23	0.0		9.62	9.62	1 0
0	AMPHIPODA (TOTAL)		3.85		355.77	298.08	
0	HAUSTORIIDAE	37.67 63	13.03		222.11	270.00	95.7
1	FONTOPOREIA (LPIL)	57.69 65	3.85		355.77	298.08	64 9
n	EPHENEROPTERA (TOTAL)		0.0		9.62	9.62	1.8
0	EFHENERIDAE	27.63	***		12.50		2.0
10	HEXAGENIA LIMBATA	19.23	0.0		9.62	9.62	1.8
0	DIPTERA NEMATOCERA (TOTAL)		7.69		115.38	57.69	
0	CHIRONOMIDAE				The same		
2	CRYPTOCHIRONOMUS (LPIL)	153.85 5	7.69		105.77	48.08	19.3
2	CHIRONOMIDAE (LPIL)	19.23	0.0		9.62	9.62	1.8
TOT	AL	346.15 75	0.00		548.08	201.92	100.0
	ERSITY (H FRIME)		0.73		1.52	0.79	
	ERSITY (J PRIME)		0.36		2,59	0.23	
100.000	BER OF TAXA		4		8		
	TOM TYPE 0						

ABOVE COMPUTED USING SAMPLE IDS 51 52

DATE 07/14/80 PAGE NO 6 T600AQUA 9/28/77

BAILEY GENERATING PLANT

BENTHIC MACROINVERTEBRATE NUMERICAL ABUNDANCE (NO/SQ M)

REPLICATE REPORT

FC TC GC LOC 5 71 71 0 0 10

-	74 74 0 0 40							
	DURATION	TON SAL	IP VUL	WIND (CURENT	TEMP		
SI	D DATE TIME D/N UNITS C SD	WD SP D UNI	ITS C SECH W T	SC DI CL S	SP DI	AIR MAT	BT TUPED COMD	DO PH SALN P
1. 1. 2	61 4/17/80 1344 0 0.0 0 15.2	2 15.2 0.0 0	0.1 6 1.0 8 0	3 2 6 1	0.0	14.4 6.0	0 0.0 0	0.0 0.0 0.0 0
	62 4/17/80 1344 0 0.0 0 15.2	2 15.2 0.0 0	0.1 6 1.0 8 0	3 2 6 1	0.0	14.4 6.0	0 0.0 0	0.0 0.0 0.0 0
								FEL
LS	TAXA						2	S.E. ABX
0.31		1	2					
0	NEMATODA (TOTAL)	19.23	0.0				9.62	9.62 0.3
1	NEMATODA (LPIL)	19.23	0.0				9.62	9.62 0.3
0	OLIGOCHAETA (TOTAL)	3596.15	711.54				2153.34	1442.31 66.3
0	TUBIFICIDAE							
1	TUBIFICIDAE (LPIL)	3596.15	711.54				2153.84	1442.31 66.3
0	BIVALVIA (TOTAL)	38.46	211.54				125.00	85.54 3.0
0	SPHAERIIDAE							
5	PISIDIUM (LPIL)	19.23	76.92				43.08	28.85 1.5
1	PISIDIUM (LPIL)	19.23	134.62				76.92	57.69 2.4
0	AMPHIPODA (TOTAL)	500.00	384.61				442.31	57.69 13.6
0	HAUSTORIIDAE							
1	PONTOPOREIA (LPIL)	500.00	384.61				442.31	57.69 13.6
0	DIPTERA NEMATOCERA (TOTAL)	307.69	730.77				519.23	211.54 16.0
0	CHIRONOMIDAE							
2	CHIRONOMUS (LPIL)	19.23	0.0				9.62	9.62 0.3
2	CRYPTOCHIRONOMUS (LPIL)	192.31	730.77				461.54	269.23 14.2
2	PROCLADIUS (LPIL)	19.23	0.0				9.62	9.62 0.3
2	PARACLADOPELMA (IPIL)	76.92	0.0				33.46	33.46 1.2
TOT	AL	4461.53	2038.46				3249.99	1211.53 100.0
DIV	ERSITY (H PRIME)	1.06	1.85				1.46	0.40
DIV	ERSITY (J PRIME)	0.35	0.93				0.64	0.29
NUM	BER OF TAXA	8	4				8	
BOT	TOM TYPE 0							

ABOVE COMPUTED USING SAMPLE IDS 61 62

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BAILEY GENERATING PLANT

BENTHIC MACROINVERTEERATE NUMERICAL ABUNDANCE (NO/SQ M)

STATION REPORT

							MEL
LS	TAXA				X	3.E.	457
		4	5	6			
0	NEMATODA (TOTAL)	0.0	0.0	9.(2	3.21	3.01	0.2
1	NEMATODA (LPIL)	0.0	0.0	9.62	3.21	3.71	0.8
0	OLIGOCHAETA (TOTAL)	115.38	38.46	2153.84	769.23	692.66	57.4
0	TUBIFICIDAE						
1	TUBIFICIDAE (LPIL)	115.38	38.46	2153.84	769.23	692.65	57.4
0	GASTROPODA (TOTAL)	0.0	9.62	0.0	3.21	3.21	0.2
5	GASTROPODA (LPIL)	0.0	9.62	0.0	3.21	3.21	0.2
0	BIVALVIA (TOTAL)	0.0	19.23	125.00	48.03	38.85	3.6
0	MYTILLIDAE						
2	MITILUS (LPIL)	0.0	9.62	0.0	3.21	3.21	0.2
0	SPHAERIIDAE						
- 5	PISIDIUM (LPIL)	0.0	0.0	48.08	16.03	16.03	1.2
2	PISIDIUM (LPIL)	0.0	9.62	0.0	3.21	3.21	0.2
1	FISIDIUM (LPIL)	0.0	0.0	76.92	25.64	25.64	1.9
0	AMPHIPODA (TOTAL)	9.62	355.77	442.31	269.23	132.19	20.1
0	HAUSTORIIDAE						
1	PONTOPOREIA (LPIL)	9.62	355.77	442.31	269.23	132.19	20.1
0	EPHEMEROPTERA (TOTAL)	0.0	9.62	0.0	3.21	3.21	
0	EFHEMERIDAE						
10	HEXAGENIA LIMBATA	0.0	9.62	0.0	3.21	3.21	0.2
0	DIPTERA NEMATOCERA (TOTAL)	96.15	115.38	519.23	243.59	137.93	
0	CHIRONOMIDAE						
2	CHIRONOMUS (LPIL)	0.0	0.0	9.62	3.21	3.21	0.2
2	CRYPTOCHIRONOMUS (LPIL)	67.31	105.77	461.54	211.54	125.49	
2	PROCLADIUS (LPIL)	0.0	0.0	9.62	3.21	3.21	0.2
2	PARACLADOPELMA (LPIL)	28.85	0.0	38.46	22.44	11.56	1.7
2		0.0	9.62	0.0	3.21	3.21	0.2
тот	AL	221.15	548.08	3249.99	1339.74	959.73	100.0
DIV	ERSITY (H PRIME)	0.80	1.52	1.46	1.26	0.23	
DIV	ERSITY (J PRIME)	0.40	0.59	0.64	0.54	0.07	
NUN	BER OF TAXA	4	8	8	12		
BOT	TOM TYPE 0						

ABOVE COMPUTED USING SAMPLE IDS

41 42 51 52 61 62

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BAILEY GENERATING PLANT

BENTHIC MACROINVERTEBRATE NUMERICAL ABUNDANCE (NO/SQ M)

REPLICATE REPORT

FC TC GC LOC 5 71 71 0 0 20

DURATION	TOW SAMP VOL	WIND CURENT TEMP	
SID DATE TIME D/N UNITS C SD	WD SP D UNITS C SECH W T	SC DI CL SP DI AIR WAT BT	TURRO COND DO FH SALH P
101 4/17/80 1932 0 0.0 0 3.1	5 3.5 0.0 0 0.1 6 1.5 8 0	3 2 6 0.0 0 8.9 0.0 0	0.0 0.0 0.0 0.0 0
102 4/17/80 1932 0 0.0 0 35.	0 35.0 0.0 0 0.1 6 1.5 8 0	3 2 6 0.0 0 8.9 0.0 0	0.0 0 0.0 0.0 0.0 0
			- PEL
LS TAXA			X S.E. ADZ
	1 2		
O CNIDARIA (TOTAL)	0.0 19.23		9.62 9.62 2.9
0 HYDROZOA			
11 CORDYLOPHORA LACUSTRIS	0.0 19.23		9.62 9.62 2.9
O NEMATODA (TOTAL)	0.0 38.46		19.23 19.23 5.7
1 NEMATODA (LPIL)	0.0 38.46		19.23 19.23 5.7
O OLIGOCHAETA (TOTAL)	57.69 519.23		288.46 230.77 85.7
0 TUBIFICIDAE			
1 TUBIFICIDAE (LPIL)	57.69 519.23		285.46 230.77 85.7
0 BIVALVIA (TOTAL)	0.0 19.23		9.62 9.62 2.9
O SPHAERIIDAE			
5 PISIDIUM (LPIL)	0.0 19.23		9.62 9.62 2.9
O DIPTERA MEMATOCERA (TOTAL)	0.0 19.23		9.62 9.62 2.9
O CHIRONOMIDAE			
2 CRYPTOCHIRONOMUS (LPIL)	0.0 19.23		9.62 9.62 2.9
TOTAL	57.69 615.38		336.54 278.85 100.0
DIVERSITY (H PRIME).	0.0 0.93		0.46 0.46
DIVERSITY (J PRIME)	0.0 0.40		0.20 0.20
NUMBER OF TAXA	1 5		5
BOTTOM TYPE 0			

ABOVE COMPUTED USING SAMPLE IDS
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BAILEY GENERATING PLANT

BENTHIC MACROINVERTEBRATE NUMERICAL ABUNDANCE (NO/SQ M)

STATION REPORT

LS	TAXA	
		10
0	CNIDARIA (TOTAL)	9.62
0	HYDROZOA	
11	CORDYLOPHORA LACUSTRIS	9.62
0	NEMATODA (TOTAL)	19.23
1	NEMATODA (LPIL)	19.23
0	OLIGOCHAETA (TOTAL)	288,46
0	TUBIFICIDAE	
0	TUBIFICIDAE (LPIL)	288.46
0	BIVALVIA (TOTAL)	9.62
0	SPHAERIIDAE	
5	PISIDIUM (LPIL)	9.62
0	DIPTERA NEMATOCERA (TOTAL)	9.62
0	CHIRONOMIDAE	
2	CRYPTOCHIRONOMUS (LPIL)	9.62
TOT	AL	336.54
DIV	ERSITY (H PRIME)	0.46
DIV	ERSITY (J PRIME)	0.20
HUM	BER OF TAXA	5
BOT	TOM TYPE 0	

-		REL
×	S.E.	ABIC
9.62	-1.00	2.7
9.62	-1.00	2.9
19.23	-1.00	5.7
19.23	-1.00	5.7
288.46	-1.00	85.7
288.46	-1.00	85.7
9.62	-1.00	
9.62	-1.00	2.9
9.62	-1.00	
9.62	-1.00	2.9
336.54	-1.00	100.0
0.46	-1.00	
0.20	-1.00	
5		

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ABOVE COMPUTED USING SAMPLE IDS 101 102

BAILEY GENERATING PLANT

BENTHIC MACROINVERTEBRATE NUMERICAL ABUNDANCE (NO/SQ M)

STATION REPORT

LS	TAXA				×	S.E.	REL
		3	6	10	^		Parts.
0	CHIDARIA (TOTAL)	0.0	0.0	9.62	3.21	3.21	0.4
11	CORDYLOPHORA LACUSTRIS	0.0	0.0	9.62	3.21	3.21	0.4
0	NEMATODA (TOTAL)	3.21	3.21	19.23	8.55	5.34	
1	NEMATODA (LPIL)	3.21	3.21	19.23	8.55	5.34	1.1
0	OLIC CHAETA (TOTAL) TUBIFICIDAE	266.03	769.23	288.46	441.24	154.12	
1	TUBIFICIDAE (LPIL)	266.03	769.23	288.46	441.24	164.12	56.6
0	HIRUDINEA (TOTAL)	6.41	0.0	0.0	2.14	2.14	
1	HIRUDINEA (LPIL)	6.41	0.0	0.0	2.14	2.14	
0	GASTROFODA (TOTAL)	0.0	3.21	0.0	1.07	1.07	
5	GASTROFODA (LPIL)	0.0	3.21	0.0	1.07	1.07	
0	BIVALVIA (TOTAL)	9,62	48.08	9.62	22.44	12.02	
0	MYTILLIDAE						100
2	MYTILUS (LPIL)	0.0	3.21	0.0	1.07	1.07	0.1
1	MODIDLUS (LPIL)	3.21	0.0	0.0	1.07	1.07	
5	MYTILLIDAE(LPIL)	3.21	0.0	0.0	1.07	1.07	
0	SPHAERIIDAE						
5	PISIDIUM (LPIL)	3.21	16.03	9.62	9.62	3.70	1.2
2	PISIDIUM (LPIL)	0.0	3.21	0.0	1.07		0.1
1	PISIDIUM (LPIL)	0.0	25.64	0.0	8.55	8.55	
0	AMPHIPODA (TOTAL) HAUSTORIIDAE	102.56	269.23	0.0	123.93	78,45	15.9
1	PONTOPOREIA AFFINIS	76.92	0.0	0.0	25.64	25.64	3.3
1	PONTOFOREIA (LPIL)	25.64	269.23	0.0	98.29	85.79	12.6
0	EPHEMEROPIERA (TOTAL)	0.0	3.21	0.0	1.07	1.07	0.1
10	HEXAGENIA LIMBATA	0.0	3.21	0.0	1.07	1.07	0.1
	TRICHOPTERA (TOTAL)	3.21	0.0	0.0	1.07	1.07	
2	TRICHOPTERA (LPIL)	3.21	0.0	0.0	1.07	1.07	
0	DIPTERA NEMATOCERA (TOTAL) CHIRONOMIDAE	272.44	243.59	9.62	175.21	83.22	
2	CHIRONOMUS (LPIL)	22.44	3.21	0.0	8.55	7.01	1.1
2	CRYPTOCHIROHOMUS (LPIL)	201.92	211.54	9.62	141.03	65.76	
2	PROCLADIUS (LPIL)	12.82	3.21	0.0	5.34	3.85	
. 2	PAPACLADOPELMA (LPIL)	25.64	22.44	0.0	16.03	8.07	
2	MONODIAMESA (LPIL)	6.41	0.0	0.0	2.14	2.14	
2	TRICHOCLADIUS	3.21	0.0	0.0	1.07	1.07	
2	CHIRONOMIDAE (LPIL)	0.0	3.21	0.0	1.07	1.07	
тот		663.46	1339.74	336.54	779.91	275.40	
120012	ERSITY (H FRIME)	1.62	1.26	0.46	1.11	0.34	
	ERSITY (J PRIME)	0.64	0.54	0.20	0.46	0.13	
	SER OF TAXA TOM TYPE 0	15	12	5	20		

DATE 07/14/80 PAGE NO 11

BAILEY GENERATING PLANT

BENTHIC MACROINVERTEBRATE NUMERICAL ABUNDANCE (NO/SQ M)

STATION REPORT

ABOVE COMPUTED USING SAMPLE IDS

11	12	21	22
31	32	41	42
51	52	61	62
101	102		

DATE 07/14/80 PASE NO 12 T600AQUA 9/28/77

BAILEY GENERATING PLANT

BENTHIC MACROINVERTEBRATE NUMERICAL ABUNDANCE (NO/SQ H) ,

REPLICATE REPORT

PC TC GC LOC 5 71 71 0 1 00

					DUPAT	TION			TO	4	SAMP	VO	L		W	CHI		CUR	ENT	Ti	EMP							
SI	D	DATE	TIME	D/H	UNITS	5 C	SD	WD	58	D	UNITS	5 C	SECH	WT	SC	DI	CL	SP	DI	AIR	MAT	BT	TUROD	COND	DO	F114	SALN	13
1000	71	4/17/80	1544	0	0.0	0	46.0	46.0	0.0	0	0.1	1 6	0.5	8 0	3	2	6		0	0.0	5.5	0	0.0	0	0.0	0.0	0.0	G.
	72	4/17/80	1544	0	0.0	0	46.0	46.0	0.0	0	0.1	1 6	0.5	8 0	3	2	6	0.0	0	0.0	5.5	0	0.0	0	0.0	0.0	0.0 REI	
LS		TAXA																					×			S.E.		
										1			2															
0		IGOCHAET		TAL)						76.	92		57	.69									67	.31		9.62	53.	.3
0		TUBIFICI																										
1		TUBIFICI	DAE (LPIL)					76.	92		57	.69									67	. 31		9.62	53	. 3
0	BI	VALVIA (TOTAL)						19.2	23		19	.23									19	.23		0.0	15	.4
0		MYTILLID	AE																									
1		MODIOL	US (L	PIL)					1	19.2	2.3		0	. 0									9	.62		9.62	7	. 7
0		SPHAERII	DAE																									
5		PISIDI	UH IL	PIL)						0.0)		19	.23									9	.62		9.63	7	. 7
0	DI	PTERA NE	MATOC	ERA I	TOTAL	.)				57.6	9		19	.23									38	.46		19.23	30	. 5
0		CHIRONOM	IDAE																									
2		CHIRON	DITUS	(LPI	L)					38.4	16		0	.0									19	.23		19.23	15	.4
5		CRYPTO	CHIRO	NOMU:	5 (LP)	(L)			. 1	19.3	23			.23									19	.23			15	
TOT	AL								15	53.8	35		96	.15									125	.00		28.85	5 100	. 0
DIV	ERS	ITY (H P	RIME)							1.7	75		1	.37									1	.56		0.19	3	
DIV	ERS	ITY (J P	RIME)							0.8	37		0	.86									0	.87		0.03		
NUN	BER	OF TAXA									4			3										5				
BOT	TOM	TYPE		0																								

ABOVE COMPUTED USING SAMPLE IDS 71 72

DATE 07/14/80 PAGE NO 13 T600AQUA 9/28/77

BAILEY GENERATING PLANT

BENTHIC MACROINVERTEBRATE NUMERICAL ABUNDANCE (NO/59 M)

PEPLICATE REPORT

PC TC GC LOC 5 71 71 0 1 00

DL	RATION			TON	SAMP V	/OL		WI	ND		CUR	ENT	Ti	EMP						
SID DATE TIME D/N UN	IITS C	50	MD	SP D	UNITS	C SECH	WT	SC	DI	CL	SP	DI	AIR	MAT	BT	TURED	COND	DO	FH	SALN P
81 4/17/80 1515 0 0	0.0	91.0	91.0	0.00	0.1	5 1.2	8 0	3	2	6	0.0	0	11.1	5.6	0	0.0	0	0.0	0.0	0.00
82 4/17/80 1515 0 0	0.0	9.1	9.1	0.00	0.1	6 1.2	8 0	3	2	6	0.0	0	11.1	5.6	0	0.0	0	0.0	0.0	0.00
LS TAXA																×			S.E.	REL ABX
				1		2														
O OLIGOCHAETA (TOTAL)				96.	15	76	.92									86.	54		9.62	42.9
0 TUBIFICIDAE																				
1 TUBIFICIDAE (LPIL)				96.	15	76	.92									86.	54		9.62	42.9
0 BIVALVIA (TOTAL)				0.	0	19	.23									9.	62		9.60	4.8
0 SPHAERIIDAE																				
5 SPHAERIIDAE (LPIL)				0.	0	19	.23									9.	62		9.62	4.8
O AMPHIPODA (TOTAL)				76.	92	96	.15									86.	54		9.60	42.9
0 HAUSTORIIDAE																				
1 FONTOPOREIA (LPIL)				76.	92	96	.15									86.	54		9.62	42.9
O DIPTERA NEMATOCERA (TO	TAL)			38.	46	0	. 0									19.	23		19.23	9.5
O CHIRONOMIDAE																				
1 CRYPTOCHIRONOMUS (LPIL)			38.	46	0	.0									19.	23		19.23	9.5
TOTAL				211.	54	192	. 31									201.	92		9.62	100.0
DIVERSITY (H PRIME)				1.	49	1	.36									1.	43		0.07	
DIVERSITY (J PRIME)				0.	94	0	.86									0.	90		0.04	
NUMBER OF TAXA					3		3										4			
BOTTOM TYPE 0																				

ABOVE COMPUTED USING SAMPLE IDS 81 82

DATE 07/14/80 PAGE NO 14 T600AQUA 9/28/77

BAILEY GENERATING PLANT

BENTHIC MACROINVERTEBRATE NUMERICAL ABUNDANCE (NO/SQ M)

REPLICATE REPORT

PC TC GC LOC 5 71 71 0 1 00

S.LN 7 0.0 0.0 0.0 PEt. 9.62 F.H. 5 0.0 0 0 BT TUZED 0 0.0 0 X AIP WAT 8.9 5.5 8.9 5.5 TEMP 5P DI 0.0 0 CURENT 9 9 SC DI 3 2 SAMP VOL UNITS C SECH W T 0.1 6 1.5 8 0 0.1 6 1.5 8 0 19.23 0.0 SP D 0.0 0 TOM 50 WD 15.2 15.2 15.2 15.2 SID DATE TIME D/N UNITS C 91 4/17/80 1433 0 0.0 0 92 4/17/80 1433 0 0.0 0 OLIGOCHAETA (TOTAL)
TUBIFICIDAE
TUBIFICIDAE (LPIL) оонооном

19.23 19.23 0.0 0.0 19.23 38.46 1.00 1.00 0.0 19.23 SPHAERIIDAE PISIDIUM (LPIL) DIVERSITY (H PRIME)
DIVERSITY (J PRIME)
NUMBER OF TAXA
BOTTOM TYPE 0 BIVALVIA (TOTAL) MYTILLIDAE

100.0

9.62

28.65

9,62

9.62

9.62 9.63

6.62 9.65

ABOVE CUMPUTED USING SAMPLE IDS

TOTAL

07/14/80 DATE PAGE NO T600AQUA

BAILEY GENERATING PLANT

ABOVE COMPUTED USING SAMPLE IDS

71

91

72

92

81

82

BENTHIC MACROINVERTEBRATE NUMERICAL ABUNDANCE (NO/SQ M)

STATION REPORT

\$0.00 mm							REL
LS	TAXA				X	S.E.	ABZ
		7	8	9			
0	OLIGOCHAETA (TOTAL)	67.31	86.54	9.62	54.49	23.11	45.9
0	TUBIFICIDAE						
1	TUBIFICIDAE (LPIL)	67.31	86.54	9.62	54.49	23.11	45.9
0	BIVALVIA (TOTAL)	19.23	9.62	19.23	16.03	3.21	13.5
0	MYTILLIDAE						
1	MYTILUS (LPIL)	0.0	0.0	9.62	3.21	3.21	2.7
1	MODIDLUS (LPIL)	9.62	0.0	0.0	3.21	3.21	2.7
0	SPHAERIIDAE						
5	PISIDIUM (LPIL)	9.62	0.0	9.62	6.41	3.21	5.4
5	SPHAERIIDAE (LPIL)	0.0	9.62	0.0	3.21	3.21	2.7
0	AMPHIPODA (TOTAL)	0.0	86.54	0.0	28.85	28.85	24.3
0	HAUSTORIIDAE						
1	PONTOFOREIA (LPIL)	0.0	86.54	0.0	28.85	28,85	24.3
0	DIPTERA NEMATOCERA (TOTAL)	38.46	19.23	. 0.0	19.23	11.10	16.2
0	CHIRONOMIDAE						
2	CHIRONOMUS (LPIL)	19.23	0.0	0.0	6.41	6.41	5.4
2	CRYPTOCHIRONOMUS (LPIL)	19.23	0.0	0.0	6.41	6.91	5.4
1	CRYPTOCHIRONOMUS (LPIL)	0.0	19.23	0.0	6.41	6.41	5.4
101	AL	125.00	201.92	28.85	118.59	50.07	100.0
DIV	ERSITY (H PRIME)	1.56	1.43	0.50	1.16	0.33	
DIV	ERSITY (J PRIME)	0.87	0.90	0.50	0.76	0.13	
NUT	BER OF TAXA	5	4	3	8		
801	TOM TYPE 0						

DATE 07/14/80 PAGE NO 16 T600AQUA 9/28/77

BAILEY GENERATING PLANT

BENTHIC MACROINVERTEBRATE NUMERICAL ABUNDANCE (NO/SQ M)

STATION REPORT

LS	TAXA		
			9
0	OLIGOCHAETA (TOTAL)		54.49
0	TUBIFICIDAE		
1	TUDIFICIDAE (LPIL)		54.49
0	BIVALVIA (TOTAL)		16.03
0	MYTILLIDAE		
1	MYTILUS (LPIL)		3.21
	MODIDLUS (LPIL)		3.21
0	SPHAERIIDAE		
5	PISIDIUM (LPIL)		6.41
5	SPHAERIIDAE (LPIL)		3.21
0	AMPHIPODA (TOTAL)		28.85
0	HAUSTCRIIDAE		
1	PONTOFOREIA (LPIL)	28.85
0	DIPTERA NEMATOCERA (T	OTAL)	19.23
0	CHIRONOMIDAE		
2	CHIPONOMUS (LPIL)		6.41
	CRYPTOCHIROHOMUS	(LPIL)	6.41
1	CRYPTOCHIRONOMUS	(LPIL)	6.41
TOT	AL		118.59
DIV	ERSITY (H PRIME)		1.16
DIV	ERSITY (J PRIME)		0.76
NUI	BER OF TAXA		8
BOT	TOM TYPE 0		
ABO	WE COMPUTED USING SAMP	LE IDS	
	71	72 81	82
	91	92	

*		FEL
×	S.E.	ADW -
54.49	-1.00	45.9
54.49	-1.00	45.9
16.03	-1.00	13.5
3.21	-1.00	2.7
3.21	-1.00	2.7
6.41	-1.00	5.6
3.21	-1.00	2.7
28.85	-1.00	29.3
23.85	-1.00	24.3
19.23	-1.00	16.2
6.41	-1.00	5.4
6.91	-1.00	5.4
6.41	-1.00	5.9
118.59		199.0
1.16	-1.00	
0.76	-1.00	
· a		

DATE 07/14/80 PAGE NO 17 T6COAQUA 9/28/77

BAILEY GENERATING PLANT

BENTHIC MACROINVERTEBRATE NUMERICAL ABUNDANCE (NO/SQ M)

REPLICATE REPORT

PC TC GC LOC 5 71 71 1 1 00

	DURATIO	N	TOW	SAMP VOL	WIND	CURENT	TEMP			
SI	D DATE TIME DAN UNITS C							BT TURED COND	DO PH	SALID P
	71 4/20/80 1025 0 0.0 0								8.9 0.0	
1	72 4/20/80 1025 0 0.0 0	10.0 10.0	0.00	0.16 1080	6 1	5 0 0 0	17.8 16.0	0 0.0 0		
	72 4720700 1025 0 0.0 0	10.0 10.0	0.00	0.1 0 1.0 0 0		5 0.0 0				REL
LS	TAXA							×	S.E.	
LJ	1 AAA		1	2					9154	******
0	CNIDARIA (TOTAL)		38.4					19.23	10.03	0.1
	HYDROZOA		30.4					47.62	******	***
0	HYDROZOA HYDRA (LPIL) PLATYHELMINTHES (TOTAL) TUPBELLARIA-(LPIL) NEMATODA (TOTAL) NEMATODA (LPIL) OLIGOHAETA (TOTAL)		70 /	6 0.0				19.23	19.23	0.1
1	DIATEMENTALE ATOTAL		20.4	38.46				19.23	19.23	
0	PLATTHELMININES TIDIAL!		0.0	38.46				19.23		
1	TUPBELLARIA-TEPILI		0.0	33.46				134.62	76.52	
0	NEMATODA (TOTAL)		211.5	57.69						
1	NEMATODA (LPIL)		211.5	4 57.69				134.62	76.92	
0	OLIGOCHAETA (TOTAL)		3423.0	7 22730.75				13076.91	9653.84	01.6
0	NAIDIDAE			1 1						
1	NAIDIDAE (LPIL)		3423.0	7 22730.75				13076.91	9653.04	
0	GASTROPODA (TOTAL)		19.2	3 0.0				9.62		0.1
5	GASTROPCDA (LPIL)		19.2	3 0.0				9.62	9.62	
0	NAIDIDAE NAIDIDAE (LPIL) GASTROPODA (TOTAL) GASTROPCDA (LPIL) BIVALVIA (TOTAL) SPHAERIIDAE PISIDIUM (LPIL) PISIDIUM (LPIL) SPHAERIIDAE (LPIL) AMPHIPODA (TOTAL) HYALELLIDAE		76.9	2 19.23				48.08	20.05	0.3
0	SPHAERIIDAE									
5	PISIDIUM (LPIL)		0.0	19.23				9.62	9.62	
1	PISIDIUM (LPIL)		38.4	6 0.0				19.23	19.23	
5	SPHAERIIDAE (LPIL)		38.4	6 0.0				19.23	19.23	
0	AMPHIPODA (TOTAL)		134.6	2 115.38				125.00	9.62	0.8
0	HYALELLIDAE									
1	HYALELLA AZTECA		134.6	2 115.38				125.00	9.62	
0	HYALELLIDAE HYALELLA AZTECA EFHEMEROPTERA (TOTAL)		38.4	6 19.23				28.85	9.62	0.2
0	CAENIDAE									
0	CAENIS (LPIL)		38.4	6 19.23				28.85	9.62	0.2
0	ODONATA (TOTAL)		19.2	3 0.0				9.62	9.62	0.1
0	COENAGRICHIDAE									
10	COENAGRIONIDAE (LPIL) TRICHOPTERA (TOTAL)		19.2	3 0.0				9.62	9.62	0.1
0	TRICHOPTERA (TOTAL)		19.2	3 0.0				9.62	9.62	0.1
0	HYDDODTTI TDAE									
2	ORTHOTRICHIA (LPIL)		19.2	3 0.0				9.62	9.62	0.1
0	DIPTERA HEMATOCERA (TOTAL)							1490.33	701.92	9.9
0	CERATOROGONIDAE									
2	CERATOPOGONIDAE (LPIL)		0.0	57.69				28.85	28.85	0.2
0	CHIDOMONIDAE									
2	CHIPONOMIS (IPIL)		0.0	461.54				230.77	230.77	1.5
2	CHIRONOMUS (LPIL) CRICOTOPUS (LFIL)		0.0	19.23				9.62	9.62	
2	TANYTARSUS (LPIL)		461 5	750.00				605.77	144.23	
2	DICROTENDIPES (LPIL)		96.1	5 0.0				43.03	48.03	
. 2	ABLABESMYIA (LPIL)		57.6	9 211.54				134.62	76.92	
: -	ASEADESITIA (CFIL)		37.0	241,34				4-377-10-5	10.176	4.7

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BAILEY GENERATING PLANT

BENTHIC MACROINVERTEBRATE NUMERICAL ABUNDANCE (NO/SQ M) .

REPLICATE REPORT

LS	TAXA			×		2.75
		1	2			
2	PSECTROCLADIUS (LPIL)	153.85	673.08	413.46	259.61	1.6
2	ENDOCHIRONOMUS (LPIL)	19.23	0.0	9.62	9.60	0.1
3	CHIRCHOMIDAE (LPIL)	0.0	19.23	9.62	9,62	0.1
0	DIPTERA BRACHYCERA (TOTAL)	38.46	0.0	19.23	19.33	0.2
0	STRATICMYIDAE					
2	NEHOLETUS	19.23	0.0	9.62	9.62	0.1
0	TABANIDAE					
2	CHRYSOPS (LPIL)	19.23	0.0	9.62	9.62	0.1
TO	TAL	4807.68	25173.04	14990.36	10102.60 10	0.0
DI	VERSITY (H PRIME)	1.78	0.71	1.24	0.53	
DI	VERSITY (J PRIME)	0.44	0.19	0.31	0.12	
NUI	BER OF TAXA	17	13	22		
10	TTOM TYPE 0					

171 172

ABOVE COMPUTED USING SAMPLE IDS

DATE 07/14/80 PAGE NO 21 T600AQUA 9/28/77

BAILEY GENERATING PLANT

BENTHIC MACROINVERTEBRATE NUMERICAL ABUNDANCE (NO/SQ M)

REPLICATE REPORT

FC TC GC LOC 5 71 71 1 1 00

	DURATION	TOW SAMP	VOL	WIND	CUPENT	TEMP			
SI	D DATE TIME D/N UNITS C SD						BT TUPED COND	DO FH S	SAIN P
1	81 4/20/80 1025 0 0.0 0 10.0 1	0.0 0.0 0 0.1	6 1.0 8 0	4 1 5	0.0 0	17.8 15.5	0 0.0 0	9.1 0.0	
	82 4/20/80 1025 0 0.0 0 10.0 1							9.1 0.0	
						*****			REL
LS	TAXA						×	S.E.	
3.00		1	2					****	84000
0	CNIDARIA (TOTAL)	57.69	96.15				76.92	19.23	4.2
0	HYDROZOA							71777	
1	HYDRA (LPIL)	57.69	96.15				76.92	19.23	4.2
0	NEMATODA (TOTAL) NEMATODA (LPIL) OLIGOCHAETA (TOTAL)	19.23	0.0				9.62	9.62	0.3
1	NEMATODA (LPIL)	19.23	0.0				9.62	9.62	
0	OLIGOCHAETA (TOTAL)	288.46	538.46				413.46	125.00	22.4
0	NAIDIDAE								
1	NAIDIDAE (LPIL)	38.46	115.38				76.92	38.46	4.2
0	TUBIFICIDAE								
1	TUBIFICIDAE (LPIL)	250.00	423.08				336.54	€6.54	18.2
0	BIVALVIA (TOTAL)	0.0	115.38				57.69	57.69	3.1
0	SPHAERIIDAE								
5	SPHAERIUM (LPIL)	0.0	115.38				57.69	57.69	3.1
0	NAIDIDAE NAIDIDAE NAIDIDAE (LPIL) TUBIFICIDAE TUBIFICIDAE (LPIL) BIVALVIA (TOTAL) SFHAERIIDAE SFHAERIUM (LPIL) OSTRACODA (TOTAL)	76.92	0.0				38.46	33,46	2.1
1	OSTRACODA (LPIL) COPEPODA (TOTAL) CALANOIDA (TOTAL) CALANOIDA (LPIL) AMPHIFODA (TOTAL)	76.92	0.0				38.46	38.46	2.1
0	COPEFODA (TOTAL)	19.23	0.0				9.62	9.62	0.5
0	CALANOIDA (TOTAL)								
1	CALANOIDA (LPIL)	19.23	0.0				9.62	9.62	0.5
0	AMPHIFODA (TOTAL)	76.92	96.15				86.54	9.62	4.7
0	HYALELLIDAE								
1	HYALELLI AZTECA	76.92	96.15				86.54	9.62	
0	EPHEMEROPTERA (TOTAL)	153.85	38.46				95.15	57.69	5.2
0	CAENIDAE								
10	CAENIS (LPIL)	153.85	38.46				96.15	57.69	
0	TRICHOPIERA (TOTAL)	38.46	0.0				19.23	19.23	1.0
0	LEPTOCERIDAE								
2	OECETIS (LPIL)	38.46	0.0				19.23	19.23	-
		1057.69	1019.23				1038.46	19.03	56.3
0	CERATOPOGONIDAE								
. 2	CERATOPOGONIDAE (LPIL)	57.69	38.46				48.08	9.62	2.6
U	CHIRCHOMIDAE								
2	CRYPTOCHIRONOMUS (LPIL)	19.23	0.0				9.62	9.62	
2	TANYTARSUS (LPIL) DICROTENDIPES (LPIL)	230.77	173.08				201.92	28.85	
2	DICROTENDIPES (LPIL)	76.92	38.46				57.69	19.23	
2	FOLYFEDILUM (LPIL)	38.46	0.0				19.23	19.23	
2	ABLABESHYIA (LPIL) FROCLADIUS (LPIL)	0.0	38.46				19.23	19.23	
2			673.08				596.15		32.3
. 5	THIENEMANNIELLA (LPIL)	38.46	0.0				19.23	19.2.	1.0
*									

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BAILEY GENERATING PLANT

BENTHIC MACROINVERTEBRATE NUMERICAL ABUNDANCE (NO/SQ M)

REPLICATE REPORT

				51,740,741
LS TAXA			X	S.E. ADX
	1	2		
2 PSECTROCLADIUS (LPIL)	19.23	38.46	28.85	9.62 1.6
2 TRICHOCLADIUS	0.0	19.23	9.62	3.62 0.5
2 CHIRONOMIDAE (LPIL)	57.69	0.0	28.85	23.85 1.6
TOTAL	1788.46	1903.84	1846.15	57.69 100.0
DIVERSITY (H PRIME)	3.42	2.89	3.16	0.27
DIVERSITY (J PRIME)	0.82	0.73	0.80	0.02
NUMBER OF TAXA	18	13	21	
EOTTOM TYPE 0				

ABOVE COMPUTED USING SAMPLE IDS 181 182

> DATE 07/14/80 PAGE NO 23 T600AQUA 9/28/77

.

BAILEY GENERATING PLANT

BENTHIC MACROINVERTEBRATE NUMERICAL ABUNDANCE (HO/SQ M)

STATION REPORT

LS	TAXA			×	S.E.	PEL
		17	18			1019414
0	CNIDARIA (TOTAL) HYDROZOA	19.23	76.92	48.03	28.85	0.6
1	HYDRA (LPIL) FLATYHELMINTHES (TOTAL) TURBELLARIA-(LPIL)	19.23	76.92	48.03	28.85	0.6
0	PLATYHELMINTHES (TOTAL)	19.23	0.0	9.62	9.62	
1	TURBELLARIA-(LPIL)	19.23	0.0	9.62	9.62	
0	NEMATODA (TOTAL)	134.62	9.62	72.12	62.50	
1	NEMATODA (LPIL)	134.62	9.62	72.12		
0	TURBELLARIA-(LPIL) NEMATODA (TOTAL) NEMATODA (LPIL) OLIGOCHAETA (TOTAL) NAIDIDAE		413.46	6745.19	6331.72	
1 0	NAIDIDAE (LPIL) TUBIFICIDAE		76.92	6576.92	6499,99	75.1
1	TUBIFICIDAE (LPIL)	0.0	336.59	168.27	168.27	2.0
0	GASTROPODA (TOTAL)	9.62	0.0	4.81	4.81	0.1
5	GASTROFODA (LPIL)	9.62	0.0	4.81	4.81	0.1
0		0.0 9.62 9.62 48.08	57.69	52.83	4.81	0.6
5	SPHAERIUM (LPIL) PISIDIUM (LPIL) PISIDIUM (LPIL)	0.0	57.69	28.85	28.85	0.3
5	PISIDIUM (LPIL)	9.62	0.0	4.81	9.82	0.1
1	PISIDIUM (LPIL)	19.23	0.0	9.62	9.62	0.1
5	SPHAERIIDAE (LPIL)	19.23	0.0	9.62	9.62	0.1
0	OSTRACODA (TOTAL)	0.0	38.46	19.23	19.23	0.2
1	OSTRACODA (LPIL)	0.0	38.46	19.23	19.23	0.2
0	COPEFODA (TOTAL)	0.0	9.62	4.81	4.81	0.1
0	CALANOIDA (TOTAL)					
1	CALANDIDA (LPIL)	0.0	9.62	4.81	4.61	0.1
0	AMFHIFODA (TOTAL) HYALELLIDAE	125.00	86.54	105.77	19.23	1.3
1	HYALELLA AZTECA	125.00	85.54	105.77	19.23	1.3
0	CAENIDAE	28.85	96.15	62.50	33.65	0.7
10	CAENIS (LPIL)	28.85	96.15	62.50	33.65	0.7
0	ODONATA (TOTAL) COENAGRIONIDAE	9.62	0.0	4.81	4.81	0.1
10	COENAGRIONIDAE (LPIL)	9.62	0.0	4.61	4.81	0.1
. 0	TRICHOPTERA (TOTAL) HYDROPTILIDAE		19.23	14.42	4.81	0.2
2 0	LEPTOCEPIDAE	9.62	0.0	4.81	4.81	0.1
2	OECETIS (LPIL)	0.0	19.23	9.62	9.62	0.1
0	DIFTERA NEMATOCERA (TOTAL) CERATOPOGONIDAE	1490.38	1038.46	1264.42	225.96	15.0
2	CERATOPOGONIDAE (LPIL) CHIRONOMIDAE	28.85	48.08	38.46	9,62	0.5
. 2		230.77	0.0	115.38	115.33	1.4

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BAILEY GENERATING PLANT

BENTHIC MACROIN/ERTEBRATE NUMERICAL ABUNDANCE (NO/SQ M)

STATION REPORT

LS	TAXA		
		17	18
2	CRYPTOCHIRONOMUS (LPIL)	0.0	9.62
2	CRICOTOPUS (LPIL)	9.62	0.0
2	TANYTARSUS (LPIL)	605.77	201.92
2	DICROTENDIPES (LPIL)	48.08	57.69
2	POLYPEDILUM (LPIL)	0.0	19.23
2	ABLABESHYIA (LPIL)	134.62	19.23
2	PROCLADIUS (LFIL)	0.0	596.15
2	THIENEMANNIELLA (LPIL)	0.0	19.23
2 2 2 2 2 2 2 2 3	PSECTROCLADIUS (LPIL)	413.46	28.85
2	ENDOCHIPONOMUS (LPIL)	9.62	0.0
2	TRICHOCLADIUS	0.0	9.62
2	CHIRONOMIDAE (LPIL)	0.0	28.85
3	CHIRONOMIDAE (LPIL)	9.62	0.0
0	DIPTERA BRACHYCERA (TOTAL)	19.23	0.0
0	STRATIONYIDAE		
2	NEHOLETUS	9.62	0.0
0	TABANIDAE		
2	CHRYSOPS (LPIL)	9.62	0.0
TOT	AL	14990.36	1846.15
DIV	ERSITY (H FRIME)	1.24	3.16
DIV	ERSITY (J PRIME)	0.31	0.80
NUR	BER OF TAXA	22	21
BOT	TOM TYPE 0		
ABO	VE COMPUTED USING SAMPLE IDS		
	171 172	181 182	

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MEL X S.E. ABX 4.81 4.81 0.1 4.31 4.81 0.1 403.85 201.92 9.3 52.88 4.61 0.6 9.62 9.62 0.1 76.92 57.69 0.9 293.08 298.08 3.5 9.62 9.02 0.1 221.15 192.31 2.6 4.81 4.61 0.1 4.81 4.81 0.1 14.42 14.42 0.2 4.81 9.81 0.1 9.62 9.62 0.1 4.81 4.61 0.1 4.81 4.81 0.1 8418.25 6572.10 100.0 2.20 0.96 0.56 0.24 32

BAILEY GENERATING PLANT

BENTHIC MACROINVERTEBRATE NUMERICAL ABUNDANCE (NO/SQ M)

STATION REPORT

LS	TAXA	
		18
0	CNIDARIA (TOTAL)	48.08
0		
1	HYDRA (LPIL)	48.08
0	PLATYHELMINTHES (TOTAL)	9.62
2	TURBELLARIA-(LPIL)	9.62
6	NEMATODA (TOTAL)	72.12
1	NEMATODA (LPIL)	72.12
0	OLIGOCHAETA (TOTAL)	6745.19
0	NAIDIDAE	
1	NAIDIDAE (LPIL)	6576.92
0	TUBIFICIDAE	
1	TUBIFICIDAE (LPIL)	168.27
0	GASTROPODA (TOTAL)	4.81
5	GASTROPODA (LPIL)	4.81
0	BIVALVIA (TOTAL)	52.88
0	SFHAERIIDAE	
5	SPHAERIUM (LPIL)	28.85
5	PISIDIUM (LPIL)	4.81
1	PISIDIUM (LPIL)	9.62
5	SPHAERIIDAE (LPIL)	9.62
0	OSTRACODA (TOTAL)	19.23
1	OSTRACODA (LPIL)	19.23
0	COPEPODA (TOTAL)	4.81
0	CALAMOIDA (TOTAL)	
1	CALANOIDA (LPIL)	4.81
0	AMPHIPODA (TOTAL)	105.77
0	HYALELLIDAE	
1	HYALELLA AZTECA	105.77
0	EPHEMEPOPTERA (TOTAL)	62.50
0	CAENIDAE	
10	CAENIS (LPIL)	62.50
0	ODONATA (TOTAL)	4.81
0	COENAGRIONIDAE	
10	COENAGRIONIDAE (LPIL)	4.81
0	TRICHOPTERA (TOTAL)	14.42
. 0	HYDROPTILIDAE	
2	ORTHOTRICHIA (LPIL)	4.81
0	LEPTOCERIDAE	
2	OECETIS (LPIL)	9.62
0	DIPTERA NEMATOCERA (TOTAL)	1264.42
0		
2	CERATOPOSONIDAE (LPIL)	38.46
0	CHIRONOMIDAE	
. 2	CHIRONOMUS (LPIL)	115.38

		P. P. L.
~		REL
X	S.E.	ABX
46.08	-1.00	0.6
48.08	-1.00	0.6
9.62	-1.00	0.1
9.62	-1.00	
		0.1
72.12	-1.00	
72.12	-1.00	
6745.19	-1.00	80.1
6576.92	-1.00	75.1
168.27	-1.00	2.0
4.81	-1.00	0.1
4.61	-1.00	0.1
52.83	-1.00	0.6
28.85	-1.00	0.3
4.81	-1.00	0.1
9.62	-1.00	0.1
9.62	-1.00	0.1
19.23	-1.00	0.2
19.23	-1.00	0.2
4.81	-1.00	0.1
		~
4.81	-1.00	0.1
105.77	-1.00	1.3
105.77	-1.00	1.3
62.50	-1.00	0.7
06.30	-1.00	0.1
62.50	-1.00	0.7
4.81	-1.00	0.1
4.81	-1.00	0.1
14.42	-1.00	0.2

4.61	-1.00	0.1
4.04	4.550	
9.62	-1.00	0.1
1269.42	-1.00	
1004-40	-1.00	15.0
38.46	-1.00	0.5
2004.400	2.100	M. s. of
115.38	-1.00	1.6
419.50	-1.00	2.17

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BAILEY GENERATING PLANT

BENTHIC MACROINVERTEBRATE NUMERICAL ABUNDANCE (NU/SQ M)

STATION REPORT

LS	TAXA	
		18
2	CRYPTOCHIRONOMUS (LPIL)	4.81
	CRICOTOPUS (LPIL)	4.61
2	TANYTARSUS (LPIL)	403.85
2 2 2 2 2 2 2 2 2 2 2	DICROTENDIPES (LPIL)	52.68
2	FOLYPEDILUM (LPIL)	9.62
2	ABLABESMYIA (LPIL)	76.92
2	PROCLADIUS (LPIL)	298.08
2	THIENEMANNIELLA (LPIL)	9.62
2	PSECTROCLADIUS (LPIL)	221.15
2	ENDOCHIRONOMUS (LPIL)	4.81
2	TRICHOCLADIUS	4.81
2	CHIRONOMIDAE (LPIL)	14.42
3	CHIROHOMIDAE (LPIL)	4.81
0	DIPTERA BRACHYCERA (TOTAL)	9.62
0	STRATICMYIDAE	
2	NEMOLETUS	4.81
0	TABANIDAE	
2	CHRYSOPS (LPIL)	4.81
TOT	AL	8418.25
DIV	ERSITY (H PRIME)	2.20
DIV	ERSITY (J PRIML)	0.56
NUL	DER OF TAXA	32
BOT	TOM TYPE 0	
ABO	VE COMPUTED USING SAMPLE IDS	
	171 172 181	182

	REL
X	S.E. 10%
4.81	-1.00 0.1
9.61	-1.00 0.1
403.85	-1.90 4.8
52.63	-1.70 0.5
9.62	-1.00 0.1
76.92	-1.00 0.9
298.08	-1.00 3.5
9.62	-1.00 C.1
221.15	-1.00 2.6
4.81	-1.00 0.1
4.81	-1.00 0.1
14.42	-1.00 0.2
4.81	-1.00 0.1
9.62	-1.00 0.1
4.81	-1.00 0.1
4.81	-1.00 0.1
8418.25	-1.00 100.0
2.20	-1.00
0.55	-1.00
32	

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BAILEY GENERATING PLANT

BENTHIC MACROINVERTEBRATE NUMERICAL ABUNDANCE (NO/SQ M)

REPLICATE REPORT

PC TC GC LOC 5 71 71 1 2 00

					DURAT	ION			TON	SAM	P VC	L.		WI	ND		CURE	ENT	T	EMP								
SI	D DA	TE	TIME	D/N	UNITS	C	50	ND	SP D	UNI	TS C	SECH	H T	SC I	IC	CL	SP	DI			BT	TURED	C	CIND	DO	FH	SAI	LH P
1	91 4/2	0/80	1055	0	0.0	0	10.0	10.0	0.0 0	0	.1 6	1.0	8 0	4	1	5	0.6	0	17.8	19.5	0	0.0		0	8.5	0.0	0	.00
1	92 4/2	0/80	1055	0	0.0	0	10.0	10.0	0.00	0	.1 6	1.0	8 0	4	1	5	0.0	0	17.8	19.5	0	0.0		0	8.5	0.0	.0	.0 0
																						-					- 5	REL
LS	TA																					X				S.E.	3	18%
	NEMATO NEMATO OLIGOCI								1			2																
0	NEMATO	DA (1	TOTAL)					269	.23			.46									153				115.3		2.5
1	NEMATO	DA (LPIL)						269	.23		38										153				115.3		2.6
0	OFIGOC	HAETA	1 (10	TAL)					5750	.00		2519	.23									4134	.61		1	615.3	8	70.5
0	149.70	TOME							2769																			
1	NAID											1980	.77									2375	.00			399.2	2 .	10.5
0	TUBI	FICIL	JAE .						0000	79.79												1750						** 6
1 0	BIVALV	FICH	DAE I	LPIL	,				2980	. //		538										1759				019.2		
0	DIVALV	EDITE	MAE	,					2980 2153 0 2153	.64		115	. 38									1134	.01			017-2	3 .	14-3
5	SFIRE	CKIII	TIME C	pri						0		115	70									57	40			57.6	0	1.0
2	en en	HAEDI	THE C	LPIL	,				2157	. 0		0	-									1076				076.9		18.4
0	AMPUTE	CODA	TOTA	FLIF	,				19	.04			.46										.85			9.6		0.5
0	HYAL	FLITE	DAF	.,					17	. 63		30	.40									6.0				7.40	61.	20.00
1	AMPHIF HYAL HY	ALFII	A A7	TECA					19	23		78	.46									28	.85			9.6	2	0.5
0	EPHEME	POPT	PA (TOTA	1.)				19				.23										.23			0.0		0.3
0	CAEN	TDAF										***																
10	CA	ENIS	(LPI	LI					19	.23		19	.23									19	.23			0.0		0.3
0	CA TRICHO	PTER	L ITO	TAL					19			0										9	.62			9.6	2	0.2
0	LEPT											-																
2	OE	CETIS	LEP.	IL)					19	.23		0	. 0									9	.62			9.6	2	0.2
0	DIPTER	A NET	TATOC	ERA	(TOTAL	.)			173	.08		557	.69									365	.38			192.3	1	6.2
0	CERA	TOPO	ONID.	AE																								
2	CERA	TOPOS	SONID	AE (LPIL)				57	.69		96	.15										. 92			19.2	3	1.3
0	CHIR	ONOM	DAE																									
2	CH	IRON	ortus	(LPI	LI				0 38 57	.0		19	.23									9	.62			9.6	2	0.2
2	TA	NYTAR	SUS	(LPI	L)				38	.46		250	.00									144	.23			105.7	7	2.5
2	DI	CROTE	ENDIP	ES (LPIL)				57	.69		115	7.70									86	.54			28.8		1.5
2	PO	LYPE	DILUM	(LP	ILI				19			0										9	1.62			9.6		0.2
2	FR	OCLA	DIUS	(LPI	L				0			-315.	.46									19	.23			19.2		0.3
. 2	PA	RATE	DIPE	SIL	PIL)				0				.23									9	.62			9.6		0.2
2	CHIR	OHOM	IDAE	(LPI	L)				0				.23									9	1.62			9.6		9.2
0	PO FR PA CHIR GIPTER	A BR	CHYC	ERA	TOTAL	.)			19	.23		0	. 0									9	.62			9.6	2	0.2
0	TARAT	HIDAE						. 1																				
2	CH	RYSOF	5 (L)	PIL)					19			-	. 0										.62			9.6		0.2
	DIPTER	A III	JIAL)						19				. 0										.62			9.6	-	0.2
2	DIPTER	AILI	ILL						19	.23		0	. 0									,	1.62			9.6	-	0.2
TOT	4.1								8442	7.0		3288	46									5865	27			576.9	2 31	00.0
	ERSITY	(H Pr	THE						0442	. 97		2											.01			0.0		30-0
DIV	TASA CH DIPTER DIPTER AL ERSITY	in ri	ATTE 7						1			-										-				0.0	of:	

DATE 07/14/80 PAGE NO 28 NORTHERN INDIANA PUBLIC SERVICE COMPANY (49720) BAILEY GENERATING PLANT BENTHIC MACROINVERTEBRATE NUMERICAL ABUNDANCE (NO/SQ M) . REPLICATE REPURT REL LS TAXA S.E. AS% DIVERSITY (J PRIME) 0.53 0.55 0.54 0.03 NUMBER OF TAXA 13 17 13 BOTTOM TYPE 0 ABOVE COMPUTED USING SAMPLE IDS 191 192 DATE 07/14/80

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BAILEY GENERATING PLANT

BENTHIC MACROINVERTEBRATE NUMERICAL ABUNDANCE (NO/SQ M)

PEPLICATE REPORT

PC TC GC LOC 5 71 71 1 2 00

			DURA	TION	1		TOW		SAMP !	VOL	0		WI	ND		CUR	ENT	7	EMP								
SI	D DATE	TIME	D/N UNIT	SC	SD	ND	SP	D	UNITS	C	SECH	WT	SC	DI	CL	SP	DI	AIR	MAT	BT	TURED	CO	(D)	00	PH	SALE	1 72
2	01 4/20/80	1055	0 0.0	0	10.0	10.0	0.0	0	0.1	6	1.0	8 0	4	1	5	0.0	0	17.8	19.5	0	0.0		0	8.7	0.0	0.5	0 0
2	02 4/20/80	1055	0 0.0	0	10.0	10.0	0.0	0	0.1	6	1.0	8 0	4	1	5	0.0	0	17.8	19.5	. 0	0.0		0	8.7	0.0	0.0	0 0
14.7																					-					2.2	EL
LS	TAXA																				X				S.E.	42	3%
								1			2																
0	NEMATODA (TOTAL					3	8.4	6		19.	.23									28	. 85			9.62	2 0	3.7
1	NEMATODA (LPIL!					3	8.4	6		19.	.23									28	.85			9.60	2 6	0.7
0	OLIGOCHAET	A (TOT	AL)				169	2.3	1		5134.	.61									3413	.46		1.7	21.15	5 85	5.5
0	NEMATODA (NEMATODA (NEMATODA (OLIGOCHAET NAIDIDAE NAIDIDAE TUBIFICI TUBIFICI																										
1	NAIDIDAE	(LPIL)				46	1.5	4		4538.	.46									2500	.00		20	138.45	68	2.7
0	TUBIFICI	DAE																									
1	TUBIFICI	DAE 11	PIL)				123	0.7	7		596.											.46			17.31		
0	HIRUDINEA	TOTAL)					0.0			19.	.23									9	.62			9.63	2 (0.2
0	GLOSSIPH	ONIIDA	E																								
1	GLOSSIPH	ONLIDA	E (LPIL)					0.0			19.										9				9.62		0.2
0	BIVALVIA (TOTAL					3	8.4	6		230.	.77									134	.62			95.15	9 3	3.4
0	SPHAERII	DAE						and the																			
5	SPHAER	IUN (L	PILI				. 3	8.4	6		230.										134				96.15		3.4
0	OSTRACODA	TOTAL					1	9.2	3		0.											.62			9.60		0.2
1	OSTRACODA	(LPIL)					1	9.2	3		0.											.62			9.62		0.2
- 575	COPEPCDA (TOTAL						0.0			19.	.23									9	.62			9.68	2 9	0.2
0	HARPACTI	COIDA	(IOTAL)																						W 27		
1	HARPACII	CUIUA	(LPIL)					0.0			19.											.62			9.62		0.2
100	HARPACTI HARPACTI ISOPODA (T ASELLIDA ASELLU EPHEMEROPT	DIALI					5	8.4	6		0.	.0									19	.23			19.23	3 (0.5
0	ASELLIDA	C / 1 DT						8.4			0.	~									10	.23			19.23		0.5
0	EPHEMEROPT	S I LPI	CTALL					0.4	0		19.											.62			9.62		0.2
	CAENIDAE	ERA II	DIALI					0.0			17.	23									7	.02			7.00		1-6
10	CACHILOAE	(IDTI						0 0			19.	22									0	.62			9.60		0.2
0	CAENIDAE CAENIS TRICHOPTER	A (TOT	41.)					0.0			19.											.62			9.62		0.2
0	LEPTOCER	TDAE	AL /					0.0			17.	2.3										.02			7.00		100
			1.3					0 0			19.	23									0	.62			9.62		0.2
0	DIPTERA NE	MATOCE	PA (TOTA	× × -			19	2 3	1		500.										346			7	53.05		8.7
0	CEPATOPO			14.5			* *		*		2001										- 10	-			W W 1 W 1		
. 2	CERATOPO						7	6.0	2		76.	92									76	. 92			0.0	. 1	1.9
. 0	CHIRONOTI							Mr. 0 X	-		1.50.4																
2	CHIRON		LPIL)					0.0			38.	46									19	.23			19.23	3 - 0	0.5
2			LPIL)				1	9.2	3		96.											.69			33.95		1.4
2	DICROT	ENDIPE	S (LPIL)						-		211.										105				05.77		2.7
2	ABLABE	SMYIA	(LPIL)								38.	45									38	.45			0.0	1	1.0
2	PROCLA	DIUS (LPIL)					0.0			19.	23									9	.62			9.62	2 (0.2
2	FHAENO	PSECTR	A (LPIL)				1	9.2	3		0.	0									9	.62			9.62	2 0	0.2
. 2	PSECTR	OCLADI	US (LPIL					8.4			19.	23									23	. 65			9.63	2 (0.7
4												and on one an			46.70	WHEN SHITTED	On 166										

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9/28/77

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BAILEY GENERATING PLANT

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BENTHIC MACROINVERTEBRATE NUMERICAL ABUNDANCE (MO/SQ M)

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REPLICATE REPORT

LS TAXA			×	S.E. ACK
	1	2		
TOTAL DIVERSITY (H PRIME) DIVERSITY (J PRIME) NUMBER OF TAXA BOTTOM TYPE 0	2019.23 1.84 0.53 11	5961.52 1.44 0.37 15	3990.37 1.64 0.45 18	1971.15 100.0 0.20 0.00
ABOVE COMPLIED USING SAMPLE IDS				

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BAILEY GENERATING PLANT

BENTHIC MACROINVERTEBRATE NUMERICAL ABUNDANCE (NO/SQ M)

STATION REPORT

	****						PEL
LS	TAXA			•	X	S.E.	ABK
-	NEMATODA (TOTAL) NEMATODA (LPIL)	19	20			1,000,000	
0	HEMATODA (IDTAL)	153.85	28.85		91.35	62.50	
1	NEMATODA (LPIL)	153.85	28.85		91.35	62.50	
0	OLIGOCHAETA (TOTAL) NAIDIDAE	4134.61	3413.46		3774.03	360.53	76.6
0	NAIDIDAE (LPIL) TUBIFICIDAE		2500.00		2437.50	62.50	49.5
1	TUBIFICIDAE (LPIL)	1759.61	913.46		1336.54	423.08	27.1
0	CLOSSIPHONI (DAT	0.0	9.62		4.81	4.81	0.1
1	GLOSSIPHON IDAE (LPIL)	0.0	9.62		4.81	4.81	0.1
0	GLOSSIFHON IDAE (LPIL) BIVALVIA (TO). L1 SPHAERIIDAE	1134.61	134.62		634.61		
5	SPHAFRIUM (IPTL)	57.69	134.62		95.15	38.46	2.0
2	SPHAERIUM (LPIL)	1076.92	0.0		538.46	538.46	
100	OSTRACODA (TOTAL)	0.0	9.62		4.31	4.81	
1	OSTRACODA (LPIL)	0.0	9.62		4.81	4.61	
	COPEPODA (TOTAL)	0.0	9.62		4.81	4.81	
0	HARPACTICOIDA (TOTAL)	0.0 0.0 0.0					
1	HARPACTICOIDA (LPIL)	0.0	9.62		4.81	4.81	
0	ASELLIDAE	0.0	19.23		9.62	9.62	
1	ASELLUS (LPIL) AMPHIPODA (TOTAL)	0.0	19.23		9.62	9.62	0.2
0		28.85	0.0		14.42	14.42	0.3
1	HYALELLA AZTECA	28.85	0.0		14.42	14.42	0.3
0 0	CAENIDAE		9.62		14.42	4.31	0.3
10	CAENIS (LPIL)	19.23	9.62		14.42	4.81	0.3
0	LEPTOCERTDAE		9.62		9.62	0.0	0.2
2	OECETIS (LPIL)	9.62	9.62		9.62	0.0	0.2
0	DIPTERA NEMATOCERA (TOTAL) CERATOPOGONIDAE	365.38	346.15		355.77	9.62	
2			76.92		76.92	0.0	1.6
. 2	CHIRONOMUS (LPIL)	9.62	19.23		14.42	4.81	0.3
2	TANYTARSUS (LPIL)		57.69			43.27	
2	DICPOTENDIPES (IPTL)	94 50	105.77		96.15	9.62	
2	POLYFEDILUM (LPIL)	9.62	0.0		4.01	4.51	140.1
2	ABLABESMYIA (LPIL)	0.0	38.46		19.23	19.23	
2	ABLABESMYIA (LPIL) PROCLADIUS (LPIL)	19.23	9.62		14.42	4.81	
2	PHAENOPSECTRA (PTL)	0.0	9.62		4.81	4.81	
2	PHAENOPSECTRA . LPIL) PSECTROCLADIUS (LPIL)	0.0	28.85		14.42	14.42	
. 2	PARATENDIPES (LPIL)	9.62	0.0		4.81	4.81	0.1
		7106	***		3.02	7.01	0.4

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BAILEY GENERATING PLANT

BENTHIC MACROINVERTEBRATE NUMERICAL ABUNDANCE (NO/SQ M)

STATION REPORT

LS TAXA			
	19	20	
2 CHIRONOMIDAE (LPIL)	9.6	0.0	
O DIPTERA BRACHYCERA (TOTAL)	9.62	0.0	
O TABANIDAE			
2 CHRYSOPS (LPIL)	9.62	0.0	
O DIPTERA (TUTAL)	9.62	0.0	
2 DIPTERA (LP.L)	9.62	0.0	
TOTAL	5865.37	3990.37	
DIVERSITY (H PRIME)	2.01	1.64	
DIVERSITY (J PRIME)	0.54	0.45	
NUMBER OF TAXA	17	18	
EOTTOM TYPE 0			
ABOVE COMPUTED USING SAMPLE IDS			
191 192	201 202		
		5.175	47.77.744

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X S.E. ABZ 4.81 9.81 0.1 4.81 4.81 0.1 4.81 4.61 0.1 4.81 0.1 4.81 0.1 4.81 4.31 4927.37 937.50 100.0 1.02 0.16 0.50 0.05 24

PEL

BAILEY GENERATING PLANT

BENTHIC MACROINVERTEBRATE NUMERICAL ABUNDANCE (NO/SQ M)

STATION REPORT

LS	TAXA	20
0	NEMATODA (TOTAL)	91.35
1		91.35
0		3774.03
0	NAIDIDAE	3//4.03
1		2437.50
0	TUBIFICIDAE	2437.30
1		1336.54
0	HIRUDINEA (TOTAL)	4.81
0	GLOSSIPHONITOAE	4.01
1	GLOSSIFHONIIDAE (LPIL)	4.81
0	BIVALVIA (TOTAL)	634.61
0	SPHAERIIDAE	054.01
5	SPHAERIUM (LPIL)	96.15
2	SPHAERIUM (LPIL)	538.46
0	OSTRACODA (TOTAL)	4.81
1	OSTRACODA (LPIL)	4.81
0	COPEFODA (TOTAL)	4.81
0	HARPACTICOIDA (TOTAL)	7.02
1	HARPACTICOIDA (LPIL)	4.81
0	ISOPODA (TOTAL)	9.62
0	ASELLIDAE	
1	ASELLUS (LPIL)	9.62
0	AMPHIPODA (TOTAL)	14.42
0	HYALELLIDAE	
1	HYALELLA AZTECA	14.42
0	EFHETEROPTERA (TOTAL)	14.42
0	CAENIDAE	
10	CAENIS (LPIL)	14.42
0	TRICHOPTERA (TOTAL)	9.62
0	LEPTOCERIDAE	
14	OECETIS (LPIL)	9.62
0	DIPTERA NEMATOCERA (TOTAL)	355.77
0	CERATOPOGONIDAE	
2	CERATOPOGONITIE (LPIL)	76.92
0	CHIRCHOMIDAE	
2 2 2 2 2	CHIRONOMUS (LPIL)	14.42
2	TANYTARSUS (LPIL)	100.96
2	DICROTENDIPES (LPIL)	96.15
2	FOLYFEDILUM (IPIL)	4.81
2	ABLADESMYIA (LPIL)	19.23
2	FROCLADIUS (LPIL)	14.42
2	PHAENOPSECTRA (LPIL)	4.81
2	PSECTROCLADIUS (LPIL)	14.42
2	PARATENDIFES (LPIL)	4.81

		REL
×	S.E.	ADZ
	100.000.00	
91.35	-1.00	1.9
91.35	-1.00	1.9
3774.03	-1.00	76.6
2437.50	-1.00	60 0
2457.50	4.00	100
1336.54	-1.00	27.1
4.81	-1.00	
4.81	-1.00	0.1
634.61	-1.00	
034.01	-1.00	14.5
96.15	-1.00	2.0
533.46	-1.00	10.9
4.81		
	-1.00	0.1
4.81	-1.00	0.1
4.81	-1.00	0.1
4.81	-1.00	
9.62	-1.00	0.2
9.62	-1.00	0.2
14.42	-1.00	0.3
14.42	-1.00	0.3
14.42	-1.00	0.3
14.42	-1.00	0.3
9.62	-1.00	0.2
9.62	-1.00	0.2
355.77	-1.00	7.2
	-	
76.92	-1.00	1.6
14.42	-1.00	0.3
100.96	-1.00	2.9
96.15	-1.00	2.0
4.81	-1.00	0.1
19.23	-1.00	0.4
14.42	-1.00	0.3
4.81	-1.00	0.1
14.42	-1.00	0.3
4.81	-1.00	0.1

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BAILEY GENERATING PLANT

BENTHIC MACROINVERTEBRATE NUMERICAL ABUNDANCE (NO/SQ M)

STATION REPORT

LS	TAXA		
			20
2	CHIRONOMIDAE (LPIL)		4.81
0	DIPTERA BRACHYCERA (TOTAL)		4.81
0 2	TABANIDAE		
2	CHRYSOPS (LPIL)		4.81
0	DIPTERA (TOTAL)		4.81
2	DIPTERA (LPIL)		4.81
TOT	AL		4927.87
DIV	ERSITY (H PRIME)		1.82
DIV	ERSITY (J FRIME)		0.50
NUIT	SER OF TAXA		24
BOT	TOM TYPE 0		
ABO	WE COMPUTED USING SAMPLE IDS		
	191 192	201	202

DATE 07/14/80 PAGE NO 35 T600AGUA 9/28/77

S.E. ALX 4.81 -1.00 0.1 -1.00 0.1 4.81 -1.00 0.1 -1.00 0.1 4.81 4,31 4.51 -1.00 0.1 4927.87 -1.00 100.0 -1.00 1.82 0.50 -1.00 24

BAILEY GENERATING PLANT

BENTHIC MACROINVERTEBRATE NUMERICAL ABUNDANCE (NO/SQ M)

REPLICATE REPORT

PC TC GC LOC 5 71 71 1 3 00

TAXA	0 0
212 4/20/80 1327 0 0.0 0 10.0 10.0 0.0 0 0.16 1.0 8 0 4 1 5 0.0 0 17.8 19.0 0 0.0 0 12.0 0.0 0.0 0.1 ES TAXA 1 2	
212 4/20/80 1327 0 0.0 0 10.0 10.0 0.0 0 0.16 1.0 8 0 4 1 5 0.0 0 17.8 19.0 0 0.0 0 12.0 0.0 0.0 0.1	0 0
TAXA	
TAXA	EL
1 2 9.62 9.62 1 TURBELLARIA-(LPIL) 0.0 19.23 9.62 9.62 9.62 9.62 9.62 9.62 9.62 9.62	BH
0 PLATYHELMINTHES (TOTAL) 0.0 19.23 9.62 9.62 1 TURBELLARIA-(LPIL) 0.0 19.23 9.62 9.62 0.62 0.62 0.62 0.62 0.62 0.62 0.62 0	
1 TURBELLARIA-(LPIL) 0.0 19.23 9.62 9.62 0 NEMATODA (TOTAL) 96.15 76.92 86.54 9.62 1 NEMATODA (LPIL) 96.15 76.92 86.54 9.62 0 OLIGOCHAETA (TOTAL) 1500.00 7865.38 4682.69 3182.69 7 0 NAIDIDAE 1 NAIDIDAE (LPIL) 846.15 4153.84 2500.00 1653.85 4 0 TUBIFICIDAE 1 TUBIFICIDAE 1 19.23 0.0 9.62 9.62 0 HIRUDINEA (TOTAL) 19.23 0.0 9.62 9.62 0 HIRUDINDAE 1 19.23 0.0 9.62 9.62 0 HIRUDINDAE 1 19.23 0.0 9.62 9.62 1 HAEMOPIS 19.23 0.0 9.62 9.62 0 BIVALVIA (TOTAL) 480.77 288.46 384.61 96.15 0 SPHAERIUM (LPIL) 307.69 211.54 259.62 48.00 1 SPHAERIUM (LPIL) 115.38 19.23 67.31 48.00	0.2
0 NEMATODA (TOTAL) 96.15 76.92 86.54 9.62 1 NEMATODA (LPIL) 96.15 76.92 86.54 9.62 0 OLIGOCHAETA (TOTAL) 1500.00 7865.38 4682.69 3182.69 7 0 NAIDIDAE 1 NAIDIDAE (LPIL) 846.15 4153.84 2500.00 1653.85 4 1 TUBL*ICIDAE (LPIL) 653.85 3711.54 2182.69 1528.05 3 0 HIRUDINEA (TOTAL) 19.23 0.0 9.62 9.62 0 HIRUDINIDAE 19.23 0.0 9.62 9.62 1 HAEMOPIS 19.23 0.0 9.62 9.62 0 BIVALVIA (TOTAL) 480.77 288.46 384.61 96.15 0 SPHAERIUM (LPIL) 307.69 211.54 259.62 48.00 1 SPHAERIUM (LPIL) 115.38 19.23 67.31 48.00	0.2
1 NEMATODA (LPIL) 96.15 76.92 86.54 9.62 0 OLIGOCHAETA (TOTAL) 1500.00 7865.38 4682.69 3182.69 7	1.9
0 OLIGOCHAETA (TOTAL) 1500.00 7865.38 4682.69 3162.69 3 0 NAIDIDAE	1.4
0 NAIDIDAE 1 NAIDIDAE (LPIL) 846.15 4153.84 2500.00 1653.85 4 0 TUBIFICIDAE 653.85 3711.54 2182.69 1528.65 3 1 TUBIFICIDAE (LPIL) 653.85 3711.54 2182.69 1528.65 3 0 HIRUDINEA 19.23 0.0 9.62 9.62 1 HAEMOPIS 19.23 0.0 9.62 9.62 0 BIVALVIA (TOTAL) 480.77 288.46 384.61 96.15 0 SPHAERIUM (LPIL) 307.69 211.54 259.62 48.00 1 SPHAERIUM (LPIL) 115.38 19.23 67.31 48.00	5.2
1 NAIDIDAE (LPIL) 846.15 4153.84 2590.00 1653.85 4 0 TUBIFICIDAE 1 TUBIVICIDAE (LPIL) 653.85 3711.54 2182.69 1528.65 3 0 HIRUDINEA (TOTAL) 19.23 0.0 9.62 9.62 0 HIRUDINIDAE 1 HAEMOPIS 19.23 0.0 9.62 9.62 0 BIVALVIA (TOTAL) 480.77 288.46 384.61 96.15 0 SPHAERIUM (LPIL) 307.69 211.54 259.62 48.00 1 SPHAERIUM (LPIL) 115.38 19.23 67.31 48.00	
0 TUBIFICIDAE 1 TUBIFICIDAE (LPIL) 653.85 3711.54 2182.69 1528.65 3 0 HIRUDINEA (TOTAL) 19.23 0.0 9.62 9.62 0 HIRUDINIDAE 19.23 0.0 9.62 9.62 0 BIVALVIA (TOTAL) 480.77 288.46 384.61 96.15 0 SPHAERIUM (LPIL) 307.69 211.54 259.62 48.00 1 SPHAERIUM (LPIL) 115.38 19.23 67.31 48.00	0.1
1 TUBL*ICIDAE (LPIL) 653.85 3711.54 2182.69 1528.65 3 0 HIRUDINEA (TOTAL) 19.23 0.0 9.62 9.62 0 HIRUDINIDAE 1 HAEMOPIS 19.23 0.0 9.62 9.62 0 BIVALVIA (TOTAL) 480.77 288.46 384.61 96.15 0 SPHAERIUM (LPIL) 307.69 211.54 259.62 48.00 1 SPHAERIUM (LPIL) 115.38 19.23 67.31 48.00	
0 HIRUDINEA (TOTAL) 19.23 0.0 9.62 9.62 0 HIRUDINIDAE 1 HAEMOPIS 19.23 0.0 9.62 9.62 0 BIVALVIA (TOTAL) 480.77 288.46 384.61 96.15 0 SPHAERIUM (LPIL) 307.69 211.54 259.62 48.00 1 SPHAERIUM (LPIL) 115.38 19.23 67.31 48.00	5.0
0 HIRUDINIDAE 1 HAENOPIS 19.23 0.0 9.62 9.62 0 BIVALVIA (TOTAL) 480.77 288.46 384.61 96.15 0 SPHAERIUM (LPIL) 307.69 211.54 259.62 48.00 1 SPHAERIUM (LPIL) 115.38 19.23 67.31 48.00	0.2
1 HAENOPIS 19.23 0.0 9.62 9.62 0 BIVALVIA (TOTAL) 480.77 288.46 384.61 96.15 0 SPHAERIUM (LPIL) 307.69 211.54 259.62 48.00 1 SPHAERIUM (LPIL) 115.38 19.23 67.31 48.00	
0 BIVALVIA (TOTAL) 480.77 288.46 384.61 96.15 0 SPHAERIUME * 5 SPHAERIUM (LPIL) 307.69 211.54 259.62 48.00 1 SPHAERIUM (LPIL) 115.38 19.23 67.31 48.00	0.2
0 SPHAERIDAE * 5 SPHAERIUM (LPIL) 307.69 211.54 259.62 48.00 1 SPHAERIUM (LPIL) 115.38 19.23 67.31 48.00	6.2
5 SPHAERIUM (LPIL) 307.69 211.54 259.62 48.00 1 SPHAERIUM (LPIL) 115.38 19.23 67.31 48.00	
1 SPHAERIUM (LPIL) 115.38 19.23 67.31 48.00	4.2
	1.1
5 FISIDIUM (LPIL) 0.0 57.69 28.85 28.85	0.5
1 PISIDIUM (LPIL) 57.69 0.0 28.85 28.85	0.5
0 OSTRACODA (TOTAL) 19.23 57.69 33.46 19.23	0.6
1 OSTRACODA (LPIL) 19.23 57.69 38.46 19.23	0.5
0 ISOFODA (TOTAL) 269.23 76.92 173.08 96.15	2.8
O ASELLIDAE	
1 ASELLUS (LPIL) 269.23 76.92 173.08 96.15	2.8
0 EPHEMEROPTERA (TOTAL) 0.0 19.23 9.62 9.62	0.2
0 CAENIDAE	
0 CAENIDAE 10 CAENIS (LPIL) 0.0 19.23 9.62 9.62 0 DIPIERA NEMATOCERA (TOTAL) 961.54 692.31 826.92 134.62 1	0.2
0 DIPIERA NEMATOCERA (TOTAL) 961.54 692.31 826.92 134.62 1	13.3
0 CEPATOPOGONIDAE	
2 CERATOPOGONIDAE (LPIL) 942.31 192.31 567.31 375.00	9.1
2 CHIRONOMUS (LPIL) 0.0 19.23 9.62 9.62	0.2
2 TANYTARSUS (LFIL) 0.0 115.38 57.69 57.69	0.9
. 0 CHIROMONIDAE 2 CHIROMONUS (LPIL) 0.0 19.23 9.62 9.62 2 TANYTARSUS (LPIL) 0.0 115.38 57.69 57.69 2 DICROTENDIFES (LPIL) 0.0 173.08 86.54 86.54	1.4
C FULIFEDILUM (LF1L) 0.0 30.49	0.3
2 ADLABESHYIA (LFIL) 19.23 38.46 28.85 5.62	0.5
2 FROCLADIUS (LPIL) 0.0 19.23 9.62 9.62	0.2
	0.5
	0.3

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BAILEY GENERATING PLANT

BENTHIC MACROINVERTEBRATE NUMERICAL ABUNDANCE (NO/SQ M)

REPLICATE REPORT

LS TAXA			X	S.E. /EZ
	1	2		
0 DIPTERA BRACHYCERA (TOTAL) 0 STRATIOMYIDAE	0.0	19.23	9.62	9.62 0.7
2 EUPARYPHUS	0.0	19.23	9.62	9.62 0.0
TOTAL	3346.15	9115.36	6230.75	2034.60 100.0
DIVERSITY (H PRIME)	2.52	1.93	2.23	0.29
DIVERSITY (J PRIME)	0.76	0.46	0.61	0.15
NUMBER OF TAXA BOTTOM TYPE 0	10	19	20	

ABOVE COMPUTED USING SAMPLE IDS 211 212

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BATLEY GENERATING PLANT

BENTHIC MACROINVERTEBRATE NUMERICAL ABUNDANCE (NO/SQ M)

STATION REPORT

LS	TAXA		×	S.E.	ADX.
19.75		21			
0	PLATYHELMINTHES (TOTAL)	9.62	9.62	-1.00	0.2
1	TURBELLARIA-(LPIL)	9.62	9.62	-1.00	1.0
0	NEMATOD/ (TOTAL)	86.54	86.54		
1	NEMATODA 'LPIL'	86.54	86.54	-1.00	1.9
0	PLATYHELMINTHES (TOTAL) TURBELLARIA-(LPIL) NEMATOD/ (TOTAL) NEMATODA 'LPIL) OLIGOCHAETA (TOTAL) NAIDIDAE		4682.69	-1.00	75.2
1 0	NAIDIDAE (LPIL) TUDIFICIDAE	2500.00	2500.00	-1.00	40.1
1	TUBIFICIDAE (LPIL)	2182.69	2182.69	-1.00	75 0
0	HIRUDINEA (TOTAL)	9.62	9.62	-1.00	
0	HIRUDINIDAE	9.62			
	HAEMOPIS		9.62	-1.00	0.2
0	SPHAERIIDAE SPHAERIUM (LPIL)	384.61	304.61	-1.00	6.2
5	SPHAERIUM (LPIL)	259.62	259.62	-1.00	4.2
1	SPHAERIUM (LPIL)	67.31	67.31	-1.00	1.1
5	PISIDIUM (LPIL)	28.85	28.85	-1.00	0.5
1	PISIDIUM (LPIL)	28.85	23.65	-1.00	0.5
0	OSTRACODA (TOTAL)	38.46	38.46	-1.00	0.6
1	OSTRACODA (LPIL)	38.46	33.46	-1.00	0.6
0	ASELLIDAE	259.62 67.31 28.85 28.85 38.46 38.46	173.08	-1.00	2.8
1	ASELLUS (LPIL)	173.08	173.03	-1.00	2.8
0	ASELLIDAE ASELLUS (LPIL) EFHEMEROPTERA (TOTAL) CAENIDAE		9.62	-1.00	0.2
10	CAENIS (LPIL)	9.62	9.62	-1.00	0.2
0	DIPTERA NEMATOCERA (TOTAL) CERATOPOGONIDAE	826.92	826.92	-1.00	
2		567.31	567.31	-1.00	9.1
2	CHIRCNOTHS (LPIL)	9.62	9.62	-1.00	0.2
2	TANYTARSUS (LPIL)	57.69	57.69	-1.00	0.9
2	DICROTENDIPES (LPIL)	86.54	86.54	-1.00	1.4
2	POLYPEDILUM (LPIL)	19.23	19.23	-1.00	0.3
2	ABLABESHYIA (LPIL)	28.65	28.65	-1.00	0.5
. 2	FROCLADIUS (LPIL)	9.62	9.62	-1.00	0.2
2	PSECTROCLADIUS (LPIL)	28.85	28,85	-1.00	0.5
2	CHIRONOMIDAE (LPIL)	19.23	19.23	-1.00	0.3
0	DIPTERA BRACHYCERA (TOTAL)	9.62	9.62	-1.00	0.3
0	STRATIONYIDAE				
5	EUPARYPHUS	9.62	9.62	-1.00	0.2
TOT	AL	6230.75	6230.75	-1.00	100.0
.DIV	ERSITY (H PRIME)	2.23	2.23	-1.00	
·DIV	ERSITY (J PRIME)	6230.75 2.23 0.61	0.61	-1.00	

DATE PAGE NO

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BAILEY GENERATING PLANT

BENTHIC MACROINVERTEBRATE NUMERICAL ABUNDANCE (NO/SQ M)

STATION REPORT

LS TAXA

NUMBER OF TAXA

BOTTOM TYPE 0

ABOVE COMPUTED USING SAMPLE IDS 211 212

21

20

DATE 07/14/80 PAGE NO 39 T600AQUA 9/28/77 X S.E. ABX

RSL

20

BAILEY GENERATING PLANT

BENTHIC MACROINVERTEBRATE NUMERICAL ABUNDANCE (NO/59 M)

STATION REPORT

LS	IndA		
0	PLATYHELMINTHES (TOTAL)	21	
1	TURBELLARIA-(LPIL)	9.62	
0	NESATODA (TOTAL)	9.62	
1	NEMATODA (LPIL)	86.54	
0		86.54	
	OLIGOCHAETA (TOTAL)	4682.69	
0	NAIDIDAE		
1	THE STATE OF THE S	2500.00	
0	TUBIFICIDAE		
1	TUBITICIDAE (LPIL)	2182.69	
0	HIRUDINEA (TOTAL)	9.62	
- 00	HIRUDINIDAE		
1	HAEMOPIS	9.62	
0		384.61	
5			
-	SPHAERIUM (LPIL)	259.62	
1	SPHAERIUM (LPIL)	67.31	
5	PISIDIUM (LPIL)	28.85	
1	PISIDIUM (LPIL)	28.85	
0	EXTRACTOR STATES	38.46	
1	OSTRACODA (LPIL)	38.46	
0	ISOPODA (TOTAL)	173.08	
0	ASELLIDAE	177 44	
1	ASELLUS (LPIL)	173.08	
0	and the second s	9.62	
0	CAENIDAE		
10	CAENIS (LPIL)	9.62	
0	DIPTERA NEMATOCERA (TOTAL)	826.92	
2	The second secon	F/7 71	
0	CHIRONOMIDAE (LPIL)	567.31	
2	CHIRONOMUS (LPIL)	0 / 0	
2		9.62	
		57.69	
2	DICROTENDIPES (LPIL)	86.54	
2	POLYPEDILUM (LPIL)	19.23	
2	ABLABESMYIA (LPIL)	28.85	
2	PROCLADIUS (LPIL)	9.62	
2	PSECTROCLADIUS (LPIL)	28 85	
2		19.23	
-	DIPTERA ERACHYCERA (TOTAL)	9.62	
0		0.40	
2	EUPARYPHUS	9.62	
TOT	AL	6230.75	
DIV	ERSITY (H PRIME)	2.23	
DIV	ERSITY (J PRIME)	0.61	

-		REL
X	S.E.	A500
9.62	-1.00	0.2
9.62	-1.00	0.2
85.54	-1.00	1.4
86.54	-1.60	1.9
4682.69	-1.00	75.2
2500.00	-1.00	40.1
2182.69	-1.00	35.0
9.62	-1.00	0.2
9.62	-1.00	0.2
304.61	-1.00	
201102	****	
259.62	-1.00	4.2
67.31	-1.00	
28.85		1.1
	-1.00	0.5
28.85	-1.00	0.5
38,46	-1.00	0.6
38.46	-1.00	0.6
173.08	-1.00	2.5
173.03	-1.00	2.8
9.62	-1.00	0.2
9.62	-1.00	0.2
826.92	-1.00	13.3
0.0.70	4.00	43.3
567.31	-1.00	9.1
557.31	-1.00	7.2
0.40	1 00	
9.62	-1.00	0.2
57.69	-1.00	0.9
86.54	-1.00	1.4
19.23	-1.00	0.3
28.85	-1.00	0.5
9.62	-1.00	0.2
23.85	-1.00	0.5
19.23	-1.00	0.3
9.62	-1.00	0.2
	2025	
9.62	-1.00	0.2
7.00	1.00	0.6
6230.75	1.00	200.0
	1.00	100.0
2.23	1.30	
0.61	-1.50	

BAILEY GENERATING PLANT

BENTHIC MACROINVERTEBRATE NUMERICAL ABUNDANCE (NO/SQ M)

STATION REPORT

LS TAXA

NUMBER OF TAXA

BOTTOM TYPE

0

ABOVE COMPUTED USING SAMPLE IDS 211 212

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REL S.E. ABX

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